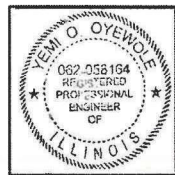


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	1
		ILLINOIS	CONTRACT NO. 62M28	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

D-91-564-20



JULY 23, 2021

*Yemi O. Oyewole*

YEMI O. OYEWOLE  
ILLINOIS REG. PROFESSIONAL ENGINEER NO. 062-058164  
EXPIRATION DATE 11-30-2021  
SHEETS 01-16 & 43-52



JULY 23, 2021

*Jiahong Zuo*

JIAHONG ZUO  
ILLINOIS REG. STRUCTURAL ENGINEER NO. 081-006794  
EXPIRATION DATE 11-30-2022  
SHEETS 17-21 & 23-32

# PROPOSED HIGHWAY PLANS

FAP ROUTE 332: IL 394: BISHOP FORD FREEWAY  
AT GLENWOOD-LANSING ROAD  
(BRIDGE CARRYING GLENWOOD-LANSING ROAD OVER IL 394)

SECTION: 2020-168-BR  
PROJECT: NHPP-QCUC(955)

BRIDGE DECK OVERLAY, JOINTS REPAIR  
COOK COUNTY

**TRAFFIC DATA**

2018 ADT = 6,450 (GLENWOOD LANSING ROAD)

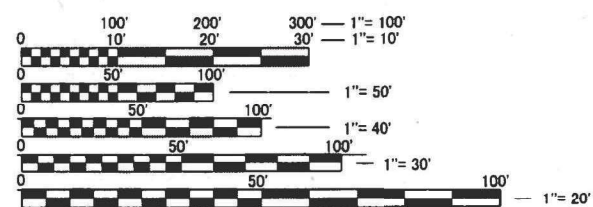
**POSTED SPEED**

POSTED SPEED: 45 MPH (GLENWOOD LANSING ROAD)

**DESIGN DESIGNATION**

MAJOR COLLECTOR (GLENWOOD LANSING ROAD)

THIS PROJECT IS LOCATED IN  
THE VILLAGE OF GLENWOOD



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

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

PROJECT MANAGER: FAWAD AQUEEL, PE, PTOE (847) 705-4247  
PROJECT ENGINEER: VESELIN VELICHKOV, PE (847) 705-4432

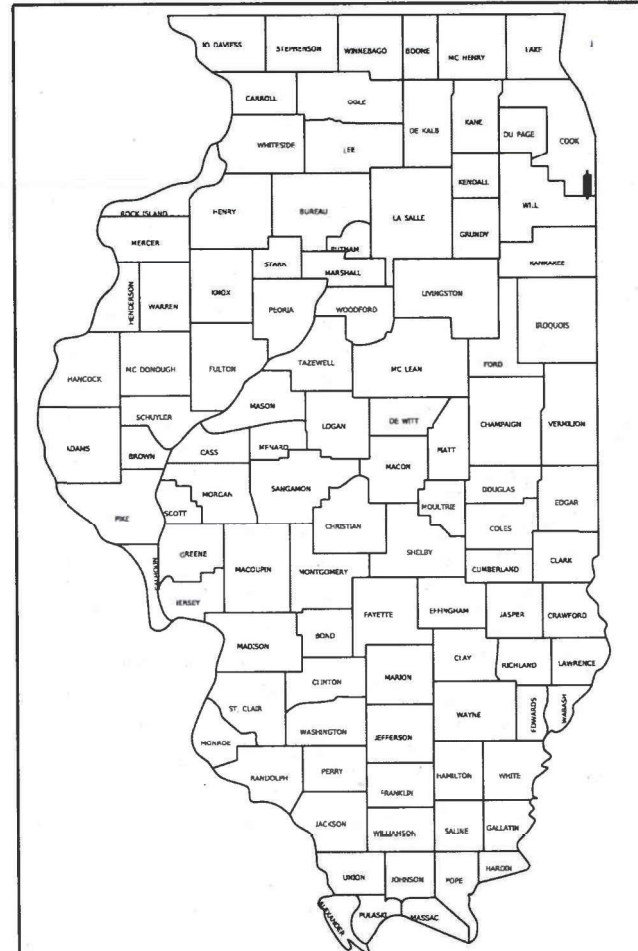


CONTRACT NO. 62M28

PROJECT BEGINS STA. 100+40.00  
C-91-363-20  
PROJECT ENDS STA. 104+04.30  
SN 016-0918  
3rd P.M.



LOCATION MAP (NOT TO SCALE)



LOCATION OF SECTION INDICATED THIS: -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 3, 2021  
*Jose Rios* REGIONAL ENGINEER  
October 1, 2021  
*Stephen M. Smith* ENGINEER OF DESIGN AND ENVIRONMENT  
October 2, 2021  
*Stephen M. Smith* DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

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- 630001-12 STEEL PLATE BEAM GUARDRAIL
- 630201-07 PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
- 630301-09 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631031-17 TRAFFIC BARRIER TERMINAL, TYPE 6
- 701006-05 OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
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- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701311-03 LANE CLOSURE 2L, 2W MOVING OPERATIONS-DAY ONLY
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- 701401-12 LANE CLOSURE FREEWAY, FREEWAY/EXPRESSWAY
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- 701901-08 TRAFFIC CONTROL DEVICES
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- 782006-01 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

**GENERAL NOTES**

1. 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 UTILITIES. (48 HOUR NOTIFICATION IS REQUIRED).
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF GLENWOOD.
3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE OR VILLAGE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE EITHER AGENCY.
4. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE PLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.
5. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE RESIDENT ENGINEER.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
7. THE CONTRACTOR SHALL CONTACT THE EXPRESSWAY TRAFFIC CONTROL SUPERVISOR AT (847) 705-4155 AND THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA @ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
8. THE RESIDENT ENGINEER SHALL CONTACT THE ARTERIAL FIELD ENGINEER, PATRICE HARRIS, AT PATRICE.HARRIS@ILLINOIS.GOV AND THE EXPRESSWAY FIELD ENGINEER AT (847) 705-4153 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
9. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
10. THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING ITEMS THAT WILL NOT BE REMOVED INCLUDING PREVIOUSLY SEEDED AREAS. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE TO THE SATISFACTION OF THE ENGINEER.
11. DURING CONSTRUCTION, THE CONTRACTOR WILL BE REQUIRED AT HIS EXPENSE TO HAVE AVAILABLE A WATER TRUCK OR SIMILAR EQUIPMENT TO CONTROL DUST. IF NECESSARY, THE CONTRACTOR SHALL BE REQUIRED TO CONTROL DUST DURING NON-WORKING HOURS.
12. THE CONTRACTOR SHALL MAINTAIN ALL ROADWAYS OPEN TO TRAFFIC AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION OF ALL EMERGENCY SERVICES, SCHOOL DISTRICTS, I.D.O.T.'S COMMUNICATIONS CENTER, SPRINGFIELD TRUCK PERMIT SECTION AND OTHER AGENCIES AFFECTED BY THE CLOSURE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR POSTING SIGNS THAT WILL INDICATE THE DATES THE CLOSURE WILL BE IN PLACE.
14. THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM THE BUREAU OF MAINTENANCE.
15. THE CONTRACTOR SHALL REQUEST AND GAIN APPROVAL FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S EXPRESSWAY TRAFFIC OPERATIONS ENGINEER AT WWW.IDOTLCS.COM TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL DAILY LANE, RAMP AND SHOULDER CLOSURES AND 7 DAYS IN ADVANCE OF ALL PERMANENT AND WEEKEND CLOSURES ON ALL FREEWAYS AND/OR EXPRESSWAYS IN DISTRICT ONE. THIS ADVANCE NOTIFICATION IS CALCULATED BASED ON MONDAY THROUGH FRIDAY AND SHALL NOT INCLUDE WEEKENDS OR HOLIDAYS.
16. ALL STAGE CHANGES REQUIRING THE STOPPING AND/OR THE PACING OF TRAFFIC SHALL TAKE PLACE DURING THE ALLOWABLE HOURS FOR FULL EXPRESSWAY CLOSURES AND SHALL BE APPROVED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE DISTRICT ONE EXPRESSWAY TRAFFIC CONTROL SUPERVISOR AT LEAST 3 WORKING DAYS (WEEKENDS AND HOLIDAYS DO NOT COUNT INTO THIS 72 HOURS NOTIFICATION) IN ADVANCE OF ANY PROPOSED STAGE CHANGE.
17. A MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED TO THE DISTRICT ONE EXPRESSWAY TRAFFIC CONTROL SUPERVISOR 14 DAYS IN ADVANCE OF ANY STAGE CHANGES OR FULL EXPRESSWAY CLOSURES. THE MAINTENANCE OF TRAFFIC PLAN SHALL INCLUDE, BUT NOT BE LIMITED TO: LANE AND RAMP CLOSURES, EXISTING GEOMETRICS, AND EQUIPMENT AND MATERIAL LOCATION.

**DRAINAGE AND UTILITIES GENERAL NOTES**

1. THE LOCATION AND ELEVATION OF EXISTING UTILITIES ARE APPROXIMATE AND ARE PROVIDED BY THE OWNERS. THE EXACT LOCATIONS AND ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR THROUGH THE OWNERS OF THE UTILITIES.

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**WBK ENGINEERING LLC**  
 116 WEST MAIN STREET, SUITE 201  
 ST. CHARLES, ILLINOIS 60174  
 (630) 443-7755

USER NAME = kcartopassi	DESIGNED - KAC	REVISED -
PLOT SCALE = 1:2	DRAWN - SS	REVISED -
PLOT DATE = 9/17/2021	CHECKED - YOO	REVISED -
	DATE - 08/11/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
 INDEX OF SHEETS, IDOT STANDARDS AND GENERAL NOTES**

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

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	2
			CONTRACT NO.	62M28
ILLINOIS FED. AID PROJECT				



# SUMMARY OF QUANTITIES

SPECIALTY ITEM	SPECIAL PROVISION	CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	80% FEDERAL 20% STATE
						BRIDGE 0059
		20200100	EARTH EXCAVATION	CU YD	47	47
*		28000400	PERIMETER EROSION BARRIER	FOOT	561	561
*		28000510	INLET FILTERS	EACH	2	2
		40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	120	120
		40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	534	534
		40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	44.8	44.8
		48101200	AGGREGATE SHOULDERS, TYPE B	TON	17	17
		48101620	AGGREGATE SHOULDERS, TYPE B 10"	SQ YD	1,526	1,526
		50102400	CONCRETE REMOVAL	CU YD	12.4	12.4
		50157300	PROTECTIVE SHIELD	SQ YD	728	728
		50300255	CONCRETE SUPERSTRUCTURE	CU YD	13.4	13.4
		50300260	BRIDGE DECK GROOVING	SQ YD	1,028	1,028
		50300300	PROTECTIVE COAT	SQ YD	1,084	1,084
		50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	6,485	6,485
		50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,210	1,210
		50901730	BRIDGE FENCE RAILING	FOOT	26	26
		52000110	PREFORMED JOINT STRIP SEAL	FOOT	109	109
		52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	20	20
		52100520	ANCHOR BOLTS, 1"	EACH	40	40
		58700300	CONCRETE SEALER	SQ FT	5,679	5,679
		59000200	EPOXY CRACK INJECTION	FOOT	20	20
		60600605	CONCRETE CURB, TYPE B	FOOT	60	60
*		63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	75	75
*		63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4
*		63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4
		63200310	GUARDRAIL REMOVAL	FOOT	371	371
*	S	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	55	55
*	S	66900530	SOIL DISPOSAL ANALYSIS	EACH	2	2
*	S	66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	1	1
*	S	66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	1	1
*	S	66901006	REGULATED SUBSTANCES MONITORING	CAL DA	2	2
		67100100	MOBILIZATION	L SUM	1	1
*		70107025	CHANGEABLE MESSAGE SIGN	CAL DA	42	42

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 116 WEST MAIN STREET, SUITE 201  
 ST. CHARLES, ILLINOIS 60174  
 (630) 443-7755

USER NAME = ssundaresan	DESIGNED - KAC	REVISED -
PLOT SCALE = 1:2	DRAWN - SS	REVISED -
PLOT DATE = 8/11/2021	CHECKED - YOO	REVISED -
	DATE - 08/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD LANSING ROAD  
SUMMARY OF QUANTITIES**

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

FAP RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 3
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	

# SUMMARY OF QUANTITIES

SPECIALTY ITEM	SPECIAL PROVISION	CODE NO.	ITEM	UNIT	TOTAL QUANTITY URBAN	80% FEDERAL 20% STATE
						BRIDGE 0059
		70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1
*		72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4
		73000100	WOOD SIGN SUPPORT	FOOT	52	52
*		78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	1,458	1,458
*		78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4
*		78200006	GUARDRAIL REFLECTORS, TYPE B	EACH	16	16
*		78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	8	8
		78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	6	6
*		78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	486	486
	S <input type="checkbox"/>	X0322215	CLEANING BRIDGE SCUPPERS AND DOWNSPOUTS	EACH	4	4
	S	X0326766	CLEAN & RESEAL RELIEF JOINT	FOOT	50	50
	S	X0326806	WASHOUT BASIN	L SUM	1	1
		X6700410	ENGINEER'S FIELD OFFICE, TYPE A (SPECIAL)	CAL MO	12	12
	S	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
	S	X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1
	S	X7380150	REMOVE AND REERECT OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED, SPECIAL	EACH	1	1
*	S	Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	20	20
*	S	Z0001903	STRUCTURAL STEEL REMOVAL	POUND	2,263	2,263
*	S	Z0001905	STRUCTURAL STEEL REPAIR	POUND	1,405	1,405
	S	Z0003600	BEAM STRAIGHTENING	L SUM	1	1
	S	Z0006012	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES	SQ YD	1,084	1,084
	S <input type="checkbox"/>	Z0010400	CLEANING BRIDGE SEATS	SQ FT	285	285
	S	Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	1,084	1,084
	S	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	282	282
	S	Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	15	15
	S	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1
	S	Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	1	1
	S	Z0018051	DRAINAGE SCUPPERS TO BE ADJUSTED	EACH	4	4
	S	Z0018400	DRAINAGE STRUCTURES TO BE ADJUSTED	EACH	2	2
	S <input type="checkbox"/>	Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	2	2
	S	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	163	163
	S	Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	6	6
	<input type="checkbox"/>	Z0076600	TRAINEES	HOURS	500	500
	<input type="checkbox"/>	Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOURS	500	500

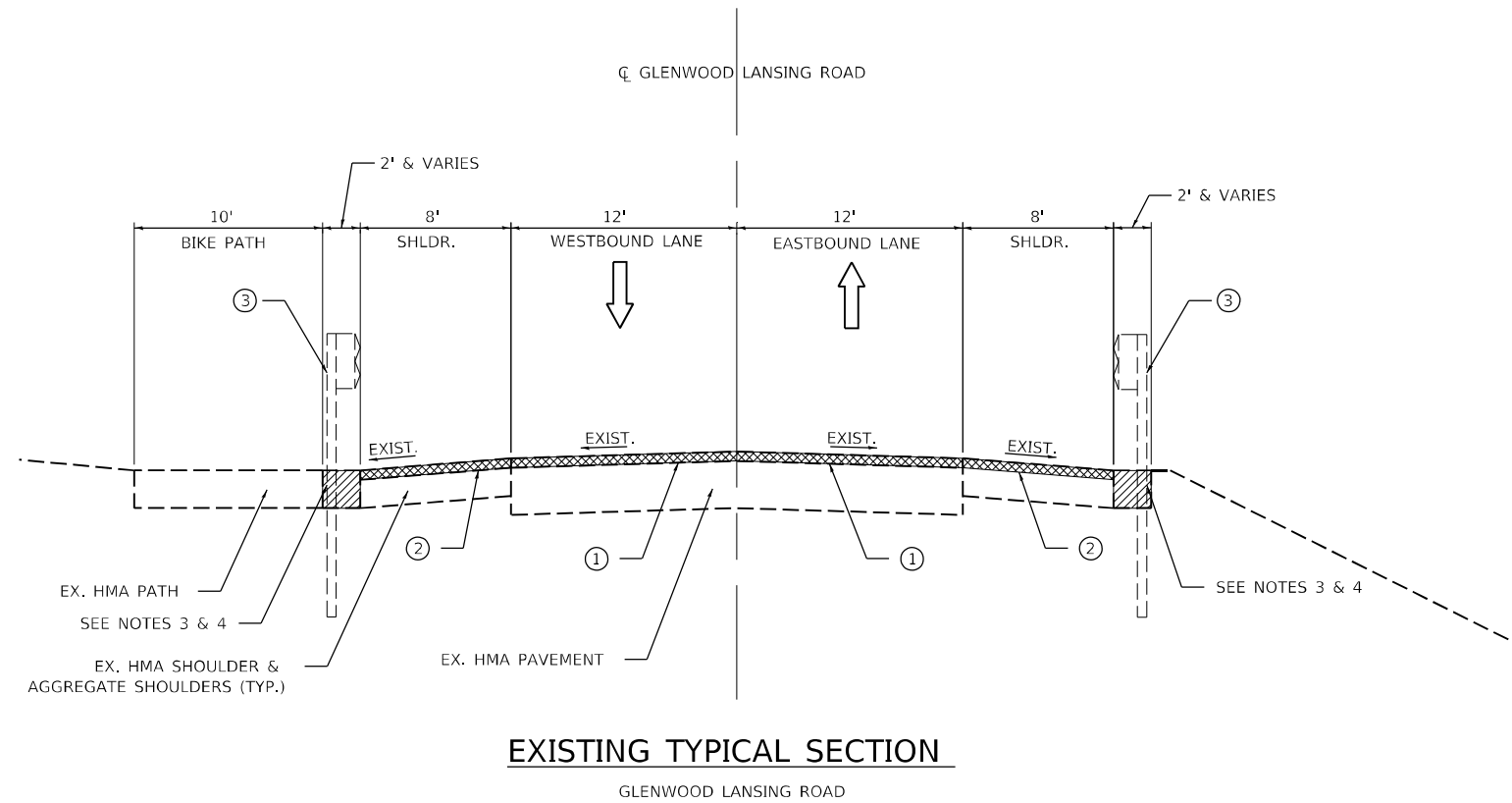
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NON-PART 100% STATE

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	PLOT SCALE = 1:2 PLOT DATE = 8/11/2021	DATE - 08/11/2021 REVISED -	SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT		





- EXISTING LEGEND**
- ① EXISTING HMA PAVEMENT
  - ② EXISTING HMA SHOULDER (SEE NOTES 3 & 4)
  - ③ EXISTING GUARDRAIL TO BE REMOVED (SEE NOTE 1)
  - HMA SHOULDER REMOVAL (UNDER EXISTING GUARDRAIL)
  - HMA SURFACE REMOVAL BUTT JOINT (1.5")

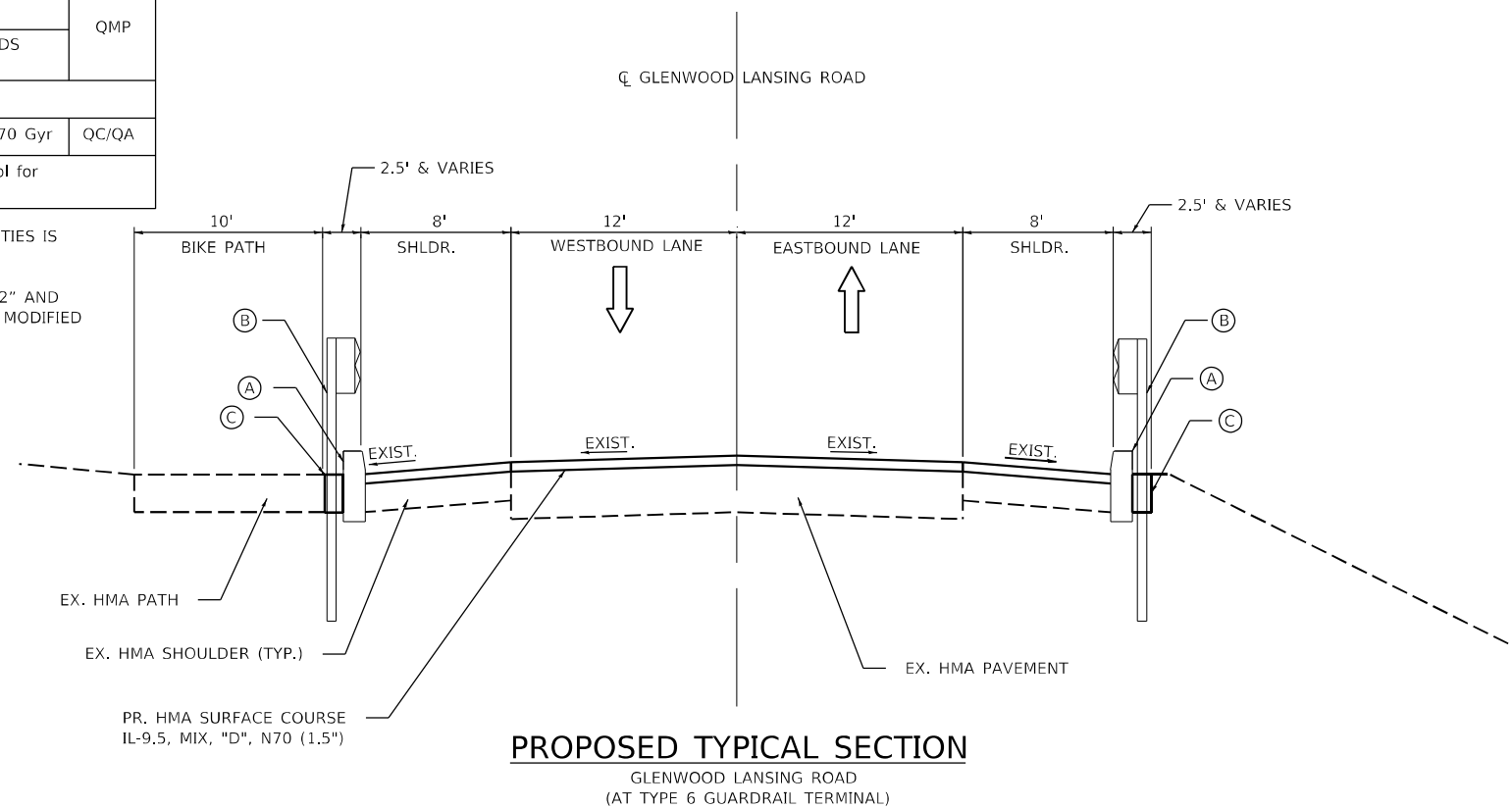
- NOTES**
1. GUARDRAIL TO BE REMOVED AT ALL FOUR QUADRANTS OF THE BRIDGE
  2. EXISTING PAVEMENT CROSS SLOPES ARE ESTIMATED
  3. EX. HMA SHOULDER REMOVAL UNDER AND FOR THE LENGTH OF THE EXISTING GUARDRAIL (ASSUMED EX. HMA THICKNESS OF 6")
  4. FULL DEPTH SAW CUT SHALL BE INCLUDED IN THE COST OF HMA SHOULDER REMOVAL

HOT-MIX ASPHALT MIXTURE REQUIREMENTS			QMP
MIXTURE TYPE	AIR VOIDS @ Ndes		
HOT-MIX ASPHALT TAPER			
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL - 9.5, N70 (1.5")	4% @ 70 Gyr		QC/QA
QMP Designations: Quality Control/Quality Assurance (QC/QA); Quality Control for Performance (QCP); Pay for Performance (PFP)			

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY SPECIAL PROVISIONS.

FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS.



- PROPOSED LEGEND**
- Ⓐ PCC CURB TYPE B (SEE NOTE 2)  
STA 100+85.00 TO STA 101+00.00 RT  
STA 100+85.00 TO STA 101+00.00 LT  
STA 103+44.30 TO STA 103+59.30 RT  
STA 103+44.30 TO STA 104+59.30 LT
  - Ⓑ PROPOSED GUARDRAIL (AT ALL FOUR QUADRANTS OF THE BRIDGE)
  - Ⓒ AGGREGATE SHOULDER, TYPE B 10" (TO BE USED UNDER GUARDRAIL AND FOR TRAFFIC BARRIER TERMINAL TYPE 1 WIDENING PER IDOT DISTRICT ONE STANDARD TC-34)

- NOTES**
1. PROPOSED PAVEMENT CROSS SLOPES SHALL MATCH EXISTING
  2. PCC CURB TYPE B REQUIRED AT THE TRAFFIC BARRIER TERMINAL TYPE 6 PER IDOT STANDARD 631031

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**WBK engineering**  
 WBKENGINEERING LLC  
 116 WEST MAIN STREET, SUITE 201  
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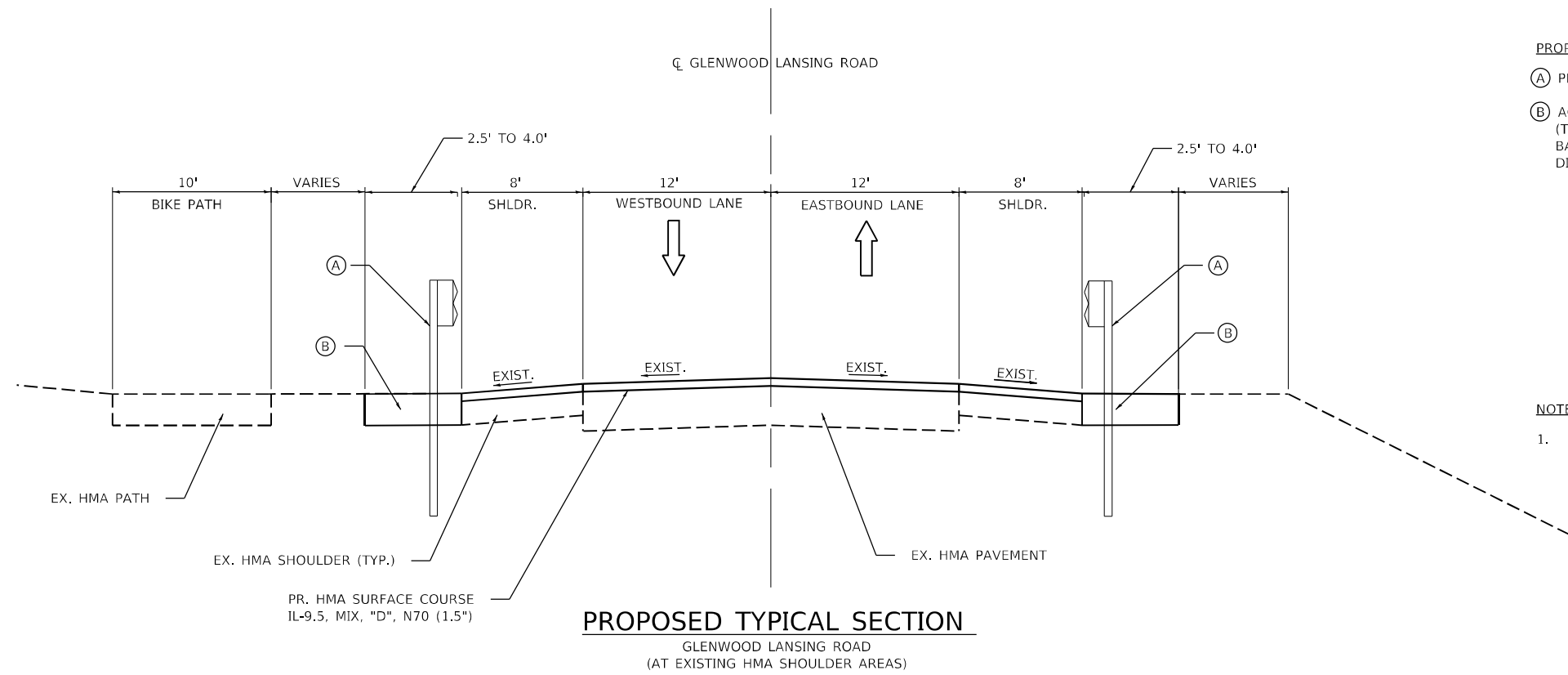
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PLOT DATE = 8/11/2021	CHECKED - YOO	REVISED -
	DATE - 08/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
GLENWOOD LANSING ROAD - TYPICAL SECTION**

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

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	5
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M28	



**PROPOSED LEGEND**

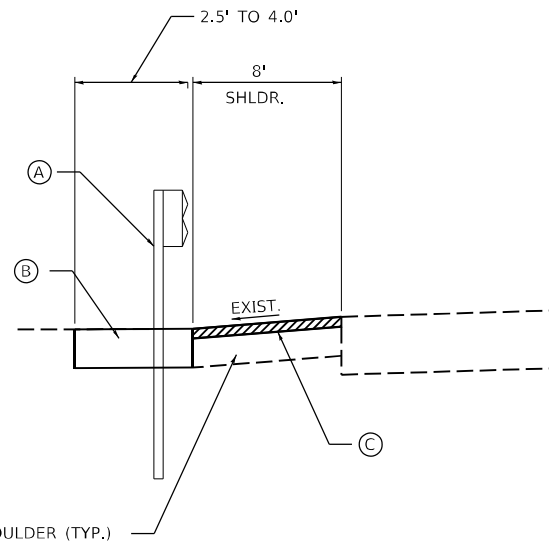
- (A) PROPOSED GUARDRAIL (PER PLAN)
- (B) AGGREGATE SHOULDER, TYPE B 10" (TO BE USED UNDER GUARDRAIL AND FOR TRAFFIC BARRIER TERMINAL TYPE 1 WIDENING PER IDOT DISTRICT ONE STANDARD TC-34)

**NOTES**

- 1. PROPOSED PAVEMENT CROSS SLOPES SHALL MATCH EXISTING

**PROPOSED TYPICAL SECTION**

GLENWOOD LANSING ROAD  
(AT EXISTING HMA SHOULDER AREAS)



**PROPOSED LEGEND**

- (A) PROPOSED GUARDRAIL (PER PLAN)
- (B) AGGREGATE SHOULDER, TYPE B 10" (TO BE USED UNDER GUARDRAIL AND FOR TRAFFIC BARRIER TERMINAL TYPE 1 WIDENING PER IDOT DISTRICT ONE STANDARD TC-34)
- (C) AGGREGATE SHOULDER, TYPE B (0-1" DEPTH) (OVER EXISTING AGGREGATE SHOULDER AS NECESSARY)

**PROPOSED TYPICAL SECTION**

GLENWOOD LANSING ROAD  
(AT EXISTING AGGREGATE SHOULDER AREAS)

FILE NAME = Z:\2018\1810124\_P1B187\cadd\Civil\Dgn\WO38\SIN\18M28-Typical\_Sec02.dgn



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PLOT SCALE = 1:10	DRAWN - SS	REVISED -
PLOT DATE = 8/11/2021	CHECKED - YOO	REVISED -
	DATE - 08/11/2021	REVISED -

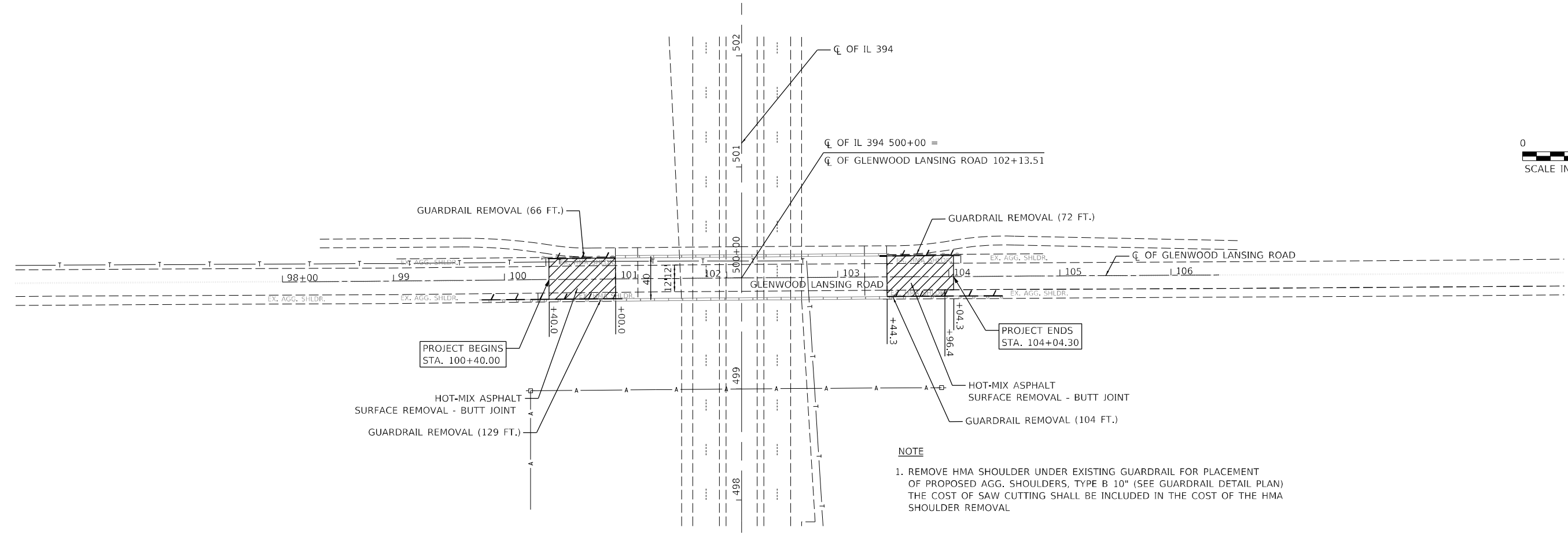
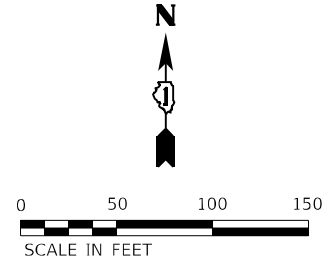
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
GLENWOOD LANSING ROAD - TYPICAL SECTION**

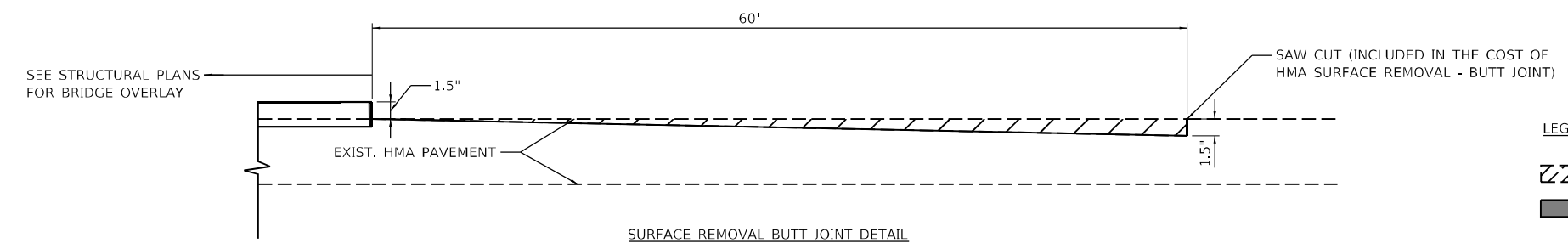
SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	6
CONTRACT NO.			62M28	
ILLINOIS		FED. AID PROJECT		

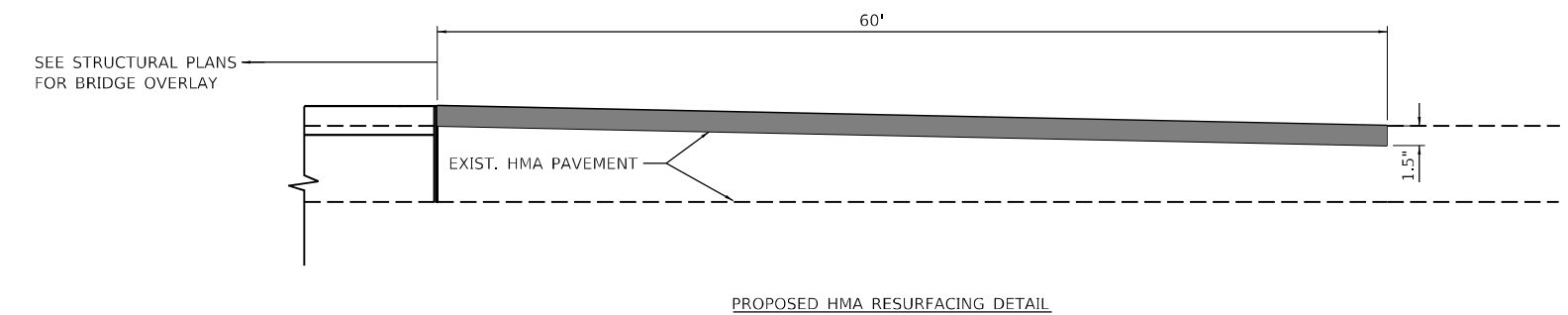




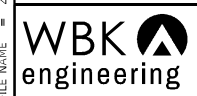
**NOTE**  
 1. REMOVE HMA SHOULDER UNDER EXISTING GUARDRAIL FOR PLACEMENT OF PROPOSED AGG. SHOULDERS, TYPE B 10" (SEE GUARDRAIL DETAIL PLAN) THE COST OF SAW CUTTING SHALL BE INCLUDED IN THE COST OF THE HMA SHOULDER REMOVAL



**LEGEND**  
 [Hatched pattern] - HMA SURFACE REMOVAL - BUTT JOINT  
 [Solid grey area] - HMA SURFACE COURSE, IL-9.5, MIX "D", N70, 1.5"



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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
 BUTT JOINT AND RESURFACING PLAN**

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

FAP RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 7
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	

**MAINTENANCE OF TRAFFIC - GENERAL NOTES**

1. SEE SPECIAL PROVISIONS TITLED TRAFFIC CONTROL PLAN, KEEPING THE EXPRESSWAY OPEN TO TRAFFIC, FAILURE TO OPEN TRAFFIC LANES TO TRAFFIC, TRAFFIC CONTROL AND PROTECTION (ARTERIALS), AND TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
2. THE CONTRACTOR SHALL REMOVE AND SAFELY STORE (FREE FROM THEFT OR DAMAGE) OR COVER ALL CONFLICTING EXISTING SIGNS FOR THE DURATION OF THE CONSTRUCTION. ALL SIGNS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF CONSTRUCTION.
3. THE FOLLOWING APPLY TO CONSTRUCTION SIGNS:
  - A.) THE CONTRACTOR SHALL FURNISH, INSTALL AND REMOVE ALL MOT RELATED SIGNS.
  - B.) ALL SIGNS SHALL BE CONSIDERED INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION (SPECIAL) PAY ITEM, EXCEPT FOR TEMPORARY INFORMATION SIGNING AS NOTED ON THE PLANS.
4. FULL EXPRESSWAY CLOSURES AND SINGLE LANE CLOSURES ON IL 394 IN PRE-STAGE 1 FOR THE REMOVAL OF THE EXISTING OVERHEAD BRIDGE MOUNTED SIGN, IN STAGE 1 FOR REPAIRS TO PARAPET WALLS OVER IL 394 LANES AND SHOULDER AND IN STAGE 2 & 3 WILL ONLY BE ALLOWED AT NIGHT PER THE KEEPING THE EXPRESSWAY OPEN TO TRAFFIC SPECIAL PROVISION.
5. ALL OVER NIGHT OPERATIONS SHALL REQUIRE NIGHT TIME WORK ZONE LIGHTING. THIS WORK WILL BE PAID FOR SEPARATELY AT THE CONTRACT UNIT PRICE LUMP SUM FOR NIGHTTIME WORK ZONE LIGHTING.
6. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING PAVEMENT MARKINGS. THIS WORK WILL BE PAID FOR SEPARATELY AT THE CONTRACT UNIT PRICE SQUARE FOOT FOR PAVEMENT MARKING REMOVAL - WATER BLASTING.
7. THE CONTRACTOR SHALL COVER ANY CONFLICTING SIGNS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE FOR THE RELATED MOT PAY ITEM.
8. ALL TRAFFIC CONTROL SIGNAGE SHALL BE IN PLACE PRIOR TO BEGINNING ANY CONSTRUCTION.
9. THE SHARED USE PATH ON THE NORTH SIDE OF BRIDGE IS TO REMAIN OPEN AT ALL TIMES EXCEPT FOR WHEN THE CONTRACTOR IS CLEANING AND REPAIRING THE BRIDGE EXPANSION JOINTS ACROSS THE PATH. CONTRACTOR SHALL USE HIGHWAY STANDARD 701801 TO TEMPORARILY CLOSE THE PATH DURING THE DAY WHILE THIS WORK IS BEING PERFORMED AND REMOVE THE CLOSURE AT THE END OF EACH WORK DAY. EXPANSION JOINT REPAIR THAT HAS NOT BEEN COMPLETED BY THE END OF THE WORK DAY SHALL BE COVERED WITH A STEEL PLATE TO KEEP THE PATH OPEN OVERNIGHT AND OVER WEEKENDS.

**SUGGESTED STAGING SEQUENCE**

**PRE-STAGE 1**

- SET UP DETOUR TRAFFIC CONTROL FOR GLENWOOD LANSING ROAD CLOSURE AS SHOWN IN THE PLANS. (HIGHWAY STANDARDS 7010006 & 701106)
- INSTALLATION OF PROTECTIVE SHIELD (OVERNIGHT WORK ONLY) (DISTRICT 1 HIGHWAY STANDARD TC-9 AND HIGHWAY STANDARDS 701400, 701401, 701428, & 701411)
- REMOVAL OF EXISTING OVERHEAD BRIDGE MOUNTED SIGN AND SIGN SUPPORTS OVER SOUTHBOUND IL 394 (OVERNIGHT WORK ONLY, 15 MINUTE DURATION SHUTDOWNS OF SOUTHBOUND IL 394) (DISTRICT ONE HIGHWAY STANDARD TC-9, HIGHWAY STANDARDS 701400, 701401, & 701428, AND STATE POLICE ASSISTED CLOSURE)
- ERECT TEMPORARY INFORMATION SIGN ON WOOD POSTS BEHIND EXISTING BARRIER WALL AT LOCATION AS DIRECTED BY THE ENGINEER. SIGN SHALL BE IN PLACE FOR THE ENTIRE DURATION UNTIL THE OVERHEAD BRIDGE MOUNTED SIGN OVER SOUTHBOUND IL394 IS REINSTALLED.

**STAGE 1 (GLENWOOD LANSING ROAD)**

- MOVE TRAFFIC TO DETOUR CONFIGURATION ON GLENWOOD LANSING ROAD. (DETOUR PLAN)
- REMOVE CONFLICTING RAISED REFLECTIVE PAVEMENT MARKERS.
- REMOVE GUARDRAIL.
- HYDROSCARIFY EXISTING DECK AND APPROACH SLAB.
- ADJUST AND CLEAN SCUPPERS.
- ADJUST AND CLEAN DRAINAGE STRUCTURES.
- DECK SLAB REPAIR.
- PARAPET WALL MODIFICATIONS AND REPAIRS. ALL PARAPET WALL REPAIRS OVER A LANE ON IL 394 REQUIRE OVERNIGHT CLOSURE OF THE LANES (HIGHWAY STANDARDS 701400, 701401, & 701428)
- APPROACH SLAB REPAIR.
- BRIDGE DECK LATEX CONCRETE OVERLAY.
- CLEAN AND RESEAL RELIEF JOINTS.
- GRIND HMA BUTT JOINT
- CONSTRUCT PCC CURB TYPE B UNDER PR. TYPE 6 BARRIER TERMINAL
- HMA RESURFACING
- INSTALL PROPOSED GUARDRAIL AND GUARDRAIL END TERMINALS
- PLACE AGGREGATE SURFACE COURSE UNDER AND BEHIND GUARDRAIL
- INSTALL PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS
- STAGE 1A (GLENWOOD LANSING ROAD AND IL 394)
  - MAINTAIN GLENWOOD LANSING ROAD DETOUR
  - RE-ERECT OVERHEAD BRIDGE MOUNT SIGN AND SIGN SUPPORTS REMOVED IN PRE-STAGE 1. (COMPLETED USING OVERNIGHT FULL IL 394 LANE CLOSURES)(HIGHWAY STANDARDS 701400, 701401, & 701428, AND STATE POLICE ASSISTED CLOSURE)

**STAGE 2 (IL 394 SOUTHBOUND) (OVERNIGHT WORK ONLY)**

- SET UP SOUTHBOUND OUTSIDE SHOULDER CLOSURE. (IDOT DISTRICT 1 DETAIL TC-17)
- TEMPORARY BEAM SHORING AT WEST ABUTMENT
- STRUCTURAL CONCRETE REPAIR ON WEST ABUTMENT AND PIER 1.
- CLEAN BRIDGE SEATS
- REMOVE AND REPLACE BEARINGS
- REPAIR BEAM ENDS
- REPLACE DIAPHRAMS

**STAGE 2A (IL 394 SOUTHBOUND) (OVERNIGHT WORK ONLY)**

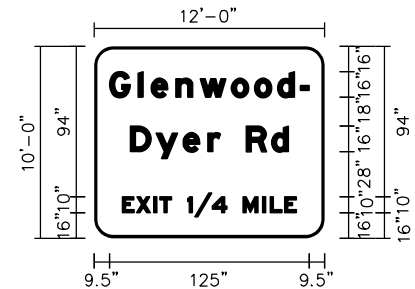
- SET UP INSIDE SHOULDER CLOSURE BOTH NORTHBOUND AND SOUTHBOUND SIDES. (IDOT DISTRICT 1 DETAIL TC-17)
- STRUCTURAL CONCRETE REPAIR ON PIER 2.
- CLEAN BRIDGE SEATS

**STAGE 2B (IL 394 NORTHBOUND) (OVERNIGHT WORK ONLY)**

- SET UP NORTHBOUND OUTSIDE SHOULDER CLOSURE. (IDOT DISTRICT 1 DETAIL TC-17)
- STRUCTURAL CONCRETE REPAIR ON PIER 3 AND EAST ABUTMENT.
- CLEAN BRIDGE SEATS
- REMOVE AND REPLACE BEARINGS
- REPAIR BEAM ENDS
- REPLACE DIAPHRAMS

**STAGE 3 (IL 394 NORTHBOUND) (OVERNIGHT WORK ONLY)**

- SET UP NORTHBOUND OUTSIDE LANE CLOSURE PER MOT PLAN.
- SET TEMPORARY SHORING
- REPAIR AND STRAIGHTEN BEAM
- REMOVE MOT (HIGHWAY STANDARD 701428)



9.0" RADIUS, 2" BORDER

LEGEND & LETTERING = WHITE  
BACKGROUND = GREEN

PAID FOR AS TEMPORARY INFORMATION SIGNING.

