

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	1
		ILLINOIS	CONTRACT NO. G2K20	

THE IMPROVEMENT IS LOCATED IN THE CITY OF CHICAGO

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION:

NB I-55  
INTERSTATE  
ADT (2018) = 140300  
POSTED SPEED LIMIT = 55 MPH

PROPOSED  
HIGHWAY PLANS

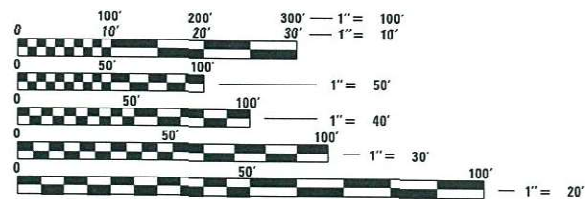
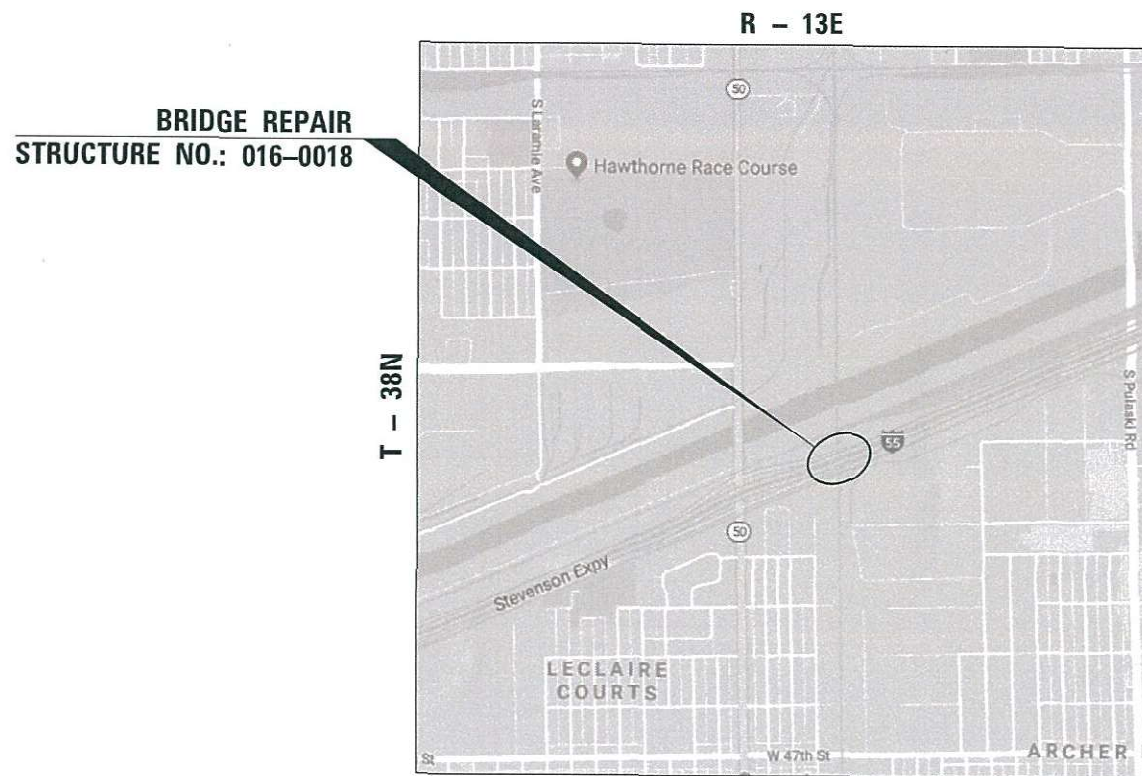
FAI 55 I-55 (STEVENSON EXPRESSWAY)  
AT BRC RAILROAD 0.3 MILES  
EAST OF IL RTE 50 (CICERO AVE)  
SECTION 2019-146-BR  
BRIDGE REPAIR  
COOK COUNTY  
C-91-099-20

D-91-305-20



QUIGG ENGINEERING INC  
SHEETS  
1-8

DATE: 10/31/2019  
LICENSE EXPIRES ON 11/30/2021



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.

C.U.A.N.  
CHICAGO UTILITY ALERT NETWORK  
1-312-744-7000

PROJECT MANAGER: FAWAD AQEEL, PE, PTOE (847) 705-4247  
PROJECT ENGINEER: PRAVEEN KAINI, PE (847) 705-4237

CONTRACT NO.: 62K20

LAKE TOWNSHIP  
LOCATION MAP

NOT TO SCALE  
GROSS LENGTH = 287 FT. = 0.054 MI.  
NET LENGTH = 287 FT. = 0.054 MI.



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED January 24, 2020  
*Anthony J. Quigg* REGIONAL ENGINEER  
May 8, 2020  
*Scott A. Elk* ENGINEER OF DESIGN AND ENVIRONMENT  
May 8, 2020  
*Jamir J. [Signature]* DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 13

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OF THE STATE OF ILLINOIS

**INDEX OF SHEETS**

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**STATE STANDARDS**

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
631031-16	TRAFFIC BARRIER TERMINAL, TYPE 6
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY / EXPRESSWAY
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY / EXPRESSWAY
701446-10	TWO LANE CLOSURE FREEWAY / EXPRESSWAY
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

**GENERAL NOTES:**

1. THESE PLANS HAVE BEEN PREPARED FROM INFORMATION ACQUIRED FROM EXISTING PLANS AND NOTES RECEIVED FROM IDOT FIELD MAINTENANCE ENGINEERS.
2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO VARIATIONS FOUND IN THE FIELD. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. ANY ADJUSTMENTS PROPOSED BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED BASED UPON THE UNIT PRICE.
3. SEVENTY TWO HOURS BEFORE STARTING EXCAVATION, THE CONTRACTOR WILL CALL DIGGER (CHICAGO UTILITY ALERT NETWORK) AT (312) 744-7000 FOR LOCATIONS OF THE EXISTING UTILITIES.
4. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
5. SAW CUTTING PRIOR TO ANY REMOVAL ITEMS NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEMS BEING REMOVED.
6. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
7. THE CONTRACTOR SHALL USE CARE IN REMOVING OR EXCAVATING NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
8. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, AS REQUIRED, PRIOR TO COMMENCING CONSTRUCTION.
9. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR FOR EXPRESSWAYS AT (847) 705-4155 AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.
10. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OUTSIDE THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
11. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.
12. ANY AGGREGATE SUBGRADE IMPROVEMENT CONTAMINATED AND/OR DAMAGED BY THE CONTRACTOR'S VEHICLES AND/OR EQUIPMENT IS TO BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER AT CONTRACTOR EXPENSE.
13. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ASSURE THAT NO DEBRIS FALLS ONTO THE BRC RR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.
14. CONTRACTOR SHALL COMPLY WITH CITY OF CHICAGO NOISE CONTROL ORDINANCE.
15. CONTRACTOR SHALL NOTIFY PACE 10 DAYS PRIOR TO STARTING CONSTRUCTION. CONTACT IS RICHARD WILLMAN AT RICHARD.WILLMAN@PACEBUS.COM OR (847) 228-3584.

**COMMITMENTS**

NONE

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>I-55 OVER BRC INDEX OF SHEETS, STATE STANDARDS GENERAL NOTES, AND COMMITMENTS</b>			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	2
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K20	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				100% STATE
				BRIDGE
				0013
				S.N. 016-0018
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	12	12
25200110	SODDING, SALT TOLERANT	SQ YD	12	12
50102400	CONCRETE REMOVAL	CU YD	48.4	48.4
50157300	PROTECTIVE SHIELD	SQ YD	94	94
50200100	STRUCTURE EXCAVATION	CU YD	16.6	16.6
50300225	CONCRETE STRUCTURES	CU YD	4.6	4.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	40.8	40.8
50300300	PROTECTIVE COAT	SQ YD	138	138
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	2.5	2.5
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	80	80
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	11120	11120
50800530	MECHANICAL SPLICERS	EACH	27	27
52000020	PREFORMED JOINT SEAL 1 3/4"	FOOT	96	96
52000320	NEOPRENE EXPANSION JOINT 2"	FOOT	4.5	4.5

\* SPECIALTY ITEMS

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				100% STATE
				BRIDGE
				0013
				S.N. 016-0018
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	140	140
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1	1
63200310	GUARDRAIL REMOVAL	FOOT	40	40
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	17	17
66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1
66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1	1
66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1	1
66901006	REGULATED SUBSTANCES MONITORING	CAL DA	10	10
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12
67100100	MOBILIZATION	L SUM	1	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	90	90
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1
70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	425	425
70400100	TEMPORARY CONCRETE BARRIER	FOOT	475	475

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-55 OVER BRC  
SUMMARY OF QUANTITIES**

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	3
CONTRACT NO. 62K20			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				100% STATE
				BRIDGE
				0013
				S.N. 016-0018
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	1	1
78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	425	425
78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	113	113
78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	38	38
X0320012	REMOVE TEMPORARY IMPACT ATTENUATORS, STATE OWNED	EACH	1	1
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	142	142
X7010410	SPEED DISPLAY TRAILER	CAL MO	3	3
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1
X7013820	TRAFFIC CONTROL SURVEILLANCE, EXPRESSWAYS	CAL DA	65	65
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	19	19
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	76	76
Z0041895	POLYMER CONCRETE	CU FT	10.8	10.8
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1
Ø Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOUR	500	500

\* SPECIALTY ITEMS

Ø 0042

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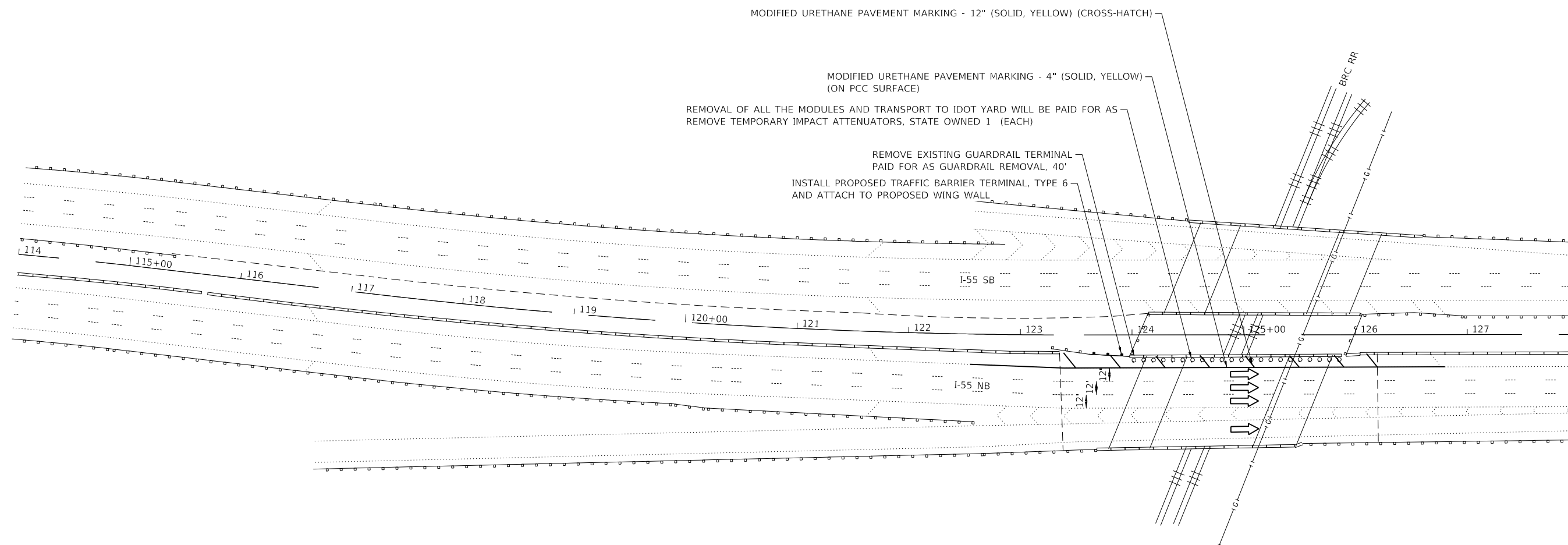
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	DATE - 10/29/2019	REVISOR -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-55 OVER BRC  
SUMMARY OF QUANTITIES**

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	4
			CONTRACT NO. 62K20	
ILLINOIS FED. AID PROJECT				



- LEGEND:**
- EX IMPACT ATTENUATOR MODULES (STATE OWNED)
  - ➔ DIRECTION OF TRAFFIC FLOW
  - PROPOSED TRAFFIC BARRIER TERMINAL, TYPE 6

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-55 OVER BRC  
PLAN SHEET**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	5
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				

**TRAFFIC CONTROL GENERAL NOTES**

1. TRAFFIC CONTROL AND PROTECTION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ALL LANE, RAMP AND SHOULDER CLOSURES ON THE EXPRESSWAY SHALL BE SET UP IN ACCORDANCE WITH 2019 ILLINOIS HIGHWAY STANDARDS FOR TRAFFIC CONTROL 701400, 701401, 701428, 701446, 701901 AND DISTRICT 1 TRAFFIC CONTROL DETAILS, TC-08, TC-09, TC-17 AND TC-18.
3. TYPE A LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE USED ON EACH SIGN IN ADVANCE OF THE WORK DURING HOURS OF DARKNESS.
4. ALL WARNING SIGNS SHALL BE A MINIMUM OF 48" X 48" AND HAVE A BLACK LEGEND AND BORDER ON A FLUORESCENT ORANGE REFLECTORIZED BACKGROUND.
5. ALL TYPE III BARRICADES UTILIZED FOR ROAD CLOSURES SHALL HAVE TWO LOW INTENSITY FLASHING LIGHTS MOUNTED ON TOP OF EACH BARRICADE.
6. MAINTAIN EXISTING TRAFFIC SIGNS.
7. COVER ALL EXISTING TRAFFIC SPEED LIMIT SIGNS WHERE WORK ZONE SPEED LIMIT CHANGES ARE IMPLEMENTED.
8. WHERE ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
9. EXACT LOCATION OF ALL WARNING SIGNS AND BARRICADES SHALL BE STAKED IN THE FIELD FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.
10. PRIOR TO START OF CONSTRUCTION, ALL REQUIRED TRAFFIC CONTROL DEVICES SHALL BE IN PLACE.
11. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS PRIOR TO ANY ANTICIPATED CLOSURES.
12. A MINIMUM 11' LANE WIDTH SHALL BE MAINTAINED ON ALL INTERSTATE LANES OPEN TO TRAFFIC DURING CONSTRUCTION.
13. THE CONTRACTOR SHALL COORDINATE WORK WITH PRIVATE UTILITY COMPANIES AND THEIR CONTRACTORS FOR ADJUSTMENTS, SUPPORTS, AND RELOCATION. UTILITY WORK WILL GENERALLY BE CONDUCTED PRIOR TO ROADWAY WORK, BUT CERTAIN ITEMS MAY NEED TO PROCEED IN CONCERT WITH CONSTRUCTION OPERATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT AFFECTED UTILITIES AND COORDINATE WORK WITHIN THE CONSTRUCTION SCHEDULE. THE EFFORT OF WHICH WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
14. THE CONTRACTOR SHALL ONLY SET UP AND STORE EQUIPMENT DURING CONSTRUCTION AT THE SUGGESTED STAGING WORK ZONE AREAS SHOWN IN THE PLANS OR AS APPROVED BY THE ENGINEER. THE SUGGESTED STAGING AREAS SHOWN IN THE PLANS ARE SUBJECT TO FIELD MODIFICATION AS DETERMINED BY THE ENGINEER. THE SUGGESTED STAGING AREAS MAY BE SHARED WITH OTHER ADJACENT CONTRACTS WHICH MAY BE UNDER CONSTRUCTION DURING THE DURATION OF THIS PROJECT. CONTRACTOR COOPERATION IS REQUIRED.
15. THE FURNISHING, INSTALLING, AND RELOCATION OF ALL TRAFFIC SIGNS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION, (EXPRESSWAYS). ALL CONFLICTING TRAFFIC SIGNS SHALL BE COVERED AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE COST TRAFFIC CONTROL AND PROTECTING, (EXPRESSWAYS).
16. SEE THE CONTRACT SPECIAL PROVISIONS, KEEPING THE EXPRESSWAY OPEN TO TRAFFIC SPECIAL PROVISION FOR ALLOWABLE LANE CLOSURE HOURS.

