

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	J
			ILLINOIS CONTRACT NO. 62M29	

D-91-551-20

FOR INDEX OF SHEETS & LIST OF STANDARDS,
SEE SHEET NO. 2

PROJECT IS LOCATED IN THE VILLAGES
OF FORD HEIGHTS AND SAUK VILLAGE

TRAFFIC DATA

IL ROUTE 394 EXPRESSWAY

2017 ADT = 30,700

POSTED SPEED LIMIT = 55 MPH

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 332: IL 394 / BISHOP FORD EXPWY
AT CN (fmr. EJ&E) AND NS RAILROAD
SECTION 2020-169-BR
PROJECT NHPP-850P(130)
BRIDGE DECK OVERLAY, JOINT REPAIRS
COOK COUNTY

C-91-350-20

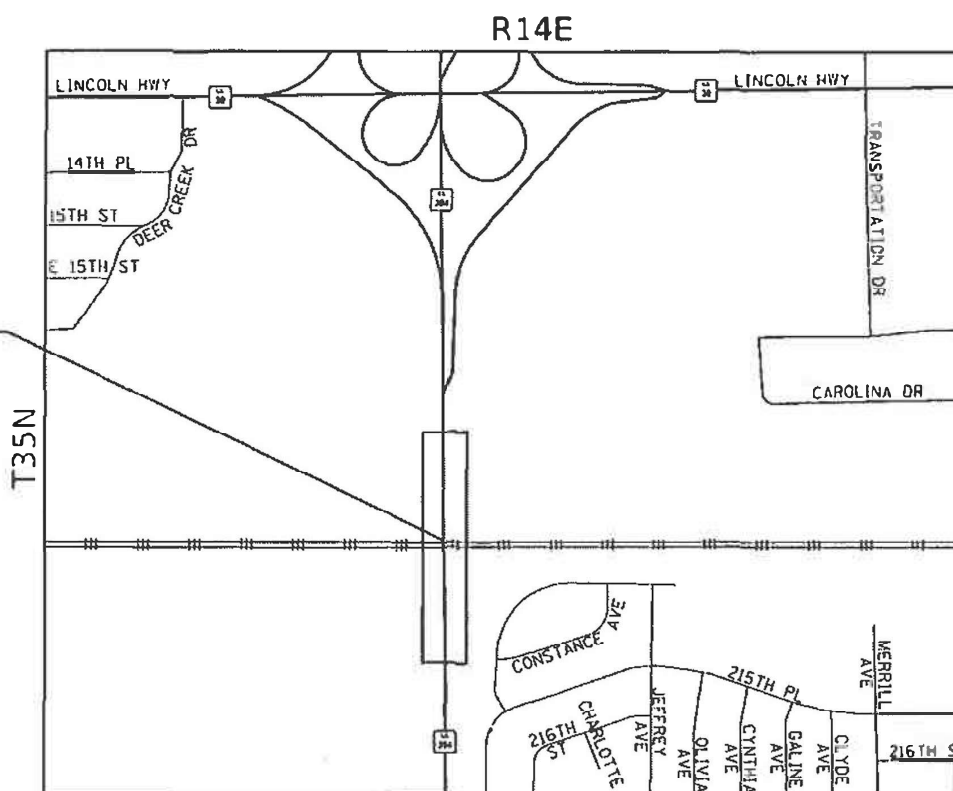


LOCATION OF SECTION INDICATED THIS: -

PROJECT BEGINS
STA. 314 + 70.9

BRIDGE REPAIR
SN 016-0456 (NB)
SN 016-1041 (SB)
STA. 322 + 61.00

PROJECT ENDS
STA. 333 + 67.8

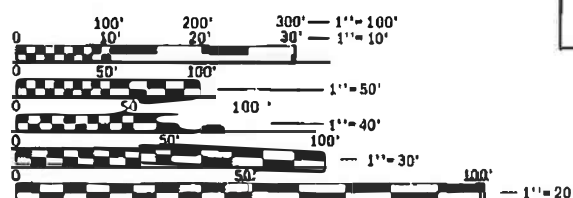


LOCATION MAP NOT TO SCALE

BLOOM TOWNSHIP

TOTAL GROSS LENGTH OF PROJECT = 1896.9 FT=0.36 MILE

TOTAL NET LENGTH OF PROJECT = 1896.9 FT=0.36 MILE



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 LOCATING INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

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

CONTRACT NO. 62M29



SIGNATURE: *Bruce P. Talbot*
EXPIRES: 11/30/2021
DATE: 12/1/20
SHEETS: 1-15



SIGNATURE: *John C. Zeman*
EXPIRES: 11/30/2022
DATE: 12/01/20
SHEETS: 16-45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED: *December 9 2020*
Anthony J. D'Amico / OEB
REGIONAL ENGINEER
January 29, 2021

Scott A. Etk
ENGINEER OF DESIGN AND ENVIRONMENT
January 29, 2021
James J. Gu
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

Farnsworth
GROUP
1011 WARRENVILLE ROAD
LISLE, ILLINOIS 60532
(630) 296-5877 / info@f-w.com

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HIGHWAY STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482011-03	HMA SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
606001-07	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
630001-12	STEEL PLATE BEAM GUARDRAIL
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5
631031-17	TRAFFIC BARRIER TERMINAL, TYPE 6
642001-02	SHOULDER RUMBLE STRIPS, 16 INCH
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701400-10	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45MPH (2 SHEETS)
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

COMMITMENTS

NONE

GENERAL NOTES

- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE TAKEN TO MEAN THE LATEST EDITION OF THE CITED STANDARD.
- THE TELEPHONE NUMBER FOR JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS IS 1-800-892-0123.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 1-800-892-0123.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITY FACILITIES. HE OR SHE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR THEIR MARKING OF THE EXACT LOCATION. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
- ALL UTILITY POLES REQUIRING RELOCATION SHALL BE MOVED BY OTHERS UNLESS OTHERWISE SHOWN.
- MAINTENANCE OF DRAINAGE THROUGH THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- A FULL DEPTH SAW CUT SHALL BE PROVIDED AT ALL REMOVAL LIMITS UNLESS OTHERWISE SHOWN ON THE PLANS. THIS WORK SHALL BE INCLUDED IN THE COST OF REMOVAL ITEMS.
- GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF THE PROJECT RIGHT OF WAY AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DETERMINED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR PORTLAND CEMENT CONCRETE SIDEWALK AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- THE CONTRACTOR SHALL NOTIFY THE DISTRICT ONE EXPRESSWAY TRAFFIC CONTROL SUPERVISOR AT 847-705-4155 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL RECORD AND RETAIN FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THE MARKINGS CAN BE RE-ESTABLISHED. EXACT LOCATIONS OF ALL MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL REQUEST AND GAIN APPROVAL FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S EXPRESSWAY 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.
- THE RESIDENT ENGINEER SHALL CONTACT THE EXPRESSWAY FIELD ENGINEER AT 847-705-4151. A MINIMUM OF TWO (2) WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	AIR VOIDS @Ndes	OMP
APPROACH SLAB OVERLAY		
POLYMERIZED HMA SURFACE COURSE, STONE MATRIX ASPHALT, IL-9.5 MIX "F", N80, 1-1/2"	4% @ 80 GYR.	QC/QA
SHOULDER RESURFACING		
POLYMERIZED HMA SURFACE COURSE, STONE MATRIX ASPHALT, IL-9.5 MIX "F", N80, 1-1/2"	4% @ 80 GYR.	QC/QA
HMA SHOULDER, 8"		
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 6 1/2"	4% @ 70 GYR.	QC/QA
POLYMERIZED HMA SURFACE COURSE, STONE MATRIX ASPHALT, IL-9.5 MIX "F", N80, 1-1/2"	4% @ 80 GYR.	QC/QA

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. QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE.

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DRAWN NDJ	REVISED -
CHECKED MLL	REVISED -
DATE 12/01/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL
NOTES, AND COMMITMENTS**

SCALE: N.T.S. SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	2
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				

80% FED 20% STATE

CONSTR. CODE
URBAN
BRIDGE
0047
016-0456, 016-1041

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE 0047
20200100	EARTH EXCAVATION	CU YD	197	197
31102100	SUBBASE GRANULAR MATERIAL, TYPE C 4"	SQ YD	200	200
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1487	1487
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	907	907
40605026	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, 9.5, MIX "F", N80	TON	200	200
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	1061	1061
44004250	PAVED SHOULDER REMOVAL	SQ YD	924	924
44201815	CLASS D PATCHES, TYPE II, 14 INCH	SQ YD	8	8
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	924	924
50102400	CONCRETE REMOVAL	CU YD	23	23
50157300	PROTECTIVE SHIELD	SQ YD	839	839
50300225	CONCRETE STRUCTURES	CU YD	13	13
50300255	CONCRETE SUPERSTRUCTURE	CU YD	25	25
50300260	BRIDGE DECK GROOVING	SQ YD	2442	2442

* SPECIALTY ITEM

80% FED 20% STATE

CONSTR. CODE
URBAN
BRIDGE
0047
016-0456, 016-1041

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE 0047
50300300	PROTECTIVE COAT	SQ YD	2615	2615
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	430	430
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5810	5810
50800515	BAR SPLICERS	EACH	64	64
52000110	PREFORMED JOINT STRIP SEAL	FOOT	168	168
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	32	32
52100520	ANCHOR BOLTS, 1"	EACH	72	72
58700300	CONCRETE SEALER	SQ FT	422	422
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	113	113
* 63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	2	2
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4
63200310	GUARDRAIL REMOVAL	FOOT	350	350
64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	3781	3781
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE. 332	SECTION 2020-169-BR	COUNTY COOK	TOTAL SHEETS 54	SHEET NO. 3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M29	

REV-SEP

80% FED 20% STATE

CONSTR. CODE
URBAN
BRIDGE
0047
016-0456, 016-1041

80% FED 20% STATE

CONSTR. CODE
URBAN
BRIDGE
0047
016-0456, 016-1041

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE 0047 016-0456, 016-1041
67100100	MOBILIZATION	L SUM	1	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	120	120
70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	11007	11007
70300905	PAVEMENT MARKING TAPE, TYPE IV 5"	FOOT	1447	1447
70300912	PAVEMENT MARKING TAPE, TYPE IV 12"	FOOT	134	134
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2042	2042
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1388	1388
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	11007	11007
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	134	134
* 78003120	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5"	FOOT	1447	1447
* 78003140	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 8"	FOOT	146	146
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	1160	1160

* SPECIALTY ITEM

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE 0047 016-0456, 016-1041
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	10	10
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	2	2
* 78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	274	274
X0323491	SLOPE WALL CRACK SEALING	FOOT	22	22
78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	4503	4503
X6030205	FRAMES AND GRATES TO BE ADJUSTED (SPECIAL)	EACH	8	8
X6060505	CONCRETE CURB (SPECIAL)	FOOT	45	45
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1
X7013820	TRAFFIC CONTROL SURVEILLANCE, EXPRESSWAYS	CAL DA	120	120
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	192	192
X7830050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	83	83
* X7830072	GROOVING FOR RECESSED PAVEMENT MARKING 6"	FOOT	1447	1447
* X7830076	GROOVING FOR RECESSED PAVEMENT MARKING 9"	FOOT	146	146
* X8570001	SMART TRAFFIC MONITORING SYSTEM	CAL DA	120	120

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE. 332	SECTION 2020-169-BR	COUNTY COOK	TOTAL SHEETS 54	SHEET NO. 4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M29	

REV-SEP

CONSTR. CODE
URBAN
BRIDGE
0047
016-0456, 016-1041

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
Z0001800	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SQ YD	6	6
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	4	4
Z0003802	REMOVAL OF EXISTING BEARINGS	EACH	28	28
Z0006014	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/2 INCHES	SQ YD	2520	2520
<input type="checkbox"/> Z0010615	CLEANING EXISTING INLETS	EACH	24	24
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	2520	2520
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	141	141
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	40	40
Z0015800	DECK DRAINS TO BE ADJUSTED	EACH	16	16
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	5	5
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	17	17
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	51	51
* Z0049100	RAISED PAVEMENT MARKER REFLECTOR REPLACEMENT	EACH	73	73
* Z0053000	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	1	1
Z0031200	JACKING AND GRIBBING	EACH	28	28
Z0065730	SLOPE WALL SLURRY PUMPING	CU YD	20	20
∅ Z0076600	TRAINEES	HOURS	500	500
∅ Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOURS	500	500

- * SPECIALTY ITEM
- NON-PARTICIPATING ITEM, 100% STATE

∅ 0042

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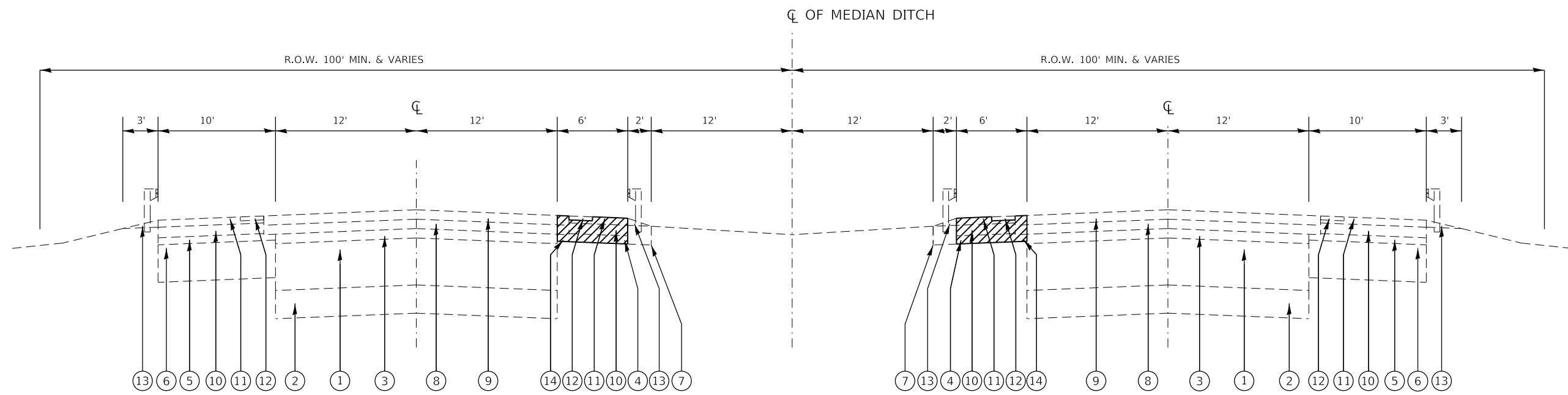
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

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

F.A.P. RTE. 332	SECTION 2020-169-BR	COUNTY COOK	TOTAL SHEETS 54	SHEET NO. 5
			CONTRACT NO. 62M29	
ILLINOIS FED. AID PROJECT				

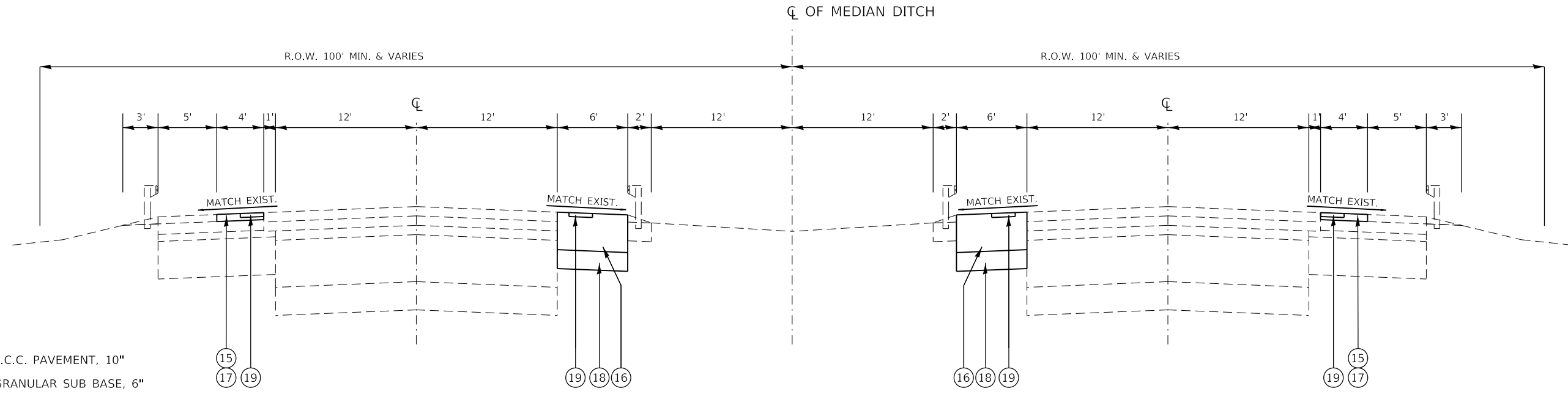


EXISTING TYPICAL CROSS SECTION
(LOOKING SOUTH)

IL 394 NORTHBOUND LANES
STA 316+45.1 TO STA 333+67.8 LT
STA 318+05.1 TO STA 329+02.0 RT

IL 394 SOUTHBOUND LANES
STA 317+64.8 TO STA 327+16.9 LT
STA 315+29.9 TO STA 328+76.9 RT

BRIDGE OMISSION
STA 320+95.13 TO STA 324+26.88



PROPOSED TYPICAL CROSS SECTION
(LOOKING SOUTH)

IL 394 NORTHBOUND LANES
STA 316+45.1 TO STA 333+67.8 LT
STA 318+05.1 TO STA 329+02.0 RT

IL 394 SOUTHBOUND LANES
STA 317+64.8 TO STA 327+16.9 LT
STA 315+29.9 TO STA 328+76.9 RT

BRIDGE OMISSION
STA 320+95.13 TO STA 324+26.88

LEGEND

- ① EXISTING P.C.C. PAVEMENT, 10"
- ② EXISTING GRANULAR SUB BASE, 6"
- ③ EXISTING HOT-MIX ASPHALT SURFACE, 2"
- ④ EXISTING HOT-MIX ASPHALT BINDER COURSE MIX, TYPE "B", 1 3/4"
- ⑤ EXISTING HOT-MIX ASPHALT SURFACE COURSE MIX, TYPE "D", 1 1/2"
- ⑥ EXISTING HOT-MIX ASPHALT SHOULDER, 8"
- ⑦ EXISTING HOT-MIX ASPHALT SHOULDER
- ⑧ EXISTING STONE MATRIX ASPHALT (SMA) BINDER COURSE, 2"
- ⑨ EXISTING STONE MATRIX ASPHALT (SMA) SURFACE COURSE, 2"
- ⑩ EXISTING HOT-MIX ASPHALT BINDER COURSE, IL-19, N70, 2 1/4"
- ⑪ EXISTING HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 1/2"

- ⑫ EXISTING SHOULDER RUMBLE STRIP
- ⑬ EXISTING AGGREGATE WEDGE SHOULDER, TYPE "B"
- ⑭ PROPOSED PAVED SHOULDER REMOVAL
- ⑮ PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"
- ⑯ PROPOSED HOT-MIX ASPHALT SHOULDER, 8"
- ⑰ POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, 9.5, MIX "F", N80
- ⑱ PROPOSED SUBBASE GRANULAR MATERIAL, TYPE C 4"
- ⑲ PROPOSED SHOULDER RUMBLE STRIP, 16 INCHES

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 394
TYPICAL CROSS SECTIONS - EXISTING & PROPOSED

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

F.A.P. RTE. 332	SECTION 2020-169-BR	COUNTY COOK	TOTAL SHEETS 54	SHEET NO. 6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M29	

STAGING SCHEDULE						
LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	BARRIER WALL REFLECTORS, TYPE C	PINNING TEMPORARY CONCRETE BARRIER
	FOOT	FOOT	EACH	EACH	EACH	EACH
PRE-STAGE						
STAGE 1	2042		2		163	168
STAGE 2		1388		2	111	24
TOTAL	2042	1388	2	2	274	192

REMOVALS SCHEDULE						
LOCATION	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT		HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	PAVED SHOULDER REMOVAL	GUARDRAIL REMOVAL	
	SQ YD	SQ YD	SQ YD	FOOT		
I-394 NORTHBOUND						
316+45.1	TO	320+95.1	222	198	193	150
324+26.9	TO	333+67.8	226	416	317	100
I-394 SOUTHBOUND						
315+29.9	TO	320+95.1	232	249	220	100
324+26.9	TO	328+76.9	226	198	193	
TOTAL			907	1061	924	350

ROADWAY IMPROVEMENT SCHEDULE										
LOCATION	BITUMINOUS MATERIALS (TACK COAT)		POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, 9.5, MIX "F", N80	HOT-MIX ASPHALT SHOULDERS, 8"	SHOULDER RUMBLE STRIPS, 16 INCH	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 5	TRAFFIC BARRIER TERMINAL, TYPE 6	GUARDRAIL REFLECTORS, TYPE A	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 5
	POUND	TON	SQ YD	FOOT	FOOT	EACH	EACH	EACH	EACH	
I-394 NORTHBOUND										
316+45.1	TO	320+95.1	276	35	193	736	113		2	
324+26.9	TO	333+67.8	432	54	317	1420		2		
I-394 SOUTHBOUND										
315+29.9	TO	320+95.1	316	40	220	889		2		
324+26.9	TO	328+76.9	278	36	193	736				1
TOTAL			1301	165	924	3781	113	2	4	2

PAVEMENT MARKING SCHEDULE																			
LOCATION	PAVEMENT MARKING TAPE, TYPE IV 4"		PAVEMENT MARKING TAPE, TYPE IV 5"		PAVEMENT MARKING TAPE, TYPE IV 12"		THERMOPLASTIC PAVEMENT MARKING - LINE 4"		THERMOPLASTIC PAVEMENT MARKING - LINE 12"		PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5"	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 8"	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	RAISED REFLECTIVE PAVEMENT MARKER	PAVEMENT MARKING REMOVAL - WATER BLASTING	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	GROOVING FOR RECESSED PAVEMENT MARKING 6"	GROOVING FOR RECESSED PAVEMENT MARKING 9"	RAISED PAVEMENT MARKER REFLECTOR REPLACEMENT
	WHITE FOOT	YELLOW FOOT	WHITE FOOT	WHITE FOOT	YELLOW FOOT	WHITE FOOT	YELLOW FOOT	WHITE FOOT	YELLOW FOOT	WHITE FOOT	WHITE FOOT	WHITE FOOT	WHITE FOOT	WHITE FOOT	WHITE FOOT	WHITE FOOT	WHITE FOOT	WHITE FOOT	WHITE FOOT
I-394 NORTHBOUND																			
297+29.9	TO	321+14.6	471	310	118	15	471	310	15	118					324	6	118		6
321+14.6	TO	324+07.4										73	290	290	49	5		73	
324+07.4	TO	348+67.8	2467	2465	616	72	2,467	2465	72	616					1,973	31	616		31
I-394 SOUTHBOUND																			
314+70.9	TO	321+14.6	2131	2383	596	33	2131	2383	33	596					1,786	30	596		30
321+14.6	TO	324+07.4										73	290	290	49	5		73	
324+07.4	TO	328+32.7	471	310	118	14	471	310	14	118					323	6	118		6
SUB-TOTAL			5539	5468	1447	134	0	5,539	5468				580	580					
TOTAL			11,007		1,447	134		11,007	134	1447	146		1,160	10	4503	83	1447	146	73

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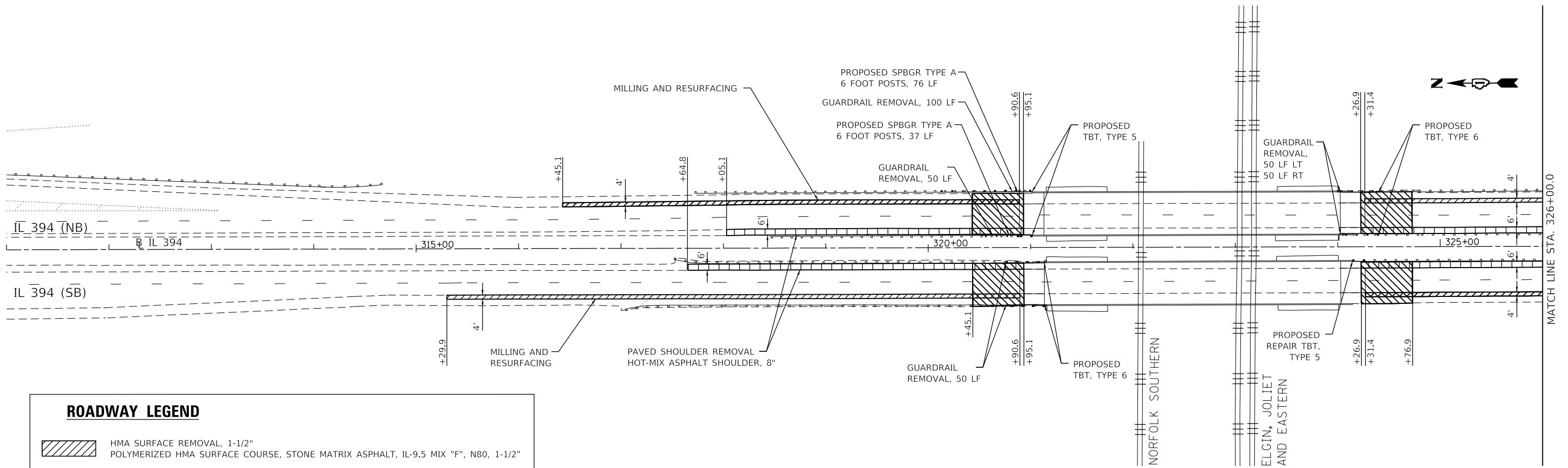
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SCHEDULE OF QUANTITIES

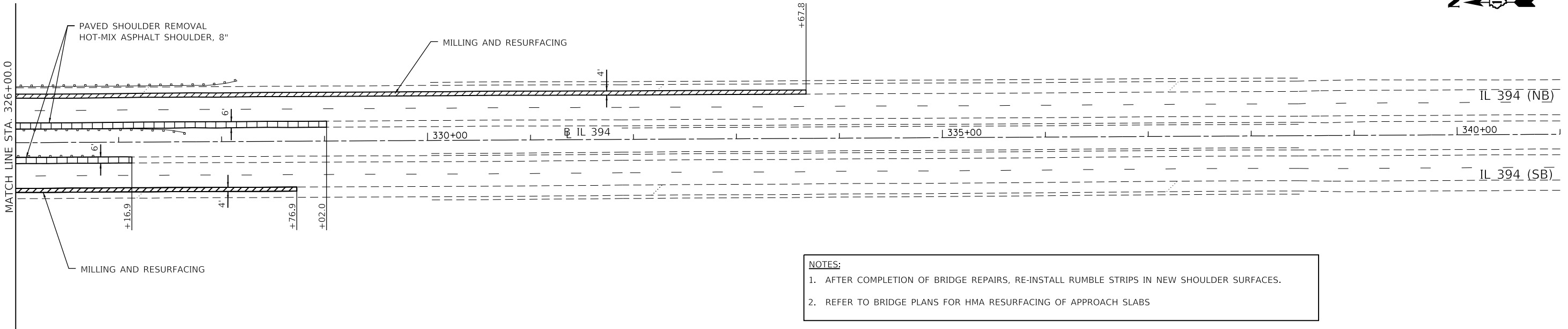
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	7
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				



ROADWAY LEGEND

	HMA SURFACE REMOVAL, 1-1/2" POLYMERIZED HMA SURFACE COURSE, STONE MATRIX ASPHALT, IL-9.5 MIX "F", N80, 1-1/2"
	PAVED SHOULDER REMOVAL HOT-MIX ASPHALT SHOULDER, 8" SUB-BASE GRANULAR MATERIAL TYPE C, 4"
	HMA SURFACE REMOVAL - BUTT JOINT POLYMERIZED HMA SURFACE COURSE, STONE MATRIX ASPHALT, IL-9.5 MIX "F", N80



NOTES:

- AFTER COMPLETION OF BRIDGE REPAIRS, RE-INSTALL RUMBLE STRIPS IN NEW SHOULDER SURFACES.
- REFER TO BRIDGE PLANS FOR HMA RESURFACING OF APPROACH SLABS



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 Lisle, Illinois 60532
 630/296-5877

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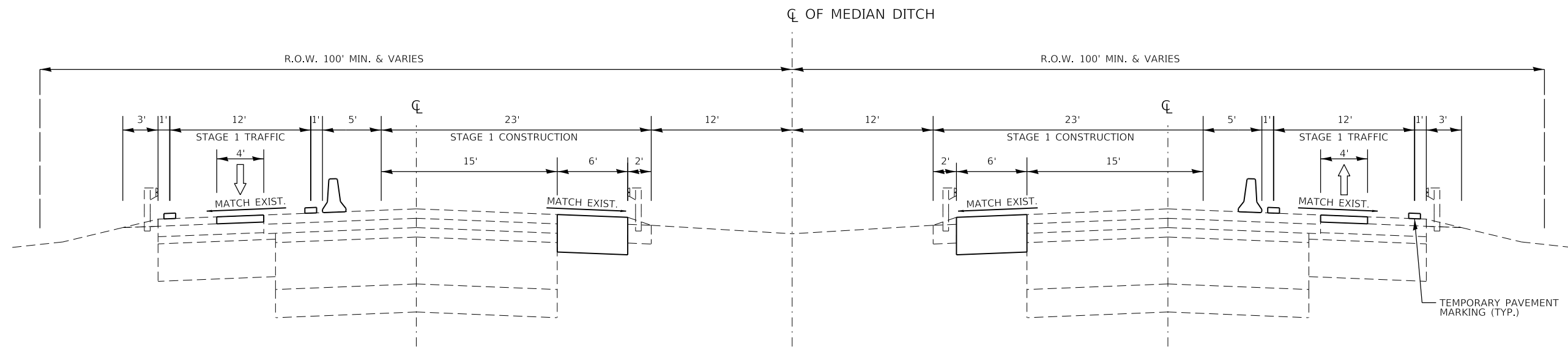
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

IL 394 ROADWAY PLAN	
SCALE: 1" = 50'	SHEET 1 OF 1 SHEETS
STA. 311+00	TO STA. 341+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	8
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				

PRE-STAGE 1 OPERATIONS:

1. MILL AND RESURFACE INNER 4 FEET OF OUTSIDE SHOULDERS TO REMOVE RUMBLE STRIPS. COMPLETE GUARDRAIL IMPROVEMENTS ON OUTER EDGES. UTILIZE HIGHWAY STANDARDS 701400, 701401, AND 701428 FOR TRAFFIC CONTROL.

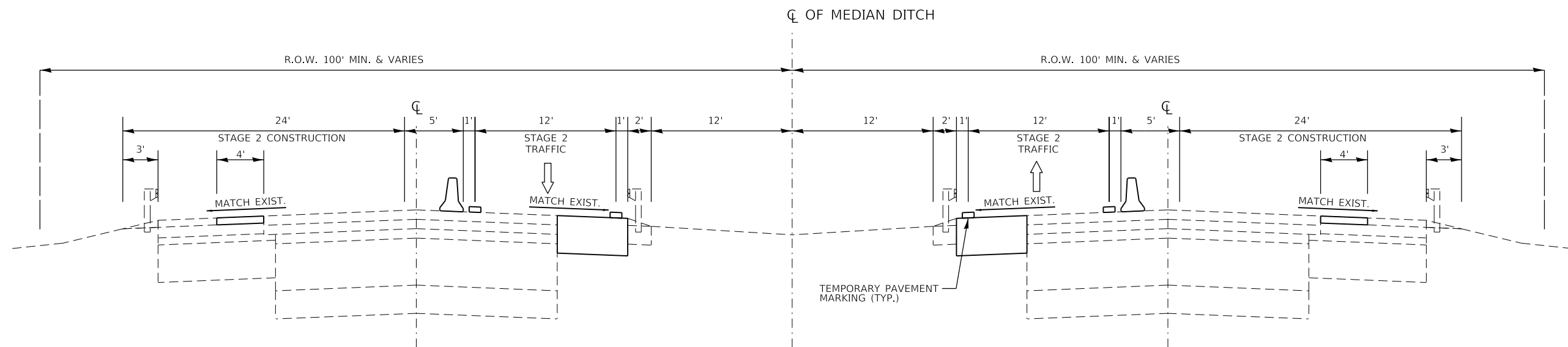


STAGE 1 PROPOSED TYPICAL CROSS SECTION
(LOOKING SOUTH)

IL 394 NORTHBOUND LANES
STA 316+45.1 TO STA 333+67.8 LT
STA 318+05.1 TO STA 329+02.0 RT

IL 394 SOUTHBOUND LANES
STA 317+64.8 TO STA 327+16.9 LT
STA 315+29.9 TO STA 328+76.9 RT

BRIDGE OMISSION
STA 320+95.13 TO STA 324+26.88



STAGE 2 PROPOSED TYPICAL CROSS SECTION
(LOOKING SOUTH)

IL 394 NORTHBOUND LANES
STA 316+45.1 TO STA 333+67.8 LT
STA 318+05.1 TO STA 329+02.0 RT

IL 394 SOUTHBOUND LANES
STA 317+64.8 TO STA 327+16.9 LT
STA 315+29.9 TO STA 328+76.9 RT

BRIDGE OMISSION
STA 320+95.13 TO STA 324+26.88

POST-STAGE 2 OPERATIONS:

1. INSTALL NEW RUMBLE STRIPS IN SHOULDERS. USE HIGHWAY STANDARDS 701400, 701401, AND 701428 FOR TRAFFIC CONTROL.
2. RE-INSTALL PAVEMENT MARKINGS IN ACCORDANCE WITH STANDARD DETAILS.
3. RE-INSTALL REFLECTORS REMOVED FROM RAISED PAVEMENT MARKERS.

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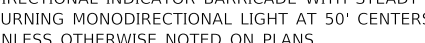
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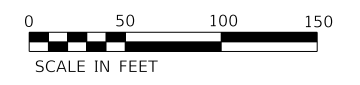
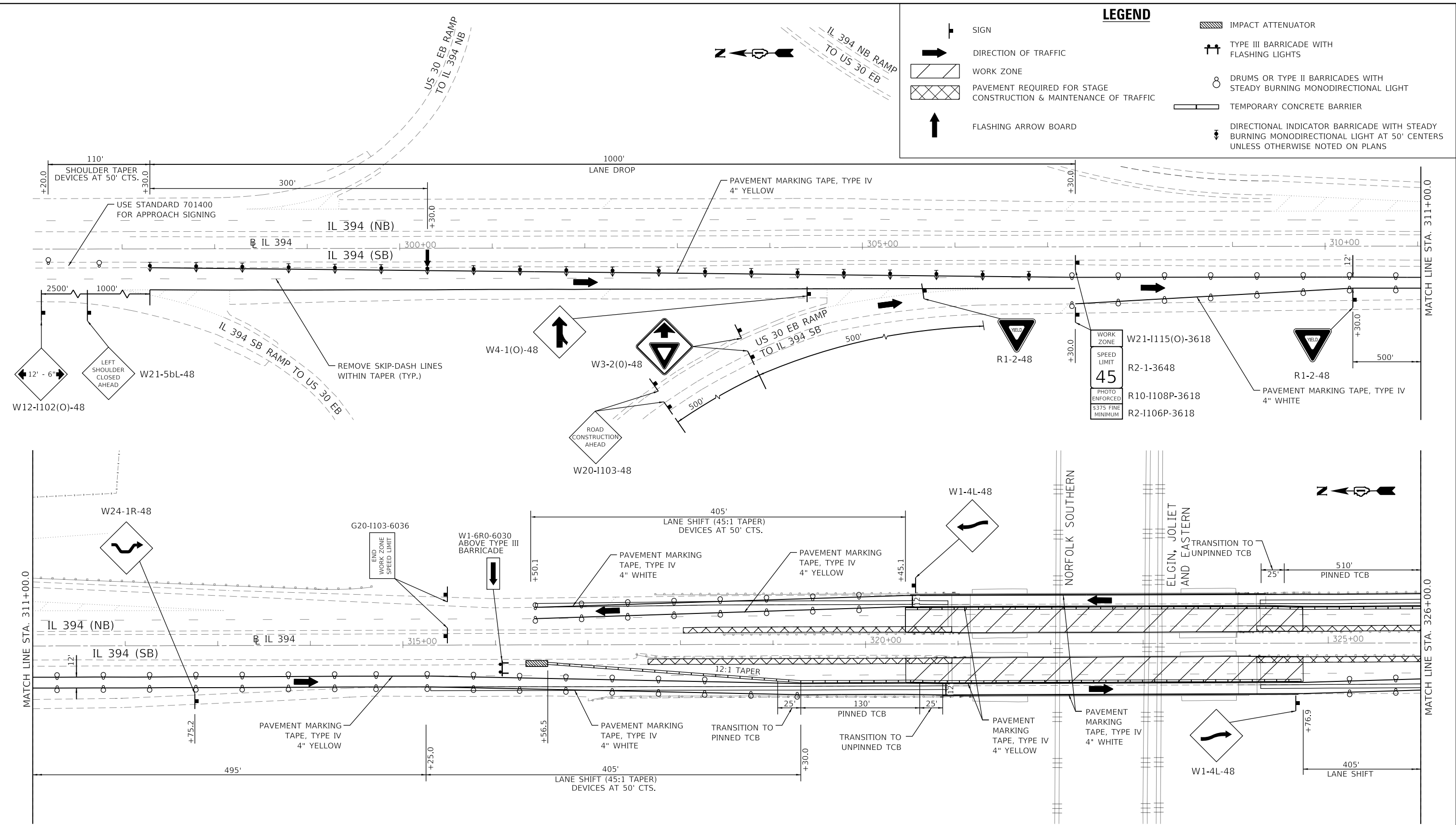
IL 394
TYPICAL CROSS SECTIONS - STAGE 1 & 2

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	9
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				

LEGEND

-  SIGN
-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  PAVEMENT REQUIRED FOR STAGE CONSTRUCTION & MAINTENANCE OF TRAFFIC
-  FLASHING ARROW BOARD
-  IMPACT ATTENUATOR
-  TYPE III BARRICADE WITH FLASHING LIGHTS
-  DRUMS OR TYPE II BARRICADES WITH STEADY BURNING MONODIRECTIONAL LIGHT
-  TEMPORARY CONCRETE BARRIER
-  DIRECTIONAL INDICATOR BARRICADE WITH STEADY BURNING MONODIRECTIONAL LIGHT AT 50' CENTERS UNLESS OTHERWISE NOTED ON PLANS



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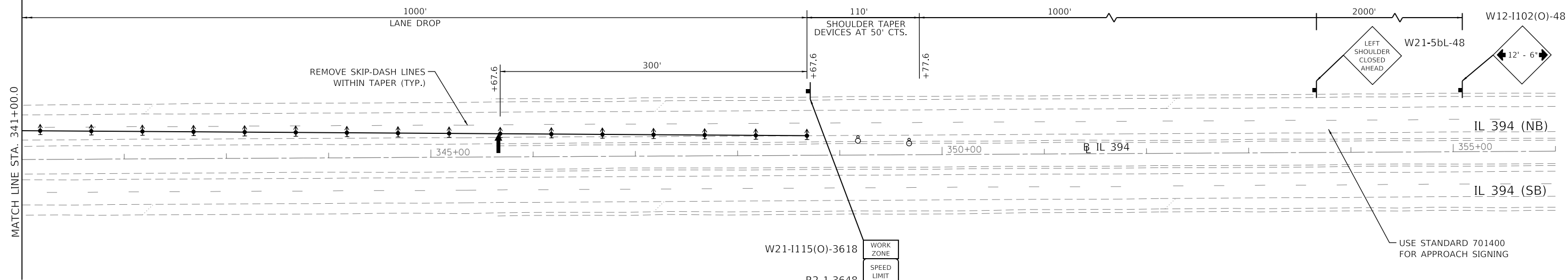
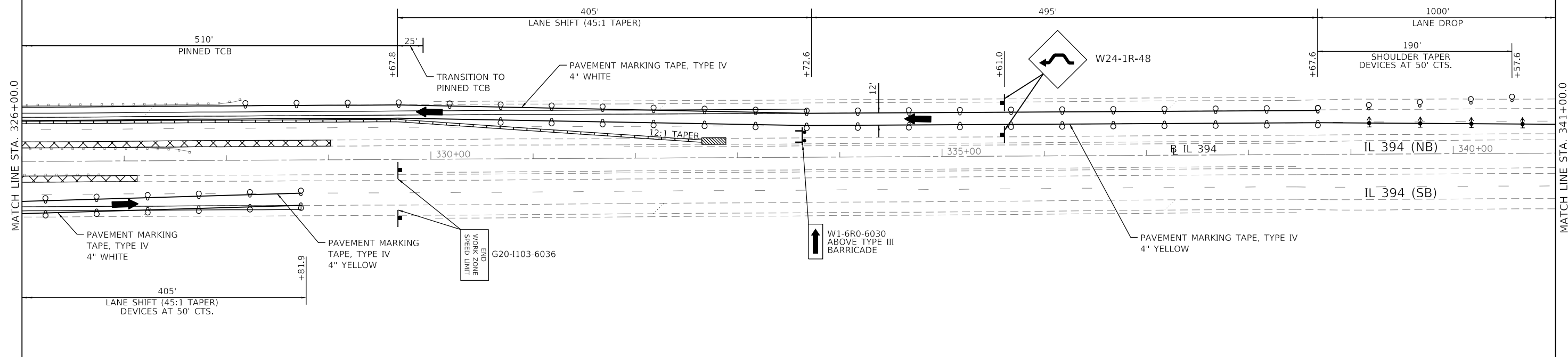
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 630/296-5877

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PLOT DATE = 12/16/2020	CHECKED MLL	REVISED -
	DATE 12/01/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 394	
STAGE 1 MAINTENANCE OF TRAFFIC	
SCALE: 1" = 50'	SHEET 1 OF 2 SHEETS STA. 296+00 TO STA. 326+00

F.A.P. RTE. 332	SECTION 2020-169-BR	COUNTY COOK	TOTAL SHEETS 54	SHEET NO. 10
CONTRACT NO. 62M29				
		ILLINOIS	FED. AID PROJECT	



LEGEND

- SIGN
- DIRECTION OF TRAFFIC
- WORK ZONE
- PAVEMENT REQUIRED FOR STAGE CONSTRUCTION & MAINTENANCE OF TRAFFIC
- FLASHING ARROW BOARD
- IMPACT ATTENUATOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- DRUMS OR TYPE II BARRICADES WITH STEADY BURNING MONODIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER
- DIRECTIONAL INDICATOR BARRICADE WITH STEADY BURNING MONODIRECTIONAL LIGHT AT 50' CENTERS UNLESS OTHERWISE NOTED ON PLANS

W21-1115(O)-3618
R2-1-3648
R10-1108P-3618
R2-1106P-3618

WORK ZONE
SPEED LIMIT
45
PHOTO ENFORCED
5375 FINE MINIMUM



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630/296-5877

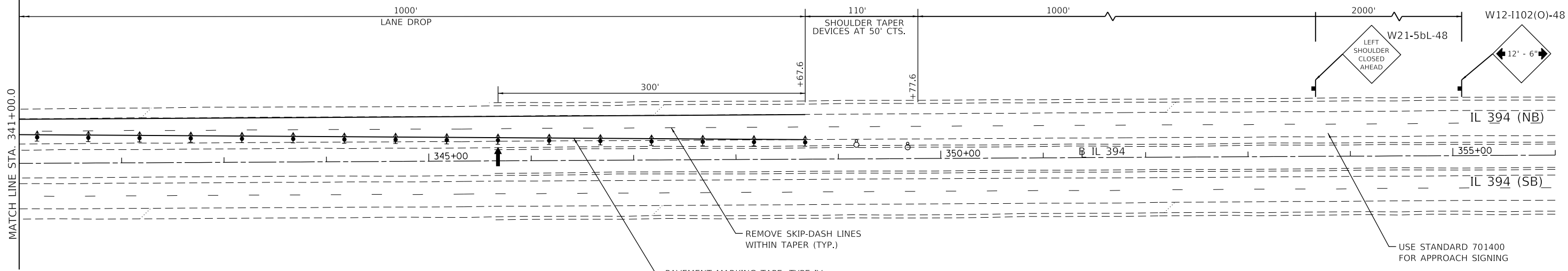
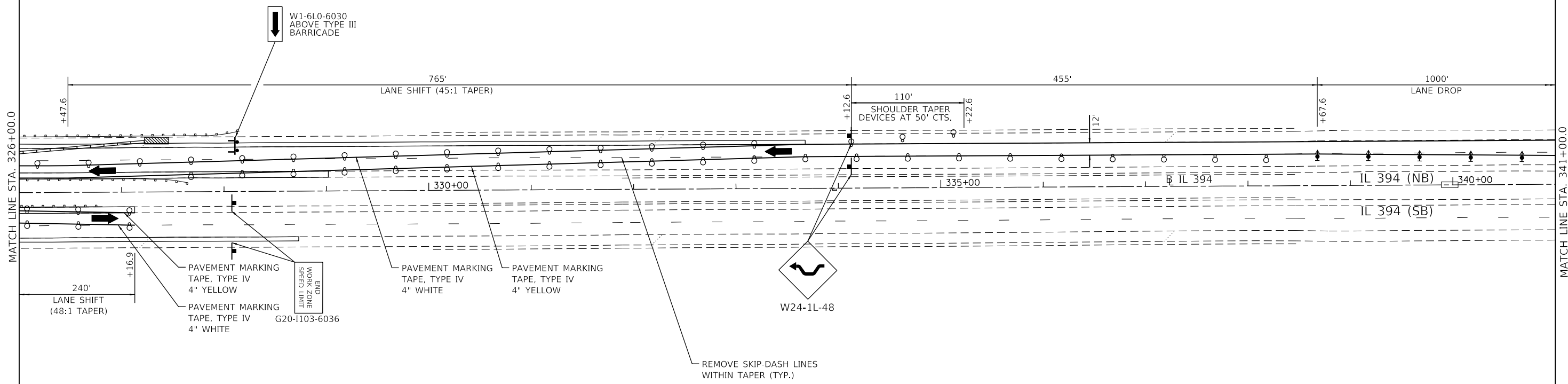
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	DATE 12/01/2020	REVISION -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

IL 394 STAGE 1 MAINTENANCE OF TRAFFIC

SCALE: 1" = 50' SHEET 2 OF 2 SHEETS STA. 326+00 TO STA. 356+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	11
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				