ERECT TEMPORARY INFORMATION SIGN ON WOOD POSTS BEHIND EXISTING BARRIER WALL AT LOCATION AS DIRECTED BY THE ENGINEER. SIGN SHALL BE IN PLACE FOR THE ENTIRE DURATION UNTIL THE OVERHEAD BRIDGE MOUNTED SIGN OVER SOUTHBOUND IL394 IS REINSTALLED.

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	DATE - 08/11/2021	REVISED -

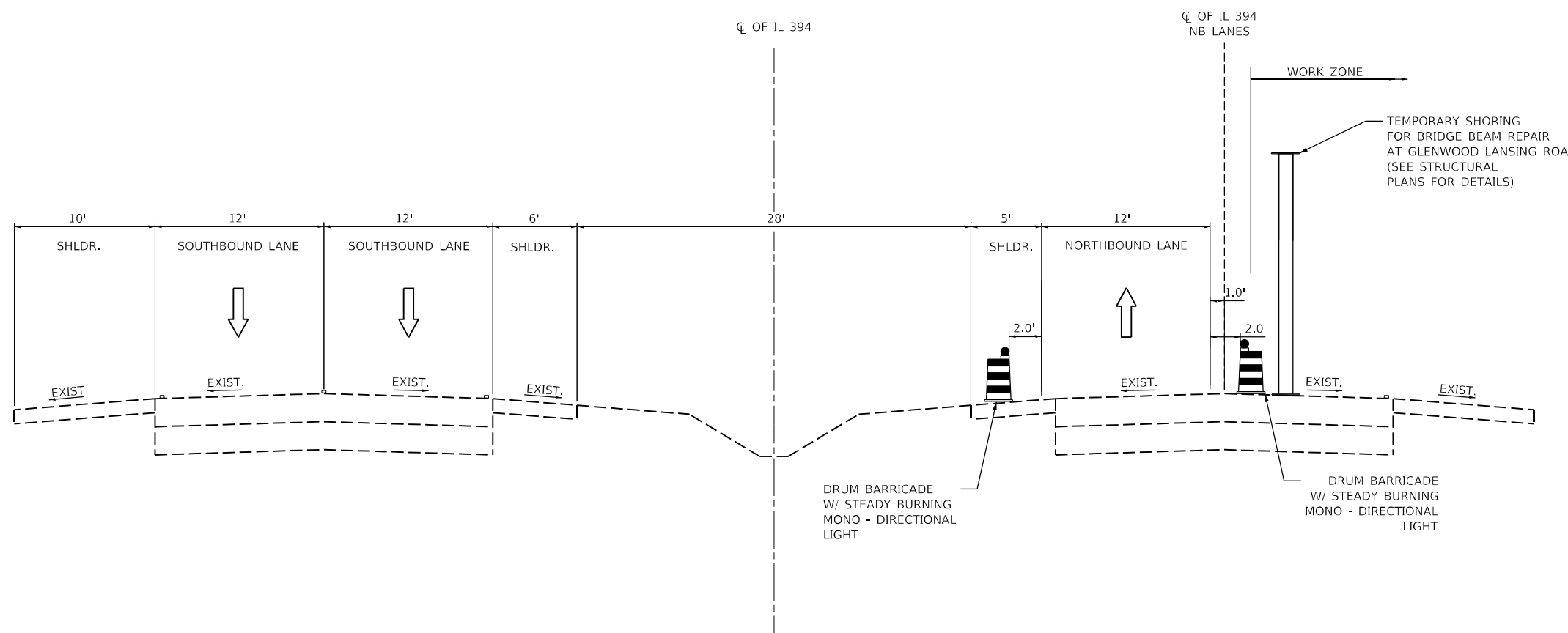
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD LANSING ROAD  
MAINTENANCE OF TRAFFIC GENERAL NOTES**

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

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	8
CONTRACT NO.62M28				
ILLINOIS FED. AID PROJECT X				





SUMMARY OF WORK:  
 - IMPLEMENT MAINTENANCE OF TRAFFIC PLAN  
 - INSTALL TEMPORARY SHORING  
 - REPAIR AND STRAIGHTEN BRIDGE BEAM

**MOT STAGE 3 - TYPICAL SECTION**

AT IL 394  
 (LOOKING NORTH)

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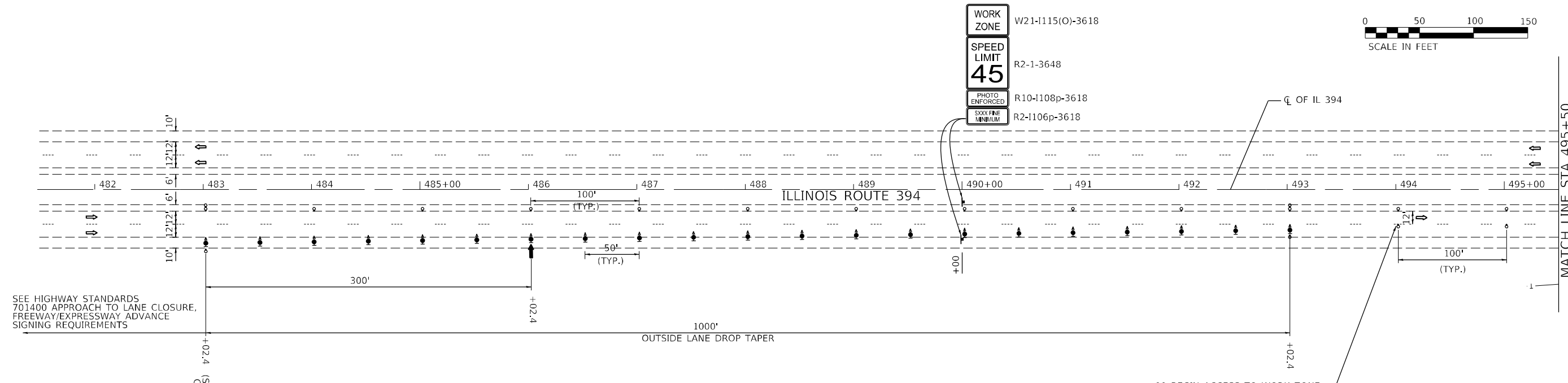
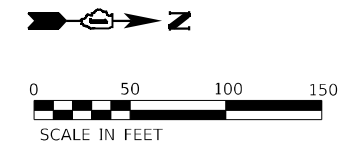
USER NAME = ssundaresan	DESIGNED - KAC	REVISED -
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	DATE - 08/11/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
 SUGGESTED MAINTENANCE OF TRAFFIC - TYPICAL SECTION (IL 394)**

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

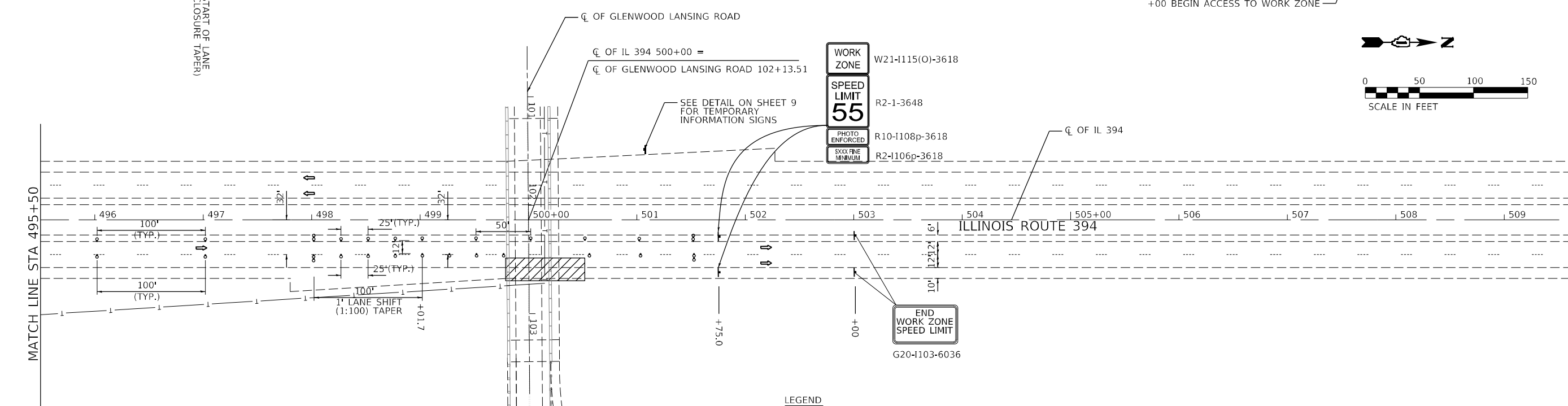
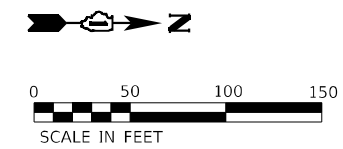
FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	9
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	



SEE HIGHWAY STANDARDS  
701400 APPROACH TO LANE CLOSURE,  
FREEWAY/EXPRESSWAY ADVANCE  
SIGNING REQUIREMENTS

1000'  
OUTSIDE LANE DROP TAPER

+00 BEGIN ACCESS TO WORK ZONE



SEE DETAIL ON SHEET 9  
FOR TEMPORARY  
INFORMATION SIGNS

END  
WORK ZONE  
SPEED LIMIT  
G20-1103-6036

LEGEND

- DIRECTION OF TRAFFIC
- SIGN
- DIRECTION INDICATOR  
BARRICADE WITH STEADY  
BURNING MONODIRECTIONAL  
LIGHT
- ARROW BOARD
- TYPE II BARRICADE WITH STEADY BURN  
MONODIRECTIONAL LIGHT
- WORK ZONE

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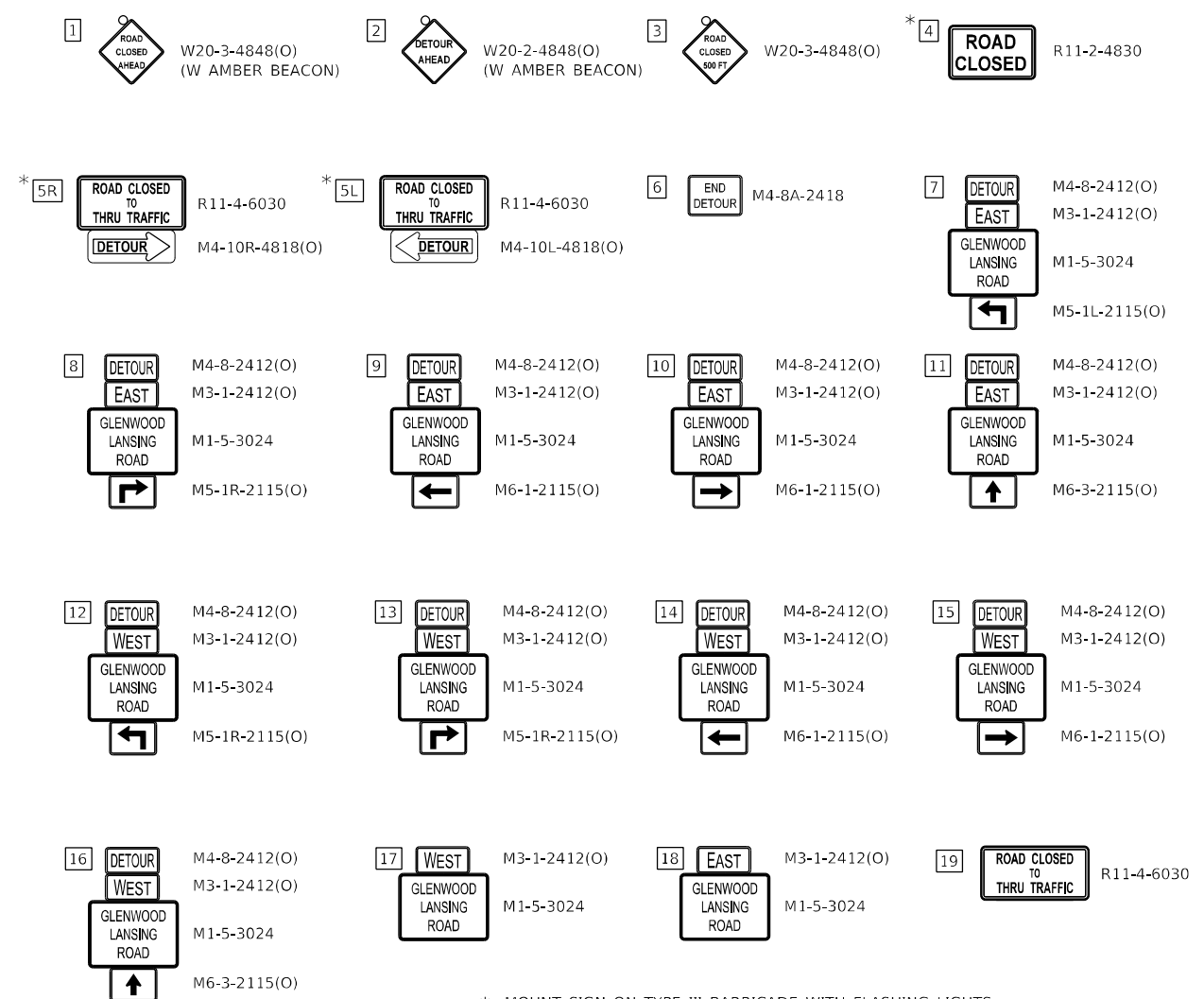
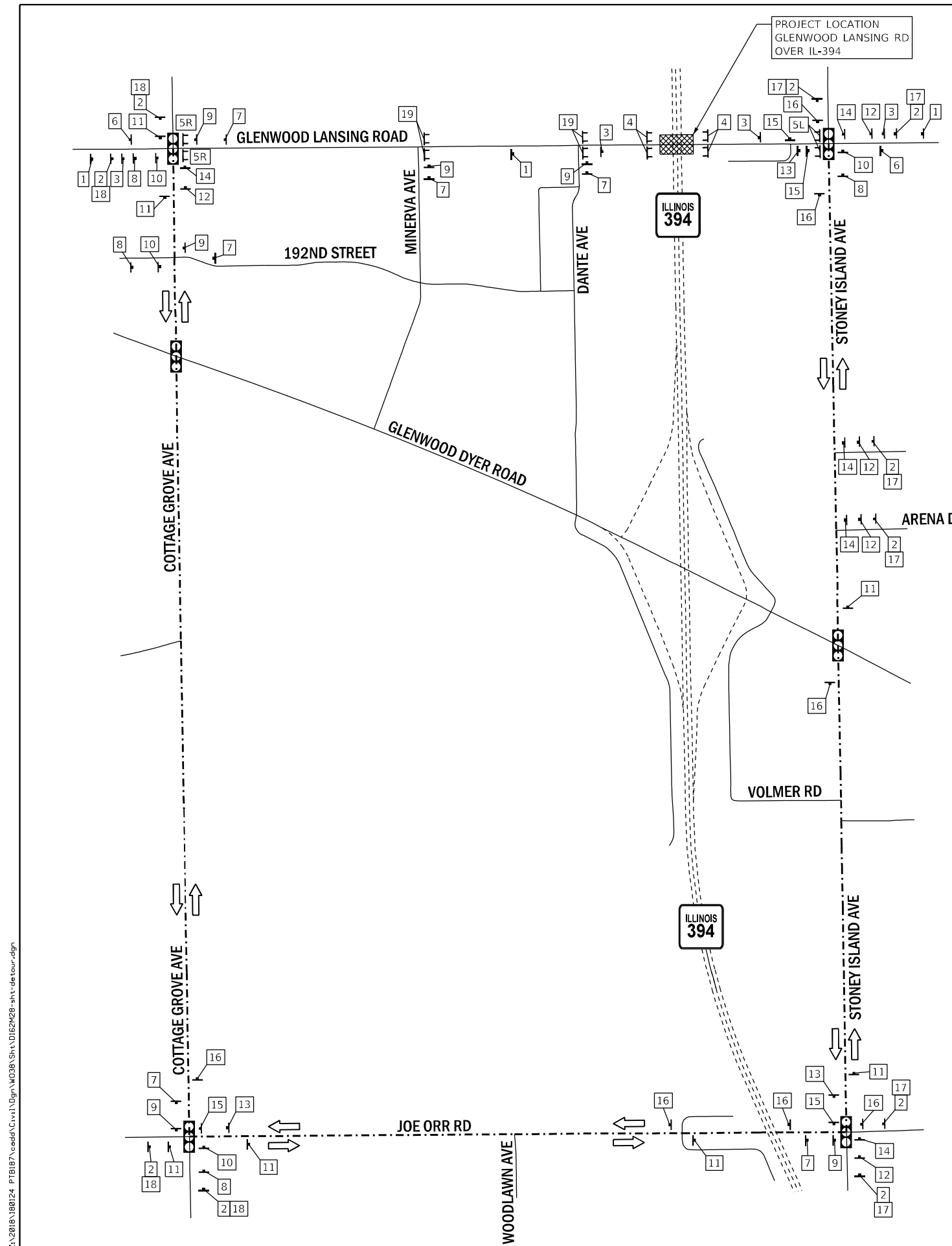
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
SUGGESTED MAINTENANCE OF TRAFFIC - PLAN (IL 394)**

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

FAP RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 10
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	



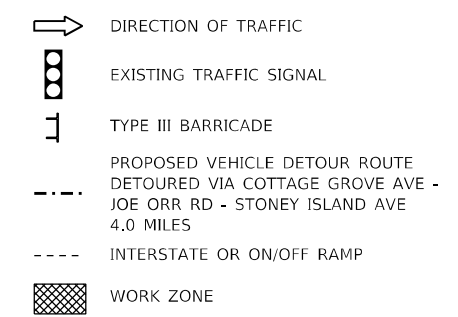


\* MOUNT SIGN ON TYPE III BARRICADE WITH FLASHING LIGHTS.

**NOTES**

1. TYPE III BARRICADES SHALL BE PLACED IN ADVANCE OF THE LIMITS OF CONSTRUCTION.
  2. TEMPORARY TRAFFIC SIGNAL TIMING REQUIRED FOR THE INTERSECTIONS AT:
  3. - GLENWOOD LANSING ROAD AT COTTAGE GROVE AVENUE  
 - GLENWOOD DYER ROAD AT COTTAGE GROVE AVENUE  
 - COTTAGE GROVE AVENUE AT JOE ORR ROAD  
 - JOE ORR ROAD AT STONEY ISLAND AVENUE  
 - STONEY ISLAND AVENUE AT GLENWOOD DYER ROAD  
 - STONEY ISLAND AVENUE AT GLENWOOD LANSING ROAD
- REFER TO DISTRICT STANDARD TC-21 FOR SIGN SPACING DETAILS.

**LEGEND**



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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
 DETOUR EXHIBIT**

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

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	11
CONTRACT NO.			62M28	
ILLINOIS FED. AID PROJECT				

**EROSION CONTROL AND LANDSCAPING GENERAL NOTES**

1. ALL CONTROL MEASURES NECESSARY MUST MEET THE MINIMUM REQUIREMENTS AS DESCRIBED IN THE LATEST EROSION AND SEDIMENT CONTROL FIELD GUIDE FOR CONSTRUCTION INSPECTION BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION. ADDITIONAL DETAILS AND BMPs ARE ALSO AVAILABLE AND CAN BE UTILIZED AS SHOWN IN THE ILLINOIS URBAN MANUAL, REVISED TO LATEST VERSION AS AMENDED. ALL ESC MEASURES WILL BE MAINTAINED IN ACCORDANCE WITH THE IDOT EROSION AND SEDIMENT CONTROL FIELD GUIDE FOR CONSTRUCTION INSPECTION AND IDOT'S BEST MANAGEMENT PRACTICES - MAINTENANCE GUIDE: (HTTP://WWW.IDOT.ILLINOIS.GOV/TRANSPORTATION-SYSTEM/ENVIRONMENT/EROSION-AND-SEDIMENT-CONTROL).
2. ALL THE SOIL EROSION AND SEDIMENT CONTROL FEATURES MUST BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF UPLAND DISTURBANCE. SOIL DISTURBANCE MUST BE PHASED OR ENACTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES MUST CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY AND/OR PERMANENT MEASURES.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SEDIMENT TRANSPORT OFF THE SITE IS REDUCED BY A COMBINATION OF MINIMIZATION OF EROSION AT THE SOURCE AND THE INSTALLATION OF SPECIFIC MEASURES TO CONTROL OR REDUCE THE TRANSPORT OF SEDIMENT. A COPY OF THE EROSION AND SEDIMENT CONTROL SCHEDULE BEING IMPLEMENTED BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER AND WILL BE ON THE CONSTRUCTION SITE AT ALL TIMES.
4. ALL RUNOFF ORIGINATING ON DISTURBED AREAS ASSOCIATED WITH THIS PROJECT WILL PASS THROUGH ONE OR MORE MEASURES THAT WILL MINIMIZE THE OFF-SITE SEDIMENT IMPACTS OF THE CONSTRUCTION ACTIVITIES.
5. DISTURBED AREAS ARE TO BE PROTECTED FROM EROSION IN A TIMELY MANNER. UPON COMPLETION OF GRADING OR CONSTRUCTION ACTIVITY, THE AREA WILL BE STABILIZED (USING PERMANENT MEASURES WHEN POSSIBLE) WITHIN ONE ( 1) CALENDAR DAY.
6. THE CONTRACTOR MUST CLEAN UP, GRADE THE WORK AREA AS THE PROJECT PROGRESSES AND INSTALL EROSION PROTECTION TO ELIMINATE THE CONCENTRATION OF RUNOFF, OR MUST INSTALL APPROPRIATE SEDIMENT CONTROL DEVICES TO TRAP SEDIMENT. PAVEMENT MUST BE CLEANED DAILY OR AS NECESSARY TO REMOVE EARTHEN MATERIAL TO THE SATISFACTION OF THE ENGINEER OR AUTHORIZED IDOT PERSONNEL.
7. THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR MAINTENANCE OF ALL SOIL EROSION CONTROL DURING CONSTRUCTION. THE CONTRACTOR SHALL DESIGNATE ONE OF HIS EMPLOYEES TO BE RESPONSIBLE FOR IMPLEMENTATION OF THE EROSION AND SEDIMENT CONTROL PLAN ON ALL DISTURBED AREAS THROUGHOUT THE PROJECT.
8. THE CONTRACTOR'S REPRESENTATIVE HAS TO BE KNOWLEDGEABLE ABOUT INSTALLATION AND MAINTENANCE OF THE REQUIRED MEASURES AND HAVE TAKEN AN ILLINOIS DEPARTMENT OF TRANSPORTATION OR APPROVED EQUAL EROSION AND SEDIMENT CONTROL COURSE. THIS PERSON SHALL HAVE THE AUTHORITY TO CARRY OUT THE IMPLEMENTATION OF ANY INSTRUCTION CONCERNING THE EROSION AND SEDIMENT CONTROL PLAN PROVIDED BY THE ENGINEER. THIS INDIVIDUAL AND THE ENGINEER MUST MAKE INSPECTIONS A MINIMUM OF ONCE EVERY SEVEN DAYS OF THE FOLLOWING:
  - A. DISTURBED AREAS OF THE PROJECT SITE THAT HAVE NOT BEEN FULLY STABILIZED.
  - B. STRUCTURAL CONTROL MEASURES (SUCH AS PERIMETER EROSION BARRIER, ETC.)
  - C. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE PROJECT SITE
  - D. AN ADDITIONAL INSPECTION OF THE ITEMS LISTED ABOVE MUST BE MADE WITHIN 24-HOURS AFTER A 24-HOUR RAINFALL OR EQUIVALENT SNOWFALL EVENT GREATER THAN 0.5 INCH THAN 0.5-INCH. DURING WINTER MONTHS, ALL MEASURES MUST BE CHECKED BY THE CONTRACTOR AFTER EACH SIGNIFICANT SNOWMELT.
9. ALL THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED DURING THE CONSTRUCTION SEASON, AS WELL AS OVER THE WINTER SHUTDOWN PERIOD AND OTHER DAYS WHEN THE PROJECT IS CLOSED DOWN FOR A LONGER DURATION. ANY CONTROL MEASURES FILLED MORE THAN 75% MUST BE CLEANED AND RESET AND THESE SPOILS REMOVED TO AN APPROVED SITE.
10. THE CONTRACTOR'S REPRESENTATIVE AND THE ENGINEER MUST KEEP A WRITTEN REPORT SUMMARIZING THE REQUIRED INSPECTIONS. THE REPORTS MUST BE KEPT AT THE SITE DURING CONSTRUCTION. THE REPORT MUST ALSO BE RETAINED FOR THREE YEARS FROM THE DATE THE SITE IS FINALLY STABILIZED.
11. ANY SEDIMENT LADEN DEWATERING DISCHARGE MUST BE DIRECTED TO AN APPROVED SEDIMENT TRAPPING CONTROL MEASURE PRIOR TO RELEASE FROM THE PROJECT SITE.
12. NO WORK IS ALLOWED BEYOND THE PERMITTED AREA. ANY WORK WITHIN A CREEK OR DITCH CAPABLE OF CONVEYING WATER MUST BE CONDUCTED IN THE DRY. PROVISIONS MUST BE MADE TO BYPASS PUMP OR DEWATER ANY AREAS IN WHICH WORK WILL BE CONDUCTED. IN HIGH FLOW CHANNELS WHERE DEWATERING IS NOT POSSIBLE OR PRACTICAL, SILT FENCE OR SEDIMENT CURTAINS MAY BE INSTALLED PARALLEL TO THE STREAM BANK. IN NO CASE WILL THE CURTAINS BE INSTALLED PERPENDICULAR TO THE FLOW. DEWATERING MUST BE DISCHARGED TO A STABLE, NON-ERODIBLE SURFACE AND IN-STREAM WORK BARRIERS MUST BE COMPOSED OF NON-ERODIBLE MATERIAL.
13. THE CONTRACTOR MUST COOPERATE WITH THE ENGINEER AND HIS/HER REPRESENTATIVE WHO WILL MAKE SITE VISITS TO REVIEW THE COMPLIANCE OF THE PLANS IN THE FIELD AND AUDIT IF NECESSARY. THE CONTRACTOR MUST PREPARE THE LOGS AND RECORDS WHEN REQUIRED AND SUBMIT TO IDOT AND/OR APPROPRIATE AGENCIES.
14. STABILIZATION MEASURES SHALL BE INITIATED IMMEDIATELY WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN ONE (1) DAY AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED ON ALL DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION WILL NOT OCCUR FOR A PERIOD OF FOURTEEN (14) OR MORE CALENDAR DAYS.
15. ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES, WHICH OBSTRUCTS THE NATURAL FLOW OF WATER, SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. PRIOR TO ACCEPTANCE OF THE IMPROVEMENT, ALL DRAINAGE STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT.
16. STABILIZATION MEASURES SHALL BE INITIATED IMMEDIATELY WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN ONE (1) DAY AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED ON ALL DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION WILL NOT OCCUR FOR A PERIOD OF FOURTEEN ( 14) OR MORE CALENDAR DAYS.
17. EROSION CONTROL ITEMS ARE CONSIDERED TO BE A HIGH PRIORITY ON THIS CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE ENGINEER.

**HIGHWAY STANDARD**

280001 TEMPORARY EROSION CONTROL SYSTEMS

FILE NAME = Z:\2018\181310124\_P1B187\cadd\Civil\p1\p1\W038\SIN\ID162M28\ER-ESC-controlnotes.dgn



**WBK ENGINEERING LLC**  
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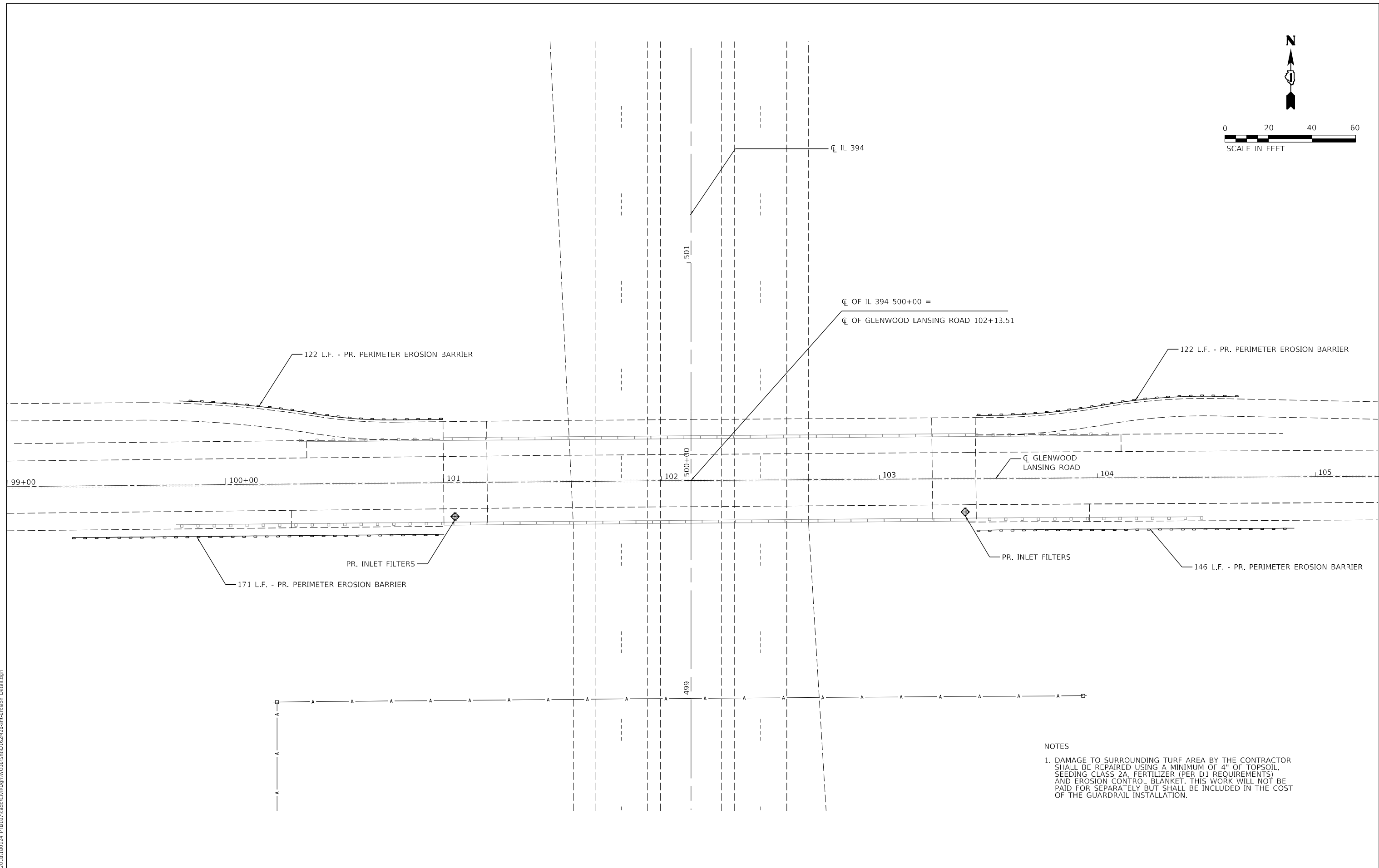
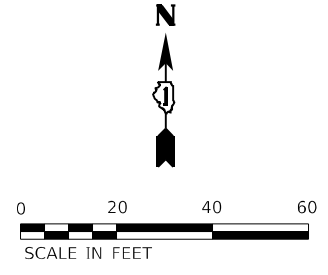
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
EROSION AND SEDIMENT CONTROL NOTES**

SCALE: SHEET 1 OF 3 SHEETS STA. TO STA.

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	12
CONTRACT NO.			62M28	
ILLINOIS		FED. AID PROJECT		



NOTES  
 1. DAMAGE TO SURROUNDING TURF AREA BY THE CONTRACTOR SHALL BE REPAIRED USING A MINIMUM OF 4" OF TOPSOIL, SEEDING CLASS 2A, FERTILIZER (PER DJ REQUIREMENTS) AND EROSION CONTROL BLANKET. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE GUARDRAIL INSTALLATION.

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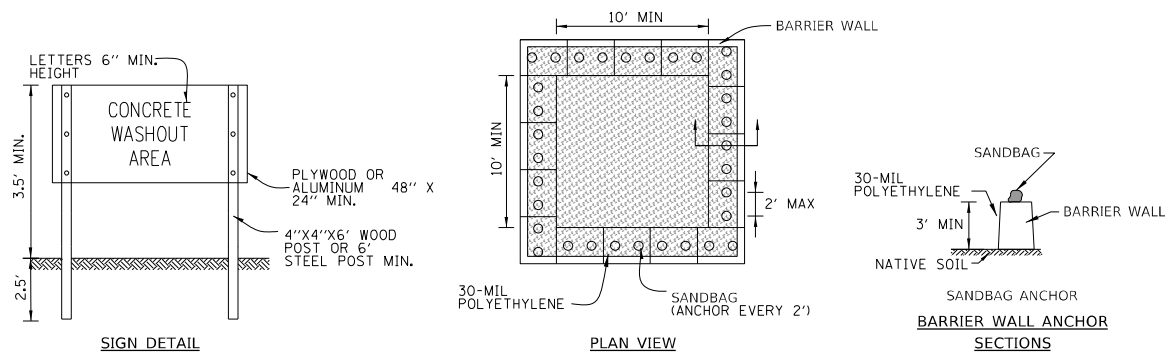
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
 EROSION AND SEDIMENT CONTROL PLAN**

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

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	13
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	

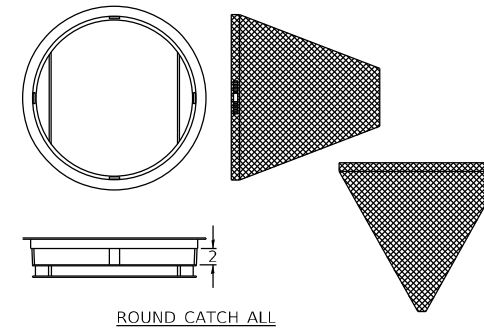


WASHOUT NOTES:

1. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND/OR SLURRY AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION.
2. FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.

**TEMPORARY CONCRETE  
WASHOUT FACILITY - BARRIER WALL**

STD. IUM-654BW  
(TEMPORARY CONCRETE WASHOUT)



GENERAL NOTES:

FRAME: TOP FLANGE FABRICATED FROM 11#4"x11#4"x1#8" ANGLE. BASE RIM FABRICATED FROM 11#2"x1#2"x1#8" CHANNEL. HANDELS AND SUSPENSION BRACKETS FABRICATED FROM 11#4"x1#4" FLAT STOCK. ALL STEEL CONFORMING TO ASTM-A36.

SEDIMENT BAG: BAG FABRICATED FROM 4 OZ./SQ.YD. NON-WOVEN POLYPROPYLENE GEOTEXTILE REINFORCED WITH POLYESTER MESH. BAG SECURED TO BASE RIM WITH A STAINLESS STEEL BAND AND LOCK.

**INLET PROTECTION DETAIL**

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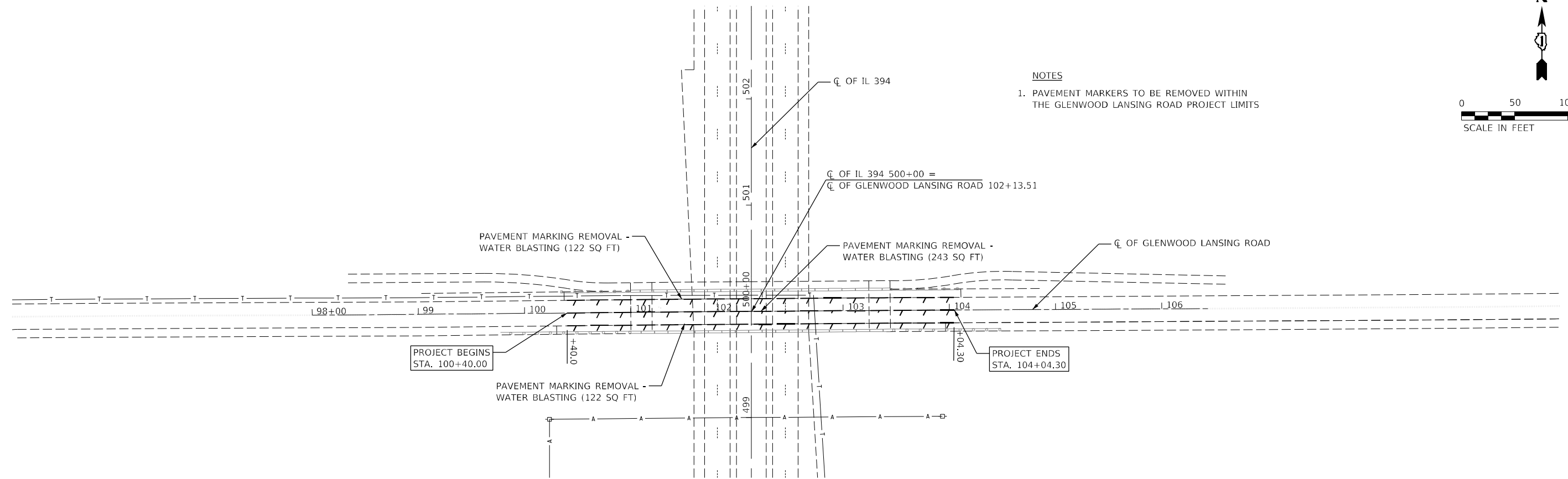
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<b>IL 394 AT GLENWOOD-LANSING ROAD</b>	
<b>EROSION AND SEDIMENT CONTROL DETAILS</b>	
SCALE:	SHEET 3 OF 3 SHEETS STA. TO STA.

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	14
CONTRACT NO.			62M28	
ILLINOIS FED. AID PROJECT				

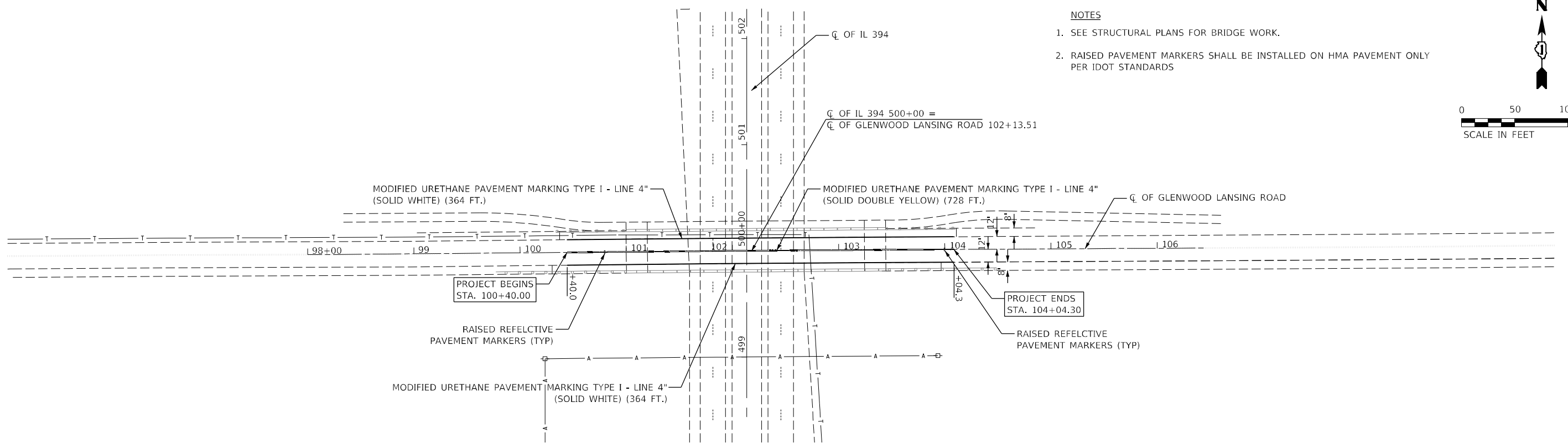


### EXISTING REMOVAL PLAN



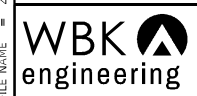
- NOTES**
1. PAVEMENT MARKERS TO BE REMOVED WITHIN THE GLENWOOD LANSING ROAD PROJECT LIMITS

### PROPOSED PAVEMENT MARKING PLAN



- NOTES**
1. SEE STRUCTURAL PLANS FOR BRIDGE WORK.
  2. RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON HMA PAVEMENT ONLY PER IDOT STANDARDS

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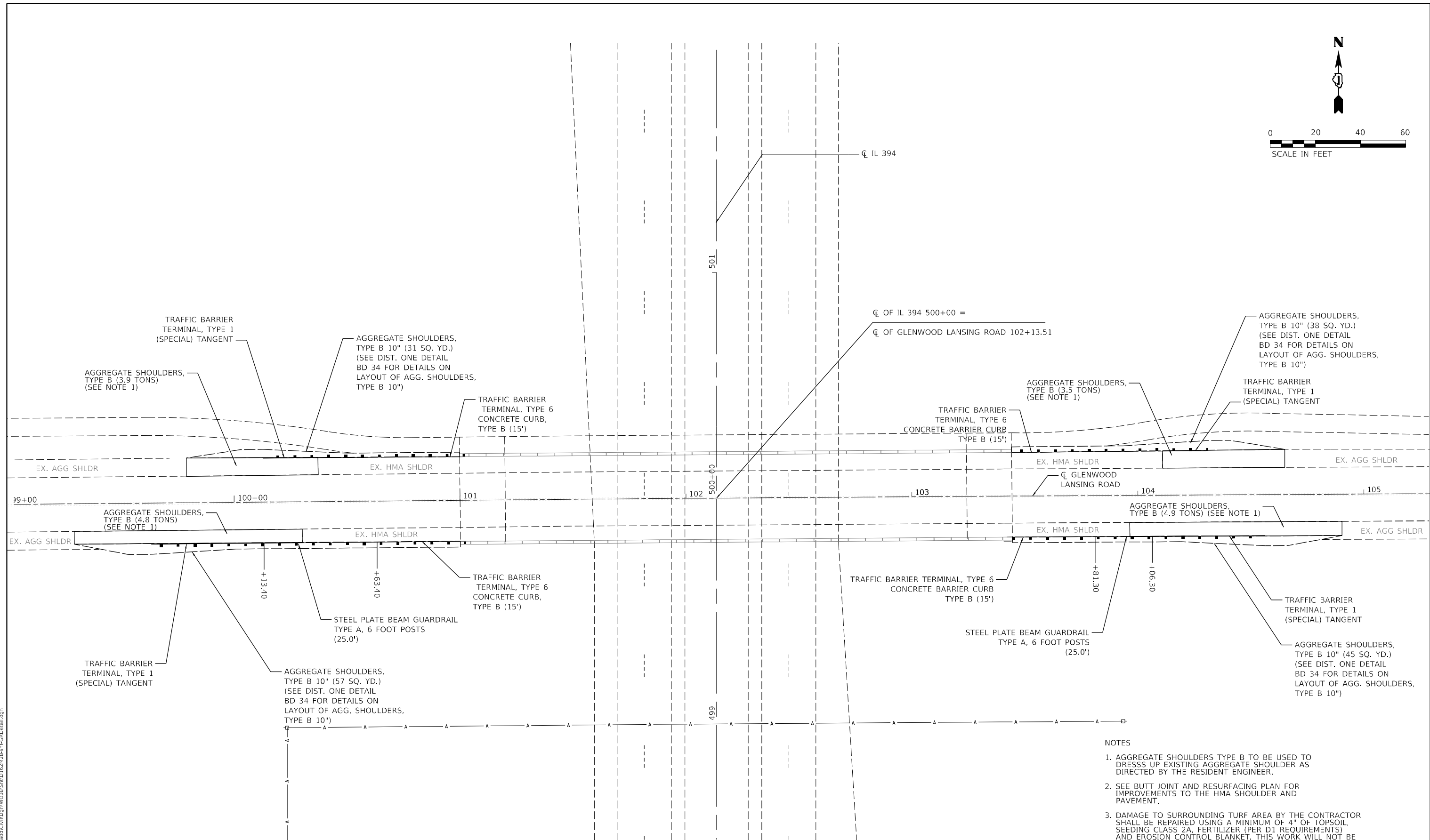
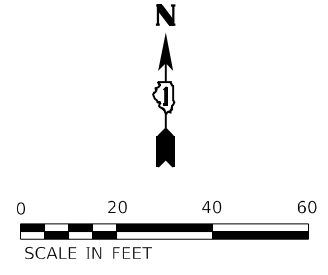
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 394 AT GLENWOOD-LANSING ROAD  
 PAVEMENT MARKING PLAN**

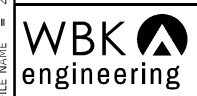
SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	15
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	



- NOTES**
1. AGGREGATE SHOULDERS TYPE B TO BE USED TO DRESS UP EXISTING AGGREGATE SHOULDER AS DIRECTED BY THE RESIDENT ENGINEER.
  2. SEE BUTT JOINT AND RESURFACING PLAN FOR IMPROVEMENTS TO THE HMA SHOULDER AND PAVEMENT.
  3. DAMAGE TO SURROUNDING TURF AREA BY THE CONTRACTOR SHALL BE REPAIRED USING A MINIMUM OF 4" OF TOPSOIL, SEEDING CLASS 2A, FERTILIZER (PER D1 REQUIREMENTS) AND EROSION CONTROL BLANKET. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE GUARDRAIL INSTALLATION.