17. THE CONTRACTOR SHALL REQUEST AND GAIN APPROVAL FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S EXPRESSWAY TRAFFIC OPERATIONS ENGINEER AT WWW.IDOTLCS.COM TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL DAILY LANE, RAMP AND SHOULDER CLOSURES AND 7 DAYS IN ADVANCE OF ALL PERMANENT AND WEEKEND CLOSURES ON ALL FREEWAYS AND/OR EXPRESSWAYS IN DISTRICT ONE. THIS ADVANCE NOTIFICATION IS CALCULATED BASED ON WORKWEEK OF MONDAY THROUGH FRIDAY AND SHALL NOT INCLUDE WEEKENDS OR HOLIDAYS.

**SUGGESTED CONSTRUCTION SEQUENCE**

PRE-STAGE

THE CONTRACTOR SHALL INSTALL PROTECTIVE SHIELD UNDER SN 016-0018 INSIDE SHOULDER PER STANDARD 701446, 701400 AND 701401.

IMPLEMENT STAGE 1 TRAFFIC CONTROL ON SN 016-0018 PER PLANS AND STANDARD TC-17.

REMOVE SAND MODULES ONLY WHEN PARAPET IS PROTECTED BY TEMPORARY CONCRETE BARRIER.

STAGE 1

PROCEED WITH CONSTRUCTION OF THE DECK, PARAPET, WING WALL, APPROACH PAVEMENT AND GUARDRAIL ON THE INSIDE SHOULDER.

SHOULD DELIVERY OF MATERIALS OR EQUIPMENT REQUIRE A LANE CLOSURE, IT WILL BE DONE WITHIN THE PERMITTED HOURS PER STANDARDS 701400, 701401 AND TC-18.

CONTRACTOR MAY PROCEED WITH SUBSTRUCTURE REPAIRS AND JOINT REPAIRS.

STAGE 2

IMPLEMENT STAGE 2 TRAFFIC CONTROL FOR CLOSURE OF INSIDE SHOULDER AND LANES 1 AND 2 USING HIGHWAY STANDARD 701400, 701401, 701428, 701446, INCLUDING REMOVING TEMPORARY CONCRETE BARRIER DURING THE ALLOWABLE LANE CLOSURE HOURS LISTED IN THE KEEPING THE EXPRESSWAYS OPEN TO TRAFFIC SPECIAL PROVISION.

COMPLETE DECK PATCHING THAT COULD NOT BE COMPLETED IN STAGE 1.

PROCEED WITH REPLACEMENT OF THE JOINT IN THE INSIDE SHOULDER, LANE 1 AND PART OF LANE 2.

STAGE 3

IMPLEMENT STAGE 3 TRAFFIC CONTROL FOR CLOSURE OF LANES 2 AND 3 AND ENTRANCE RAMP GORE, USING HIGHWAY STANDARD 701400, 701401, 701428, 701446 AND TC-08 DURING THE ALLOWABLE LANE CLOSURE HOURS LISTED IN THE KEEPING THE EXPRESSWAYS OPEN TO TRAFFIC SPECIAL PROVISION.

PROCEED WITH REPLACEMENT OF THE JOINT IN THE OUTSIDE SHOULDER, PART OF LANE 2, LANE 3, ENTRANCE RAMP GORE AND ENTRANCE RAMP.

POST-STAGE

REMOVE PROTECTIVE SHIELD AND STRIPE INSIDE SHOULDER LINE USING STANDARDS 701400, 701401 AND 701428.

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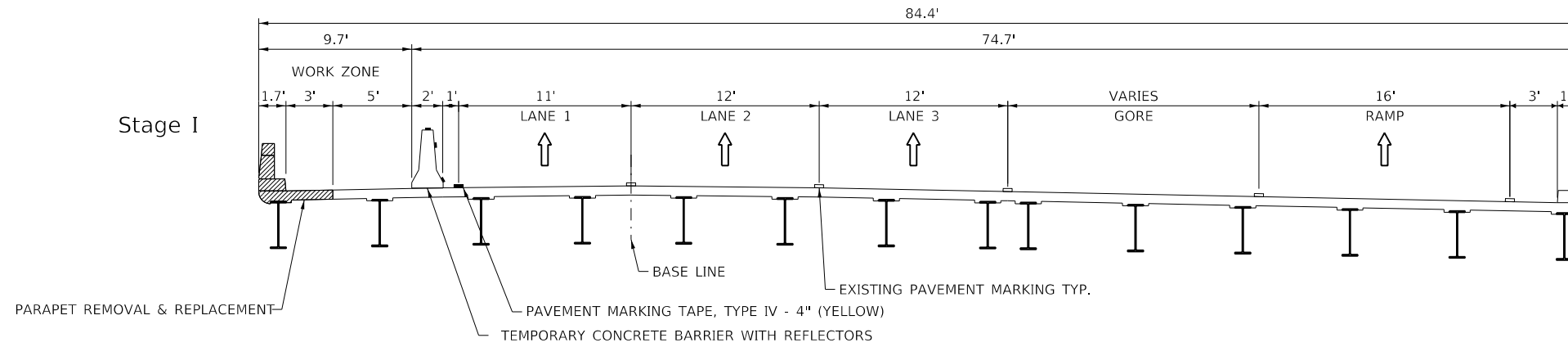
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-55 OVER BRC  
TRAFFIC CONTROL GENERAL NOTES**

SCALE: SHEET OF SHEETS STA. TO STA.

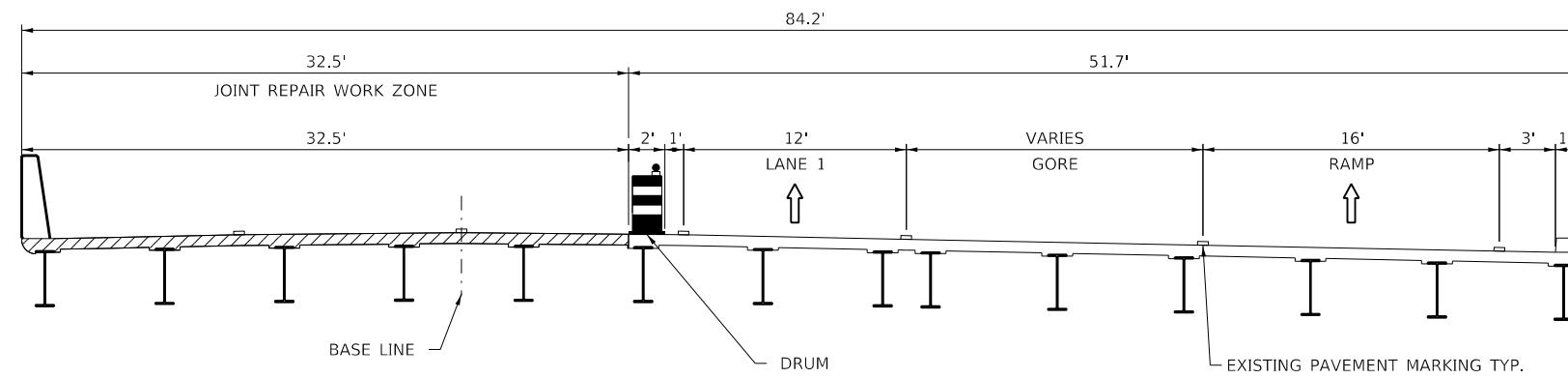
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K20	

Stage I



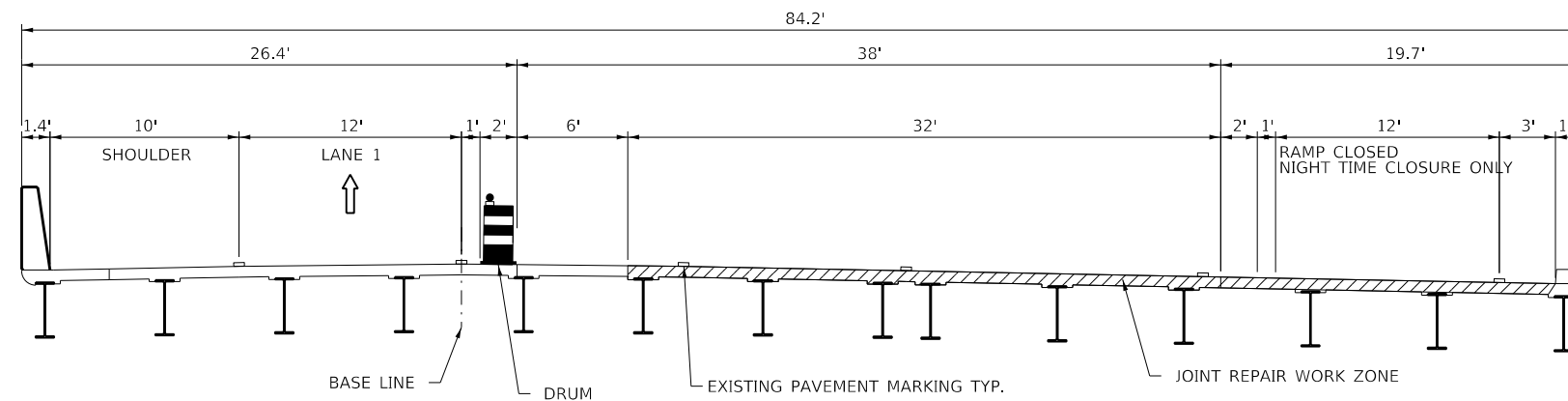
PARAPET REPAIRS TYPICAL CROSS SECTION AT I-55 OVER BRC

Stage II






PARTIAL JOINT REPLACEMENT TYPICAL CROSS SECTION AT I-55 OVER BRC

Stage III



PARTIAL JOINT REPLACEMENT TYPICAL CROSS SECTION AT I-55 OVER BRC

**LEGEND**

-  DIRECTION OF TRAFFIC
-  TEMPORARY CONCRETE BARRIER WITH BARRIER WALL REFLECTORS, TYPE C SEE IDOT STANDARD 704001 & 782006 (SINGLE SIDED CRYSTAL)
-  WORK ZONE

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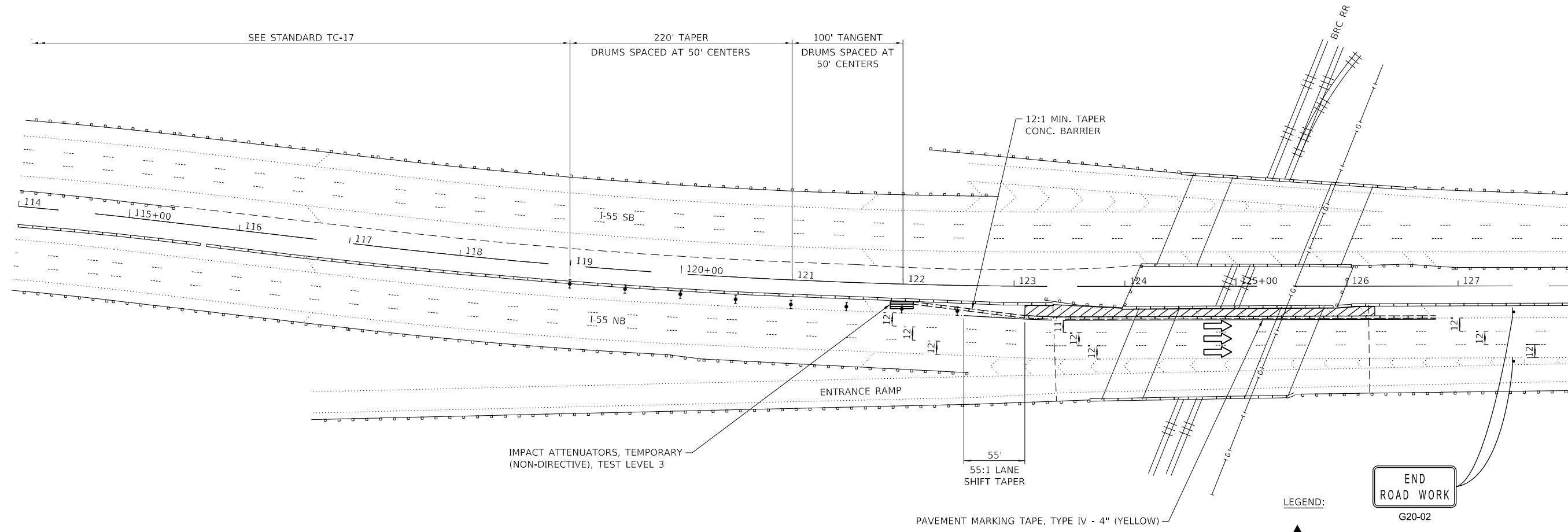
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	DATE - 10/29/2019	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-55 OVER BRC  
SUGGESTED TRAFFIC CONTROL  
TYPICAL SECTIONS**

SCALE: 1:5 SHEET 1 OF 1 SHEETS STA. 123+37.30 TO STA. 126+24.95

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	7
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				



- LEGEND:
- ARROW BOARD
  - DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
  - DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
  - TRAILER MOUNTED SIGN
  - SIGN
  - SPOTTER
  - WORKER
  - IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3
  - TEMPORARY CONCRETE BARRIER
  - DIRECTION OF TRAFFIC FLOW
  - WORK ZONE

- NOTES:
- SEE STANDARD TC-17 FOR SHOULDER CLOSURES.
  - FOR NIGHTLY SINGLE LANE CLOSURES, THE CONTRACTOR SHALL FOLLOW IDOT STANDARD 701401.