LEGEND

- SIGN
- DIRECTION OF TRAFFIC
- WORK ZONE
- PAVEMENT REQUIRED FOR STAGE CONSTRUCTION & MAINTENANCE OF TRAFFIC
- FLASHING ARROW BOARD
- IMPACT ATTENUATOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- DRUMS OR TYPE II BARRICADES WITH STEADY BURNING MONODIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER
- DIRECTIONAL INDICATOR BARRICADE WITH STEADY BURNING MONODIRECTIONAL LIGHT AT 50' CENTERS UNLESS OTHERWISE NOTED ON PLANS



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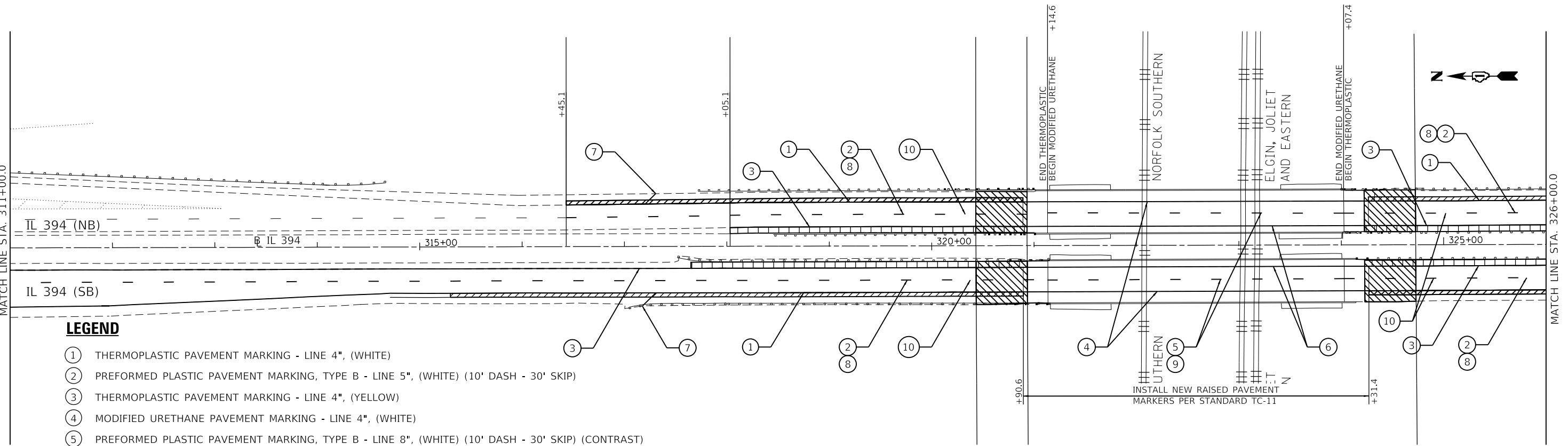
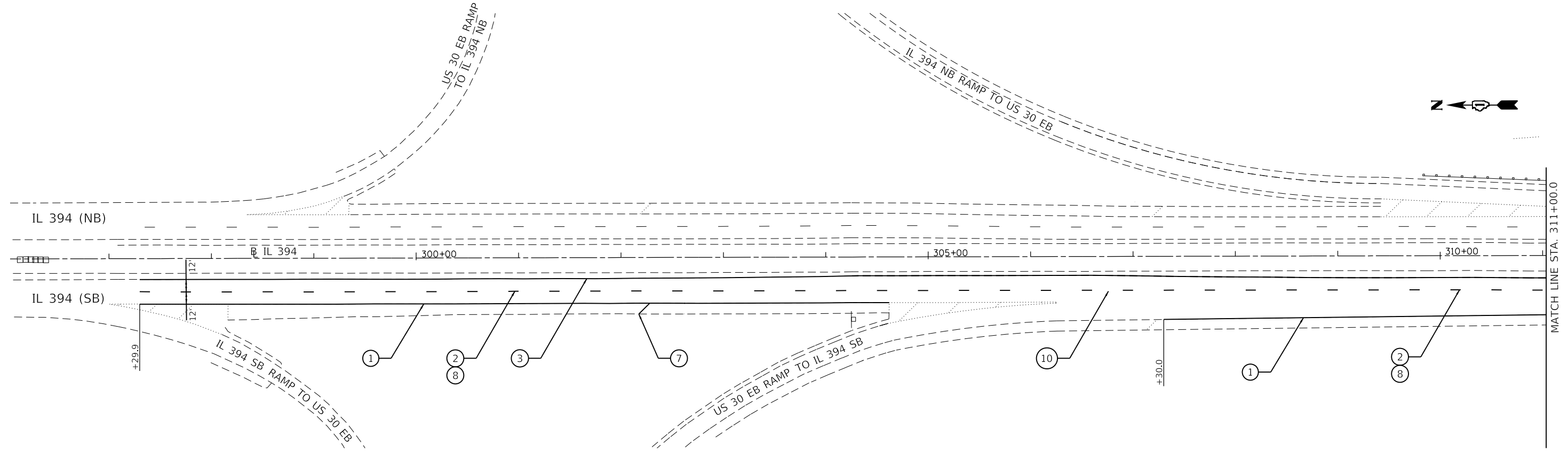
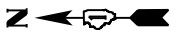
Farnsworth GROUP
 1011 Warrenville Road
 Lisle, Illinois 60532
 630/296-5877

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	DATE 12/01/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

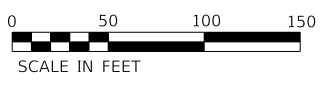
IL 394	
STAGE 2 MAINTENANCE OF TRAFFIC	
SCALE: 1" = 50'	SHEET 2 OF 2 SHEETS
STA. 326+00	TO STA. 356+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	13
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				



LEGEND

- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4", (WHITE)
- ② PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5", (WHITE) (10' DASH - 30' SKIP)
- ③ THERMOPLASTIC PAVEMENT MARKING - LINE 4", (YELLOW)
- ④ MODIFIED URETHANE PAVEMENT MARKING - LINE 4", (WHITE)
- ⑤ PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 8", (WHITE) (10' DASH - 30' SKIP) (CONTRAST)
- ⑥ MODIFIED URETHANE PAVEMENT MARKING - LINE 4", (YELLOW)
- ⑦ THERMOPLASTIC PAVEMENT MARKING - LINE 12", (WHITE) (DIAGONAL) (500' CENTERS)
- ⑧ GROOVING FOR RECESSED PAVEMENT MARKING, 6"
- ⑨ GROOVING FOR RECESSED PAVEMENT MARKING, 9"
- ⑩ REPLACEMENT REFLECTOR



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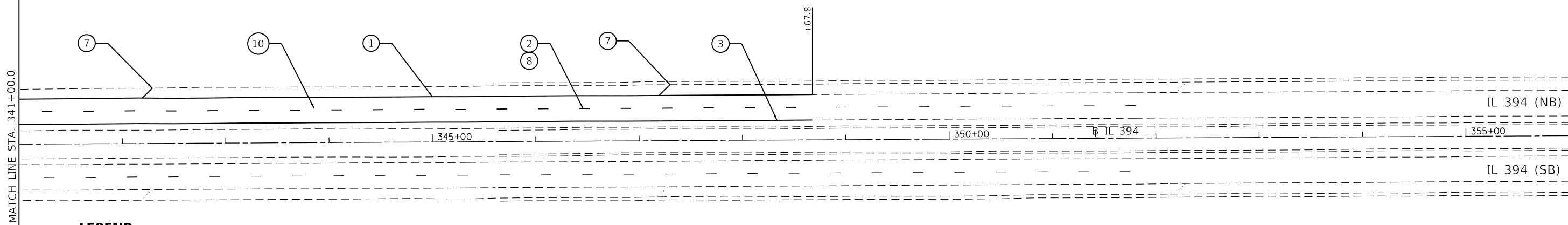
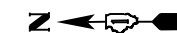
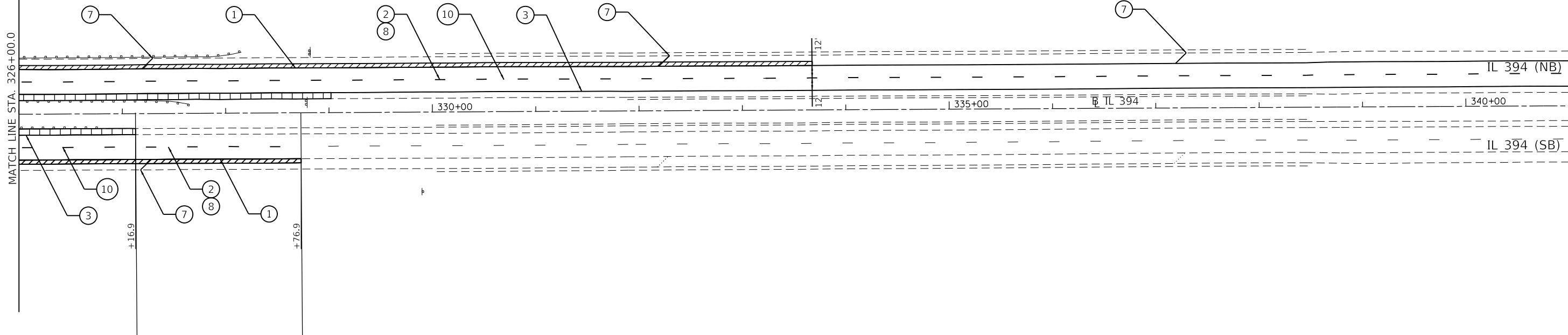
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 Lisle, Illinois 60532
 630/296-5877

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PLOT DATE = 12/10/2020	CHECKED MLL	REVISED -
	DATE 12/01/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 394 PAVEMENT MARKING PLAN	
SCALE: 1" = 50'	SHEET 1 OF 2 SHEETS
STA. 296+00	TO STA. 326+00

F.A.P. RTE. 332	SECTION 2020-169-BR	COUNTY COOK	TOTAL SHEETS 54	SHEET NO. 14
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				



LEGEND

- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4", (WHITE)
- ② PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5", (WHITE) (10' DASH - 30' SKIP)
- ③ THERMOPLASTIC PAVEMENT MARKING - LINE 4", (YELLOW)
- ④ MODIFIED URETHANE PAVEMENT MARKING - LINE 4", (WHITE)
- ⑤ PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 8", (WHITE) (10' DASH - 30' SKIP) (CONTRAST)
- ⑥ MODIFIED URETHANE PAVEMENT MARKING - LINE 4", (YELLOW)
- ⑦ THERMOPLASTIC PAVEMENT MARKING - LINE 12", (WHITE) (DIAGONAL) (500' CENTERS)
- ⑧ GROOVING FOR RECESSED PAVEMENT MARKING, 6"
- ⑨ GROOVING FOR RECESSED PAVEMENT MARKING, 9"
- ⑩ REPLACEMENT REFLECTOR



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

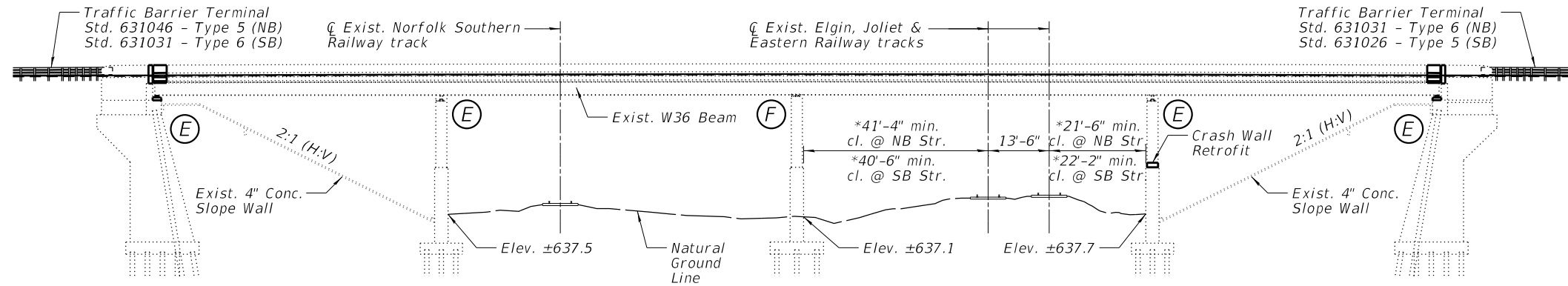
IL 394
PAVEMENT MARKING PLAN

SCALE: 1" = 50' SHEET 2 OF 2 SHEETS STA. 326+00 TO STA. 356+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	15
CONTRACT NO. 62M29			ILLINOIS FED. AID PROJECT	

Benchmark: #1, Iron Rod w/ cap. Elevation = 662.60, Sta. 317+03.01, 59.86' RT.
 #2, Iron Rod w/ cap. Elevation = 666.53, Sta. 321+02.06, 2.37' RT.
 #3, Iron Rod w/ cap. Elevation = 666.17, Sta. 324+14.48, 0.25' RT.

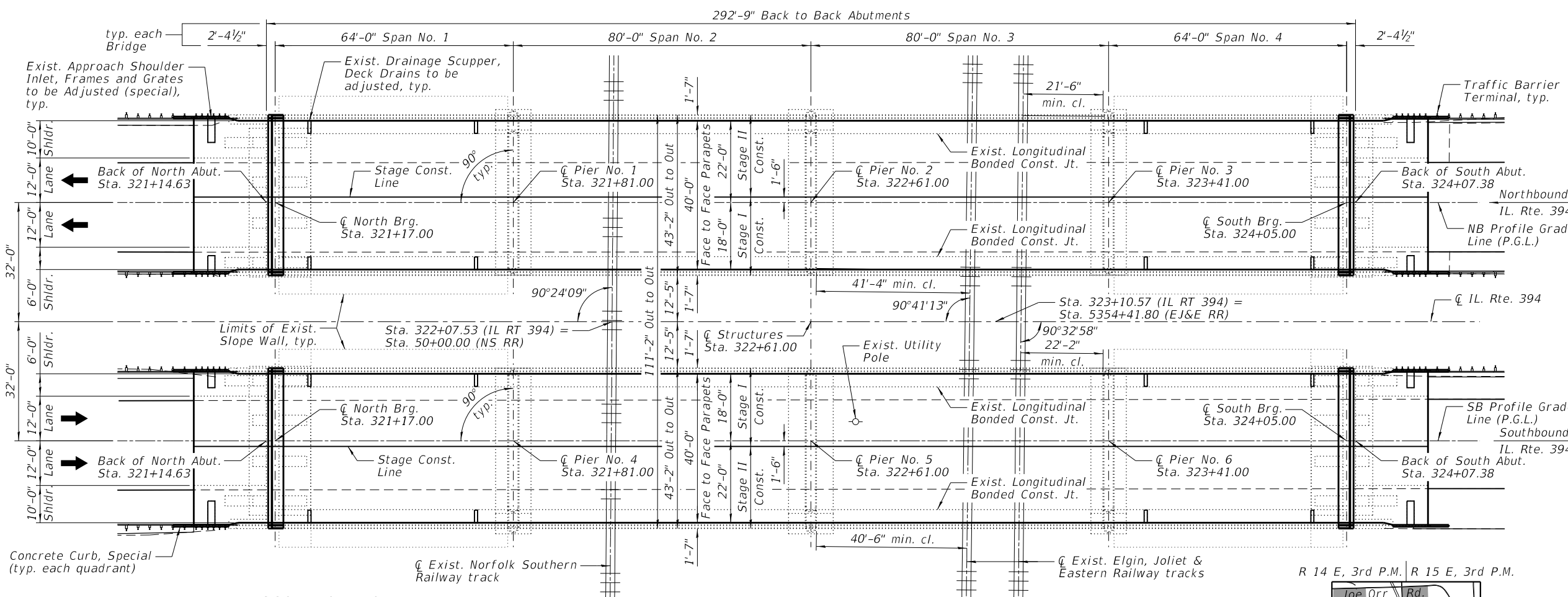
Existing Structure: S.N. 016-0456 (N.B.) and S.N. 016-1041 (S.B.) were originally constructed in 1955 as Section 066A-0203.1-MFT. In 1990, each bridge was widened with an additional beam line and received a deck replacement. The superstructure consists of a four-span continuous, rolled steel beam bridge with a 7 1/2" cast-in-place concrete deck. The substructure consists of spill-thru counterfort abutments supported by driven concrete piles and multi-column piers with crash walls supported on driven concrete piles. The back-to-back of abutments length measures 292'-9", and the out-to-out of deck width measures 43'-2" for each bridge. The span lengths are 64'-0", 80'-0", 80'-0", and 64'-0". The structures are not skewed. One lane of traffic in each direction will be maintained utilizing stage construction. No Salvage.



ELEVATION

*Dimension @ Rt. L's to Track

SHEET NO.	TITLE
1	GENERAL PLAN AND ELEVATION
2	GENERAL DATA
3	STAGE CONSTRUCTION DETAILS
4	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
5-7	DECK & APPROACH SLAB REPAIRS
8-9	DECK & APPROACH SLAB REPAIRS - AS BUILT
10-14	JOINT REPLACEMENT DETAILS
15	PREFORMED JOINT STRIP SEAL
16	DRAINAGE SCUPPER DETAILS
17	APPROACH SHOULDER INLET DETAILS
18	BEARING DETAILS
19-20	NORTH ABUTMENT REMOVAL
21-22	NORTH ABUTMENT
23-24	SOUTH ABUTMENT REMOVAL
25-26	SOUTH ABUTMENT
27-29	PIER DETAILS
30	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS



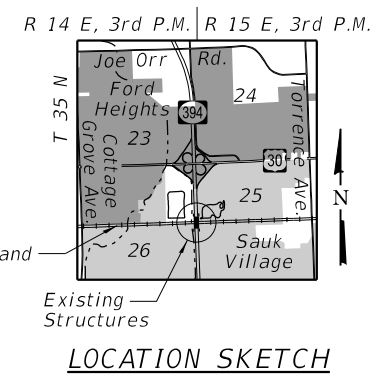
SCOPE OF WORK

- 1.) Maintain one lane of traffic in each direction according to Stage Construction cross sections.
- 2.) Scarify the bridge deck 3/4".
- 3.) Partial depth and full depth repairs to bridge deck and partial depth repairs to approaches.
- 4.) Remove and replace the existing expansion joints with Preformed Joint Strip Seal.
- 5.) Jack and remove the existing bearings at the abutments.
- 6.) Place concrete on the abutment seats.
- 7.) Install Type I elastomeric bearings at the abutments.
- 8.) Install 2 1/2" latex overlay on the bridge deck.
- 9.) Install 1 3/4" Hot-Mix Asphalt (HMA) on the approaches.
- 10.) Extend the top of pier crash walls at Pier No. 3 and Pier No. 6.
- 11.) Formed concrete repair all areas noted on the plans.
- 12.) Adjust frames and grates of existing drainage scuppers and approach shoulder inlets.
- 13.) Slope wall repairs.

PLAN



JOHN C. ZEMAN
 ILLINOIS STRUCTURAL ENGINEER
 NO. 081-007515
 Exp. Date 11/30/22



GENERAL PLAN & ELEVATION
IL. RTE. 394 OVER EJ&E RAILWAY
AND NS RAILWAY
 F.A.P. RTE. 332 - SEC. 2020-169-BR
 COOK COUNTY
 STATION 322+61.00
 STRUCTURE NO. 016-0456 (N.B.)
 STRUCTURE NO. 016-1041 (S.B.)

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS20-44

No allowance for future wearing surface

EXISTING DESIGN STRESSES

1955 CONSTRUCTION

$f_c = 1,200$ psi (Superstructure)
 $f_c = 800$ psi (Substructure)
 $f_s = 20,000$ psi (Reinforcement)
 $f_s = 18,000$ psi (Structural Steel)

1990 CONSTRUCTION

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

PROPOSED DESIGN STRESSES

FIELD UNITS:

$f'_c = 3,500$ psi
 $f'_c = 4,000$ psi (Superstructure Concrete)
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (Structural Steel)



DESIGNED - DAH	REVISOR
CHECKED - JCZ	REVISOR
DRAWN - DJM	REVISOR
CHECKED - DWP	REVISOR

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	16

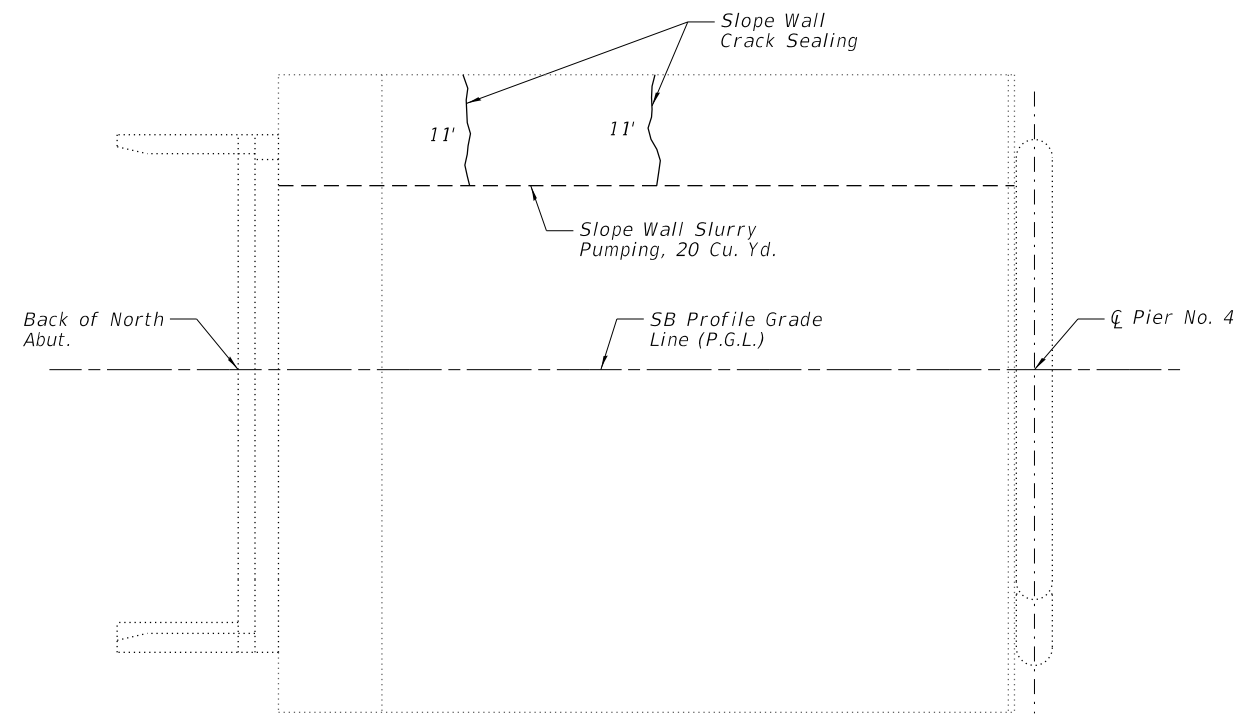
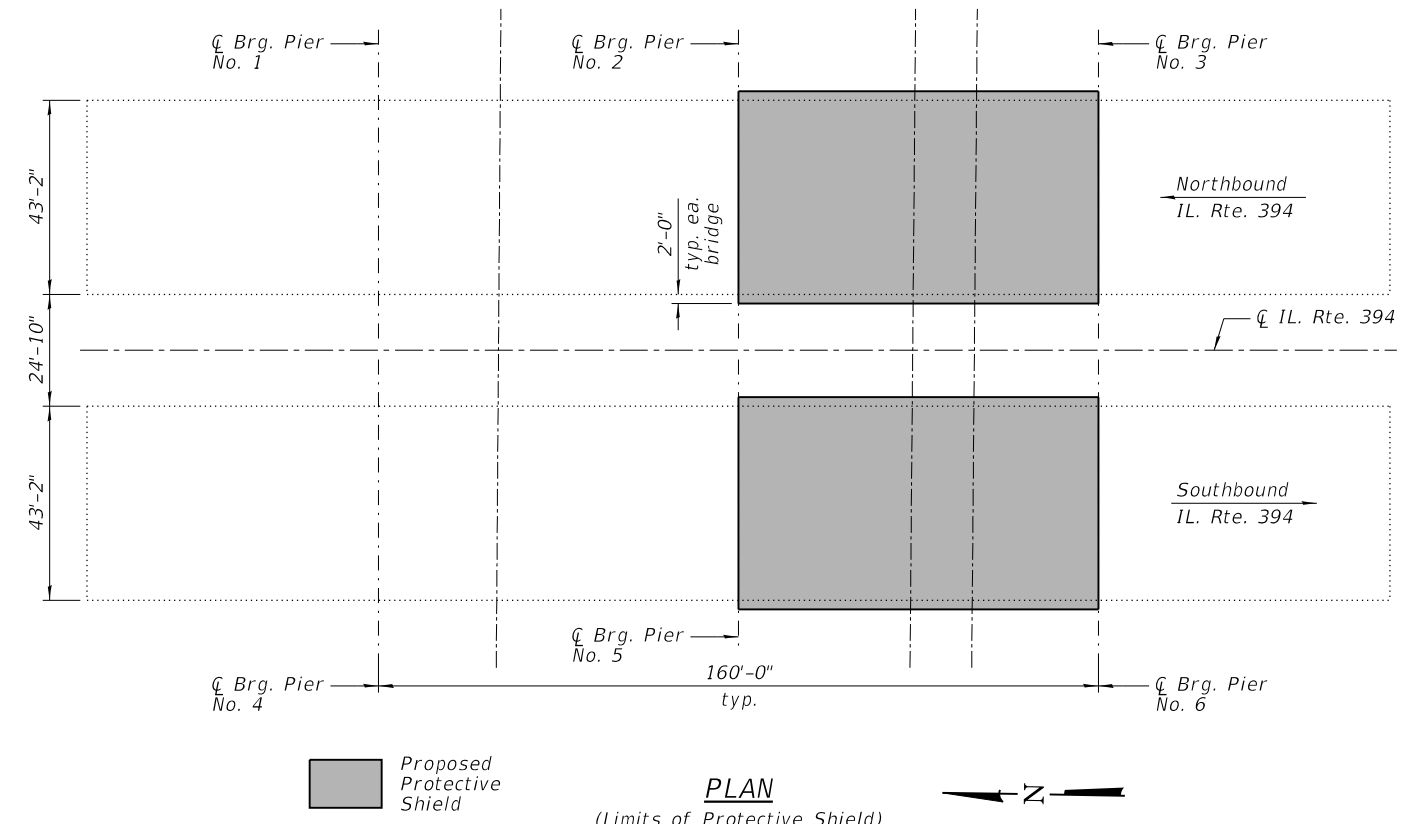
CONTRACT NO. 62M29
 ILLINOIS FED. AID PROJECT

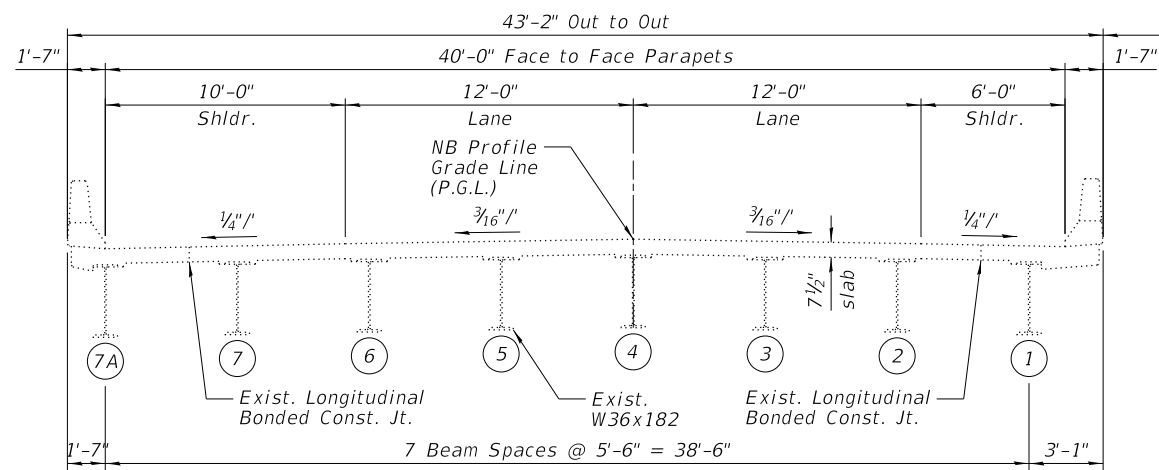
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Polymerized Hot-Mix Asphalt Surface Course, Stone Matrix Asphalt, 9.5, Mix "F", N80	Ton	35
Bituminous Materials (Tack Coat)	Pound	160
Protective Shield	Sq. Yd.	839
Concrete Removal	Cu. Yd.	22.6
Concrete Structures	Cu. Yd.	13.2
Concrete Superstructure	Cu. Yd.	25.4
Bridge Deck Grooving	Sq. Yd.	2,442
Protective Coat	Sq. Yd.	2,615
Furnishing And Erecting Structural Steel	Pound	430
Reinforcement Bars, Epoxy Coated	Pound	5,810
Bar Splicers	Each	64
Preformed Joint Strip Seal	Foot	168
Elastomeric Bearing Assembly, Type 1	Each	32
Anchor Bolts, 1"	Each	72
Concrete Sealer	Sq. Ft.	422
Slope Wall Crack Sealing	Foot	22
Frames and Grates To Be Adjusted (Special)	Each	8
Concrete Curb (Special)	Foot	45
Approach Slab Repair (Partial Depth)	Sq. Yd.	6
Jack and Remove Existing Bearings	Each	4
Removal of Existing Bearings	Each	28
Bridge Deck Latex Concrete Overlay, 2 1/2 Inches	Sq. Yd.	2,520
Cleaning Existing Inlets	Each	24
Bridge Deck Scarification 3/4"	Sq. Yd.	2,520
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	141
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	40
Deck Drains To Be Adjusted	Each	16
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	5
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	17
Jacking and Cribbing	Each	28
Slope Wall Slurry Pumping	Cu. Yd.	20

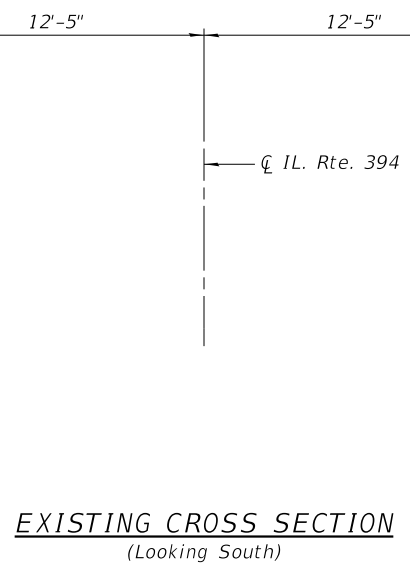
GENERAL NOTES:

- 1.) All structural steel shall be AASHTO M 270 Grade 36.
- 2.) No field welding is permitted except as specified in the contract documents.
- 3.) Reinforcement bars designated (E) shall be epoxy coated.
- 4.) Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- 5.) Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8" (0.01 ft.) Adjustment shall be made either by grinding the surface or by shimming the bearings.
- 6.) Protective Coat shall be applied to the areas listed in Article 503.19 of the Standard Specifications, but only to new concrete areas.
- 7.) Concrete Sealer shall be applied according to Section 587 of the Standard Specifications to the backwalls and caps of the abutments, but only to new concrete areas.
- 8.) The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

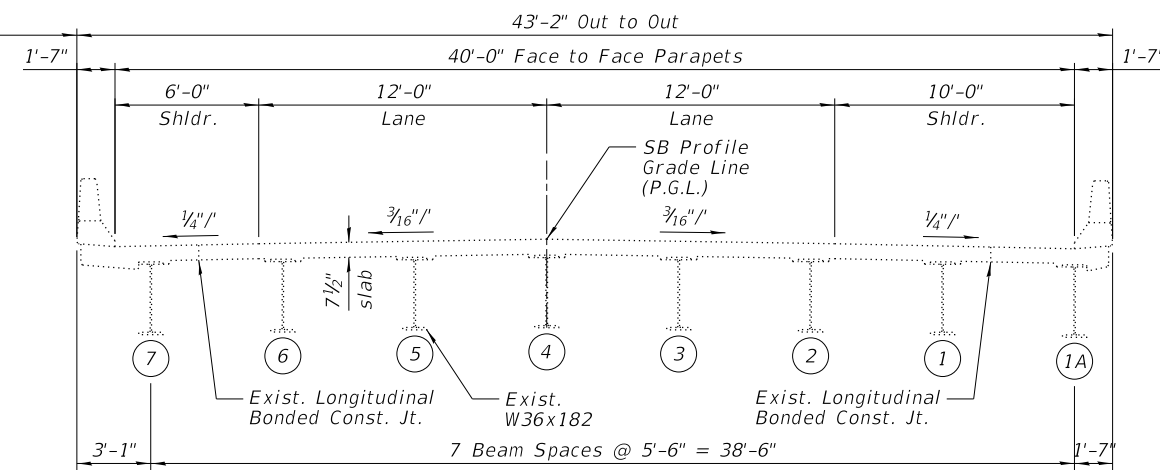




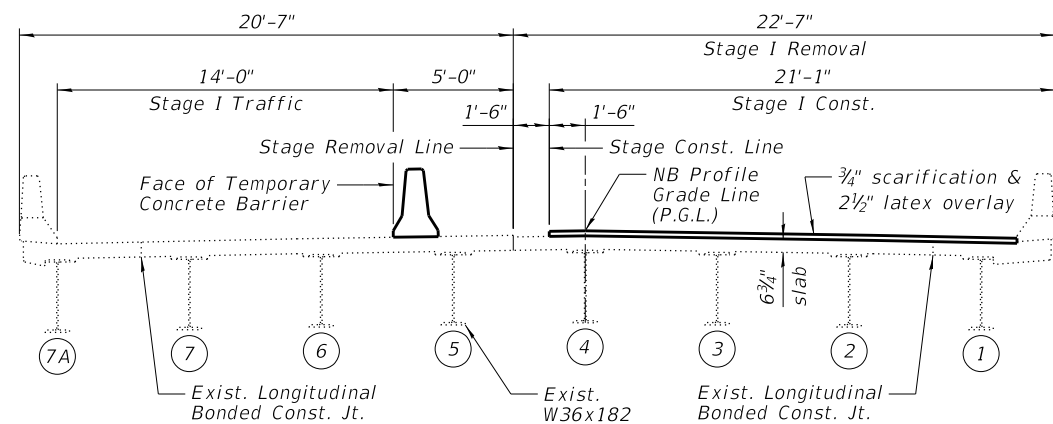
NORTHBOUND



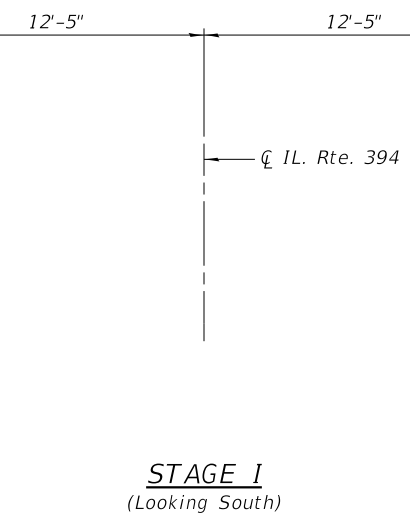
EXISTING CROSS SECTION
(Looking South)



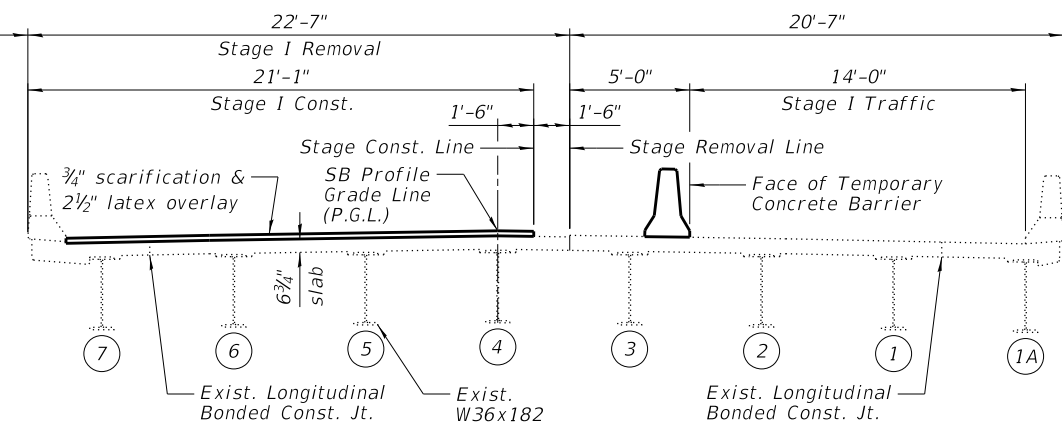
SOUTHBOUND



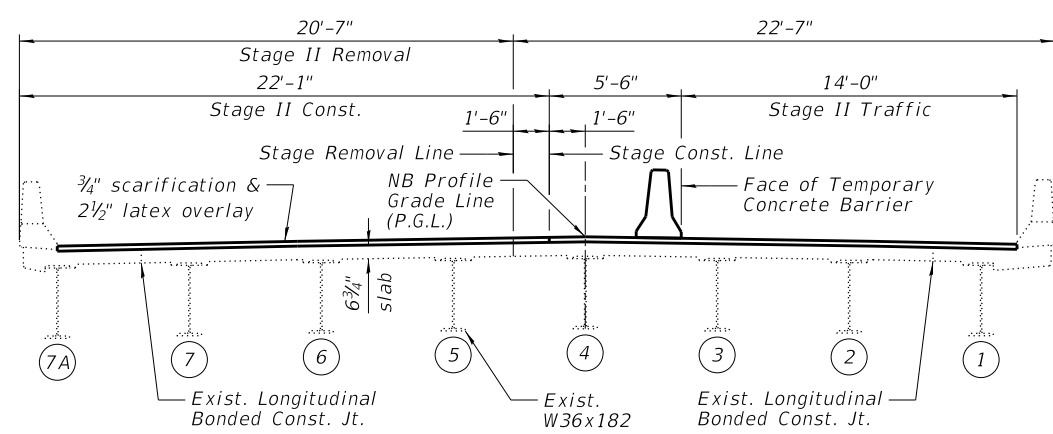
NORTHBOUND



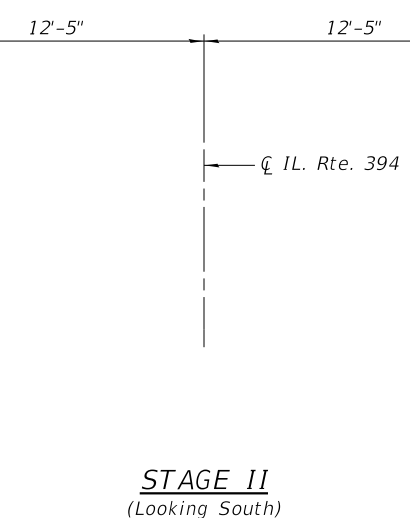
STAGE I
(Looking South)



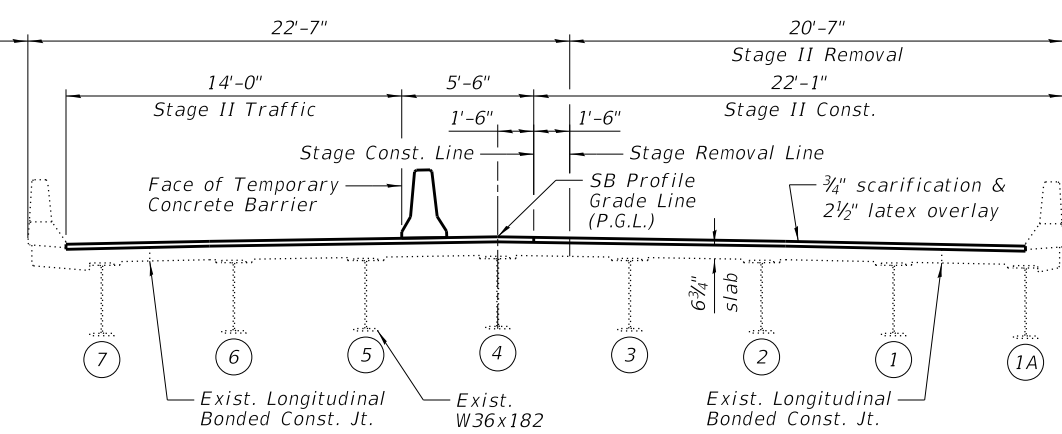
SOUTHBOUND



NORTHBOUND



STAGE II
(Looking South)



SOUTHBOUND



DESIGNED - DAH	REVISED
CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
CHECKED - DWP	REVISED
DATE - 12/01/2020	

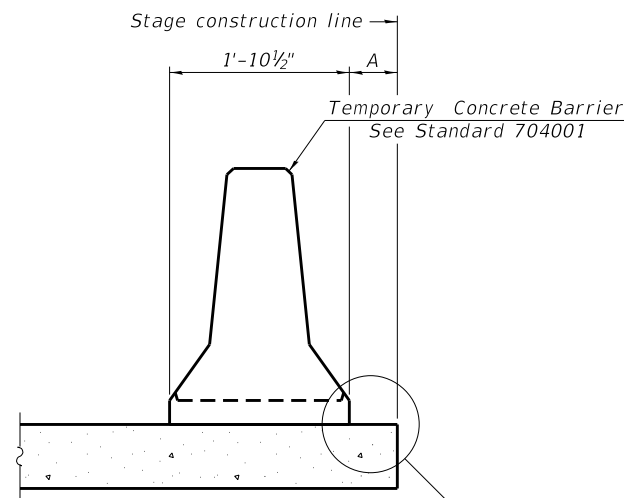
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)

SHEET NO. 3 OF 30 SHEETS

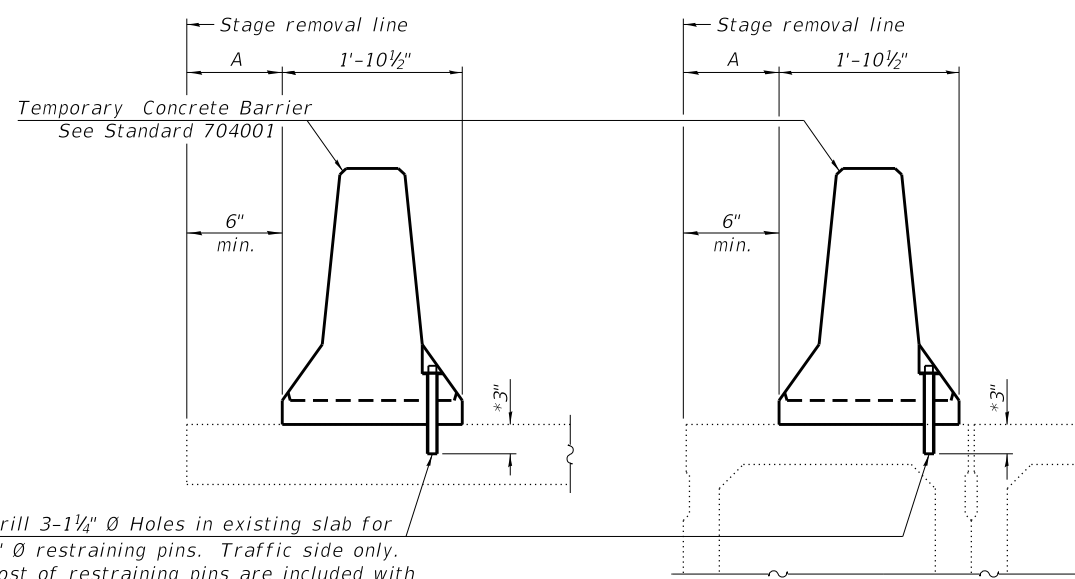
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	18
CONTRACT NO. 62M29				

ILLINOIS FED. AID PROJECT



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

NEW SLAB OR NEW DECK BEAM

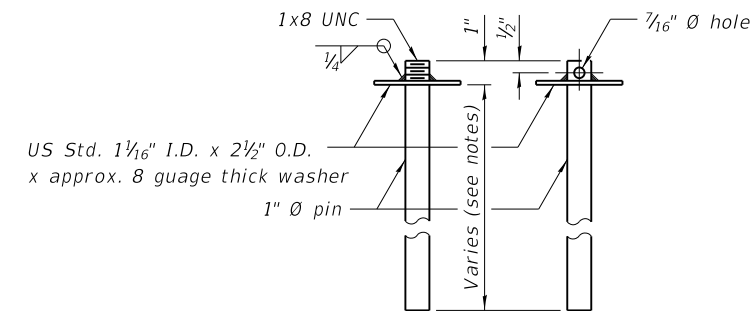


Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

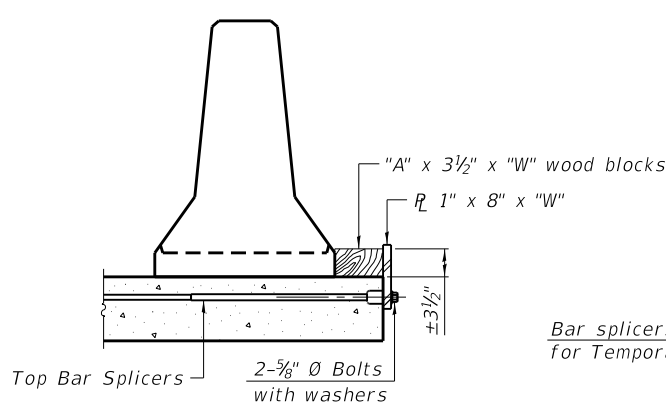
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