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

**IL 394 AT GLENWOOD-LANSING ROAD**  
**GUARDRAIL DETAIL PLAN**

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

FAP RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 16
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M28	

Benchmark: "C" Cut in West Pier of Glenwood-Lansing Road Bridge, Elev. 617.63.

Existing Structure: The existing structure was constructed in 1954, widened and re-decked in 1991. The north facial girder between Piers 1 and 2 was repaired in 2007. The bridge consists of four spans measuring 206'-3" back-to-back abutments and 54'-2" out-to-out deck with a 24-ft wide travel roadway and two 8-ft shoulders and a 10-ft bike path on the northside. The superstructure consists of a 7.5-in reinforced concrete composite deck on continuous wide flange steel beams. The substructure consists of abutments and frame-piers founded on concrete piles.

Traffic is to be detoured during construction. Refer to MOT plans for IL 394 traffic control during beam impact damage repair as well as SB sign structure removal and re-installation.

No Salvage.

**SCOPE OF WORK**

1. Install Temporary Protective Shielding.
2. Remove, modify and re-install existing SB bridge mounted sign structure.
3. Remove and replace parapet ends.
4. Remove and replace a section of north existing parapet and fence.
5. Partial and full depth deck / approach slab repairs.
6. Remove and replace expansion joints.
7. Scarification ¼ inch of existing deck and approach slab.
8. Bridge deck and approach slab Latex Concrete Overlay 2¼ inch.
9. Bridge deck sawcut grooving.
10. Clean and reseal relief joints.
11. Concrete sealer for side path and bridge parapets.
12. Clean bridge scuppers and approach drainage structures.
13. Structural repair of concrete for piers / abutments.
14. Remove and replace nine (9) steel diaphragms (W. Abut. btwn. Beams 1 & 5 and 7 & 8; E. Abut. btwn. Beams 1 & 2, 3 & 5, and 7 & 8).
15. Beam end repairs (W. Abut. Beams 2, 4, and 8; E. Abut. Beams 1, 4, and 8).
16. Remove and replace all existing bearings at West and East abutments.
17. Beam Impact Damage Repair (Beam 10 in Span 3).

**INDEX OF SHEETS**

1. General Plan and Elevation
2. General Data
3. Deck and Approach Slabs Repair Plan
4. Preformed Joint Strip Seal - Sidewalk
5. Parapet Repair and Modification
- 5A. South Parapet Repair and Modification
6. Bridge Fence Railing, Parapet Mounted
7. Abutment Repair Details
8. Pier 1 Repair Details
9. Pier 2 Repair Details
10. Pier 3 Repair Details
11. Beam End Repair and Diaphragm Replacement
12. Bearing Replacement at Abutments (at Beams 1 Thru 8)
13. Bearing Replacement at Abutments (at Beams 9 & 10)
14. Beam Straightening Details
15. Bridge Mounted Sign Structure Modification
- 16-25. Abbreviated Existing Plans (For Information Only)

**DESIGN SPECIFICATIONS (EXIST.)**

1989 AASHTO Specifications

**DESIGN STRESSES**

FIELD UNITS (EXIST. - 1954)

$f_s = 18,000$  psi (Structural Steel)  
 $f_s = 20,000$  psi (Reinforcement)

FIELD UNITS (EXIST. - 1991)

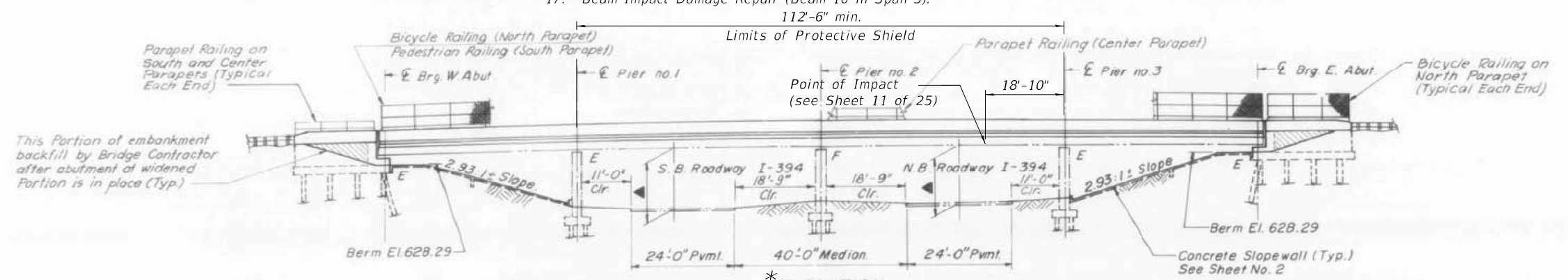
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_s = 20,000$  psi (Structural Steel)

FIELD UNITS (PROP.)

$f'_c = 4,000$  psi (Superstructure)  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 50,000$  psi (M270 Grade 50)  
 $f_y = 36,000$  psi (M270 Grade 36 - Scupper and Drainage Structures)

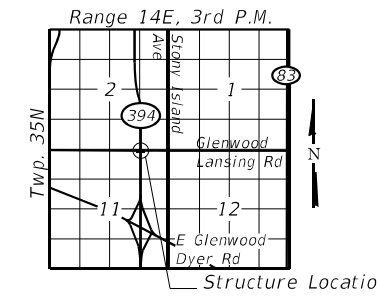
**LOADING HS 20-44 (EXIST.)**

(No Allowance for Future Wearing Surface)

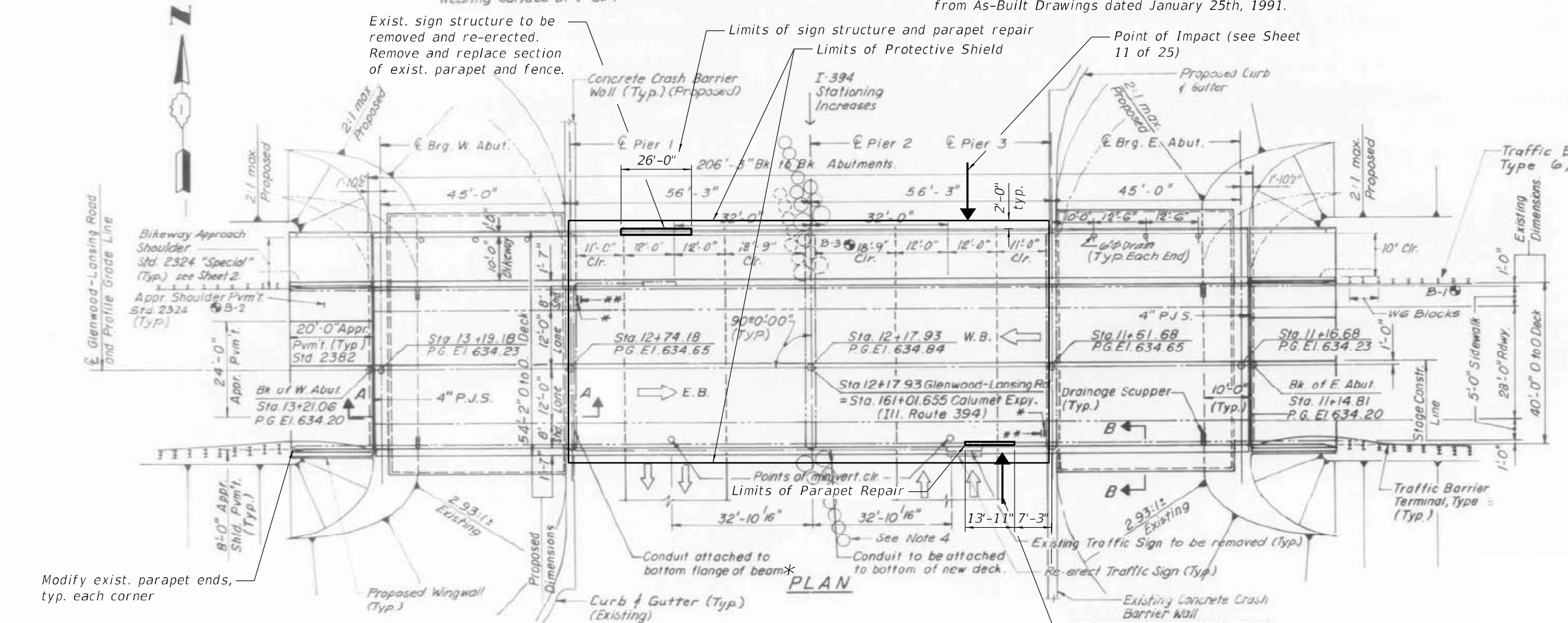


**ELEVATION**

\*Existing Benchmark, General Plan and Elevation taken from As-Built Drawings dated January 25th, 1991.



**LOCATION SKETCH**



**PLAN**



SIGNED: *J. Zuo*  
 DATE: 09/29/2021  
 LICENSE EXPIRES: 11/30/2022

**GENERAL PLAN & ELEVATION**  
**GLENWOOD LANSING ROAD OVER IL 394**  
**F.A.P. ROUTE 332**  
**SECTION 2020-168-BR**  
**COOK COUNTY**  
**STATION 12+17.93**  
**STRUCTURE NO. 016-0918**

Note: See Sheet 12 of 25 for shoring reactions.

FILE NAME: Z:\2018\180124\_PTB187\cadd\Structural\Drawn\MO\_381\001\_0160918-GPE.dgn

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

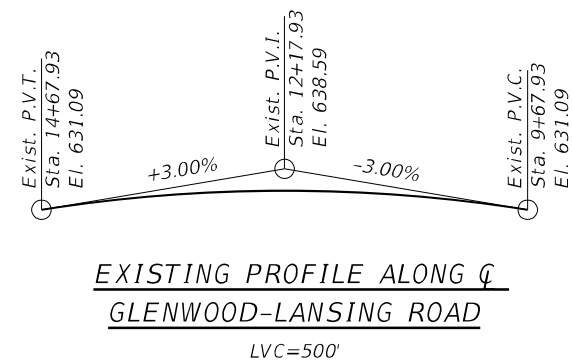
**GENERAL PLAN AND ELEVATION**  
**STRUCTURE NO. 016-0918**

SHEET NO. 1 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	17
CONTRACT NO. 62M28				
ILLINOIS   FED. AID PROJECT				

**GENERAL NOTES**

- The original bridge drawings for S.N. 016-0918 dated 1954 and 1991 will be made available to the Contractor upon request.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify all 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.
- Joint opening shall be adjusted according to Article 520.04 of the Standard Specifications at an ambient temperature other than 50 degrees F.
- No field welding is permitted except as specified in the contract documents.
- All structural steel shall be AASHTO M270 Grade 50 except for drainage structure and scupper adjusting steel, which shall be AASHTO M270 Grade 36.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Any type of containment and disposal needed shall not be paid for separately but included in the cost of the associated work.
- All new structural steel shall be galvanized according to the Special Provision for "Hot Dip Galvanizing for Structural Steel."
- Fasteners shall be ASTM F3125, Gd 325 Type 1 and hot dip galvanized. Bolts  $\frac{3}{4}$ "  $\varnothing$ , holes  $1\frac{1}{8}$ "  $\varnothing$ , unless otherwise noted.
- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new latex concrete overlay, 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 overlay.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of  $\frac{1}{8}$  in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
- Protective Coat shall be applied to the new Latex Concrete Overlay.

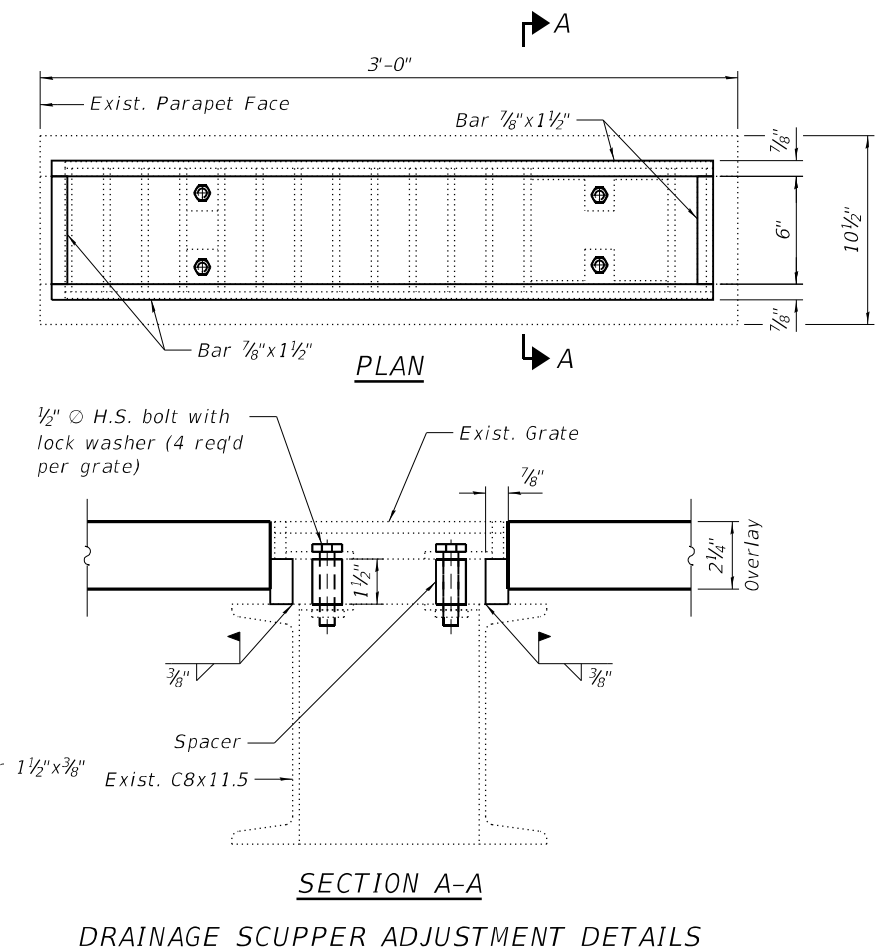
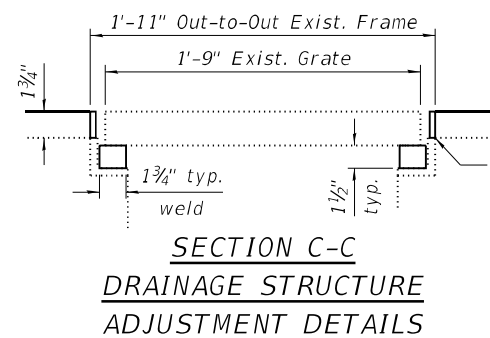
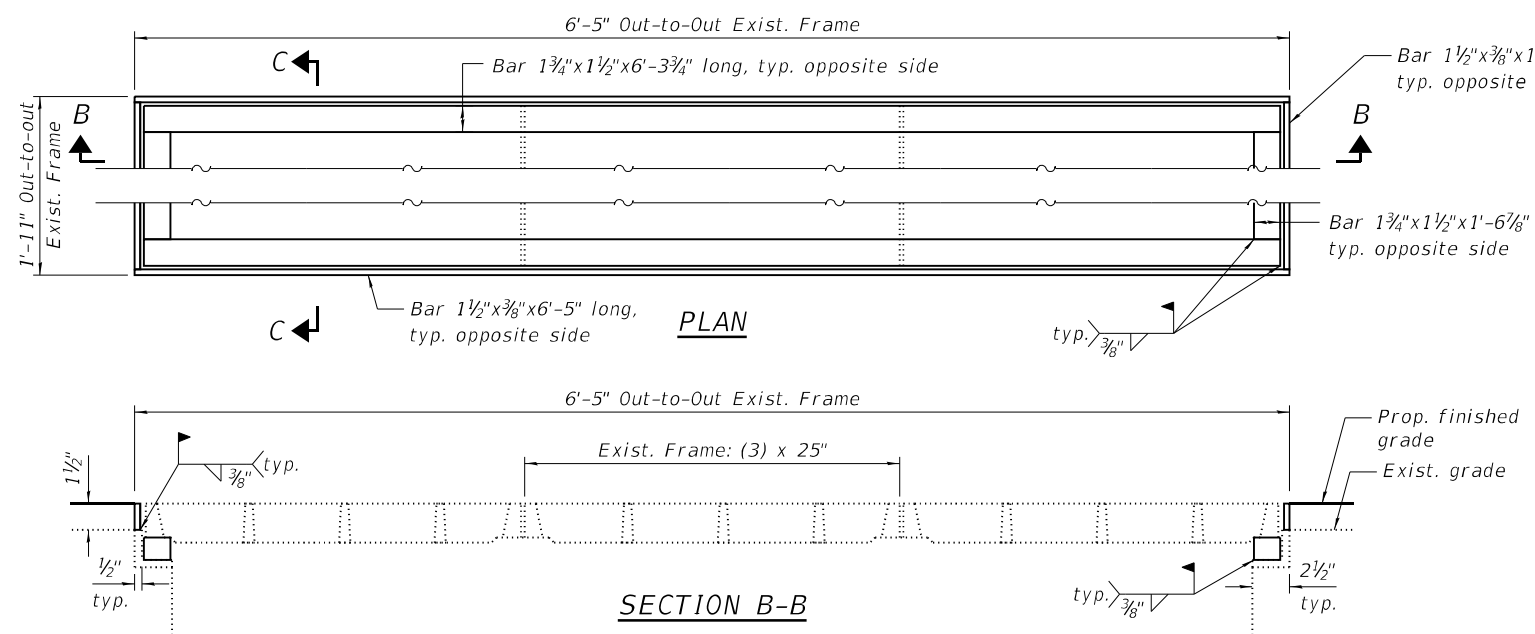


**DRAINAGE SCUPPER AND DRAINAGE STRUCTURE ADJUSTMENT NOTES**

All structural steel shall conform to AASHTO Classification M270 Gr. 36 and shall be galvanized.  
 All bolts shall be AASHTO M164, Type I and hot-dip galvanized.  
 The Contractor shall ensure that no damage is done to the existing grates to be reused.  
 Shop plans for the proposed adjusting drainage structure and scupper frame shall be submitted for approval prior to fabrication.  
 Cost of all labor and materials to remove existing grates, clean existing steel, install adjusting frames and reinstall grates is included in the cost per unit each for Drainage Scuppers (or Structures) to be Adjusted.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Protective Shield	Sq. Yd.	728		728
Concrete Removal	Cu. Yd.	12.4		12.4
Concrete Superstructures	Cu. Yd.	13.4		13.4
Bridge Deck Grooving	Sq. Yd.	1,028		1,028
Protective Coat	Sq. Yd.	1,084		1,084
Furnishing and Erecting Structural Steel	Pound	6,485		6,485
Reinforcement Bars, Epoxy Coated	Pound	1,210		1,210
Bridge Fence Railing	Foot	26		26
Preformed Joint Strip Seal	Foot	109		109
Elastomeric Bearing Assembly, Type II	Each	20		20
Anchor Bolts, 1"	Each	40		40
Concrete Sealer	Sq. Ft.	5,679		5,679
Epoxy Crack Injection	Foot		20	20
Cleaning Bridge Scuppers and Downspouts	Each	4		4
Clean & Reseal Relief Joint	Foot	50		50
Remove and Reerect Overhead Sign Structure-Bridge Mounted, Special	Each	1		1
Jack and Remove Existing Bearings	Each	20		20
Structural Steel Removal	Pound	2,263		2,263
Structural Steel Repair	Pound	1,405		1,405
Beam Straightening	L Sum	1		1
Bridge Deck Latex Concrete Overlay, 2 1/4 Inches	Sq. Yd.	1,084		1,084
Cleaning Bridge Seats	Sq. Ft.		285	285
Bridge Deck Scarification 3/4"	Sq. Yd.	1,084		1,084
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.		282	282
Structural Repair of Concrete (Depth Greater than 5 Inches)	Sq. Ft.		15	15
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1		1
Drainage Scuppers to be Adjusted	Each	4		4
Drainage Structures to be Adjusted	Each	2		2
Drainage Structures to be Cleaned	Each	2		2



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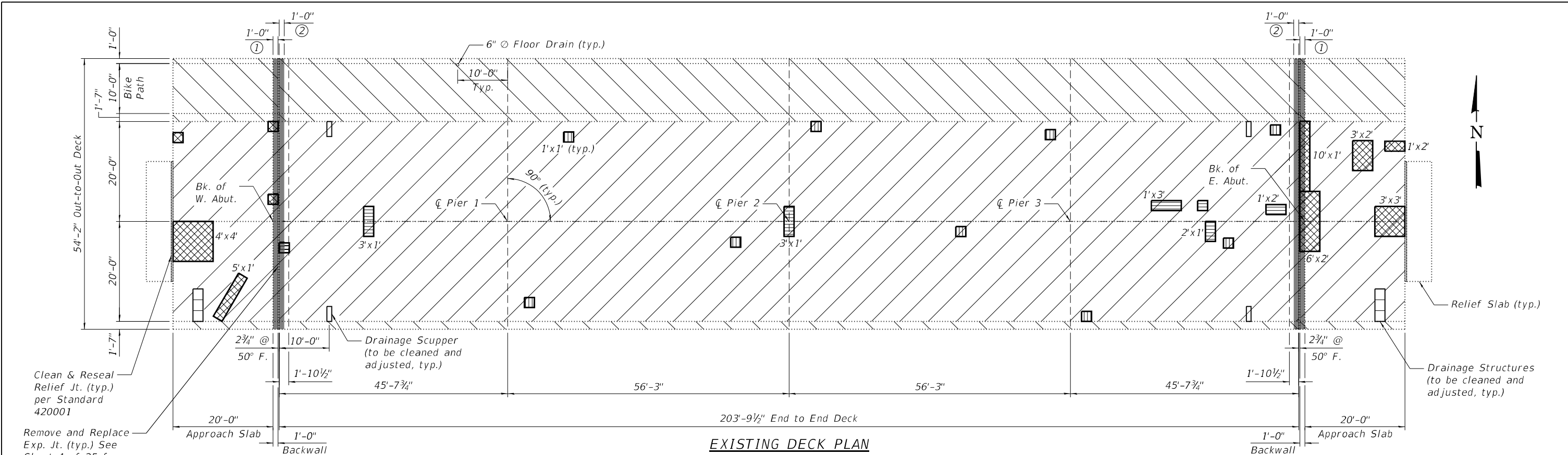
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA  
 STRUCTURE NO. 016-0918**

SHEET NO. 2 OF 25 SHEETS

F.A.P. RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 18
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	



**EXISTING DECK PLAN**

**LEGEND**

- Scarify 3/4"; Bridge Deck Latex Concrete Overlay, 2 1/4" Inches; Protective Coat
- Deck Slab Repair (Full Depth, Type I)
- \*Deck Slab Repair (Partial)
- \*Approach Slab Repair (Partial Depth)
- Apply Concrete Sealer
- Concrete Removal at Deck Joints

\* For information only to assist the Contractor in bidding - See Special Provision for "Bridge Deck Latex Concrete Overlay"

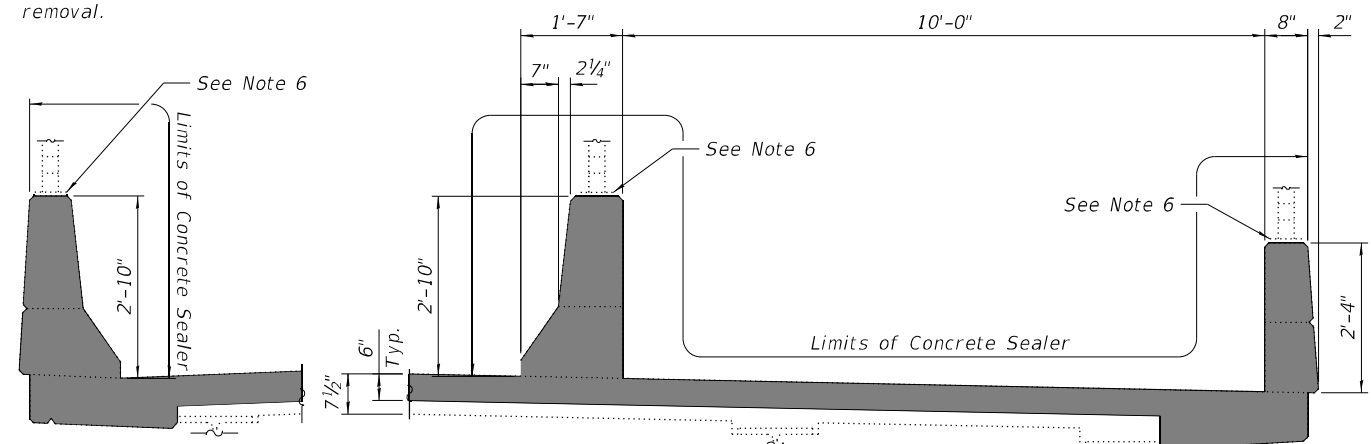
- ① Partial backwall and parapet removal and replacement (see Section at Expansion Joint on Sheet 4 of 25.)
- ② Partial deck and parapet removal and replacement (see Section at Expansion Joint on Sheet 4 of 25.)

**BILL OF MATERIAL**

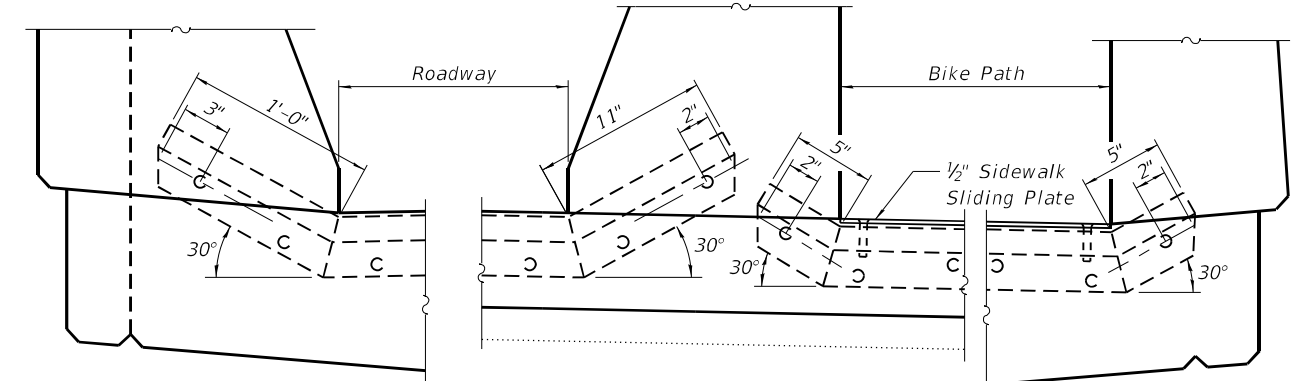
ITEM	UNIT	QUANTITY
Concrete Sealer	Sq. Ft.	5,679
Protective Coat	Sq. Yd.	1,084
Bridge Deck Latex Concrete Overlay, 2 1/4" Inches	Sq. Yd.	1,084
Bridge Deck Scarification 3/4"	Sq. Yd.	1,084
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1

**NOTES:**

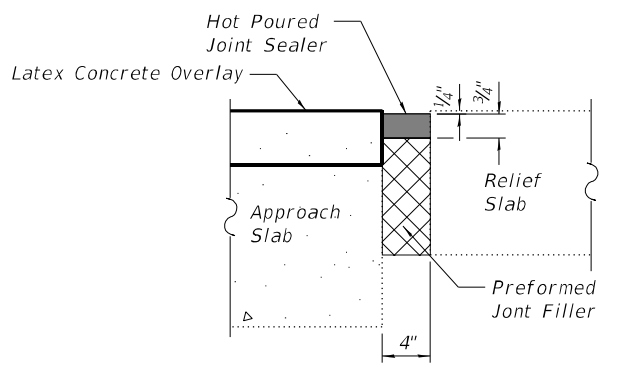
1. For details of expansion joint, see Sheet 4 of 25.
2. For details of approach relief joint, see Section Thru Relief Joint on Sheet 4 of 25.
3. For hatching clarity, repair areas in Existing Deck Plan are shown at a 2:1 scale.
4. For Drainage Structure and Scupper adjustment details, see Sheet 2 of 25.
5. Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-built Plans.
6. When necessary, remove and re-install anchor bolts for the railing posts. Cost shall be included with Concrete Removal.



**SECTION THRU SIDEWALK AND BARRIER (EXIST.)**  
(Showing Limits of Concrete Sealer and Concrete Removal)



**SECTION AT EXPANSION JOINT**



**SECTION THRU RELIEF JOINT**

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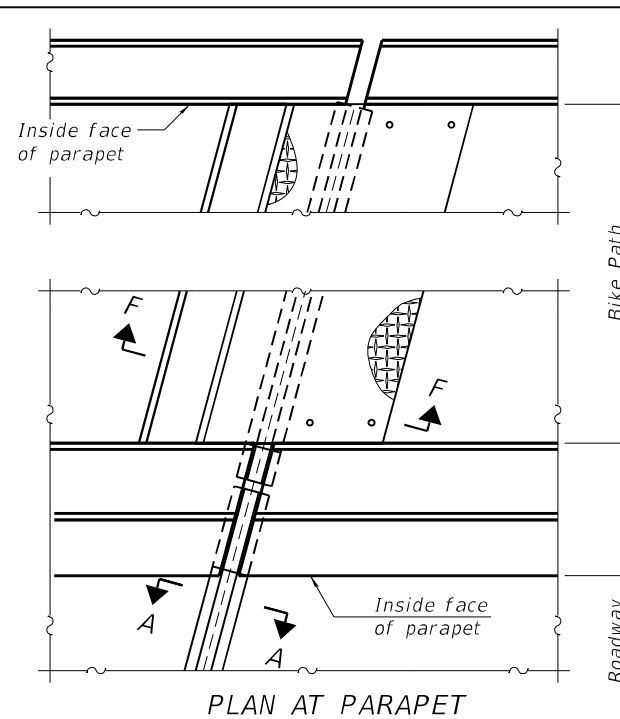
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DEPARTMENT OF TRANSPORTATION**

**DECK AND APPROACH SLABS REPAIR PLAN  
STRUCTURE NO. 016-0918**

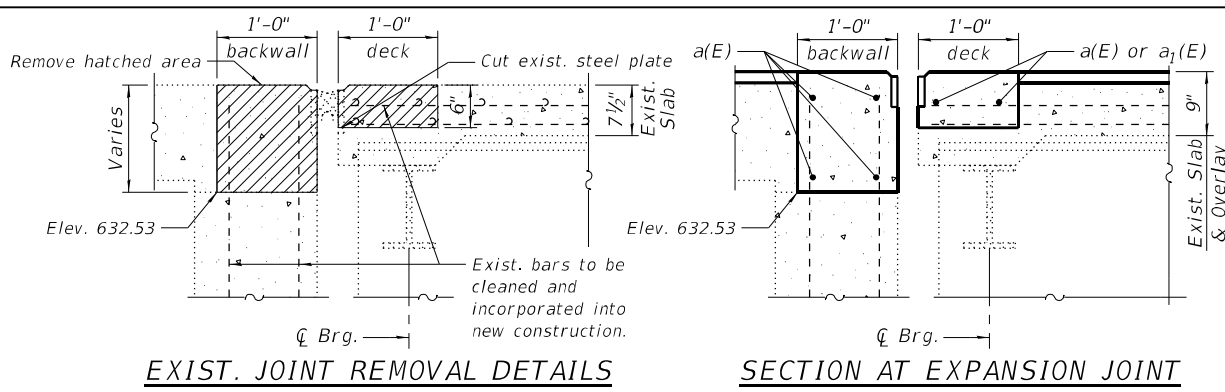
SHEET NO. 3 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	19
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	



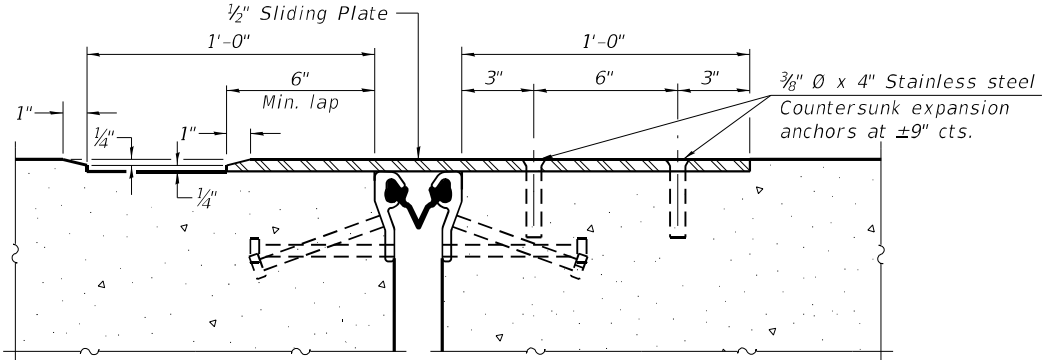


PLAN AT PARAPET

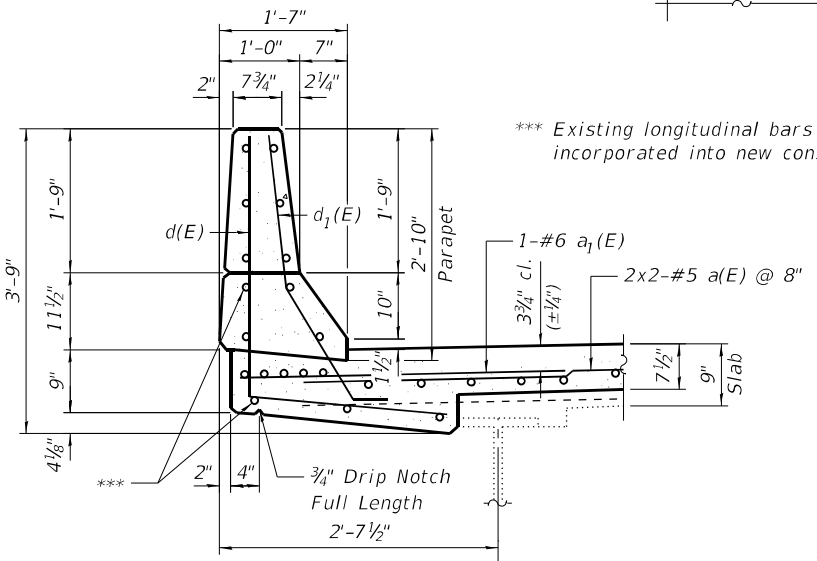


EXIST. JOINT REMOVAL DETAILS

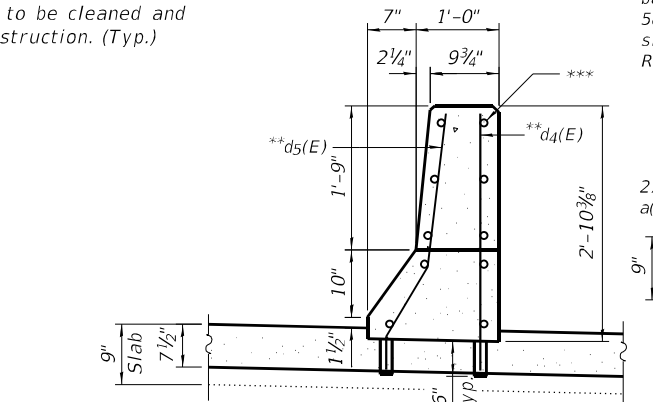
SECTION AT EXPANSION JOINT



SECTION F-F

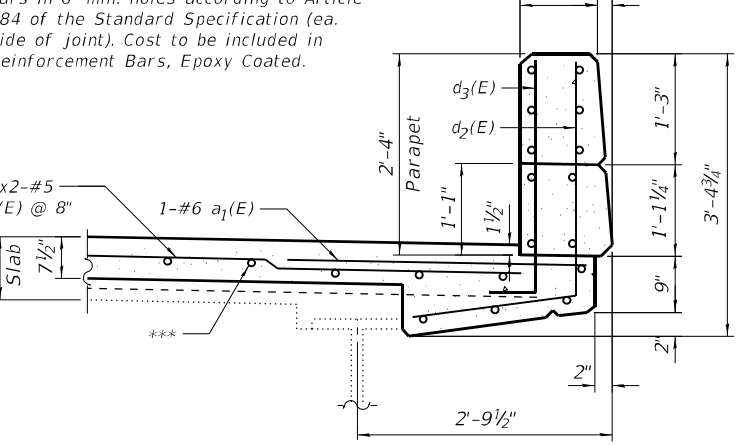


SECTION THRU ROADWAY PARAPET - SOUTH

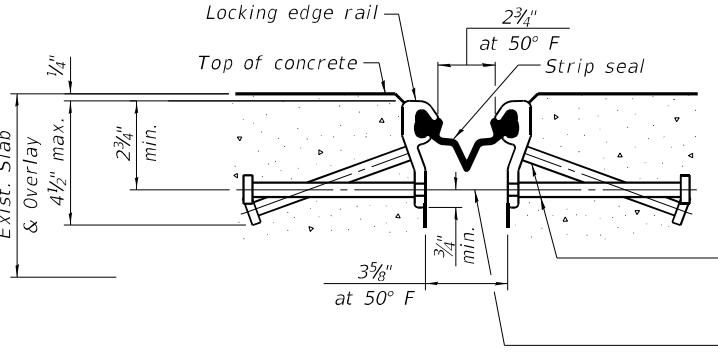


SECTION THRU ROADWAY PARAPET - NORTH

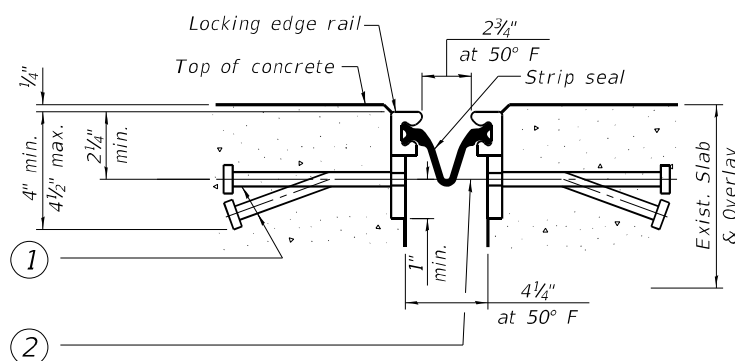
\*\* Epoxy grout two sets of d4(E) & d5(E) bars in 6" min. holes according to Article 584 of the Standard Specification (ea. side of joint). Cost to be included in Reinforcement Bars, Epoxy Coated.



SECTION THRU BIKEWAY PARAPET



SHOWING ROLLED RAIL JOINT



SHOWING WELDED RAIL JOINT

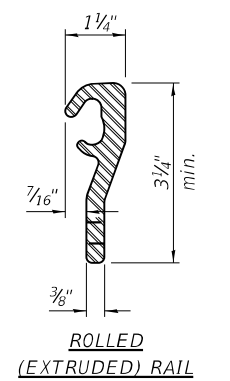
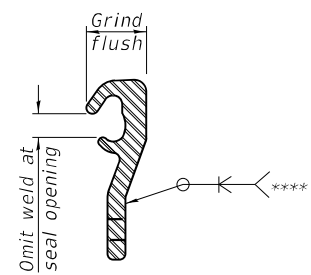
SECTION A-A

- ① 3/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
- ② 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.

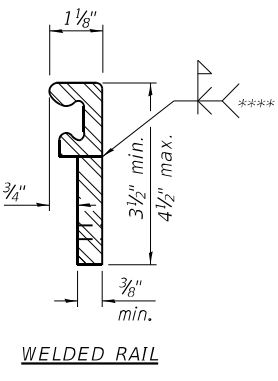
\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

LOCKING EDGE RAIL SPLICE

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



ROLLED (EXTRUDED) RAIL



WELDED RAIL

LOCKING EDGE RAILS

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

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.  
The top surface of sidewalk sliding plates shall have a raised pattern according to ASTM A786.  
Cost of sliding plates, anchorage studs, and expansion anchors 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.

BAR d(E)

BAR d1(E)

BAR d2(E)

BAR d3(E)

BAR d5(E)

LEGEND	MIN. BAR LAP
Concrete Removal	#5 bar = 3'-2"

- Notes:
- See Sheet 3 of 25 for Exist. Deck Plan.
  - Bars designated thus 2x2 - #5 etc. indicates 2 lines of bars with 2 lengths per line.