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SCALE:		SHEET OF SHEETS		STA. TO STA.		<b>I-55 OVER BRC SUGGESTED SHOULDER CLOSURE STAGE 1</b>				
						F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						55	2019-146-BR	COOK	31	8

ILLINOIS FED. AID PROJECT		CONTRACT NO. 62K20	
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**TOTAL BILL OF MATERIAL**

Item	Unit	Super	Sub	Total
Concrete Removal	Cu. Yd.	40.8	7.6	48.4
Protective Shield	Sq. Yd.	94		94
Structure Excavation	Cu. Yd.		16.6	16.6
Concrete Structures	Cu. Yd.		4.6	4.6
Concrete Superstructure	Cu. Yd.	40.8		40.8
Protective Coat	Sq. Yd.	138		138
Concrete Superstructure (Approach Slab)	Cu. Yd.	2.5		2.5
Furnishing and Erecting Structural Steel	Pound	80		80
Reinforcement Bars, Epoxy Coated	Pound	9,520	1,600	11,120
Mechanical Splicers	Each	27		27
Preformed Joint Seal 1¾"	Foot	96		96
Neoprene Expansion Joint 2"	Foot	4.5		4.5
Temporary Soil Retention System	Sq. Ft.		140	140
* Containment and Disposal of Lead Paint Cleaning Residues	L Sum	1		1
* Cleaning and Painting Steel Bridge	L Sum	1		1
* Deck Slab Repair (Partial)	Sq. Yd.	19		19
* Polymer Concrete	Cu. Ft.	10.8		10.8

\* See Special Provision

**GENERAL NOTES**

Calculated weight of Structural Steel = 80 lbs

All structural steel shall be AASHTO M 270 Grade 36.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". Beams 15 and 16, bearings and other structural steel within the limits shown on sheet 11 of 17 of either side of deck joint shall be cleaned per Near White Blast Cleaning (SSPC-SP10). The exterior surfaces and bottom of the bottom flange of the fascia beam shall be cleaned per Commercial Grade Power Tool Cleaning (SSPC-SP15).

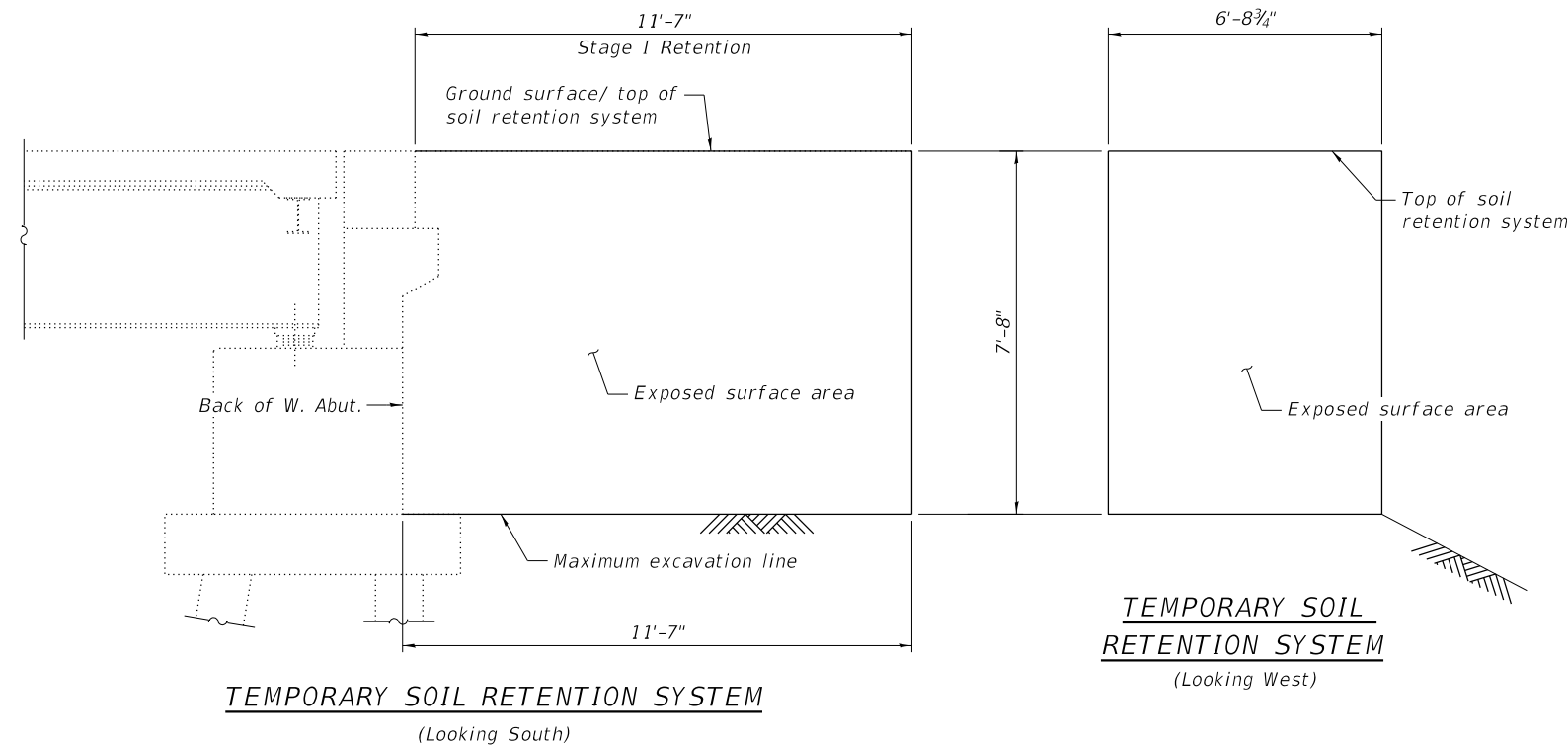
The designated areas cleaned per Near White Blast Cleaning (SSPC-SP10) and Commercial Grade Power Tool Cleaning (SSPC-SP15) shall be painted according to the requirements of the Epoxy Mastic / Acrylic / Acrylic Paint System for shop and field painting. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams and the new stiffener angles shall be Reddish Brown, Munsell No. 2.5YR 3/4.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

Protective Coat shall be applied to the top and front face of the new parapet and new concrete deck.

The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".



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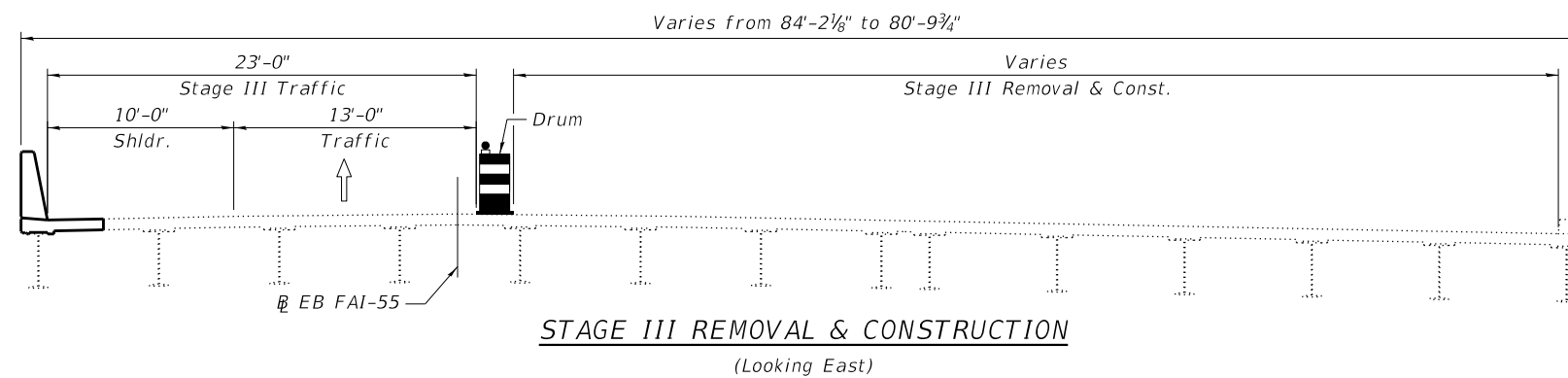
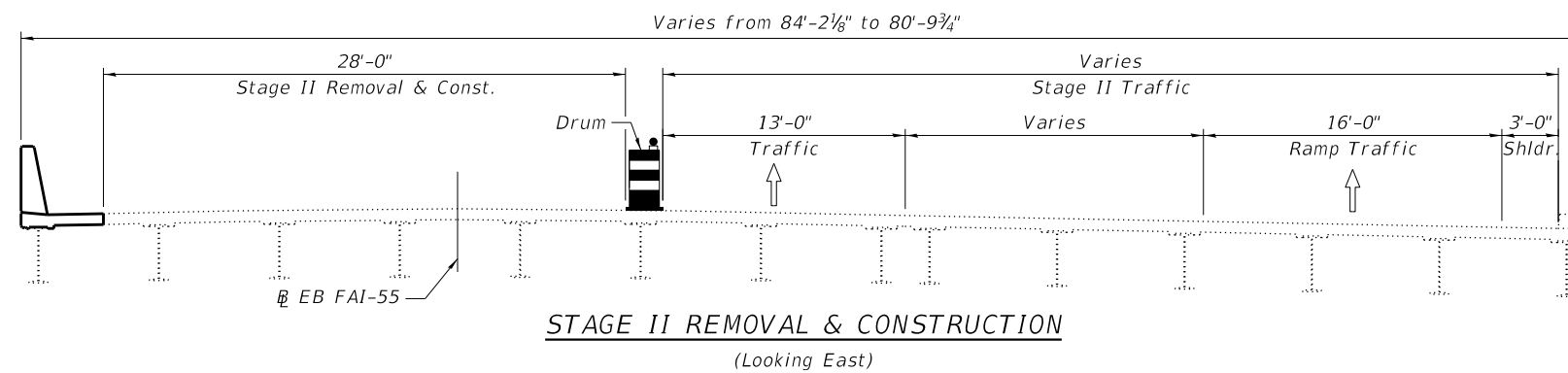
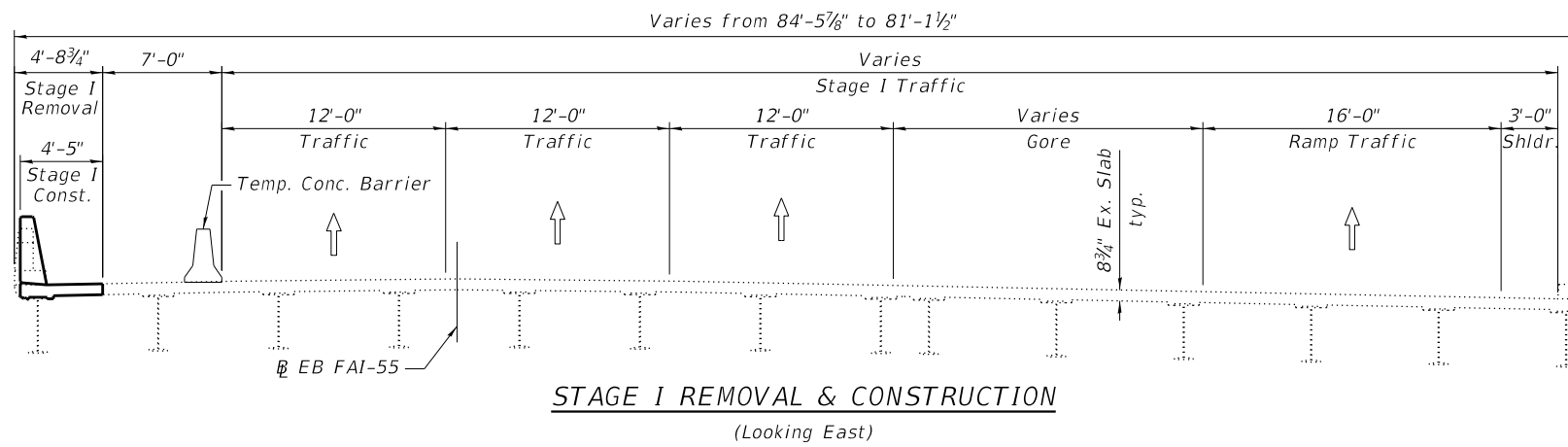
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DETAILS  
STRUCTURE NO. 016-0018**

SHEET 2 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	10
CONTRACT NO. 62K20				
		ILLINOIS	FED. AID PROJECT	

SDATE\$ \$TIME\$



MODEL: SMODELNAMES  
FILE NAME: SFILELS



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USER NAME - SUSER\$	DESIGNED - CFS	REVISED -
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PLOT DATE - 12/11/2019	CHECKED - MDC	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

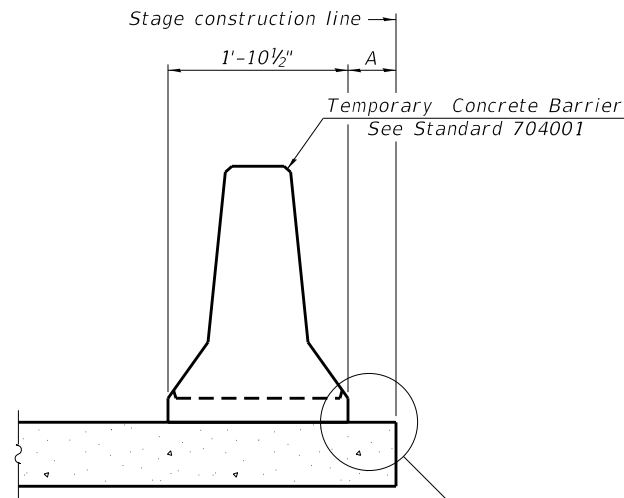
STAGE CONSTRUCTION DETAILS  
STRUCTURE NO. 016-0018

SHEET 3 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	11
CONTRACT NO. 62K20				