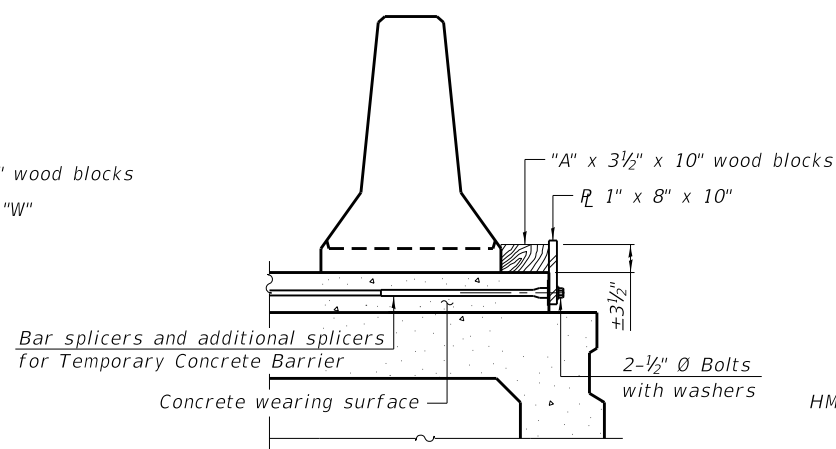


RESTRAINING PIN

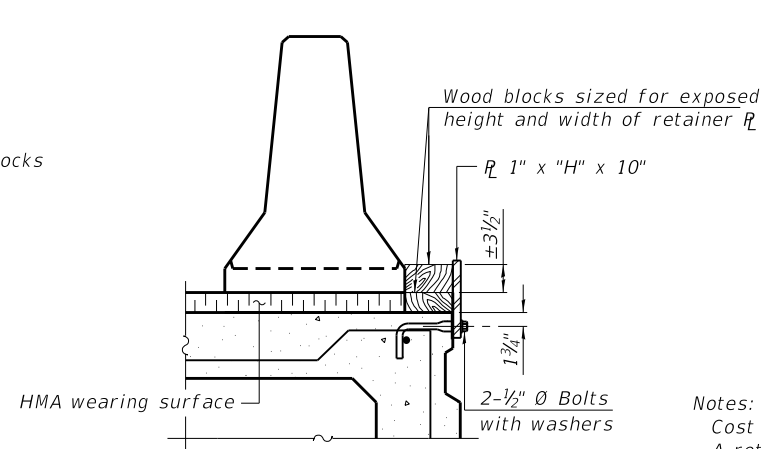
US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer



DETAIL I

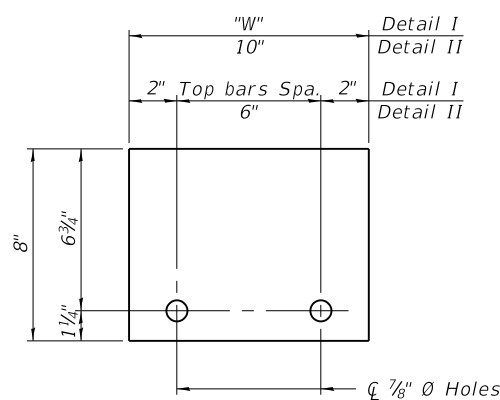
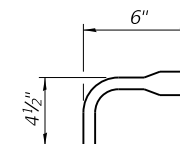


DETAIL II

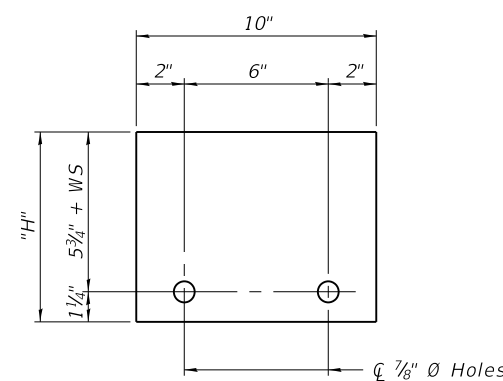


DETAIL III

BAR SPLICER FOR #4 BAR - DETAIL III



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



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

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate C of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate.
 For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

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

R-27 2-17-2017



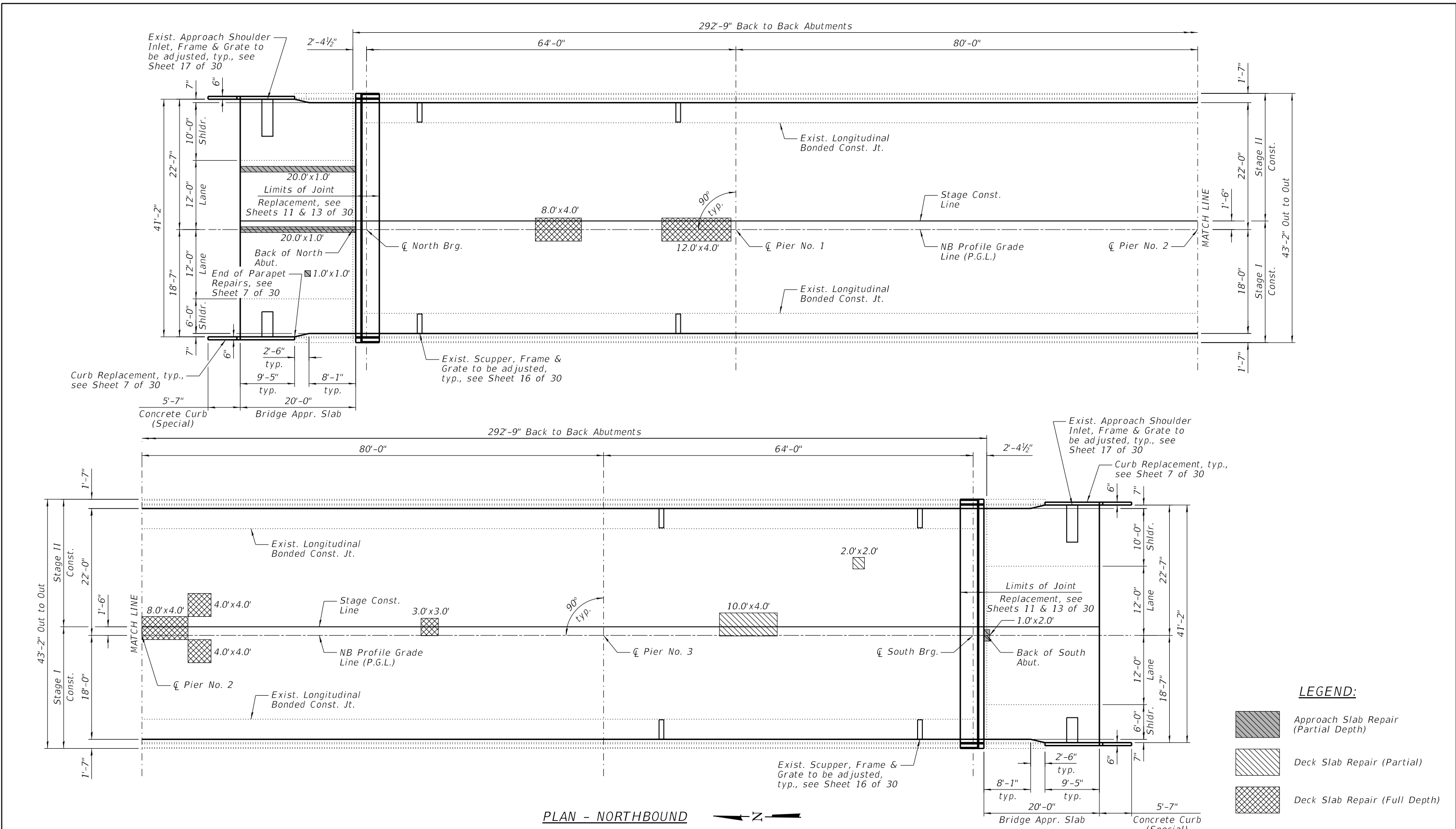
DESIGNED - DAH	REVISED
CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
CHECKED - DWP	REVISED
DATE - 12/01/2020	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)

SHEET NO. 4 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	19
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				

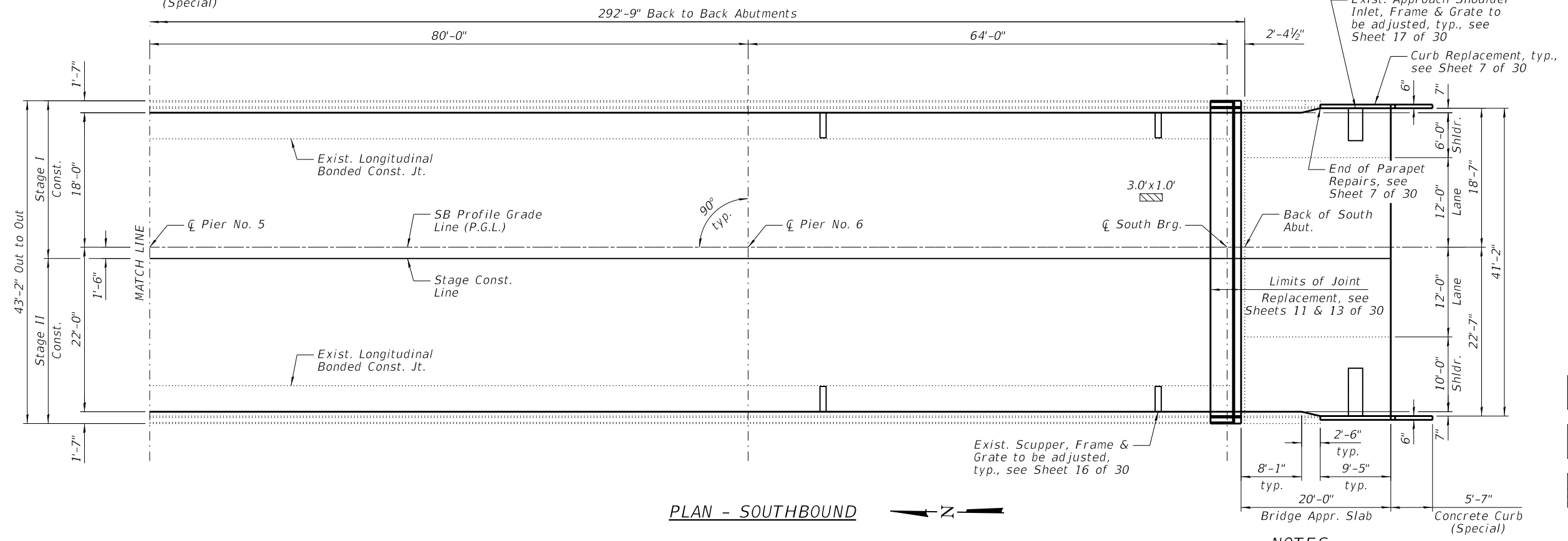
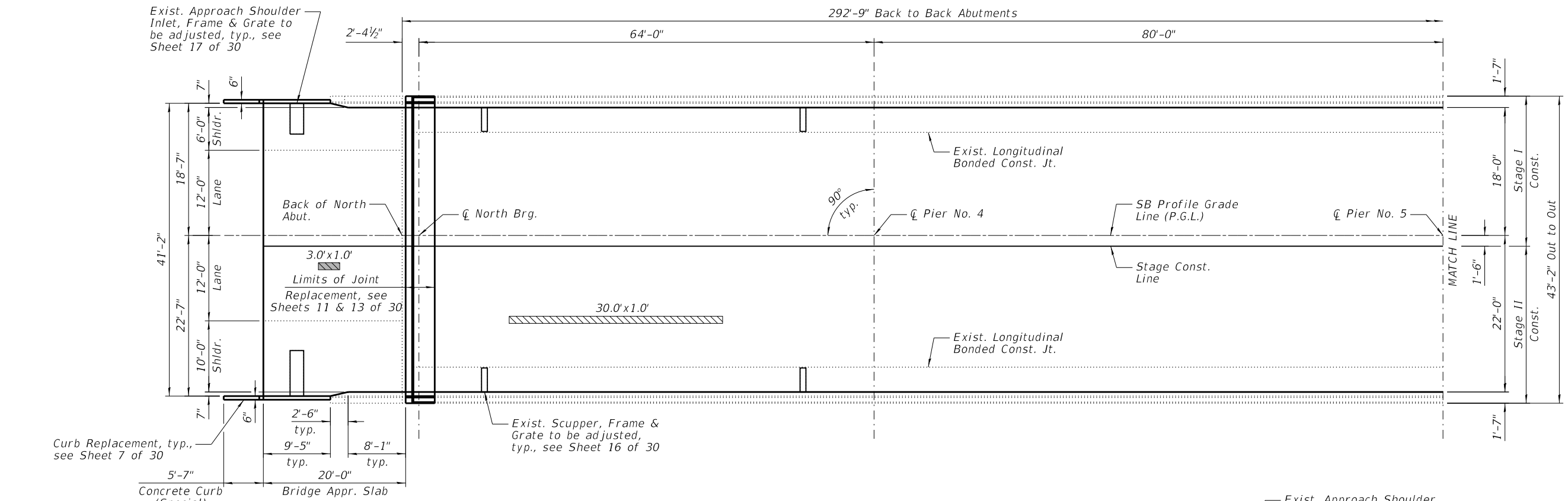


NOTES:

- 1.) The repair areas shown are estimated based on a field inspection conducted in June 2020. The actual repair areas required shall be verified according to the Special Provisions.
- 2.) See Special Provision "Bridge Deck Latex Concrete Overlay" for method of measurement and basis of payment for Deck Slab Repair (Partial).
- 3.) See Sheet 7 of 30 for Bill of Material.

<p>1011 Warrenville Road Lisle, Illinois 60532 630/296-5877 / info@f-w.com</p>	DESIGNED - DAH	REVISOR	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p align="center">DECK & APPROACH SLAB REPAIRS STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)</p>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - JCZ	REVISOR				332	2020-169-BR	COOK	54	20
	DRAWN - DJM	REVISOR				CONTRACT NO. 62M29				
DATE - 12/01/2020	CHECKED - DWP	REVISOR	SHEET NO. 5 OF 30 SHEETS		ILLINOIS FED. AID PROJECT		S.N. 016-0456 (NB)			

Exist. Approach Shoulder Inlet, Frame & Grate to be adjusted, typ., see Sheet 17 of 30



PLAN - SOUTHBOUND

LEGEND:

- Approach Slab Repair (Partial Depth)
- Deck Slab Repair (Partial)
- Deck Slab Repair (Full Depth)

NOTES:

- 1.) The repair areas shown are estimated based on a field inspection conducted in June 2020. The actual repair areas required shall be verified according to the Special Provisions.
- 2.) See Special Provision "Bridge Deck Latex Concrete Overlay" for method of measurement and basis of payment for Deck Slab Repair (Partial).
- 3.) See Sheet 7 of 30 for Bill of Material.



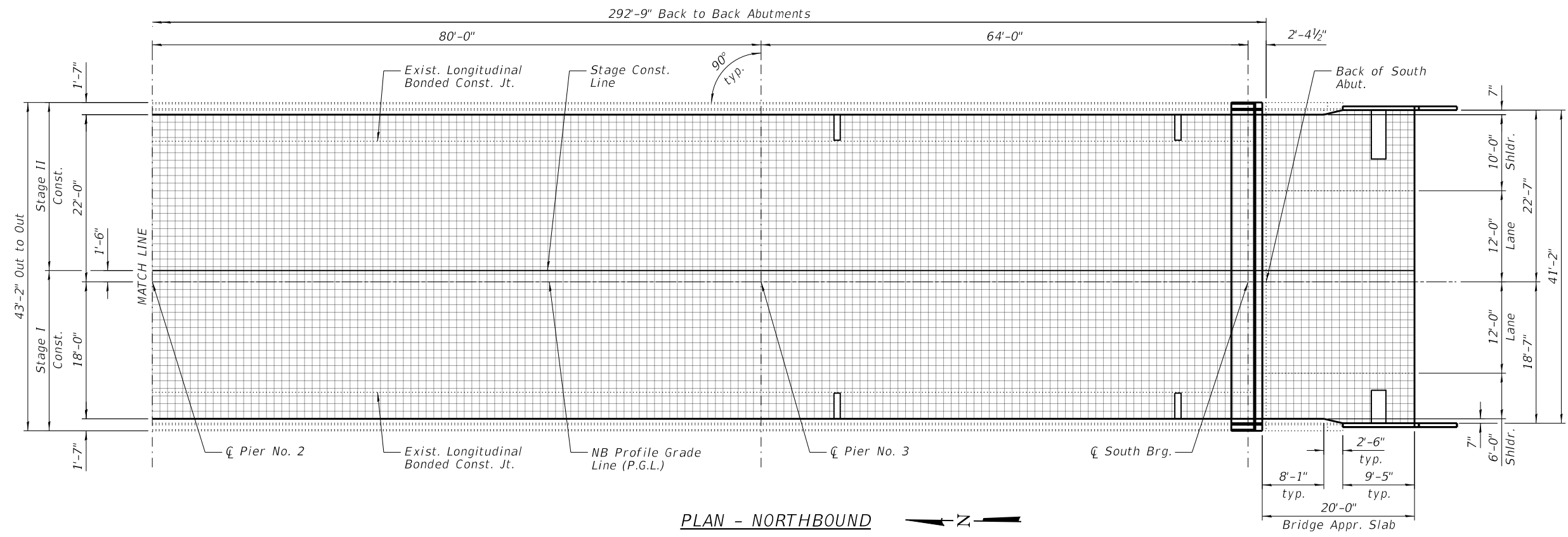
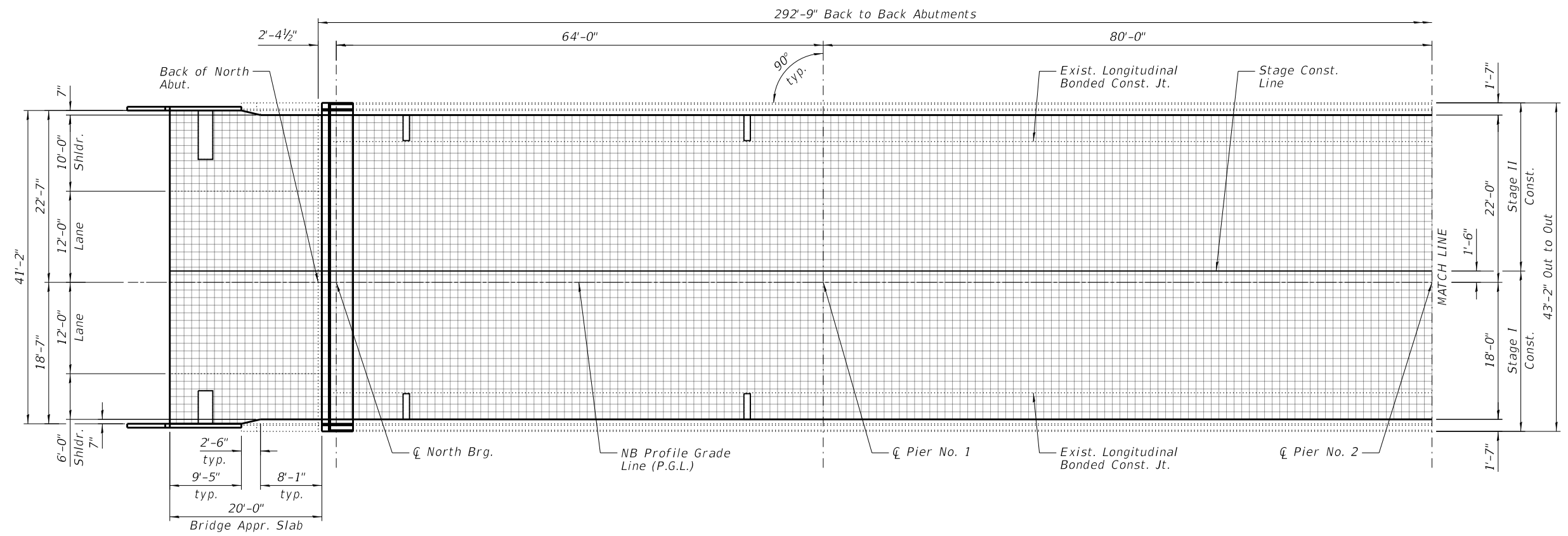
DESIGNED - DAH	REVISED
CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
CHECKED - DWP	REVISED
DATE - 12/01/2020	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK & APPROACH SLAB REPAIRS
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)**

SHEET NO. 6 OF 30 SHEETS

S.N. 016-1041 (SB)		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		332	2020-169-BR	COOK	54	21
CONTRACT NO. 62M29						
ILLINOIS FED. AID PROJECT						



PLAN - NORTHBOUND ← Z →

NOTES:

- 1.) The Engineer will record the as-built deck & approach slab repair areas on this sheet.
- 2.) The reference grid was drawn with 1'x1' squares.



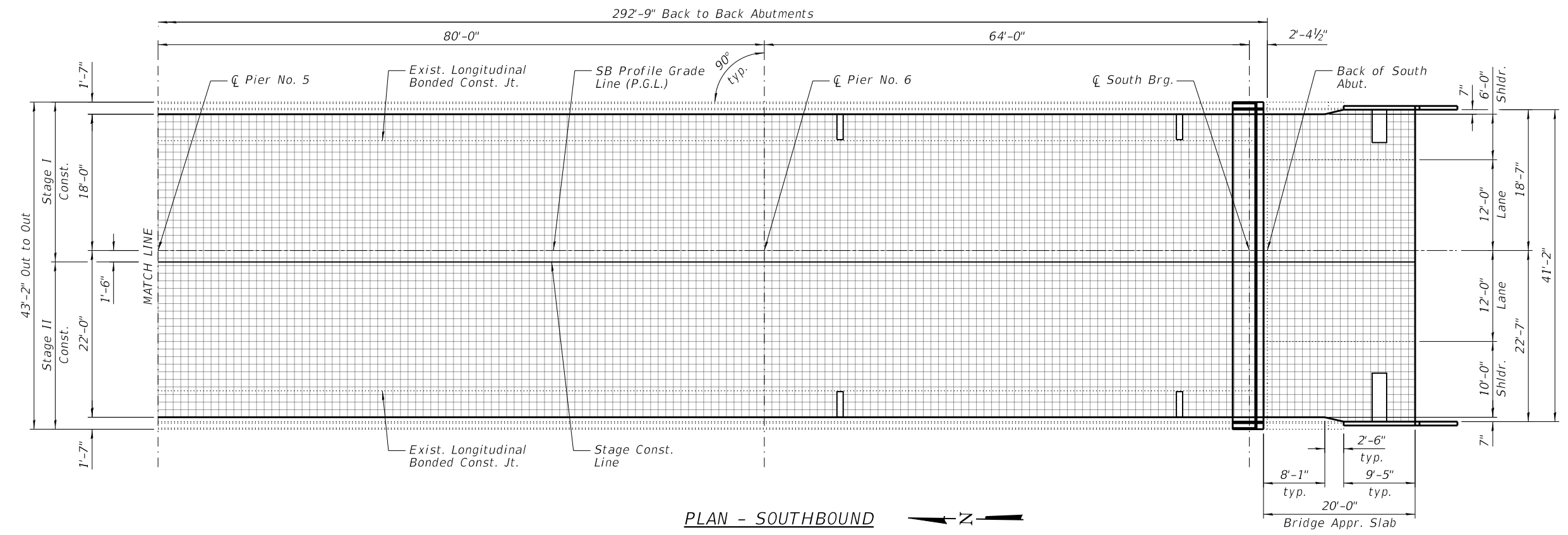
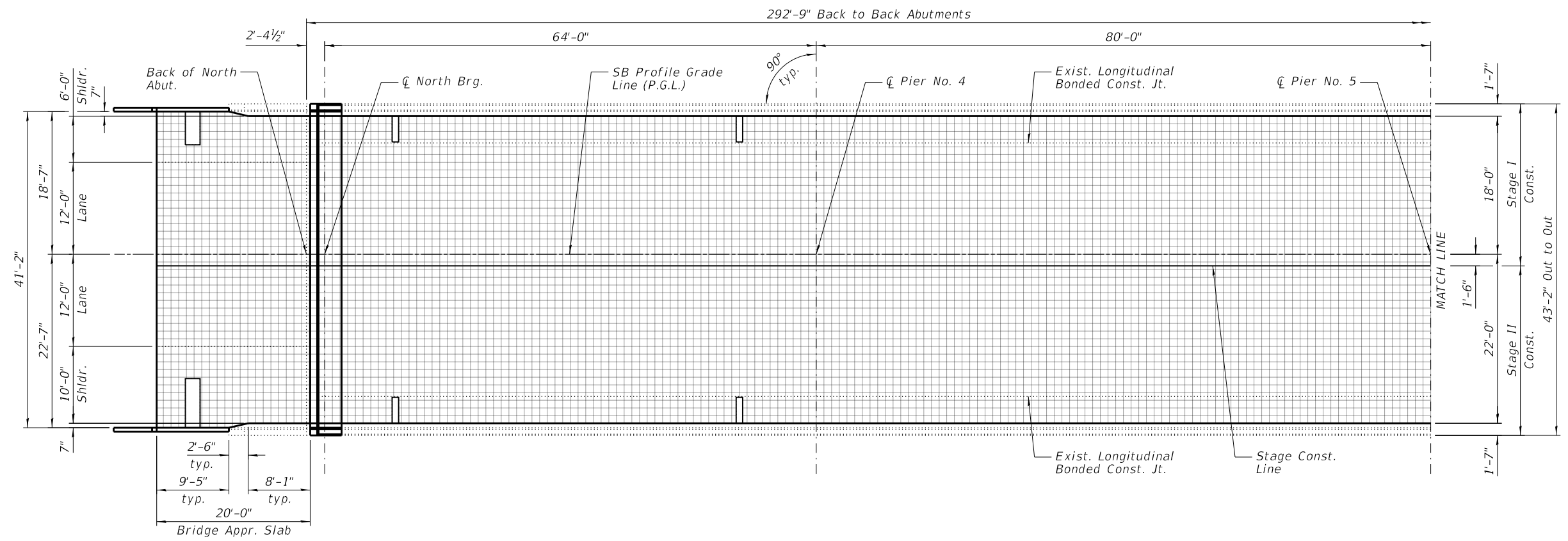
DESIGNED - DAH	REVISED - 12/16/2020 DJM
CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
CHECKED - DWP	REVISED
DATE - 12/01/2020	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK & APPROACH SLAB REPAIRS - AS BUILT
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)

SHEET NO. 8 OF 30 SHEETS

S.N. 016-0456 (NB)		TOTAL SHEETS	SHEET NO.
F.A.P. RTE.	SECTION	COUNTY	
332	2020-169-BR	COOK	54 23
CONTRACT NO. 62M29			
ILLINOIS FED. AID PROJECT			



PLAN - SOUTHBOUND ← Z →

NOTES:

- 1.) The Engineer will record the as-built deck & approach slab repair areas on this sheet.
- 2.) The reference grid was drawn with 1'x1' squares.

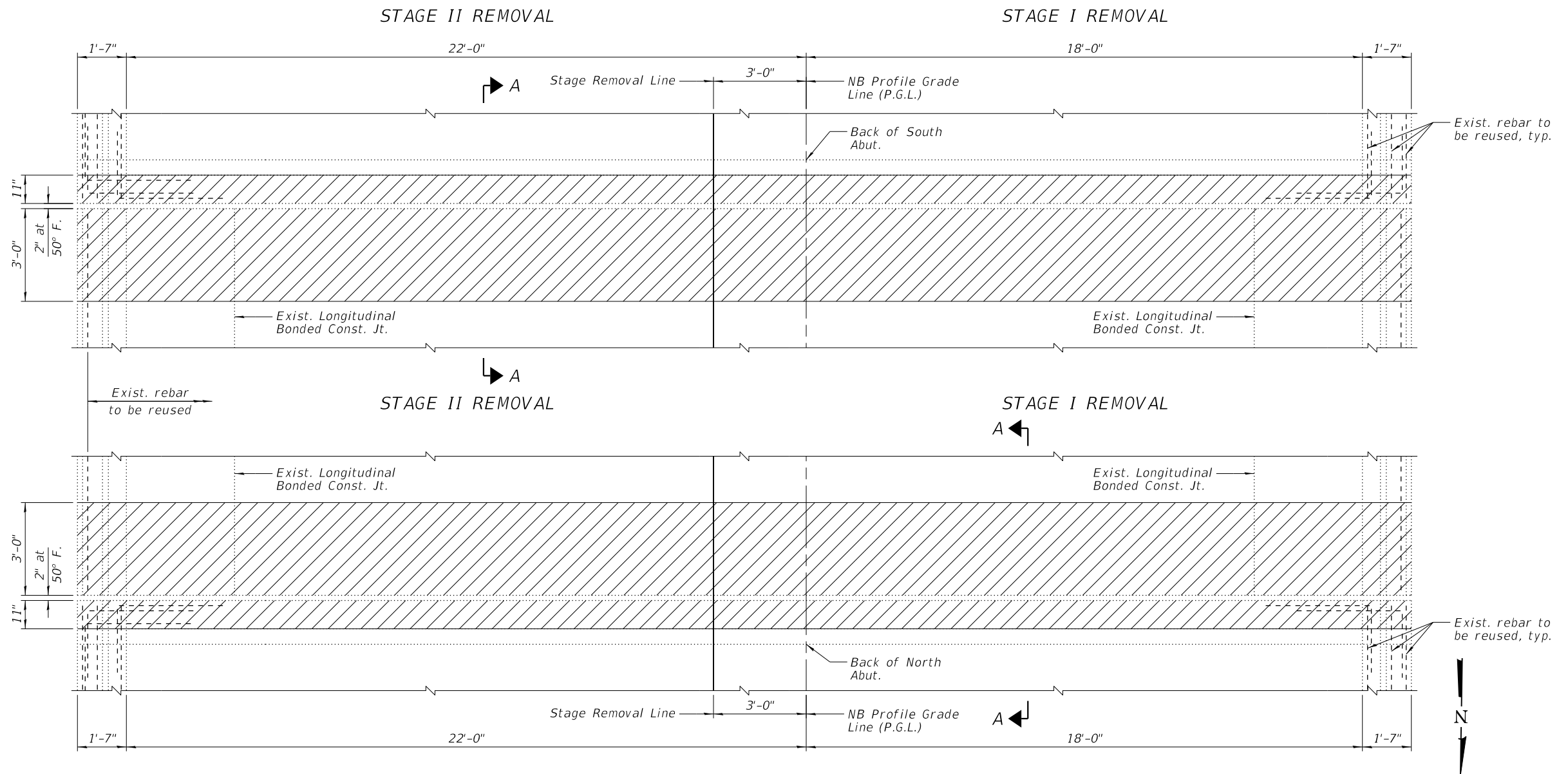


DESIGNED - DAH	REVISED - 12/16/2020 DJM
CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
CHECKED - DWP	REVISED

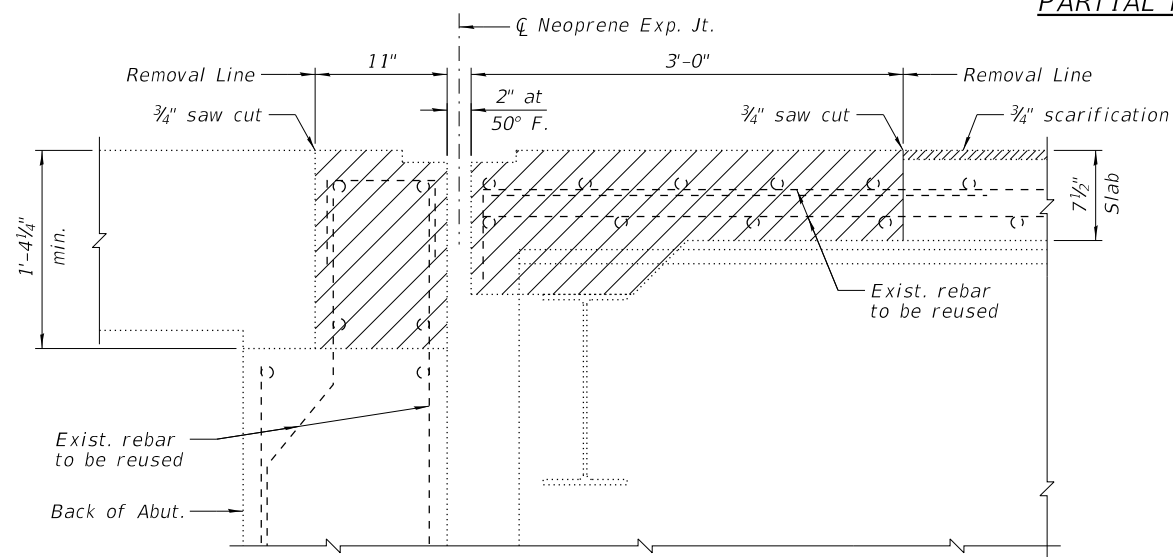
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK & APPROACH SLAB REPAIRS - AS BUILT
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)

S.N. 016-1041 (SB)		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		332	2020-169-BR	COOK	54	24
CONTRACT NO. 62M29						



PARTIAL PLAN SHOWING CONCRETE REMOVAL - NORTHBOUND



SECTION A-A

LEGEND

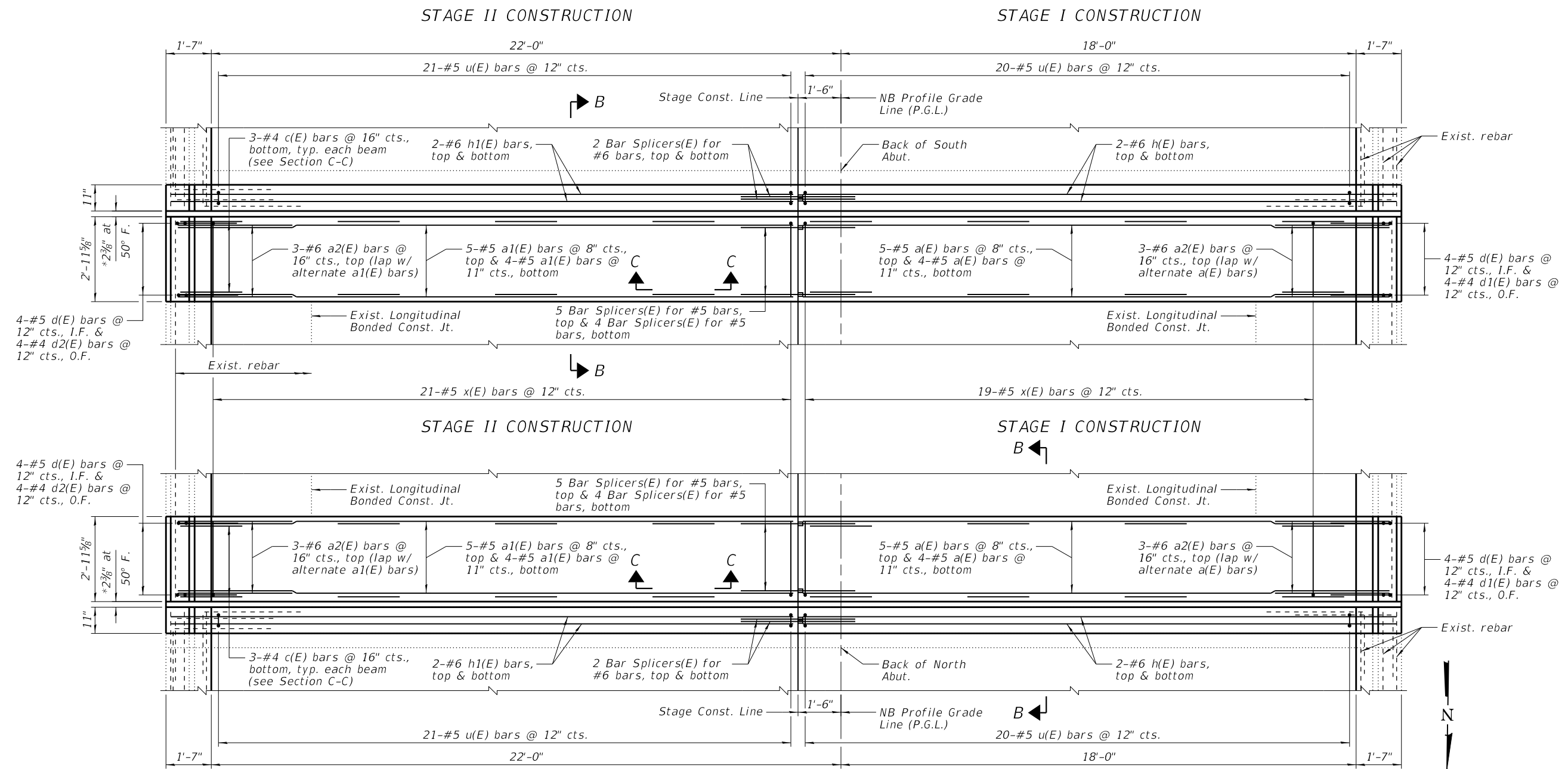


NOTES:

- 1.) Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal".
- 2.) Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".
- 3.) See Sheet 14 of 30 for Bill of Material.

DESIGNED - DAH	REVISD - 12/16/2020 DJM
CHECKED - JCZ	REVISD
DRAWN - DJM	REVISD
DATE - 12/01/2020	CHECKED - DWP
	REVISD

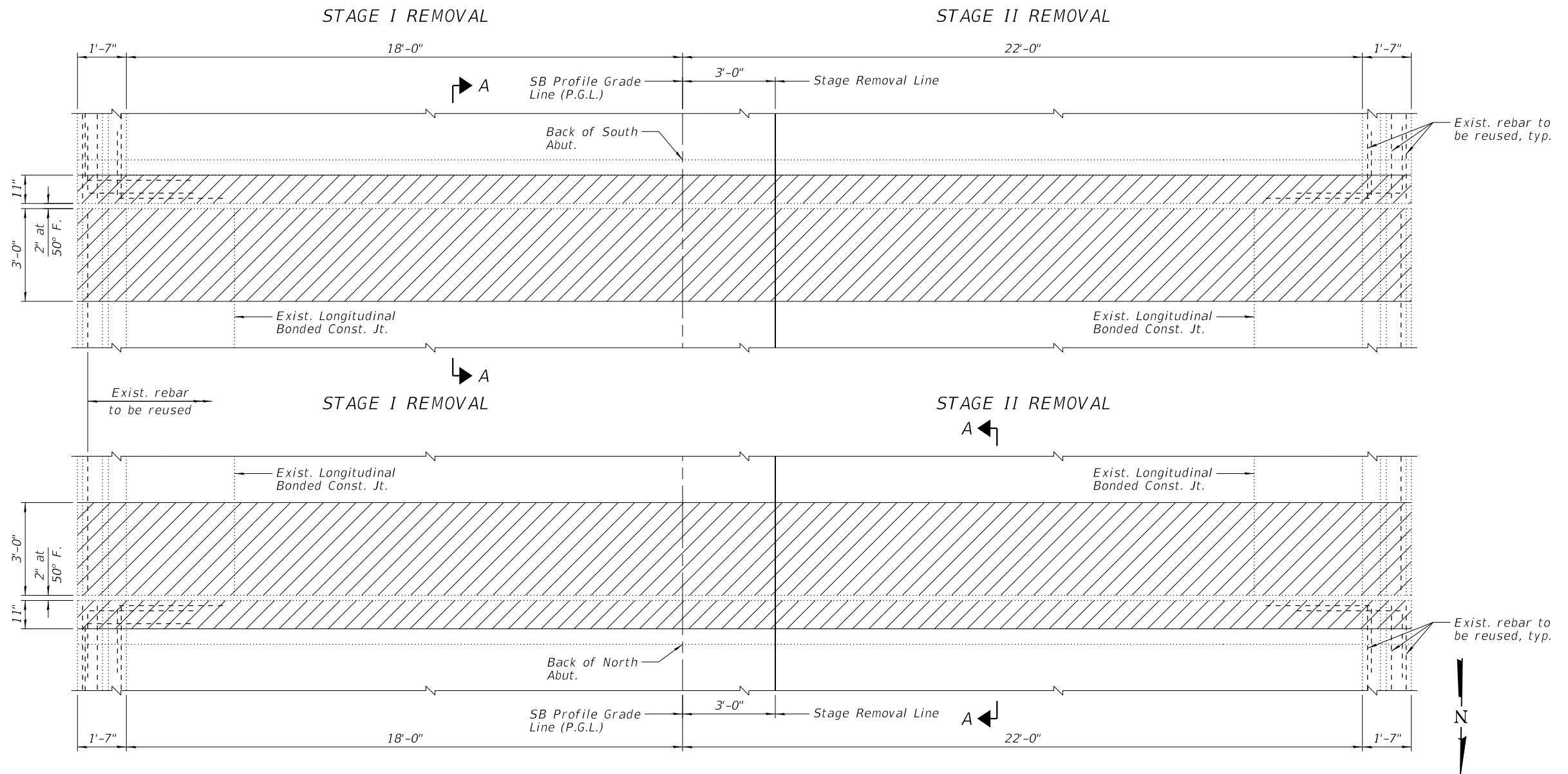
S.N. 016-0456 (NB)		TOTAL SHEETS	SHEET NO.
F.A.P. RTE.	SECTION	COUNTY	54 25
332	2020-169-BR	COOK	
CONTRACT NO. 62M29			
ILLINOIS FED. AID PROJECT			



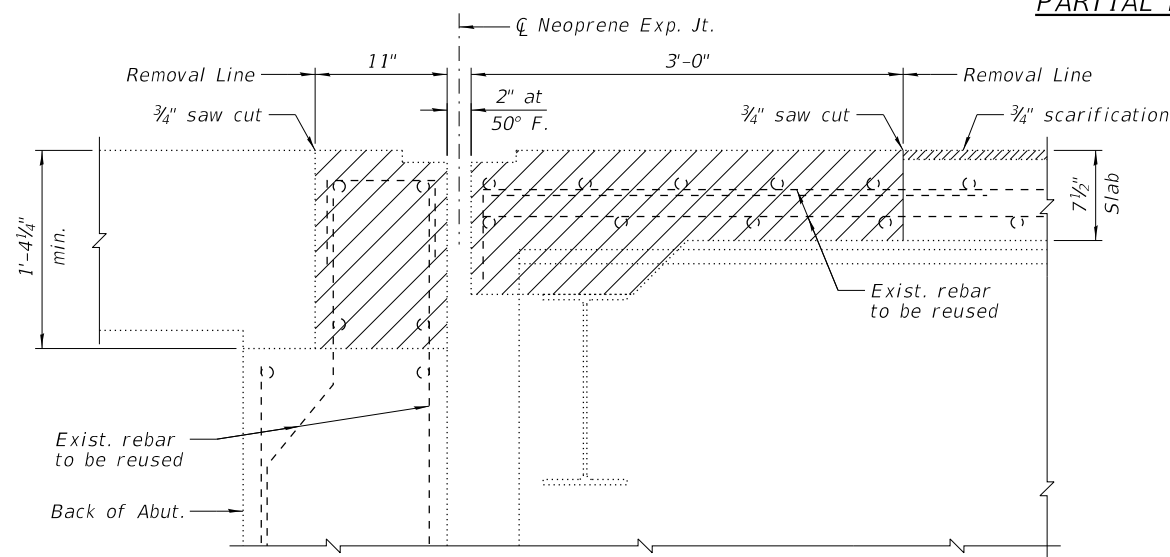
PARTIAL PLAN SHOWING CONCRETE REPLACEMENT - NORTHBOUND

- NOTES:**
- 1.) *Dimension showing concrete opening. For joint opening, see Sheet 15 of 30.
 - 2.) See Sheet 14 of 30 for Bill of Material, Section B-B, Section C-C, and details.
 - 3.) See Sheet 30 of 30 for Bar Splicer details.
 - 4.) I.F. denotes Inside Face & O.F. denotes Outside Face.

S.N. 016-0456 (NB)



PARTIAL PLAN SHOWING CONCRETE REMOVAL - SOUTHBOUND



SECTION A-A

LEGEND

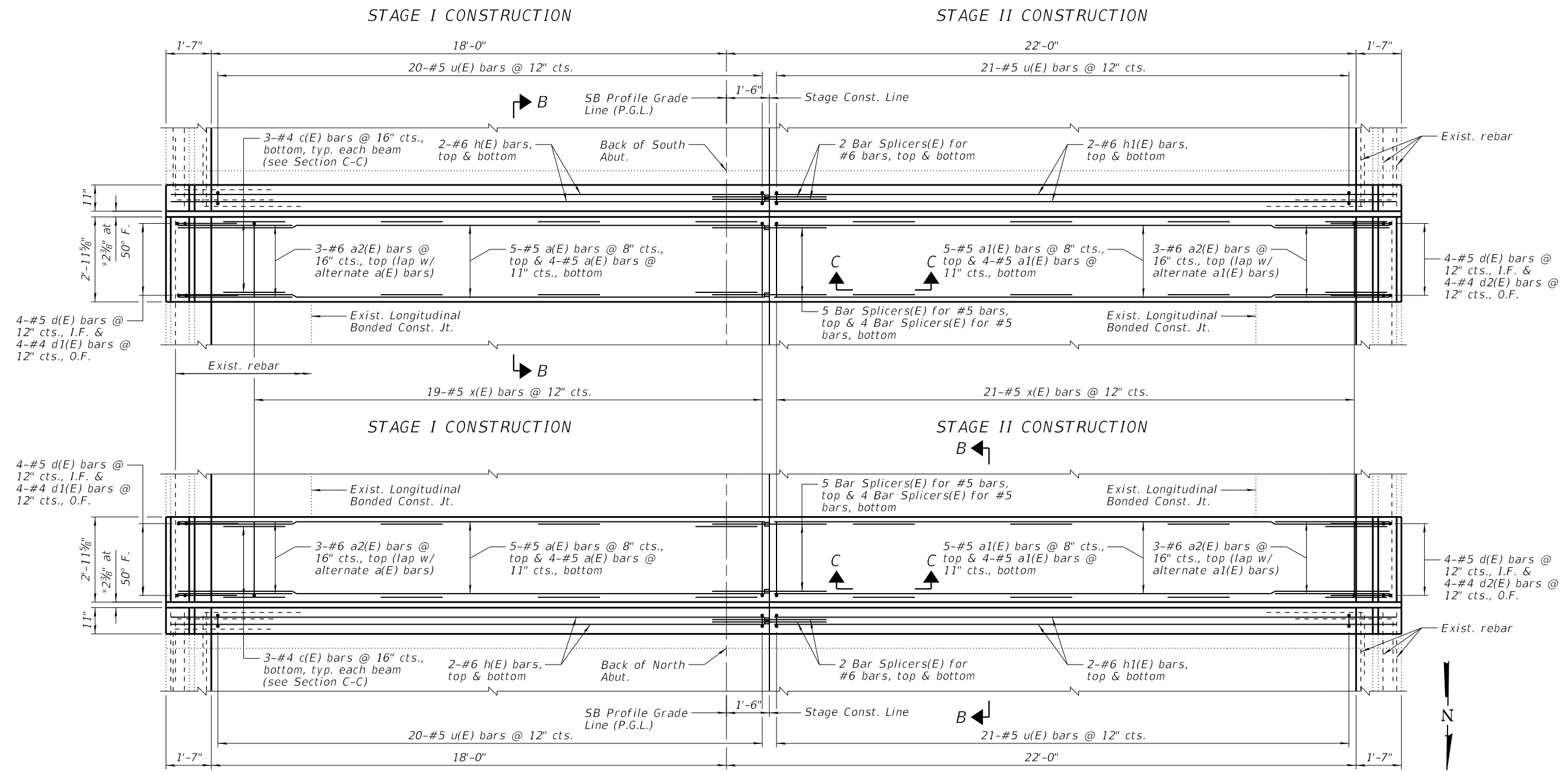
Concrete Removal

NOTES:

- 1.) Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal".
- 2.) Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".
- 3.) See Sheet 14 of 30 for Bill of Material.