BILL OF MATERIAL

Bar No.	Size	Length	Shape
a(E)	#5	28'-6"	—
a1(E)	#6	4'-0"	—
d(E)	#4	4'-9"	⌋
d1(E)	#5	3'-11"	⌋
d2(E)	#4	4'-4"	⌋
d3(E)	#5	3'-7"	⌋
d4(E)	#5	3'-3"	⌋
d5(E)	#5	3'-4"	⌋
Concrete Removal		Cu. Yd.	10.1
Reinforcement Bars, Epoxy Coated		Pound	850
Concrete Superstructures		Cu. Yd.	11.1
Preformed Joint Strip Seal		Foot	109
Clean & Reseal Relief Joint		Foot	50

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\09-Preformed Joint Strip Seal.dgn

**WBK ENGINEERING**  
WBK ENGINEERING, LLC  
116 WEST MAIN STREET, SUITE 201  
ST. CHARLES, ILLINOIS 60174  
(630) 443-7755

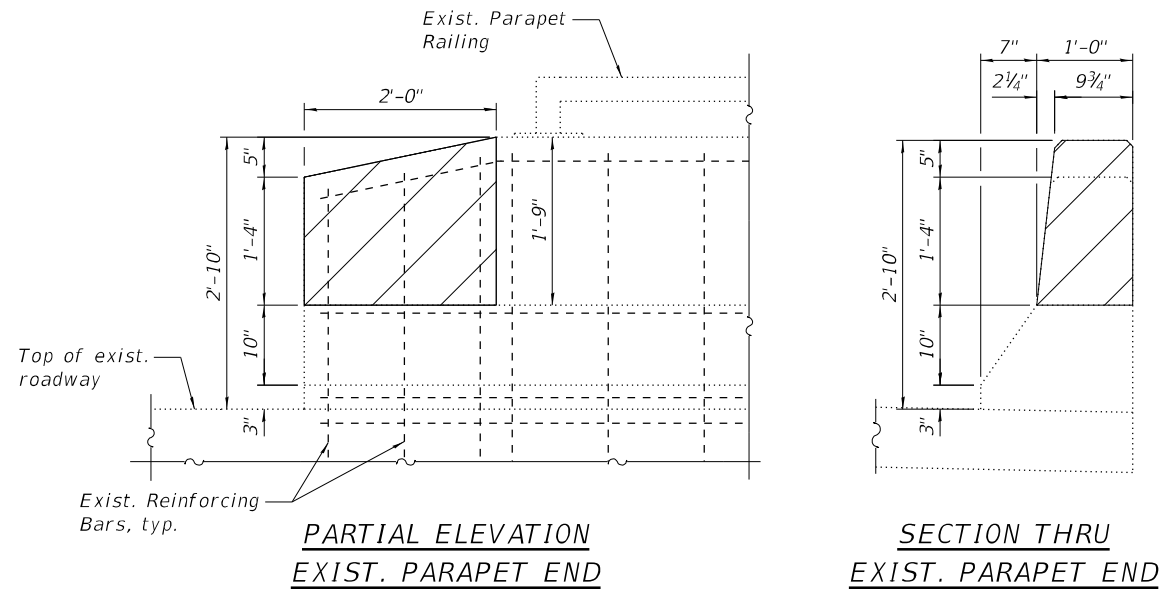
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	CHECKED - JZ	REVISIONS -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL - SIDEWALK  
STRUCTURE NO. 016-0918

SHEET NO. 4 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	20
				CONTRACT NO. 62M28
ILLINOIS FED. AID PROJECT				

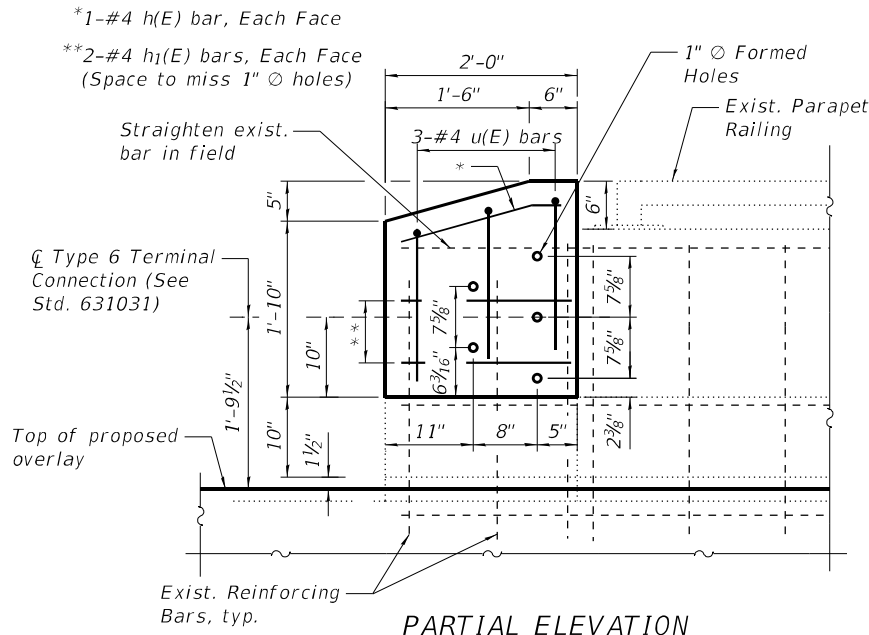


**PARTIAL ELEVATION  
EXIST. PARAPET END**

(NE, NW, SE & SW  
Parapets Similar)

**SECTION THRU  
EXIST. PARAPET END**

(NE, NW, SE & SW  
Parapets Similar)

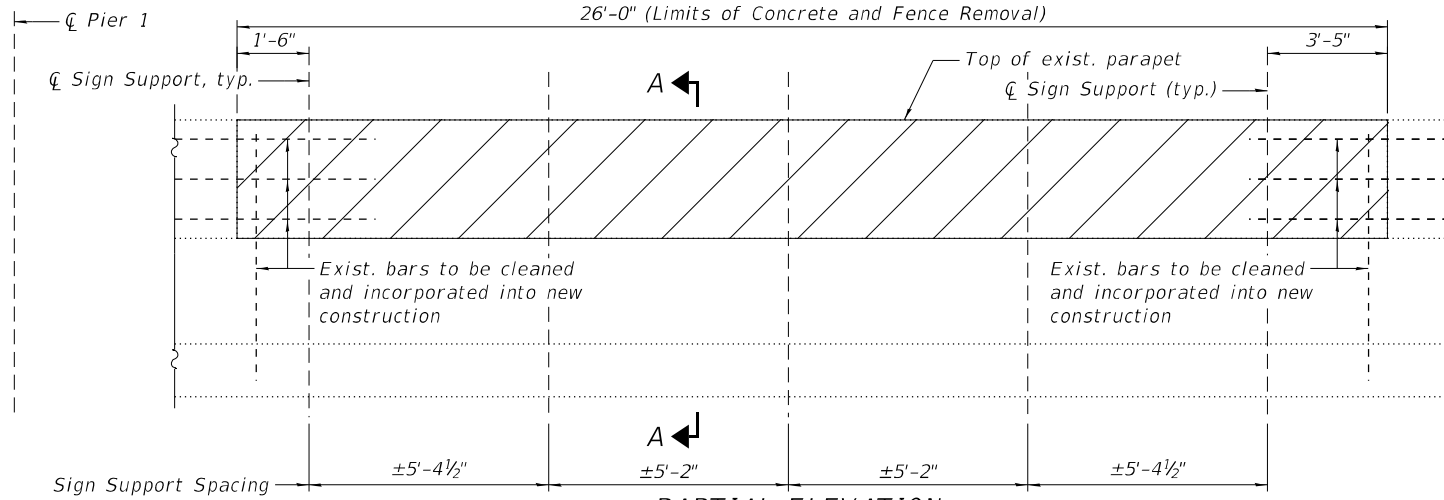


**PARTIAL ELEVATION  
PROPOSED PARAPET END**

(NE, NW, SE & SW  
Parapets Similar)

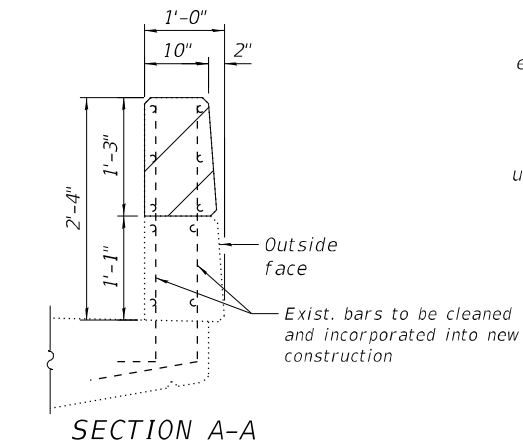
**SECTION THRU  
PROP. PARAPET END**

(NE, NW, SE & SW  
Parapets Similar)



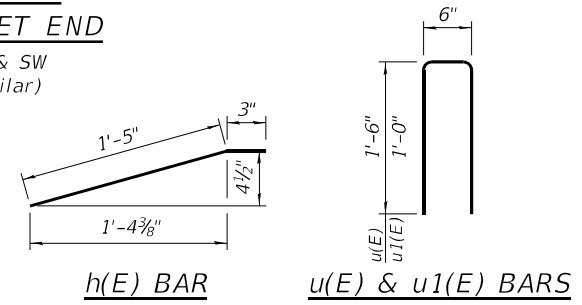
**PARTIAL ELEVATION  
EXIST. NORTH PARAPET**

(Looking north at inside face)  
(Showing Removal)



**SECTION A-A**

**SECTION B-B**

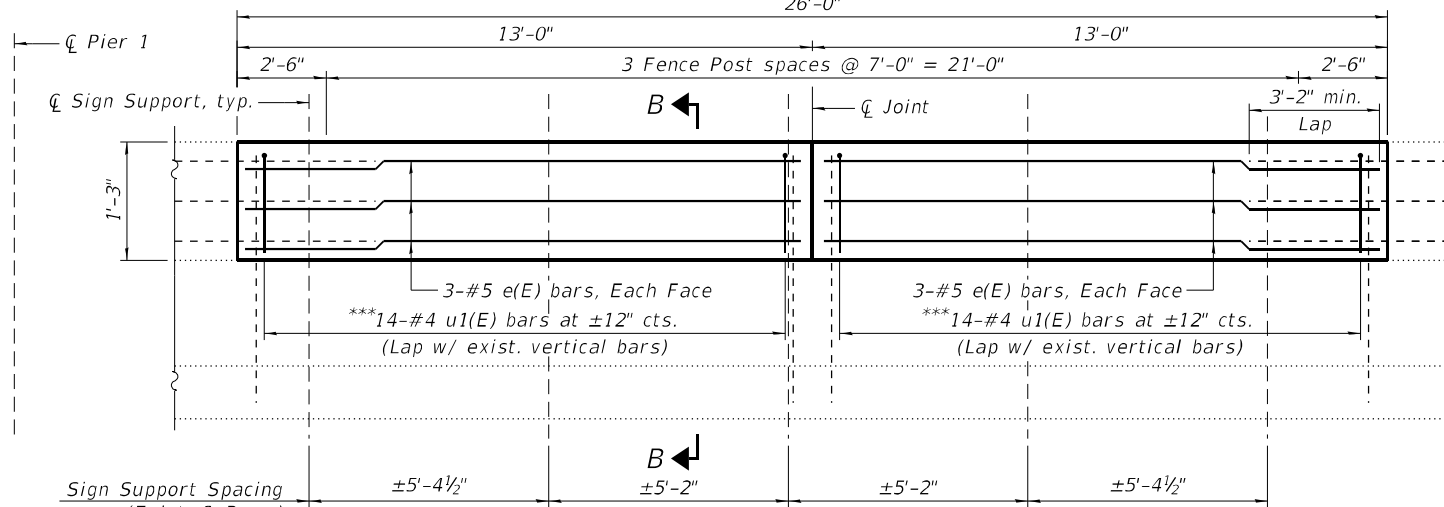


**h(E) BAR**

**u(E) & u1(E) BARS**

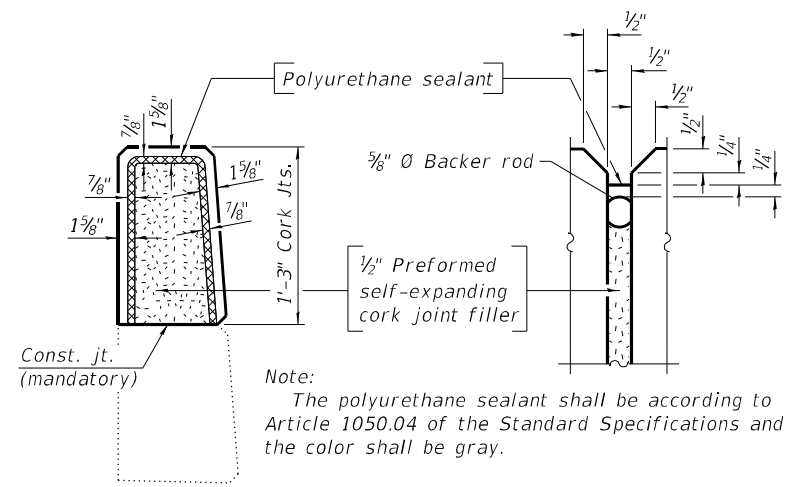
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
e(E)	12	#5	12'-8"	—
h(E)	8	#4	1'-8"	—
h1(E)	16	#4	1'-8"	—
u(E)	12	#4	3'-6"	—
u1(E)	28	#4	2'-6"	—
Concrete Removal			Cu. Yd.	1.6
Reinforcement Bars, Epoxy Coated			Pound	270
Concrete Superstructures			Cu. Yd.	1.6



**PARTIAL ELEVATION  
PROP. NORTH PARAPET**

(Looking north at inside face)  
(Showing Replacement)



**PARAPET JOINT DETAILS**

**LEGEND**

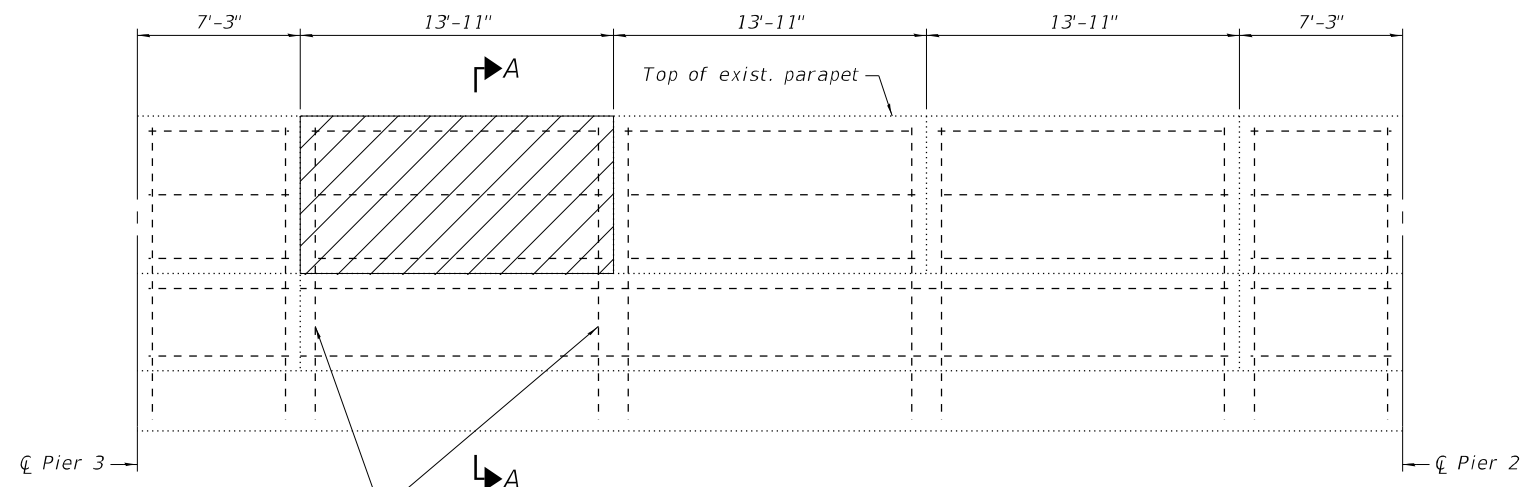
Concrete Removal

**NOTES**

- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
- Existing reinforcement bars that are cut or damaged during repair shall be replaced in kind and lapped with existing rebar. No welding of rebar shall be allowed.
- Fence Removal shall not be paid for separately but included in the cost of Concrete Removal.

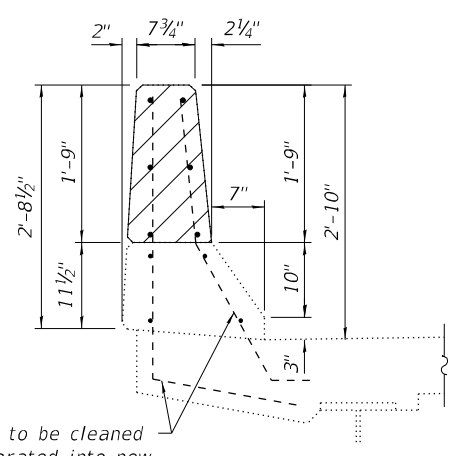
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Exist. bars to be cleaned and incorporated into new construction.

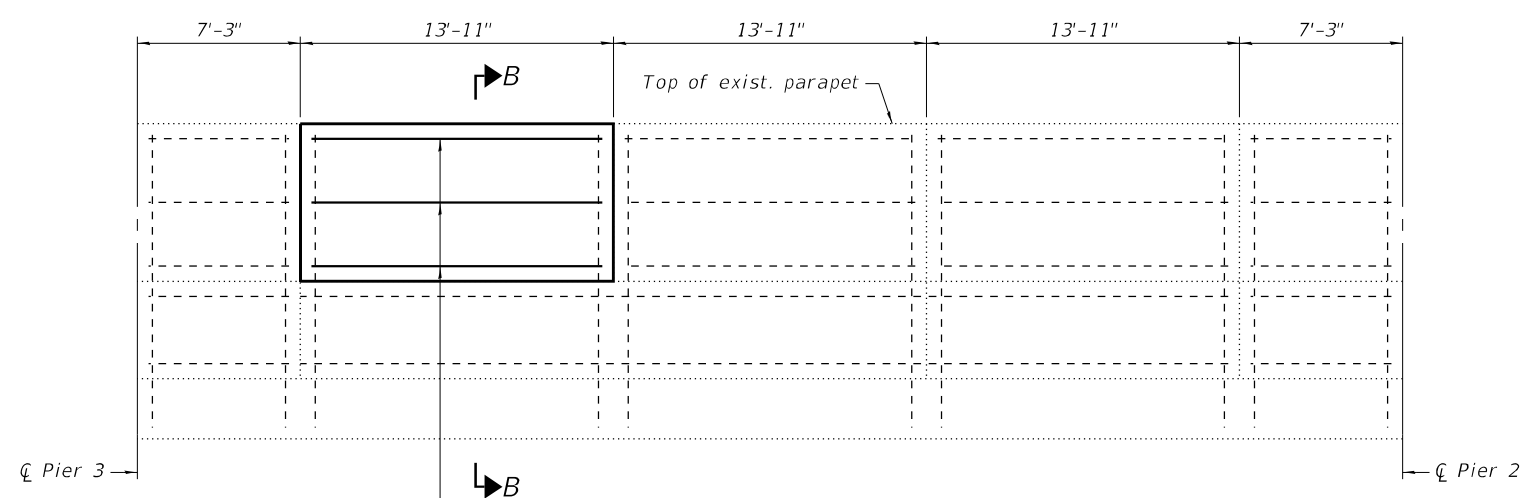
**PARTIAL ELEVATION  
 EXIST. SOUTH PARAPET**  
 (Looking south at inside face)  
 (Showing Removal)



Exist. bars to be cleaned and incorporated into new construction.

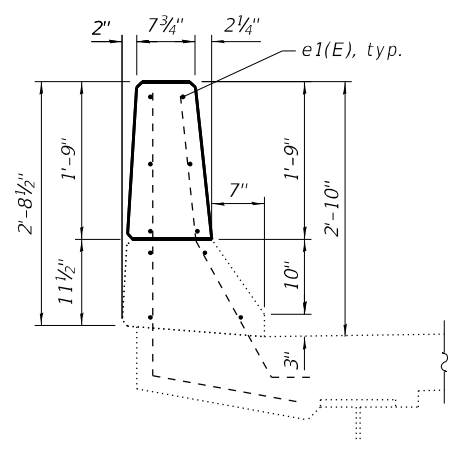
**SECTION A-A**

Concrete Removal



3-#5 e1(E) bars, Each Face

**PARTIAL ELEVATION  
 EXIST. SOUTH PARAPET**  
 (Looking south at inside face)  
 (Showing Replacement)



**SECTION B-B**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
e1(E)	6	#5	13'-8"	—
Concrete Removal			Cu. Yd.	0.7
Concrete Superstructures			Cu. Yd.	0.7
Reinforcement Bars, Epoxy Coated			Pound	90



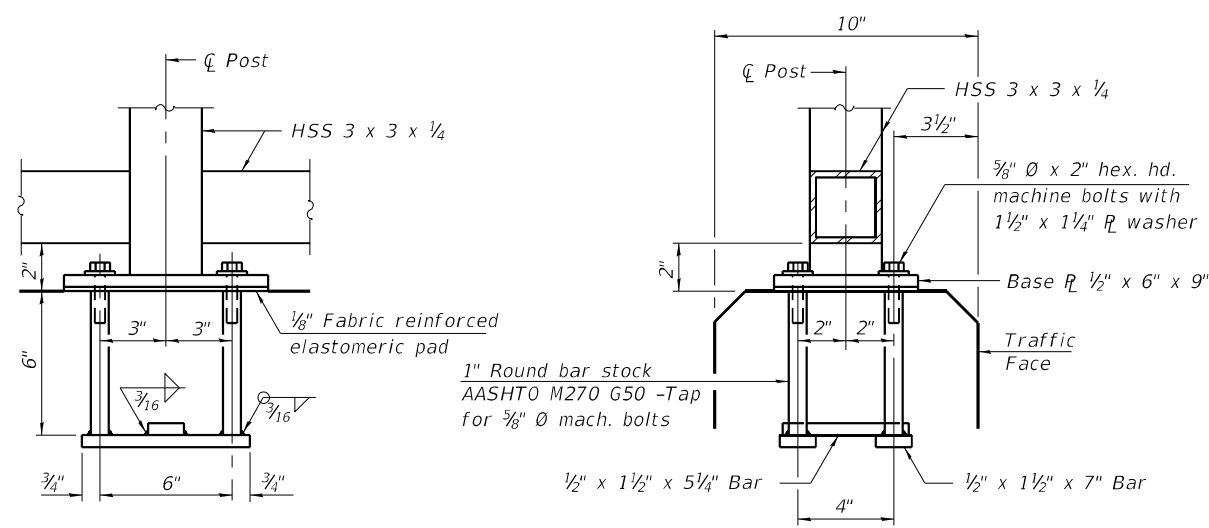
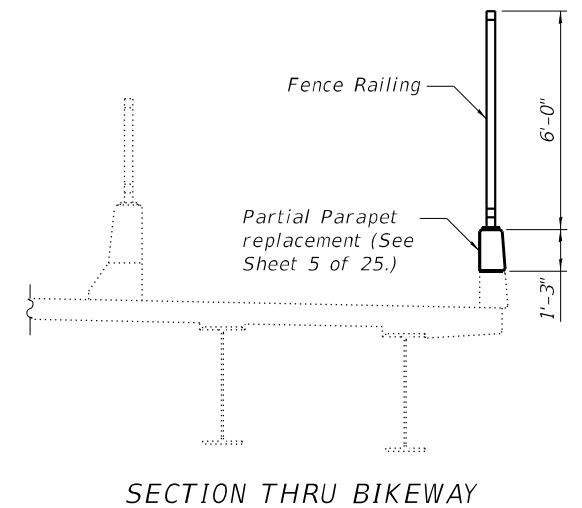
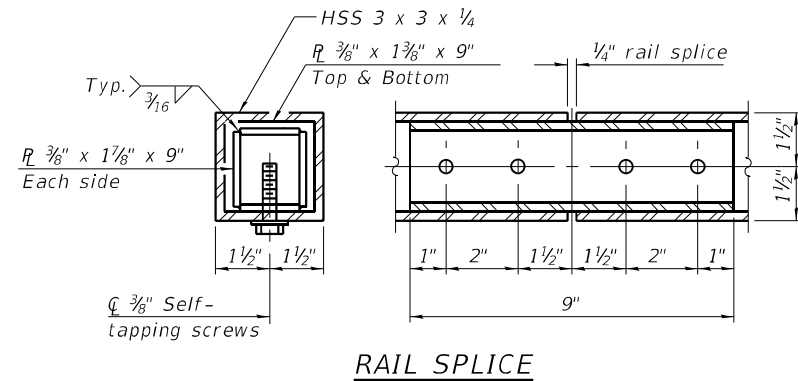
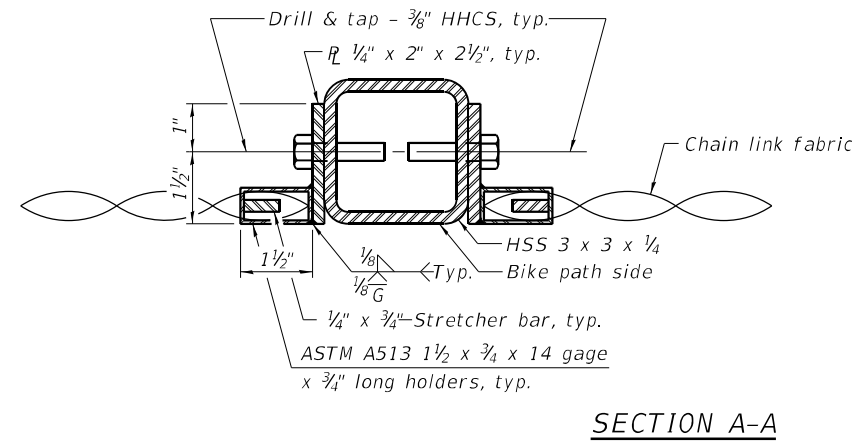
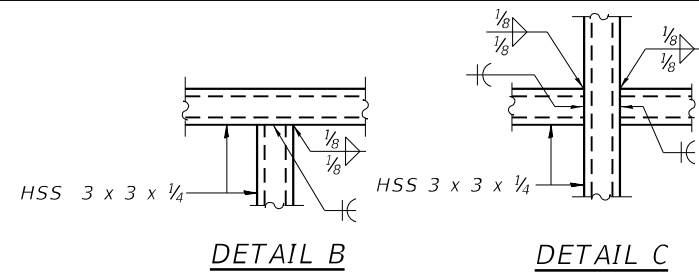
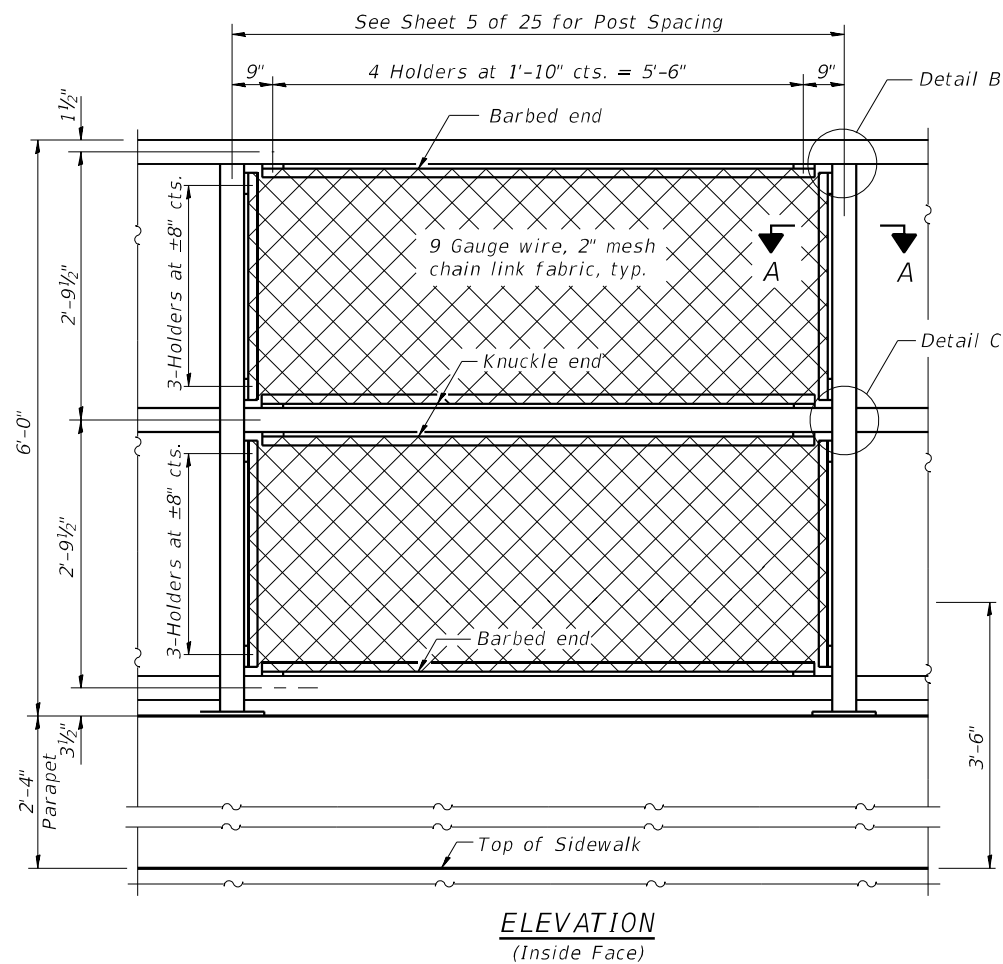
Signed: *Alex C. Benz*  
 Date: 8/12/2021  
 License Expires: 11/30/2022

**NOTES**

- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
- Existing reinforcement bars that are cut or damaged during repair shall be replaced in kind and lapped with existing rebar. No welding of rebar shall be allowed.
- Removing and reinstalling fence is incidental to the parapet repair.

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	22
CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				



**ANCHOR BOLT DETAILS**

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" Ø anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

Note:  
CVN testing may be omitted for the railing.

**Notes:**

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per linear foot for Bicycle Railing.

Installation of the chain link fabric shall be in accordance with Section 664 of the Standard Specifications.

Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M183.

The chain link fabric shall be placed along Bicycle Side as shown on Section A-A. Stretcher bars shall be used at all four sides of each panel.

All posts, railing, splices, anchor devices and bent plates shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. All bolts, nuts and washers shall be galvanized in accordance with AASHTO M-232.

Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.

The chain link fabric shall conform to the requirements of Article 1006.27 of the Standard Specifications.

**BILL OF MATERIAL**

Item	Unit	Quantity
Bridge Fence Railing	Foot	26

R-28 2-17-2017 (10'-0" Maximum Post Spacing)



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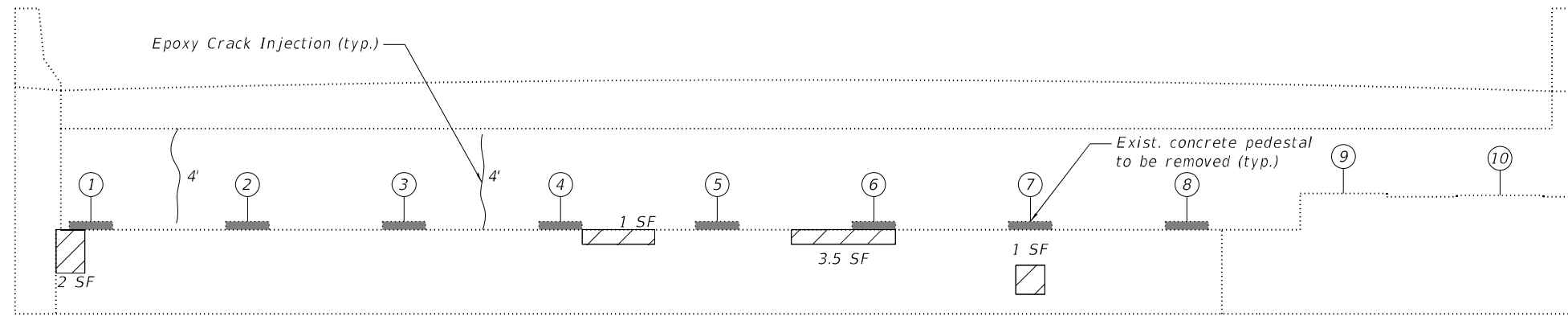
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BRIDGE FENCE RAILING, PARAPET MOUNTED  
STRUCTURE NO. 016-0918

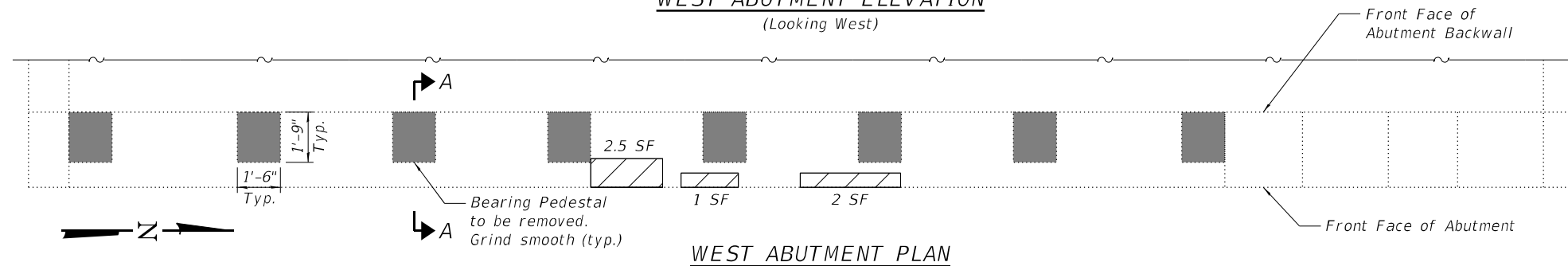
SHEET NO. 6 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	23
			CONTRACT NO. 62M28	
ILLINOIS FED. AID PROJECT				

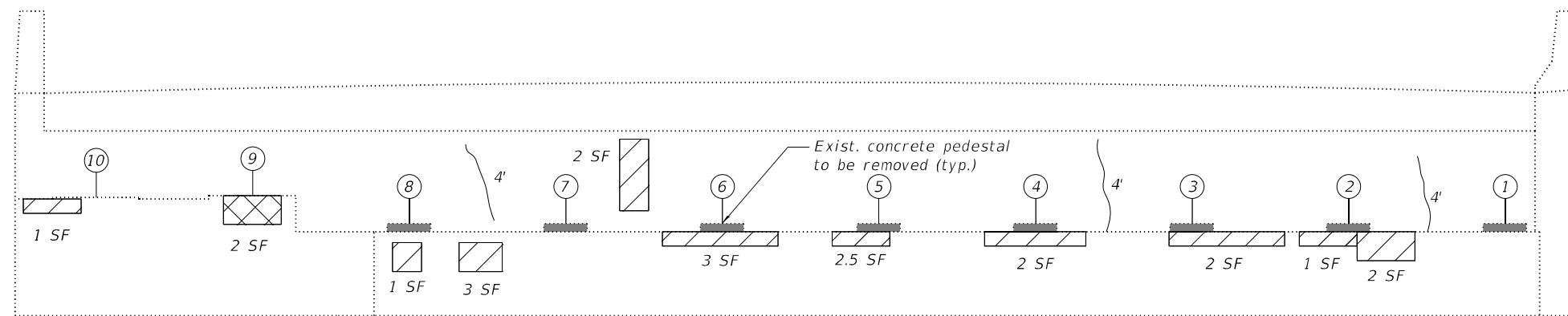
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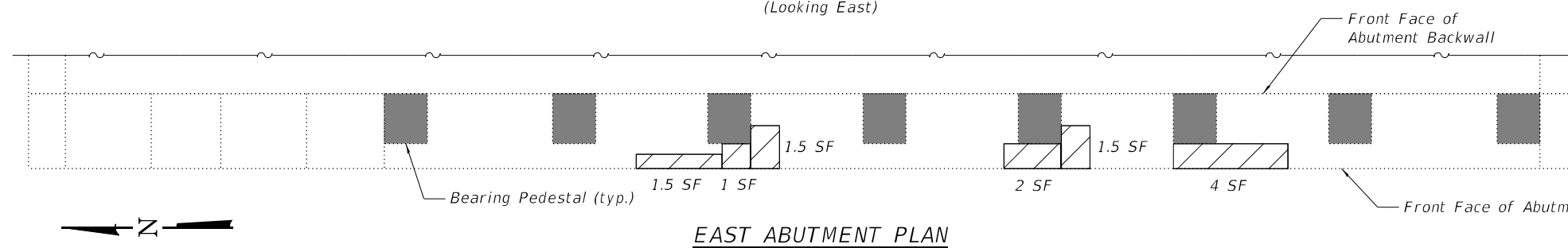
**WEST ABUTMENT ELEVATION**  
(Looking West)



**WEST ABUTMENT PLAN**



**EAST ABUTMENT ELEVATION**  
(Looking East)



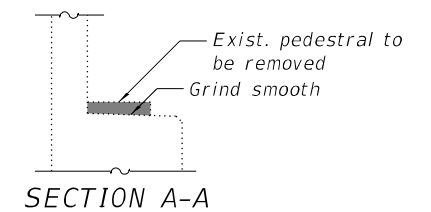
**EAST ABUTMENT PLAN**

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	20
Cleaning Bridge Seats	Sq. Ft.	285
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	44
Structural Repair of Concrete (Depth Greater than 5 Inches)	Sq. Ft.	2

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)
- Structural Repair of Concrete (Depth Greater than 5 Inches)
- Concrete Removal (see Note 4)
- Epoxy Crack Injection
- Beam Number
- SF = Square Feet

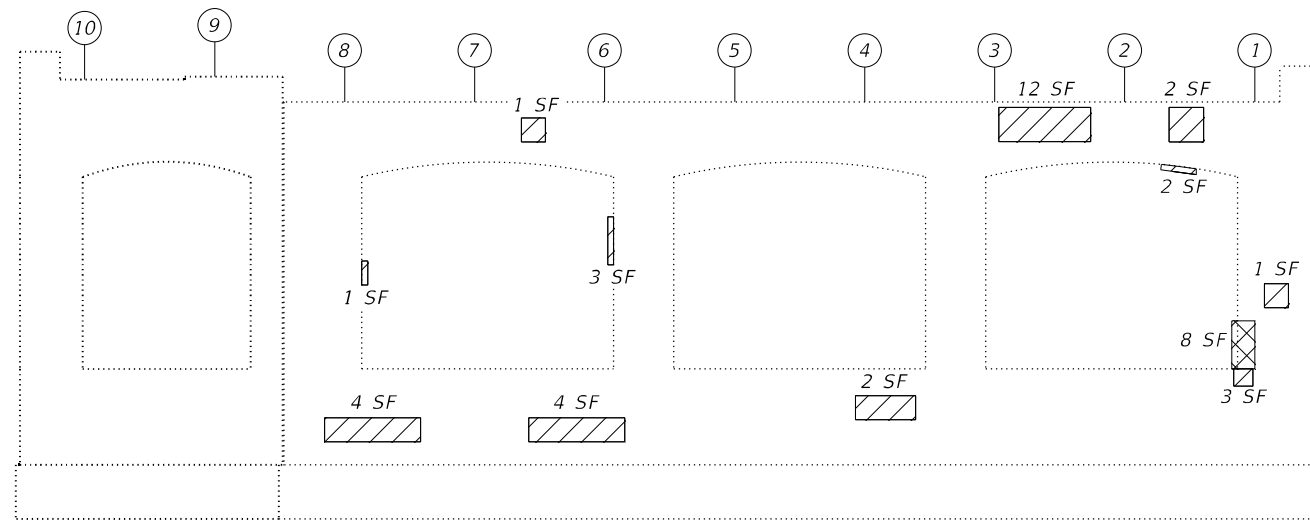


**SECTION A-A**

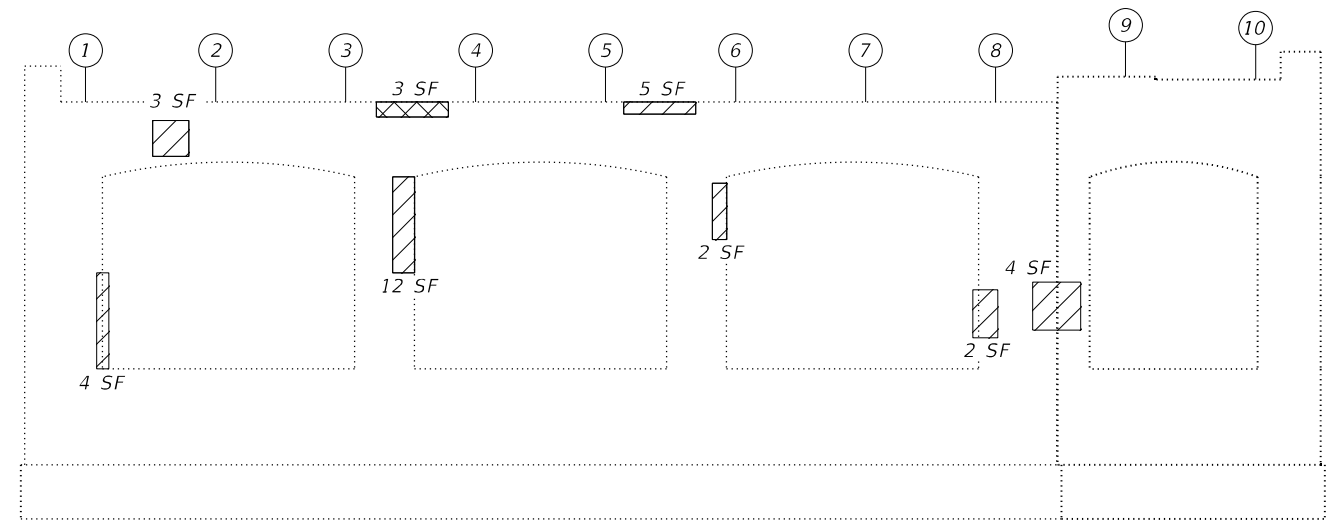
**NOTES**

1. Abutment repair areas are estimated based on visual inspection. Actual repair areas and locations shall be determined by the Engineer. The Contractor shall be paid for the actual amount of repairs made and at the bid price for the respective pay items.
2. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Structural Repair of Concrete for the depth specified.
3. Existing reinforcement bars that are cut or damaged during repair shall be replaced in kind and lapped with existing rebar. No welding of rebar shall be allowed.
4. Cost of Concrete Removal of bearing pedestals to be included with Jack and Remove Existing Bearings (see Sheet 12 of 25).
5. See Sheet 12 of 25 for shoring reactions.

FILE NAME = Z:\2018\180124\_PTB1818-AddlStructural\Drawn\MO\_381007-0160918-Abutment\_Repair\_Details.dgn



**ELEVATION - PIER 1**  
(Looking East - West Face)



**ELEVATION - PIER 1**  
(Looking West - East Face)

**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	67
Structural Repair of Concrete (Depth Greater than 5 Inches)	Sq. Ft.	11

**LEGEND**

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

Structural Repair of Concrete  
(Depth Greater than 5 Inches)

Beam Number

SF = Square Feet

Notes:

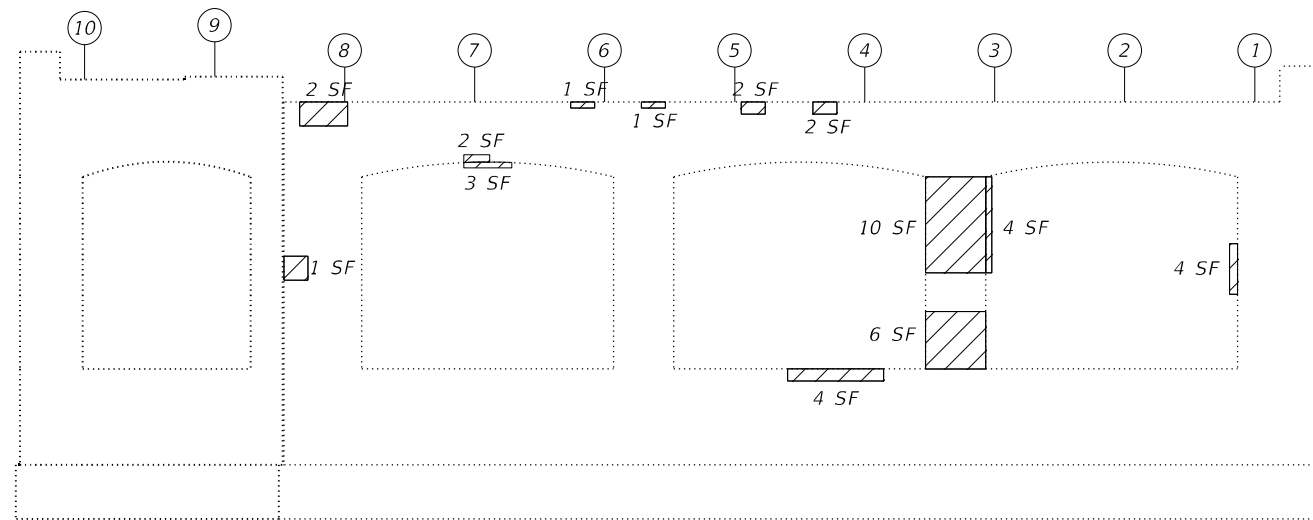
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2. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Structural Repair of Concrete for the depth specified.
3. Existing reinforcement bars that are cut or damaged during repair shall be replaced in kind and lapped with existing rebar. No welding of rebar shall be allowed.

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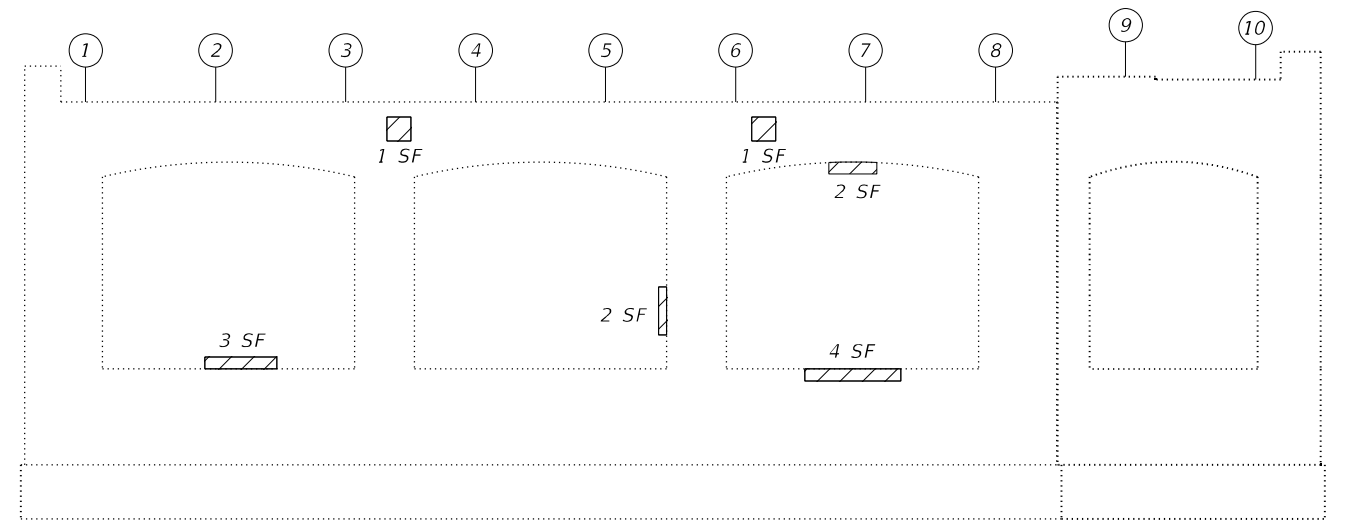
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	25
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	





**ELEVATION - PIER 2**  
(Looking East - West Face)



**ELEVATION - PIER 2**  
(Looking West - East Face)

**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	55

**LEGEND**

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

Beam Number

SF = Square Feet

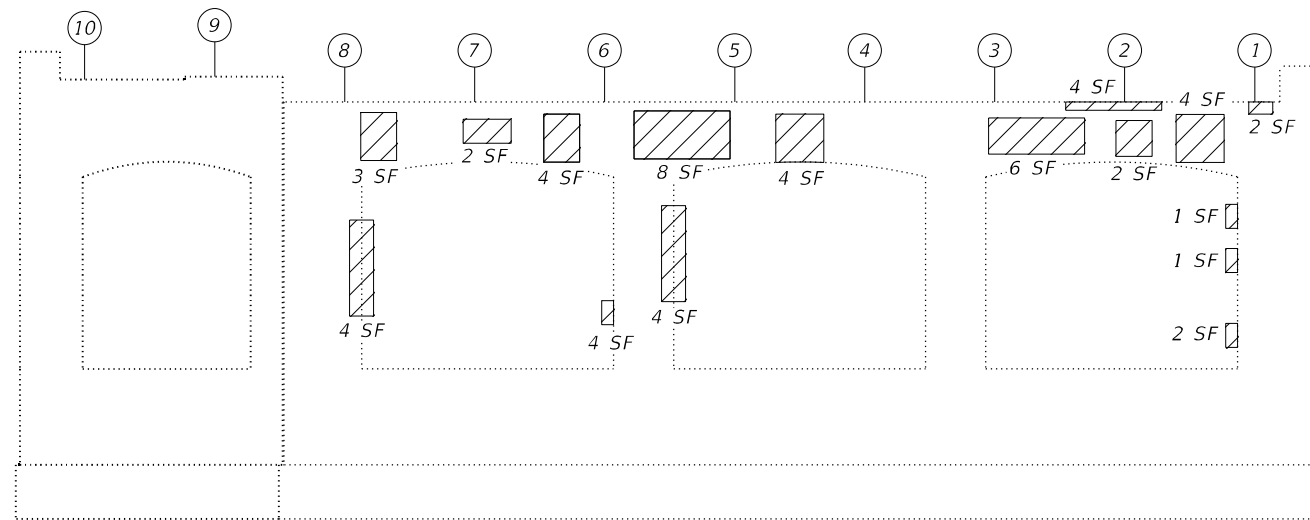
Notes:

1. Pier repair areas are estimated based on visual inspection. Actual repair areas and locations shall be determined by the Engineer. The Contractor shall be paid for the actual amount of repairs made and at the bid price for the respective pay items.
2. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Structural Repair of Concrete for the depth specified.
3. Existing reinforcement bars that are cut or damaged during repair shall be replaced in kind and lapped with existing rebar. No welding of rebar shall be allowed.