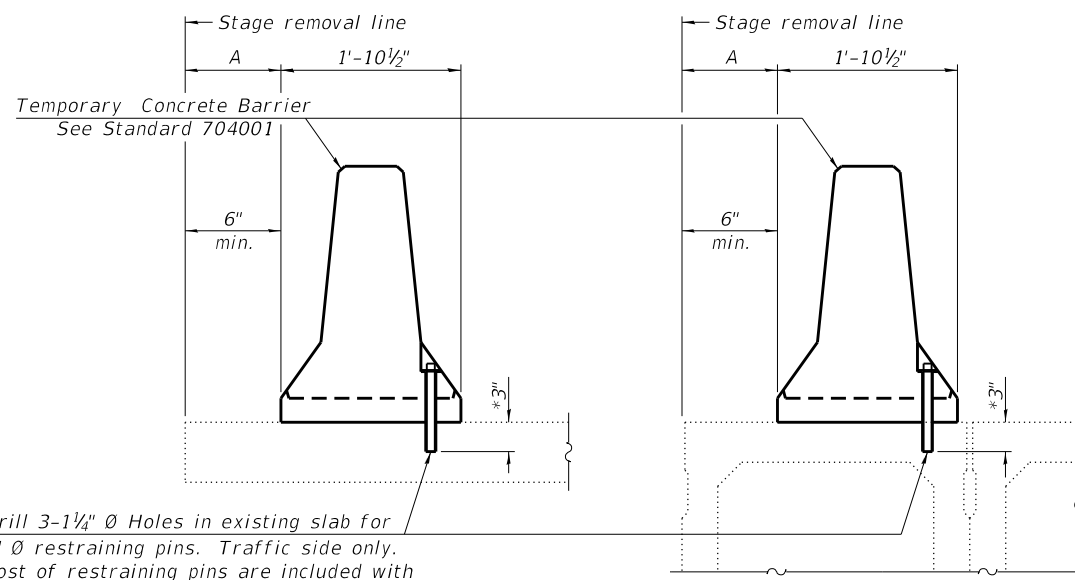
ILLINOIS FED. AID PROJECT

SDATES \$TIMES



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

NEW SLAB OR NEW DECK BEAM

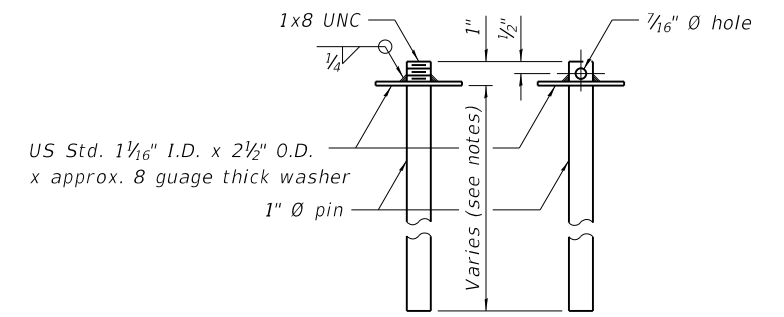


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

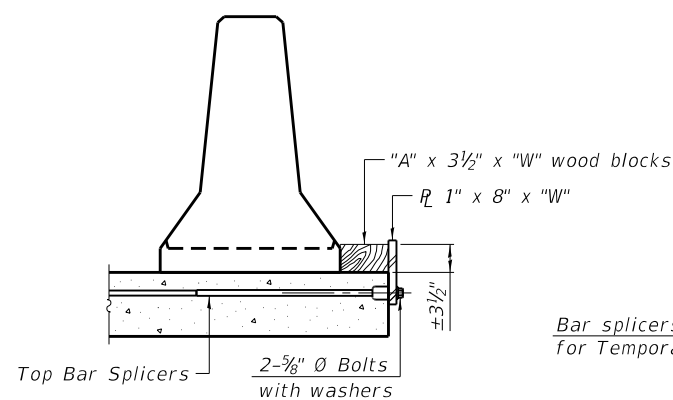
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

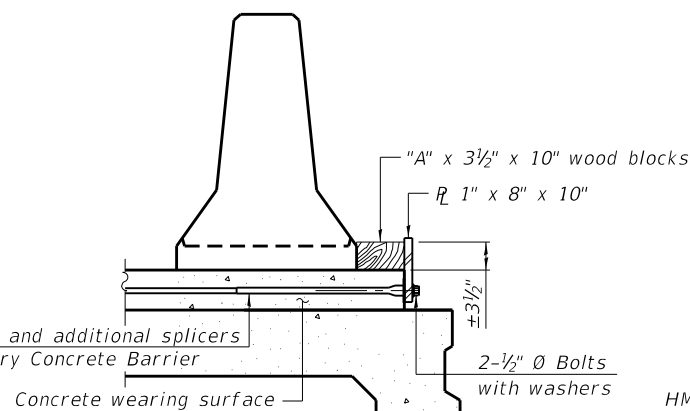


RESTRAINING PIN

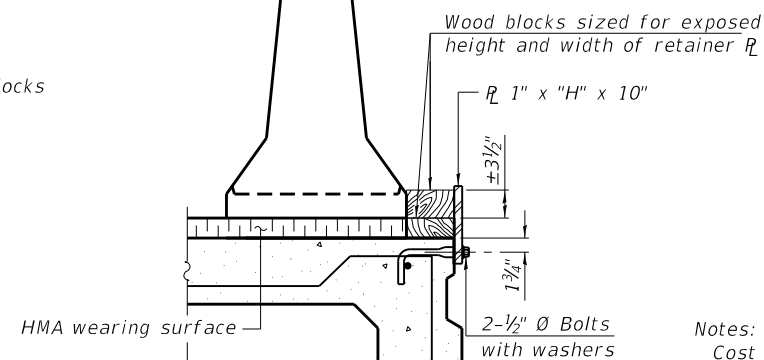
SECTIONS THRU SLAB OR DECK BEAM



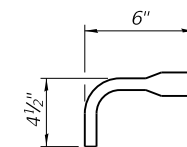
DETAIL I



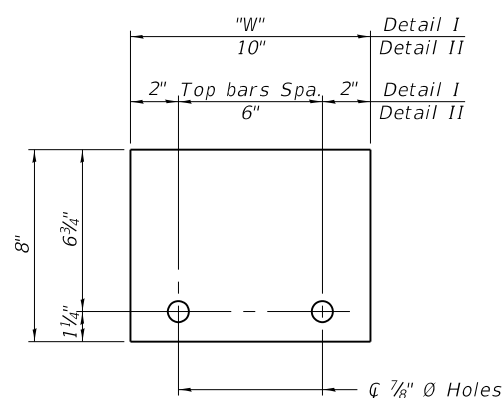
DETAIL II



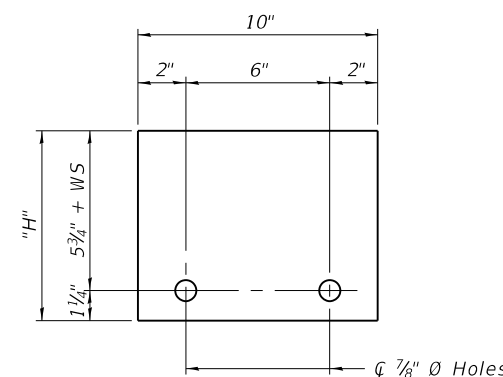
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



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



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

Notes:

- Cost of retainer assembly is included with Temporary Concrete Barrier.
- A retainer assembly shall be located at the approximate center 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.

MODEL: \$MODELNAME\$  
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R-27

2-17-2017



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CHECKED -	MDC

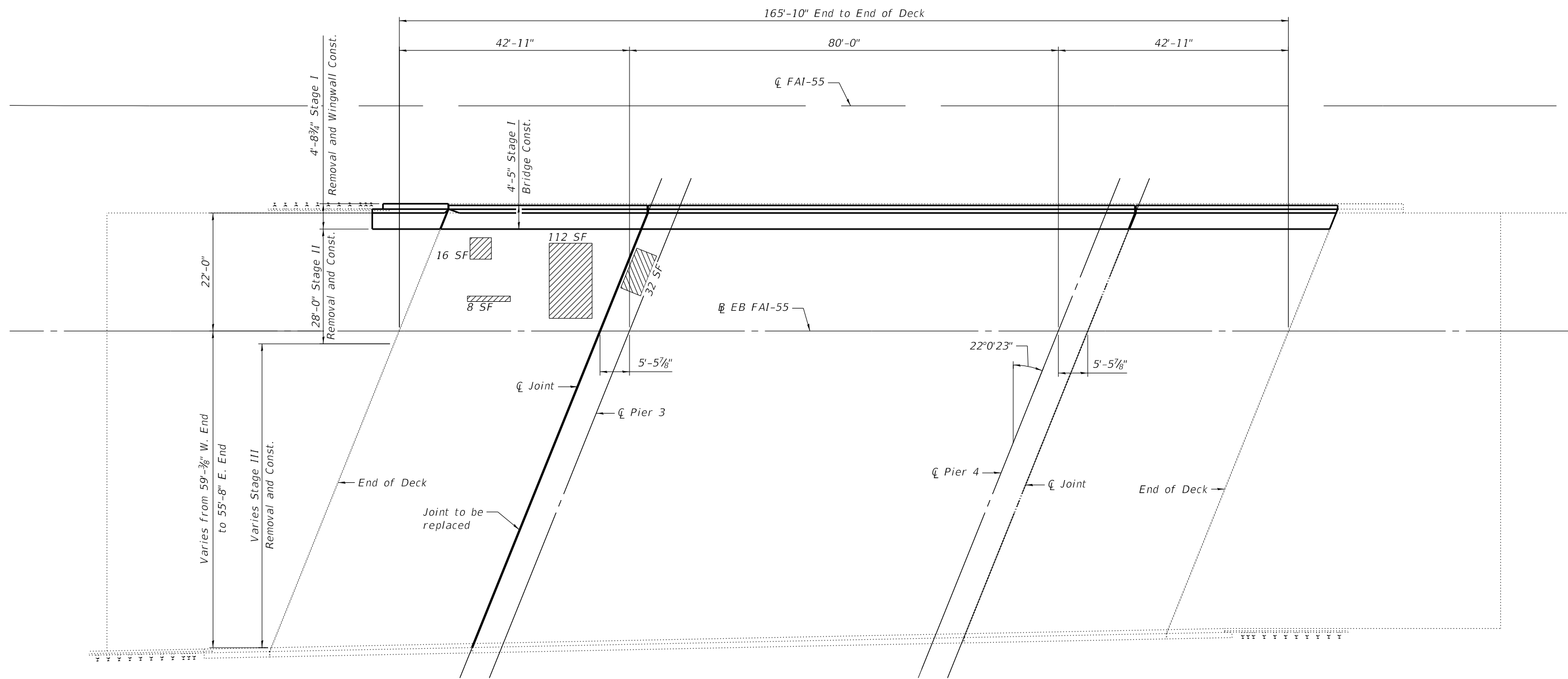
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
STRUCTURE NO. 016-0018

SHEET 4 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	12
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				



PLAN

**LEGEND**  
 Partial Depth Deck Repair Area

Notes:  
 Deck slab repair areas are estimated and shall be field verified by the Engineer prior to patching.  
 The Engineer shall show actual locations of deck repairs on the as-built plans.

**BILL OF MATERIAL**

Item	Unit	Total
Deck Slab Repair (Partial)	Sq. Yd.	19

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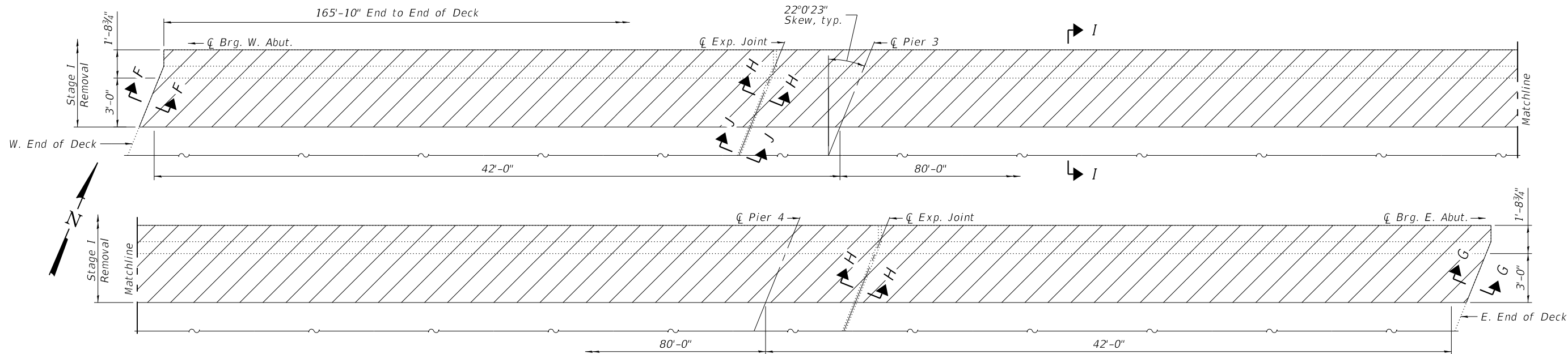
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PLOT DATE = 12/11/2019	CHECKED - MDC	REVISED -

STATE OF ILLINOIS  
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DECK REPAIR PLAN  
 STRUCTURE NO. 016-0018

SHEET 5 OF 17 SHEETS

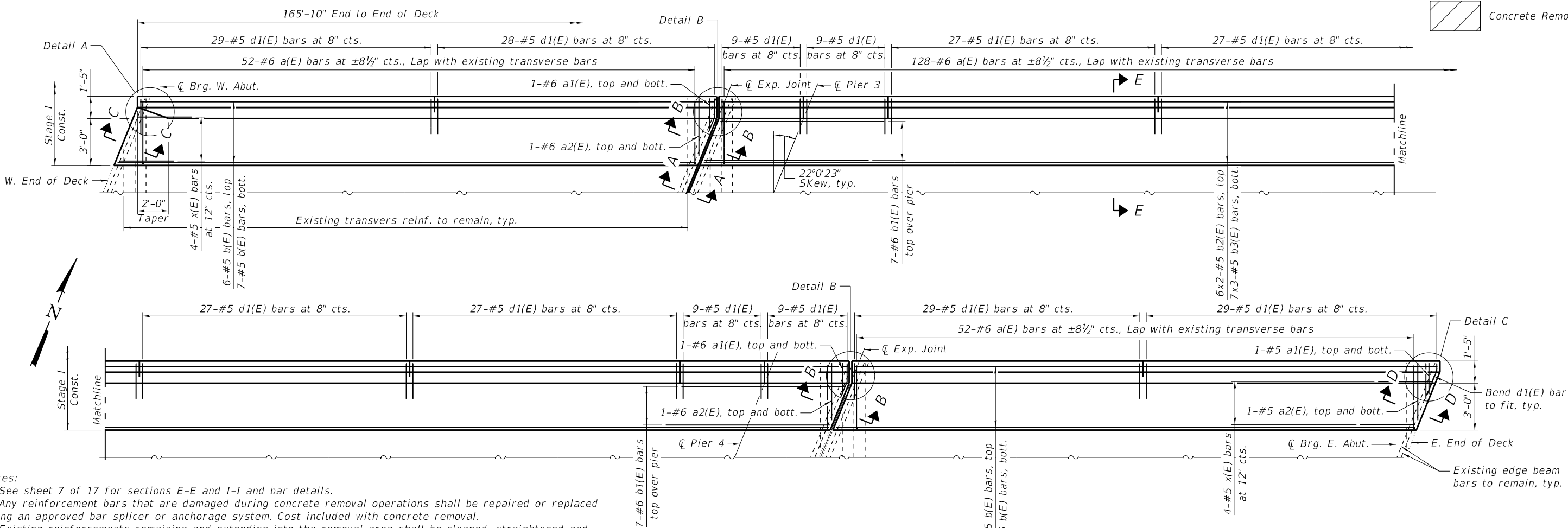
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	13
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				



**PART PLAN OF CONCRETE REMOVAL**

**LEGEND**

Concrete Removal



**PART PLAN OF CONCRETE REPLACEMENT**

**Notes:**  
 See sheet 7 of 17 for sections E-E and I-I and bar details.  
 Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with concrete removal.  
 Existing reinforcements remaining and extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.  
 Bars indicated thus 6x2-#5 etc. indicates 6 lines of bars with 2 lengths per line.  
 See sheet 8 of 17 for details A, B, and C and Bill of Material  
 See Sheet 9 of 17 for Sections C-C, D-D, F-F, and G-G.  
 See sheet 10 of 17 for Sections A-A, B-B, H-H, and J-J.  
 Existing reinforcement that does not fit into the new parapet and deck configuration shall be trimmed to allow for min. concrete cover in new parapep or cut, ground flush with the concrete and coated with epoxy paint if it does not fit within the new deck section and parapet.