DESIGNED - DAH	REVISOR - 12/16/2020 DJM
CHECKED - JCZ	REVISOR
DRAWN - DJM	REVISOR
DATE - 12/01/2020	CHECKED - DWP
	REVISOR

S.N. 016-1041 (SB)		TOTAL SHEETS	SHEET NO.
F.A.P. RTE.	SECTION	COUNTY	54
332	2020-169-BR	COOK	27
CONTRACT NO. 62M29			
ILLINOIS FED. AID PROJECT			



PARTIAL PLAN SHOWING CONCRETE REPLACEMENT - SOUTHBOUND

- NOTES:**
- 1.) *Dimension showing concrete opening. For joint opening, see Sheet 15 of 30.
 - 2.) See Sheet 14 of 30 for Bill of Material, Section B-B, Section C-C, and details.
 - 3.) See Sheet 30 of 30 for Bar Splicer details.
 - 4.) I.F. denotes Inside Face & O.F. denotes Outside Face.



DESIGNED - DAH	REVISED - 12/16/2020 DJM
CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
CHECKED - DWP	REVISED
DATE - 12/01/2020	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

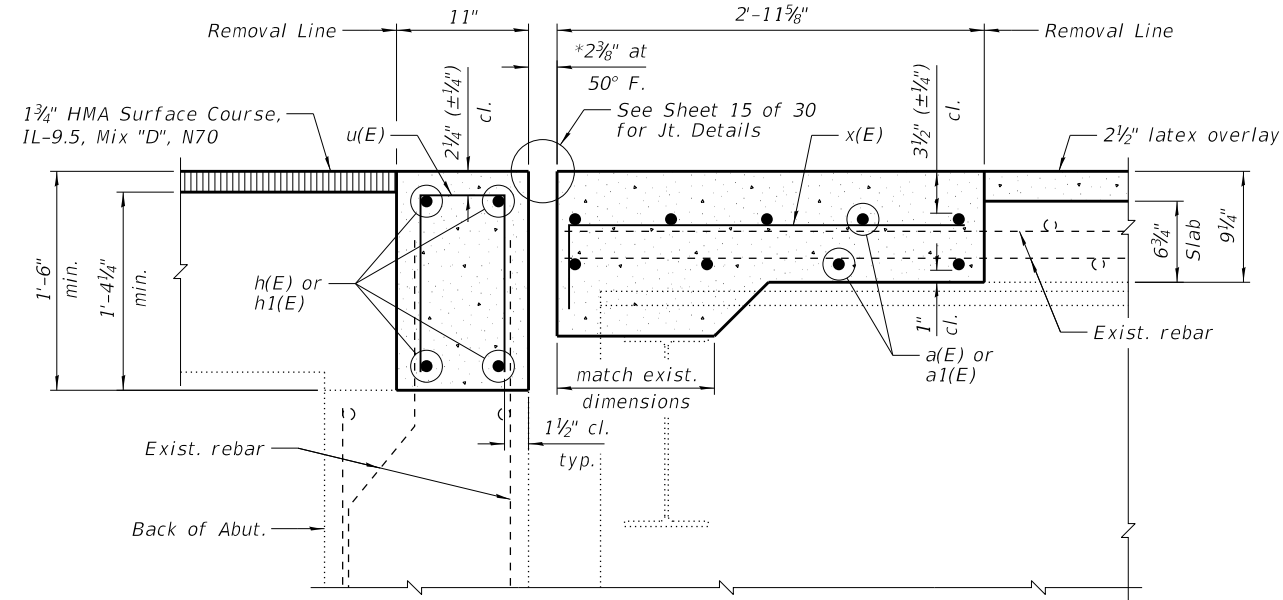
JOINT REPLACEMENT DETAILS
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)

SHEET NO. 13 OF 30 SHEETS

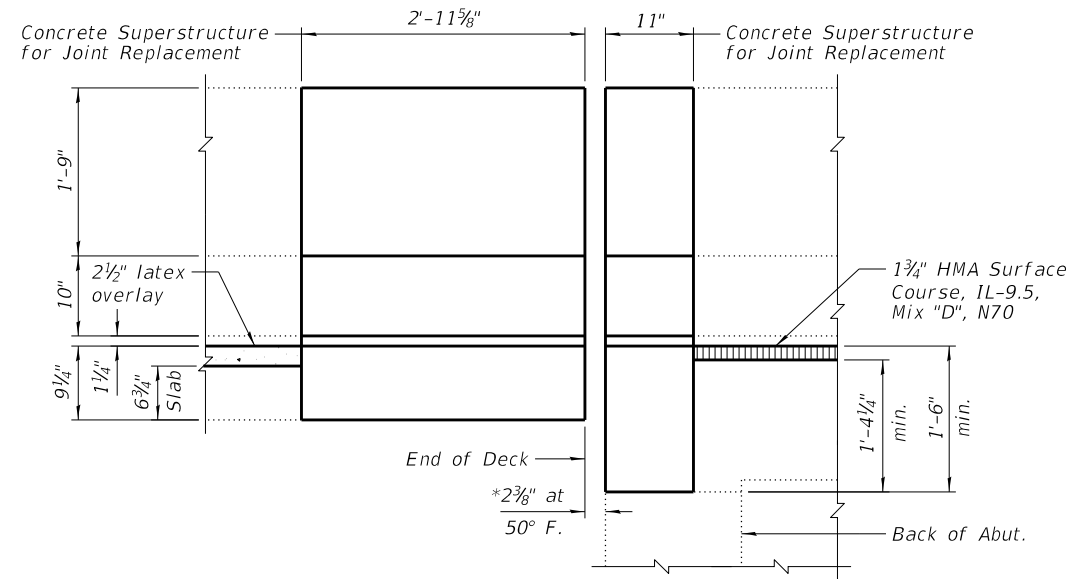
S.N. 016-1041 (SB)		TOTAL SHEETS	SHEET NO.
F.A.P. RTE. 332	SECTION 2020-169-BR	COUNTY COOK	54 28
CONTRACT NO. 62M29			
ILLINOIS FED. AID PROJECT			

**FOUR JOINT REPLACEMENTS
BILL OF MATERIAL**

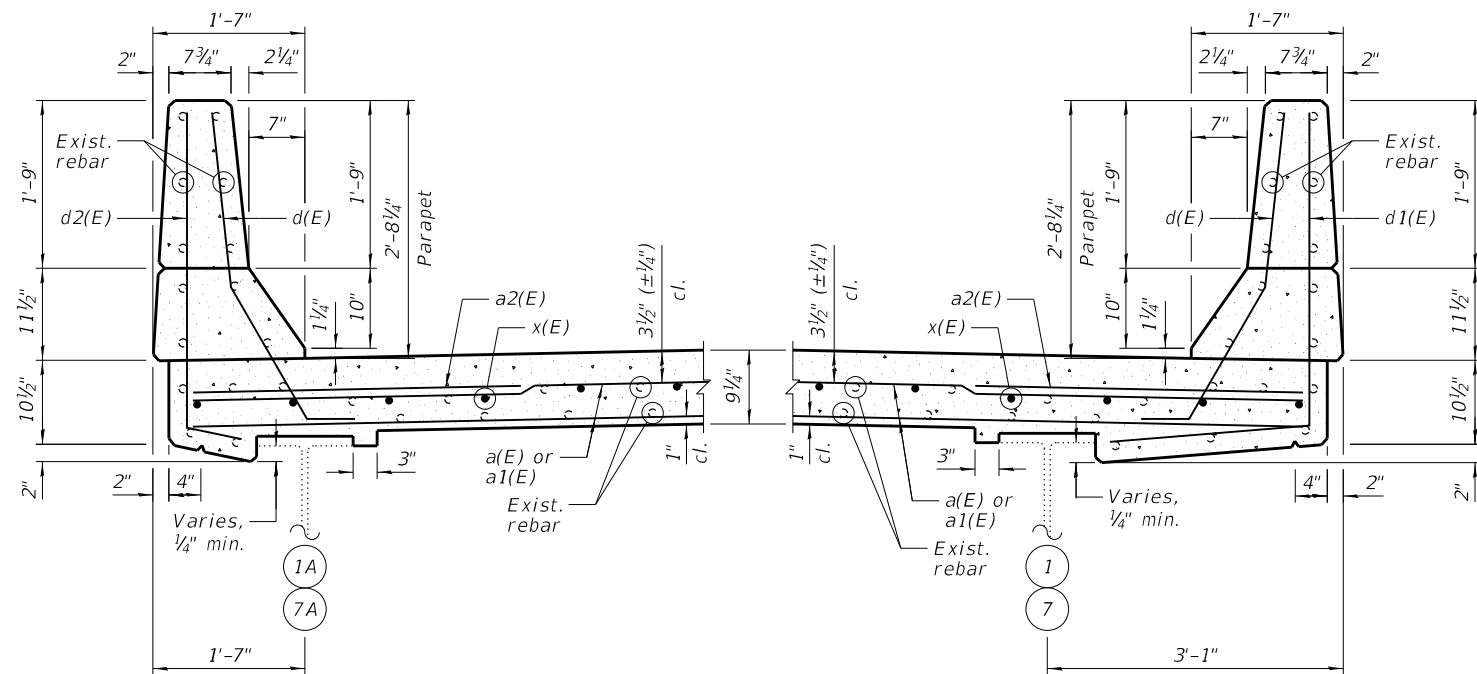
Bar	No.	Size	Length	Shape
a(E)	36	#5	20'-7"	—
a1(E)	36	#5	21'-7"	—
a2(E)	24	#6	4'-0"	—
c(E)	96	#4	3'-4"	⌒
d(E)	32	#5	3'-11"	⌒
d1(E)	16	#4	5'-4"	⌒
d2(E)	16	#4	3'-10"	⌒
h(E)	16	#6	20'-9"	—
h1(E)	16	#6	21'-9"	—
u(E)	164	#5	2'-11"	⊓
x(E)	160	#5	3'-4"	⌒
Item		Unit	Quantity	
Concrete Removal		Cu. Yd.	21.4	
Concrete Superstructure		Cu. Yd.	24.8	
Bridge Deck Grooving		Sq. Yd.	48	
Protective Coat		Sq. Yd.	82	
Reinforcement Bars, Epoxy Coated		Pound	4,250	



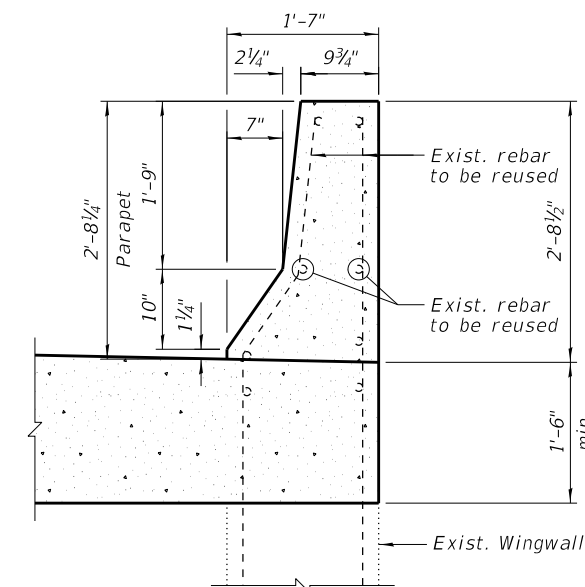
SECTION B-B



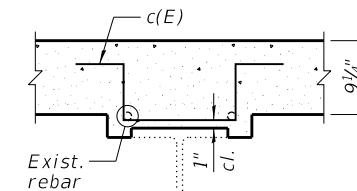
INSIDE FACE OF PARAPET ELEVATION



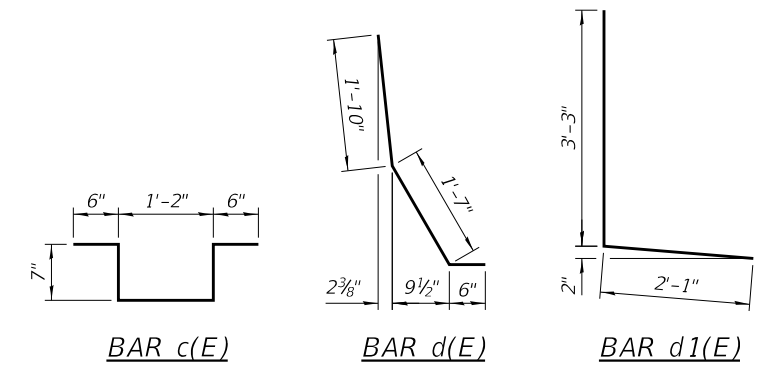
SECTIONS THRU PARAPET AT DECK



SECTION THRU PARAPET AT WINGWALL



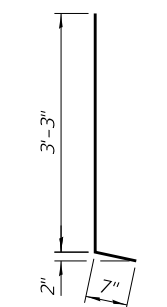
SECTION C-C



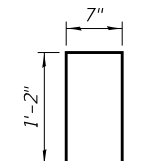
BAR c(E)

BAR d(E)

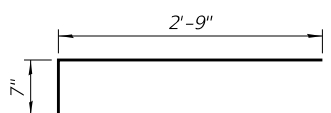
BAR d1(E)



BAR d2(E)



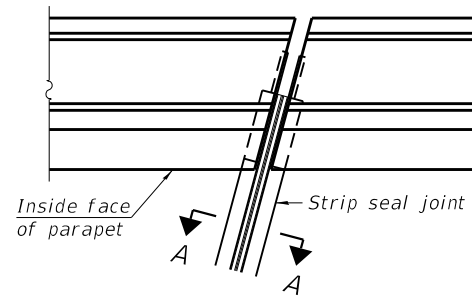
BAR u(E)



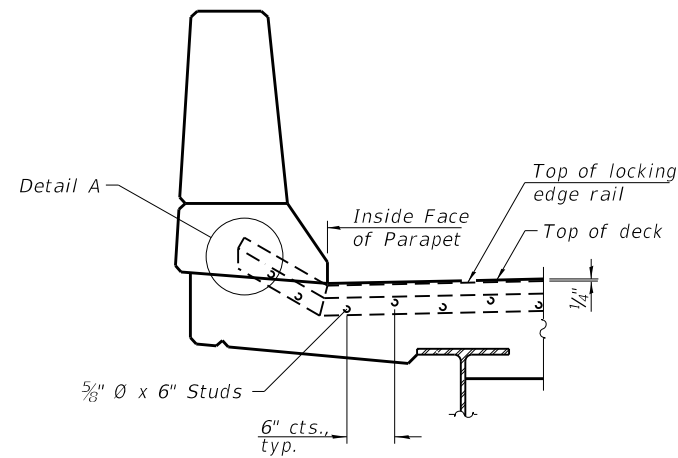
BAR x(E)

NOTES:

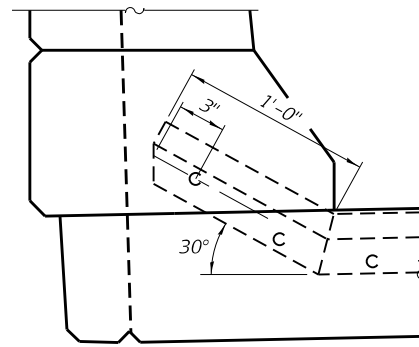
- 1.) *Dimension showing concrete opening. For joint opening, see Sheet 15 of 30.
- 2.) See Sheets 11 and 13 of 30 for location of Section B-B and Section C-C.
- 3.) Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal".
- 4.) Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".



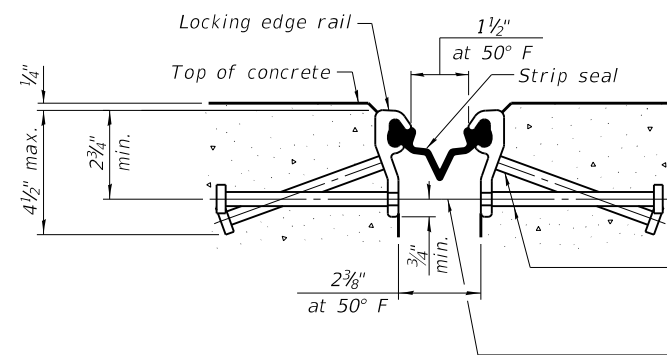
FOR SKEWS $\leq 30^\circ$
PLAN AT PARAPET



ELEVATION AT PARAPET



DETAIL A

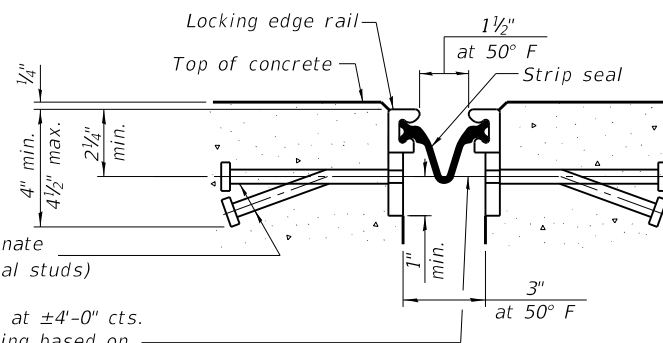


SHOWING ROLLED RAIL JOINT

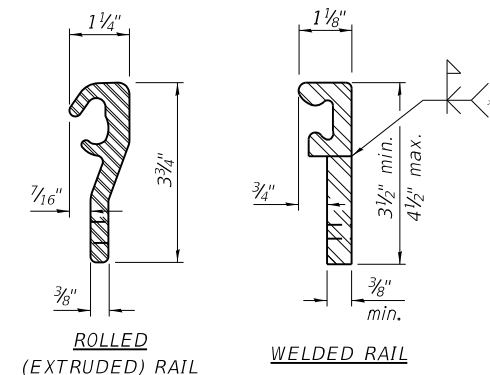
* $\frac{5}{8}$ " \varnothing x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
 $\frac{3}{8}$ " \varnothing threaded rods in $\frac{7}{16}$ " \varnothing holes at $\pm 4'-0"$ cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss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

SECTION A-A

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

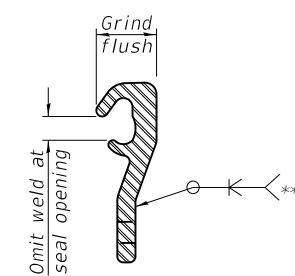


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	168

Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". 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 $4\frac{1}{2}$ " 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 $\frac{3}{16}$ " 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.
 34" F-shape barrier shown, 42" F-shape similar as noted.
 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.

EJ-SS



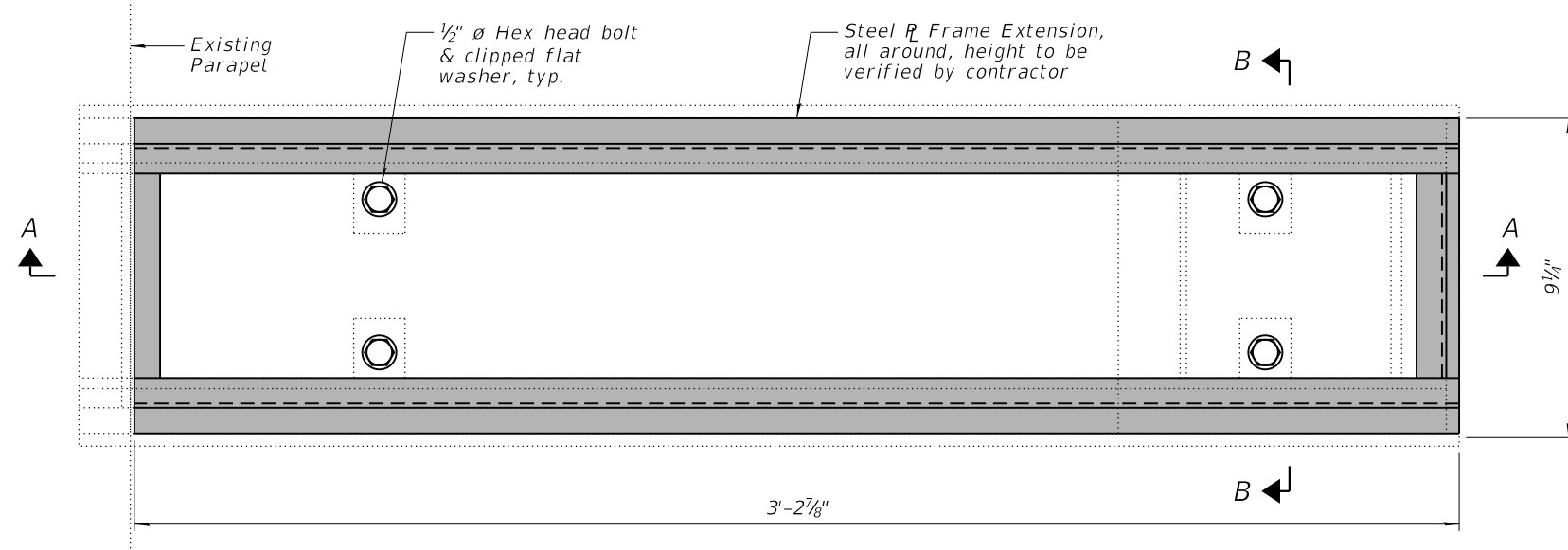
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CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
CHECKED - DWP	REVISED
DATE - 12/01/2020	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

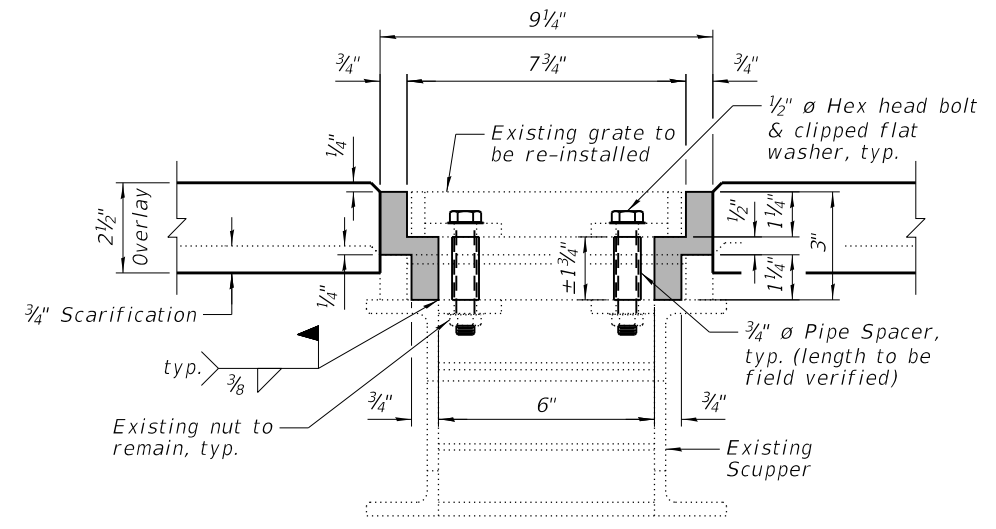
PREFORMED JOINT STRIP SEAL
 STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)

SHEET NO. 15 OF 30 SHEETS

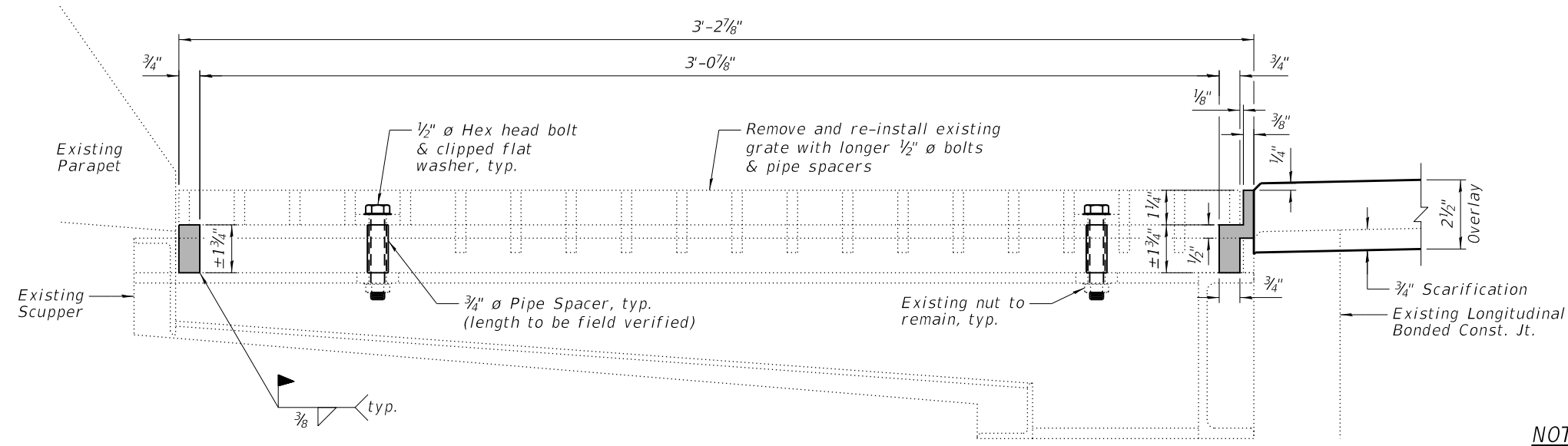
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	30
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				



PLAN
(Existing grate not shown for clarity)



SECTION B-B



SECTION A-A

BILL OF MATERIAL

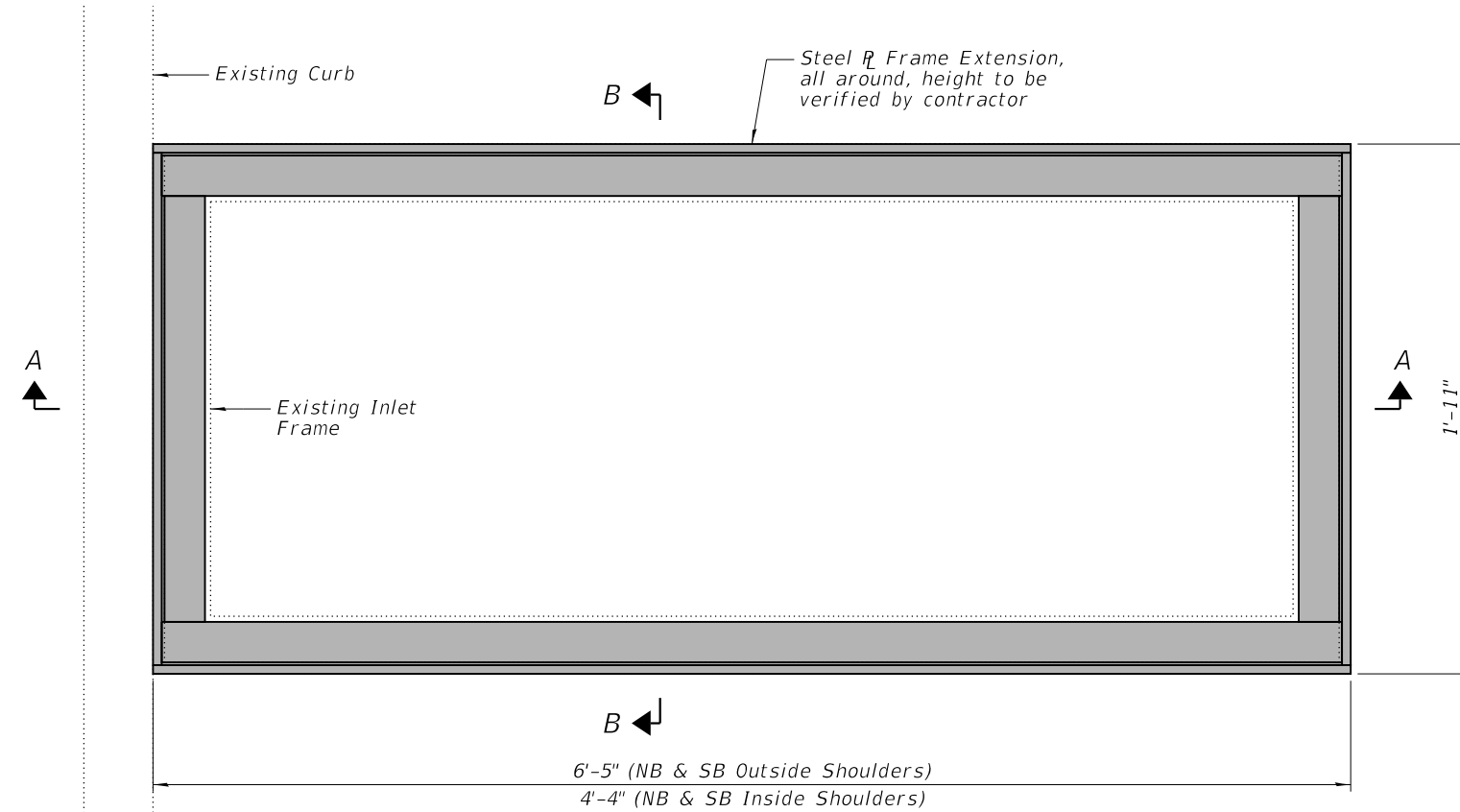
Item	Unit	Total
Cleaning Existing Inlets	Each	16
Deck Drains to be Adjusted	Each	16

LEGEND

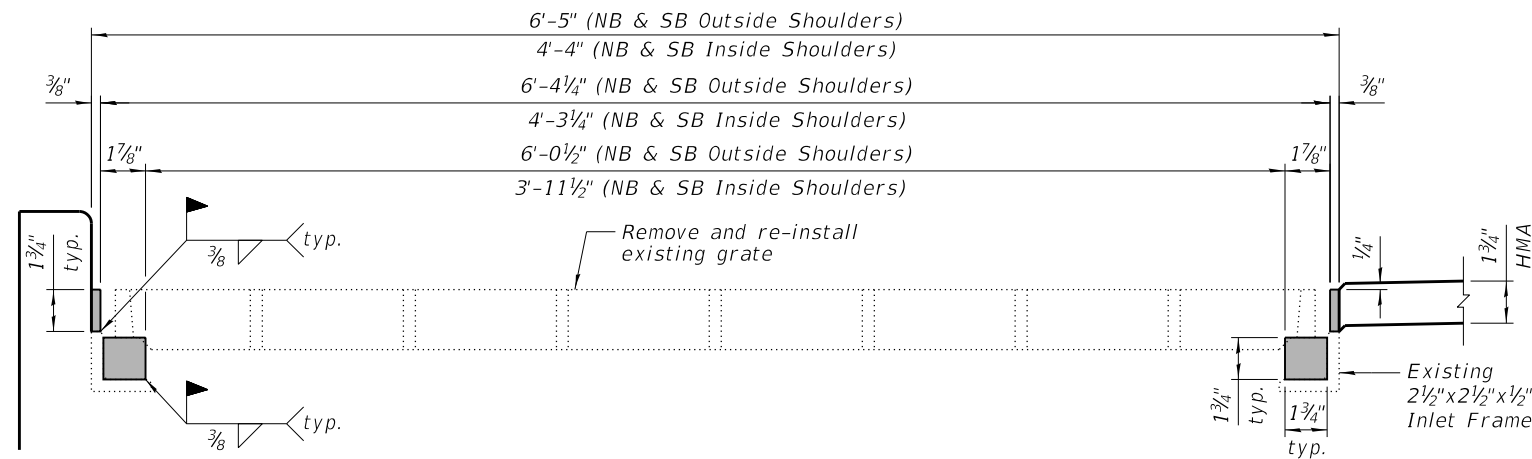
Steel \mathcal{R} Frame Extension

NOTES:

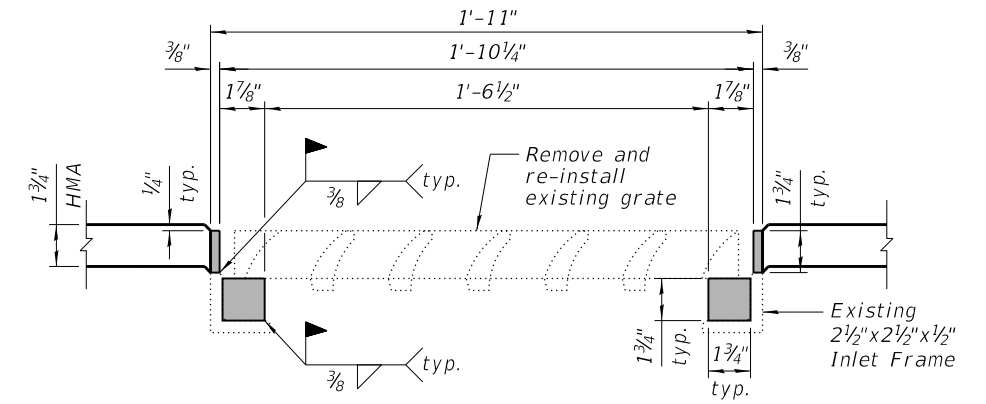
- 1.) All structural steel shall be AASHTO M270 Grade 36. The adjusting scupper ring and $\frac{3}{4}$ " \emptyset pipe sleeve spacers shall be galvanized.
- 2.) Bolts shall be $\frac{1}{2}$ " \emptyset AASHTO M164 Type 1, mechanically galvanized.
- 3.) Shop drawings for proposed Steel \mathcal{R} Frame Extension shall be submitted for approval prior to fabrication.
- 4.) Contractor shall ensure that no damage is done to existing grates to be reused.
- 5.) Cost of all labor and materials necessary to remove existing grates, clean existing scuppers, install Steel \mathcal{R} Frame Extensions and reinstall grates is included in the cost per unit each for Deck Drains to be Adjusted.



PLAN
(Existing grate not shown for clarity)



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Frames and Grates to be Adjusted (special)	Each	8
Cleaning Existing Inlets	Each	8

LEGEND



NOTES:

- 1.) All structural steel shall be AASHTO M270 Grade 36. The adjusting inlet ring shall be galvanized.
- 2.) Shop drawings for proposed Steel R Frame Extension shall be submitted for approval prior to fabrication.
- 3.) Contractor shall ensure that no damage is done to existing grates to be reused.
- 4.) Cost of all labor and materials necessary to remove existing grates, clean existing inlets, install Steel R Frame Extensions and reinstall grates is included in the cost per unit each for Frames and Grates to be Adjusted (special).

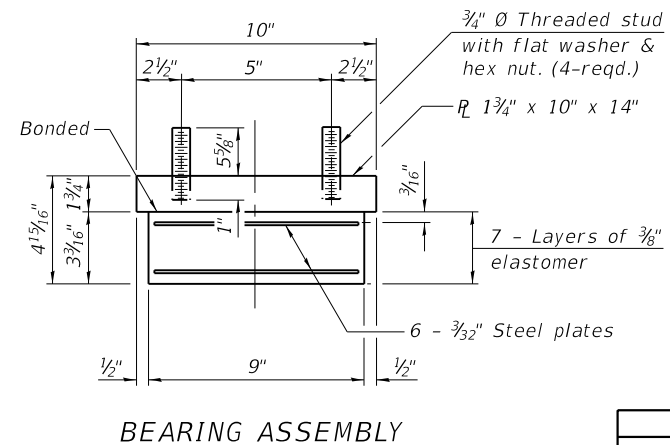
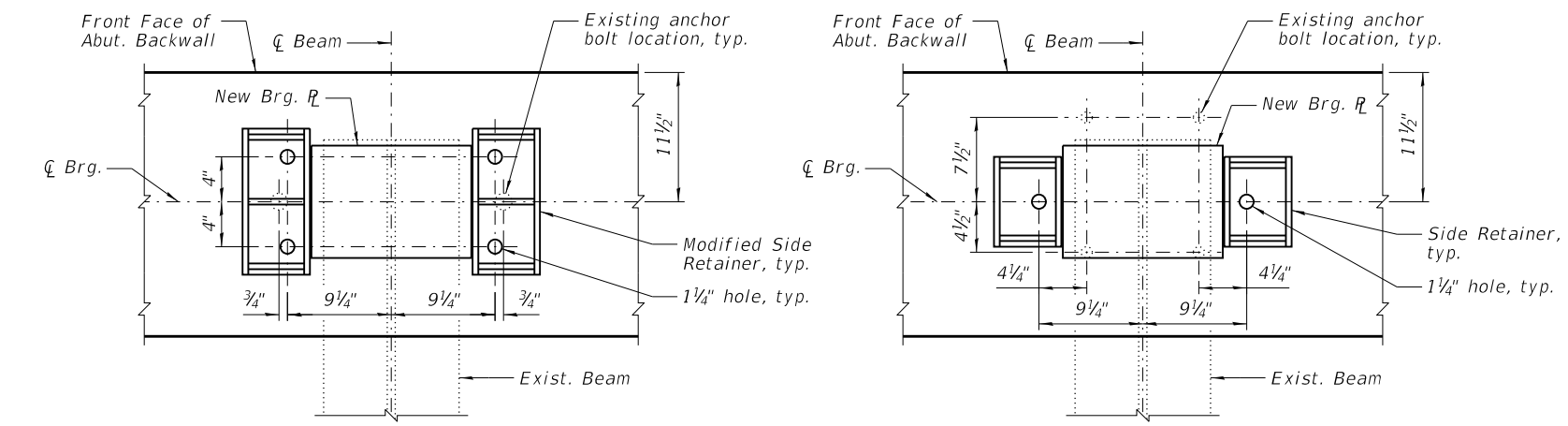
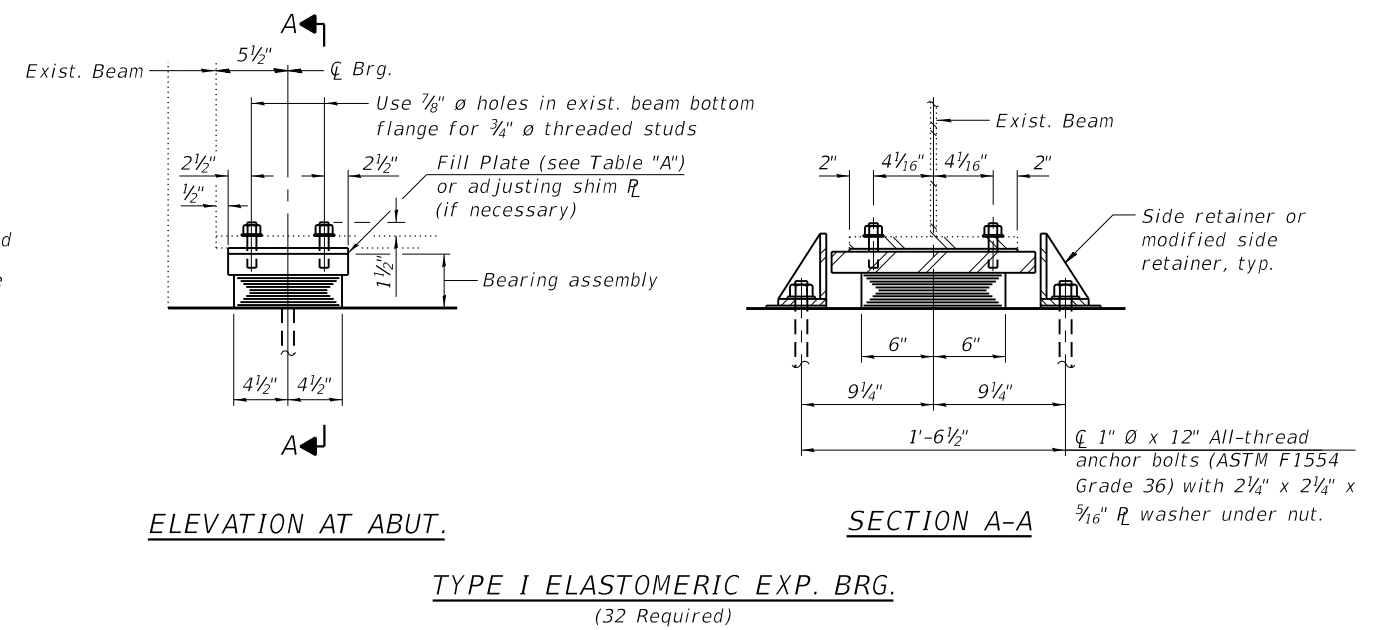
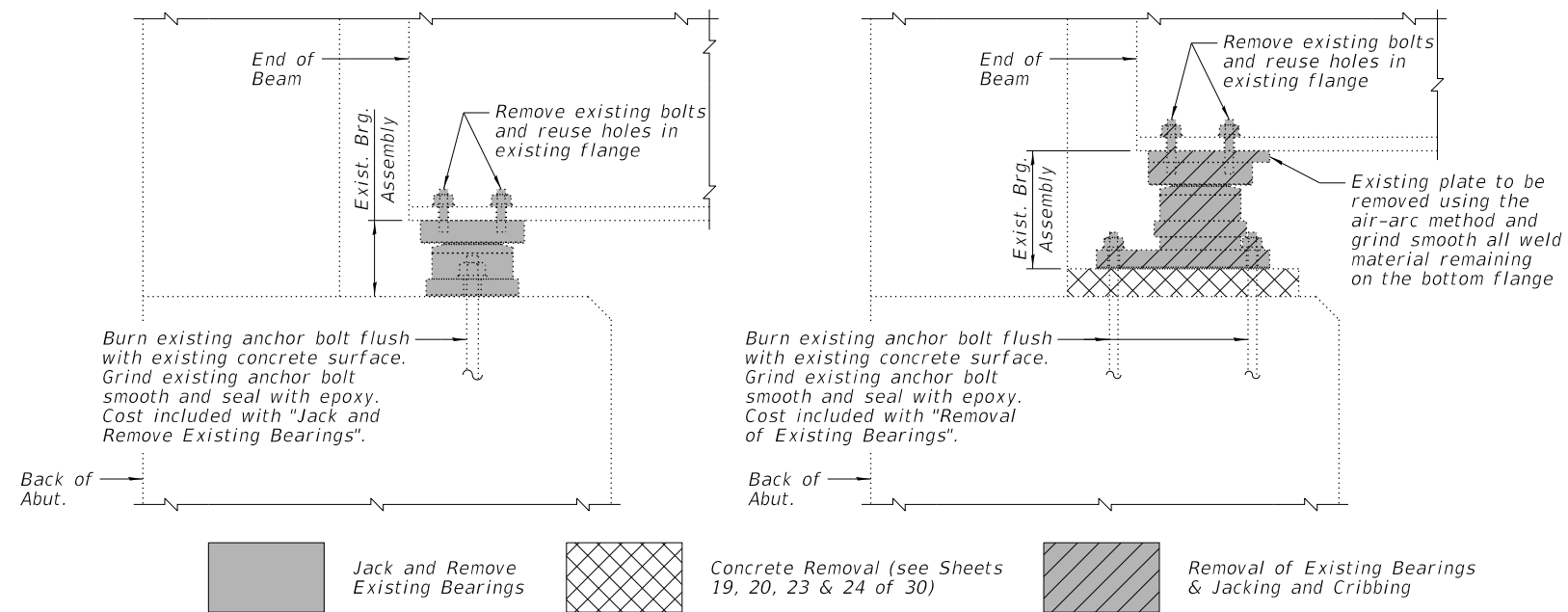
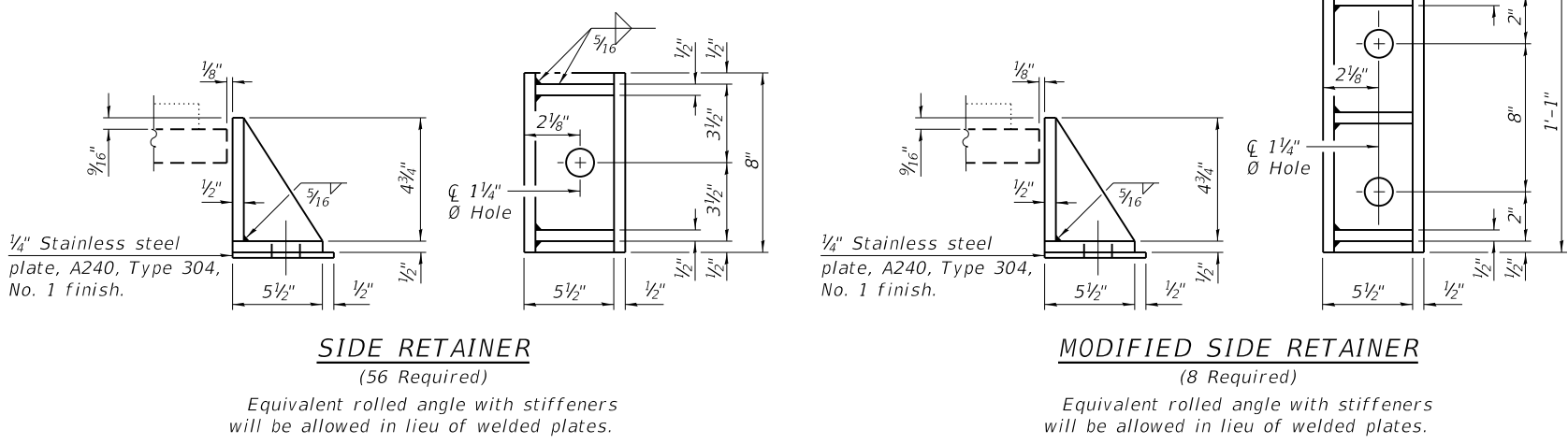


TABLE "A"

Fill Plate Thickness (in.)