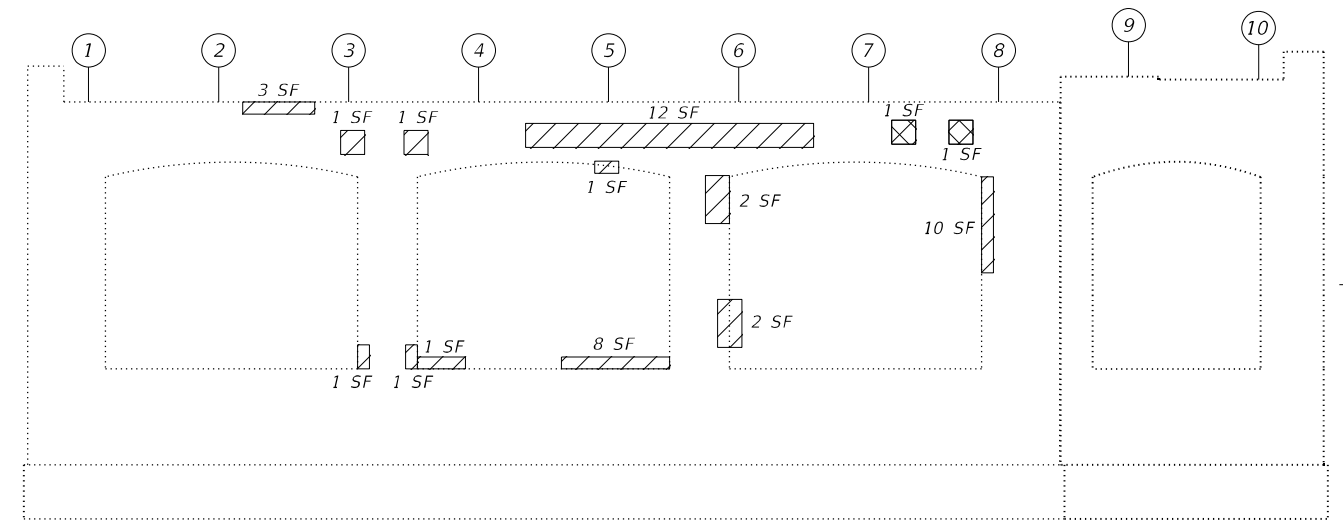
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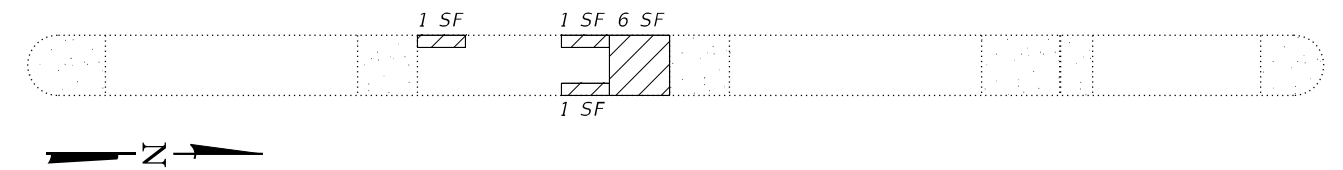
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	26
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M28	



**ELEVATION - PIER 3**  
(Looking East - West Face)



**ELEVATION - PIER 3**  
(Looking West - East Face)



**SECTION A-A**

**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	107
Structural Repair of Concrete (Depth Greater than 5 Inches)	Sq. Ft.	2

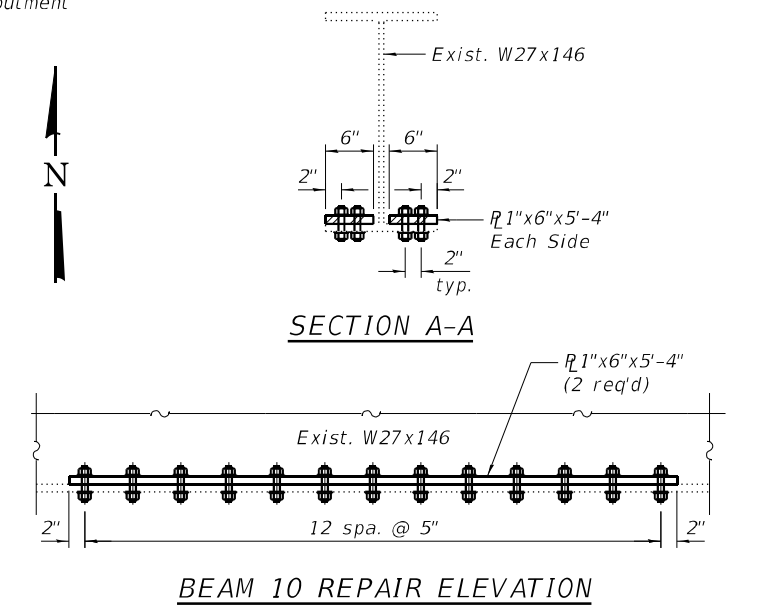
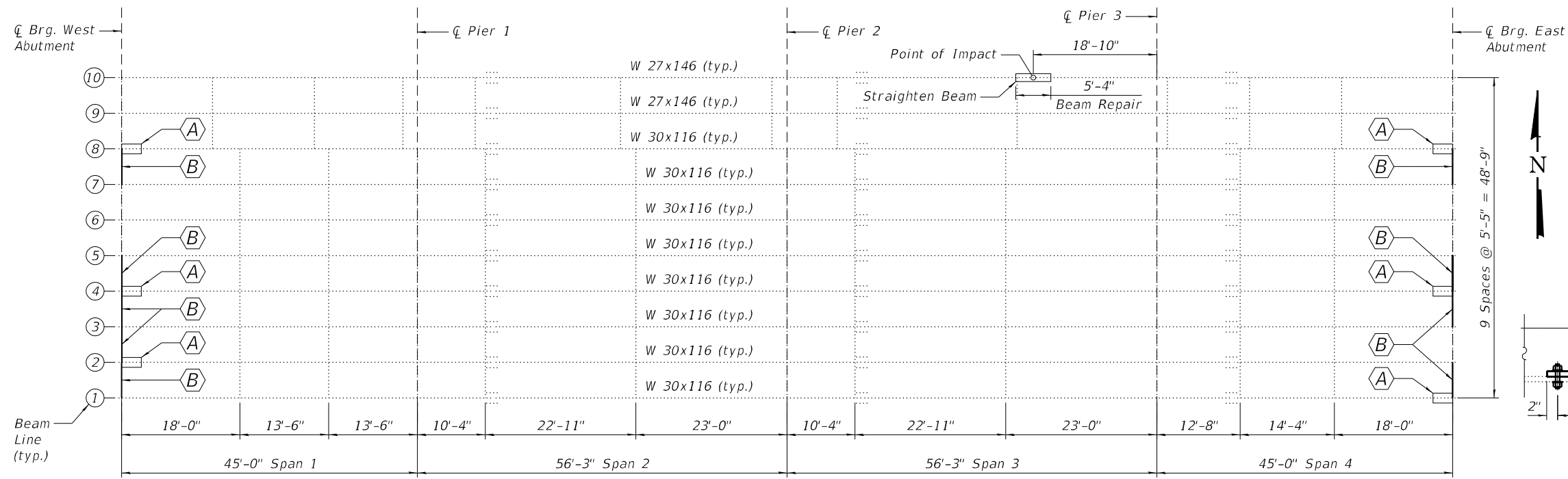
**LEGEND**

- Structural Repair of Concrete  
(Depth Equal to or Less than 5 Inches)
  - Structural Repair of Concrete  
(Depth Greater than 5 Inches)
  - Beam Number
- SF = Square Feet

**Notes:**

1. Pier repair areas are estimated based on visual inspection. Actual repair areas and locations shall be determined by the Engineer. The Contractor shall be paid for the actual amount of repairs made and at the bid price for the respective pay items.
2. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Structural Repair of Concrete for the depth specified.
3. Existing reinforcement bars that are cut or damaged during repair shall be replaced in kind and lapped with existing rebar. No welding of rebar shall be allowed.

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Drawn\0160918-Pier\_3\_Repair\_Details.dgn

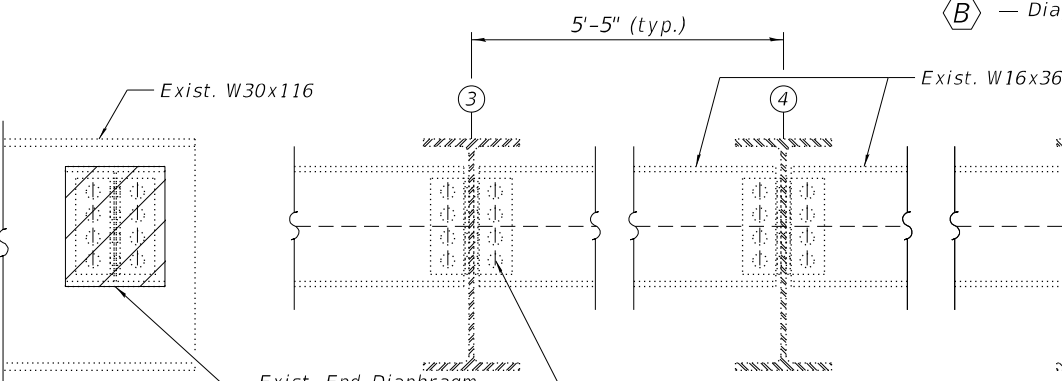


\* Verify in Field

**EXISTING FRAMING PLAN**

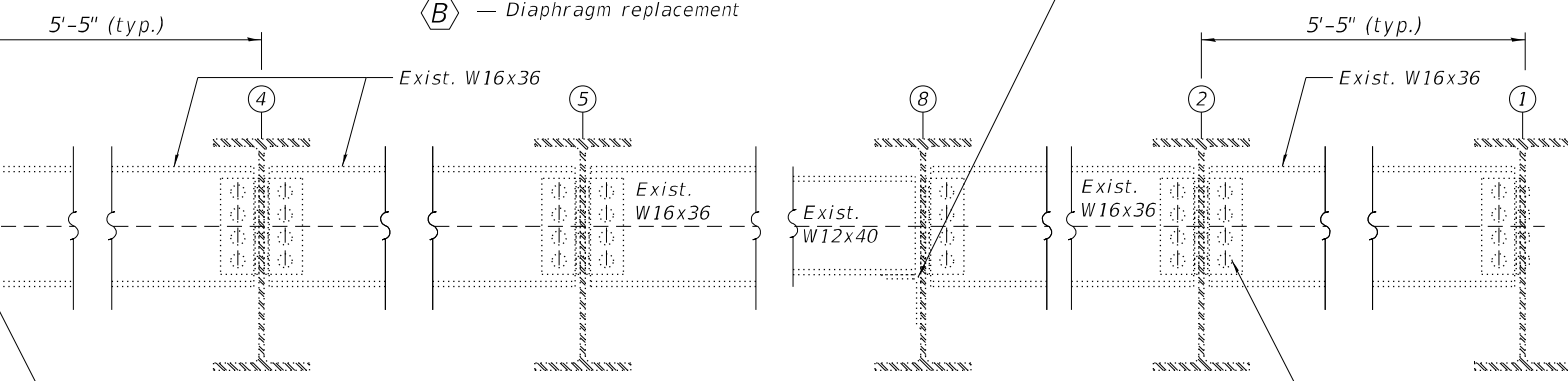
- A — Beam end repair
- B — Diaphragm replacement

Existing clip angle to be removed using the air-arc method and grind smooth all weld material remaining on the web. Cost included with Structural Steel Removal.



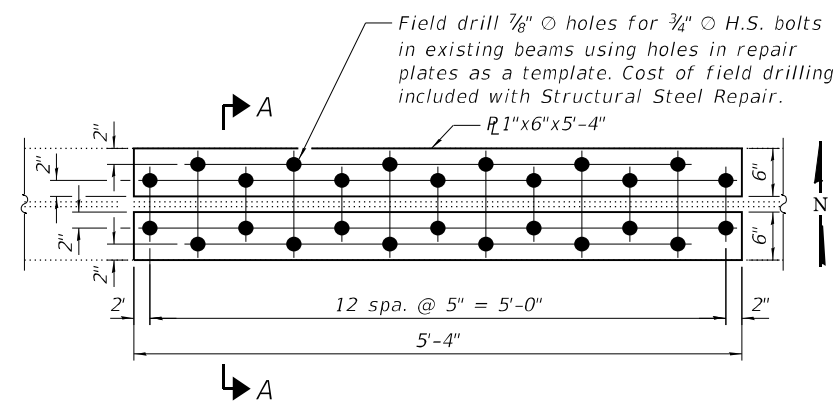
**EXIST. BEAM END DETAIL**

Exist. End Diaphragm to be removed (see Framing Plan for locations)



**EXISTING DIAPHRAGMS - W. ABUT.**

**EXISTING DIAPHRAGMS - E. ABUT.**



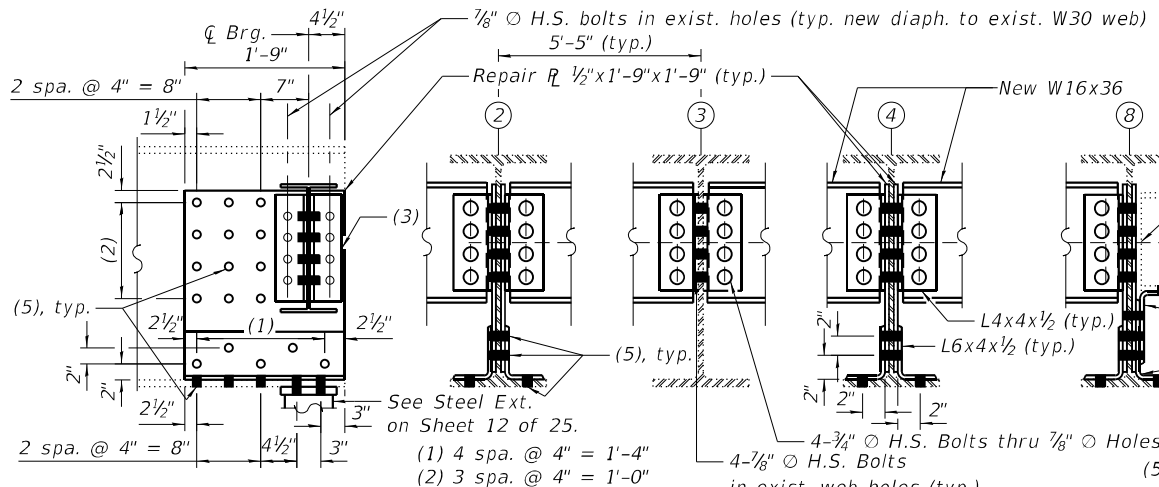
**BEAM 10 REPAIR PLAN**

**BILL OF MATERIAL**

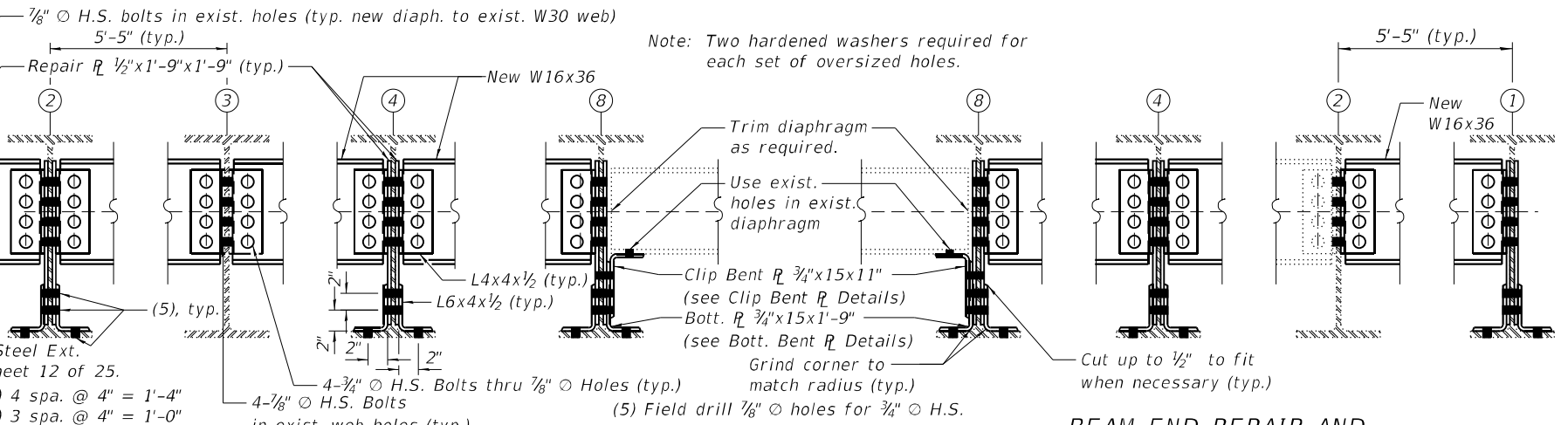
ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	2,603
Structural Steel Removal	Pound	2,263
Structural Steel Repair	Pound	1,405

Notes:

- Existing framing plan shown for information. Plan dimensions and details relative to existing plans are subject to routine variations. 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 score of work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price for the work.
- Fasteners shall be ASTM F3125 Grade A325 Type 1, hot dip galvanized bolts  $\frac{3}{4}$ "  $\phi$  with  $\frac{7}{8}$ "  $\phi$  holes unless otherwise noted.
- All new structural steel shall be galvanized according to the Special Provision for "Hot Dip Galvanizing for Structural Steel."
- For Beam Straightening details, see sheet 14 of 25.



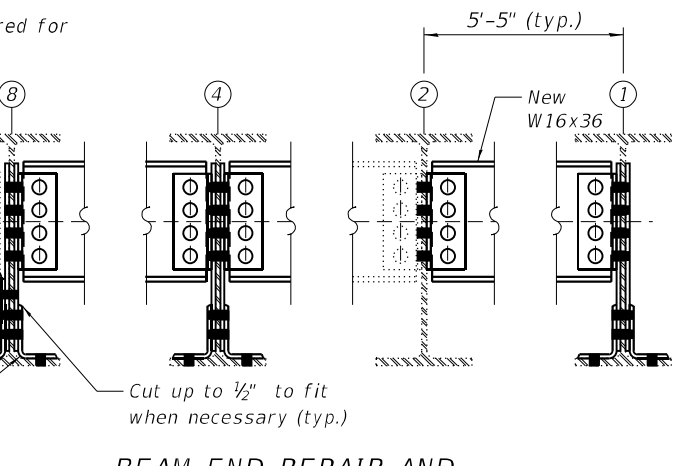
**BEAM END REPAIR DETAIL**  
at E. Abut. shown, at W. Abut. similar



**BEAM END REPAIR AND DIAPHRAGM REPLACEMENT - W. ABUT.**

Note: Two hardened washers required for each set of oversized holes.

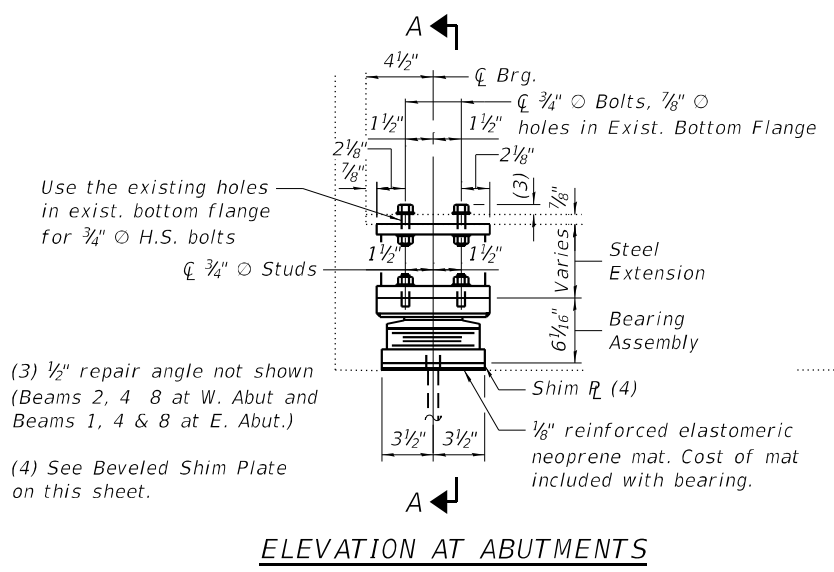
(5) Field drill  $\frac{7}{8}$ "  $\phi$  holes for  $\frac{3}{4}$ "  $\phi$  H.S. bolts in existing beams using holes in repair plates as a template. Cost of field drilling included with Furnishing and Erecting Structural Steel.



**BEAM END REPAIR AND DIAPHRAGM REPLACEMENT - E. ABUT.**  
See W. Abut. Diaphragm Repl. for bolt and angle notes

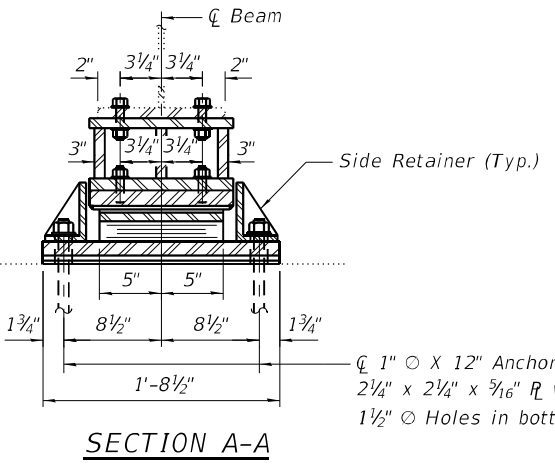
FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Drawn\MO\_38\011-0162918-Beam\_End\_Repair\_and\_Diaphragm\_Replacement.dgn

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Drawn\0160918-Bearing Replacement Details 1.dgn



(3) 1/2" repair angle not shown (Beams 2, 4, 8 at W. Abut and Beams 1, 4 & 8 at E. Abut.)  
 (4) See Beveled Shim Plate on this sheet.

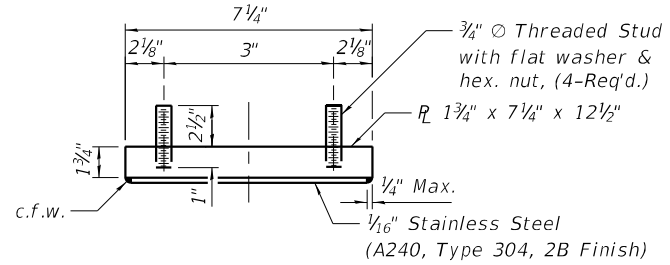
**ELEVATION AT ABUTMENTS**



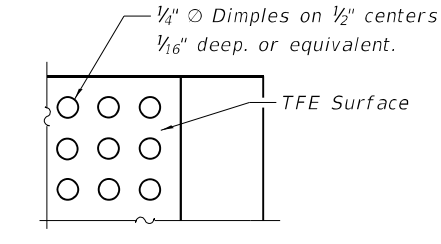
**SECTION A-A**

**TYPE II TFE ELASTOMERIC EXP. BRG.**

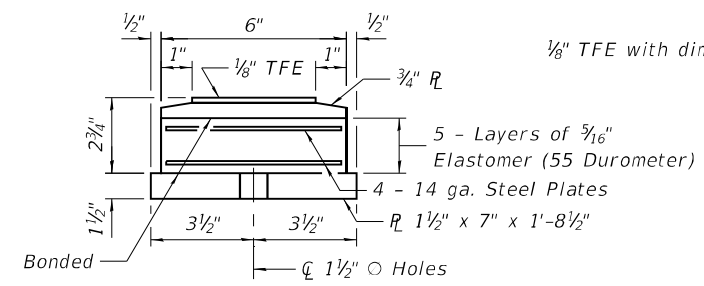
For Beams 1 thru 8. Total 16 required.  
 See Sheet 11 of 25 for Beam End Repairs.



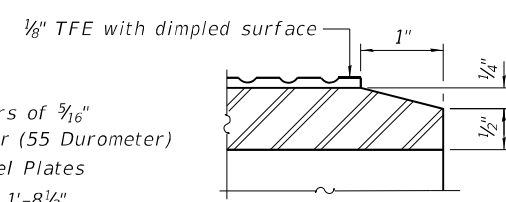
**TOP BEARING ASSEMBLY**



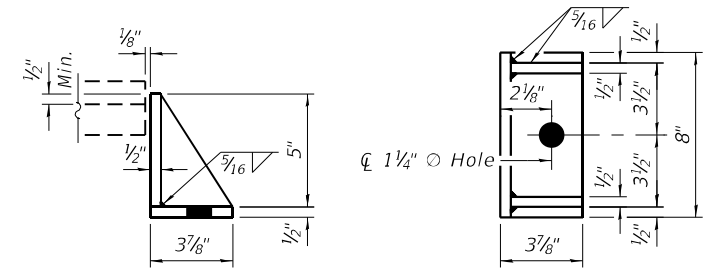
**PLAN-TFE SURFACE**



**BOTTOM BEARING ASSEMBLY**



**SECTION THRU TFE**



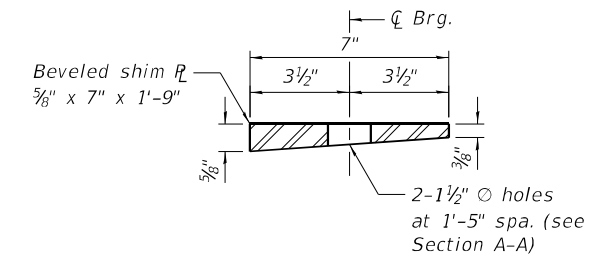
**SIDE RETAINER**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

**GIRDER REACTIONS**

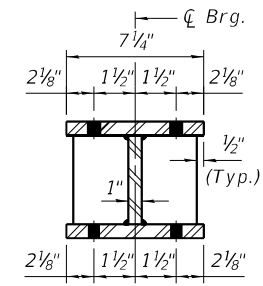
R <sub>D</sub>	(K)	13.7
R <sub>L</sub>	(K)	29.5
R <sub>Imp.</sub>	(K)	8.5
R <sub>Total</sub>	(K)	51.7

(typical, all beams)

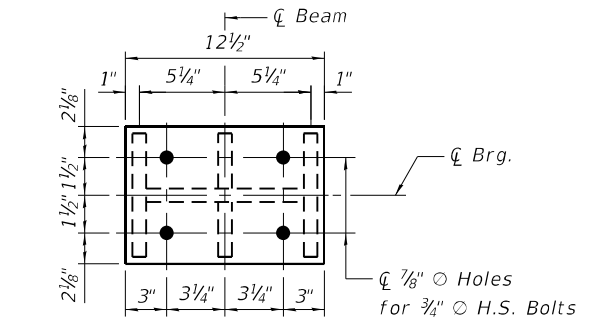


**BEVELED SHIM PLATE**

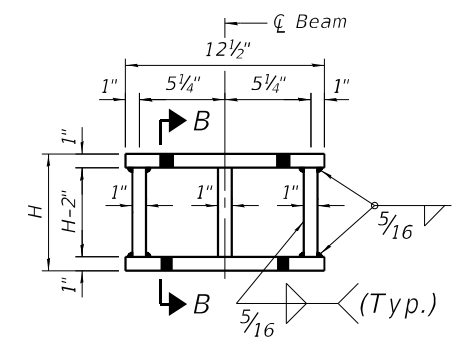
For Beams 1 thru 8.  
 Total 16 Required



**SECTION B-B**

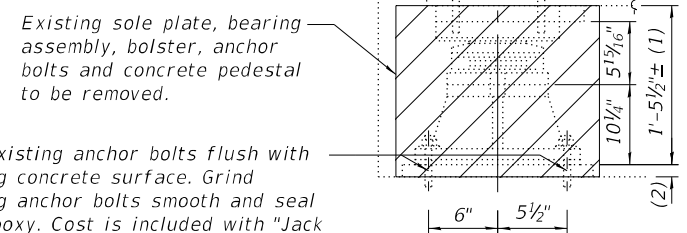


**PLAN TOP AND BOTTOM PLATE**



**STEEL EXTENSION DETAIL**

For Beams 1 thru 8. Total 16 required



**EXISTING BEARING REMOVAL**

Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth and seal with epoxy. Cost is included with "Jack and Remove Existing Bearings".

(1) Assume existing sole plate thickness of 1". Contractor shall measure in field the distance between bottom of existing bottom flange and top of bearing seat prior to ordering material. Cost is included with "Jack and Remove Existing Bearings".

(2) Concrete Pedestal to be removed. Verify existing concrete pedestal height in field. Cost shall be included with "Jack and Remove Existing Bearings".

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

**"H" FOR STEEL EXTENSION**

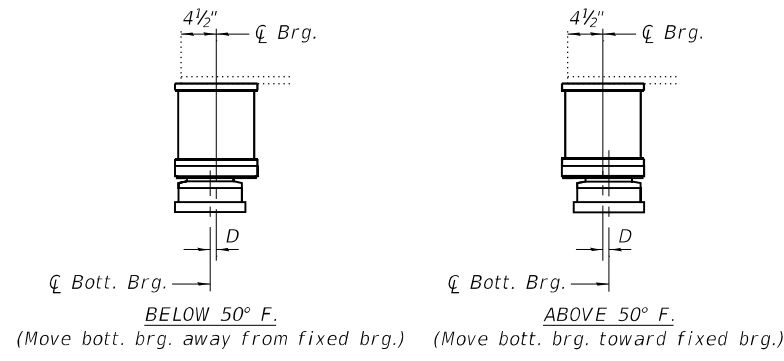
Beams	H	No. Required
1, 2, 7 & 8	12"	8
3 & 6	13 1/4"	4
4 & 5	13 3/8"	4

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	16
Jack and Remove Existing Bearings	Each	16
Furnishing and Erecting Structural Steel	Pound	3,882
Anchor Bolts, 1"	Each	32

**NOTES**

- Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included with Furnishing and Erecting Structural Steel.
- New steel extensions, shim R's, and connection bolts are included with Furnishing and Erecting Structural Steel. All steel components and fasteners shall be hot dip galvanized after fabrication.
- Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
- Minimum required jack capacity = 45 Tons.
- Anchor bolts shall be ASTM F1554 Gr. 50 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type II.
- Shim plates up to 1" total or grinding top of bearing seats up to 1/8" may be needed upon approval by the Engineer.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.



**SETTING ANCHOR BOLTS AT EXP. BRG.**

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.

TYII/REPS (modified) 01-27-2000



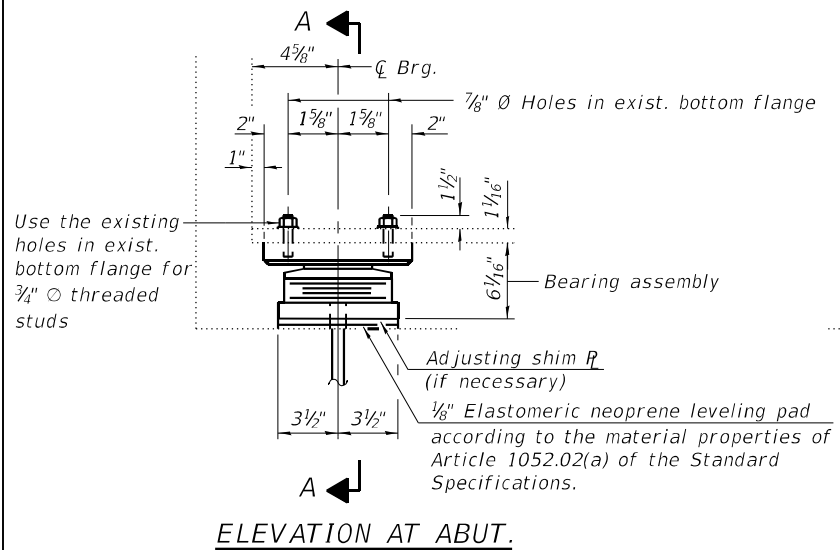
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PLOT SCALE = 1:20	CHECKED - JZ	REVISED -
PLOT DATE = 9/30/2021	DRAWN - CPT	REVISED -
	CHECKED - JZ	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

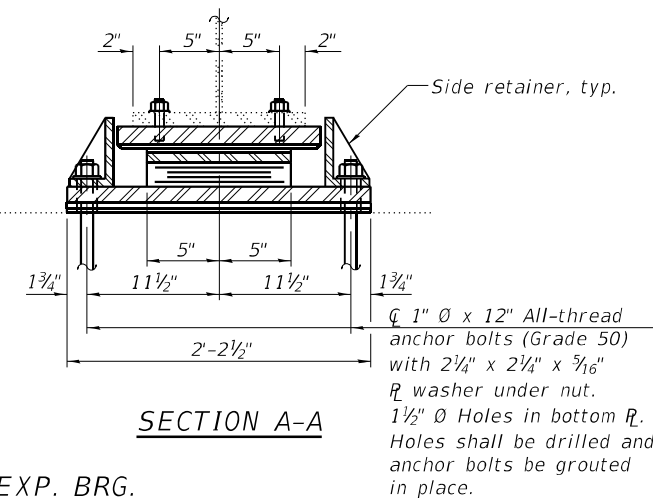
BEARING REPLACEMENT AT ABUTMENTS (AT BEAMS 1 THRU 8)  
 STRUCTURE NO. 016-0918

SHEET NO.12 OF 25 SHEETS

F.A.P. RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 29
CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				

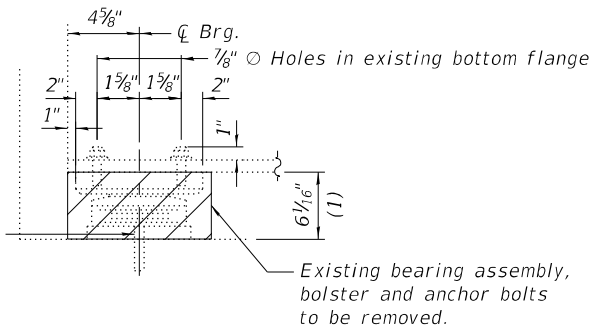


ELEVATION AT ABUT.



SECTION A-A

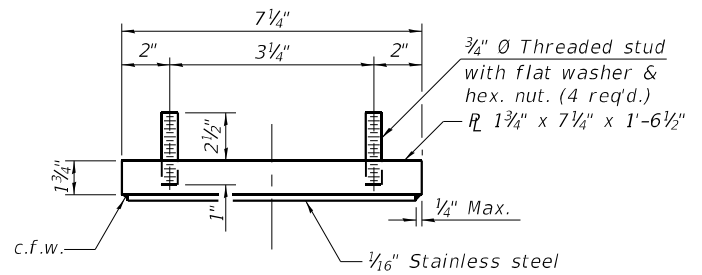
**TYPE II ELASTOMERIC EXP. BRG.**  
(For Beams 9 and 10. Total 4 required)



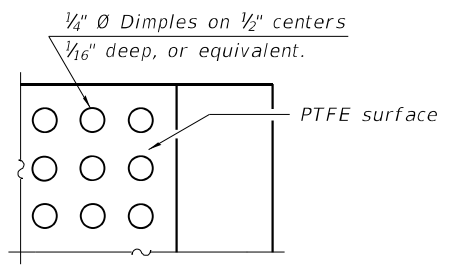
Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth and seal with epoxy. Cost is included with "Jack and Remove Existing Bearings".

**EXISTING BEARING REMOVAL**

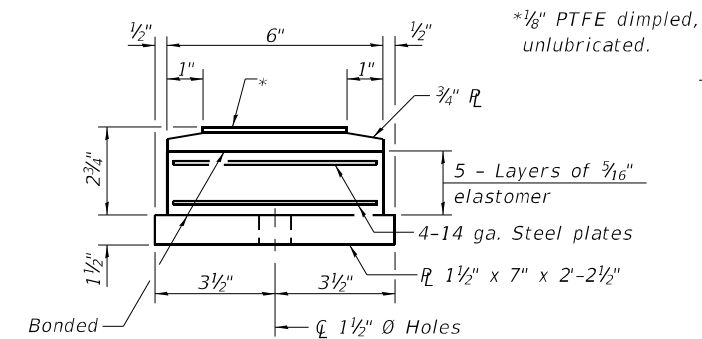
(1) Contractor shall measure in field the distance between bottom of existing bottom flange and top of bearing seat prior to ordering material. Cost is included with "Jack and Remove Existing Bearings".



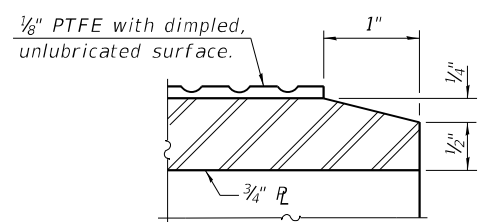
TOP BEARING ASSEMBLY



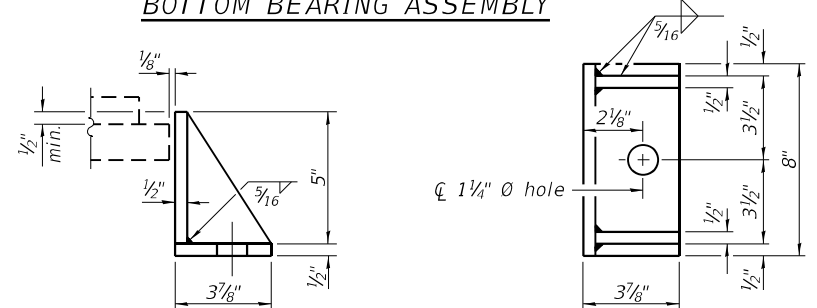
PLAN-PTFE SURFACE



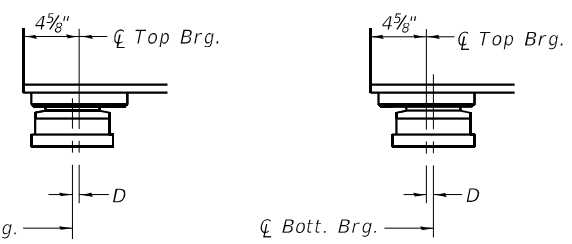
BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE



SIDE RETAINER



**EXPANSION BEARING ORIENTATION**

The above diagrams are for informational purposes only to show the amount of expected offset "D" for the current temperature in the field.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	4
Anchor Bolts	Each	8
Jack and Remove Existing Bearings	Each	4

**NOTES**

- See Sheet 12 of 25 for bearing reactions and additional notes.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- The threaded studs, washers, and nuts shall be galvanized according to AASHTO M232.
- Side retainers and leveling pad required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.
- The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
- Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
- Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
- Shim plates up to 1" total or grinding top of bearing seats up to 1/8" may be needed upon approval by the Engineer.

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Dgn\MO 381\013-016\018-Bearing Replacement\_Details II.dgn

I-2E-2 (modified) 6-15-2019

**WBK ENGINEERING, LLC**  
116 WEST MAIN STREET, SUITE 201  
ST. CHARLES, ILLINOIS 60174  
(630) 443-7755

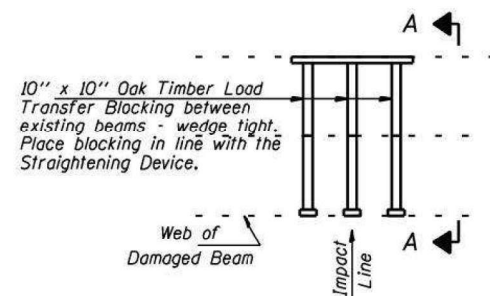
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	CHECKED - JZ	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

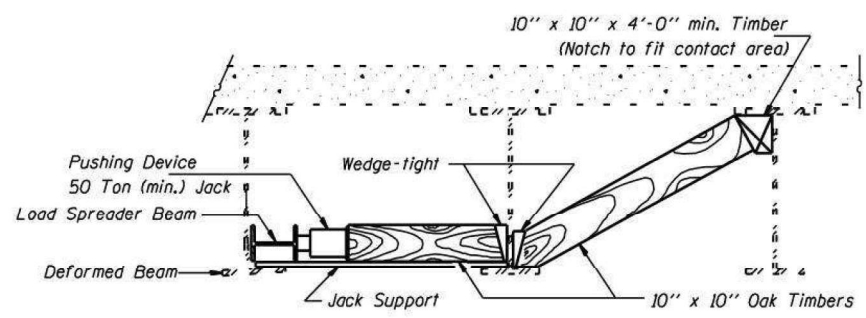
**BEARING REPLACEMENT AT ABUTMENTS (AT BEAMS 9 & 10)  
STRUCTURE NO. 016-0918**

SHEET NO.13 OF 25 SHEETS

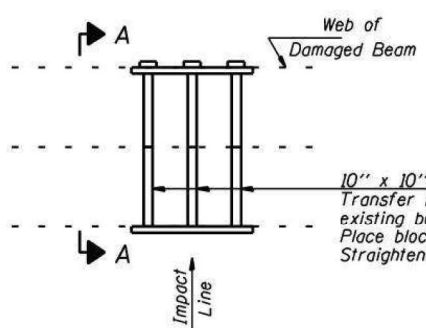
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	30
CONTRACT NO. 62M28			ILLINOIS FED. AID PROJECT	



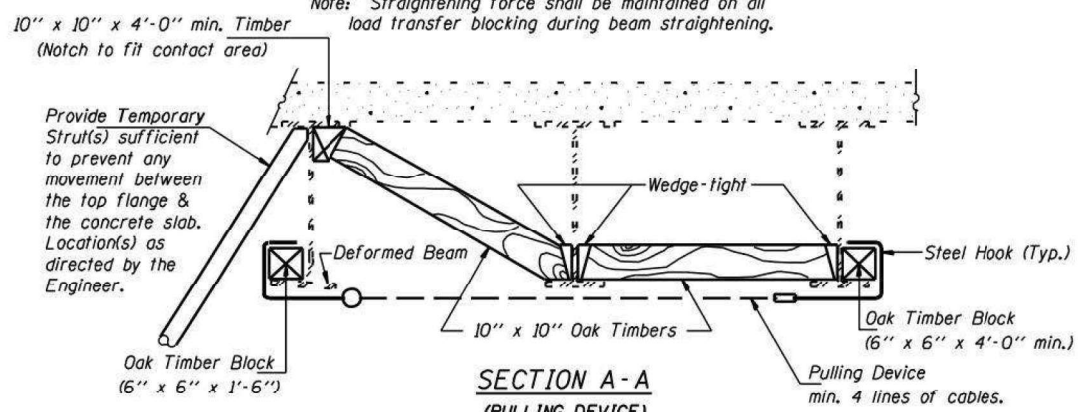
**PARTIAL PLAN**  
 Note: Straightening force shall be maintained on all load transfer blocking during beam straightening.