**MIN. LAP**  
 #5 Bar = 3'-6"

MODEL: \$MODELNAME\$  
 FILE NAME: \$FILEL\$

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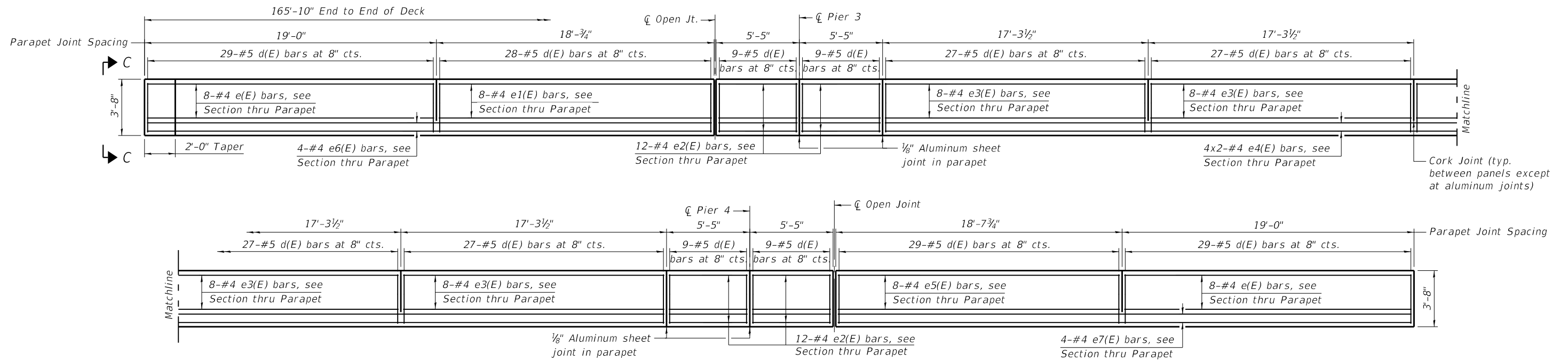
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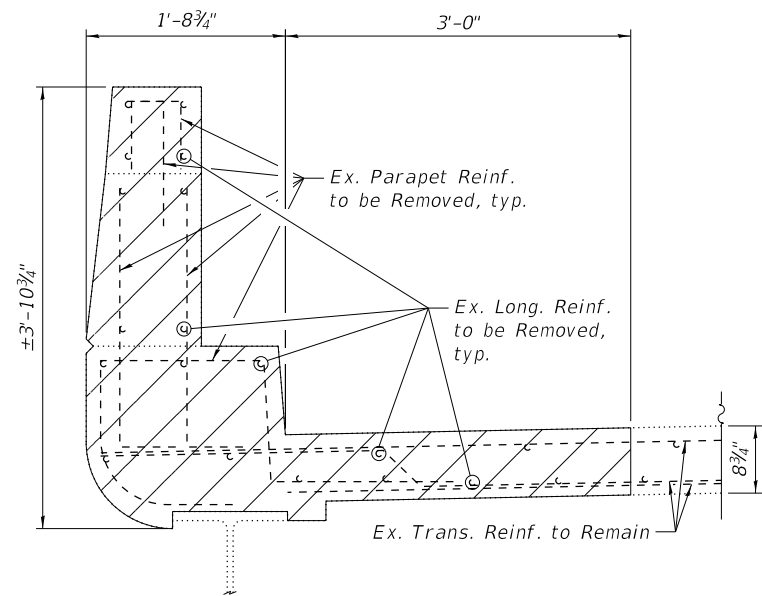
**NORTH PARAPET REPLACEMENT DETAILS**  
**STRUCTURE NO. 016-0018**

SHEET 6 OF 17 SHEETS

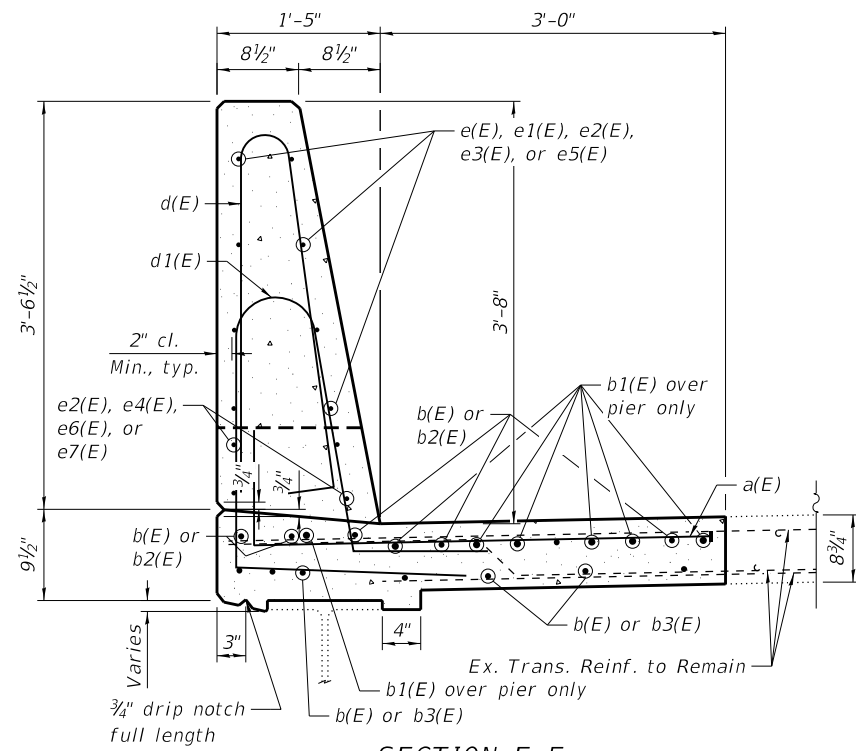
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				



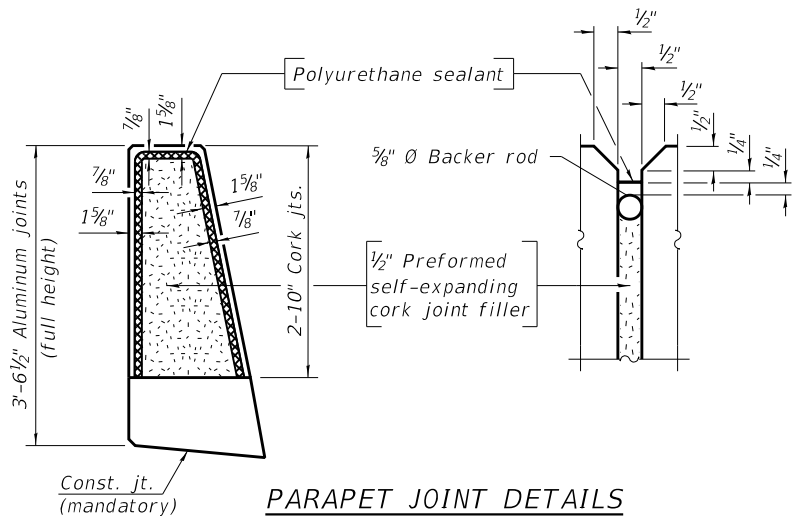
**INSIDE ELEVATION OF NORTH PARAPET**  
(Looking North)



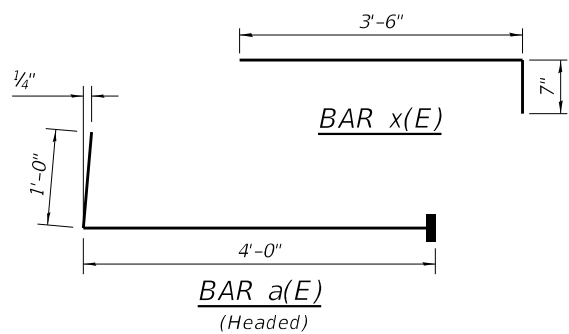
**SECTION I-I**



**SECTION E-E**

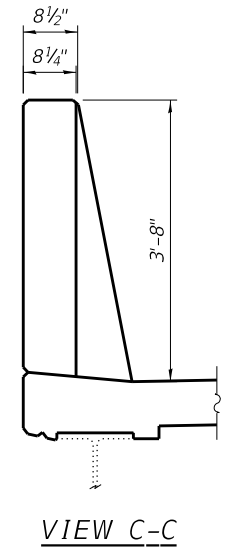


**PARAPET JOINT DETAILS**

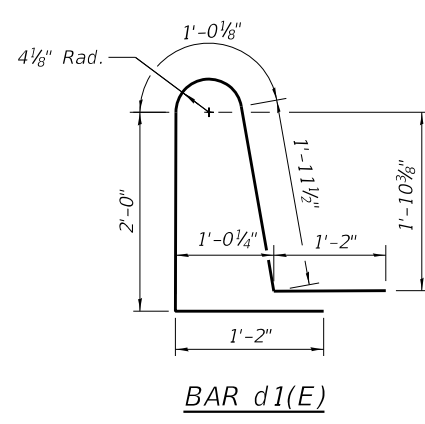


**Notes:**  
 See Sheet 6 of 17 for location of section cuts.  
 See sheet 8 of 17 for Bill of Material.  
 Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.  
 Bars indicated thus 4x2-#4 etc. indicates 4 lines of bars with 2 lengths per line.

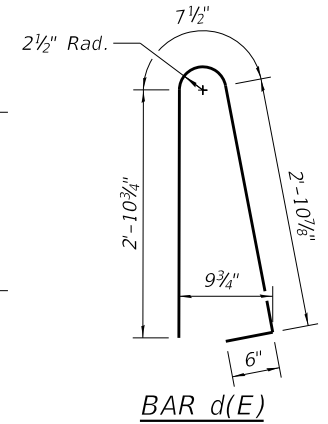
**MIN. LAP**  
 #4 Bar = 2'-5"



**VIEW C-C**



**BAR d1(E)**



**BAR d(E)**

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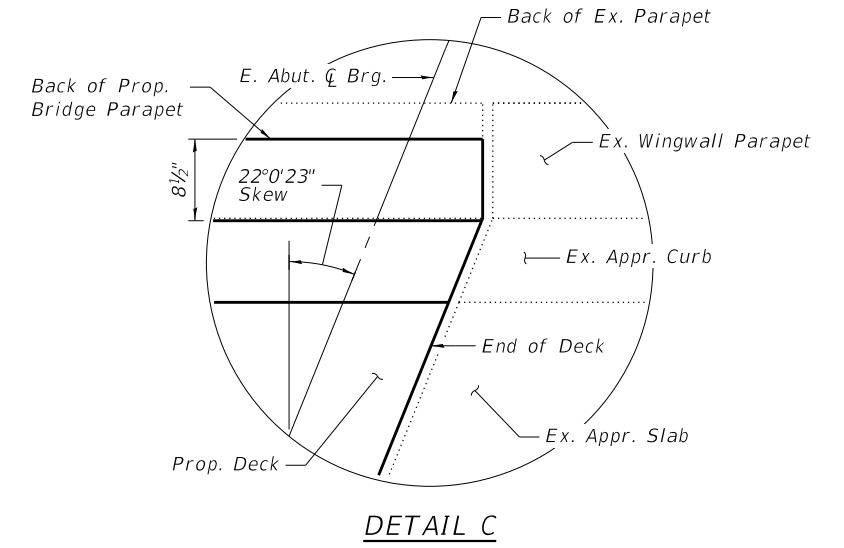
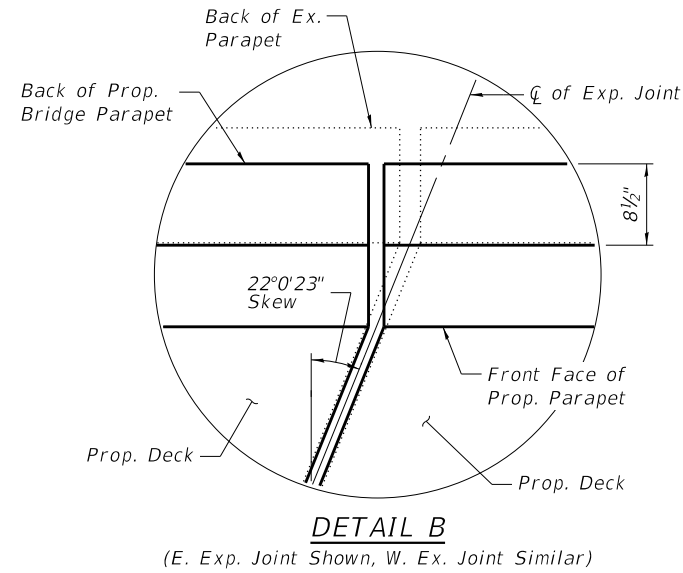
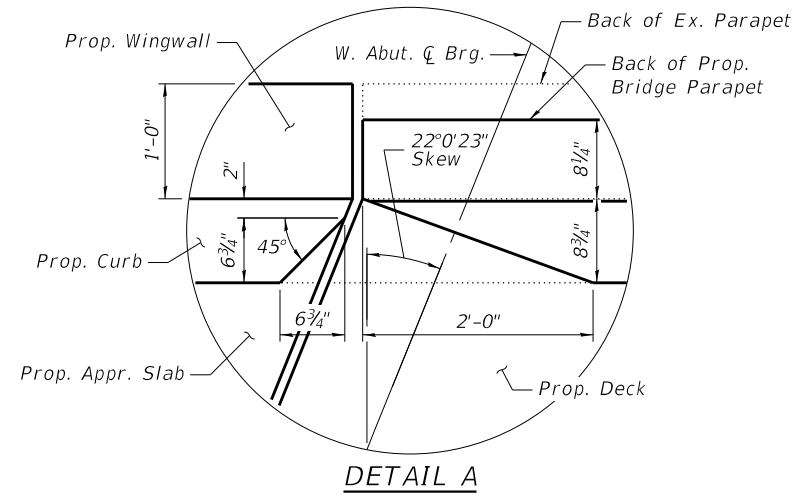
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**NORTH PARAPET REPLACEMENT DETAILS  
 STRUCTURE NO. 016-0018**

SHEET 7 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	15
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				