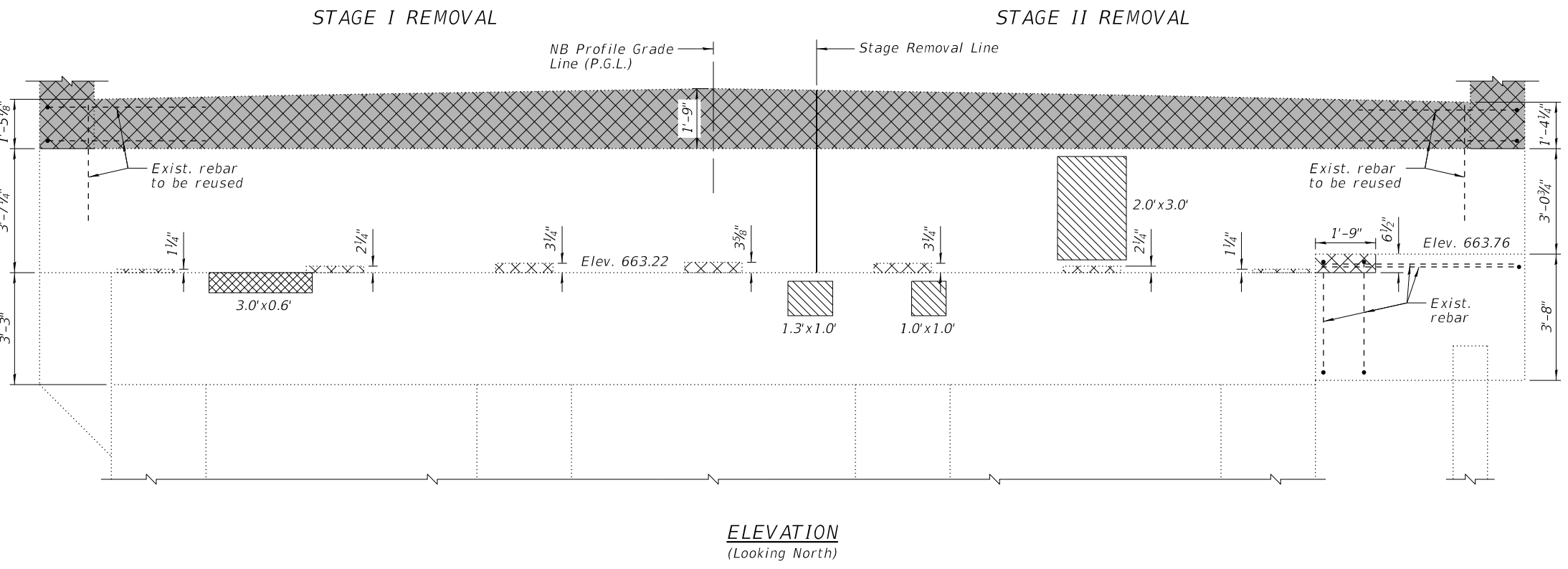
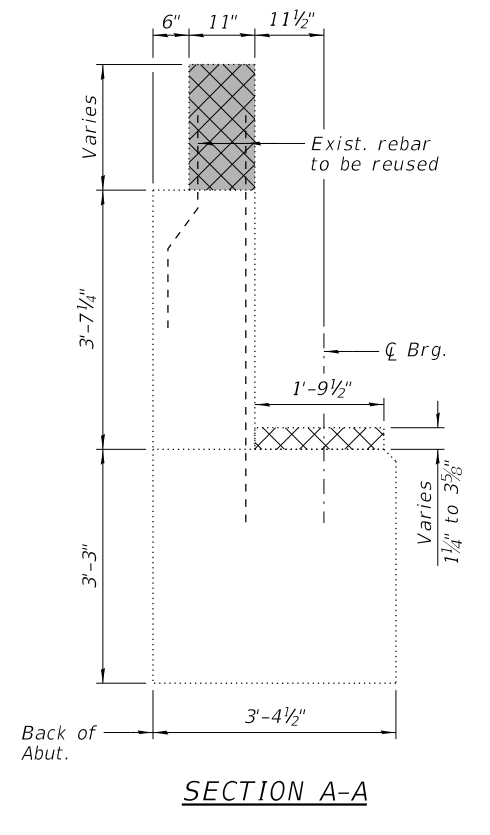
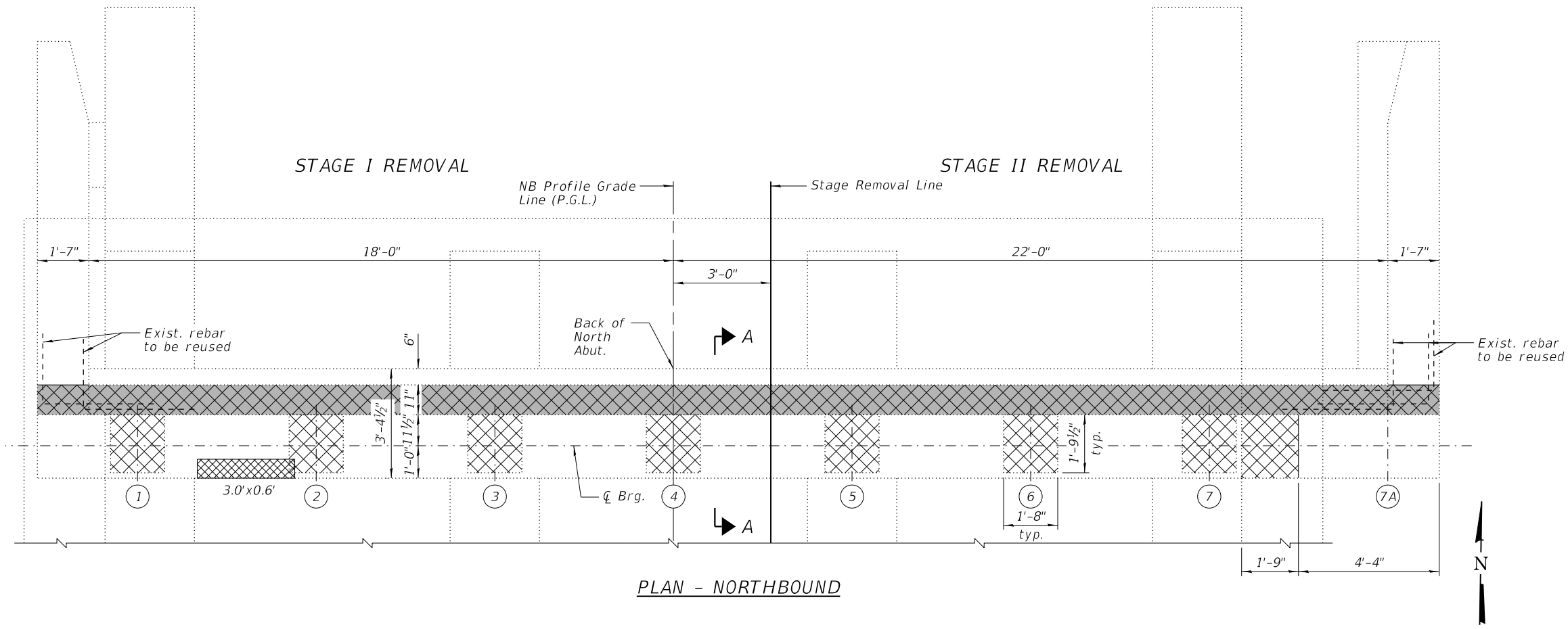
Beam No.	S.N. 016-0456 (NB)		S.N. 016-1041 (SB)	
	North Abut.	South Abut.	North Abut.	South Abut.
1A	N/A	N/A	2 1/8"	2 3/8"
1	--	--	--	--
2	--	--	--	1/8"
3	--	--	--	--
4	--	1/2"	1/4"	3/8"
5	3/4"	1/4"	3/4"	--
6	--	1/8"	--	1/8"
7	--	--	--	1/8"
7A	2 3/8"	2 1/2"	N/A	N/A



INTERIOR BEAM REACTION TABLE

	Abut.
R_{DL} (k)	21.4
R_L (k)	32.6
R_{IMP} (k)	8.5
R_{Total} (k)	62.5

- NOTES:**
- Side retainers and stainless steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.
 - Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.
 - Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions, and existing bolt locations for each bearing.
 - All existing bearings at each abutment shall be removed and replaced with Elastomeric Bearing Assembly, Type I. Bearing replacement shall be completed after the removal of existing concrete at the expansion joint but prior to construction of the new expansion joint.
 - Fill Plates shall be paid for as "Furnishing and Erecting Structural Steel".
 - Minimum jack capacity per beam at each Abutment = 35 tons.
 - The Contractor shall submit, for approval by the Engineer, plans for jacking existing beams and removing the existing bearings prior to commencing any related work. See Special Provisions.



LEGEND

- Concrete Removal
- Concrete Removal for Joint Replacement (see Sheets 10 & 12 of 30)
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- Structural Repair of Concrete (Depth Greater Than 5 Inches)

**NORTHBOUND NORTH ABUTMENT
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	0.2
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	9
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	4

- NOTES:**
- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal".
 - Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".



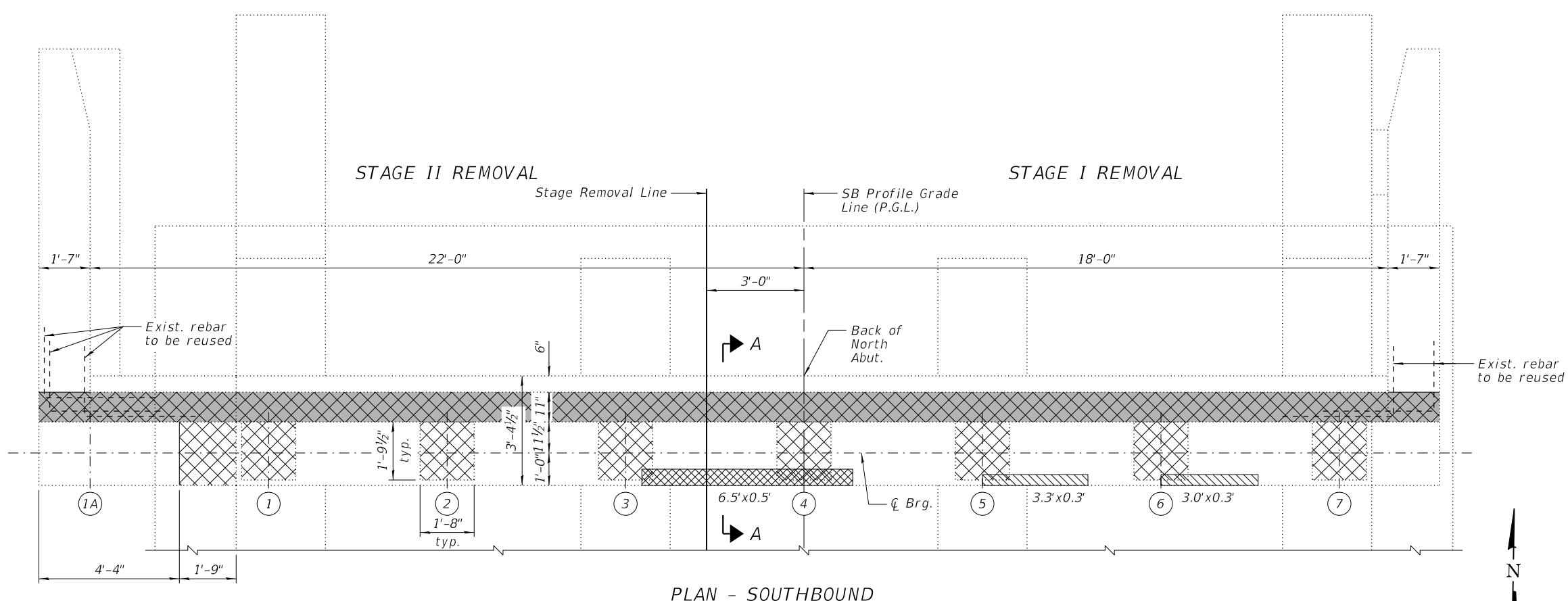
DESIGNED - DAH	REVISOR - 12/16/2020 DJM
CHECKED - JCZ	REVISOR
DRAWN - DJM	REVISOR
CHECKED - DWP	REVISOR
DATE - 12/01/2020	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

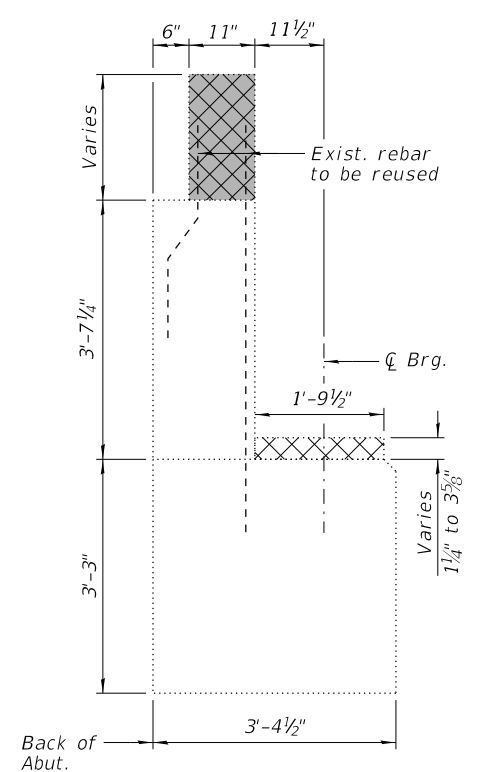
**NORTH ABUTMENT REMOVAL
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)**

SHEET NO. 19 OF 30 SHEETS

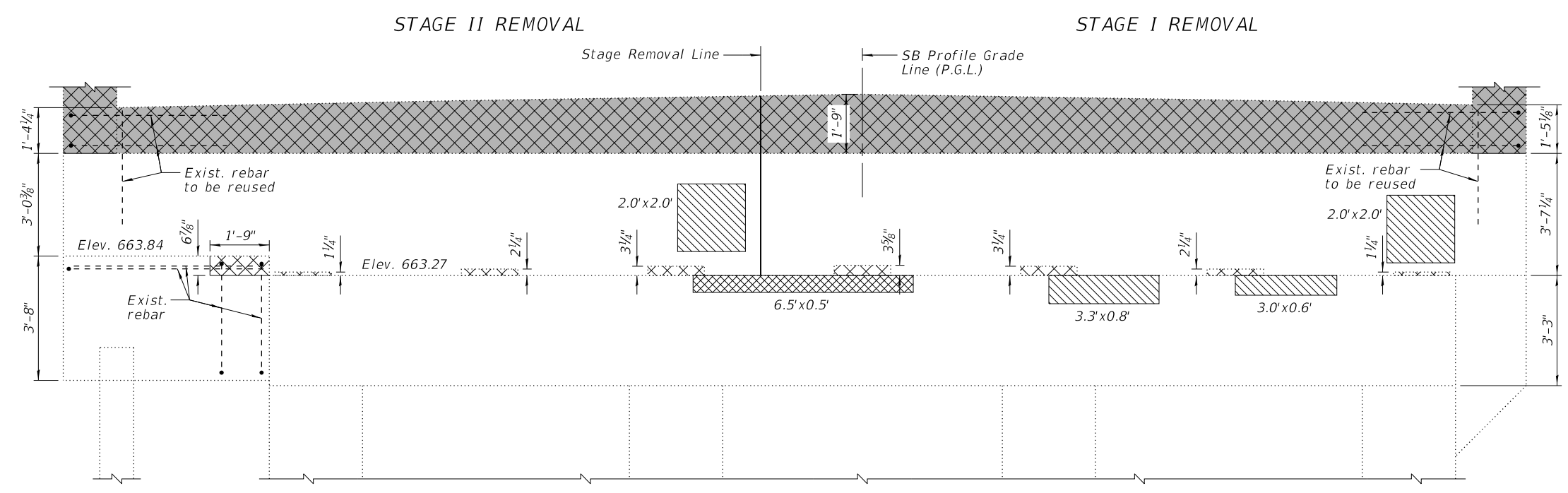
S.N. 016-0456 (NB)		TOTAL SHEETS	SHEET NO.
F.A.P. RTE.	SECTION	COUNTY	
332	2020-169-BR	COOK	54 34
CONTRACT NO. 62M29			
ILLINOIS FED. AID PROJECT			



PLAN - SOUTHBOUND



SECTION A-A



ELEVATION
(Looking North)

LEGEND

- Concrete Removal
- Concrete Removal for Joint Replacement (see Sheets 10 & 12 of 30)
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- Structural Repair of Concrete (Depth Greater Than 5 Inches)

SOUTHBOUND NORTH ABUTMENT
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	0.2
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	15
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	7

NOTES:

- 1.) Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal".
- 2.) Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".



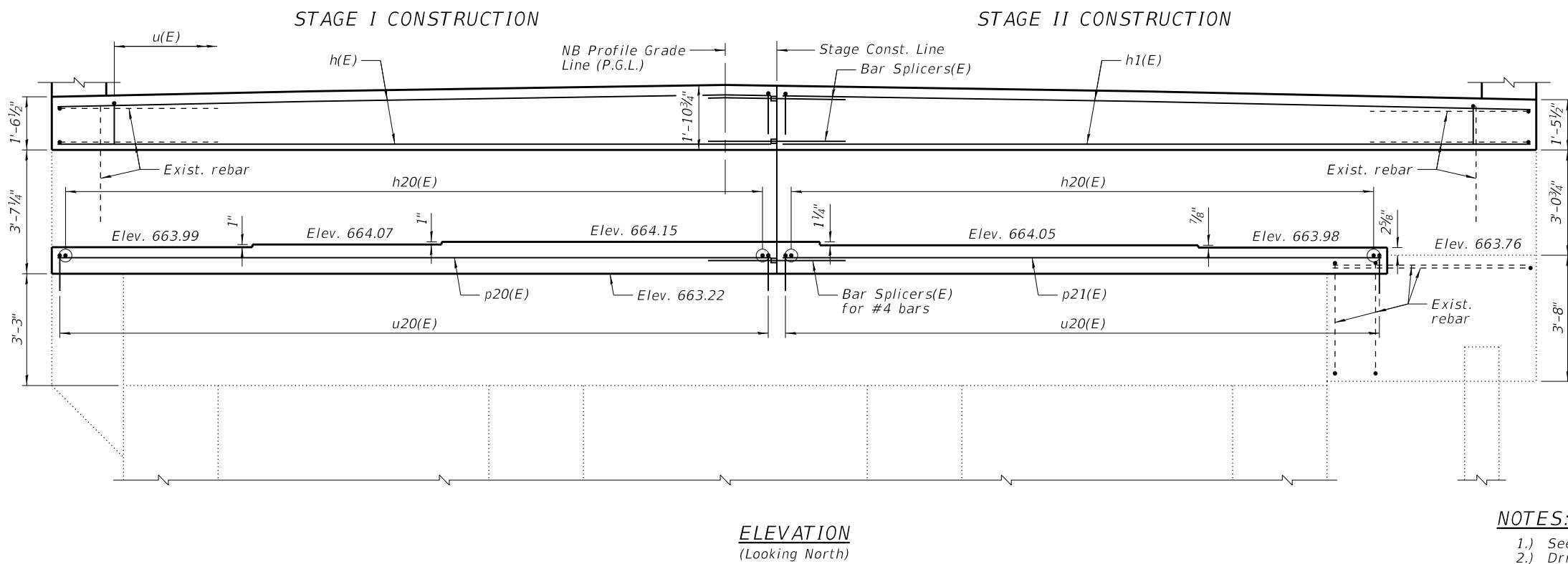
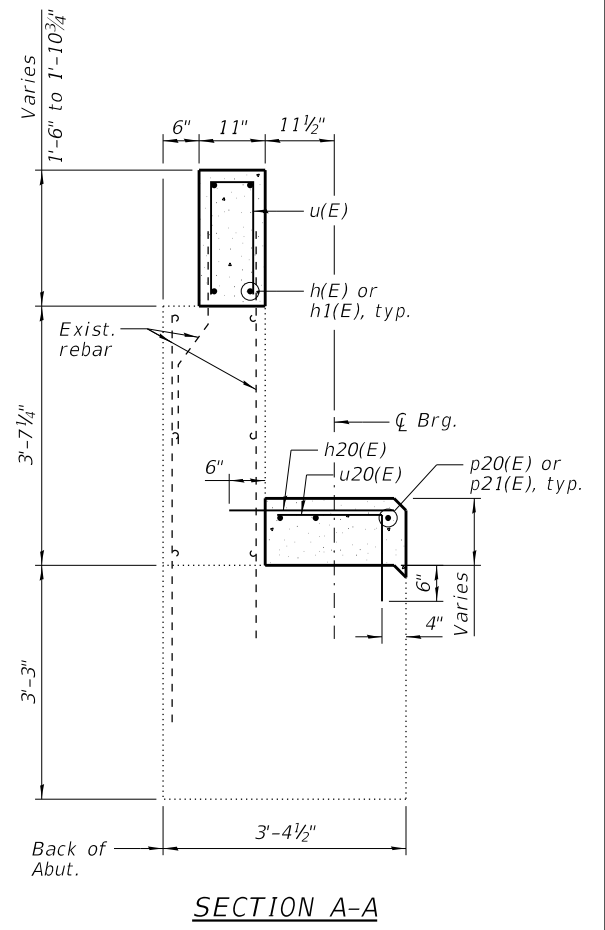
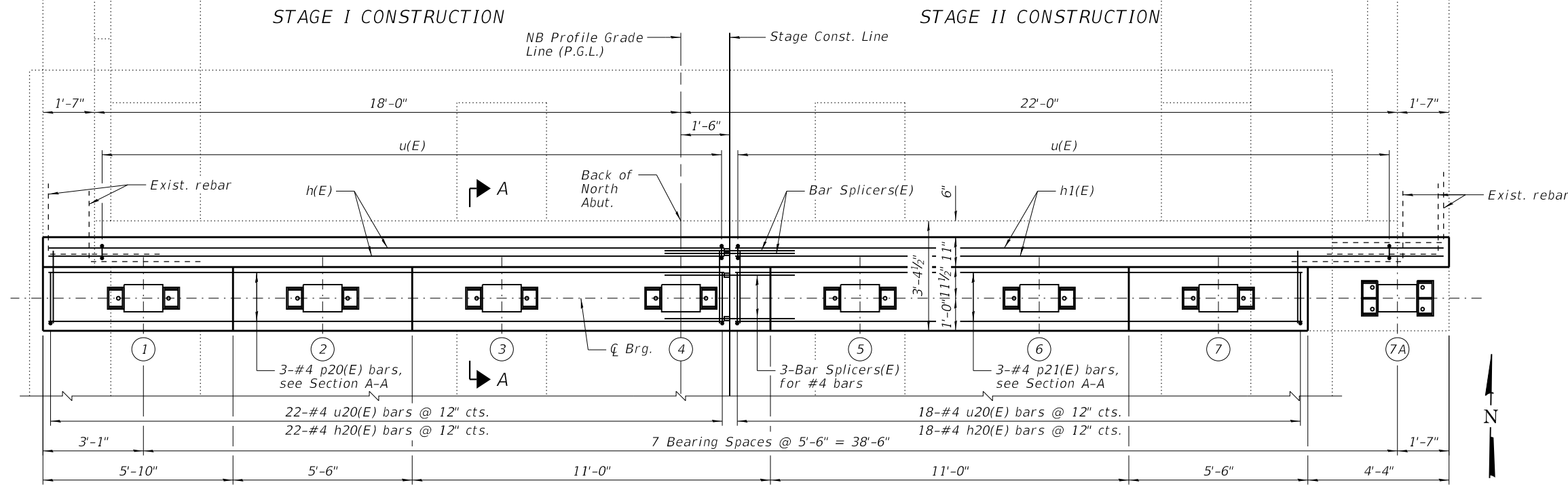
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CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
CHECKED - DWP	REVISED
DATE - 12/01/2020	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT REMOVAL
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)

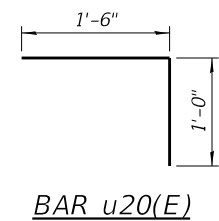
SHEET NO. 20 OF 30 SHEETS

S.N. 016-1041 (SB)		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		332	2020-169-BR	COOK	54	35
CONTRACT NO. 62M29						
ILLINOIS FED. AID PROJECT						



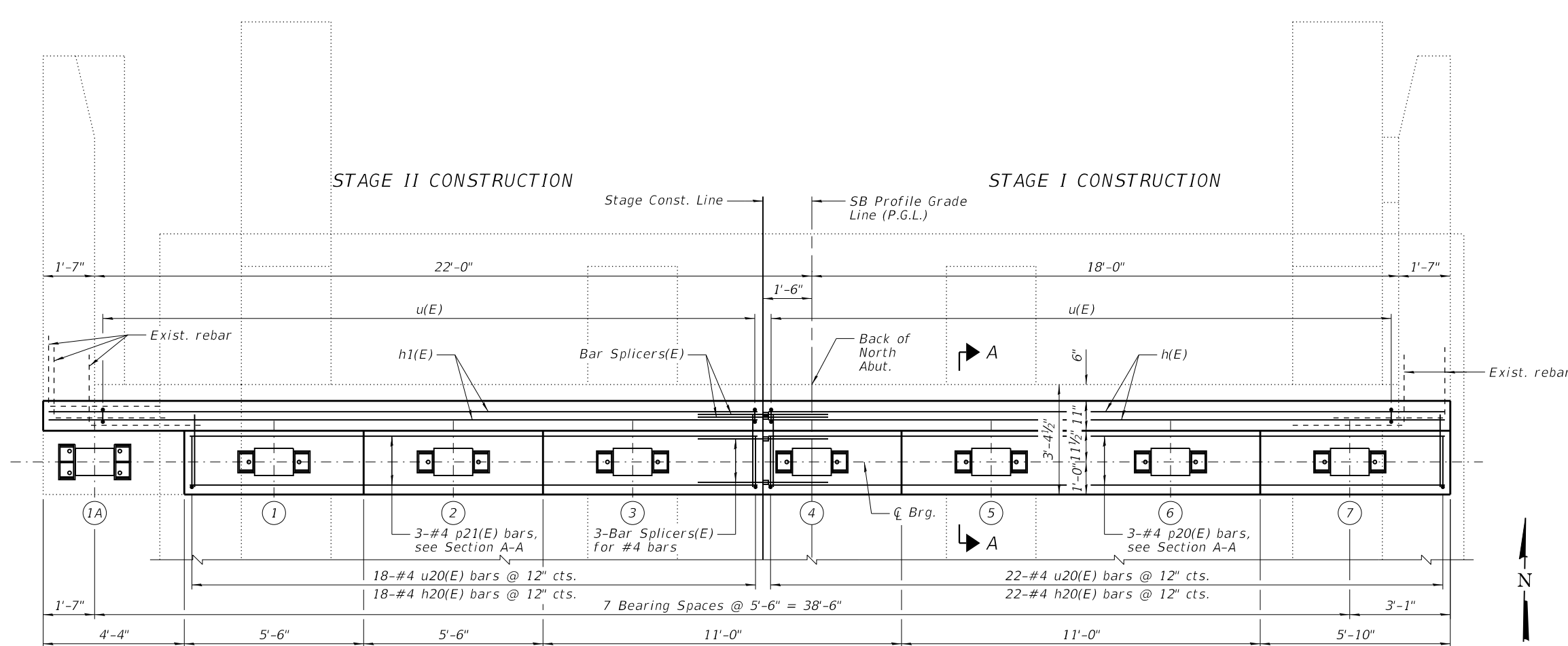
**NORTHBOUND NORTH ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h20(E)	40	#4	2'-2"	—
p20(E)	3	#4	20'-9"	—
p21(E)	3	#4	21'-9"	—
u20(E)	40	#4	2'-6"	└
Item	Unit	Quantity		
Concrete Structures	Cu. Yd.	2.4		
Reinforcement Bars, Epoxy Coated	Pound	210		
Concrete Sealer	Sq. Ft.	108		

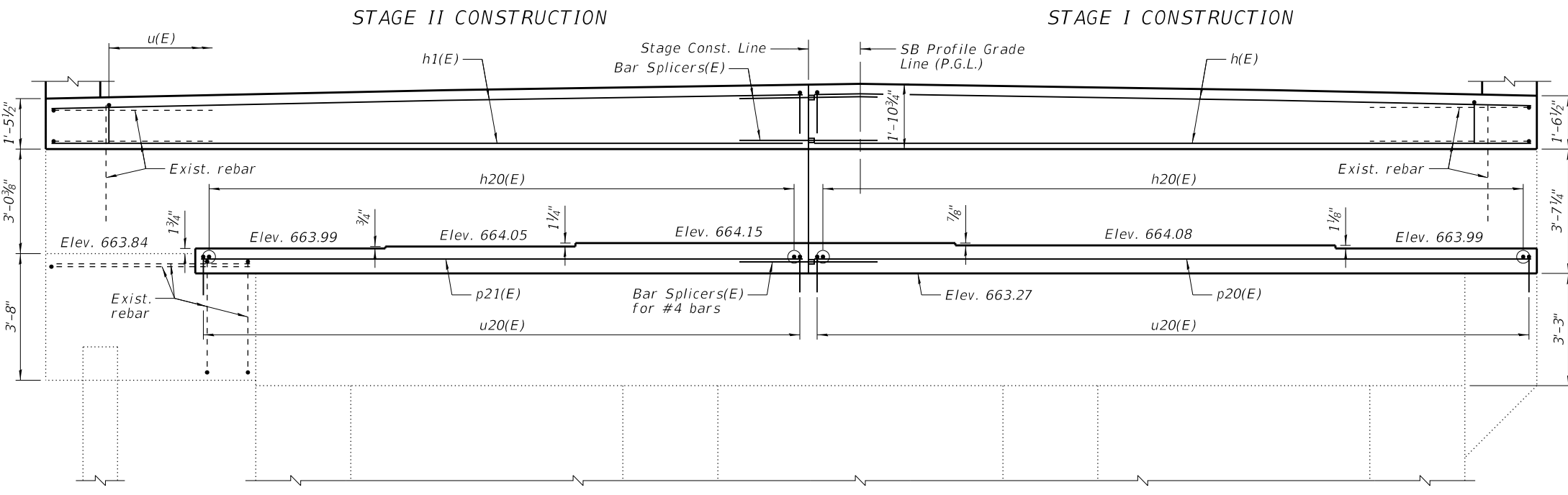


NOTES:

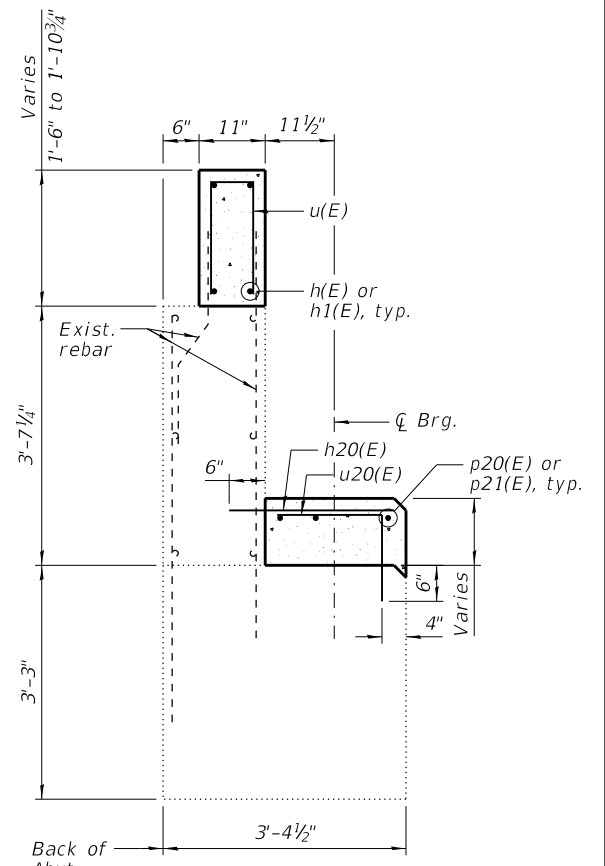
- See Sheets 11, 13, & 14 of 30 for Joint Replacement details.
- Drill & grout #4 h20(E) bars and #4 u20(E) bars 6" min. into existing concrete according to Section 584 of the Standard Specifications.
- See Sheet 18 of 30 for Anchor Bolt Placement Details.
- See Sheet 30 of 30 for Bar Splicer Details.



PLAN - SOUTHBOUND



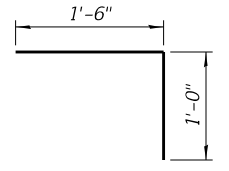
ELEVATION
(Looking North)



SECTION A-A

SOUTHBOUND NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	40	#4	2'-2"	—
p20(E)	3	#4	20'-9"	—
p21(E)	3	#4	21'-9"	—
u20(E)	40	#4	2'-6"	└
Item		Unit	Quantity	
Concrete Structures		Cu. Yd.	2.4	
Reinforcement Bars, Epoxy Coated		Pound	210	
Concrete Sealer		Sq. Ft.	110	



BAR u20(E)

NOTES:

- 1.) See Sheets 11, 13, & 14 of 30 for Joint Replacement details.
- 2.) Drill & grout #4 h20(E) bars and #4 u20(E) bars 6" min. into existing concrete according to Section 584 of the Standard Specifications.
- 3.) See Sheet 18 of 30 for Anchor Bolt Placement Details.
- 4.) See Sheet 30 of 30 for Bar Splicer Details.



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DRAWN - DJM	REVISOR
CHECKED - DWP	REVISOR
DATE - 12/01/2020	

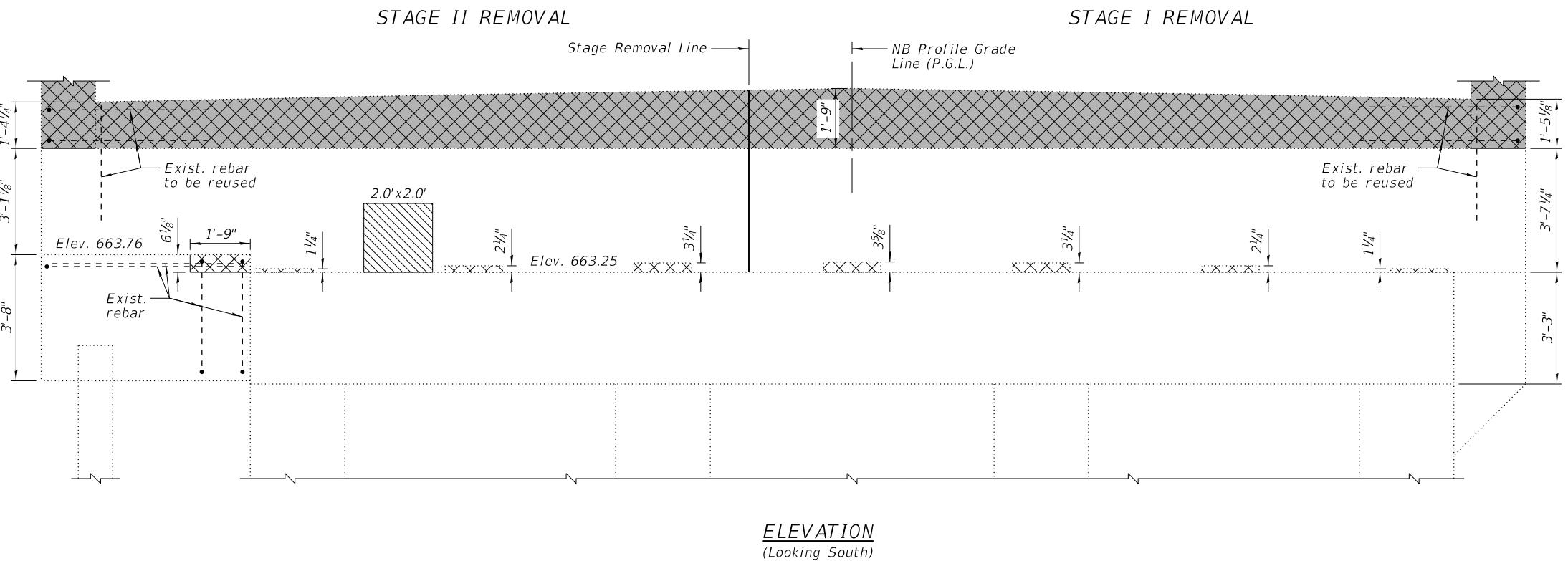
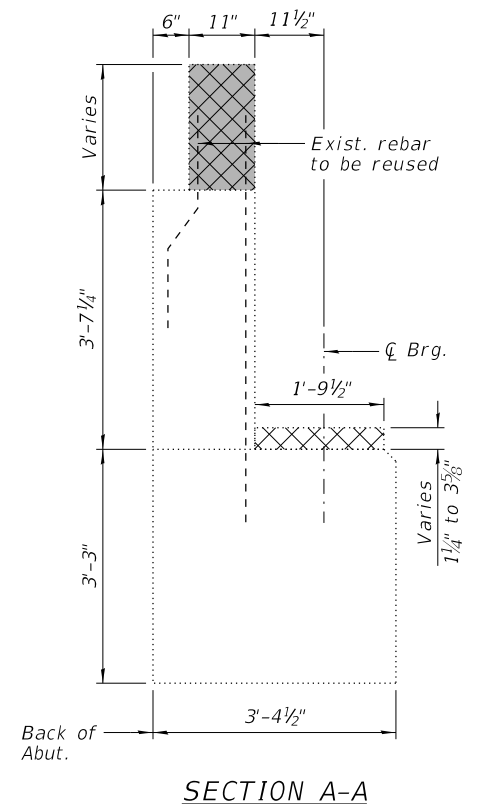
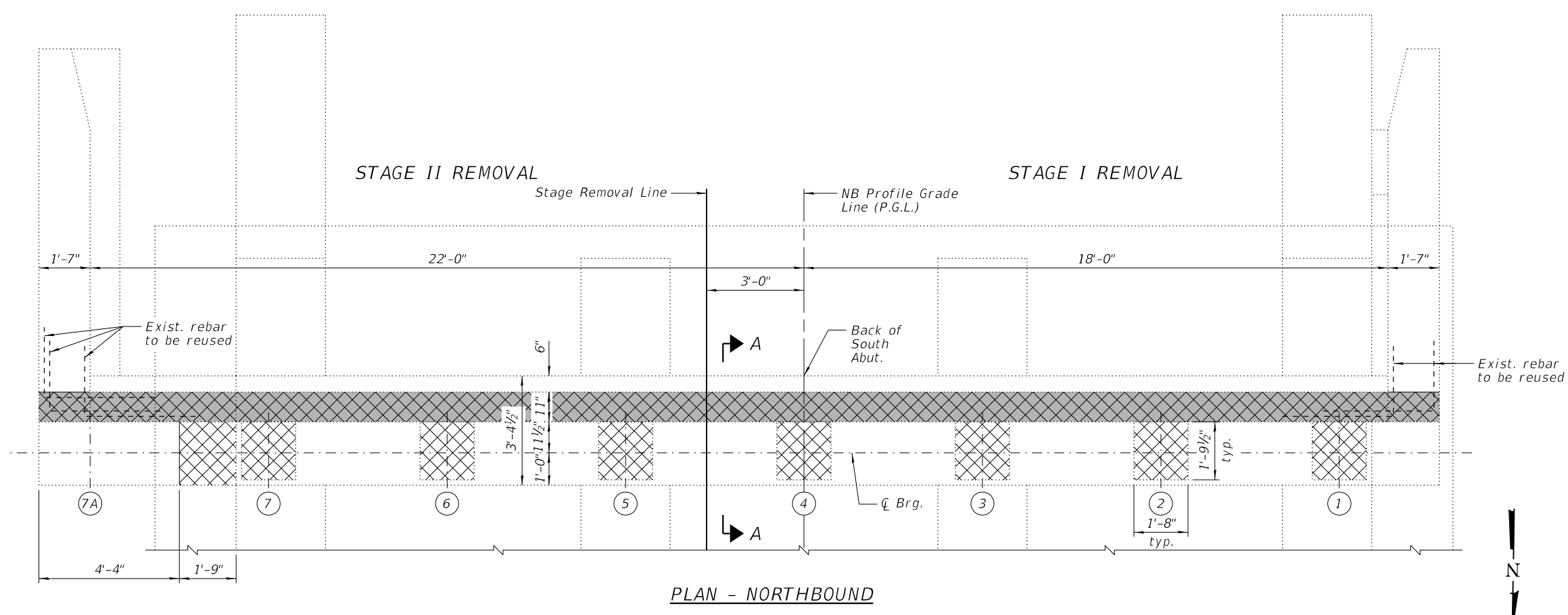
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)

SHEET NO. 22 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	37
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				

S.N. 016-1041 (SB)



LEGEND

- Concrete Removal
- Concrete Removal for Joint Replacement (see Sheets 10 & 12 of 30)
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

**NORTHBOUND SOUTH ABUTMENT
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	0.2
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	4

- NOTES:**
- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal".
 - Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".



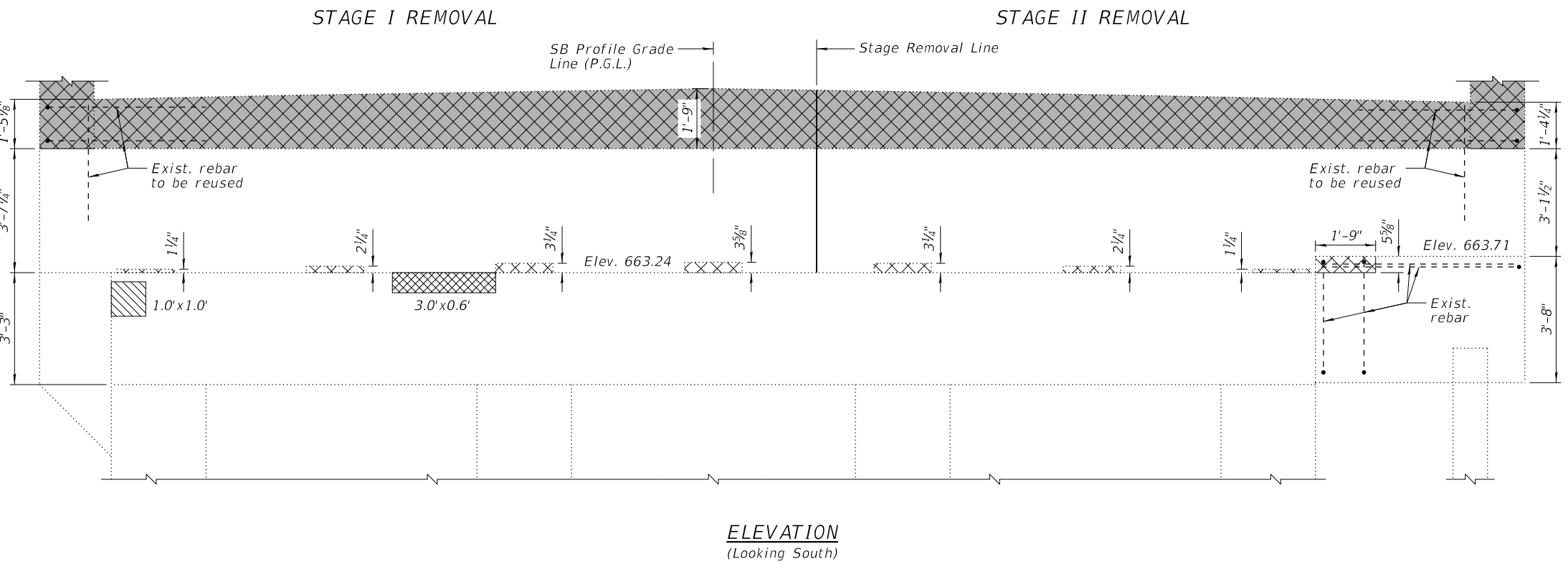
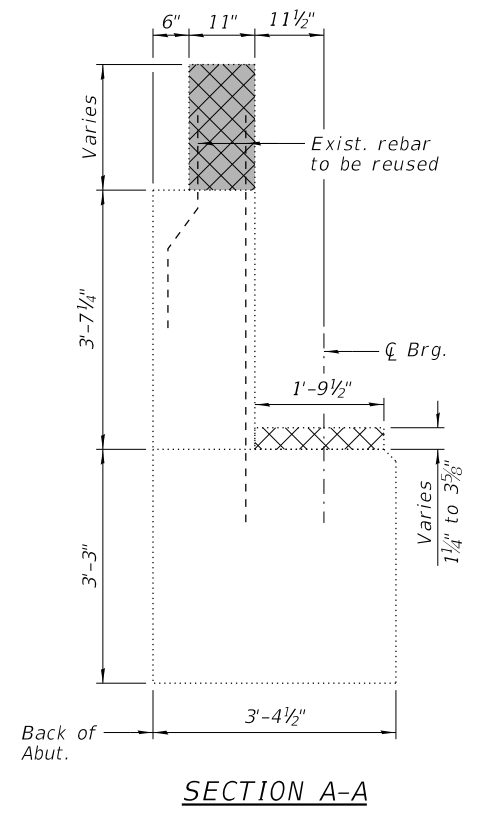
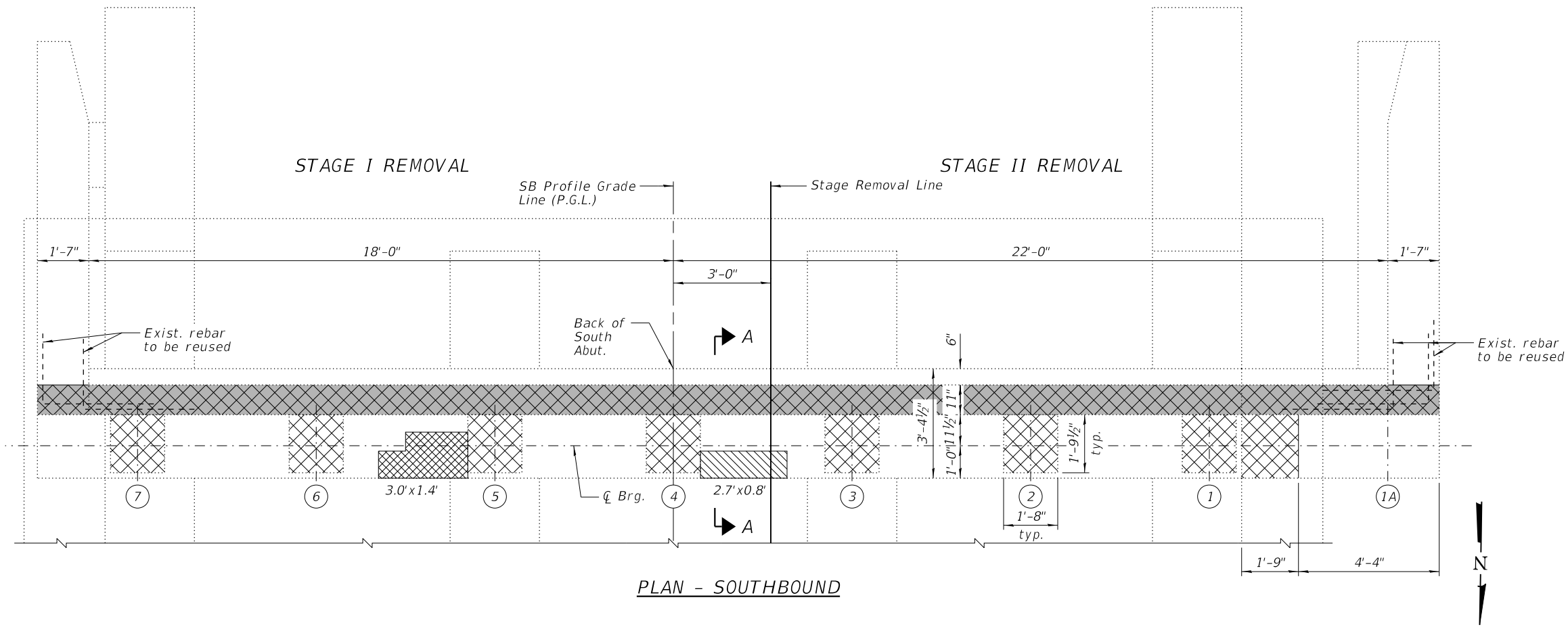
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DRAWN - DJM	REVISOR
CHECKED - DWP	REVISOR
DATE - 12/01/2020	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT REMOVAL
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)**

SHEET NO. 23 OF 30 SHEETS

S.N. 016-0456 (NB)		TOTAL SHEETS	SHEET NO.
F.A.P. RTE. 332	SECTION 2020-169-BR	COUNTY COOK	54 38
CONTRACT NO. 62M29			
ILLINOIS FED. AID PROJECT			



LEGEND

- Concrete Removal
- Concrete Removal for Joint Replacement (see Sheets 10 & 12 of 30)
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- Structural Repair of Concrete (Depth Greater Than 5 Inches)

**SOUTHBOUND SOUTH ABUTMENT
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	0.2
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	4
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	6

- NOTES:**
- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with "Concrete Removal".
 - Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".