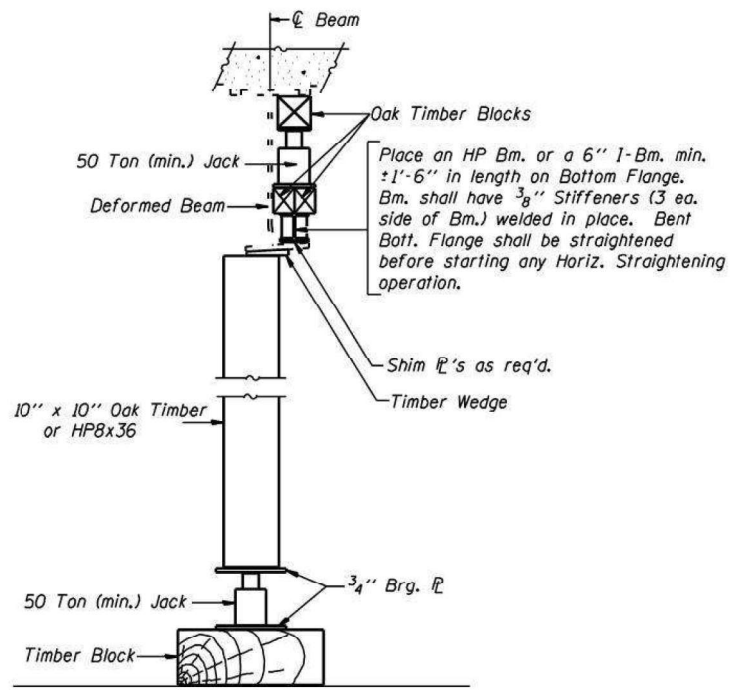
**SECTION A-A (PUSHING DEVICE)**



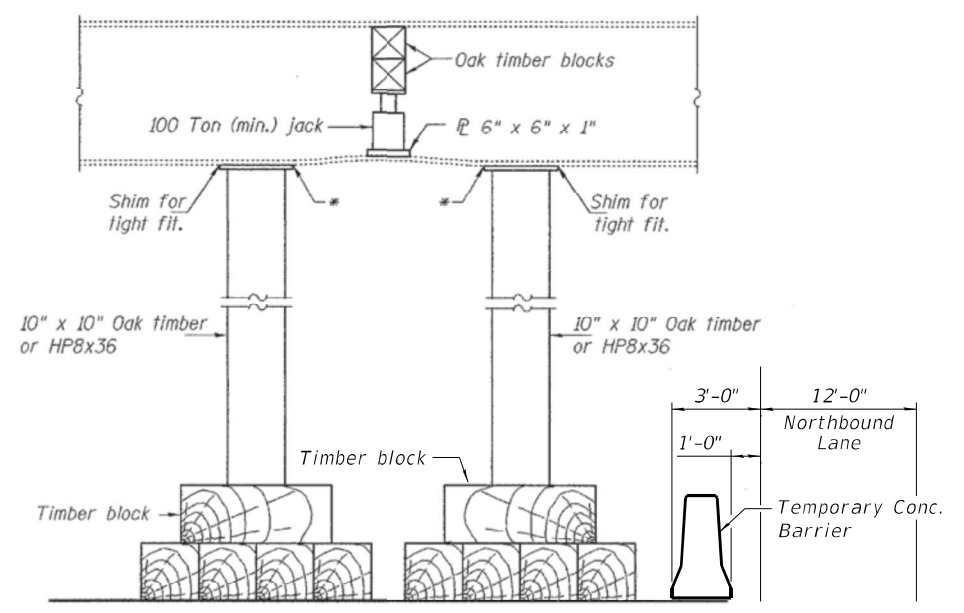
Note: Straightening force shall be maintained on all load transfer blocking during beam straightening.



**SECTION A-A (PULLING DEVICE)**



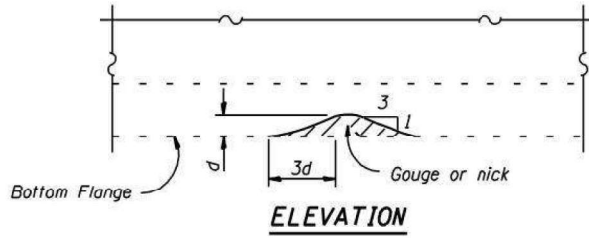
**VERTICAL STRAIGHTENING DETAIL**



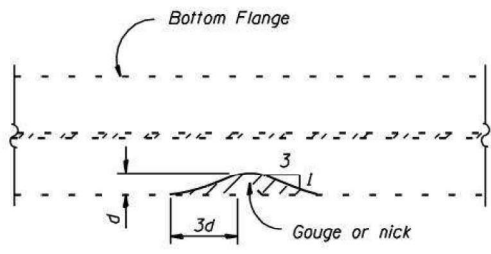
**SUGGESTED VERTICAL STRAIGHTENING DETAIL**  
 (To correct localized vertical flange deformations.)

\* Edge of plate shall line up with edge of deformation.

Note:  
 Braces and jack assembly shall be placed on same side of web.  
 Bent bottom flange shall be straightened before starting any horizontal straightening operations.



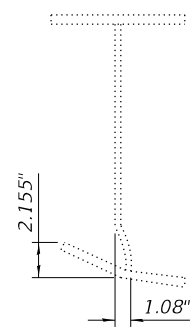
**ELEVATION**



**PLAN**

**GRINDING DETAIL**

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Ground surfaces shall be inspected for cracks using magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.



**EXISTING DEFORMATION TO BE STRAIGHTENED**

(Looking West)  
 (Approximate max. deflections)  
 Deflected length of beam to be straightened is approximately 4'-0".

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Beam Straightening	L Sum	1

Notes:

- Beam Straightening methods are suggested only.

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Drawn\MO\_381\014\_016\0918-Beam\_Straightening\_Details.dgn

REP-1 1-14-2005

**WBK ENGINEERING, LLC**  
 116 WEST MAIN STREET, SUITE 201  
 ST. CHARLES, ILLINOIS 60174  
 (630) 443-7755

USER NAME = ctacey	DESIGNED - CPT	REVISED -
PLOT SCALE = 1:20	CHECKED - JZ	REVISED -
PLOT DATE = 8/11/21	DRAWN - CPT	REVISED -
	CHECKED - JZ	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BEAM STRAIGHTENING DETAILS  
 STRUCTURE NO. 016-0918**

SHEET NO.14 OF 25 SHEETS

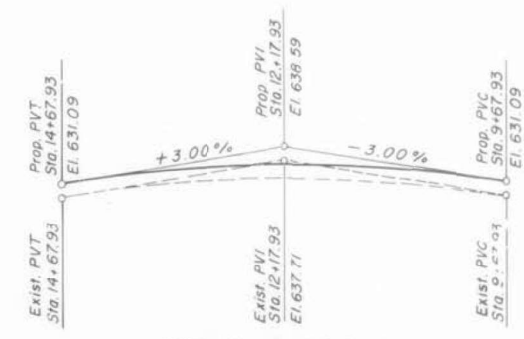
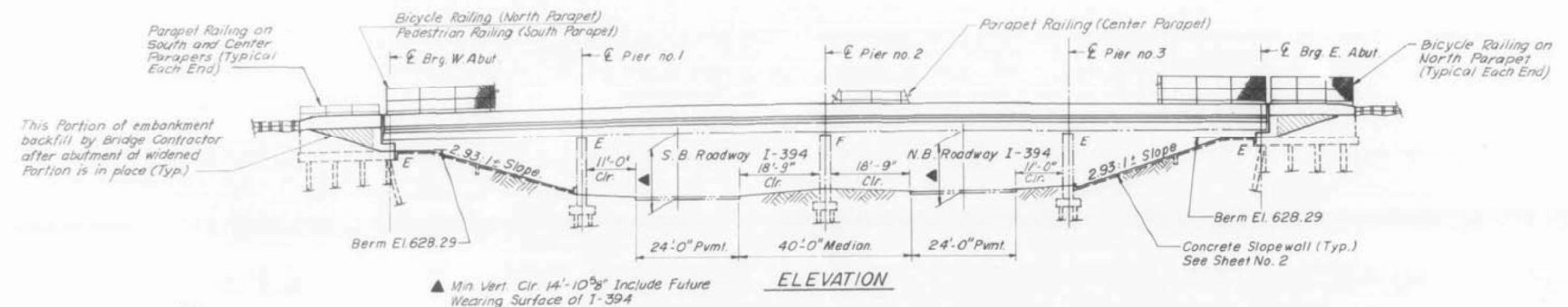
F.A.P. RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 31
			CONTRACT NO. 62M28	
ILLINOIS FED. AID PROJECT				



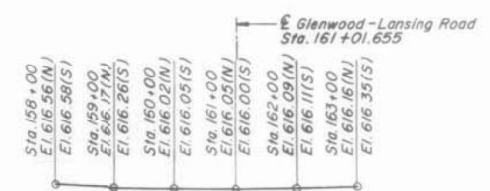
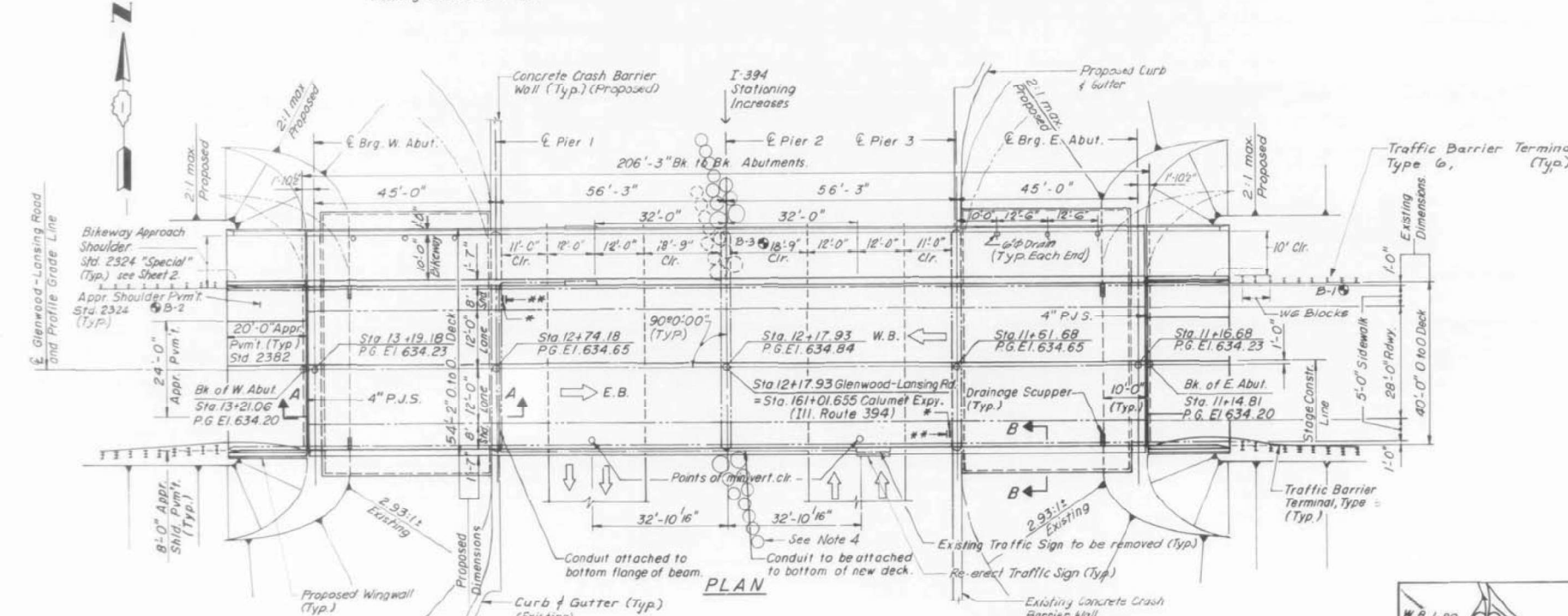


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-411		COOK		10
FED. ROAD DIST. NO. 7 ILLINOIS PROJ.				
* I0102J, 0202J, 0303J, 0303J, 67A1R & I0101J, 0303J, BR-1 1961				

**BENCH MARK**  
 "13" Cut in West Pier of Glenwood-Lansing Road Bridge. E1=617.63  
**EXISTING STRUCTURE DATA** - The Structure length is 206'-3" BK-BK of abutments.  
 Built in 1953 is 28'-0" wide with 5'-0" sidewalk on each side. The deck is concrete slab supported on four span continuous wide flange beams 2 at 45'-0" B 2 of 56'-3". The substructure consists of pile bent abutments and multi column concrete piers. The contractor shall remove the existing deck, portions of the substructure and damaged portions of the existing beams. Traffic shall be maintained at all times during construction utilizing stage construction. See Sheet 7 for Construction Staging. Existing traffic signs and conduit to be salvaged.



**PROFILE ALONG CROWN**  
**GLENWOOD-LANSING RD.**  
 LVC=500'



**EXISTING PROFILE I-394**  
 (N) Indicates Northbound  
 (S) Indicates Southbound

- MAJOR WORK ITEMS**
1. Remove, replace and widen existing bridge deck.
  2. Jacking existing structure.
  3. Modify, repair and extend existing abutments and piers.
  4. Remove existing metal bearing at abutments and replace with elastomeric bearings.
  5. Provide additional superstructure steel framing and bearings.
  6. Provide concrete slope walls.

See Proposal for Boring Data.  
 Add'l. Soil Borings available from existing structure plans, 1957

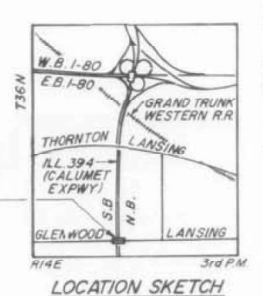
APPROVED  
 FOR STATE OF ILL.

**DESIGN SPECIFICATIONS**  
 1989 AASHTO Specifications  
**LOADING HS 20-44**

**DESIGN STRESSES**  
 (New Construction)  
**FIELD UNITS**

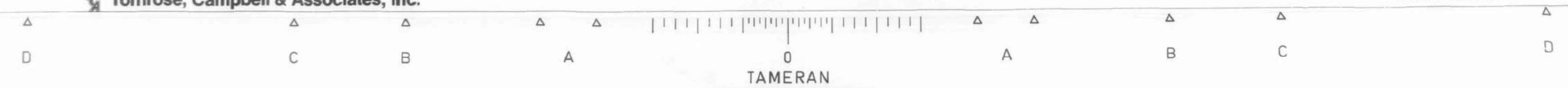
$f'_c = 3500 \text{ P.S.I.}$   
 $f_y = 60000 \text{ P.S.I. (All reinforcement)}$   
 $f_s = 20,000 \text{ P.S.I. (M183 Structural steel)}$   
**EXISTING STRUCTURE**  
 $f_s = 18,000 \text{ P.S.I. (Structural steel)}$   
 $f_s = 20,000 \text{ P.S.I. (Reinforcement)}$   
 Allow 25 psf future Wearing Surface

- NOTES:**
1. For Section A-A and Section B-B See Sheet No. 2
  2. \*Existing Name Plate to be cleaned. Cost incidental.
  3. \*\*New Name Plate above existing Name Plate, see Sheet No. 2
  4. Existing Sand Module Impact Attenuators Relocate at North end of Pier 2.



REVISED BY DATE		GLENWOOD-LANSING ROAD	
BY DATE		ILLINOIS DEPARTMENT OF TRANSPORTATION	
GENERAL PLAN AND ELEVATION			
F.A.P. RT. 411 SECTION I0102J, 0202J, 0303J, 0303J, 67A1R & I0101J, 0303J, BR-1 1961			
COOK COUNTY			
STA. 12+17.93			
DRAWN BY	DATE	FILE NO.	SHEET NO. 1 OF 26
M.A.K.	1-20-87		
CHECKED BY	DATE		
G.T.	2-18-87		

Tomrose, Campbell & Associates, Inc.



STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING PLANS I  
 STRUCTURE NO. 016-0918

SHEET NO. 16 OF 25 SHEETS

FOR INFORMATION ONLY

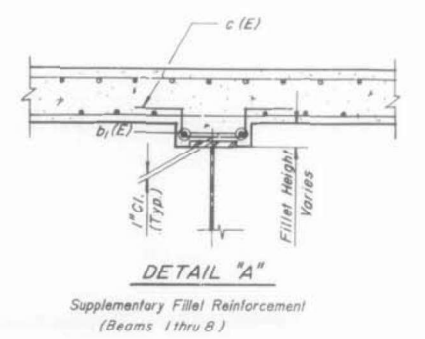
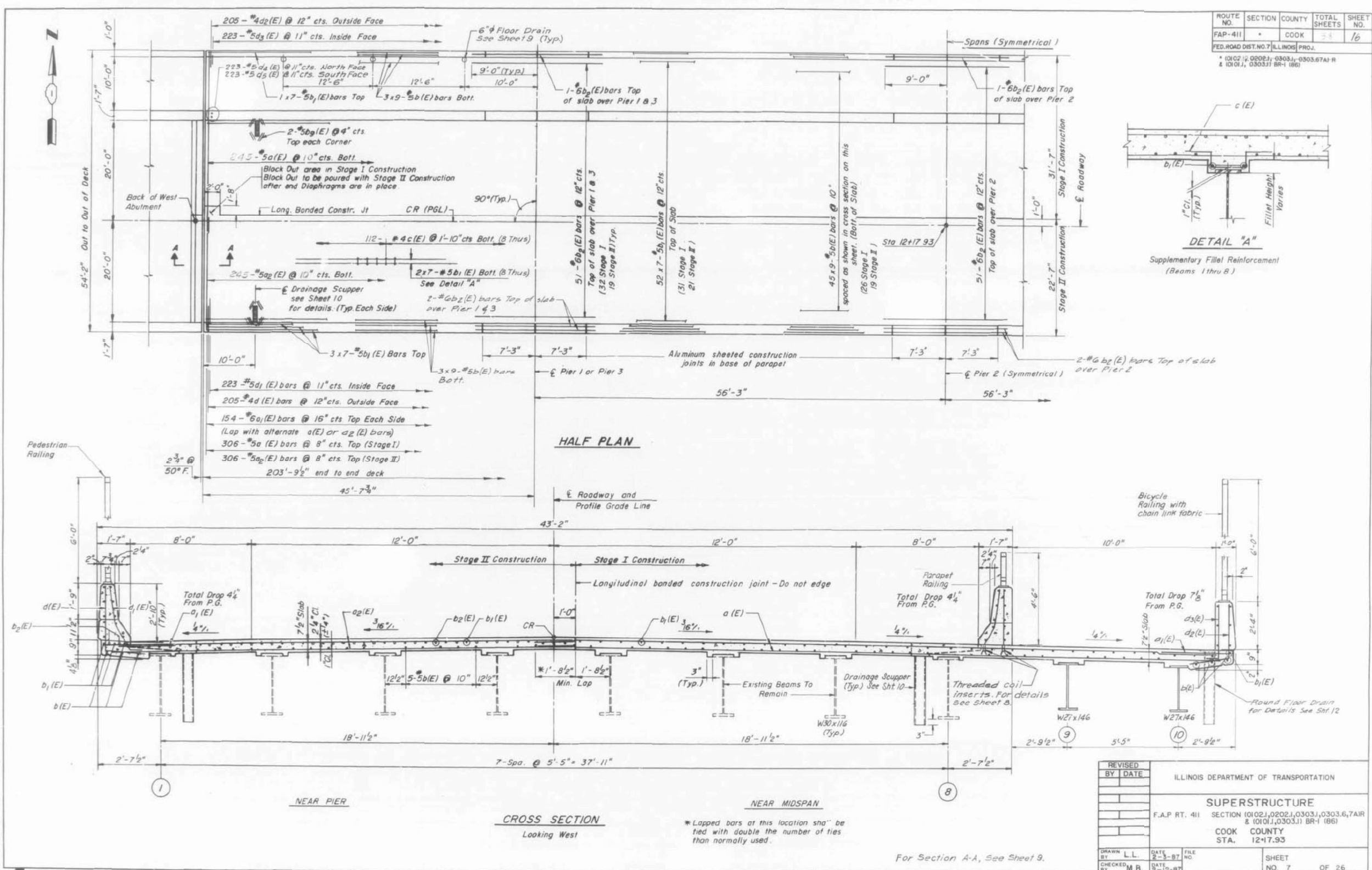
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**WBK ENGINEERING, LLC**  
 116 WEST MAIN STREET, SUITE 201  
 ST. CHARLES, ILLINOIS 60174  
 (630) 443-7755

USER NAME = ctacey	DESIGNED - CPT	REVISED -
PLOT SCALE = 1:5,333.33	CHECKED - JZ	REVISED -
PLOT DATE = 8/11/21	DRAWN - CPT	REVISED -
	CHECKED - JZ	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	33
CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-411		COOK	52	16
FED. ROAD DIST. NO. 7 ILLINOIS PROJ.				
* (1002, 0202, 0303, 0303.67A) R & (1001, 0303) BR-1 (B6)				



REVISED BY DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION
	<b>SUPERSTRUCTURE</b>
	F.A.P. RT. 411 SECTION (1002, 0202, 0303, 0303.67A) R & (1001, 0303) BR-1 (B6)
	COOK COUNTY STA. 12+17.93
DRAWN BY L.L.	DATE 2-3-87
CHECKED BY M.B.	DATE 2-12-87
	SHEET NO. 7 OF 26

**Tomrose, Campbell & Associates, Inc.**



FILE NAME = Z:\2018\180124 PTB187\cadd\Structural\Drawn\016918-Exst-Plans II.dgn

**WBK ENGINEERING, LLC**  
 116 WEST MAIN STREET, SUITE 201  
 ST. CHARLES, ILLINOIS 60174  
 (630) 443-7755

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PLOT SCALE = 1:5,333.33	CHECKED - JZ	REVISED -
PLOT DATE = 8/11/21	DRAWN - CPT	REVISED -
	CHECKED - JZ	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING PLANS II  
 STRUCTURE NO. 016-0918  
 SHEET NO. 17 OF 25 SHEETS

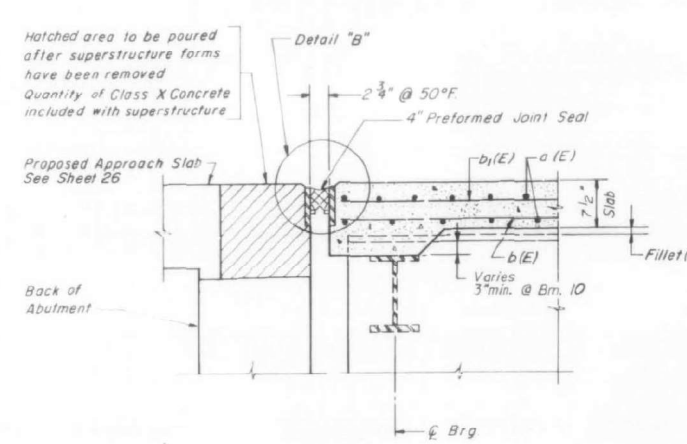
**FOR INFORMATION ONLY**

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CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				

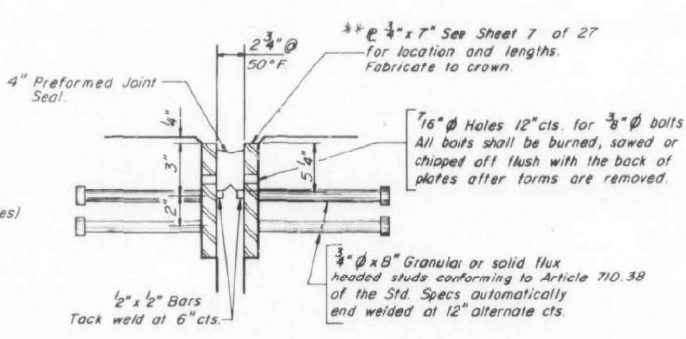




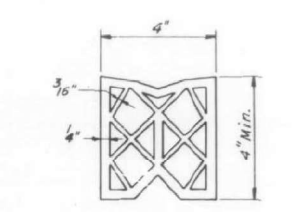
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-41	2020-168-BR	COOK	52	18
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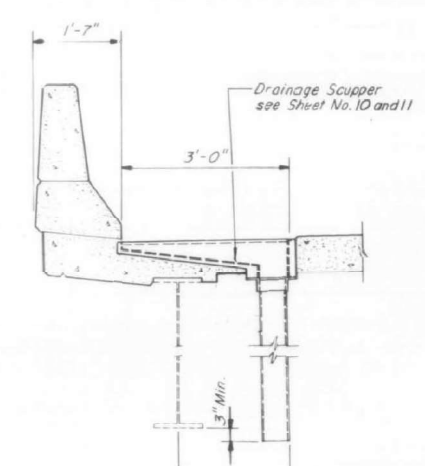
SECTION A-A



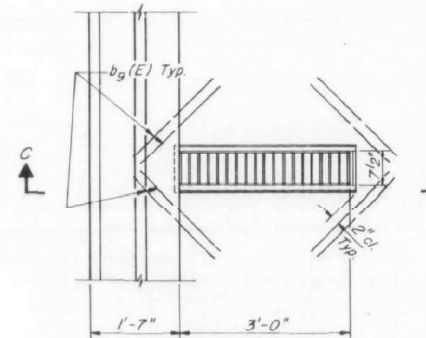
DETAIL "B"



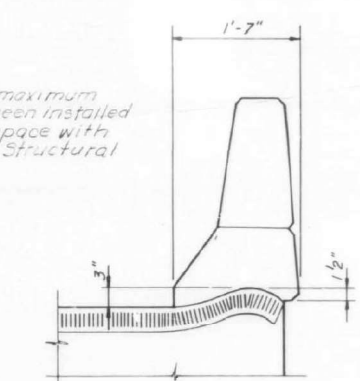
PREFORMED JOINT SEAL (4")



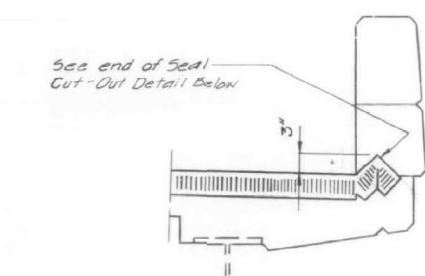
SECTION C-C



PLAN

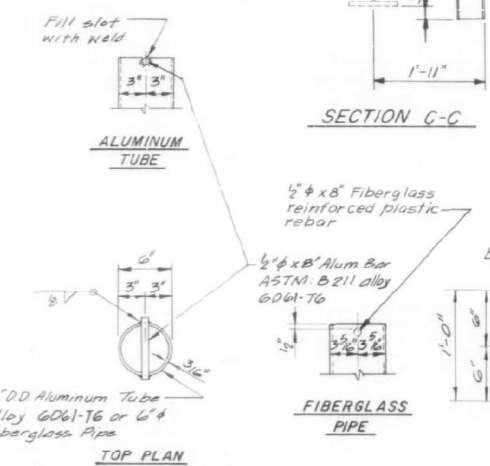


ROADWAY



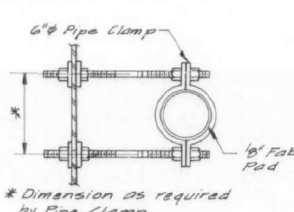
BIKEWAY

TYPICAL END OF SEAL TREATMENT

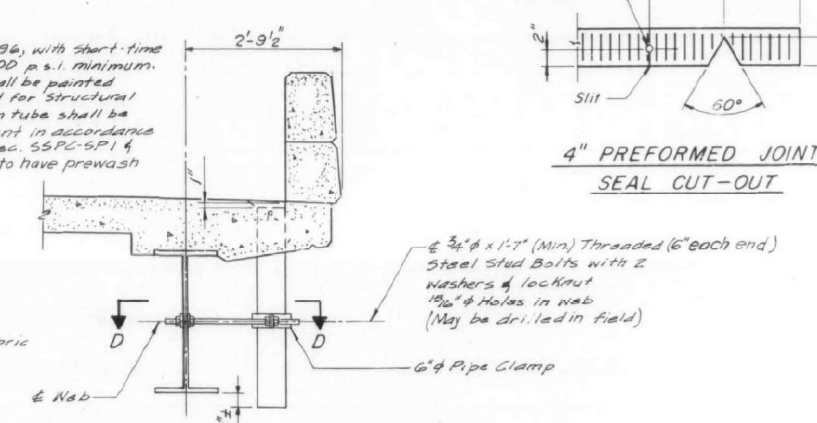


FLOOR DRAIN DETAILS

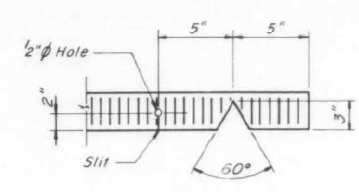
NOTE: Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The exterior surface of the Floor Drain shall be painted with the Vinyl enamel cast painting specified for Structural Steel. The exterior surfaces of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec. SSPC-SP 1 & SSPC-PAINT 27 prior to painting. Fiberglass to have prewash as per MIL-P-1532B.



SECTION D-D



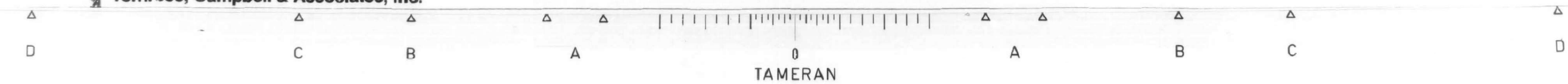
SECTION AT BIKEWAY PARAPET



4" PREFORMED JOINT SEAL CUT-OUT

REVISED BY DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS	
F.A.P. RT. 41 SECTION (01021, 02021, 03033, 03036, 7A/R & (0101, 03033) BR-1 (86)	
COOK COUNTY STA. 12+17.93	
DRAWN BY L.L.	DATE 2-3-87
CHECKED BY R.A.W.	DATE 2-19-87
FILE NO. 87462	SHEET NO. 9 OF 26

Tomrose, Campbell & Associates, Inc.



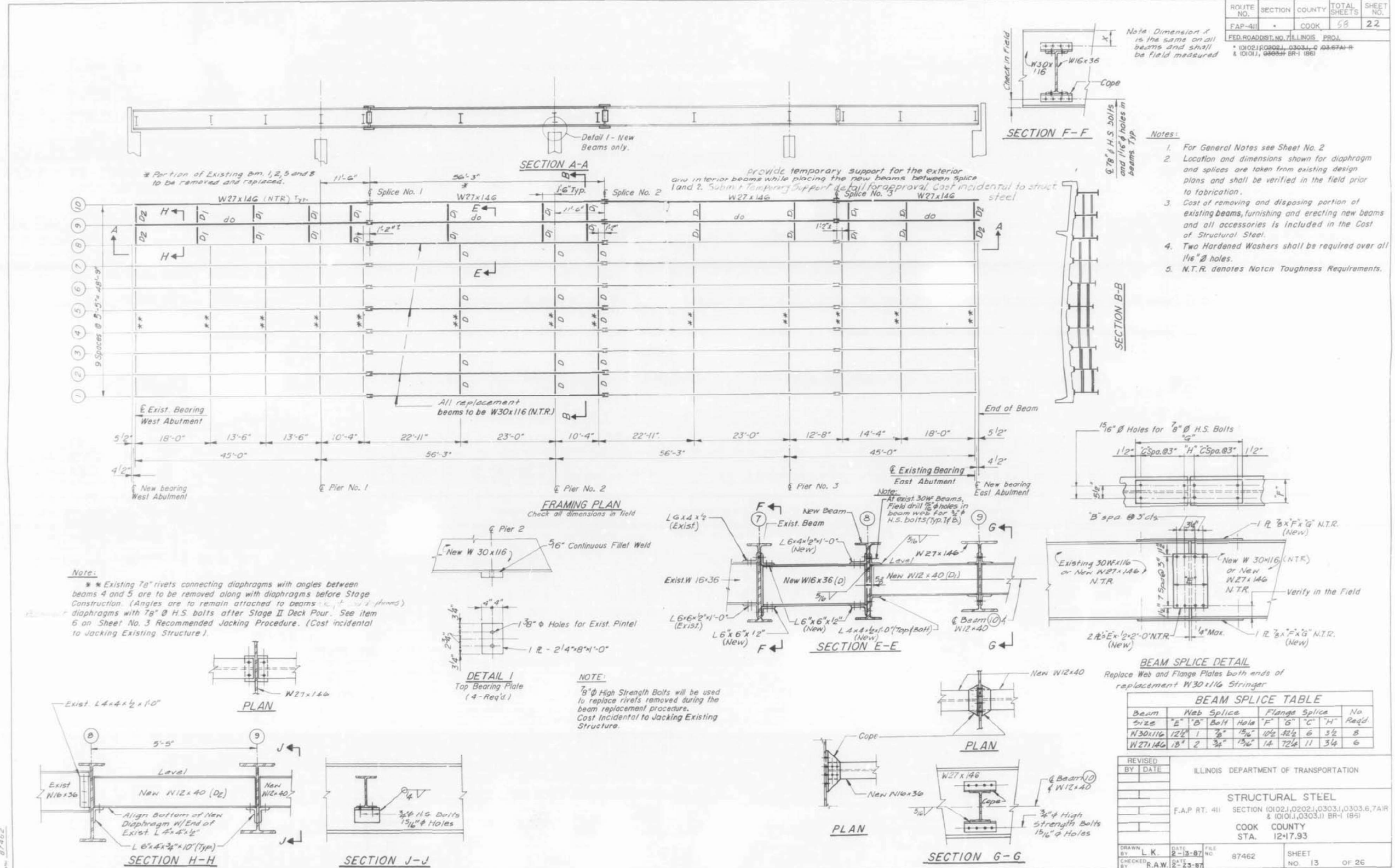
FOR INFORMATION ONLY

FILE NAME = Z:\2018\180124\_PTB1817\Addl\Structural\Drawn\MO 381019-0168918-Exst Plans IV.dgn

	WBK ENGINEERING, LLC 116 WEST MAIN STREET, SUITE 201 ST. CHARLES, ILLINOIS 60174 (630) 443-7755	USER NAME = ctacey DESIGNED - CPT CHECKED - JZ DRAWN - CPT CHECKED - JZ	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLANS IV STRUCTURE NO. 016-0918 SHEET NO. 19 OF 25 SHEETS	F.A.P. RTE. 332 SECTION 2020-168-BR COUNTY COOK TOTAL SHEETS 52 SHEET NO. 36 CONTRACT NO. 62M28 ILLINOIS FED. AID PROJECT
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-411		COOK	58	22

FED. ROAD DIST. NO. 71 LINDSEY PROJ.  
 \* (10021, 02021, 03031, 03036, 6, 7A1R & (1011, 03031) BR-1 (B5)



**Note:**  
 Existing 7/8" rivets connecting diaphragms with angles between beams 4 and 5 are to be removed along with diaphragms before Stage Construction. (Angles are to remain attached to beams 4 and 5 after diaphragms with 7/8" H.S. bolts after Stage II Deck Pour. See item 6 on Sheet No. 3 Recommended Jacking Procedure. (Cost incidental to Jacking Existing Structure).

**NOTE:**  
 7/8" High Strength Bolts will be used to replace rivets removed during the beam replacement procedure. Cost incidental to Jacking Existing Structure.

- Notes:**
- For General Notes see Sheet No. 2
  - Location and dimensions shown for diaphragm and splices are taken from existing design plans and shall be verified in the field prior to fabrication.
  - Cost of removing and disposing portion of existing beams, furnishing and erecting new beams and all accessories is included in the Cost of Structural Steel.
  - Two Hardened Washers shall be required over all 1/16" holes.
  - N.T.R. denotes Notch Toughness Requirements.

**BEAM SPLICE TABLE**

Beam Size	Web Splice	Flange Splice	No. Req'd
N30x116	12" 1 3/4" 15/16"	10" 12" 6 3/4"	8
W27x146	18" 2 3/4" 15/16"	14" 12" 11 3/4"	6

ILLINOIS DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL

F.A.P. RT. 411 SECTION (10021, 02021, 03031, 03036, 6, 7A1R & (1011, 03031) BR-1 (B5)

COOK COUNTY  
 STA. 12+7.93

DRAWN BY: L.K. DATE: 2-13-87 FILE NO: 87462 SHEET NO: 13 OF 26  
 CHECKED BY: R.A.W. DATE: 2-23-87

Tomrose, Campbell & Associates, Inc.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING PLANS V  
 STRUCTURE NO. 016-0918

FOR INFORMATION ONLY

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Drawn\MO\_381026-0160918-Exist\_Plans\_V.dgn

**WBK ENGINEERING, LLC**  
 116 WEST MAIN STREET, SUITE 201  
 ST. CHARLES, ILLINOIS 60174  
 (630) 443-7755

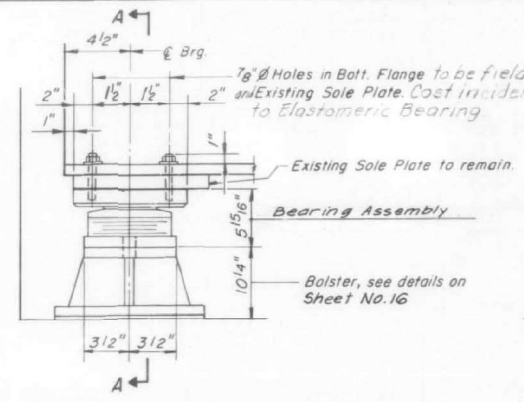
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	CHECKED - JZ	REVISED -

SHEET NO.20 OF 25 SHEETS

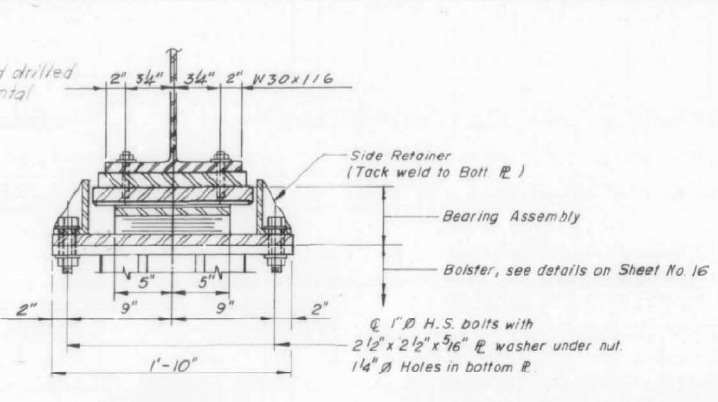
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	37
CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-411	-	COOK	58	23

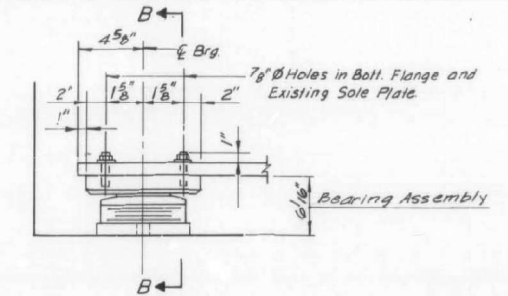
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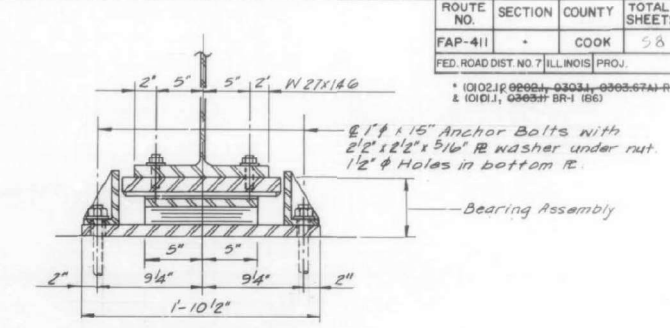
ELEVATION AT ABUT.



SECTION A-A



ELEVATION AT ABUT.



SECTION B-B

TYPE II TFE ELASTOMERIC EXP. BRG. (Beam 9410)

INTERIOR BEAM MOMENT TABLE

*ITEM	W30 x 116				W27 x 146			
	0.4 Span 1 or 0.6 Span 4	Pier 1 or 3	0.5 Span 2 or 3	Pier 2	0.4 Span 1 or 0.6 Span 4	Pier 1 or 3	0.5 Span 2 or 3	Pier 2
I (in <sup>4</sup> )	4930	4930	4930	4930	5630	5630	5630	5630
D.L. (K)	.806	.806	.806	.806	.92	.92	.92	.92
M.D.L. (K)	113.1	208.4	107.6	215.1	114.7	211.3	109.0	218.1
M.L. (K)	214.2	175.9	220.2	186.5	214.2	175.9	220.2	186.5
M Imp. (K)	62.1	51.0	63.1	54.1	62.1	51.0	63.1	51.4
M Total (K)	389.4	435.3	390.9	455.7	591.0	438.2	392.3	456.0
f <sub>s</sub> (KSI)	14.2	15.9	14.3	16.6	11.4	12.8	11.5	13.3

INTERIOR BEAM REACTION TABLE

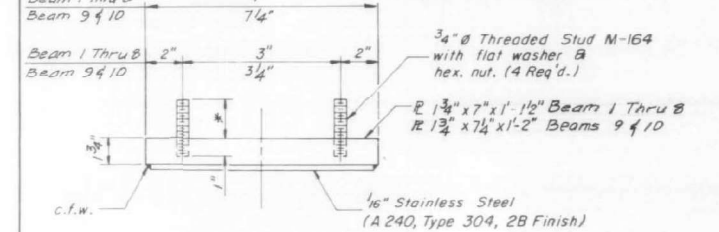
ITEM	Abut.	Pier 1 or 3	Pier 2
R <sub>D.L.</sub> (K)	13.7	45.9	46.2
R <sub>L.L.</sub> (K)	29.5	35.9	35.6
R <sub>Imp.</sub> (K)	8.5	10.4	10.3
R <sub>Total</sub> (K)	51.7	92.2	92.1

Note: Work this sheet with Sheet No. 16

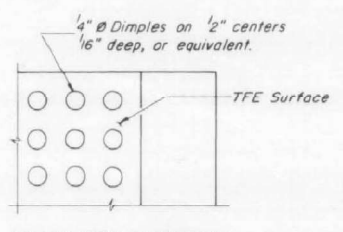
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	20

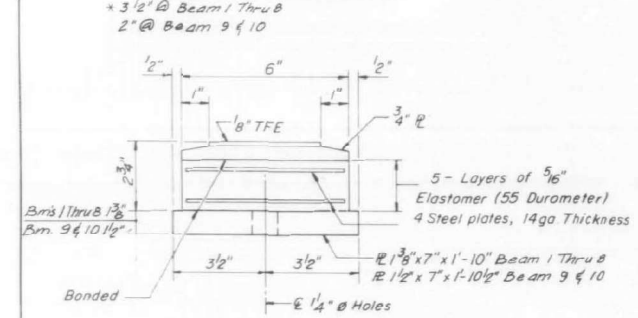
TYPE II TFE ELASTOMERIC EXP. BRG. (Beam 1 Thru 8)



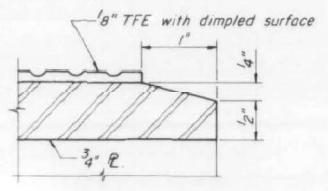
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



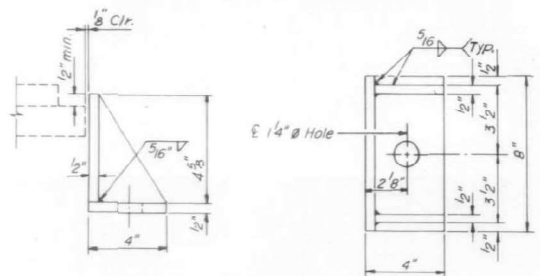
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

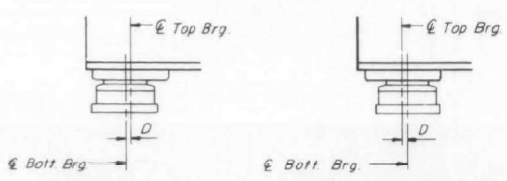
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SIDE RETAINER (40 Required)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SETTING ANCHOR BOLTS AT EXP. BRG. (Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

BELOW 50°F ABOVE 50°F

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

REVISED BY DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION
BEARING DETAILS	
F.A.P. RT. 411 SECTION 101021, 02021, 03031, 03036, 67A1R & 101011, 03031 BR-1 (86)	
COOK COUNTY	
STA. 12+7.93	
DRAWN BY L. K.	FILE NO. 87462
CHECKED BY R. A. W.	SHEET NO. 14 OF 26

Tomrose, Campbell & Associates, Inc.