Notes:  
See sheet 6 of 17 for detail locations.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
a(E)	232	#6	5'-0"	└┘	
a1(E)	6	#6	2'-0"	—	
a2(E)	6	#6	3'-8"	—	
b(E)	26	#5	37'-0"	—	
b1(E)	14	#6	10'-6"	—	
b2(E)	12	#5	47'-3"	—	
b3(E)	21	#5	32'-9"	—	
d(E)	259	#5	6'-11"	┌┐	
d1(E)	259	#5	7'-4"	┌┐	
e(E)	16	#4	18'-8"	—	
e1(E)	8	#4	17'-8"	—	
e2(E)	48	#4	5'-1"	—	
e3(E)	32	#4	16'-11"	—	
e4(E)	8	#4	35'-9"	—	
e5(E)	8	#4	18'-3"	—	
e6(E)	4	#4	36'-8"	—	
e7(E)	4	#4	37'-4"	—	
x(E)	8	#5	4'-1"	└┘	
Item				Unit	Total
Reinforcement Bars, Epoxy Coated				Pound	9,520
Concrete Superstructure				Cu. Yd.	40.8
Concrete Removal				Cu. Yd.	40.8

MODEL: \$MODELNAME\$  
FILE NAME: \$FILES\$



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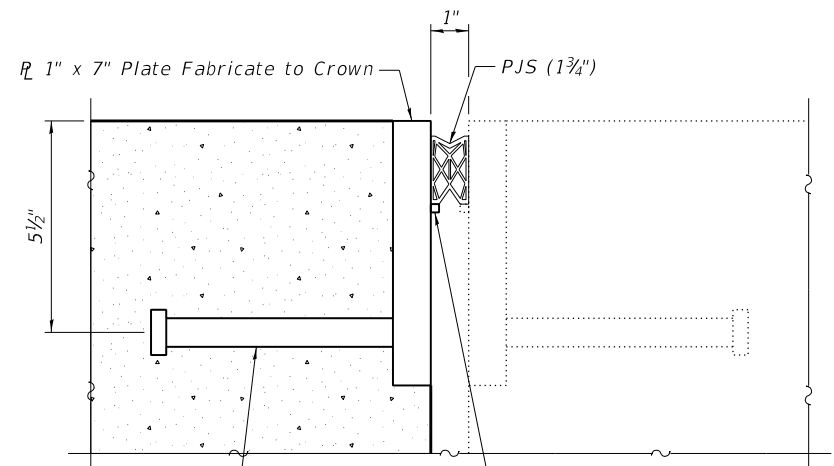
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH PARAPET REPLACEMENT DETAILS  
STRUCTURE NO. 016-0018

SHEET 8 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	16
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				

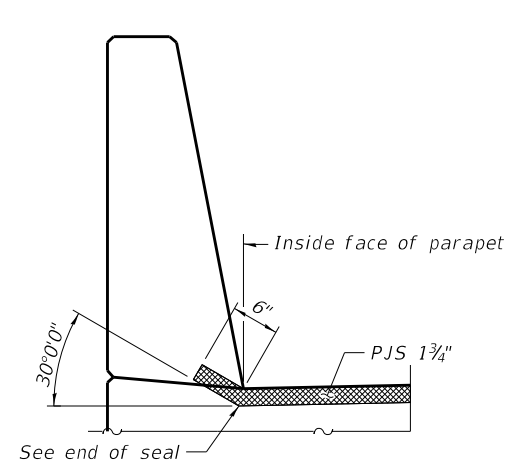




$\frac{3}{4}$ "  $\emptyset$  x 6" Granular of solid flux filled headed studs conforming to Article 1006.32 of the Std. Spec's. automatically end welded at 12" cts.

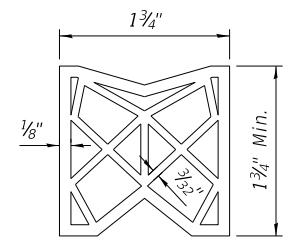
$\frac{1}{4}$ " x  $\frac{1}{2}$ " Bars (2  $\frac{1}{4}$ " from top)  
 $\frac{3}{16}$ "  $\sqrt{1\frac{1}{2}}$ " at 6" cts.

**EAST ABUT. PREFORMED JOINT SEAL**

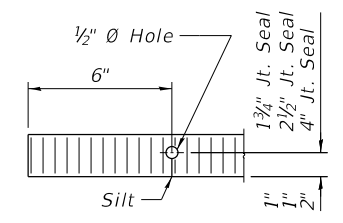


See end of seal cut-out detail

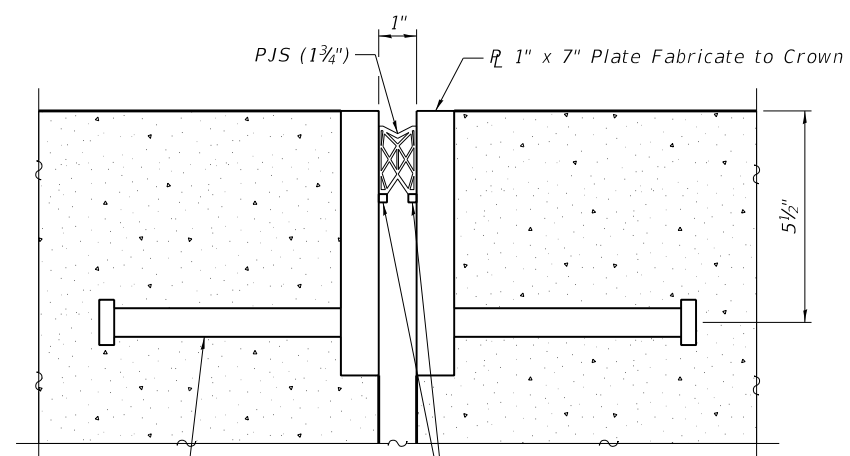
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**PREFORMED JOINT SEAL (1 3/4")**



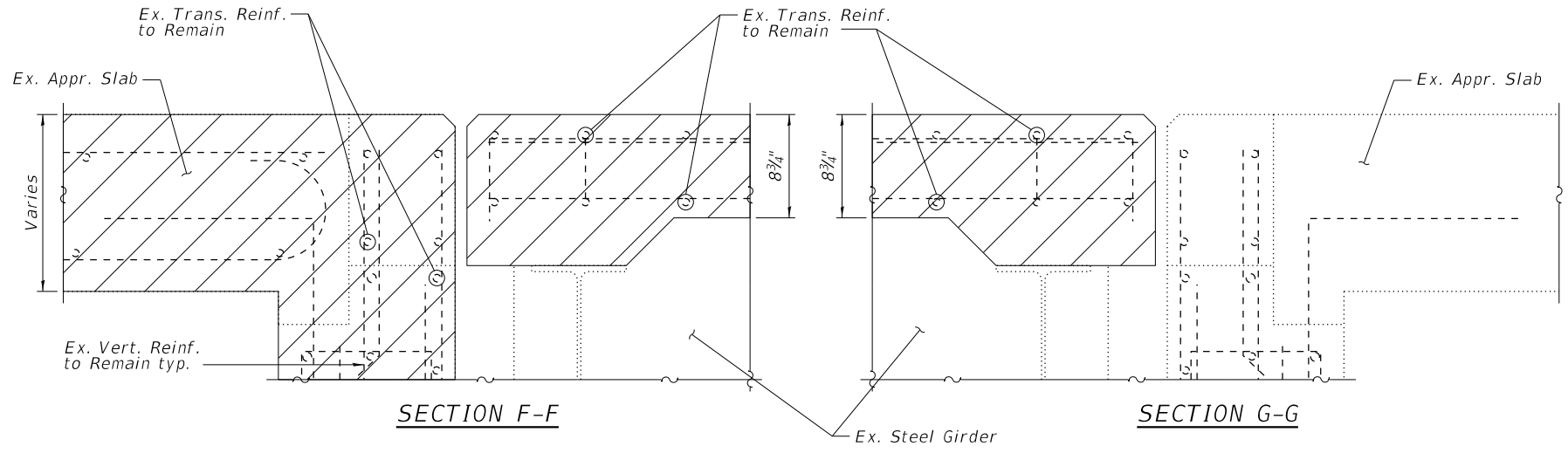
**END OF SEAL CUT-OUT**



$\frac{3}{4}$ "  $\emptyset$  x 6" Granular of solid flux filled headed studs conforming to Article 1006.32 of the Std. Spec's. automatically end welded at 12" cts.

$\frac{1}{4}$ " x  $\frac{1}{2}$ " Bars (2  $\frac{1}{4}$ " from top)  
 $\frac{3}{16}$ "  $\sqrt{1\frac{1}{2}}$ " at 6" cts.

**WEST ABUT. PREFORMED JOINT SEAL**



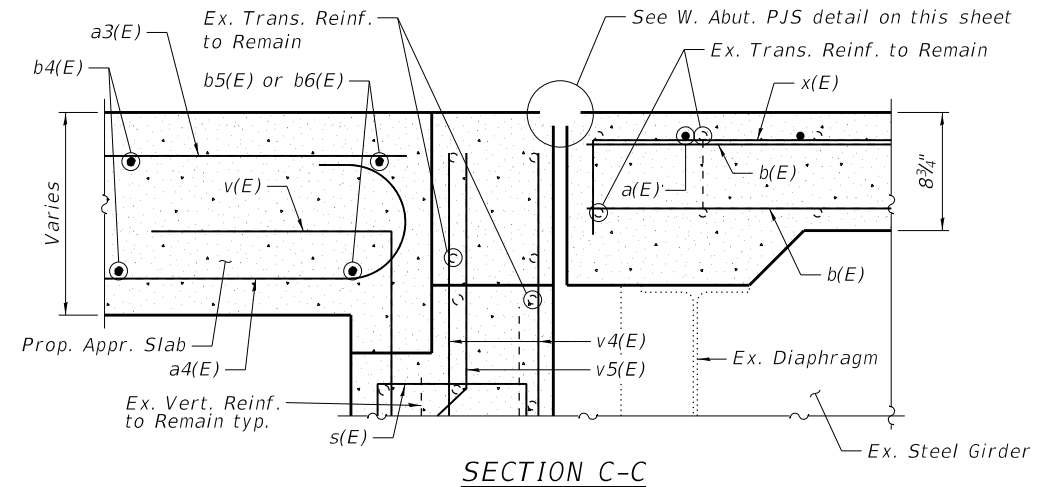
**SECTION F-F**

**SECTION G-G**

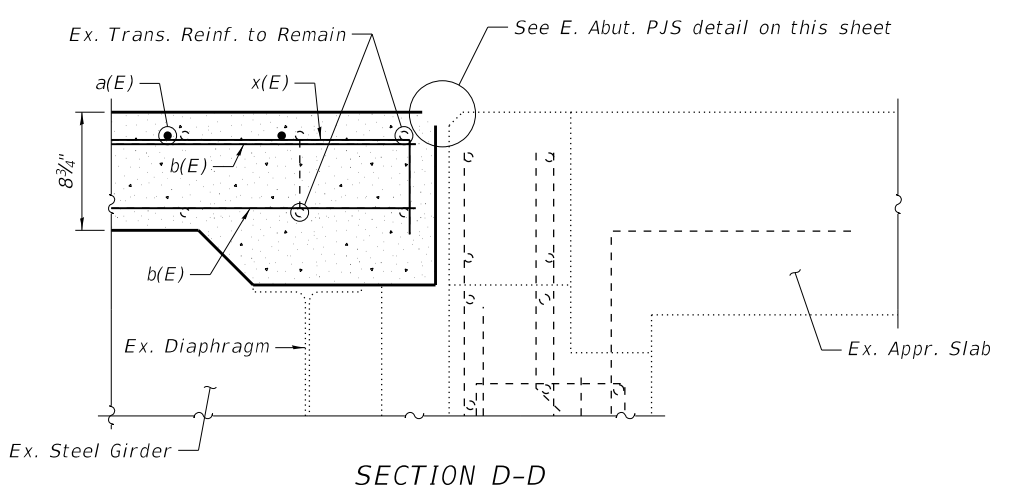
**LEGEND**

Concrete Removal

Notes:  
See sheet 6 of 17 for section cut locations.



**SECTION C-C**



**SECTION D-D**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Seal 1 3/4"	Foot	7.5

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PLOT SCALE = \$SCALES\$	DRAWN - KFO/CFS	REVISED -
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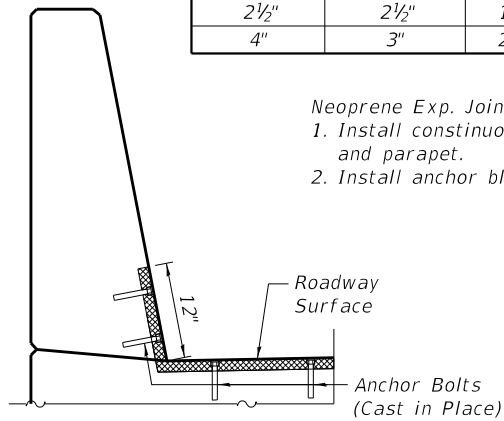
**JOINT DETAILS  
STRUCTURE NO. 016-0018**

SHEET 9 OF 17 SHEETS

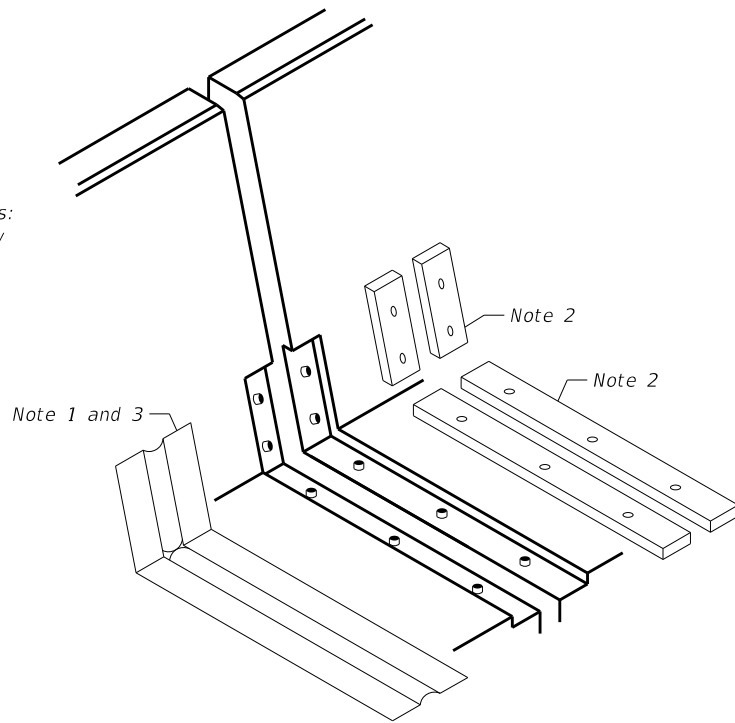
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	17
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
2½"	2½"	1¾" Min.
4"	3"	2½" Min.