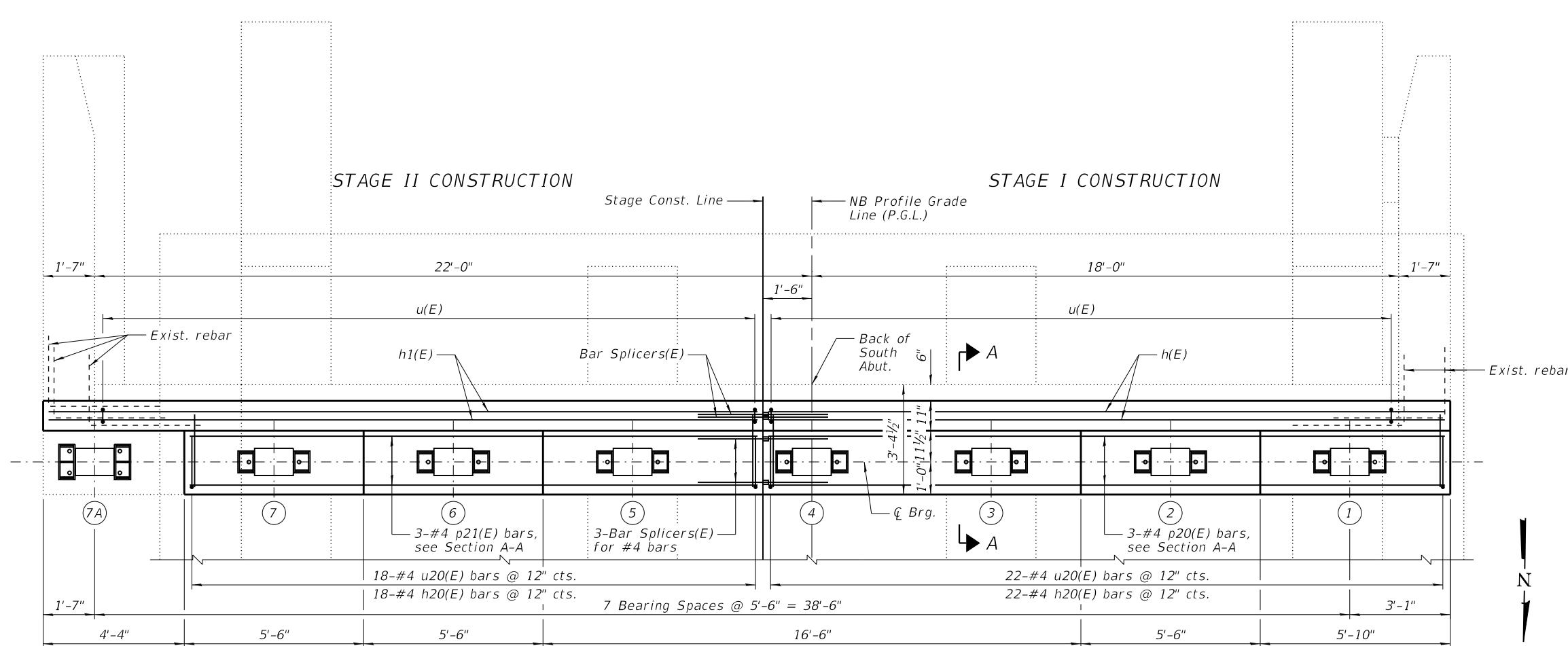
DESIGNED - DAH	REVISOR - 12/16/2020 DJM
CHECKED - JCZ	REVISOR
DRAWN - DJM	REVISOR
CHECKED - DWP	REVISOR
DATE - 12/01/2020	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

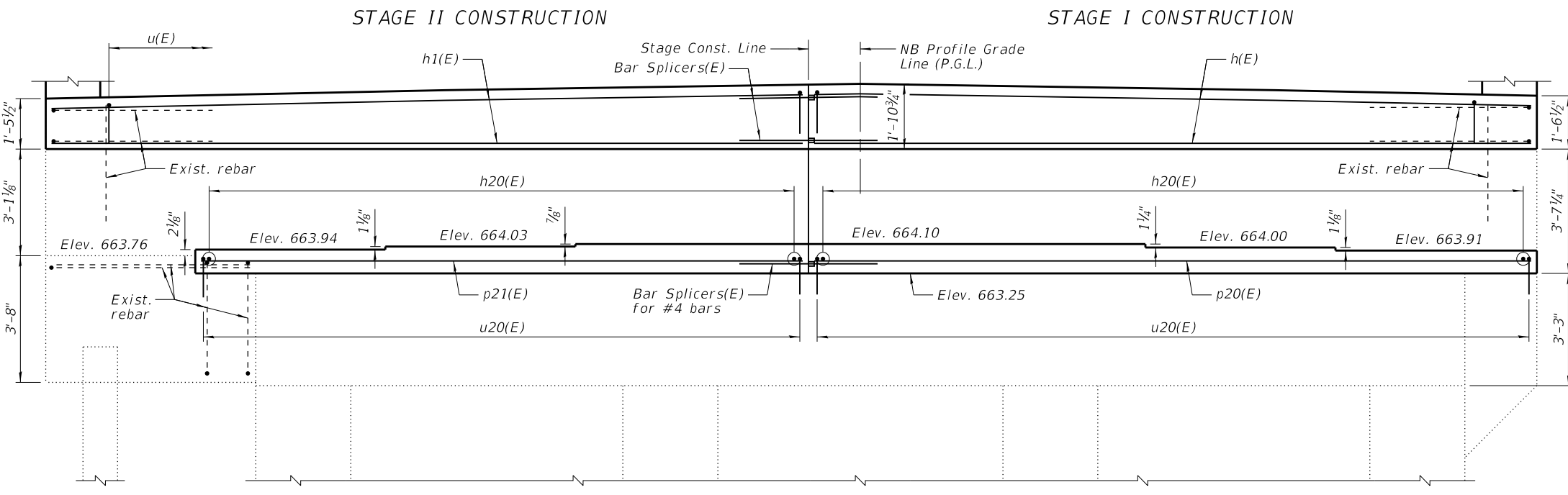
**SOUTH ABUTMENT REMOVAL
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)**

SHEET NO. 24 OF 30 SHEETS

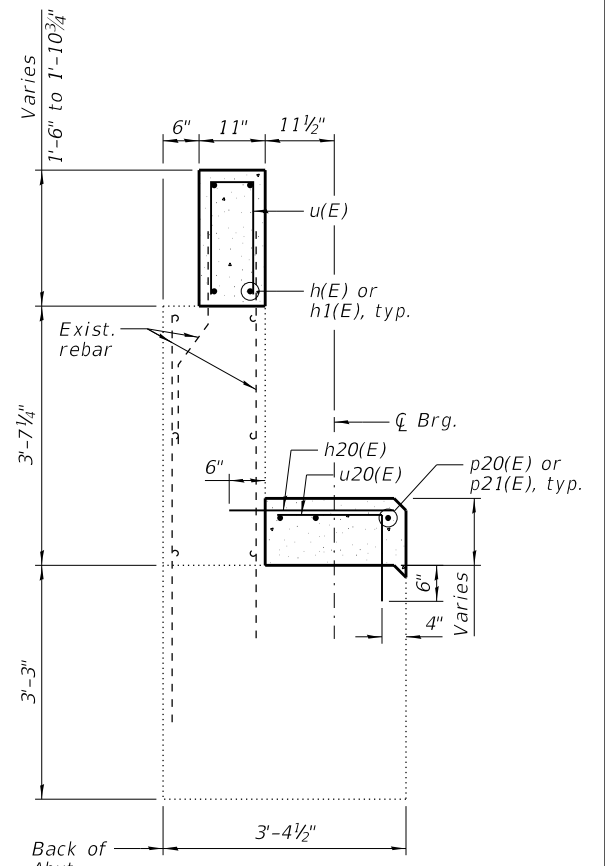
S.N. 016-1041 (SB)		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		332	2020-169-BR	COOK	54	39
		CONTRACT NO. 62M29				
		ILLINOIS FED. AID PROJECT				



PLAN - NORTHBOUND



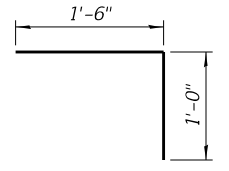
ELEVATION
(Looking South)



SECTION A-A

NORTHBOUND SOUTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	40	#4	2'-2"	—
p20(E)	3	#4	20'-9"	—
p21(E)	3	#4	21'-9"	—
u20(E)	40	#4	2'-6"	└
Item	Unit	Quantity		
Concrete Structures	Cu. Yd.	2.4		
Reinforcement Bars, Epoxy Coated	Pound	210		
Concrete Sealer	Sq. Ft.	101		



BAR u20(E)

NOTES:

- 1.) See Sheets 11, 13, & 14 of 30 for Joint Replacement details.
- 2.) Drill & grout #4 h20(E) bars and #4 u20(E) bars 6" min. into existing concrete according to Section 584 of the Standard Specifications.
- 3.) See Sheet 18 of 30 for Anchor Bolt Placement Details.
- 4.) See Sheet 30 of 30 for Bar Splicer Details.



DESIGNED - DAH	REVISOR - 12/16/2020 DJM
CHECKED - JCZ	REVISOR
DRAWN - DJM	REVISOR
CHECKED - DWP	REVISOR
DATE - 12/01/2020	

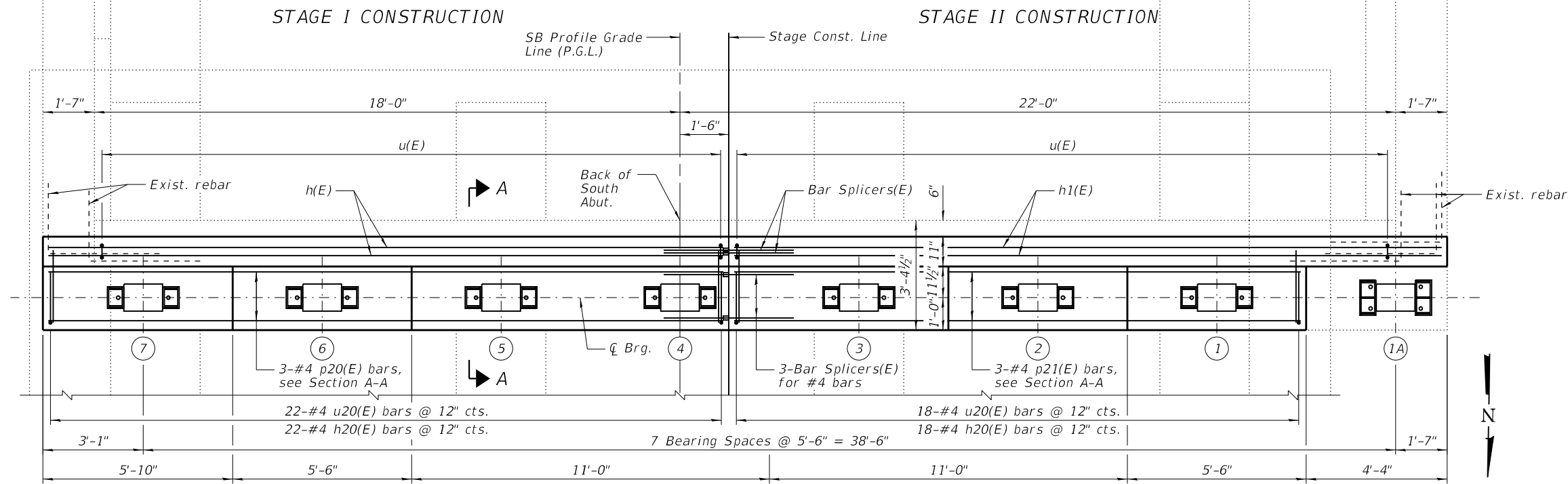
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)

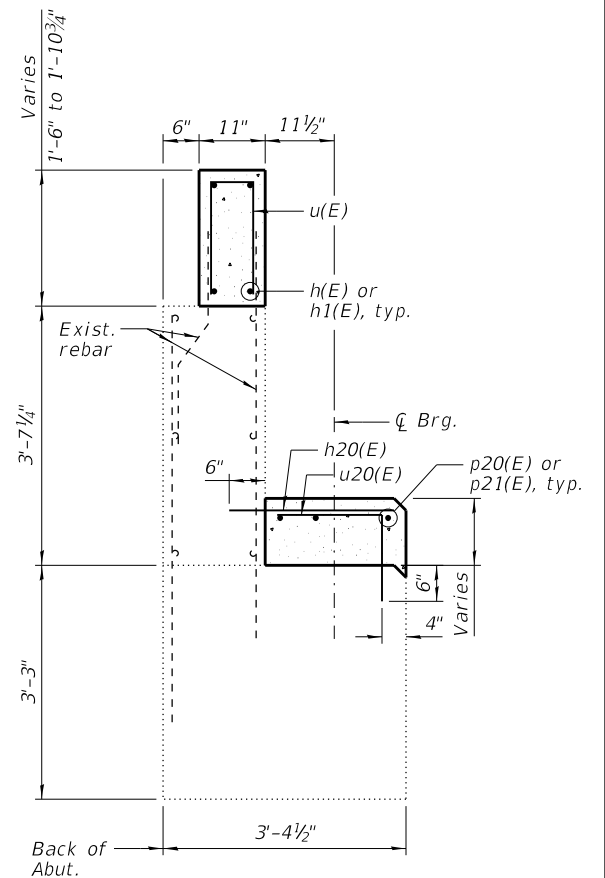
SHEET NO. 25 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	40
CONTRACT NO. 62M29				
ILLINOIS FED. AID PROJECT				

S.N. 016-0456 (NB)



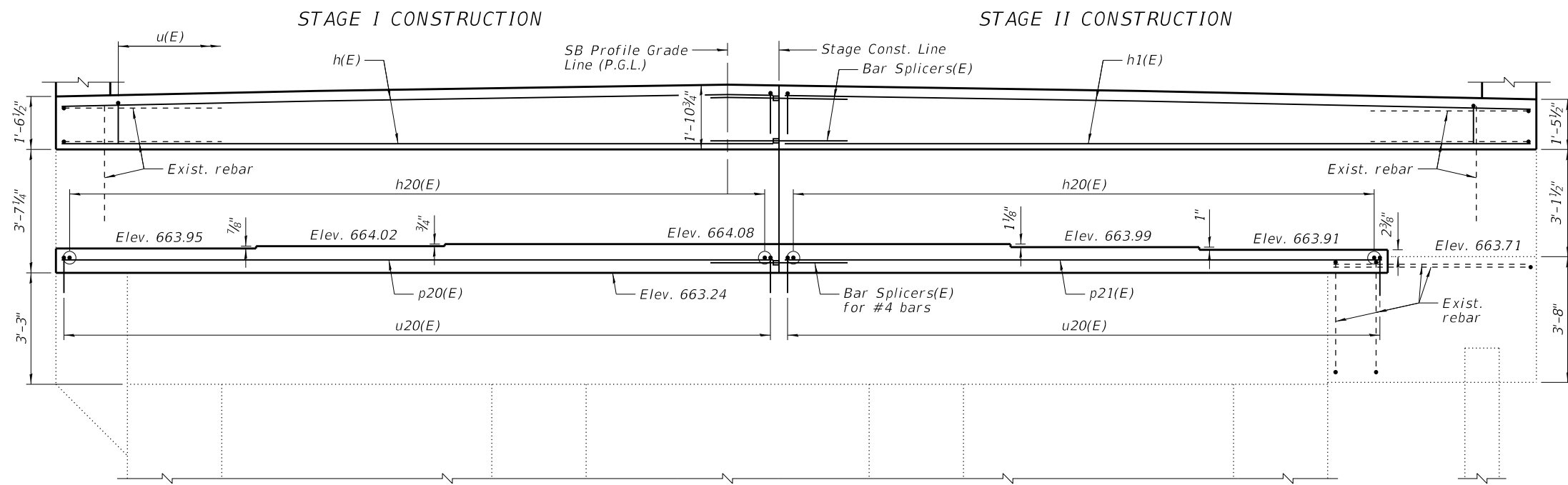
PLAN - SOUTHBOUND



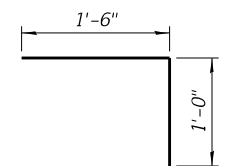
SECTION A-A

SOUTHBOUND SOUTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	40	#4	2'-2"	—
p20(E)	3	#4	20'-9"	—
p21(E)	3	#4	21'-9"	—
u20(E)	40	#4	2'-6"	└
Item	Unit	Quantity		
Concrete Structures	Cu. Yd.	2.4		
Reinforcement Bars, Epoxy Coated	Pound	210		
Concrete Sealer	Sq. Ft.	103		



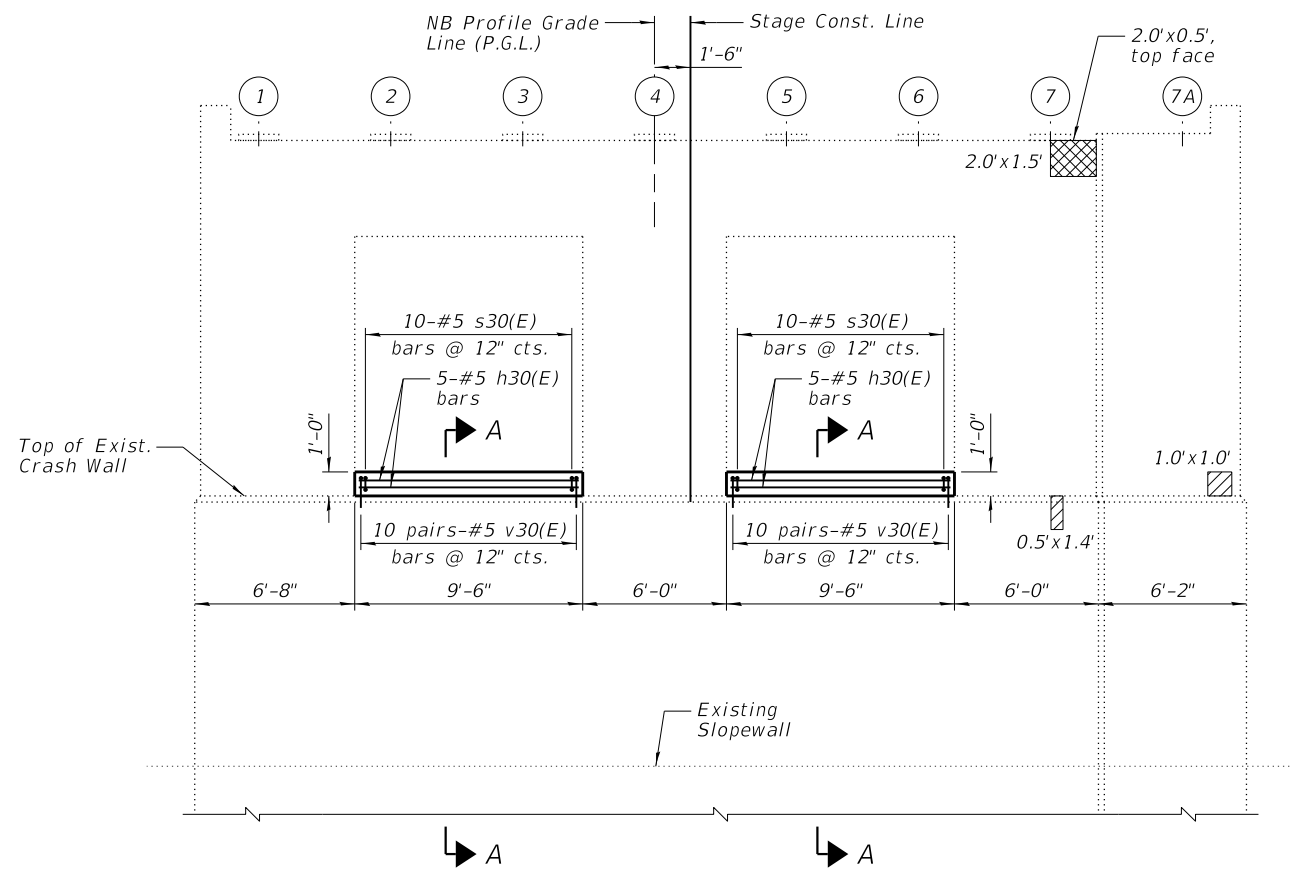
ELEVATION
(Looking South)



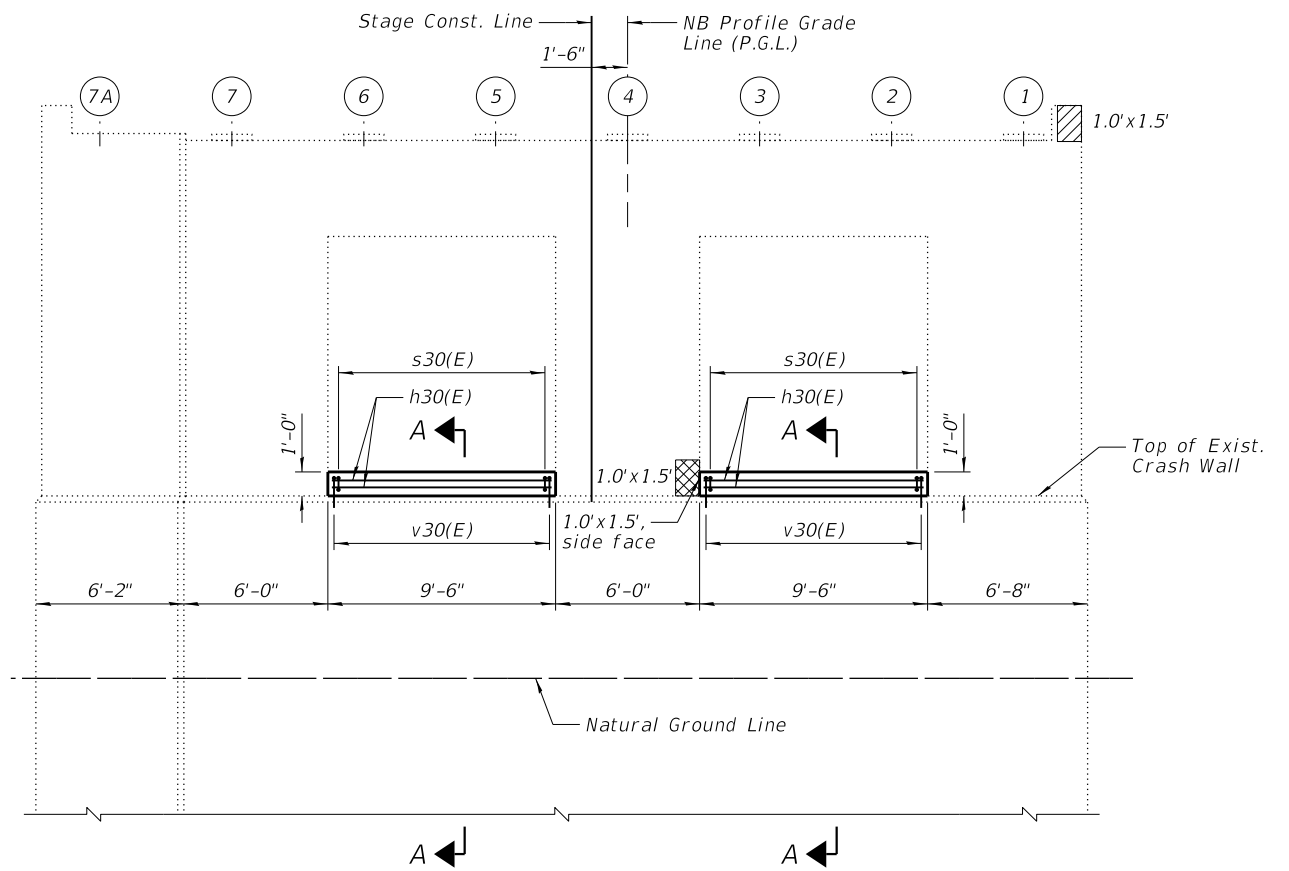
BAR u20(E)

NOTES:

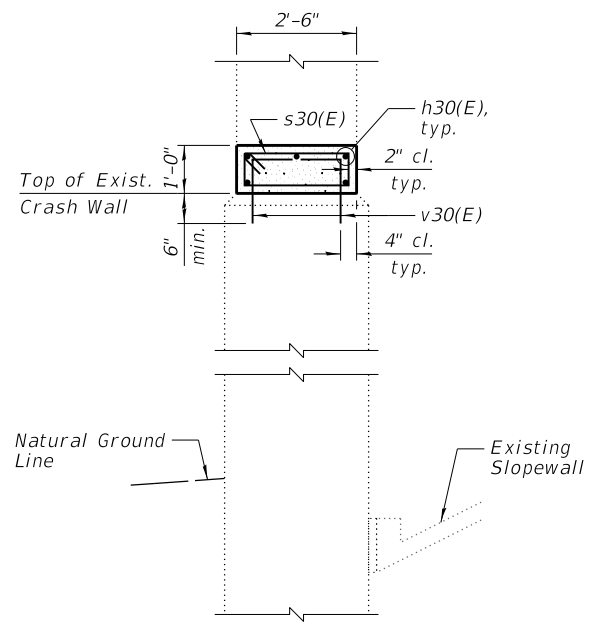
- 1.) See Sheets 11, 13, & 14 of 30 for Joint Replacement details.
- 2.) Drill & grout #4 h20(E) bars and #4 u20(E) bars 6" min. into existing concrete according to Section 584 of the Standard Specifications.
- 3.) See Sheet 18 of 30 for Anchor Bolt Placement Details.
- 4.) See Sheet 30 of 30 for Bar Splicer Details.



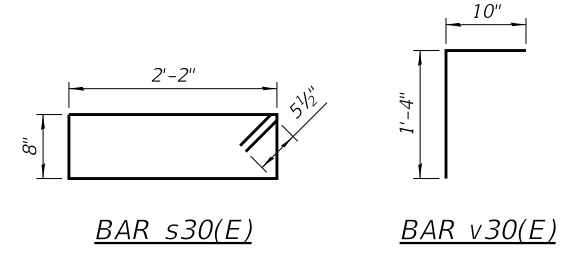
ELEVATION - PIER NO. 3
(Looking North)



ELEVATION - PIER NO. 3
(Looking South)



SECTION A-A



BAR s30(E) **BAR v30(E)**

LEGEND

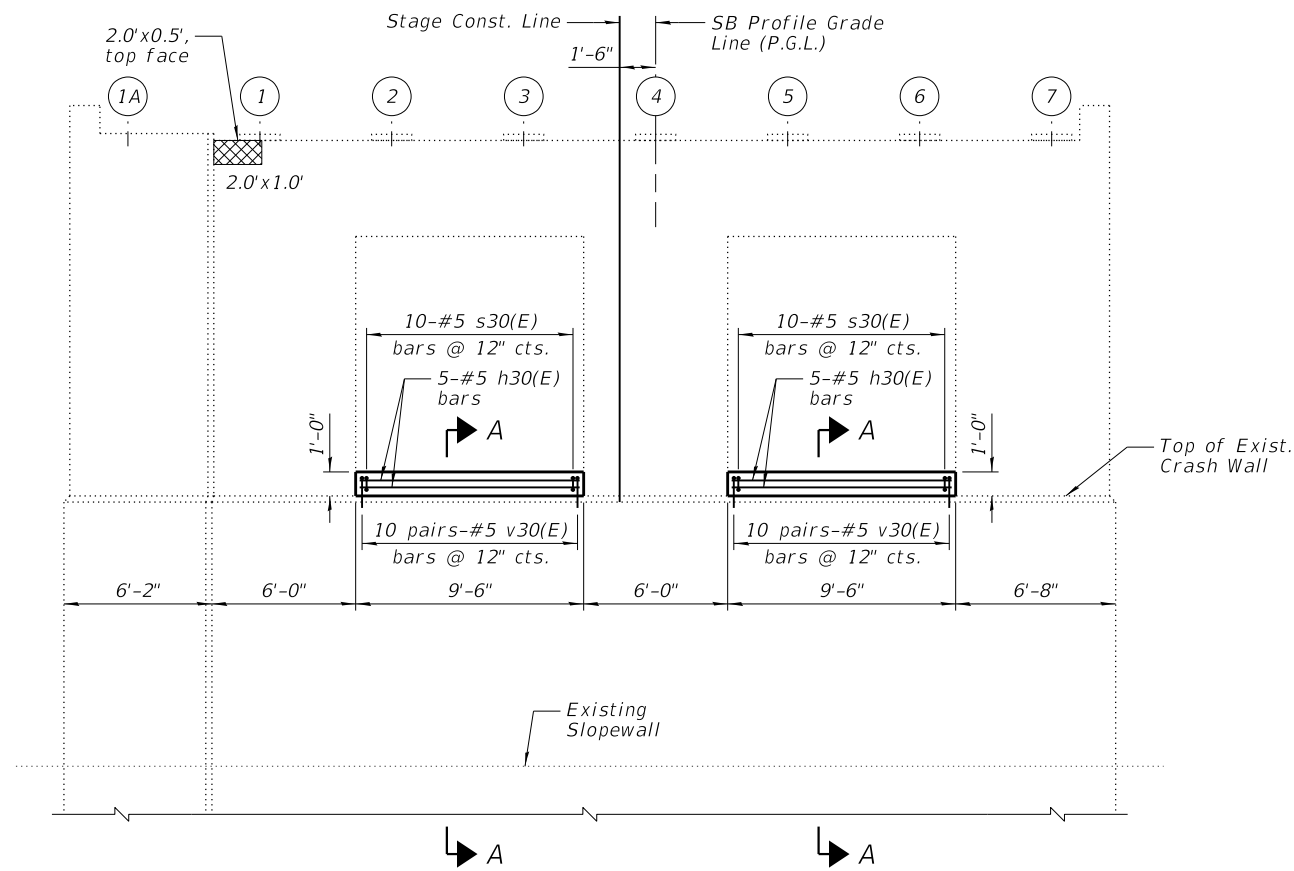
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- Structural Repair of Concrete (Depth Greater Than 5 Inches)

PIER NO. 3 BILL OF MATERIAL

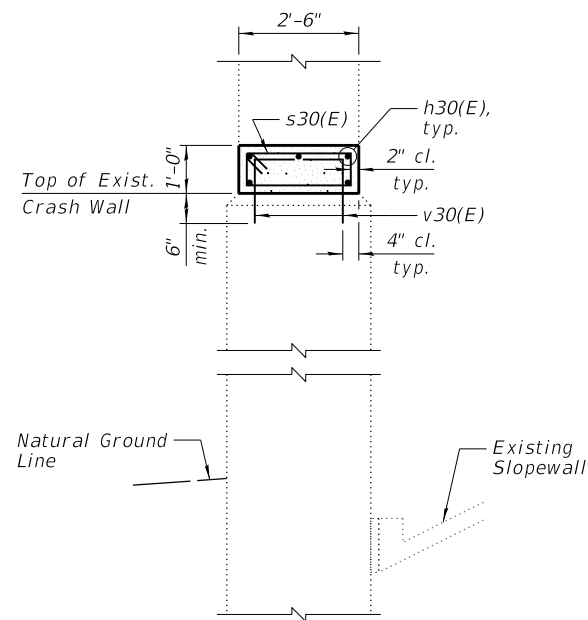
Bar	No.	Size	Length	Shape
h30(E)	10	#5	9'-2"	—
s30(E)	20	#5	5'-8"	□
v30(E)	40	#5	2'-2"	└
Item		Unit	Quantity	
Concrete Structures		Cu. Yd.	1.8	
Reinforcement Bars, Epoxy Coated		Pound	300	
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)		Sq. Ft.	4	
Structural Repair of Concrete (Depth Greater Than 5 Inches)		Sq. Ft.	7	

NOTE:

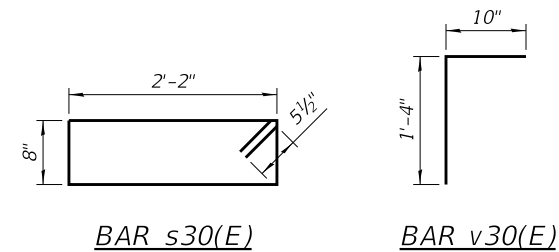
Drill & grout #5 v30(E) bars 6" min. into existing concrete according to Section 584 of the Standard Specifications.



ELEVATION - PIER NO. 6
(Looking North)



SECTION A-A



LEGEND

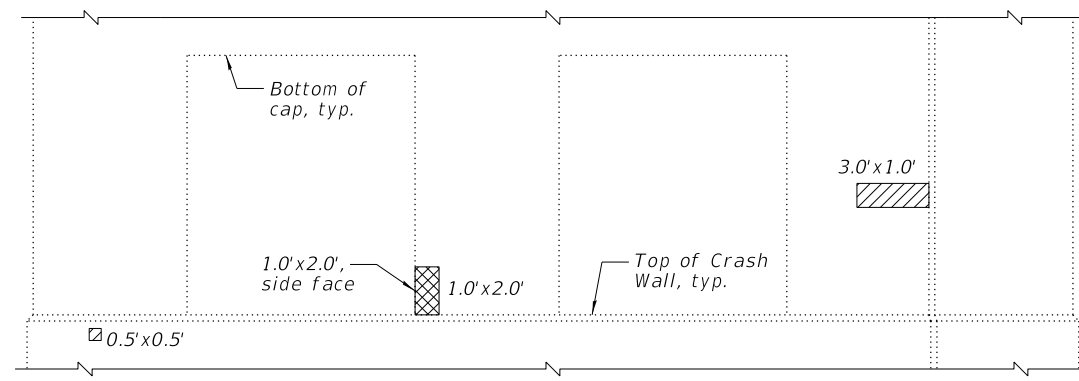
 Structural Repair of Concrete (Depth Greater Than 5 Inches)

PIER NO. 6 BILL OF MATERIAL

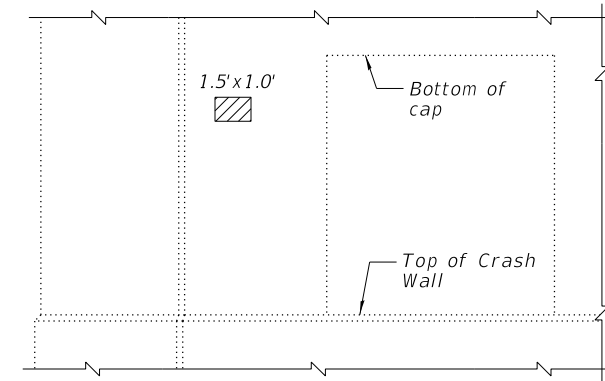
Bar	No.	Size	Length	Shape
h30(E)	10	#5	9'-2"	—
s30(E)	20	#5	5'-8"	▭
v30(E)	40	#5	2'-2"	└
Item		Unit	Quantity	
Concrete Structures		Cu. Yd.	1.8	
Reinforcement Bars, Epoxy Coated		Pound	300	
Structural Repair of Concrete (Depth Greater Than 5 Inches)		Sq. Ft.	3	

NOTE:

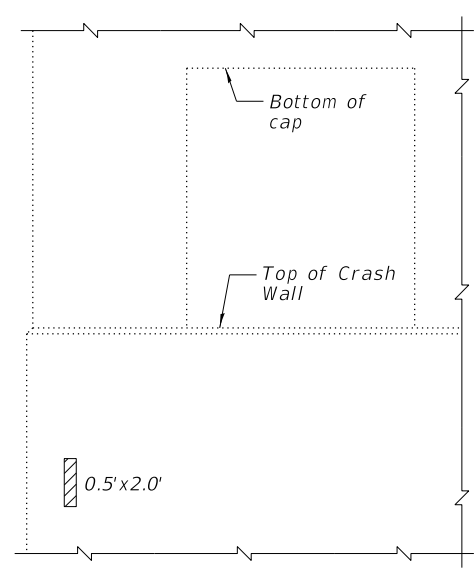
Drill & grout #5 v30(E) bars 6" min. into existing concrete according to Section 584 of the Standard Specifications.



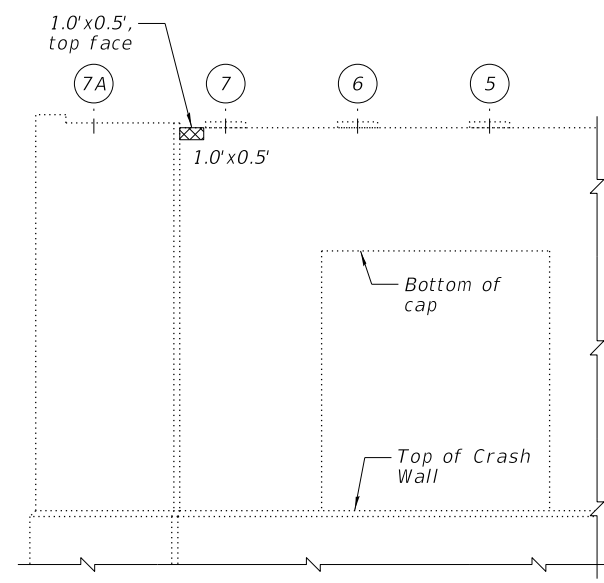
PARTIAL ELEVATION - PIER NO. 1
(Looking North)



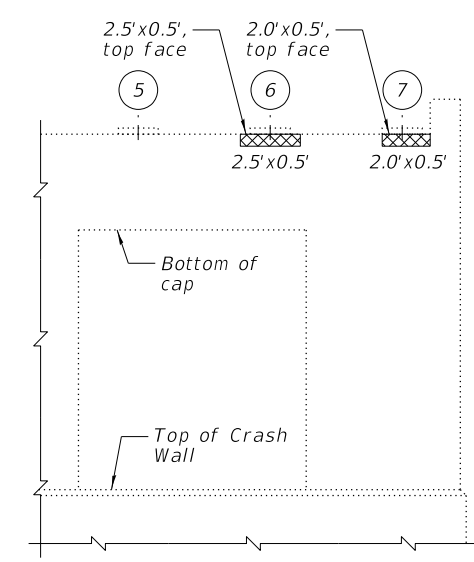
PARTIAL ELEVATION - PIER NO. 1
(Looking South)



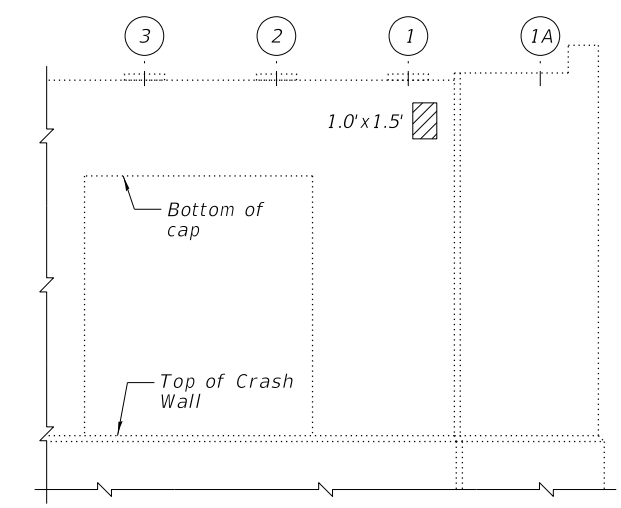
PARTIAL ELEVATION - PIER NO. 2
(Looking North)



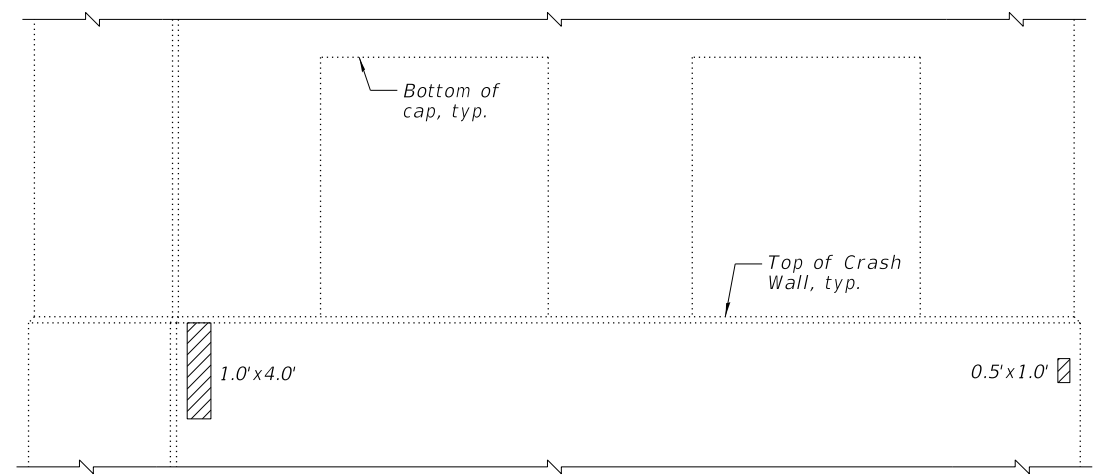
PARTIAL ELEVATION - PIER NO. 2
(Looking South)



PARTIAL ELEVATION - PIER NO. 4
(Looking North)



PARTIAL ELEVATION - PIER NO. 4
(Looking South)



PARTIAL ELEVATION - PIER NO. 5
(Looking North)

PIER NO. 1 BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	5
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	4

PIER NO. 2 BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	1
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	1

PIER NO. 4 BILL OF MATERIAL

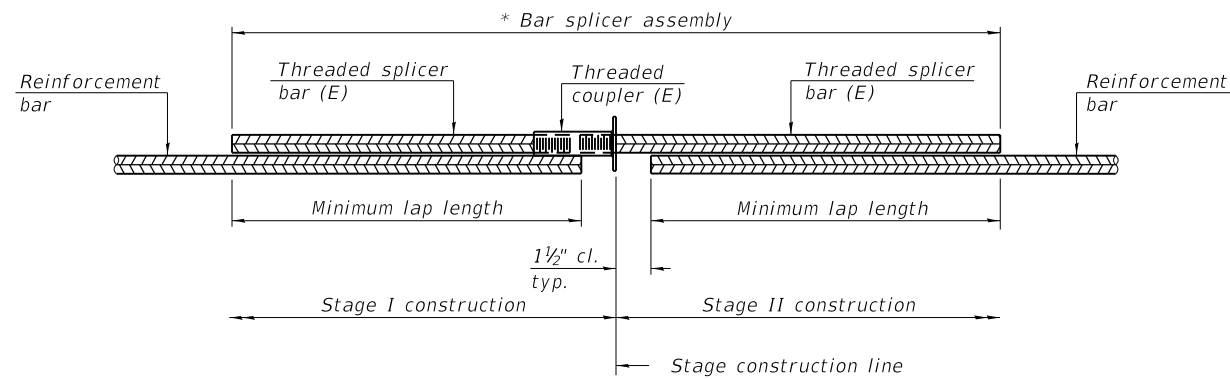
Item	Unit	Quantity
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	2
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	5

PIER NO. 5 BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	5

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)
- Structural Repair of Concrete (Depth Greater Than 5 Inches)



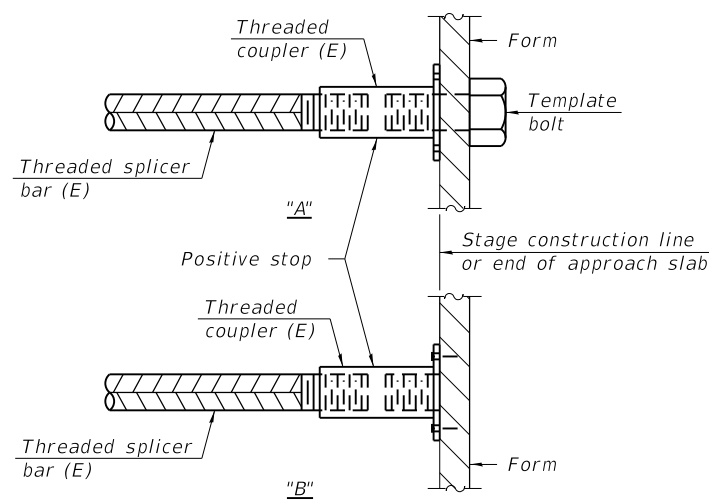
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