TAMERAN

FOR INFORMATION ONLY

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Drawn\MO 381021-0160918-Exist Plans V1.dgn

**WBK ENGINEERING, LLC**  
116 WEST MAIN STREET, SUITE 201  
ST. CHARLES, ILLINOIS 60174  
(630) 443-7755

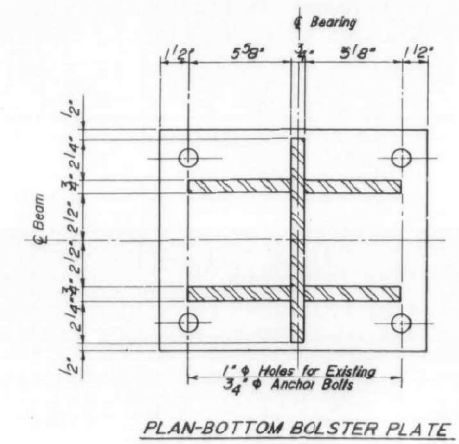
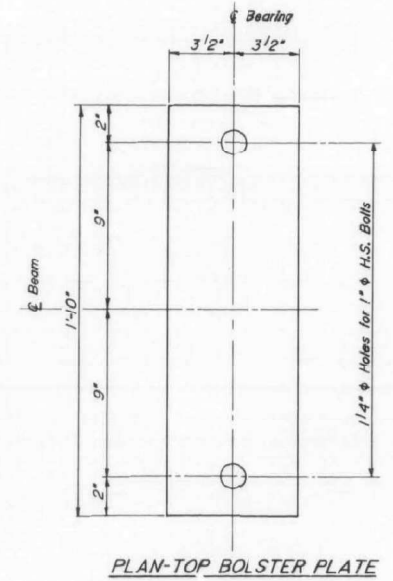
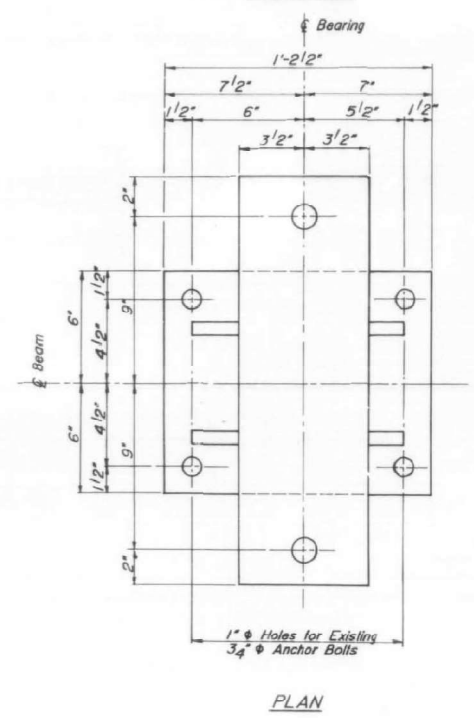
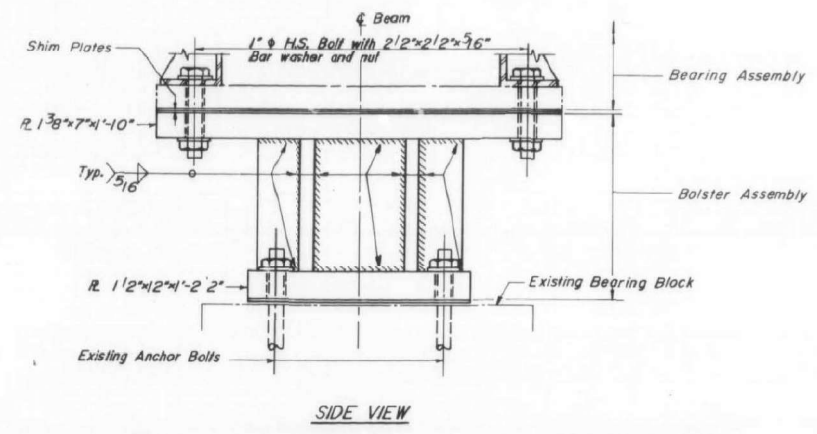
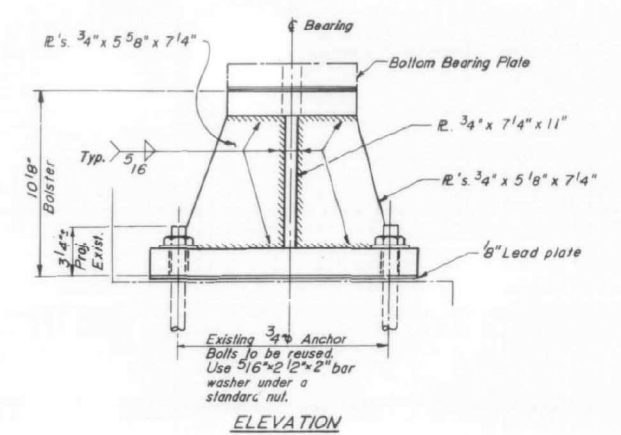
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	CHECKED - JZ	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS VI  
STRUCTURE NO. 016-0918  
SHEET NO. 21 OF 25 SHEETS

F.A.P. RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 38
CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-411	*	COOK	52	25
FED. ROAD DIST. NO. 7 ILLINOIS PROJ.				
* (102J, 0202J, 0303J, 0303.67A) R & (101J, 0303J) BR-1 (86)				



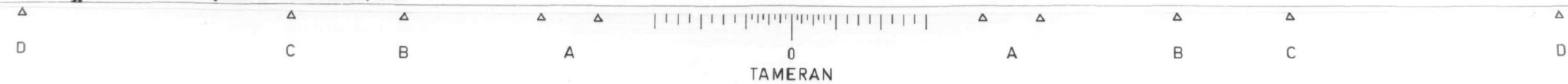
**NOTE:**  
 Weight of shim plates, bolts with nuts and washers, lead plates and bolsters is included in "STRUCTURAL STEEL"  
 Removal and disposal of existing bearing plates, rollers and other hardware is incidental to "Removal of Existing Concrete Deck"

Note: Work this sheet with Sheet No. 14

BOLSTER DETAILS - ABUTMENT  
 16 REQ'D.

REVISED BY DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION		
BOLSTER DETAILS AT ABUTMENTS			
F.A.P. RT. 411 SECTION (10102J, 0202J, 0303J, 0303.6, 7A) & (1010J, 0303J) BR-1 (86)			
COOK COUNTY		STA. 12+17.93	
DRAWN BY: L. K.	DATE: 2-24-87	FILE NO: 87462	SHEET NO. 16 OF 25
CHECKED BY: R. A. W.	DATE: 2-27-87		

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**FOR INFORMATION ONLY**

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Drawn\MO\_381022-0160918-Exist\_Plans\_VII.dgn

**WBK ENGINEERING**  
 WBK ENGINEERING, LLC  
 116 WEST MAIN STREET, SUITE 201  
 ST. CHARLES, ILLINOIS 60174  
 (630) 443-7755

USER NAME = ctacey	DESIGNED - CPT	REVISED -
PLOT SCALE = 1:5.33333	CHECKED - JZ	REVISED -
PLOT DATE = 8/11/21	DRAWN - CPT	REVISED -
	CHECKED - JZ	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING PLANS VII  
 STRUCTURE NO. 016-0918

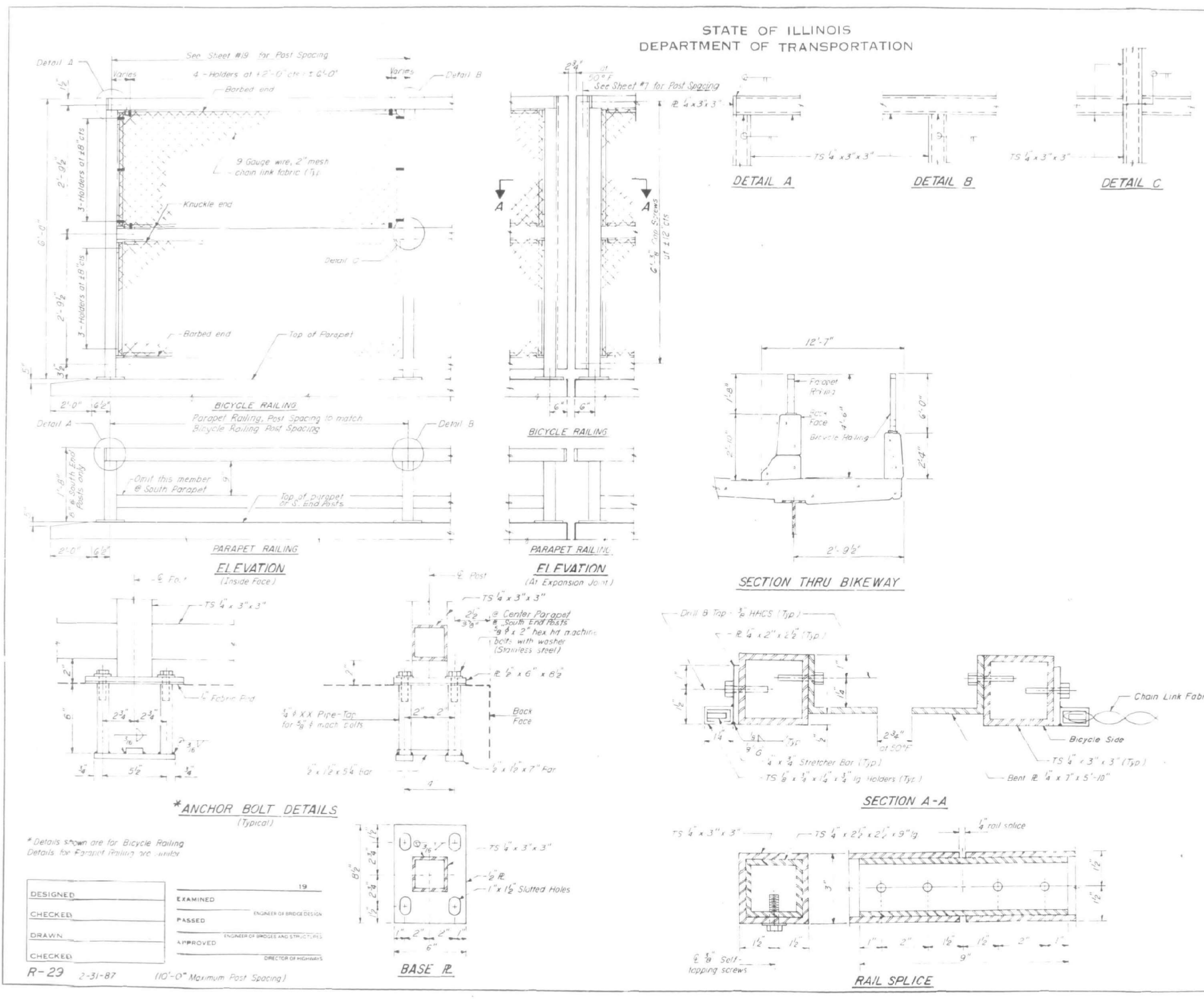
SHEET NO. 22 OF 25 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	39
CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RT. 411	COOK	33
SECTION 0102-1R B 0101 IBR-1)86		



**NOTES**

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per linear foot for Bicycle Railing.

The 9 gauge fabric mesh shall be in accordance with Article 710.33(1) of the Standard Specifications.

Installation of the chain link fabric shall be in accordance Section 629 of the Standard Specifications.

Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M183.

The Parapet Railing, Turned and installed shall be paid for as such. It shall be installed in the same manner for Bicycle Railing.

The chain link fabric shall be placed along Bicycle Side as shown on Section A-A.

Stretcher bars shall be used at all four sides of each panel.

The designer should add the appropriate note as applicable.

**A** When railing is galvanized:  
All posts, railing, splices, anchor devices and bent plates shall be galvanized after shop fabrication, in accordance with AASHTO M-111 and ASTM A-385. All bolts, nuts and washers shall be galvanized in accordance with AASHTO M-232. Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.  
The chain link fabric shall conform to the requirements of Article 710.33(a)(1)(2) or (3) of the Std. Spec's.

**B** When railing is painted:  
All posts, railing, splices, anchor devices and bent plates shall be painted using the zinc-silicate and vinyl paint system.  
The chain link fabric shall conform to the requirements of Article 710.33(a)(4) of the Std. Spec's.

**BILL OF MATERIAL**

Item	Unit	Quantity
Bicycle Railing	Lin. Ft.	241.3
Parapet Railing	Lin. Ft.	279.7

REVISIONS:

NO.	DATE	DESCRIPTION
1	2-4-87	ISSUED FOR BIDDING
2	2-11-87	REVISED

ILLINOIS DEPARTMENT OF TRANSPORTATION

**BICYCLE RAILING**

F.A.P. RT. 411 SECTION 0102-1R B 0101 IBR-1)86  
COOK COUNTY  
STA. 12+17.93

DRW. BY: DATE: 2-4-87  
CHKD. BY: DATE: 2-11-87

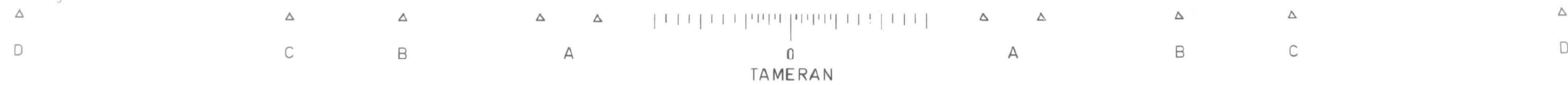
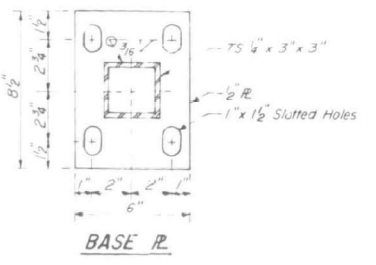
87462 SHEET NO. 24 OF 26

**\*ANCHOR BOLT DETAILS**  
(Typical)

\*Details shown are for Bicycle Railing  
Details for Parapet Railing are similar

DESIGNED	19
CHECKED	ENGINEER OF BRIDGE DESIGN
DRAWN	ENGINEER OF BRIDGE AND STRUCTURES
CHECKED	DIRECTOR OF HIGHWAYS

R-23 2-31-87 (10'-0" Maximum Post Spacing)



**FOR INFORMATION ONLY**

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Drawn\MO 381023-0160918-Exst. Plans VIII.dgn

**WBK ENGINEERING, LLC**  
116 WEST MAIN STREET, SUITE 201  
ST. CHARLES, ILLINOIS 60174  
(630) 443-7755

USER NAME = ctacey	DESIGNED - CPT	REVISED -
PLOT SCALE = 1:5.33333	CHECKED - JZ	REVISED -
PLOT DATE = 8/11/21	DRAWN - CPT	REVISED -
	CHECKED - JZ	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS VIII  
STRUCTURE NO. 016-0918  
SHEET NO. 23 OF 25 SHEETS

F.A.P. RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 40
CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DATE	DESIGNER	CHECKER	PROJECT	SHEET NO.
				4
Contract Number: 60B16				8 SHEETS

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") (2)

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specifications.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

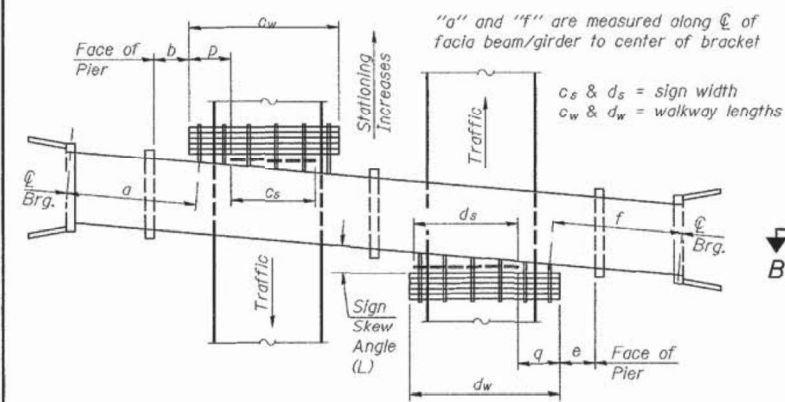
ANCHOR RODS: All threaded rod conforming to ASTM A307, 3/4" x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

- Bracket spacing  $g \leq 6'-0"$ , max. Spacing shall be uniform if possible but may vary  $+6"$  to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.
- Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.
- Unit price includes grating, handrail, brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. Limits of payment are based on grating length (cw, dw) unless otherwise specified. For Safety Chain Details and Details D, F and G, see Base Sheet BM-4.
- If walkway bracket at safety chain location is behind sign, add angle to bracket. See detail on Base Sheet BM-4.

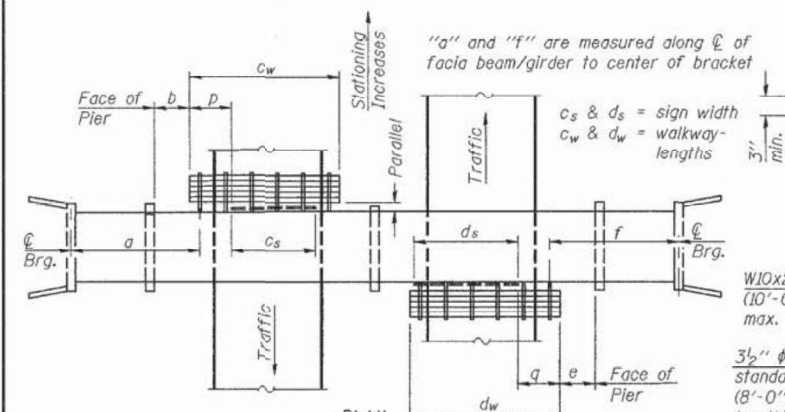
NUMBER	REVISION	DATE

TOTAL BILL OF MATERIAL

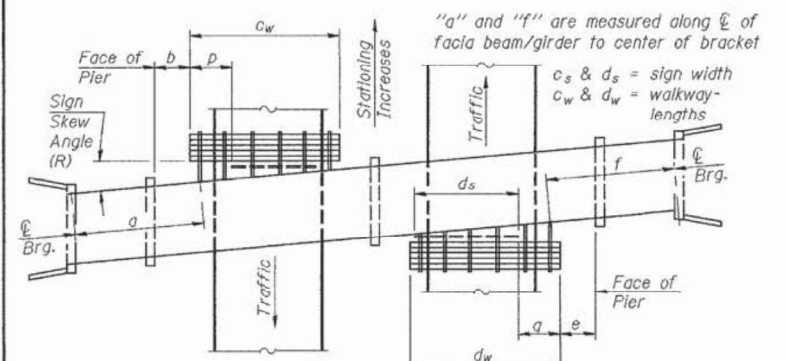
(3) OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED	Foot	22
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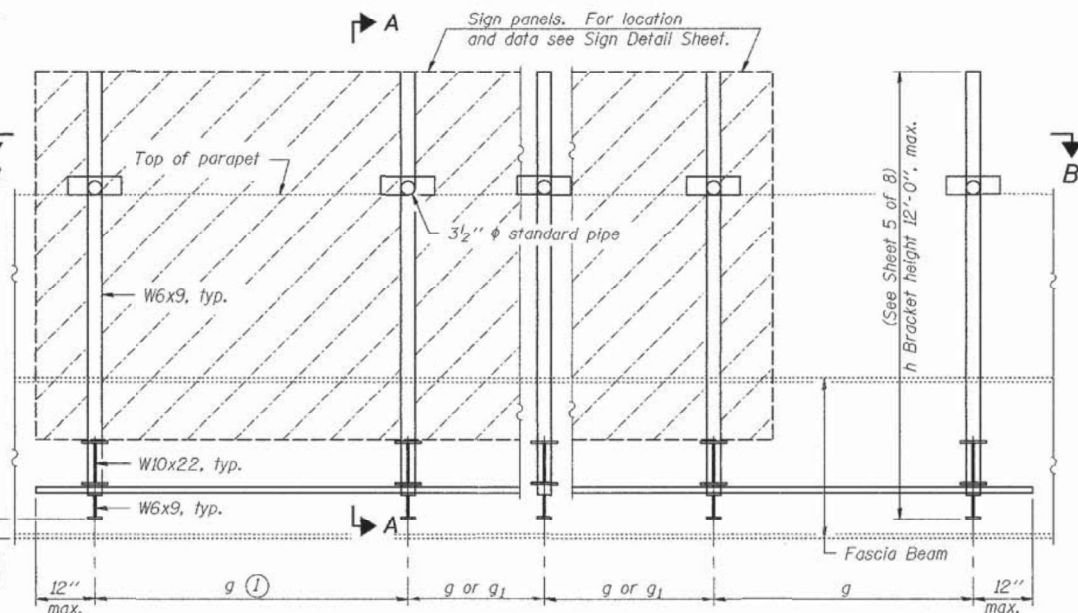
PLAN  
(Left Sign Skew > 15°)  
WALKWAY AND HANDRAIL SKETCH  
(Road plan beneath structure varies.)



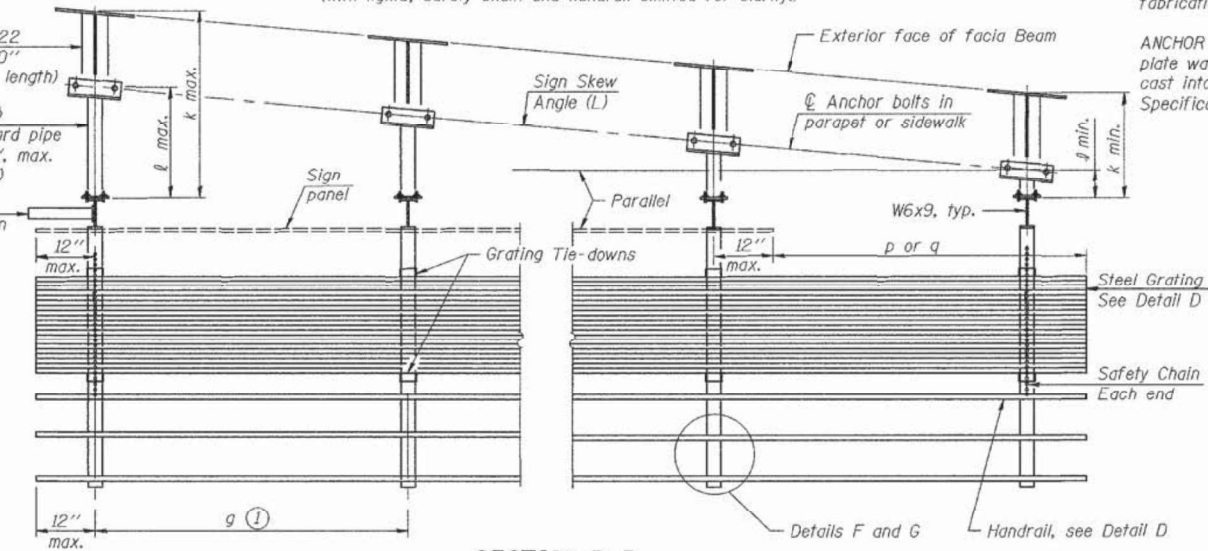
PLAN  
(For Sign Skew  $\leq 15^\circ$ , all brackets constant)  
WALKWAY AND HANDRAIL SKETCH  
(Road plan beneath structure varies.)



PLAN  
(Right Sign Skew > 15°)  
WALKWAY AND HANDRAIL SKETCH  
(Road plan beneath structure varies.)



TYPICAL FRONT ELEVATION  
(With lights, safety chain and handrail omitted for clarity.)



SECTION B-B  
(Shown: Left Sign Skew > 15°)

Structure Number	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Contract Route Designation	a	b	c <sub>s</sub>	c <sub>w</sub>	d <sub>s</sub>	d <sub>w</sub>	e	f	g	g <sub>1</sub>	No. of Brackets (Total)	p	q	Total Grating/Hndrl. Lengths (c <sub>w</sub> + d <sub>w</sub> )
180SS394 R000.0-000	0°	12+17.93	016-0918	FA 332					22'-0"	22'-0"	+11'-6"	+58'-4"	5'-4 1/2"	5'-2"	5		0"	22'-0"

Dimensions a, b, e, f & g may vary as approved by the Engineer, see (1).  
When  $c_w < c_s$  and/or  $d_w < d_s$ , use alternate brackets without walkway supports where applicable, see (3).  
The Contractor must field verify location of existing sign structure and replace in kind.

DESIGNED S.J.B.  
CHECKED P.S.J.  
DRAWN Drew Christopher  
CHECKED S.J.B. P.S.J.

September 19, 2006  
EXAMINED John A. Morris  
PASSED Ralph E. Anderson

SLT-91-001-06

SIGN STRUCTURE  
DETAILS  
GLENWOOD-  
LANSING RD / IL 394  
COOK COUNTY  
SN 016-0918

FOR INFORMATION ONLY

FILE NAME = Z:\2018\180124\_PTB187\cadd\Structural\Drawn\MO\_381024-0160918-Exst\_Plan\_IX.dgn



WBK ENGINEERING, LLC  
116 WEST MAIN STREET, SUITE 201  
ST. CHARLES, ILLINOIS 60174  
(630) 443-7755

USER NAME = ctacey	DESIGNED - CPT	REVISED -
PLOT SCALE = 1:5,33333	CHECKED - JZ	REVISED -
PLOT DATE = 8/11/21	DRAWN - CPT	REVISED -
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

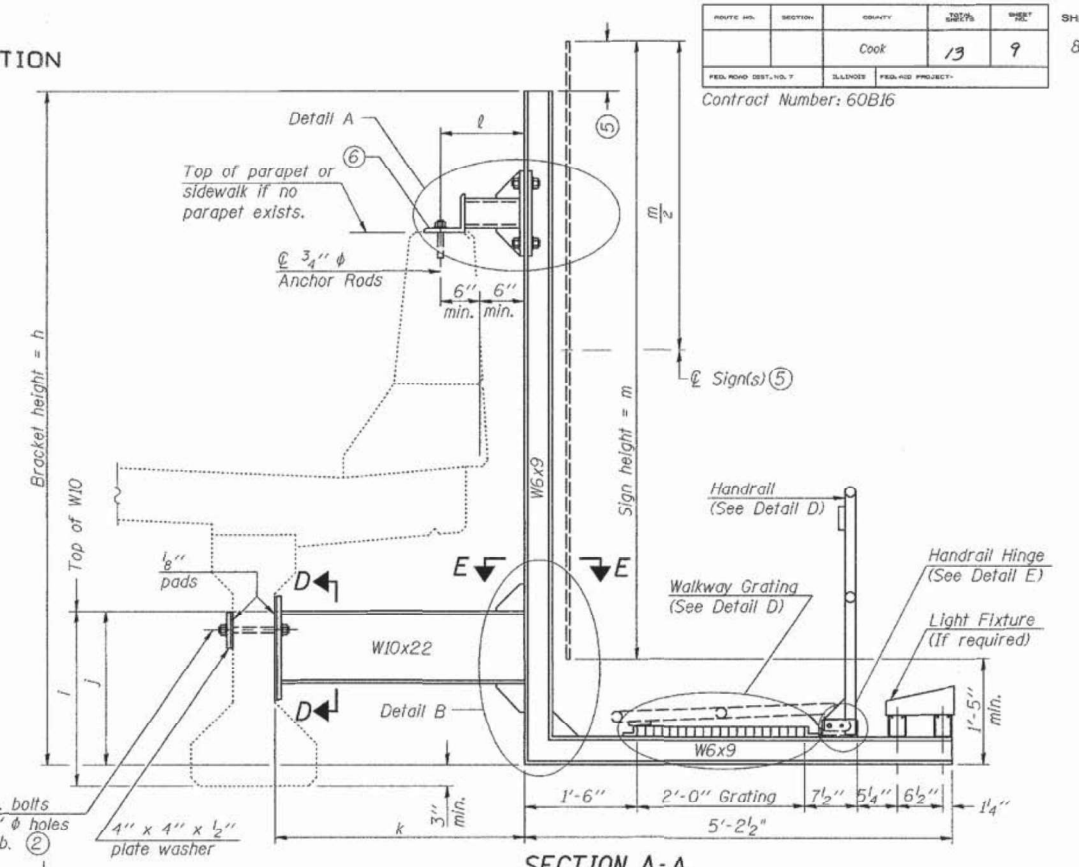
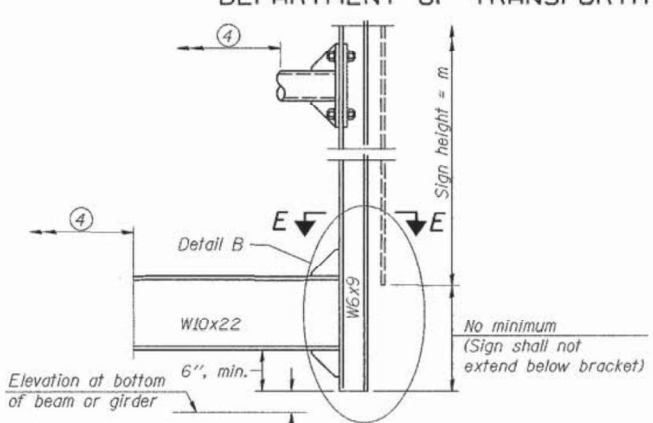
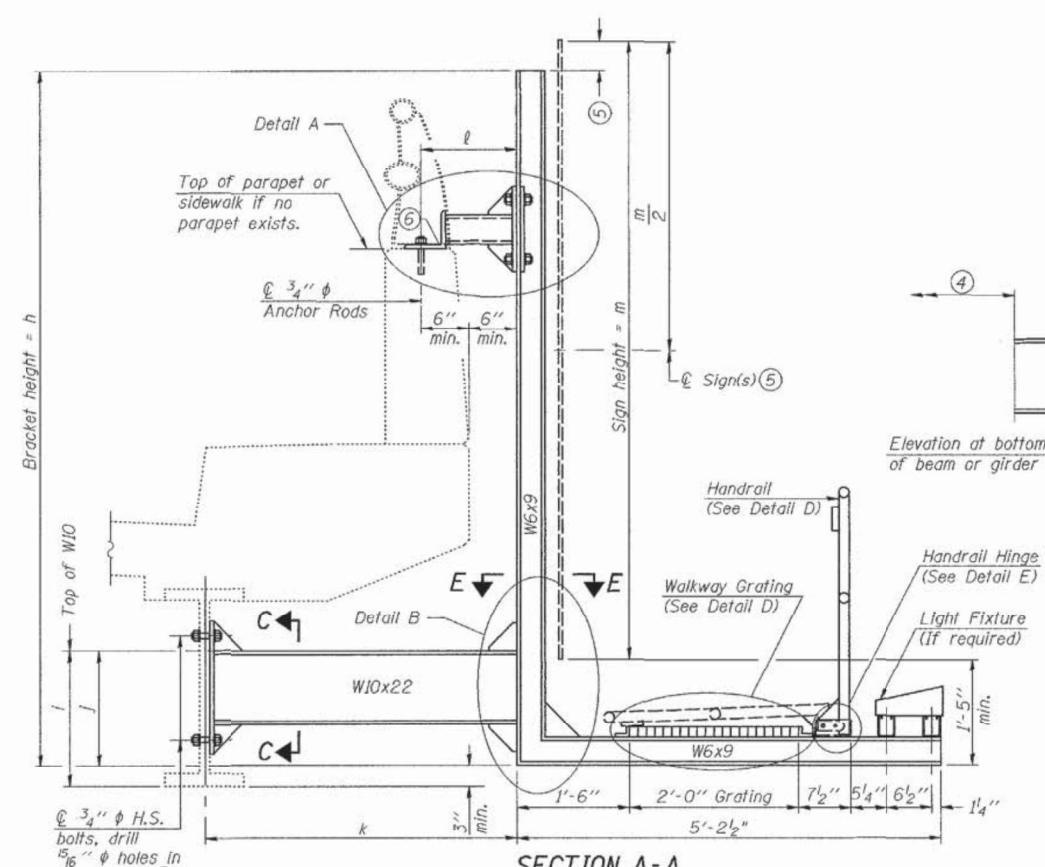
EXISTING PLANS IX  
STRUCTURE NO. 016-0918

SHEET NO. 24 OF 25 SHEETS

F.A.P. RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 41
CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	DATE	BY	SHEET NO.
				5
Contract Number: 60BJ6		13	9	8 SHEETS

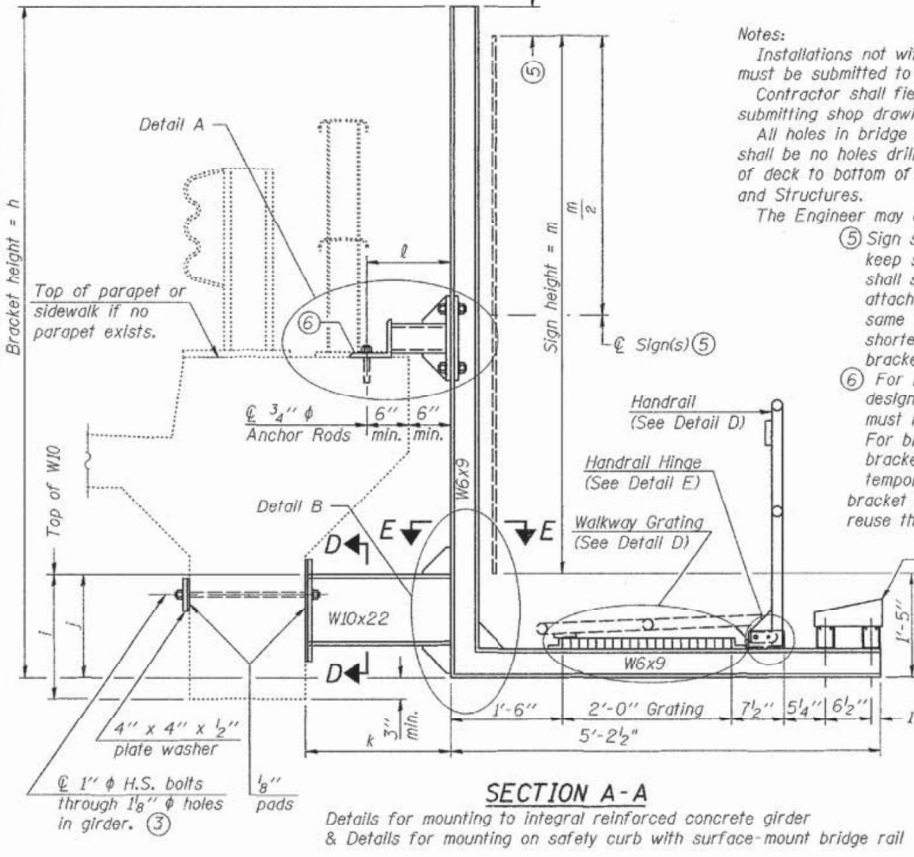


Structure Number	Station	h (12'-0" max.)	l	j	k max. (10'-0" max.)	l max. (8'-0" max.)	m (11'-0" max.)
IB0165394R000.0-000	361+01.65	9'-5"	1'-6" Min.	1'-3"	4'-0 1/2"	1'-9 5/8"	6'-0"

- For Details A & B, Sections C-C, D-D and E-E, see Base Sheet BM-3.  
For Details D & E, see Base Sheet BM-4.
- Holes in new steel members may be drilled in the fabrication shop or in the field. Field drill existing members.
  - For new PPC I beams, holes shall be formed during casting. For existing PPC I beams, prestressing strand locations shall be determined and spaced to miss strands by 6", min. Minimize spalling during field drilling of existing beams.
  - For new construction, form holes. For existing RC beams, locate primary reinforcement and space holes to miss by 6", min. Minimize spalling and concrete fracturing/damage during field drilling of existing concrete. Spalls over 1/4" deep or beyond the coverage of the 4x4 plate washer shall be repaired with epoxy mortar before installing washer.

DESIGNED S.J.B.  
CHECKED P.S.J.  
DRAWN Drew Christopher  
CHECKED S.J.B. P.S.J.

September 19, 2006  
EXAMINED John A. Morris  
PASSED Ralph E. Anderson



- Notes:
- Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval. Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings. All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures. The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.
  - Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x9 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)
  - For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If existing upper bracket angle is not damaged or torn from the bikeway parapet, the contractor may choose to reuse the upper bracket in lieu of removing existing railing. See sheet 8 of 8 for existing sign structure details. It will be the contractor's responsibility to ensure the structural adequacy of reused upper bracket components. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.

NUMBER	REVISION	DATE

**SIGN STRUCTURE  
DETAILS  
GLENWOOD-  
LANING RD / IL 394  
COOK COUNTY  
SN 016-0918**

SLT-91-001-06

**FOR INFORMATION ONLY**

FILE NAME: Z:\2018\180124\_PTB1817\cadd\Structural\Drawn\MO\_38\_1025-0160918-E.rvt; Plans\_X.dgn

**WBK ENGINEERING, LLC**  
116 WEST MAIN STREET, SUITE 201  
ST. CHARLES, ILLINOIS 60174  
(630) 443-7755

USER NAME = ctacey	DESIGNED - CPT	REVISED -
PLOT SCALE = 1:5,33333	CHECKED - JZ	REVISED -
PLOT DATE = 8/11/21	DRAWN - CPT	REVISED -
	CHECKED - JZ	REVISED -

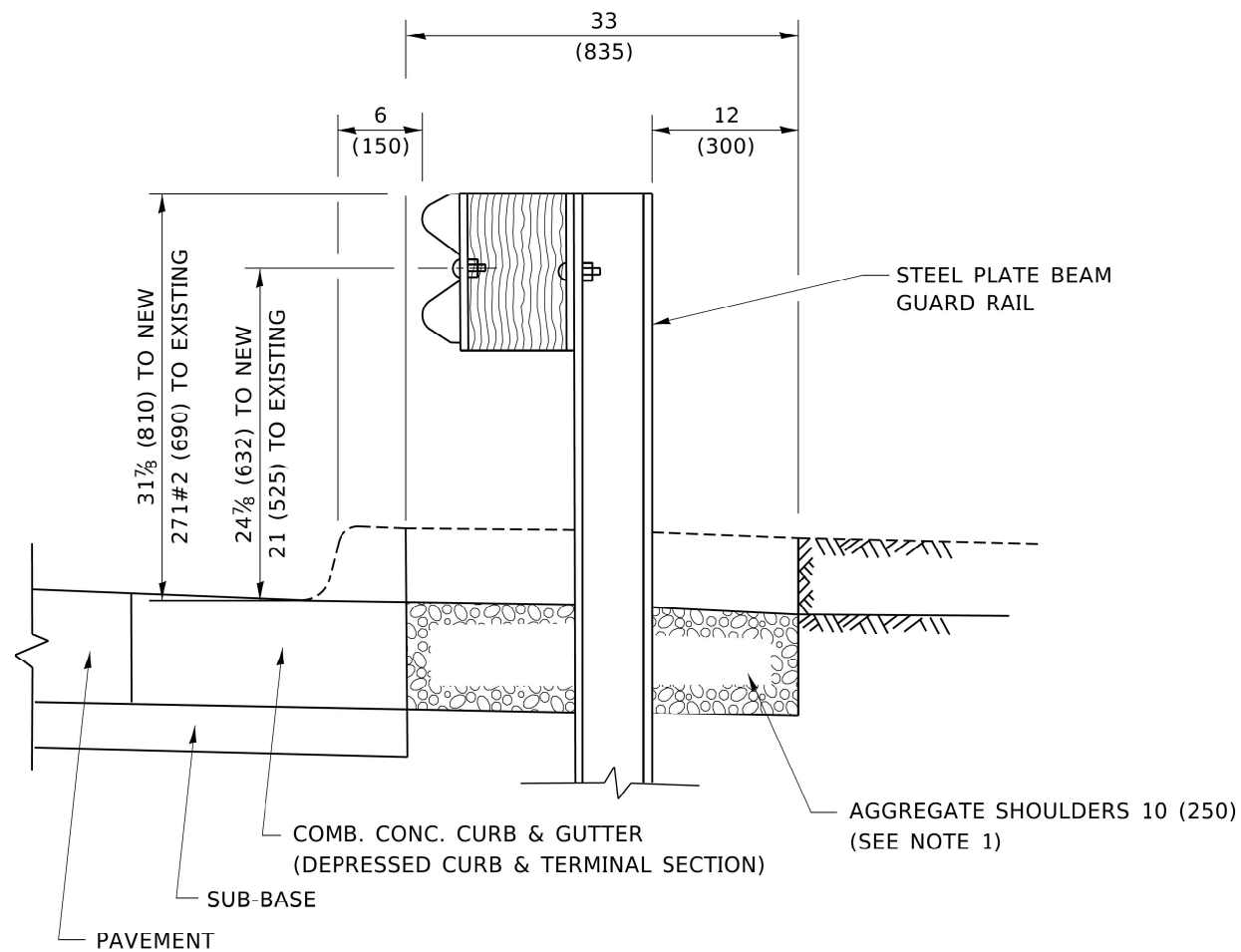
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS X  
STRUCTURE NO. 016-0918

SHEET NO.25 OF 25 SHEETS

F.A.P. RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 42
CONTRACT NO. 62M28				
ILLINOIS FED. AID PROJECT				





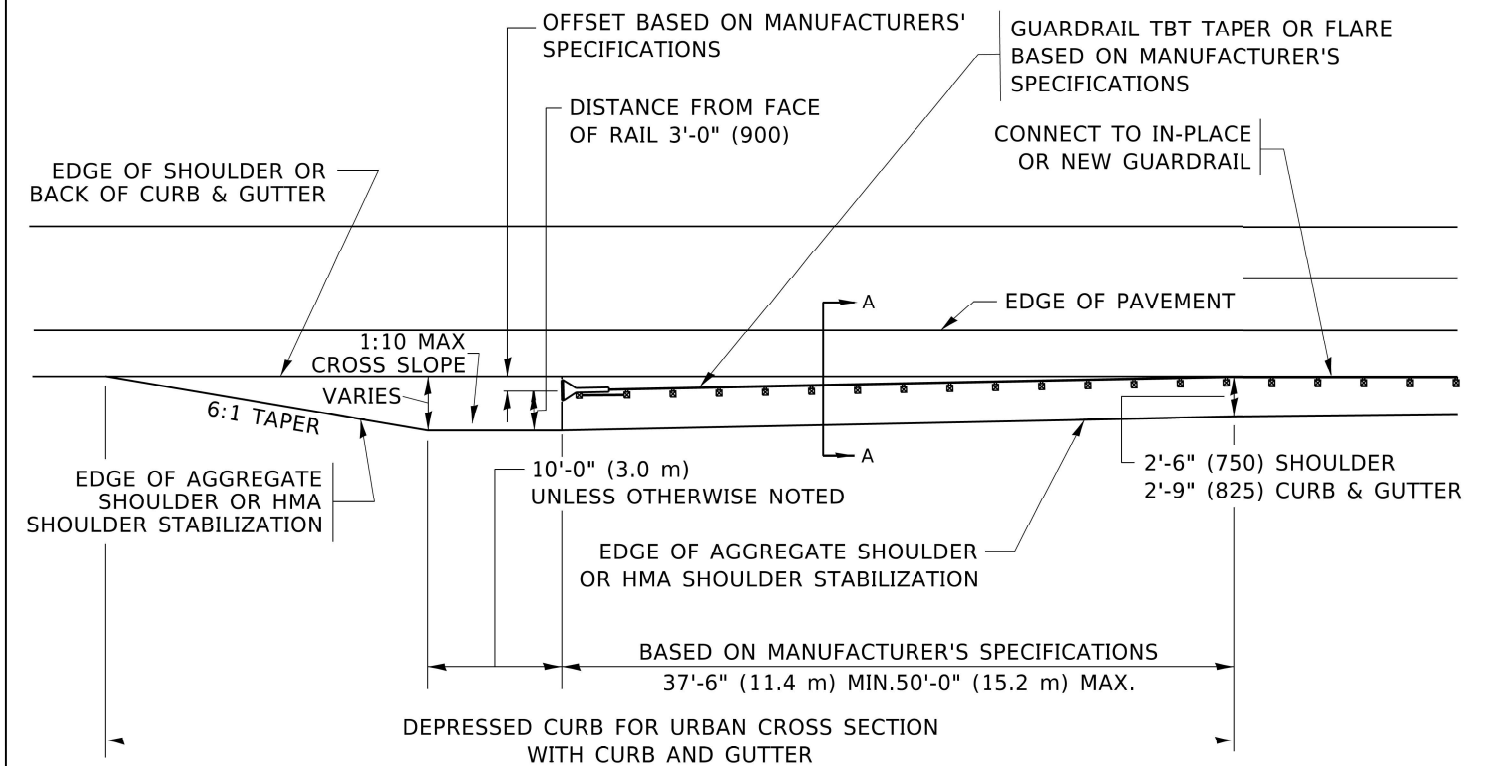
**SECTION A-A**

**NOTES:**

1. THE AGGREGATE SHOULDER, 10 (250) OR HMA SHOULDER, 6 (150) (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

**DETAILS FOR STEEL PLATE BEAM  
GUARD RAIL ADJACENT TO CURB AND GUTTER**

**[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]**



**DEPRESSED CURB AND GUTTER AND  
SHOULDER TREATMENT AT TBT TY. 1 SPL.**

AGGREGATE SHOULDER, 10 (250) WILL BE PAID ACCORDING TO SECTION 481.

HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID ACCORDING TO SECTION 482.

COMB. CONC. C&G, STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL  
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)  
UNLESS OTHERWISE SHOWN.