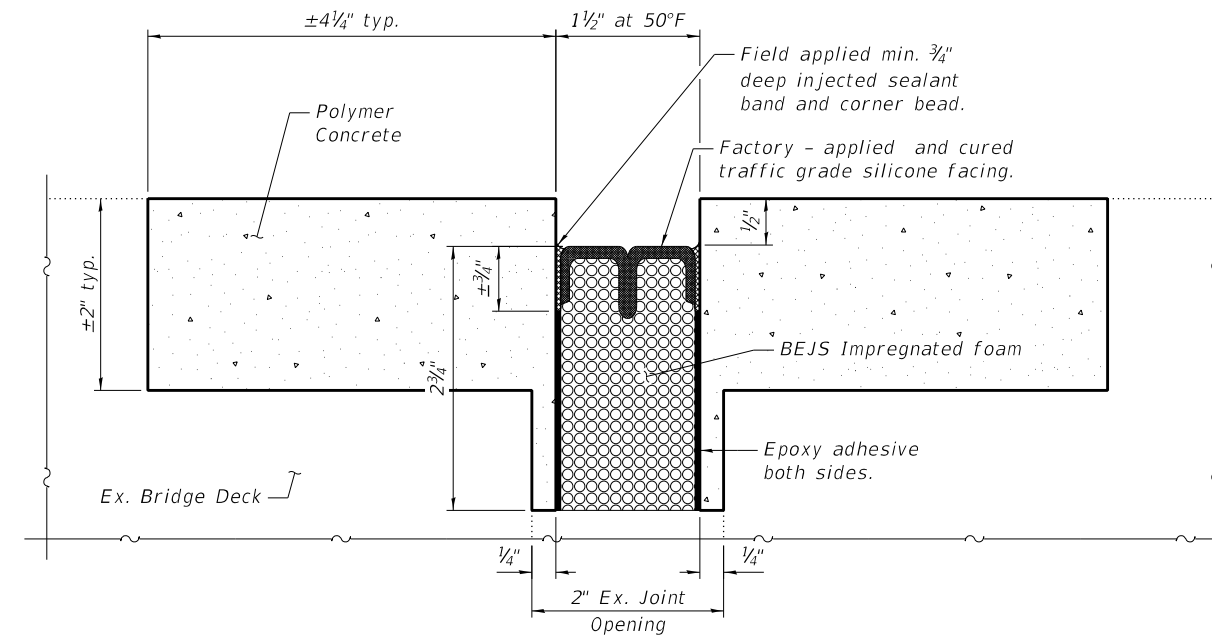
Neoprene Exp. Joint Installation Notes:  
 1. Install continuous seal in roadway and parapet.  
 2. Install anchor blocks as indicated.



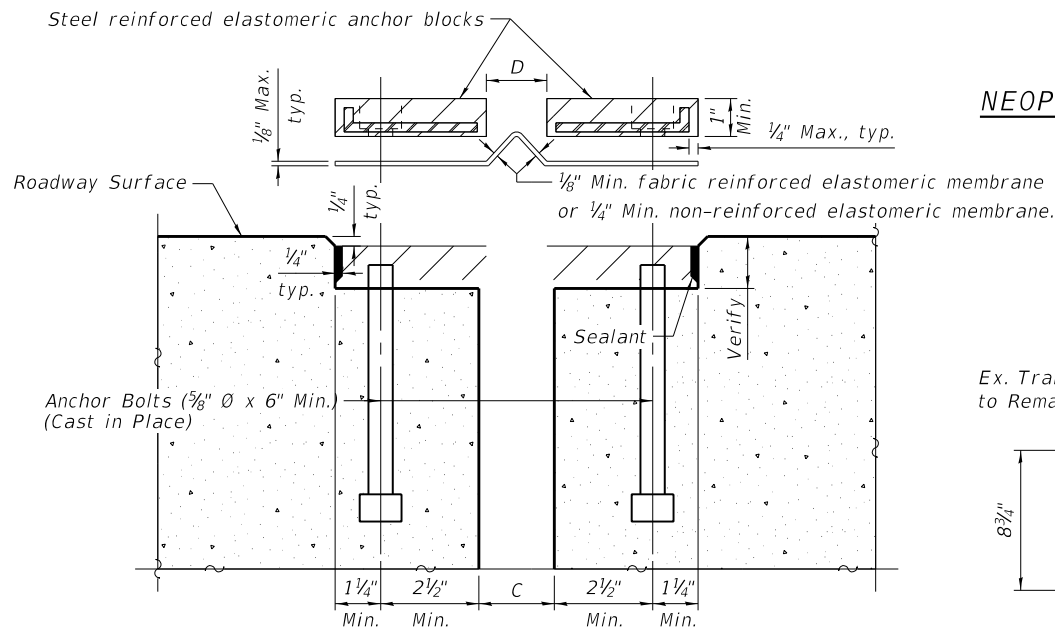
**END TREATMENT OF NEOPRENE EXP. JOINT**



**NEOPRENE EXP. JOINT AT PARAPET**



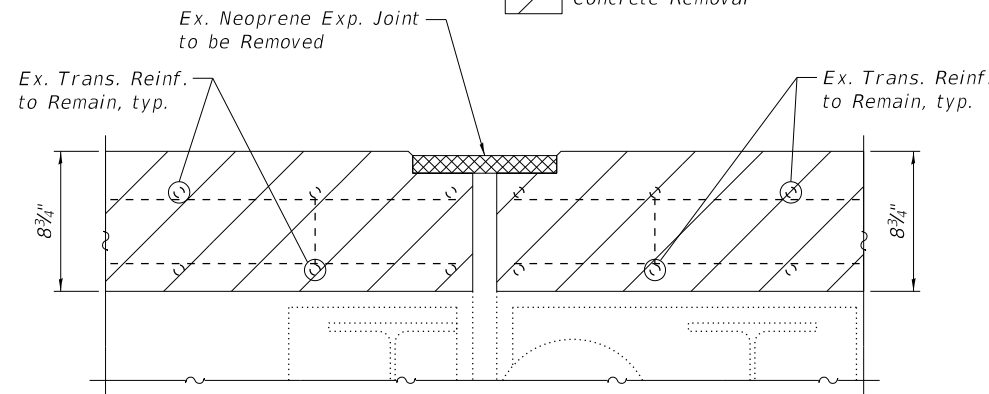
**SECTION A-A**



**NEOPRENE EXP. JOINT DETAIL**

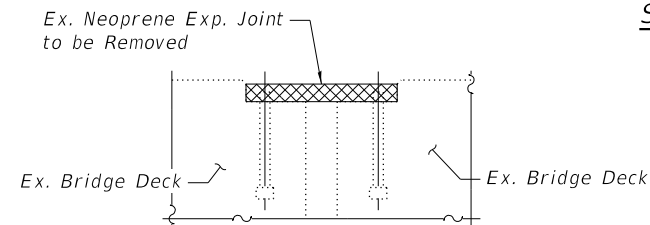
**LEGEND**

- Joint Removal
- Concrete Removal

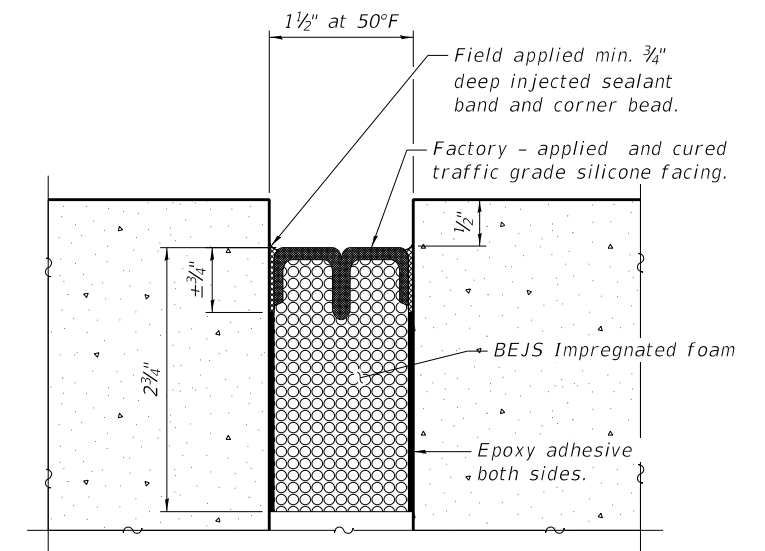


**SECTION H-H**

(E. Exp. Joint Shown, W. Ex. Joint Similar)



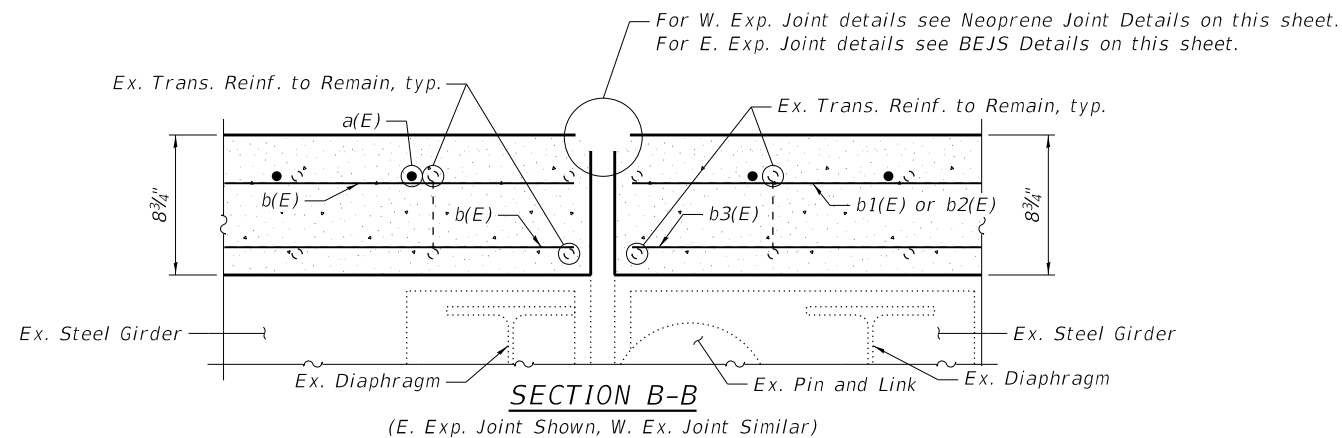
**SECTION J-J**



**BEJS JOINT DETAIL**

**Neoprene Exp. Joint Notes:**

1. Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.
2. The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.
3. Maximum spacing of anchor bolts shall be 12" centers.
4. The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.
5. The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.
6. Contractor shall field verify depth of existing joint block-out prior to ordering material. Top of joint anchor blocks shall be ¼" below existing deck surface.



**SECTION B-B**

(E. Exp. Joint Shown, W. Ex. Joint Similar)

Notes:  
 BEJS will be paid for as Preformed Joint Seal 1¾"  
 See sheet 6 of 17 for section cut locations.  
 See sheet 9 of 17 for BEJS end of seal detail.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Seal 1¾"	Foot	88.5
Neoprene Expansion Joint 2"	Foot	4.5

MODEL: \$MODELNAME\$  
 FILE NAME: \$FILEL\$



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USER NAME =	SUSERS\$	DESIGNED -	CFS	REVISED -	
\$FILEL\$		CHECKED -	SDY	REVISED -	
PLOT SCALE =	\$SCALE\$	DRAWN -	KFO/CFS	REVISED -	
PLOT DATE =	12/11/2019	CHECKED -	MDC	REVISED -	

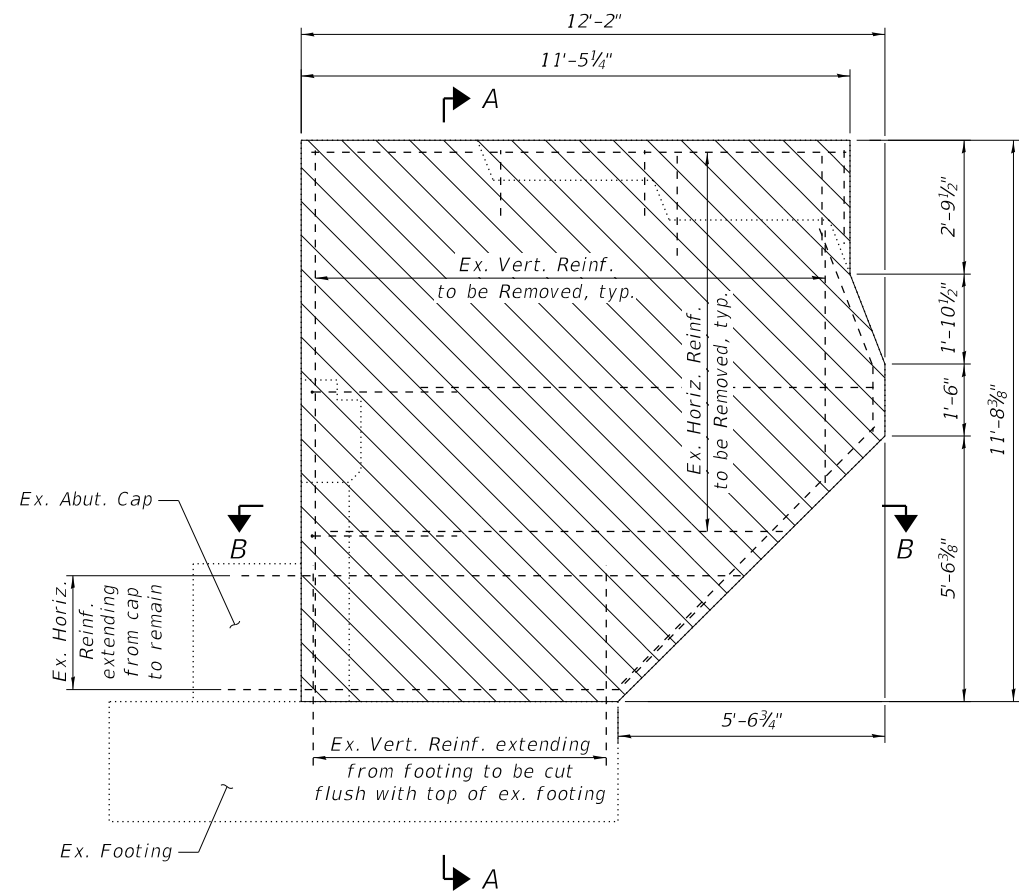
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