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

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

Location	Bar size	No. assemblies required	Minimum lap length
Four Joint Replacements, Abutment Side	#6	16	5'-0"
Four Joint Replacements, Deck Side	#5	36	3'-6"
Four Abutments, Bearing Seats	#4	12	2'-7"

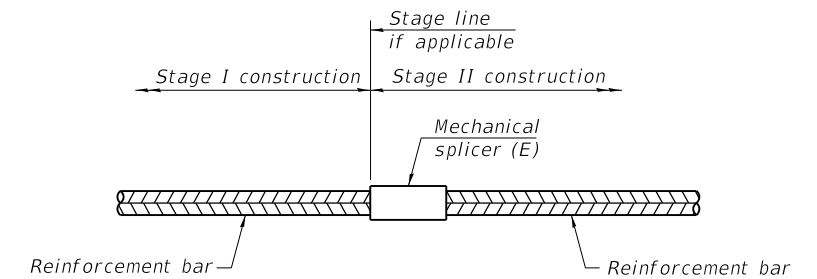


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:
 Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-1-2020



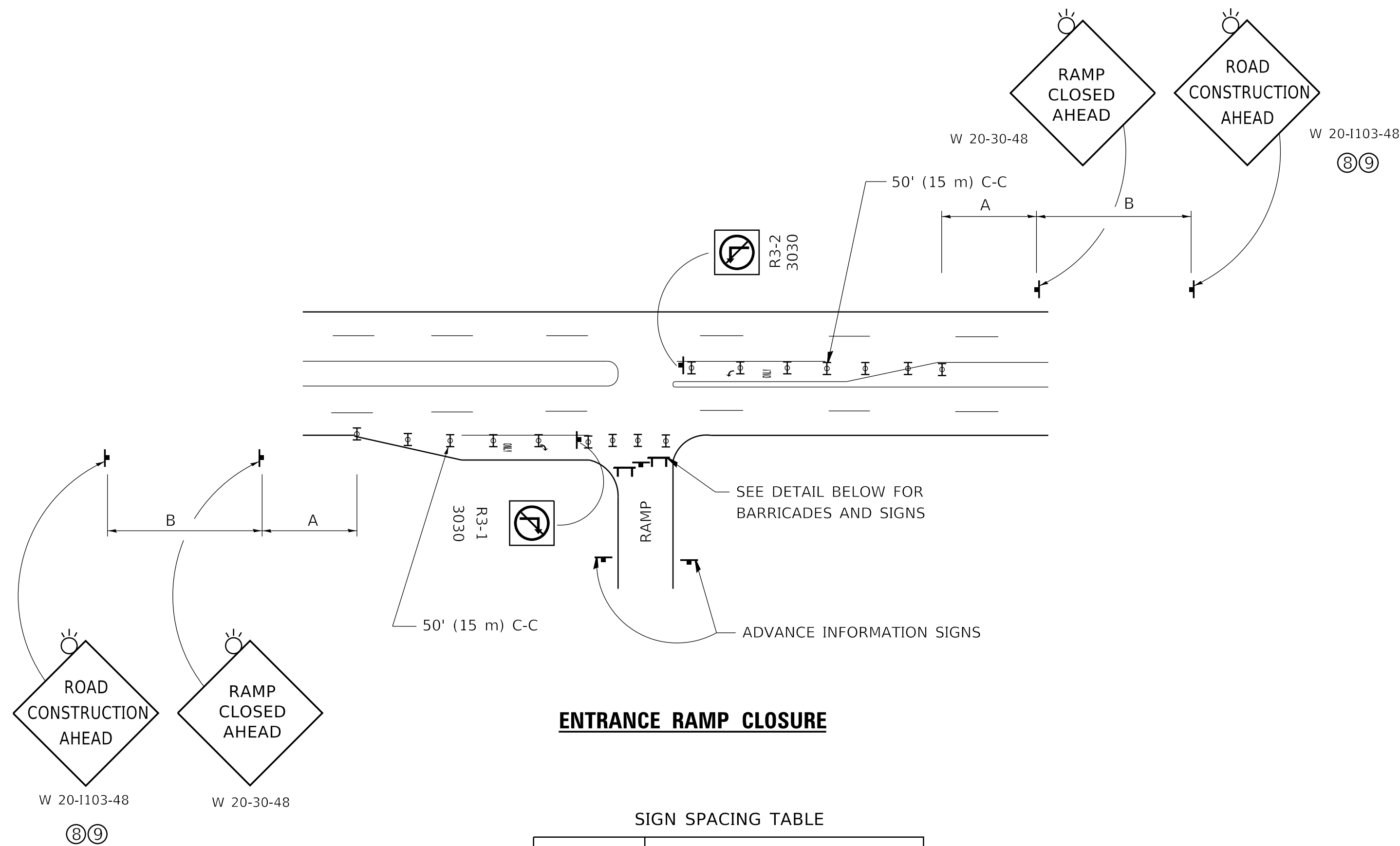
DESIGNED - DAH	REVISED
CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
CHECKED - DWP	REVISED
DATE - 12/01/2020	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 016-0456 (NB) & 016-1041 (SB)**

SHEET NO. 30 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	45
CONTRACT NO. 62M29			ILLINOIS FED. AID PROJECT	

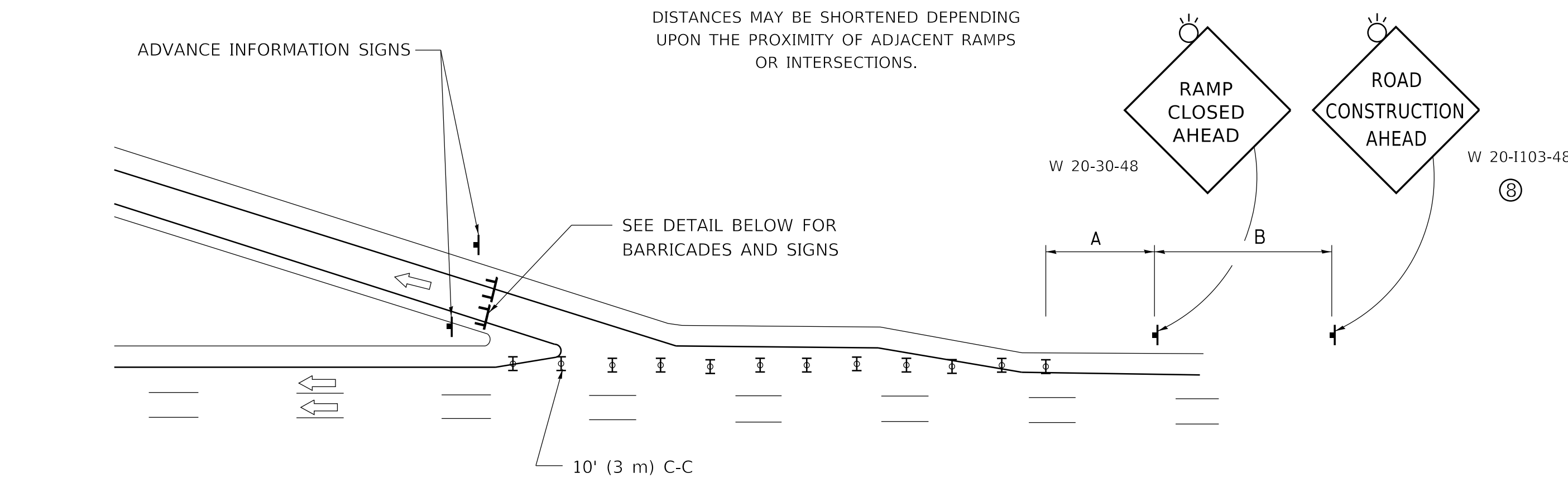


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

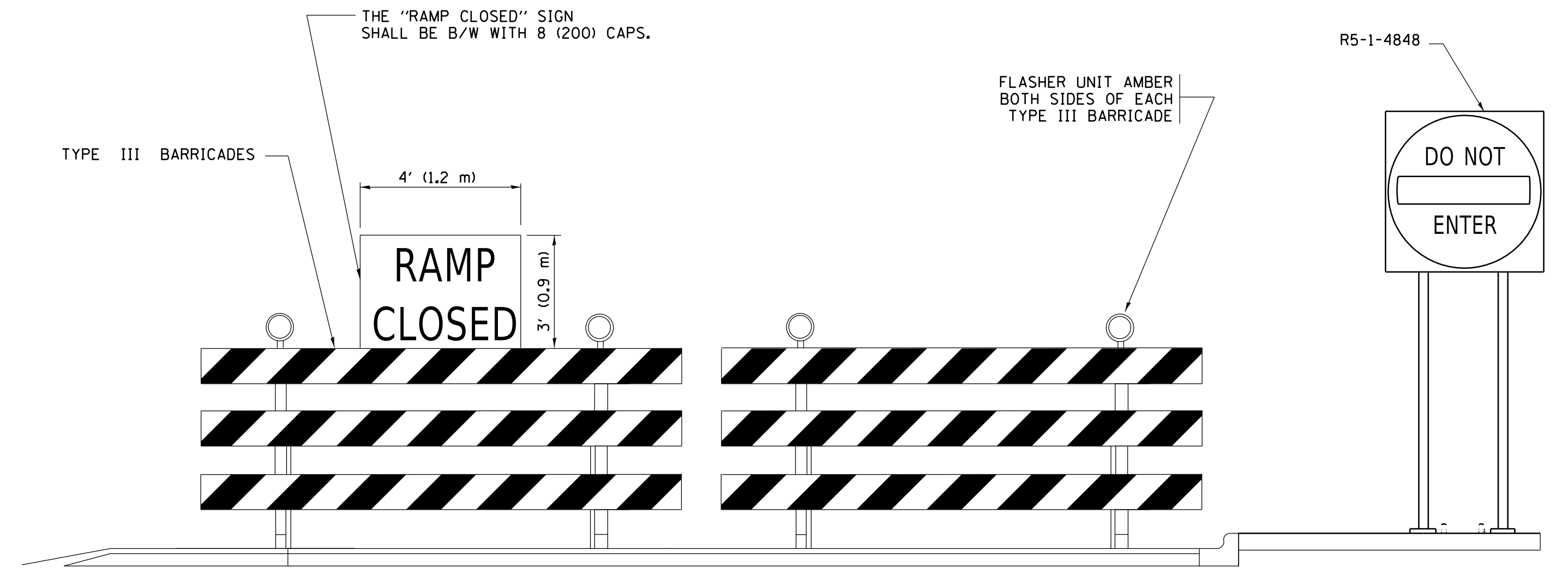
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

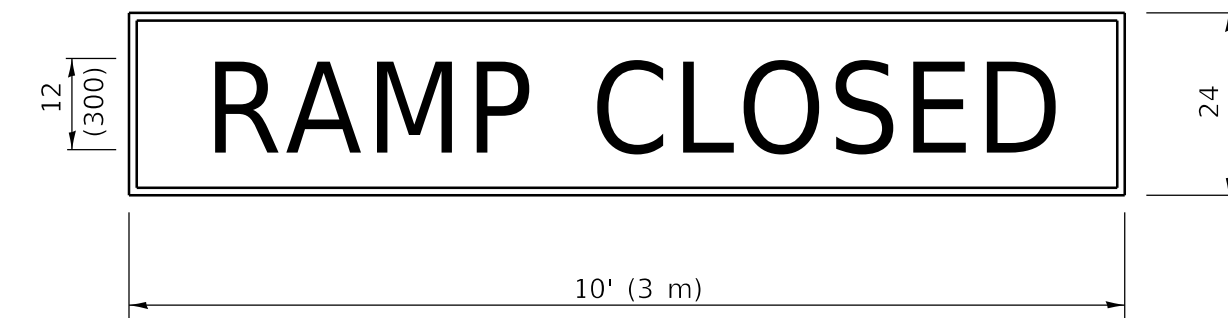
SYMBOLS

- ▬ TYPE II BARRICADE OR DRUM
- ▬ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



DETAIL FOR REQUIRED BARRICADES & SIGNS

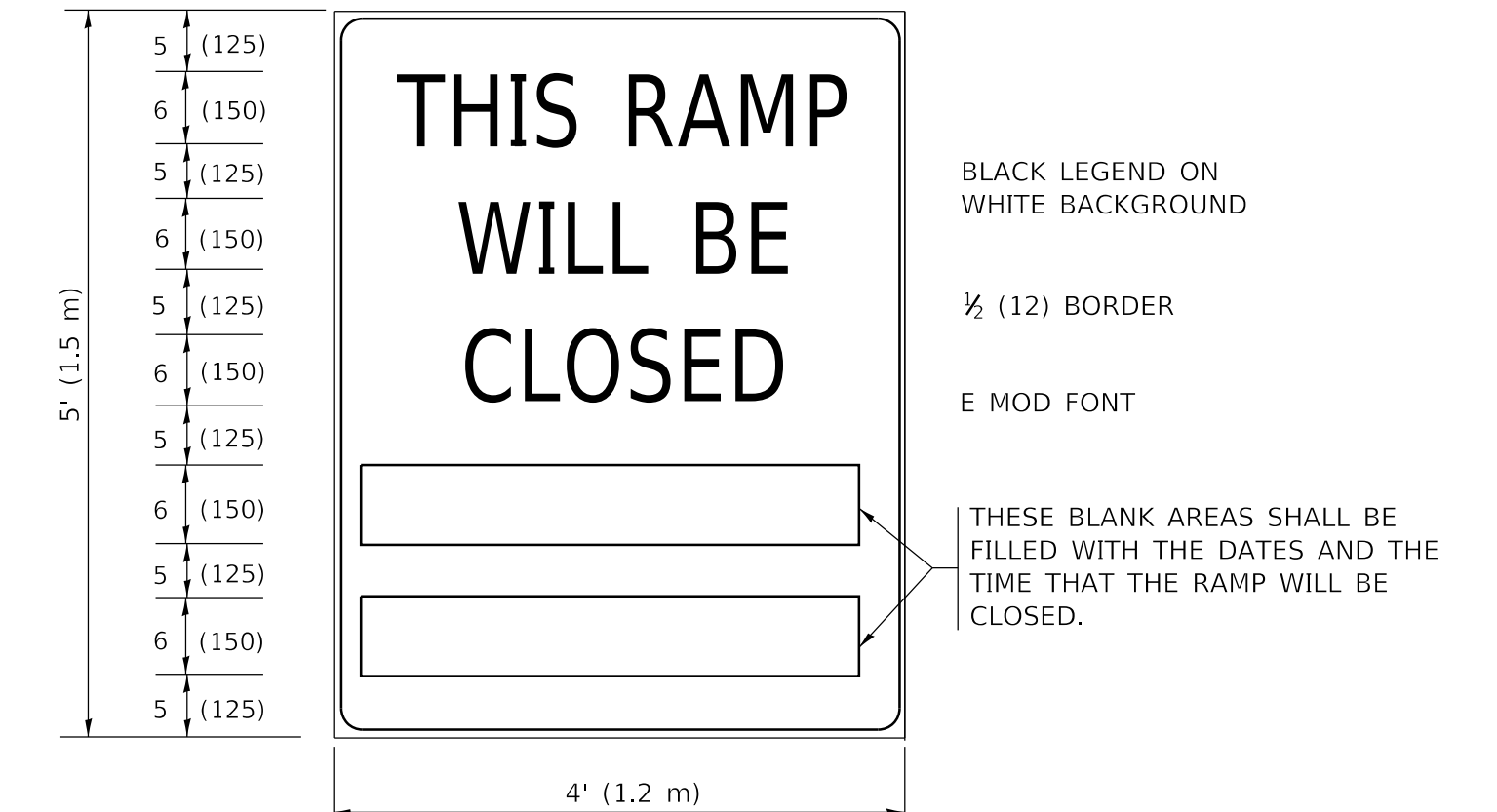
RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND

1/2 (12) BORDER

E MOD FONT

THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② VERTICAL BARRICADES SHALL NOT BE USED FOR RAMP CLOSURES.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

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

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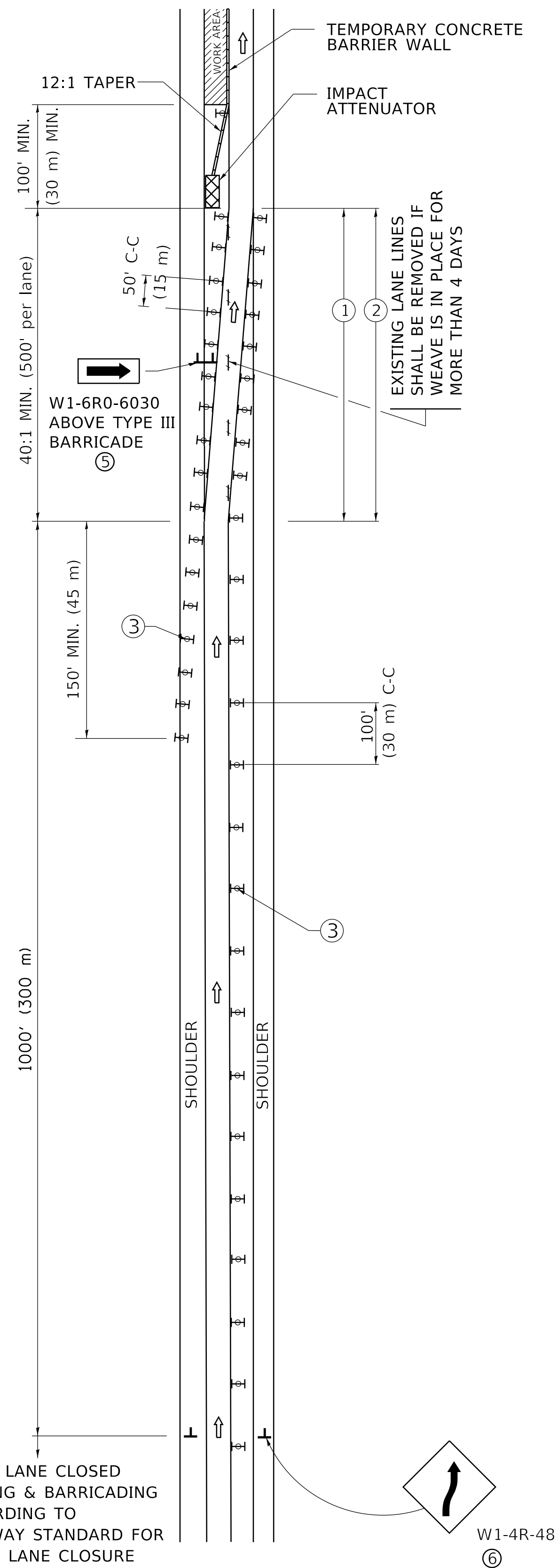
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ENTRANCE AND EXIT RAMP
CLOSURE DETAILS**

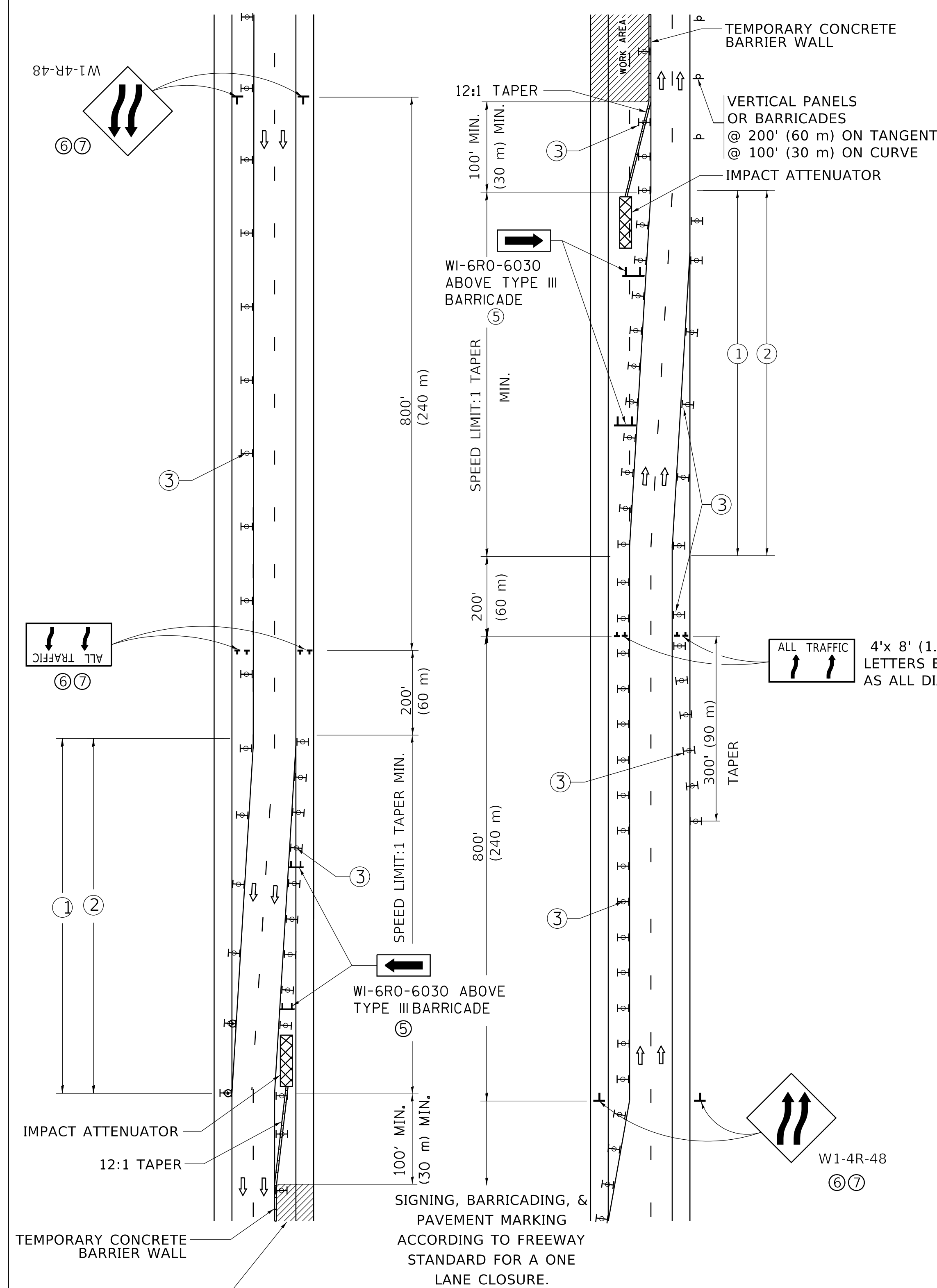
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	47
TC-08			CONTRACT NO.	62M29
ILLINOIS		FED. AID PROJECT		

SINGLE LANE WEAVE



MULTI-LANE WEAVE



GENERAL NOTES:

- EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 4 DAYS IN DURATION.
- 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.
- PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- 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.
- 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.
- 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.

SYMBOLS

- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WALL
- IMPACT ATTENUATOR
- W1-4R-48
- W24-1-48

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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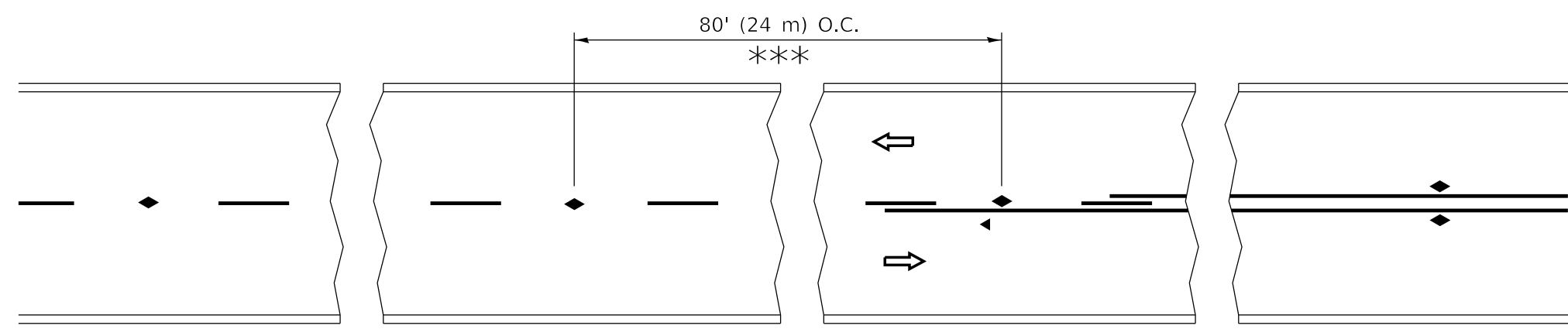
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PLOT DATE = 3/4/2019	DATE - 02-87	REVISED - M.D. 06-13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR
FREEWAY SINGLE & MULTI-LANE WEAVE

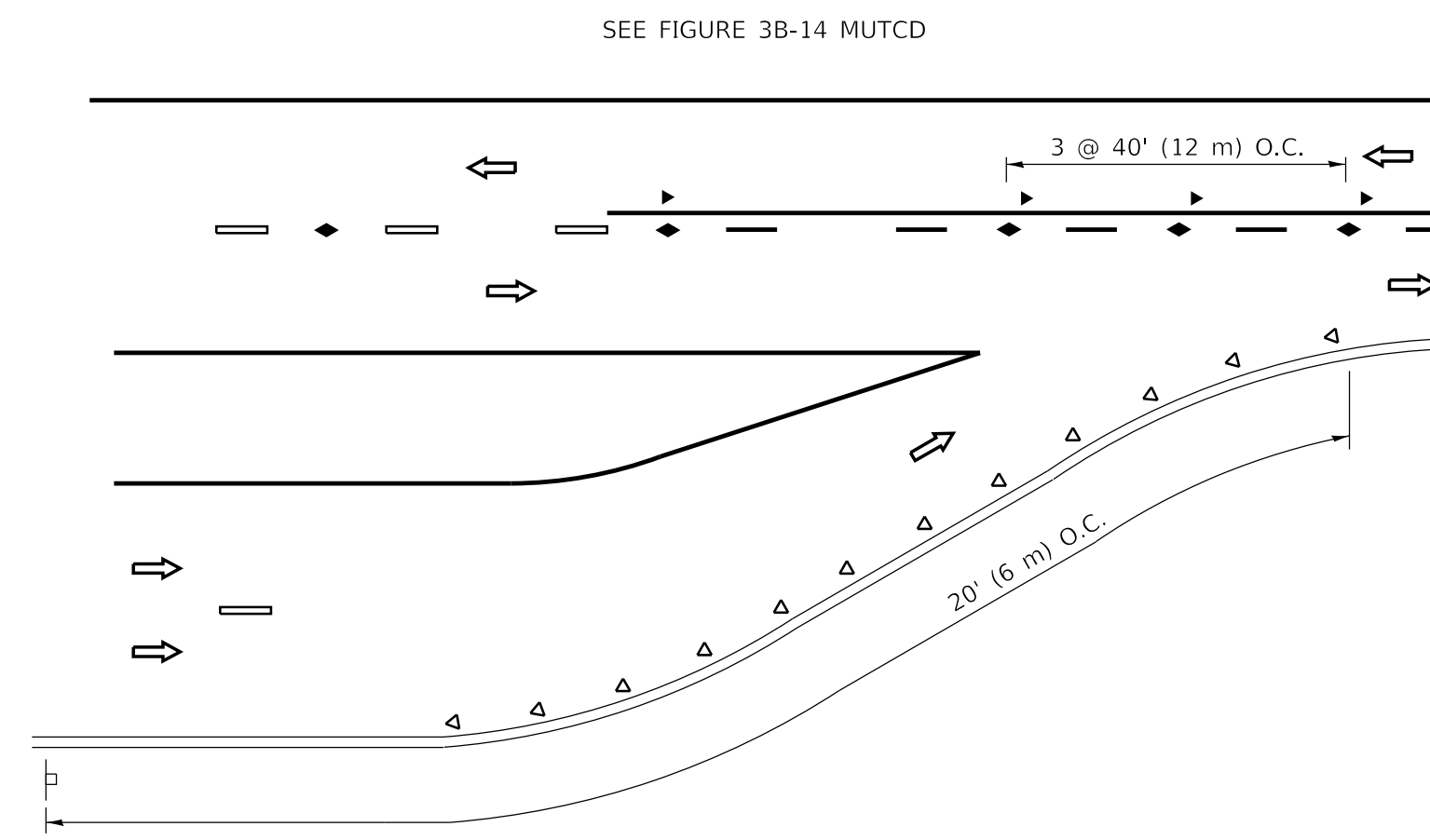
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	48
TC-09		CONTRACT NO. 62M29		
ILLINOIS FED. AID PROJECT				

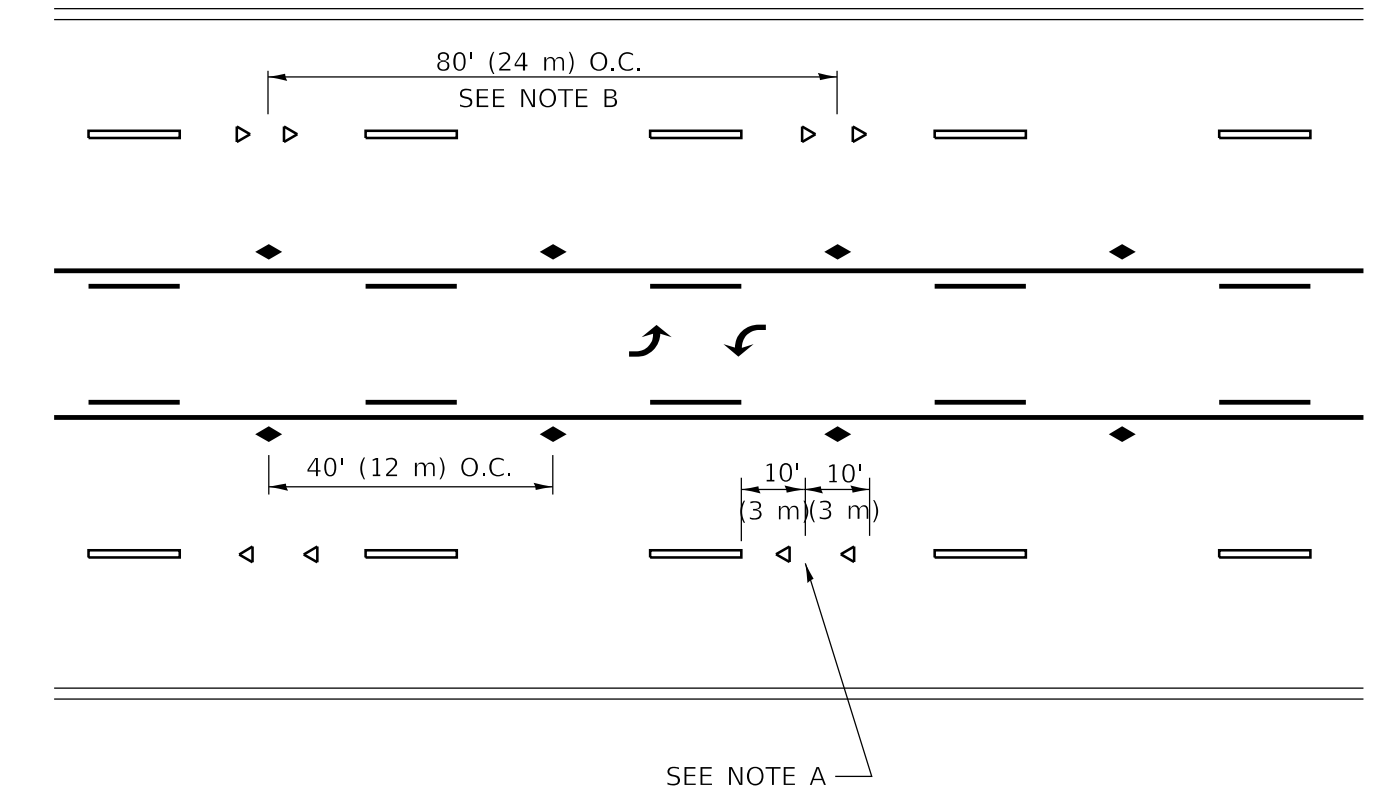


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

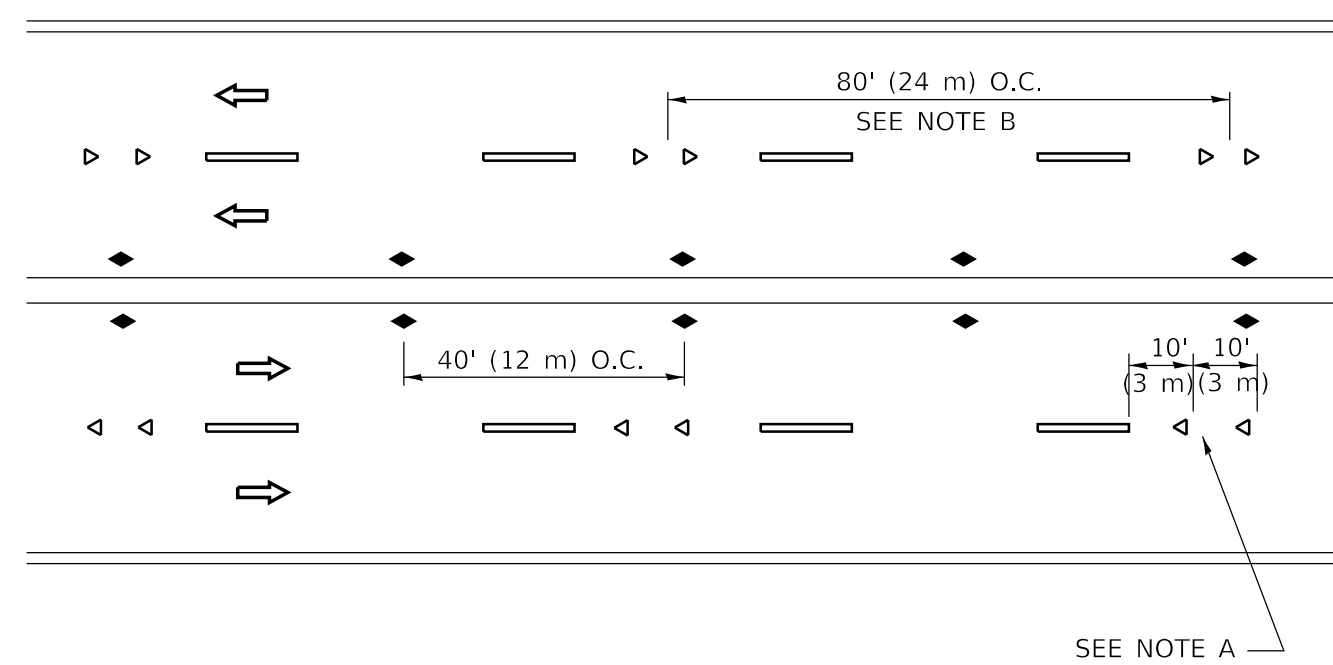
TWO-LANE/TWO-WAY



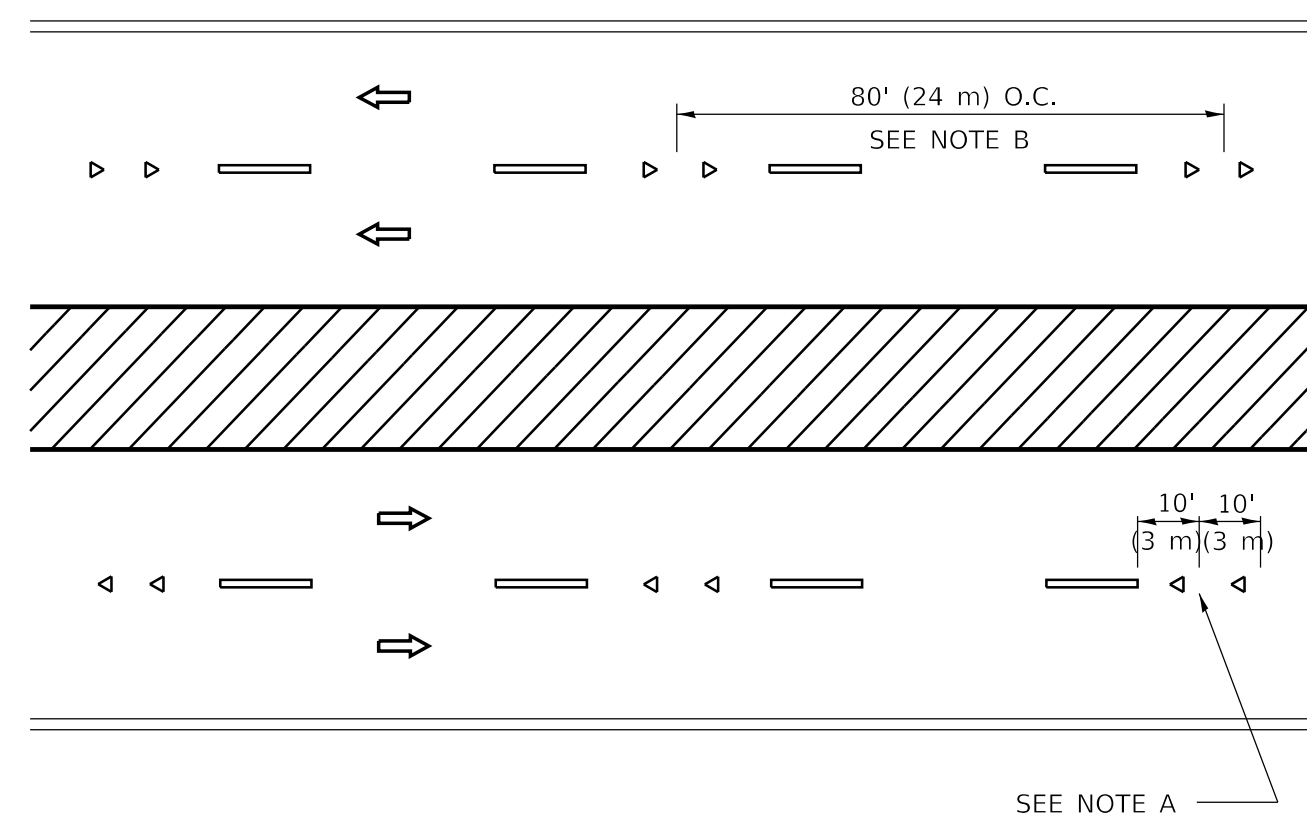
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

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

SYMBOLS

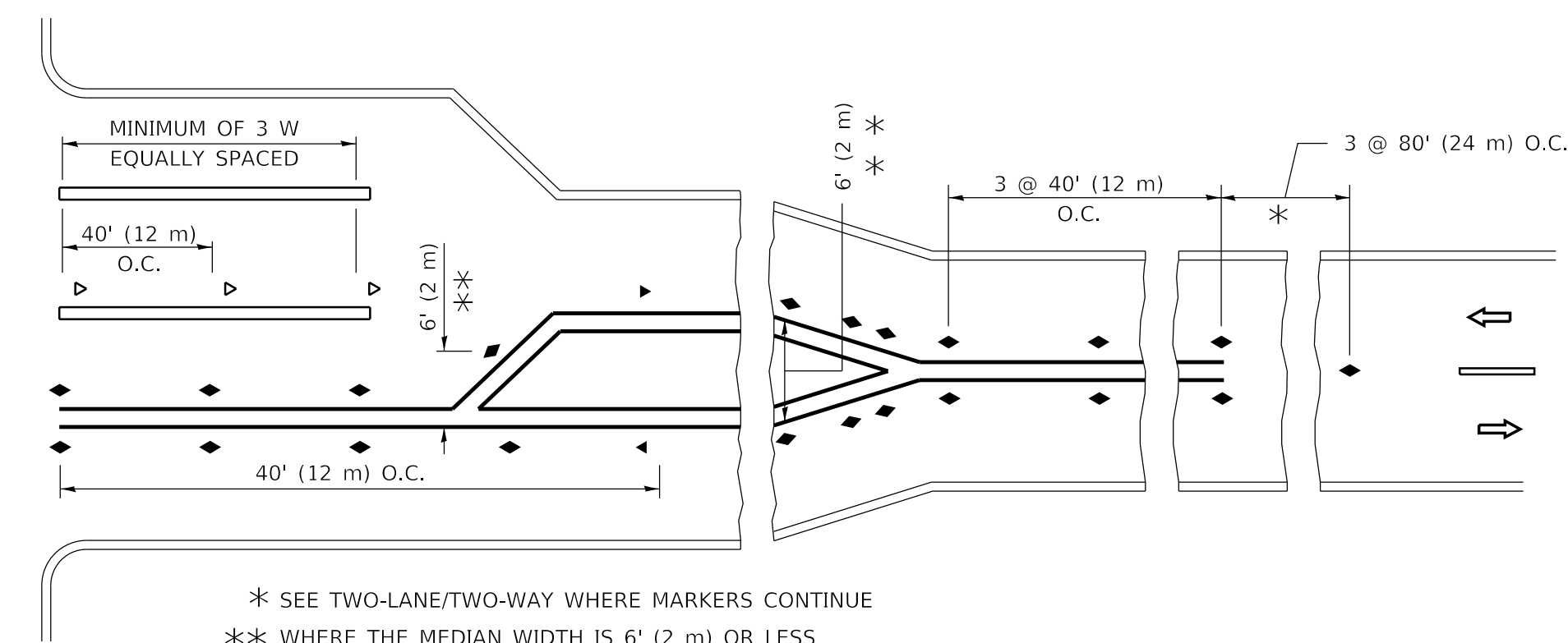
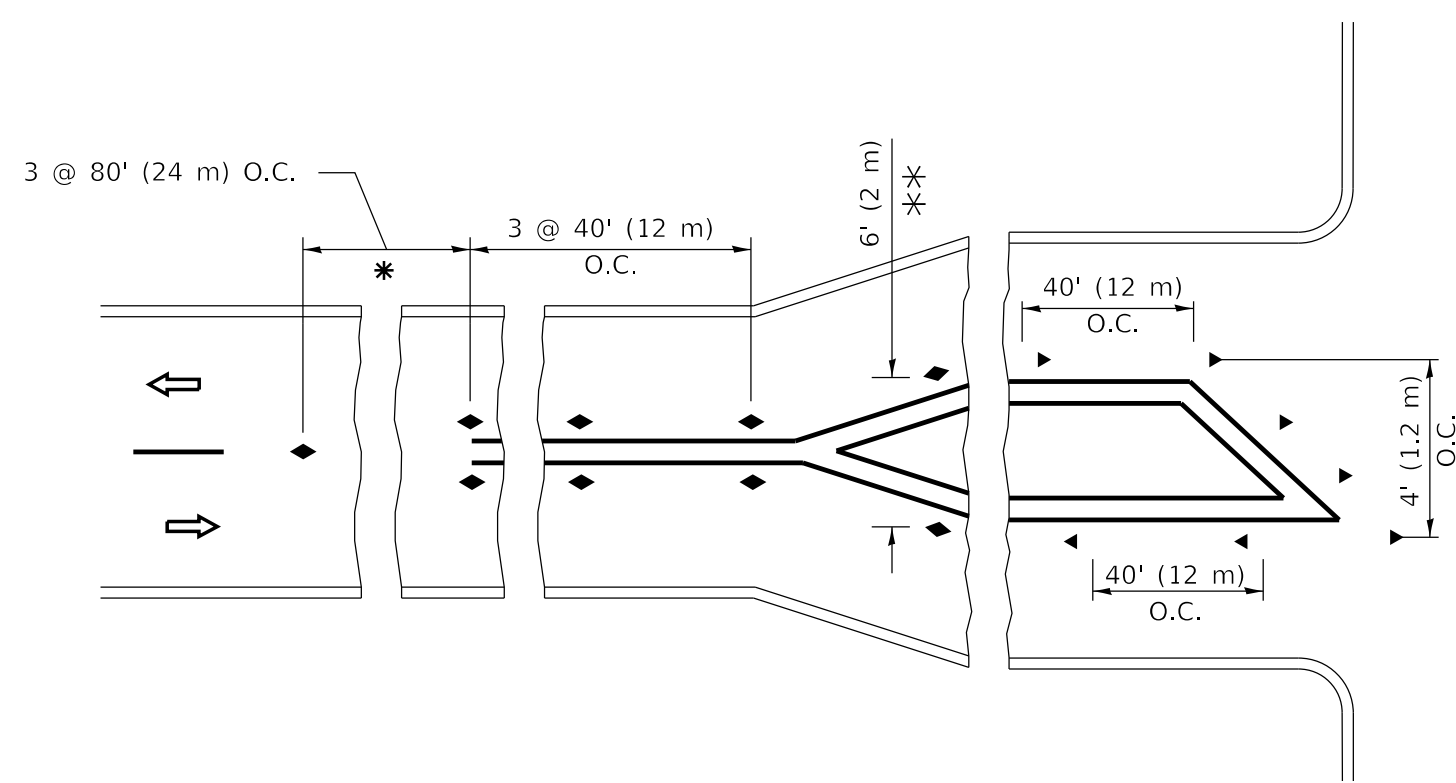
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◀ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

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

DESIGN NOTES

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



TURN LANES

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

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

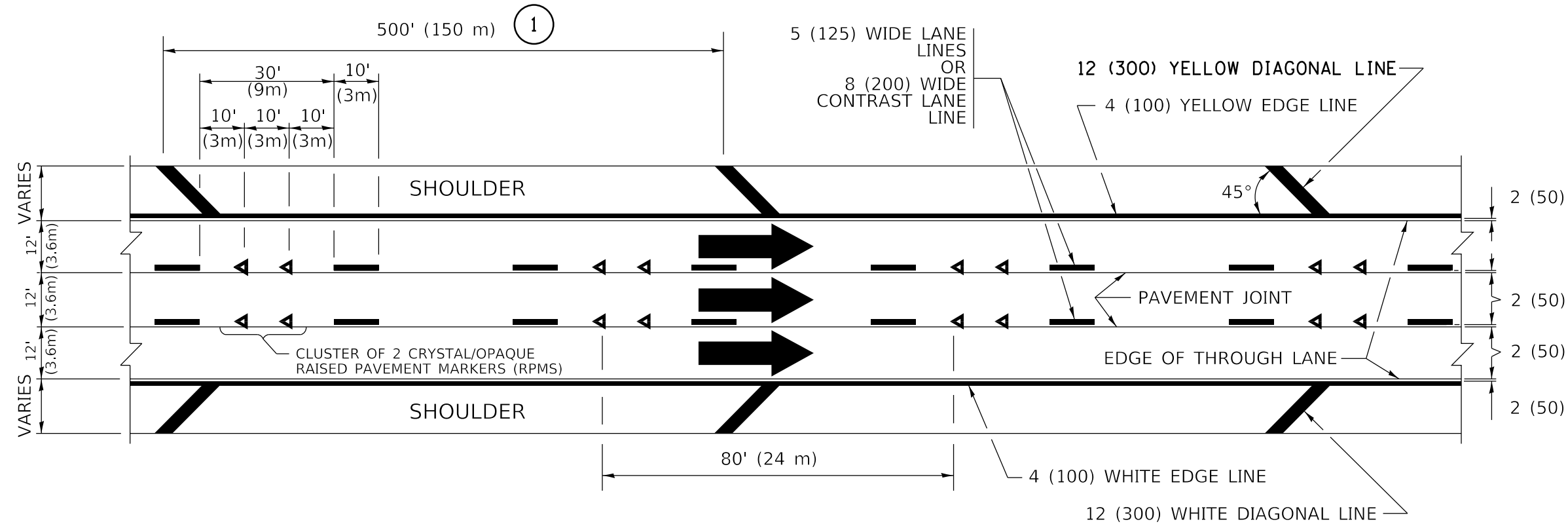
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PLOT DATE = 3/4/2019	CHECKED -	REVISED - C. JUCIUS 09-09-09
	DATE -	REVISED - C. JUCIUS 07-01-13

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL APPLICATIONS			
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)			
SCALE: NONE	SHEET 1	OF 1 SHEETS	STA. TO STA.