MODEL: Default  
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USER NAME = footemj	DESIGNED - M. DE YONG	REVISED - R. BORO 12-08-2008
PLOT SCALE = 50.0000' / 1"	CHECKED -	REVISED - R. BORO 09-14-2009
PLOT DATE = 3/27/2019	DATE - 09-22-90	REVISED - R. BORO 08-06-2012
		REVISED - R. BORO 05-08-2015

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

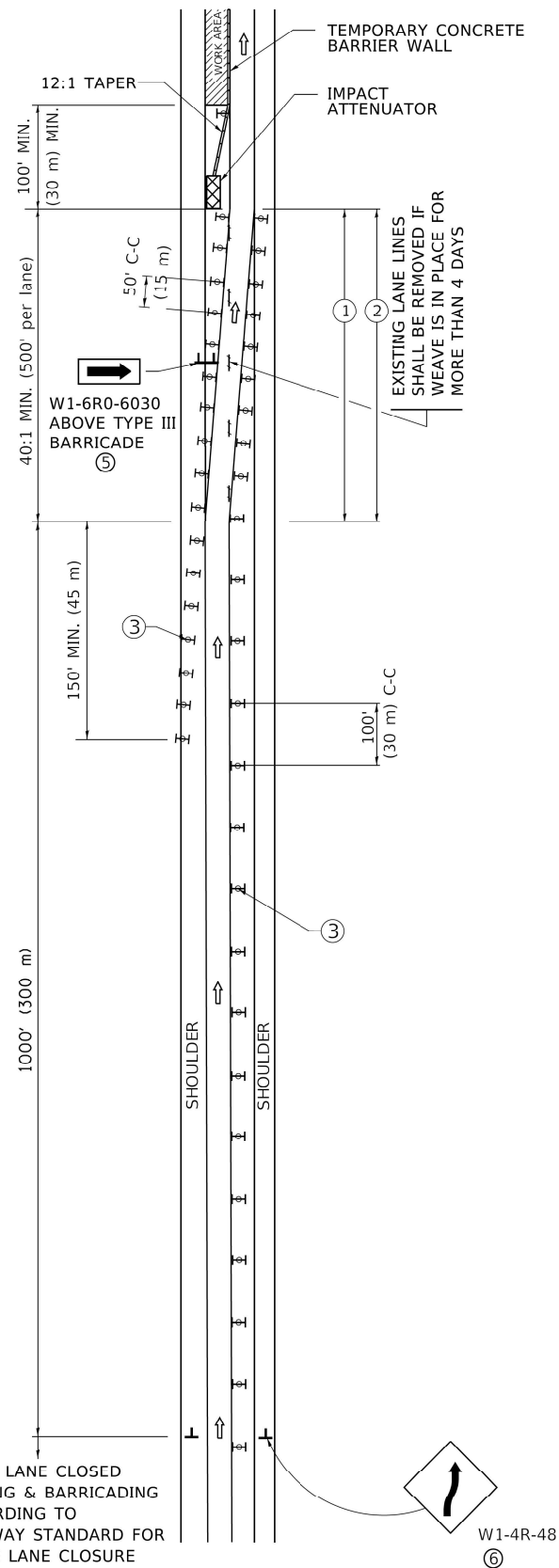
**DETAILS FOR DEPRESSED CURB & GUTTER AND  
SHOULDER TREATMENT AT TBT TY. 1 SPL.**

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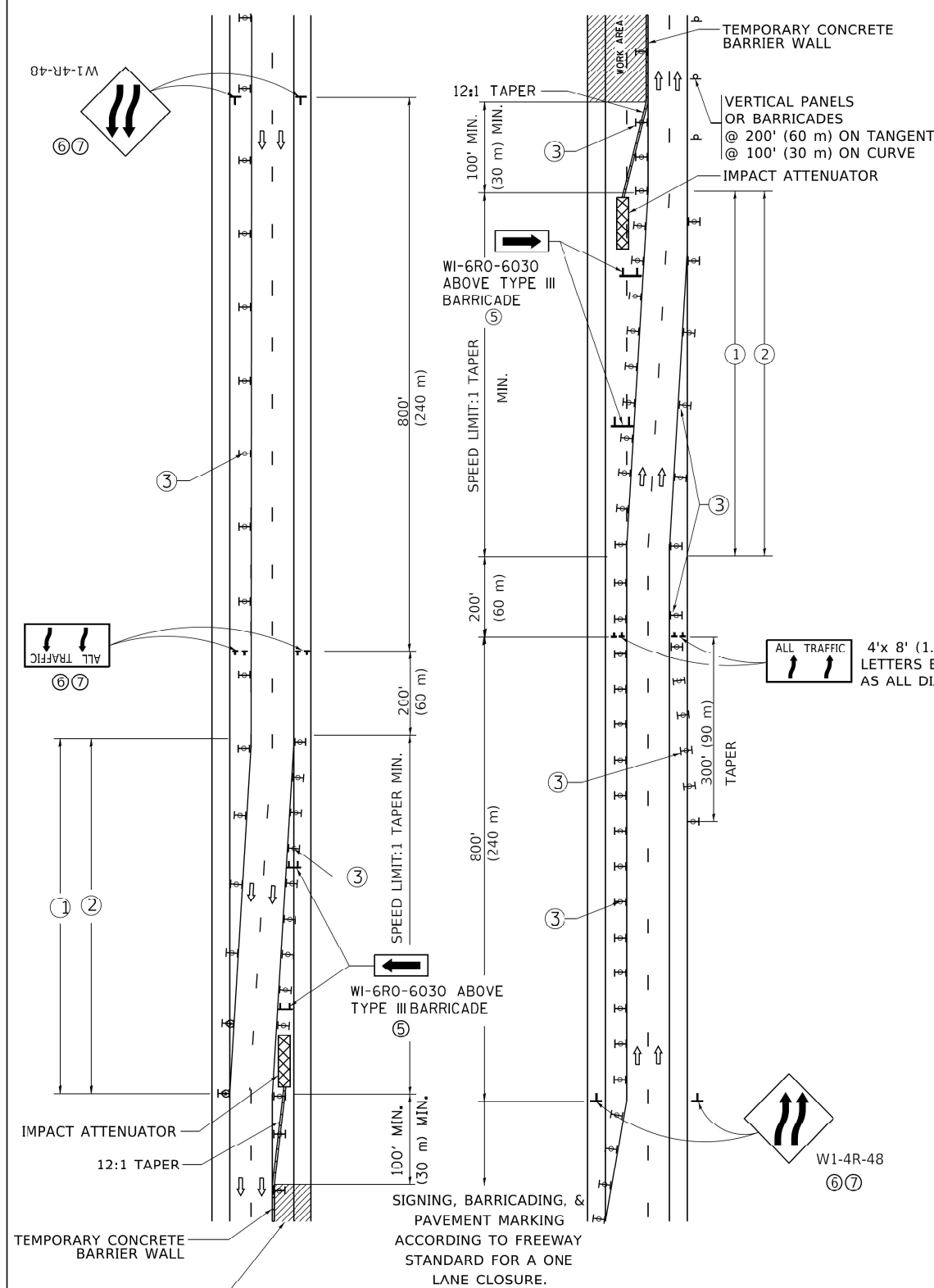
FAP RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 44
BD600-10 (BD 34)		CONTRACT NO. 62M28		
ILLINOIS FED. AID PROJECT				



# SINGLE LANE WEAVE



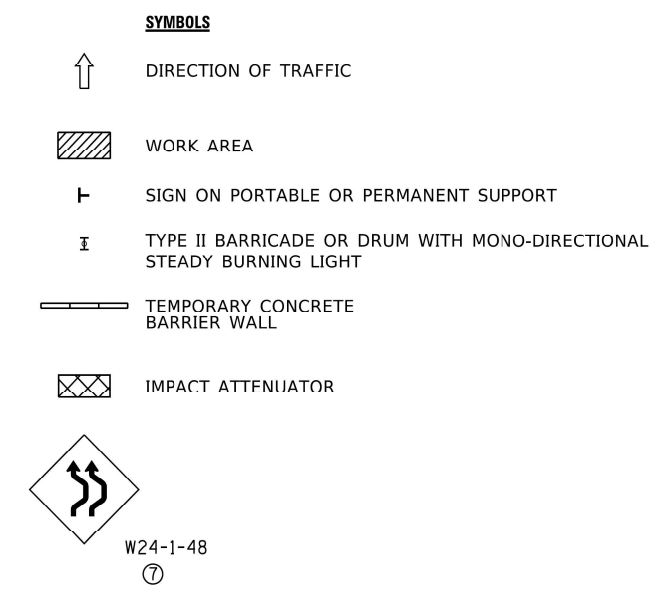
# MULTI-LANE WEAVE



### GENERAL NOTES:

- ① EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 4 DAYS IN DURATION.
- ② CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- ③ PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ④ ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ⑤ TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- ⑥ WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- ⑦ THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

4'x 8' (1.2 m x 2.4 m); 1 (25) BORDER; 10 (250) CAPITAL LETTERS BACKGROUND SHEETING SHALL BE THE SAME AS ALL DIAMOND SHAPED CONSTRUCTION SIGNS.



ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

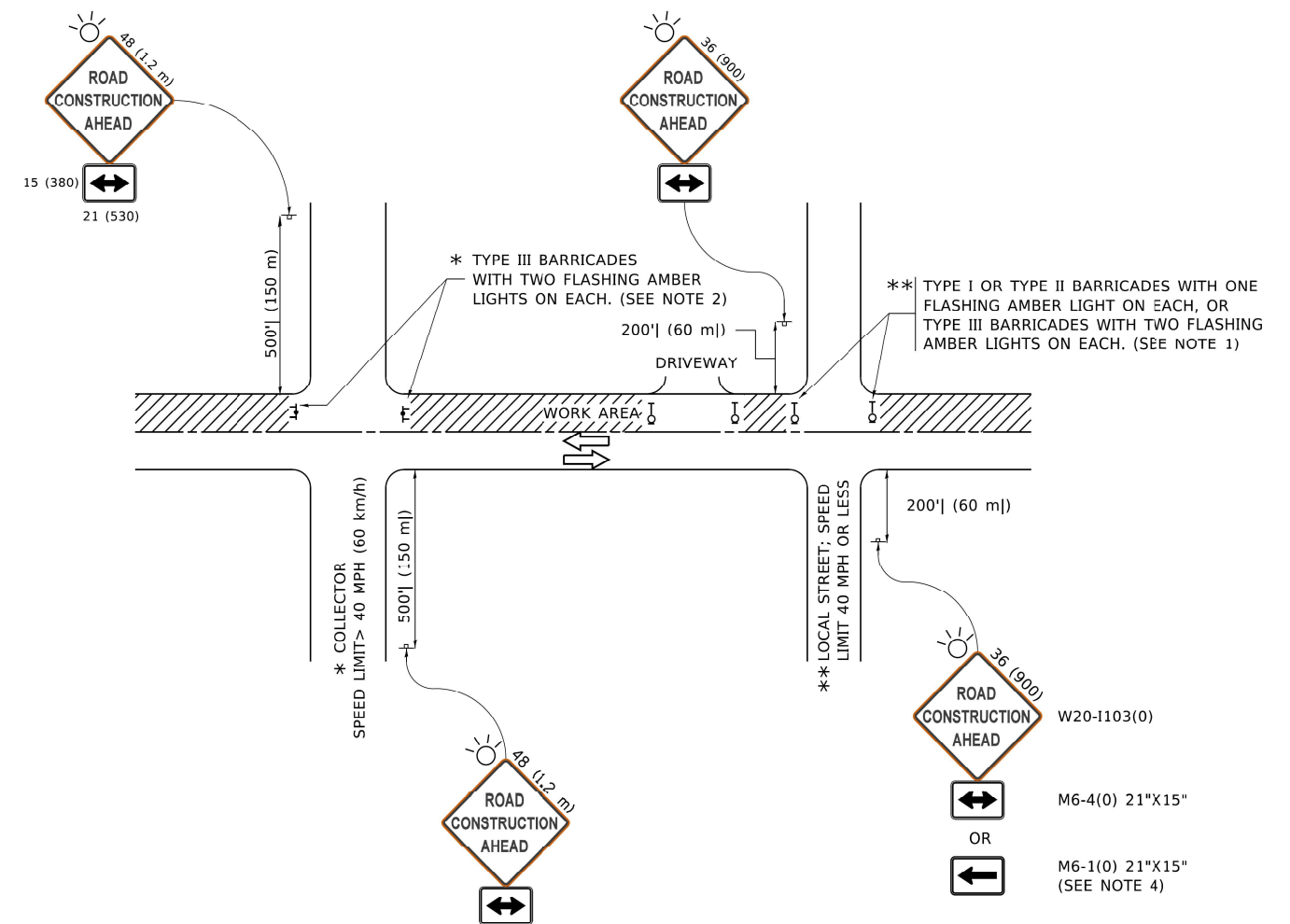
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PLOT SCALE = 50.0000" / ft.	DRAWN -	REVISED - S.P.B. 01-07
PLOT DATE = 3/4/2019	CHECKED -	REVISED - S.P.B. 12-09
	DATE - 02-87	REVISED - M.D. 06-13

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE			
SCALE: NONE	SHEET 1 OF 1 SHEETS	STA. TO STA.	

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	45
TC-09		CONTRACT NO. 62M28		
ILLINOIS FED. AID PROJECT				



**NOTES:**

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - 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.
  - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - 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.
  - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 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.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- 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.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

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PLOT SCALE = 50.0000" / 1"	DRAWN -	REVISED - T. RAMMACHER 01-06-00
PLOT DATE = 3/4/2019	CHECKED -	REVISED - A. SCHUETZE 07-01-13
	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

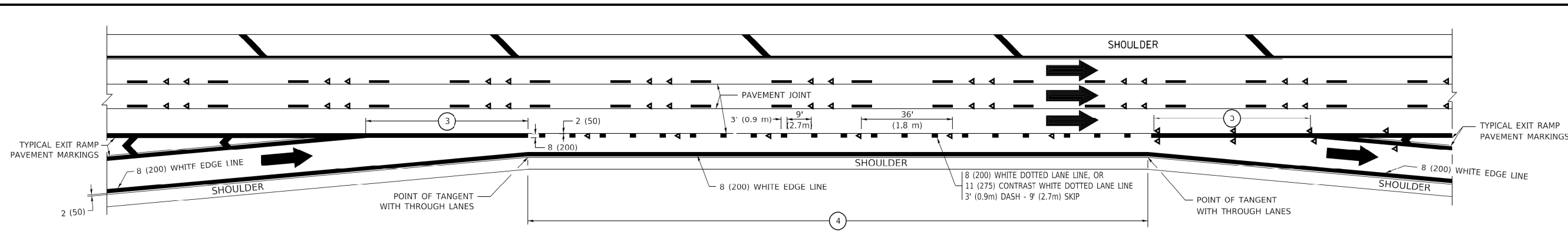
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

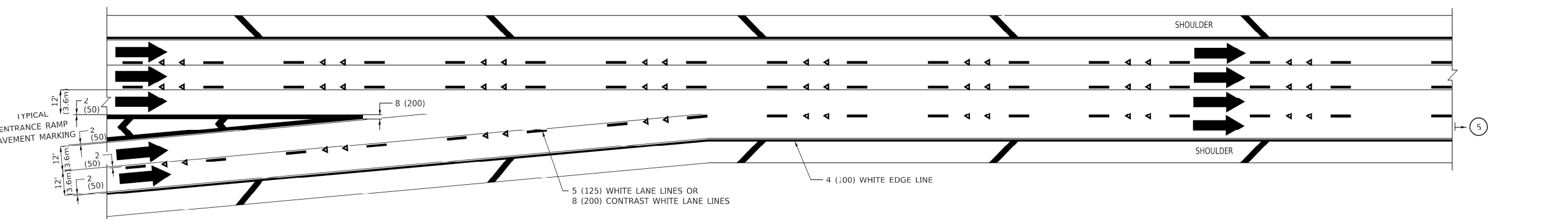
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FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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<b>TC-10</b>			CONTRACT NO. 62M28	
ILLINOIS FED. AID PROJECT				

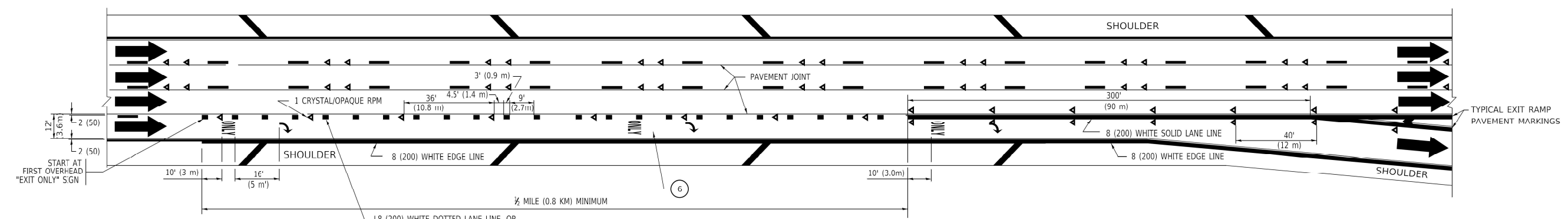




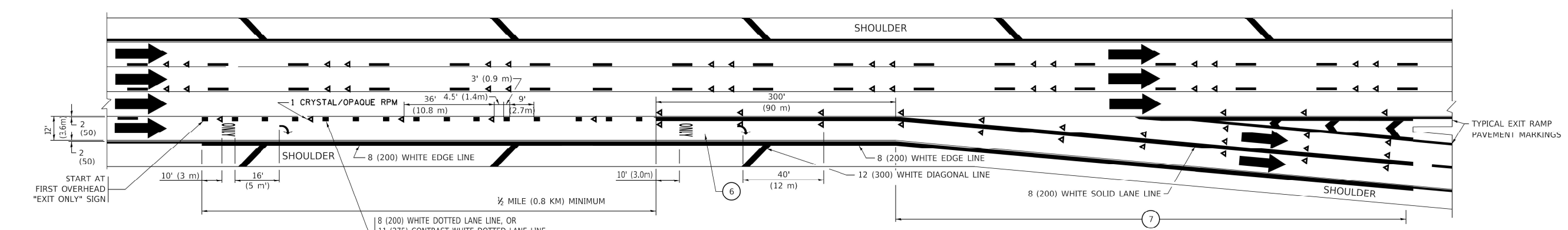
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



EXIT ONLY LANE MARKINGS



EXIT ONLY WITH OPTION LANE MARKINGS

- NOTES:**
- 3 OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
  - 4 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
  - 5 FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS. USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
  - 6 ONLY AND ARROWS EQUALLY SPACED, 500' (150 m) MAXIMUM SPACING. FULL SIZE LETTERS AND ARROW SHALL BE USED.
  - 7 CONTINUE 8" SOLID LANE LINE THROUGH EXIT TO END OF PAVED GORE.

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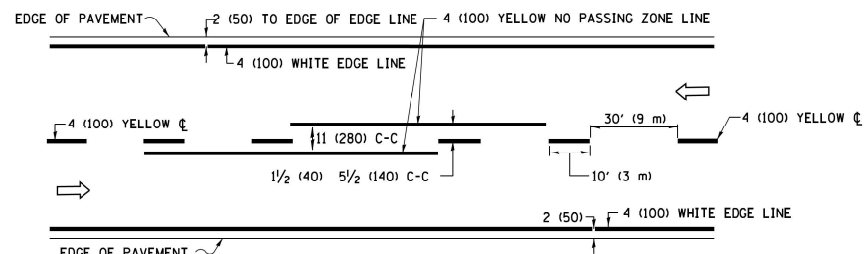
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PLOT DATE = 3/4/2019	DATE - 01-90	REVISED - S.P.B. 01-10
		REVISED - M.D. 09-17

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

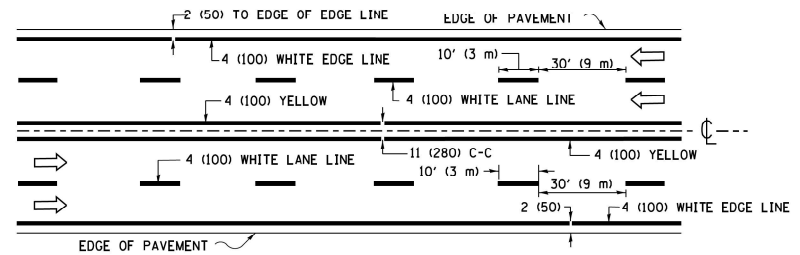
<b>MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS</b>			
SCALE: NONE	SHEET 1	OF 2 SHEETS	STA. TO STA.

FAP RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 48
<b>TC-12</b>		CONTRACT NO. 62M28		
ILLINOIS FED. AID PROJECT				

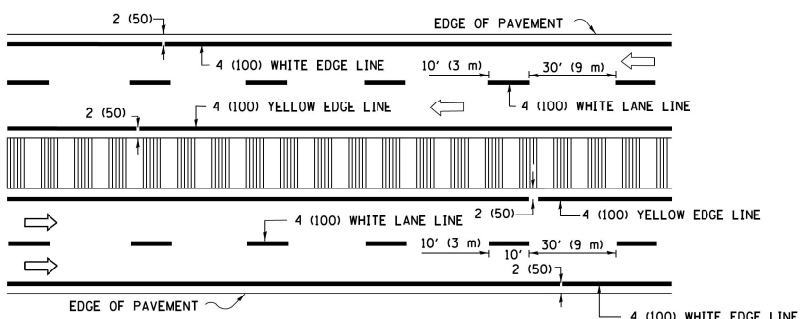




**2-LANE ROADWAY**

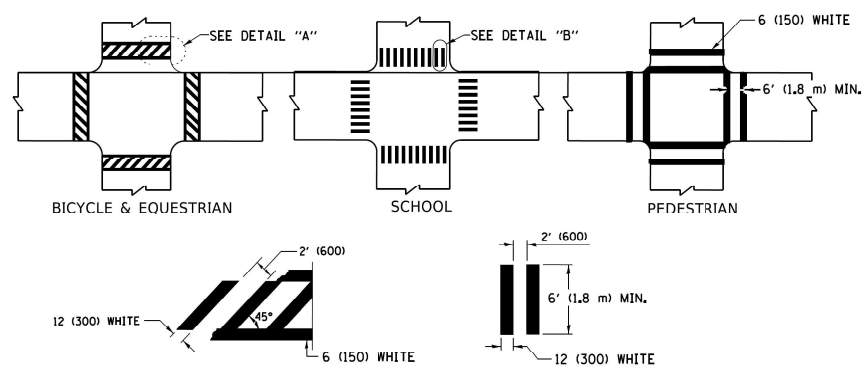


**MULTI-LANE UNDIVIDED**



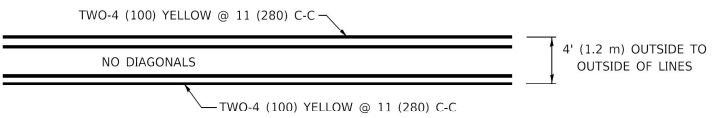
**MULTI-LANE DIVIDED WITH MEDIAN**

**TYPICAL LANE AND EDGE LINE MARKING**

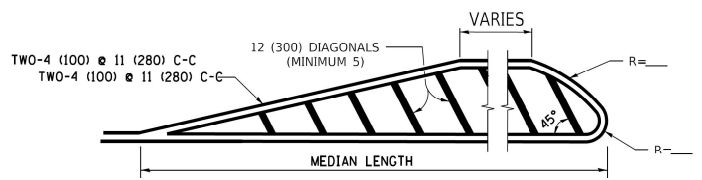


**TYPICAL CROSSWALK MARKING**

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

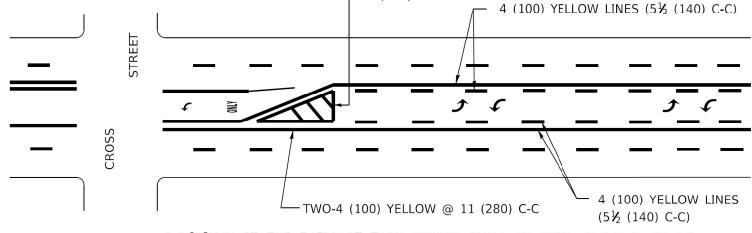


**4' (1.2 m) WIDE MEDIANS ONLY**



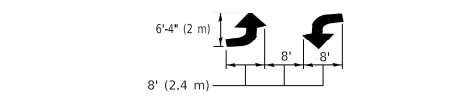
**MEDIANS OVER 4' (1.2 m) WIDE**

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))  
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)  
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))



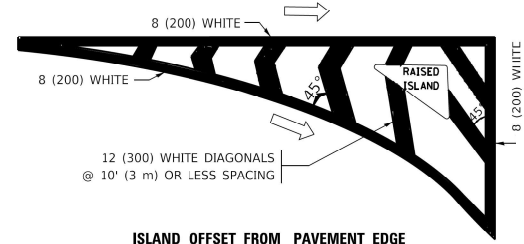
**MEDIAN WITH TWO-WAY LEFT TURN LANE  
TYPICAL PAINTED MEDIAN MARKING**

A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.

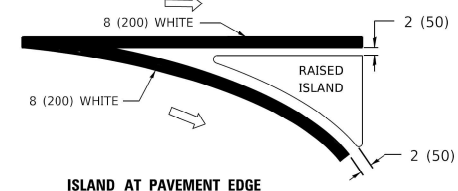


**TYPICAL LEFT (OR RIGHT) TURN LANE  
TYPICAL TURN LANE MARKING**

FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)  
\* 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".

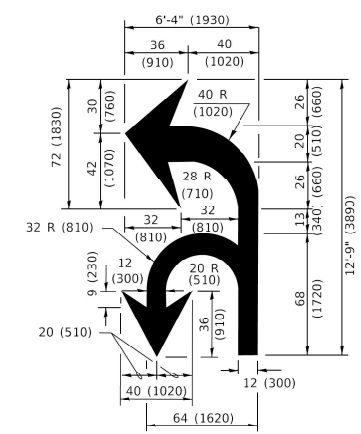


**ISLAND OFFSET FROM PAVEMENT EDGE**

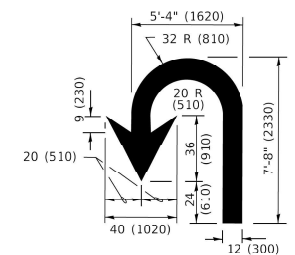


**ISLAND AT PAVEMENT EDGE**

**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" 15' 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 <sup>2</sup> EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
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.

MODEL: Default  
FILE: \\state-pw\ilc816816\BID\ITC\Illinois.gov\PW\DOT\Documents\DOT Offices\District 1\Projects\Dist1\22-23\CAD\Drawn\CAD sheets\ct13.dgn

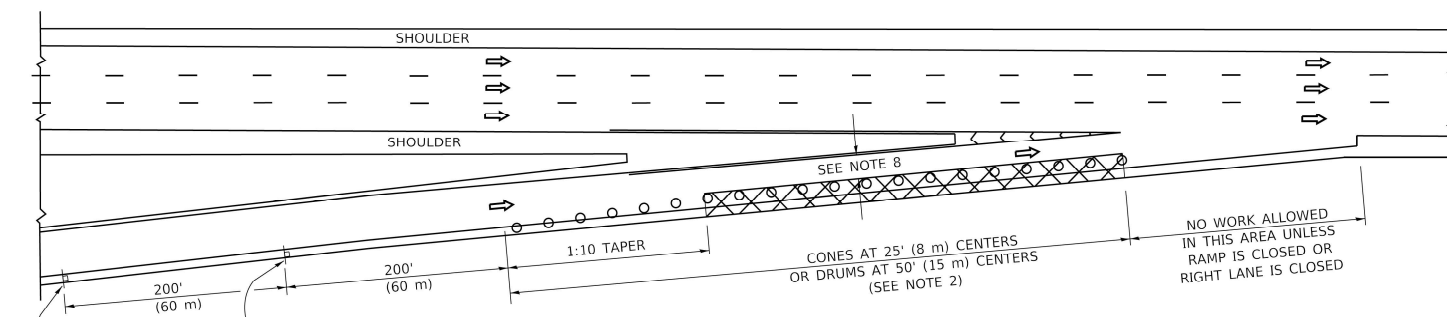
USER NAME = footemj	DESIGNED - EVERS	REVISED - C. JUCIUS 09-09-09
PLOT SCALE = 50.0000" / 1"	CHECKED -	REVISED - C. JUCIUS 07-01-13
PLOT DATE = 3/4/2019	DATE - 03-19-90	REVISED - C. JUCIUS 12-21-15
		REVISED - C. JUCIUS 04-12-16

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

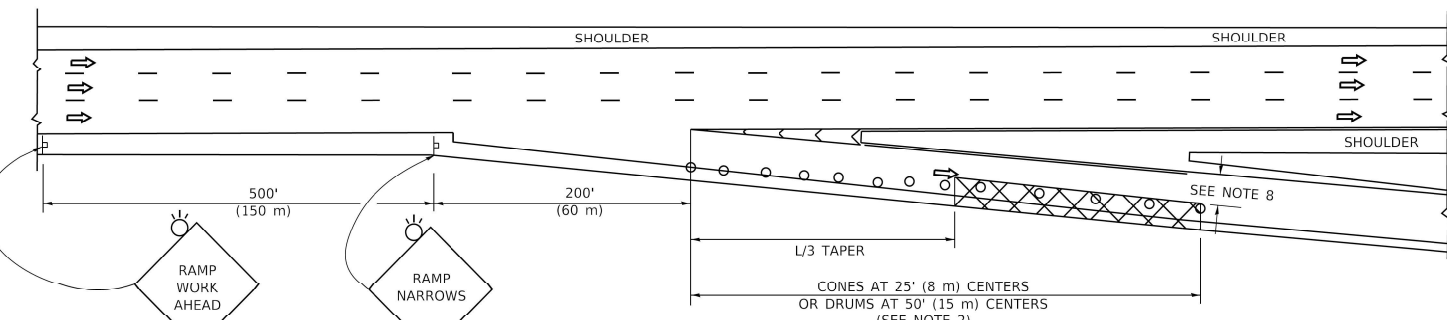
<b>DISTRICT ONE</b>			
<b>TYPICAL PAVEMENT MARKINGS</b>			
SCALE: NONE	SHEET 1 OF 2 SHEETS	STA. TO STA.	

FAP RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 49
<b>TC-13</b>		CONTRACT NO. ILLINOIS	62M28	
ILLINOIS FED. AID PROJECT				

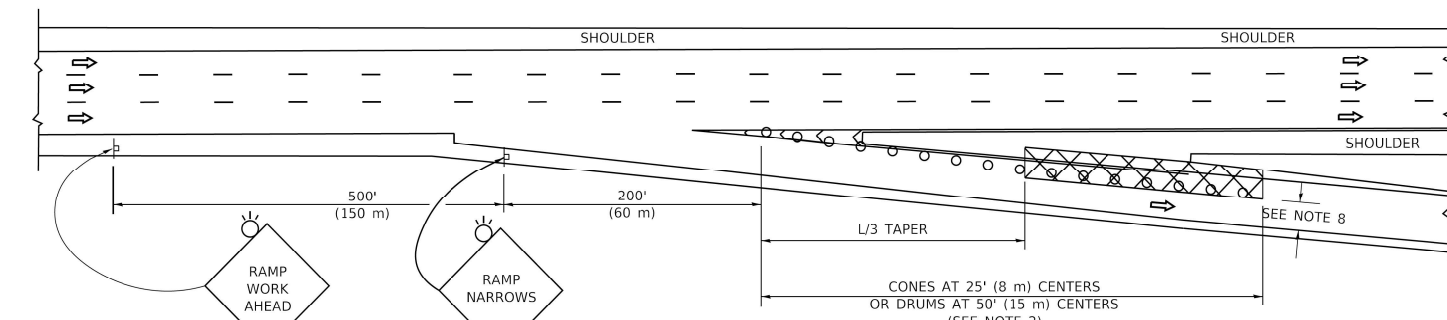
**PARTIAL RAMP CLOSURE DETAILS**



**TYPICAL ENTRANCE RAMP**



**TYPICAL EXIT RAMP**



**TYPICAL EXIT RAMP**

**SYMBOLS**

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

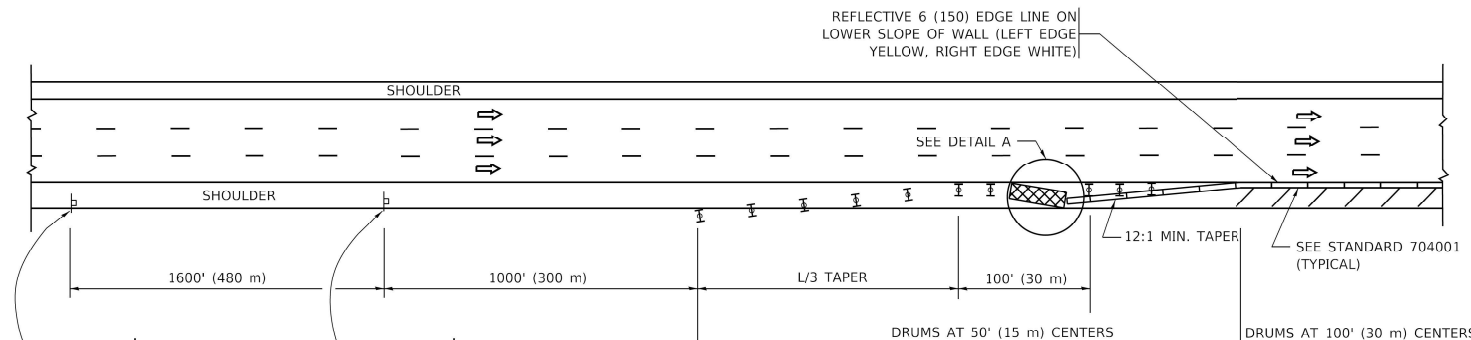
**GENERAL NOTES:**

- THE "L" DISTANCE EQUALS:  

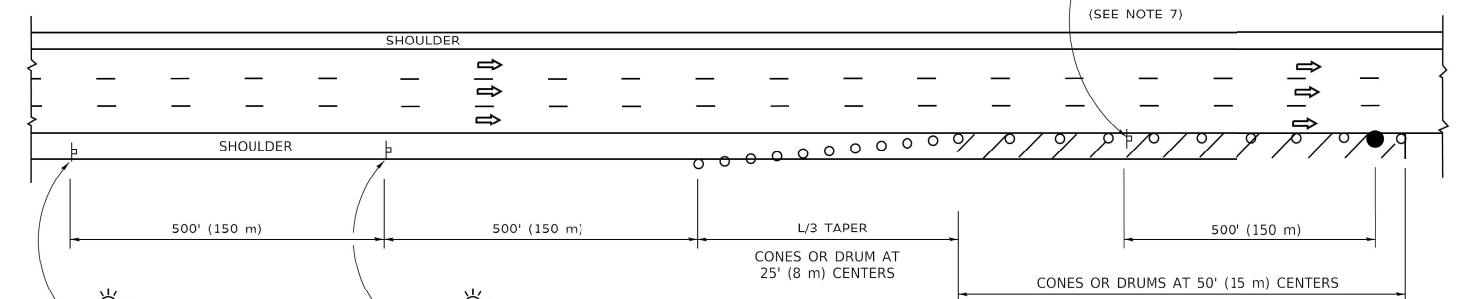
SPEED LIMIT	METRIC	ENGLISH
45 mph (80 km/h) OR GREATER:	$L=0.65(W)(S)$	$L=(W)(S)$

W = WIDTH OF OFFSET IN FEET (METERS)  
 S = NORMAL POSTED SPEED MPH (KM/H)
- TYPE II BARRICADES OR DRUMS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES. TYPE II BARRICADES OR DRUMS WITH MONODIRECTIONAL STEADY BURN LIGHTS ARE REQUIRED FOR DELINEATING OBSTACLES, EXCAVATIONS, OR HAZARDS EXCEEDING 100 FT (30m) IN LENGTH AT NIGHT.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

**SHOULDER CLOSURE DETAILS**



**PERMANENT SHOULDER CLOSURE**



**TEMPORARY SHOULDER CLOSURE**

THIS DETAIL IS USED WHERE:  
 1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



**DETAIL "A"  
 IMPACT ATTENUATOR, TEMPORARY  
 (SEE NOTE 5)**

- THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
- AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
- THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - THE WORK AVTIVITY REQUIRES FREQUENT ENCR OACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
- 12' MIN. WIDTH TANGENT SECTION  
 16' MIN. WIDTH CURVE SECTION.
- TEMPORARY SHOULDER AND NON-SYSTEM INTERCHANGE PARTIAL RAMP CLOSURES ARE ALLOWED WEEKDAYS BETWEEN 9:00 A.M. AND 3:00 P.M. AND BETWEEN 7:00 P.M. AND 5:00 A.M. OR AS APPROVED BY THE EXPRESSWAY TRAFFIC OPERATIONS ENGINEER. PERMANENT SHOULDER AND PARTIAL RAMP CLOSURES WILL ONLY BE PERMITTED IF CALLED FOR IN THE PLANS OR AS APPROVED BY THE EXPRESSWAY OPERATIONS ENGINEER.

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

MODEL: Default  
 FILE: \\state-pw\pub\plan\com\dot\illinois\pwr\WDDOT\Documents\DOT\_Offices\District\_1\Projects\DLHS\27231\CAD\Drawn\CAD\sheet\17.dgn

USER NAME = leysa	DESIGNED -	REVISED - S.P.B. 12-09
	DRAWN - D.W.S.	REVISED - M.D. 06-13
PLOT SCALE = 50.0000' / in.	CHECKED -	REVISED - M.D. 01-18
PLOT DATE = 10/14/2020	DATE - 11-96	REVISED - M.D. 10-20

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL DETAILS FOR FREEWAY  
 SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES**

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

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-168-BR	COOK	52	50
<b>TC-17</b>			CONTRACT NO.	62M28
ILLINOIS FED. AID PROJECT				

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**ROUTE MARKERS**

FOR U.S. ROUTES  
M1-40-2424

FOR ILLINOIS ROUTES  
M1-50-2424

R.R. UNMARKED ROUTES  
SPECIAL 24" x 18" VARIABLE  
1" BLACK LETTERS ON WHITE  
REFLECTIVE BACKGROUND

**ARROWS SIGNS**

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-2-2115

M6-3-2115

**CARDINAL DIRECTION & DETOUR SIGNS**

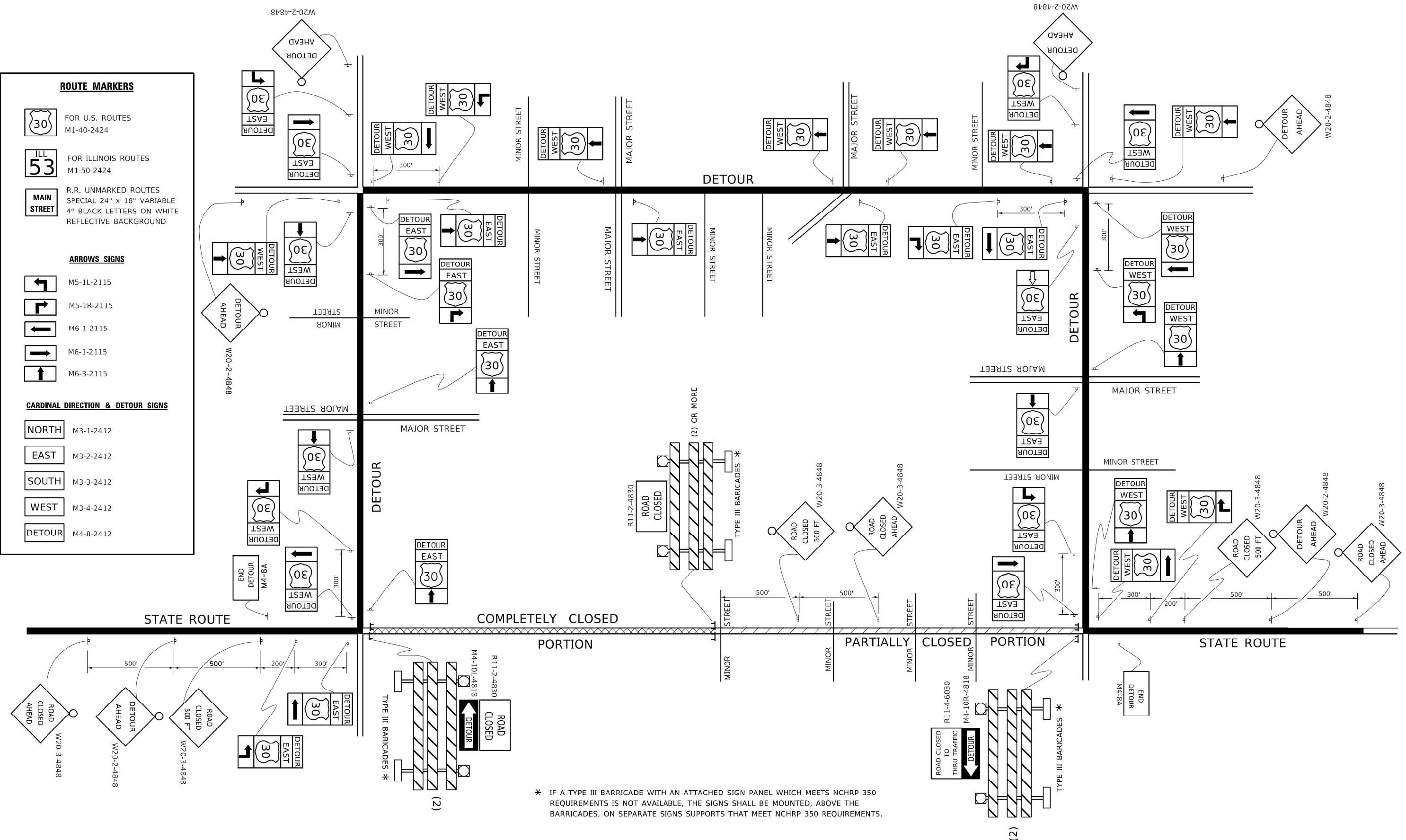
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

WEST M3-4-2412

DETOUR M4-8-2412



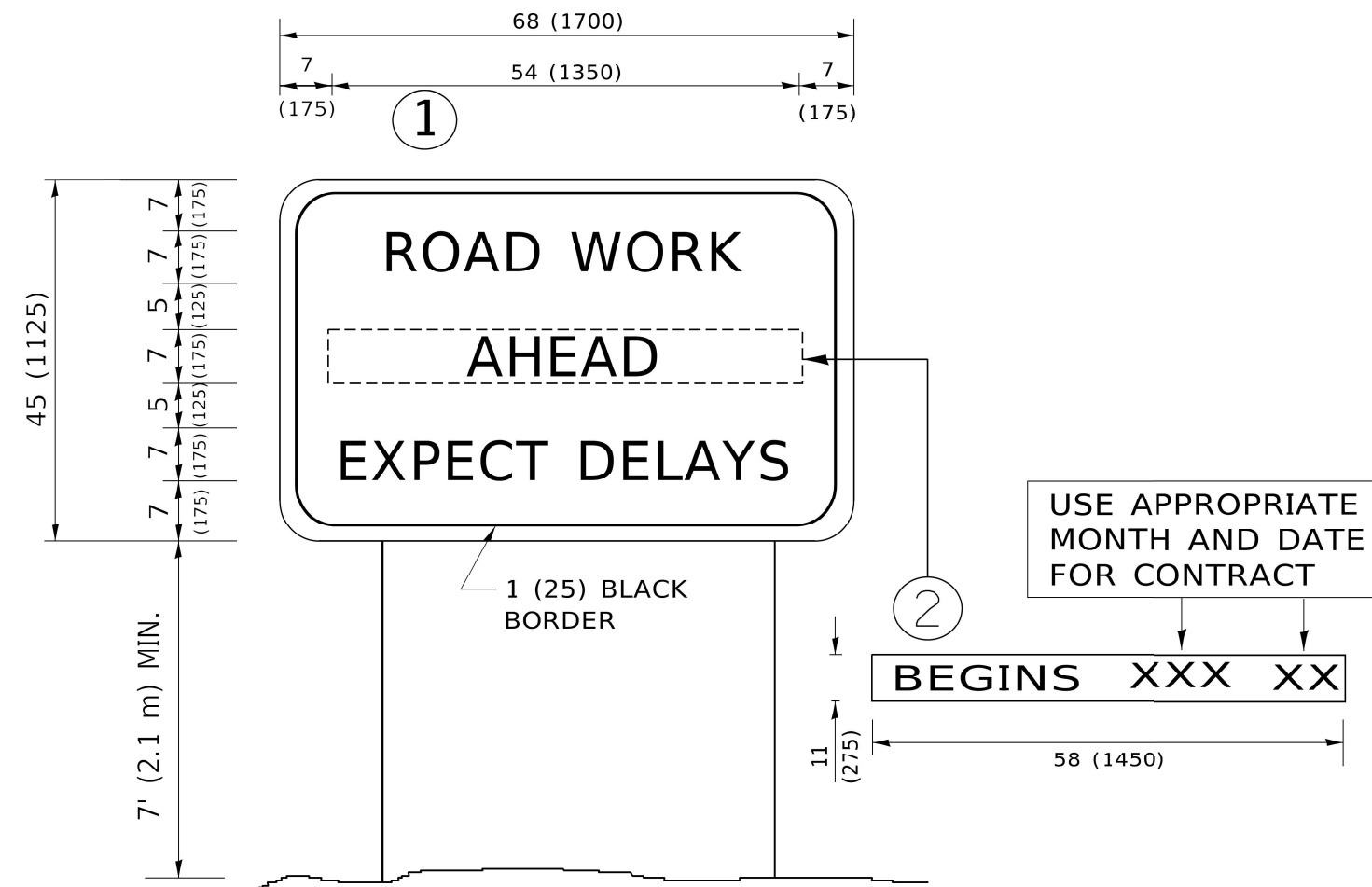
\* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

USER NAME = footemj	DESIGNED -	REVISED - 10-18-02
PLOT SCALE = 50.0000' / in.	DRAWN -	REVISED - R. BORO 09-14-09
PLOT DATE = 3/4/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>DETOUR SIGNING FOR CLOSING STATE HIGHWAYS</b>			
SCALE: NONE	SHEET 1	OF 1 SHEETS	STA. TO STA.

FAP RTE. 332	SECTION 2020-168-BR	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 51
<b>TC-21</b>		CONTRACT NO. 62M28		
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.

MODEL: D:\default\...  
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 PROJECT: ...

USER NAME = footemj	DESIGNED -	REVISOR - R. MIRS 09-15-97	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ARTERIAL ROAD INFORMATION SIGN</b>	FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 50.0000' / in.	DRAWN -	REVISOR - R. MIRS 12-11-97			332	2020-168-BR	COOK	52	52
PLOT DATE = 3/4/2019	CHECKED -	REVISOR - T. RAMMACHER 02-02-99			<b>TC-22</b>		CONTRACT NO. 62M28		ILLINOIS FED. AID PROJECT
	DATE -	REVISOR - C. JUCIUS 01-31-07	SCALE: NONE	SHEET 1	OF 1 SHEETS	STA.	TO STA.		