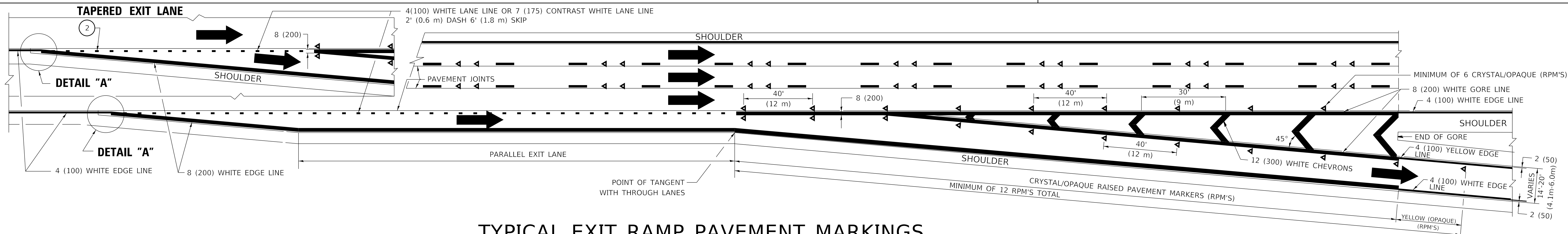
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-11			CONTRACT NO. 62M29	
ILLINOIS FED. AID PROJECT				



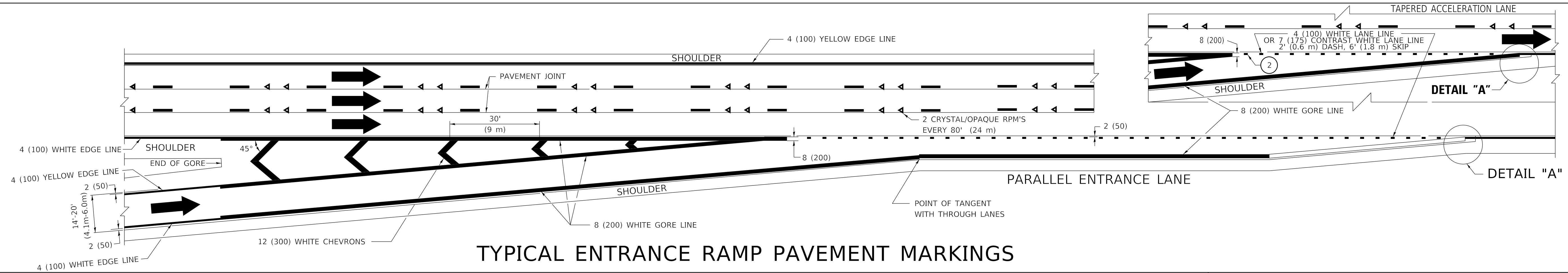
TYPICAL EDGE LINES & LANE LINES

PAVEMENT MARKING MATERIALS

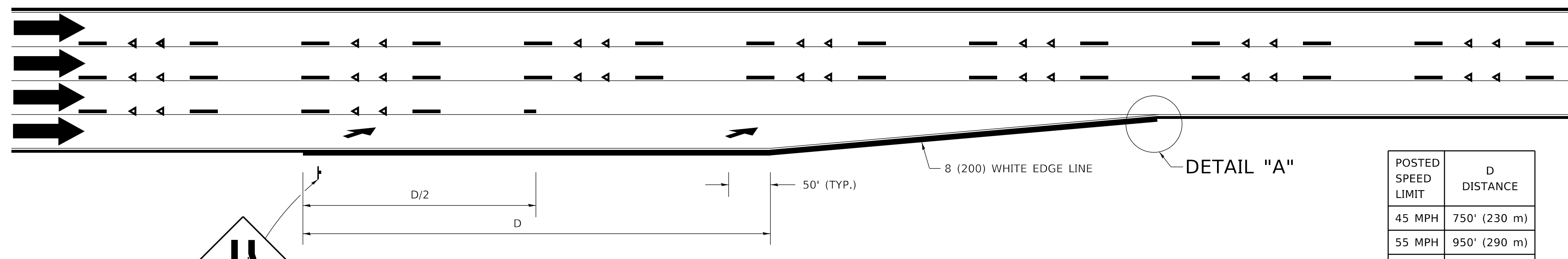
1. THERMOPLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON HMA PAVEMENTS.
2. POLYUREA OR MODIFIED URETHANE PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON PCC PAVEMENTS.
3. PREFORMED PLASTIC PAVEMENT MARKING LINE TYPE B, INLAID OR GROOVE IN, SHALL BE USED FOR ALL LANE LINES ON HMA PAVEMENTS.
4. CONTRAST PREFORMED PLASTIC PAVEMENT MARKING LINE TYPE B, GROOVE IN, SHALL BE USED FOR ALL LANE LINES ON PCC PAVEMENT.



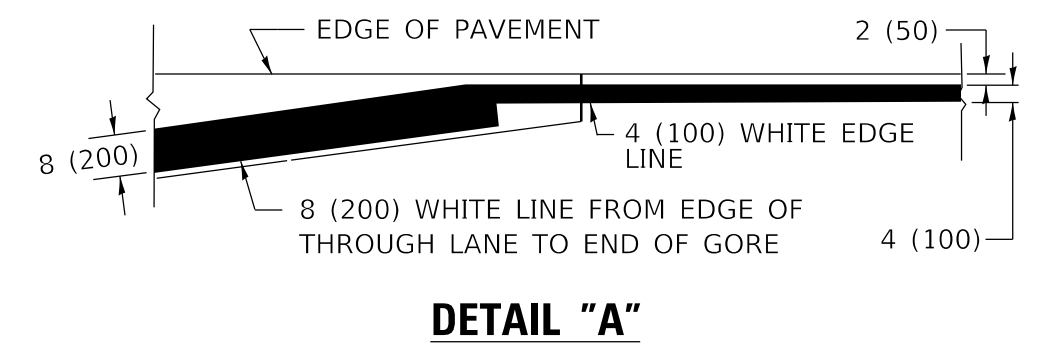
TYPICAL EXIT RAMP PAVEMENT MARKINGS



TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS



POSTED SPEED LIMIT	D DISTANCE
45 MPH	750' (230 m)
55 MPH	950' (290 m)
65 MPH	1200' (365 m)



- NOTES:**
- ① THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
 - ② 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED ON TANGENT SECTIONS.

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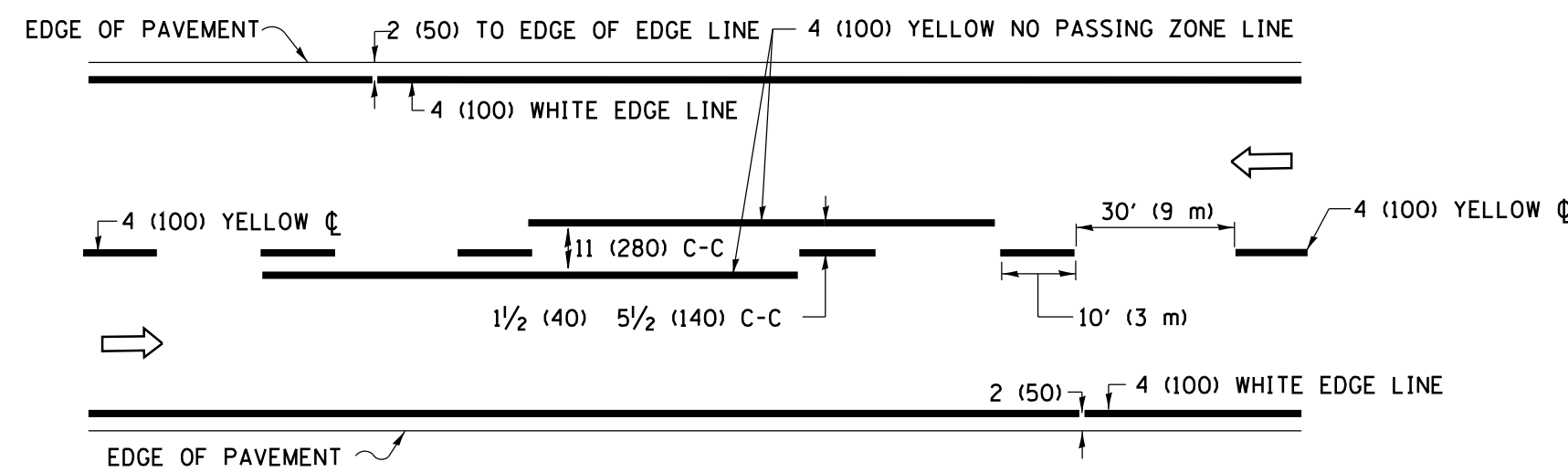
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

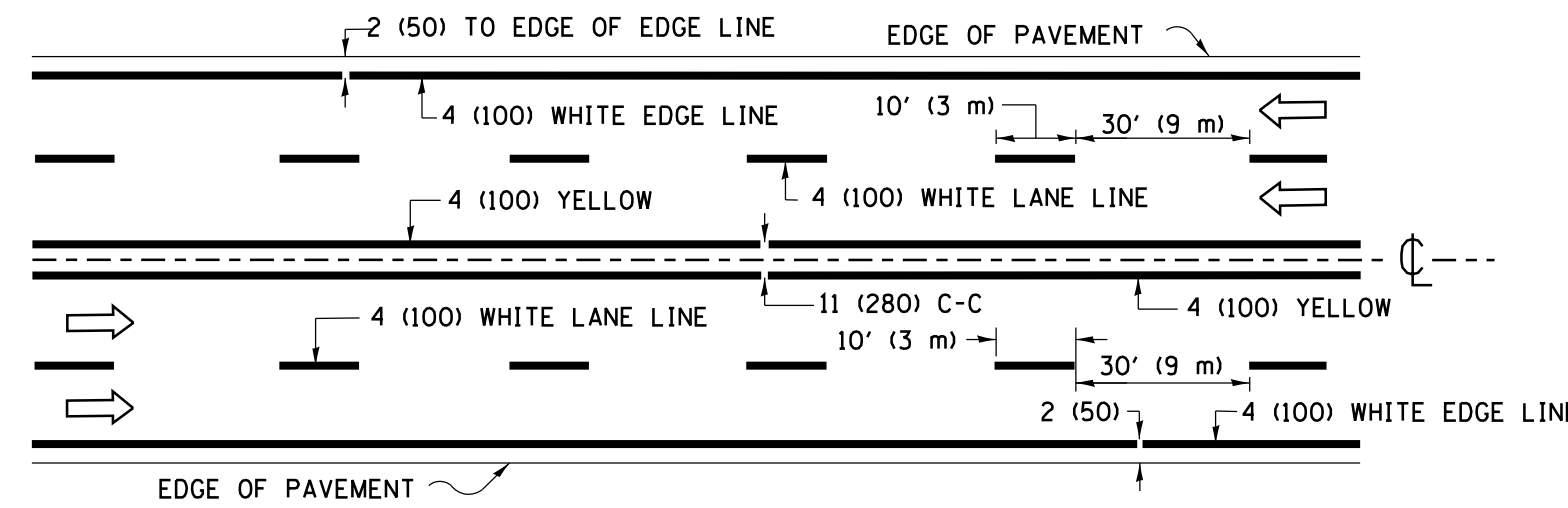
MULTI-LANE FREEWAY
PAVEMENT MARKING DETAILS

SCALE: NONE SHEET 1 OF 2 SHEETS STA. TO STA.

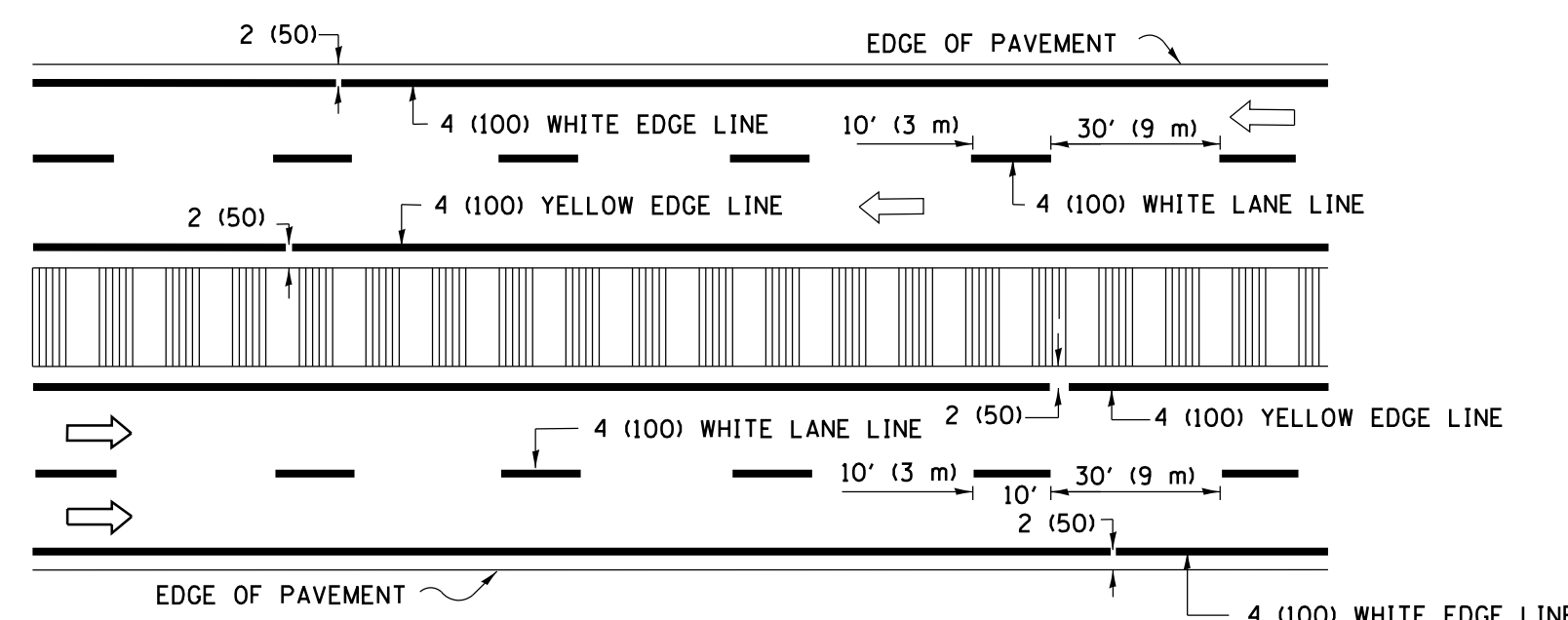
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TC-12		CONTRACT NO. 62M29		
ILLINOIS FED. AID PROJECT				



2-LANE ROADWAY

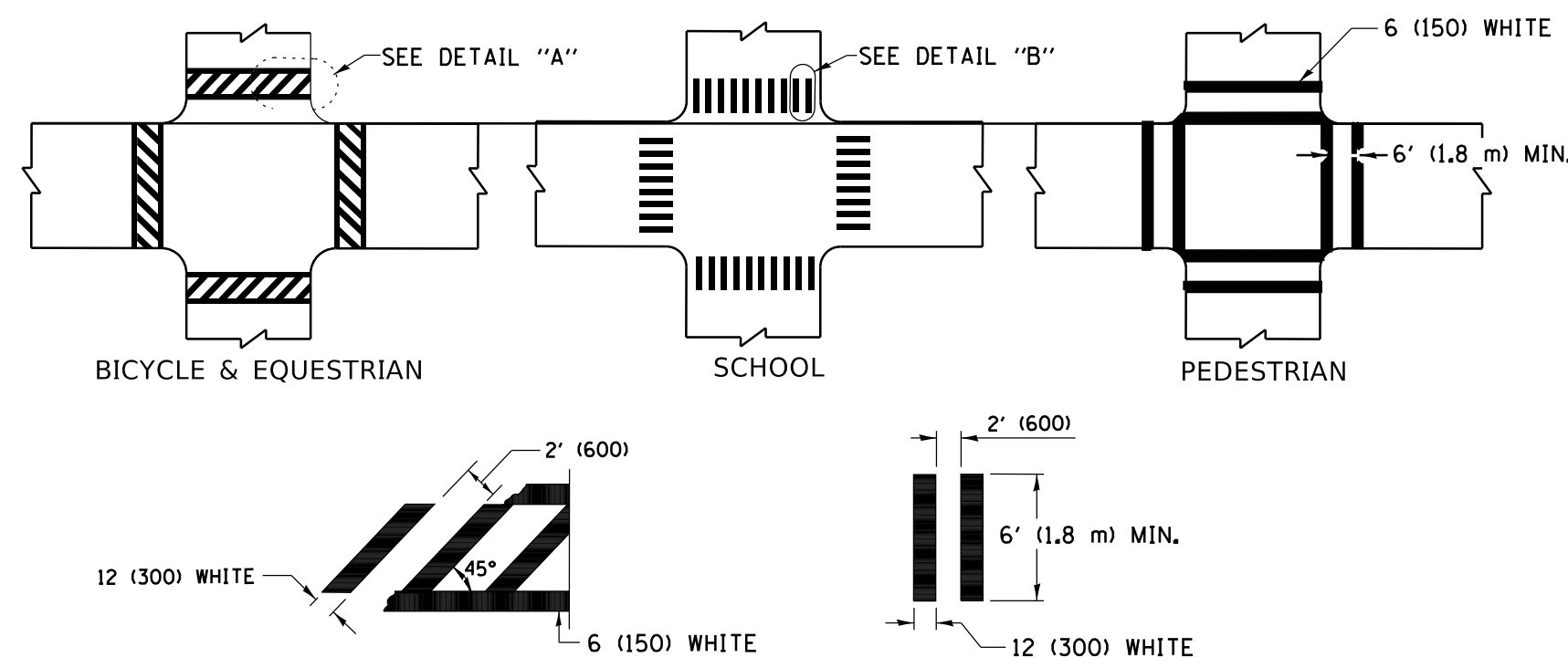


MULTI-LANE UNDIVIDED



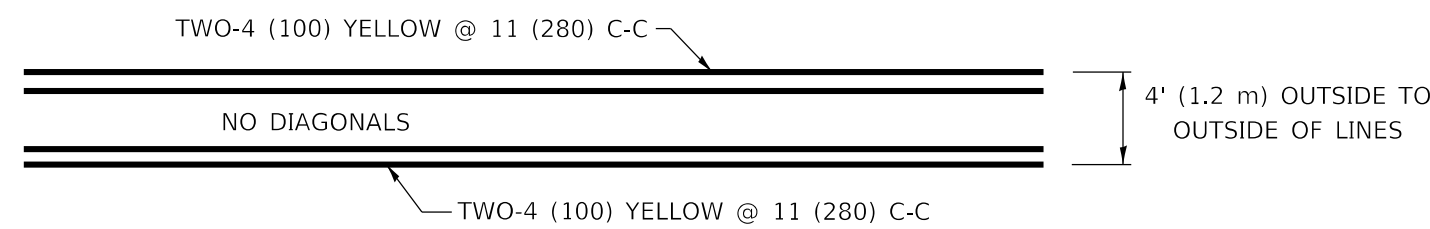
MULTI-LANE DIVIDED WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

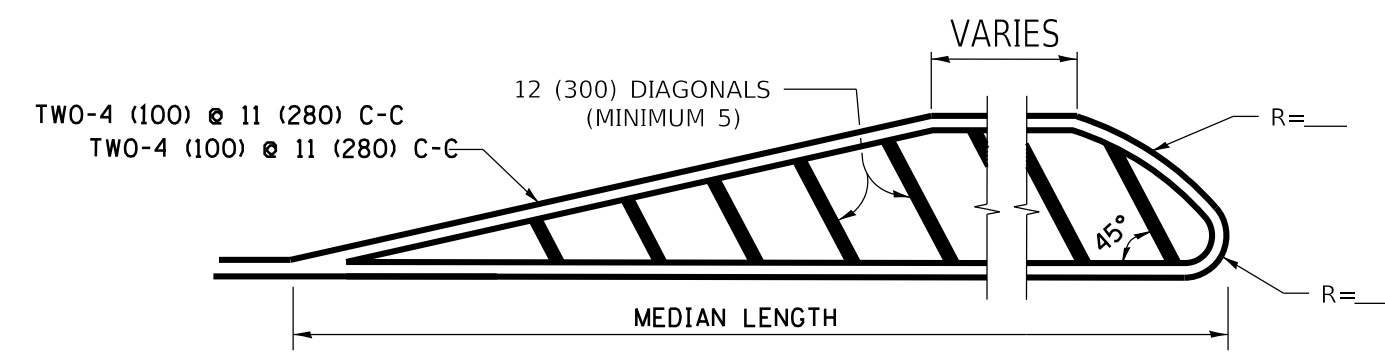


TYPICAL CROSSWALK MARKING

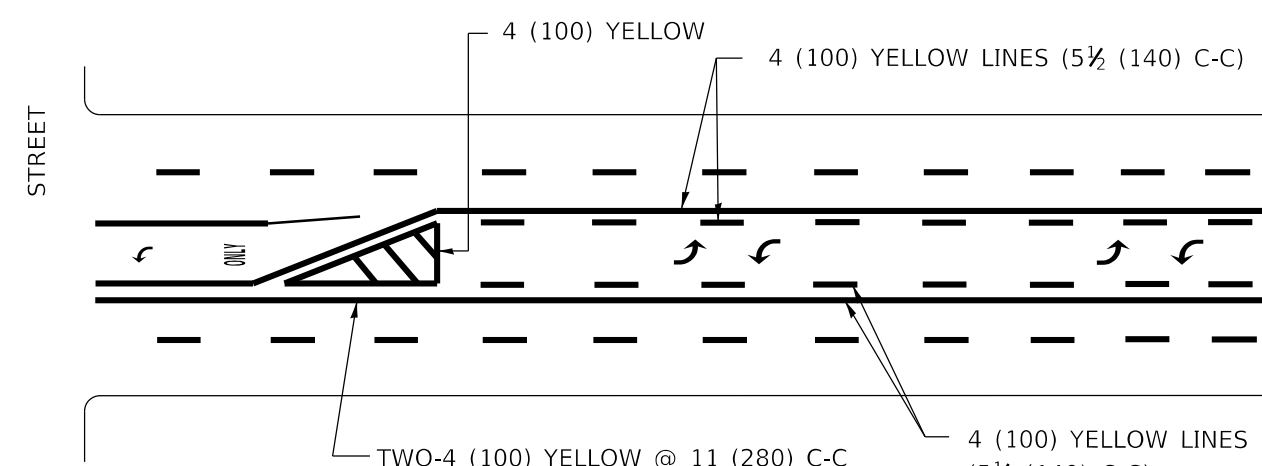
* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



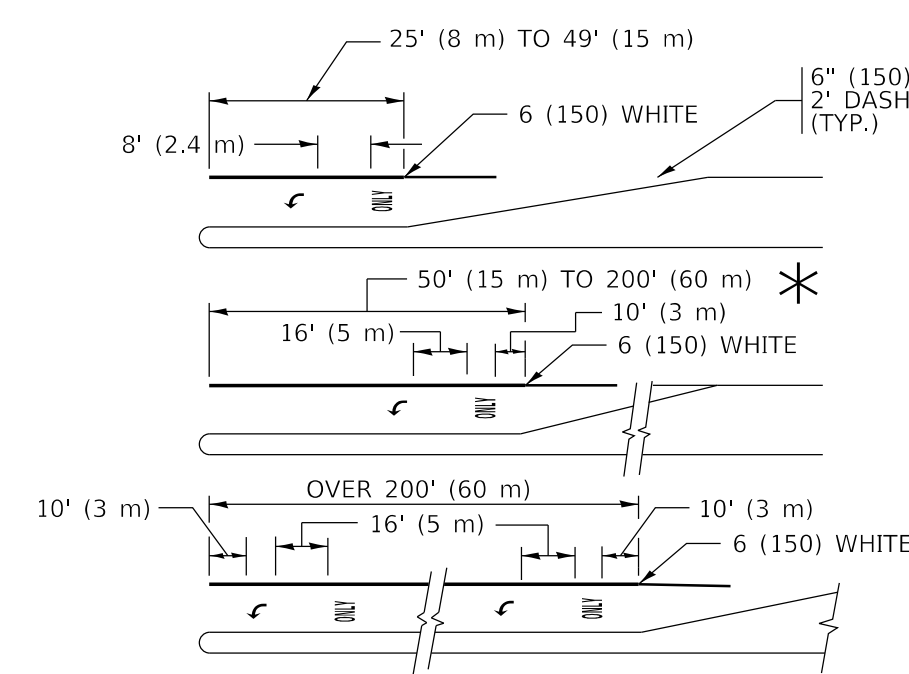
4' (1.2 m) WIDE MEDIANS ONLY



MEDIANS OVER 4' (1.2 m) WIDE

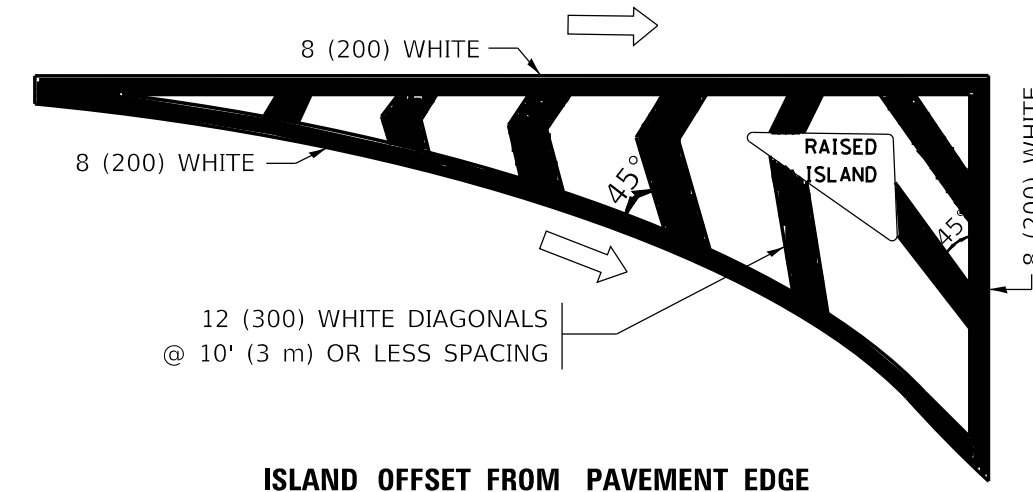


MEDIAN WITH TWO-WAY LEFT TURN LANE TYPICAL PAINTED MEDIAN MARKING

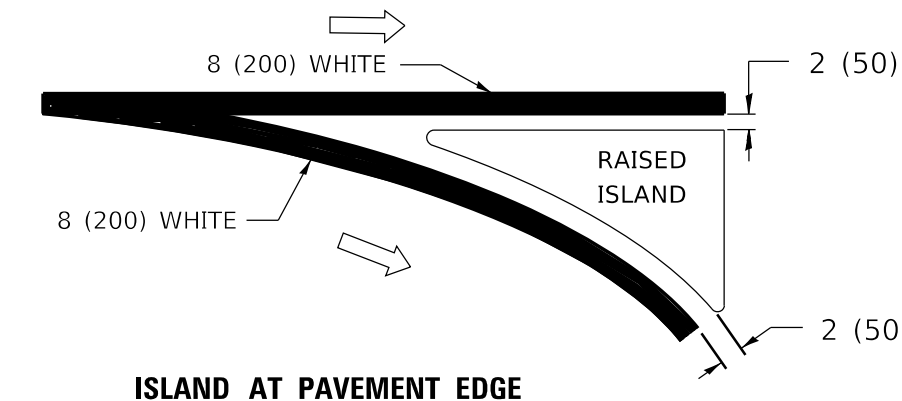


TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

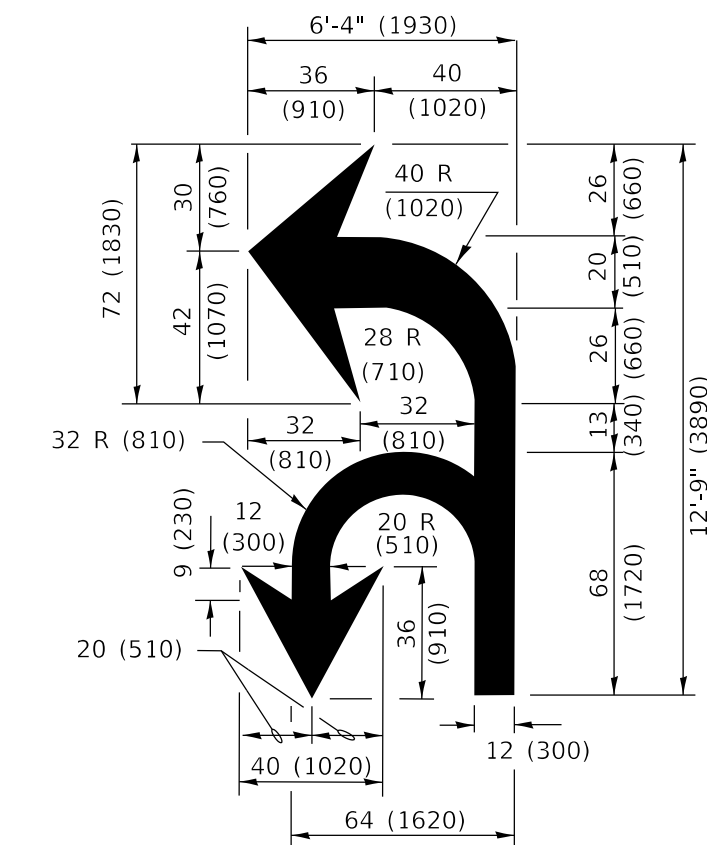


ISLAND OFFSET FROM PAVEMENT EDGE

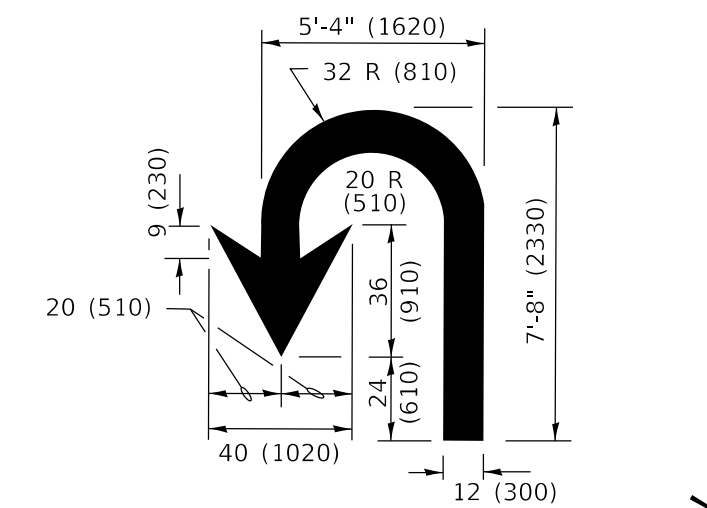


ISLAND AT PAVEMENT EDGE

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 ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

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

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

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		REVISED - C. JUCIUS 04-12-16

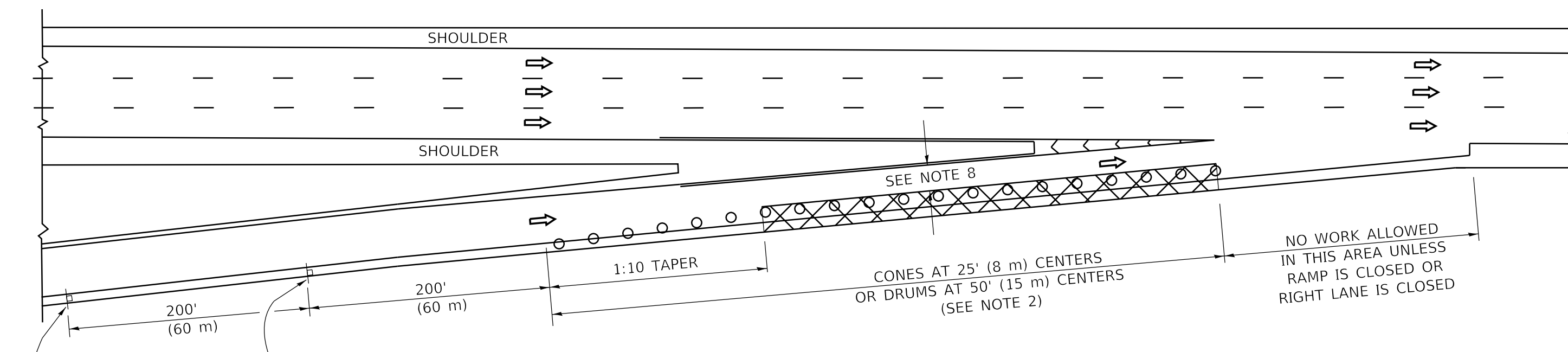
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
TYPICAL PAVEMENT MARKINGS**

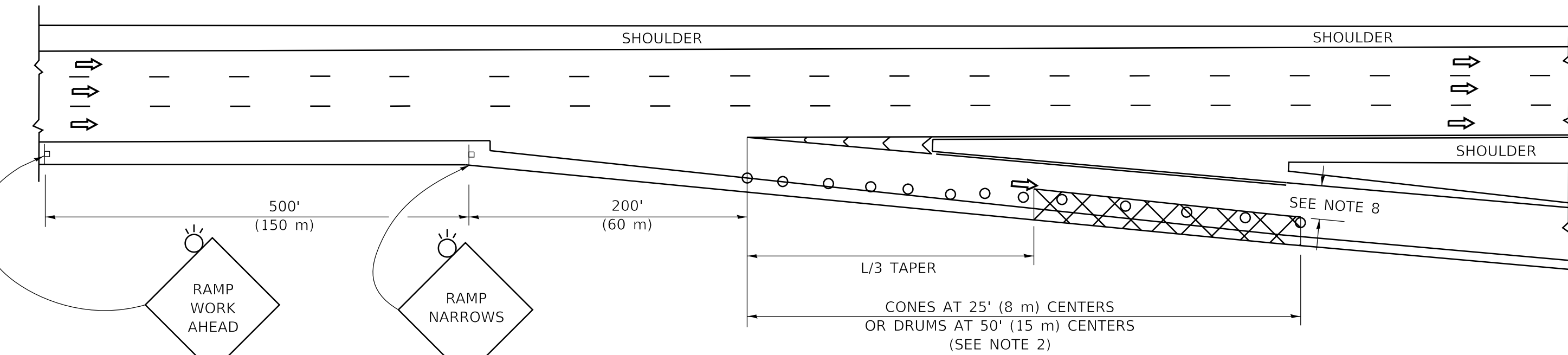
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-13		CONTRACT NO.	62M29	
ILLINOIS FED. AID PROJECT				

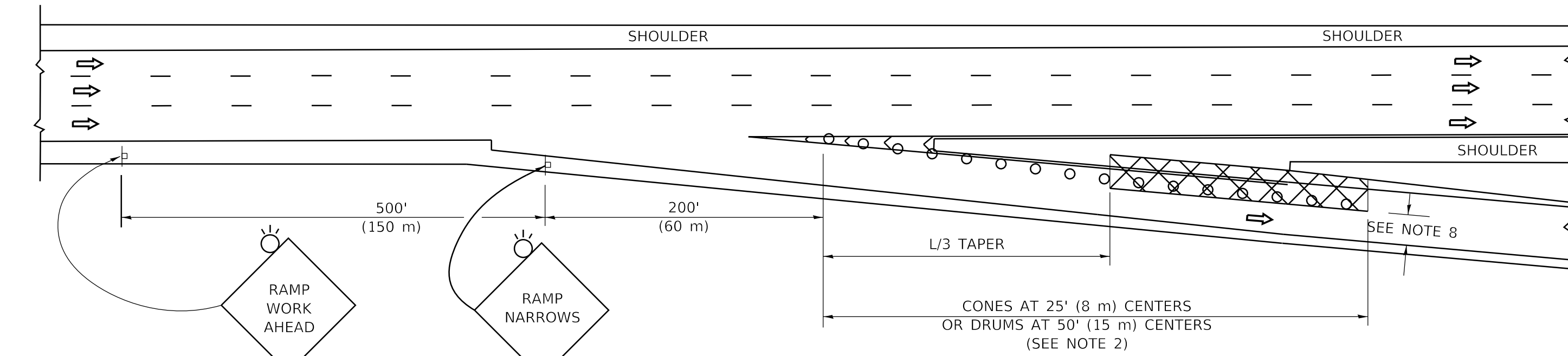
PARTIAL RAMP CLOSURE DETAILS



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

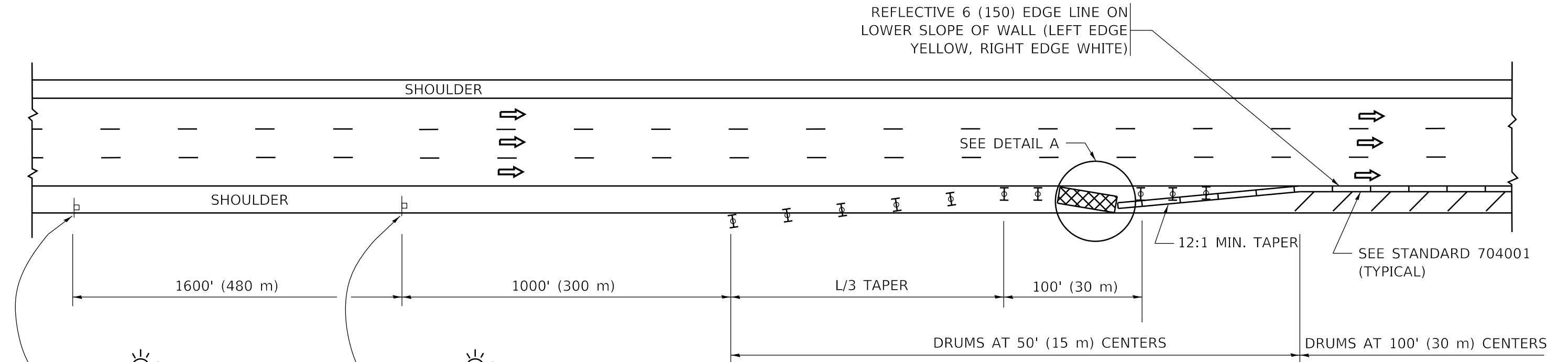
GENERAL NOTES:

- THE "L" DISTANCE EQUALS:

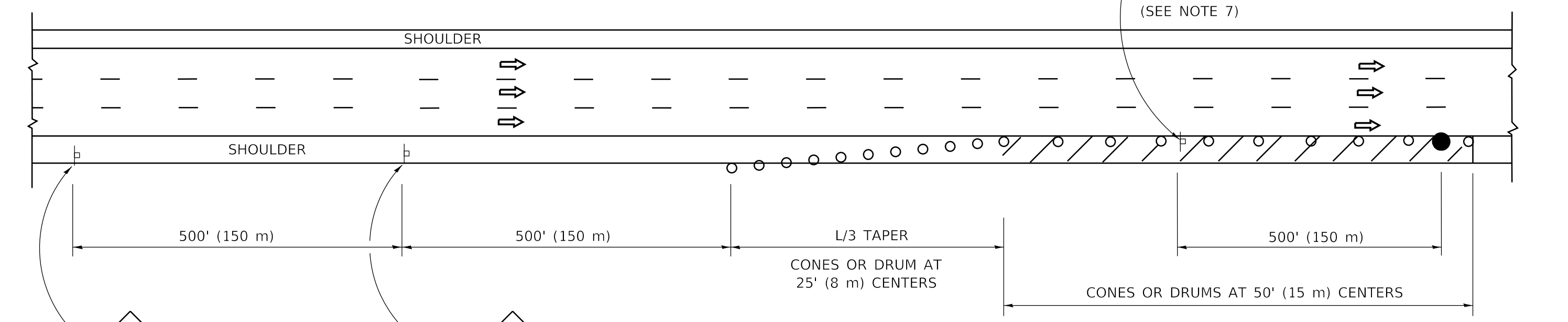
SPEED LIMIT	FORMULAS
45 mph (80 km/h)	METRIC ENGLISH
OR GREATER:	$L=0.65(WXS)$ $L=(W)XS$

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



DAYTIME SHOULDER CLOSURE

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

ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350/MASH COMPLIANT.

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

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

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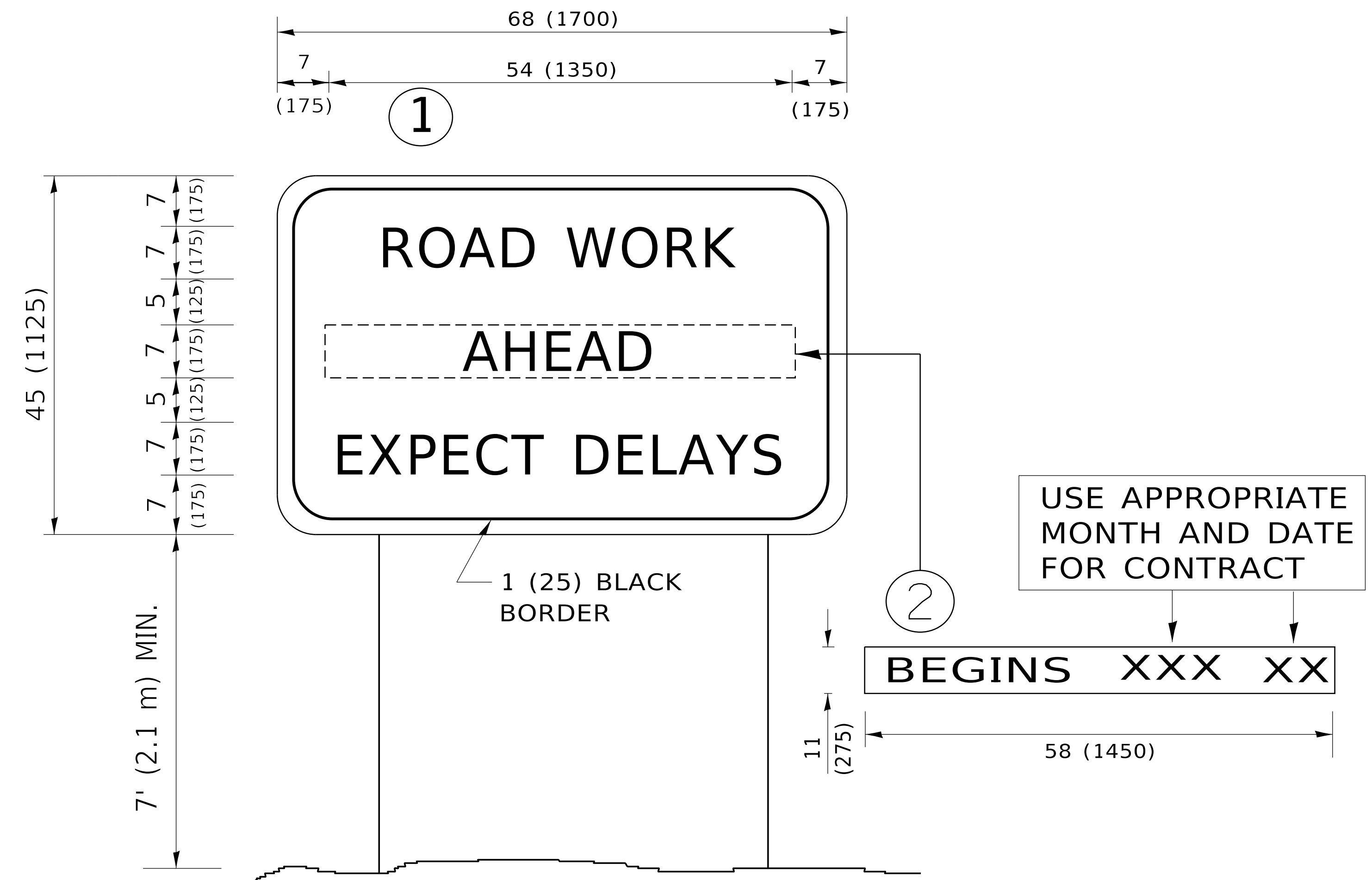
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PLOT DATE = 3/4/2019	DATE - 11-96	REVISED - M.D. 01-18

**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.

F.A.P. RTE. 332	SECTION 2020-169-BR	COUNTY COOK	TOTAL SHEETS 54	SHEET NO. 53
TC-17		CONTRACT NO. 62M29		
ILLINOIS FED. AID PROJECT				



NOTES:

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

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

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2020-169-BR	COOK	54	54
TC-22		CONTRACT NO. 62M29		
ILLINOIS FED. AID PROJECT				