JOINT DETAILS  
 STRUCTURE NO. 016-0018

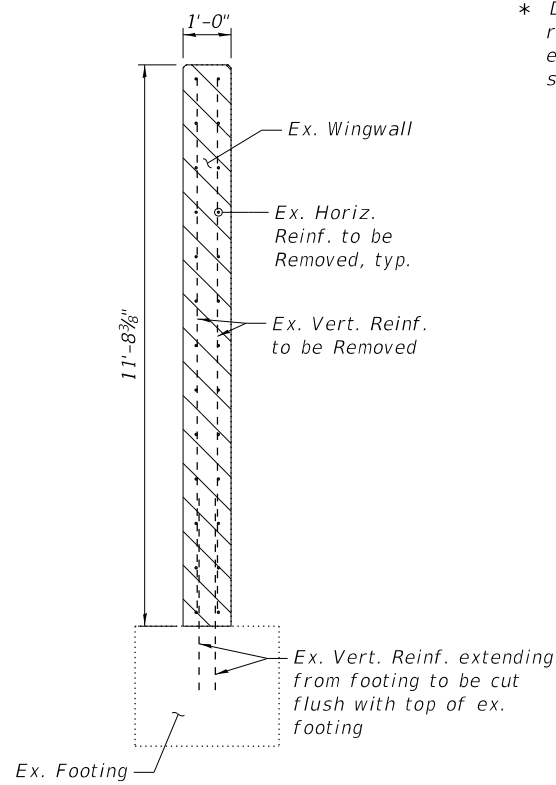
SHEET 10 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	18
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				



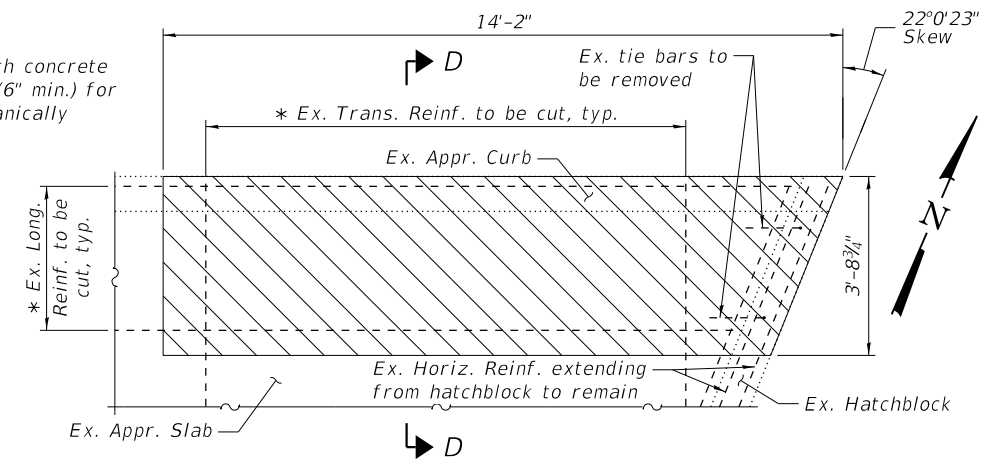


**ELEVATION NW WINGWALL**



**SECTION A-A**

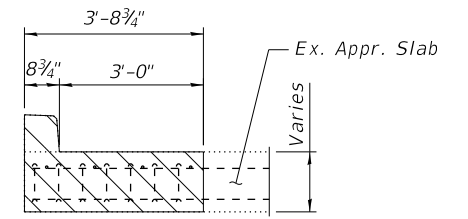
\* Do not cut reinforcement flush with concrete removal line. Leave enough length (6" min.) for existing reinforcement to be mechanically spliced to new reinforcement.



**PART PLAN OF APPROACH SLAB**

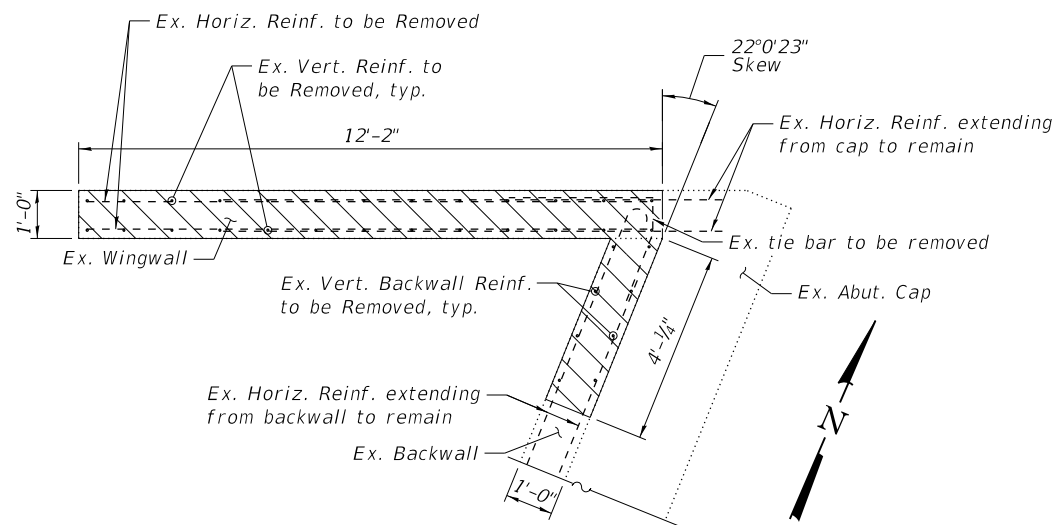
**Notes:**

See sheet 14 of 17 for Bill of Material  
 Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.  
 Existing reinforcement remaining and extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.

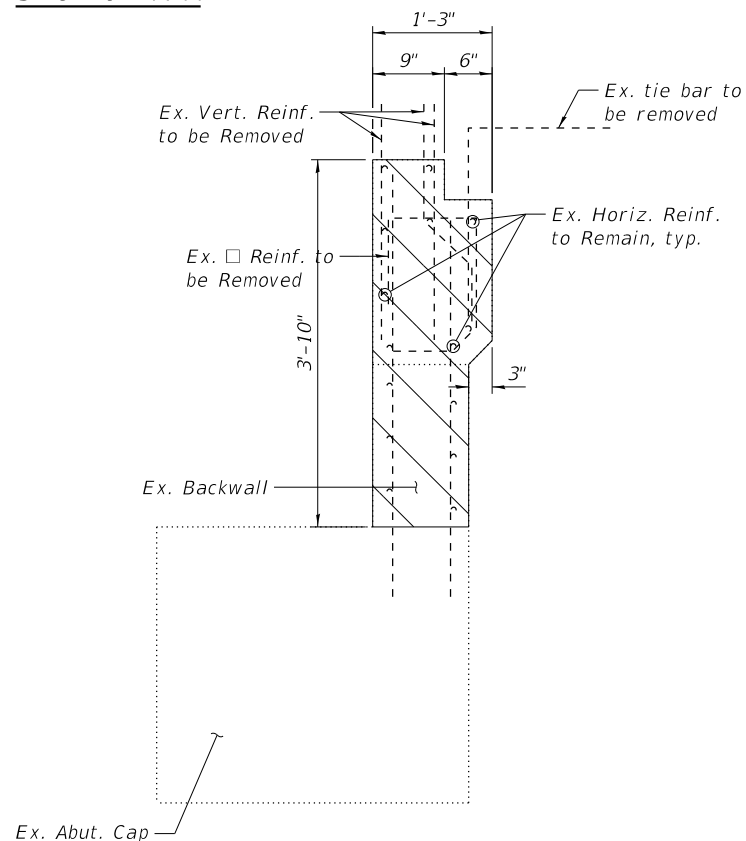


**SECTION D-D**

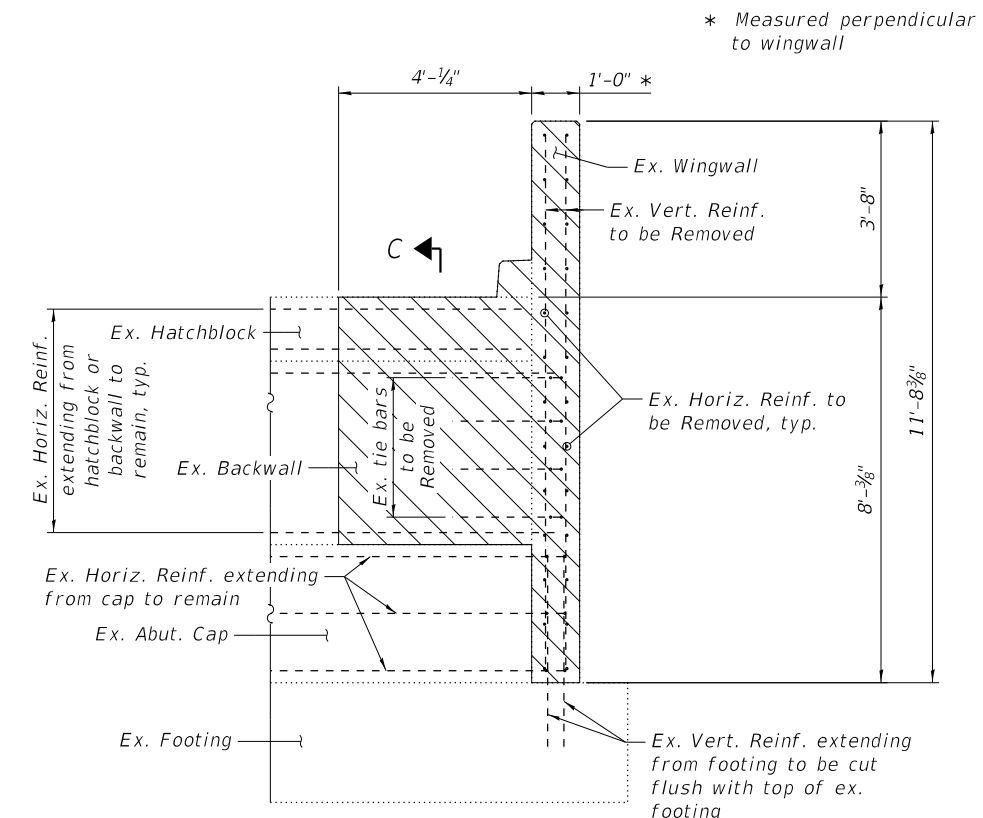
**LEGEND**



**SECTION B-B**



**SECTION C-C**



**BACKWALL ELEVATION**

\* Measured perpendicular to wingwall

MODEL: \$MODELNAME\$  
 FILE NAME: \$FILES\$



QUIGG ENGINEERING INC

USER NAME =	SUSERS\$	DESIGNED -	CFS	REVISED -	
\$FILES\$		CHECKED -	SDY	REVISED -	
PLOT SCALE =	\$SCALE\$	DRAWN -	KFO/CFS	REVISED -	
PLOT DATE =	12/11/2019	CHECKED -	MDC	REVISED -	

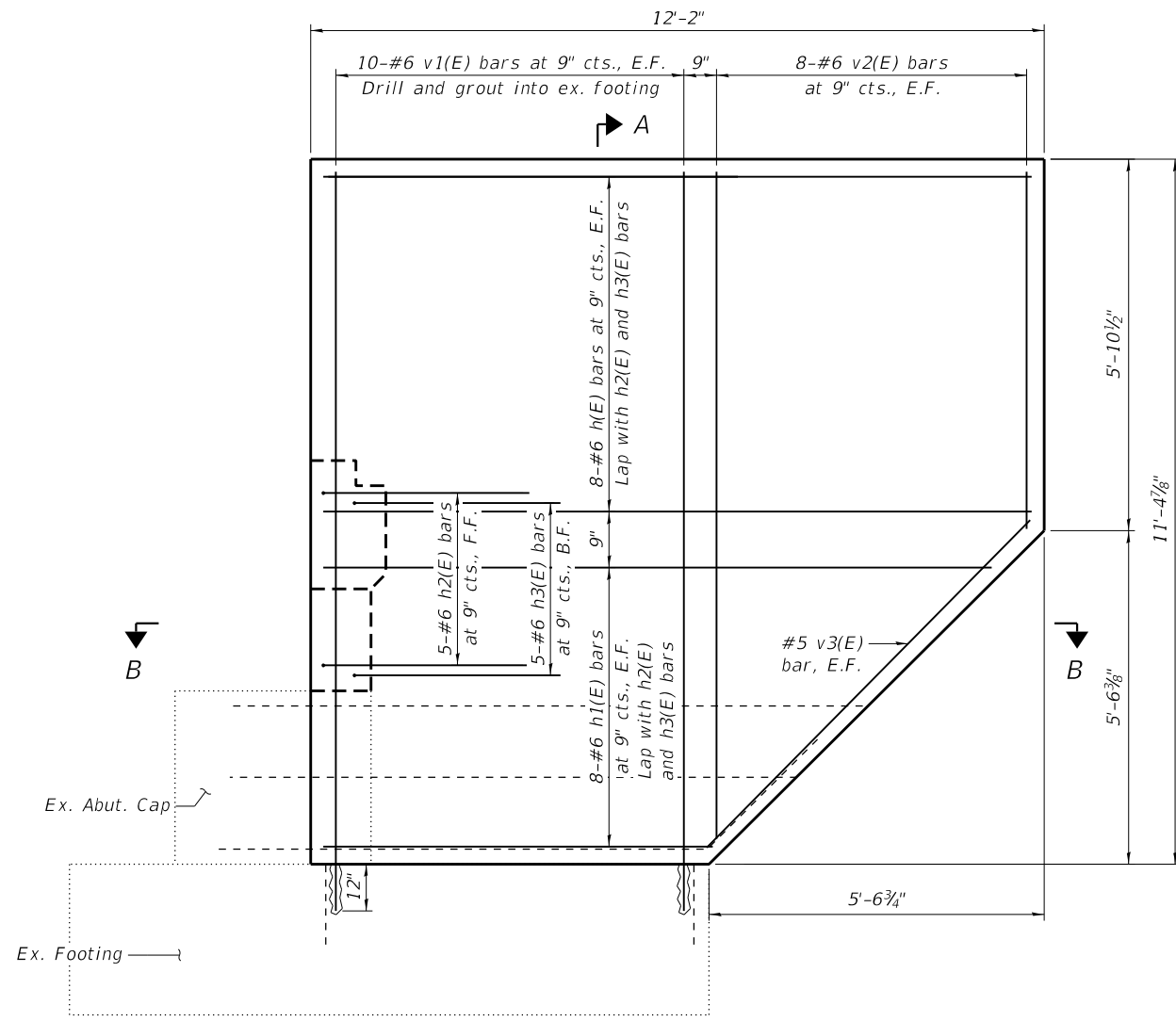
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT WINGWALL REPAIR  
 STRUCTURE NO. 016-0018

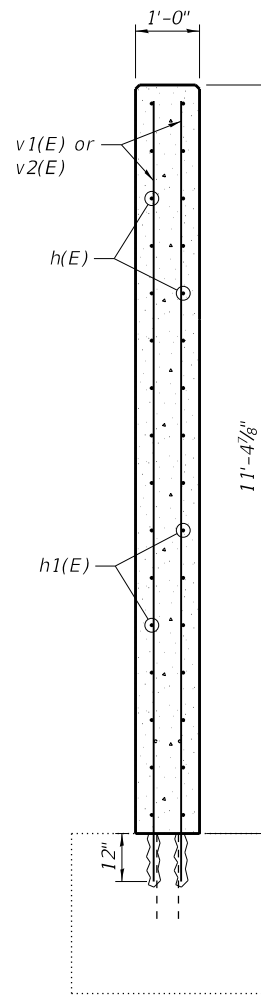
SHEET 12 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	20
CONTRACT NO. 62K20				

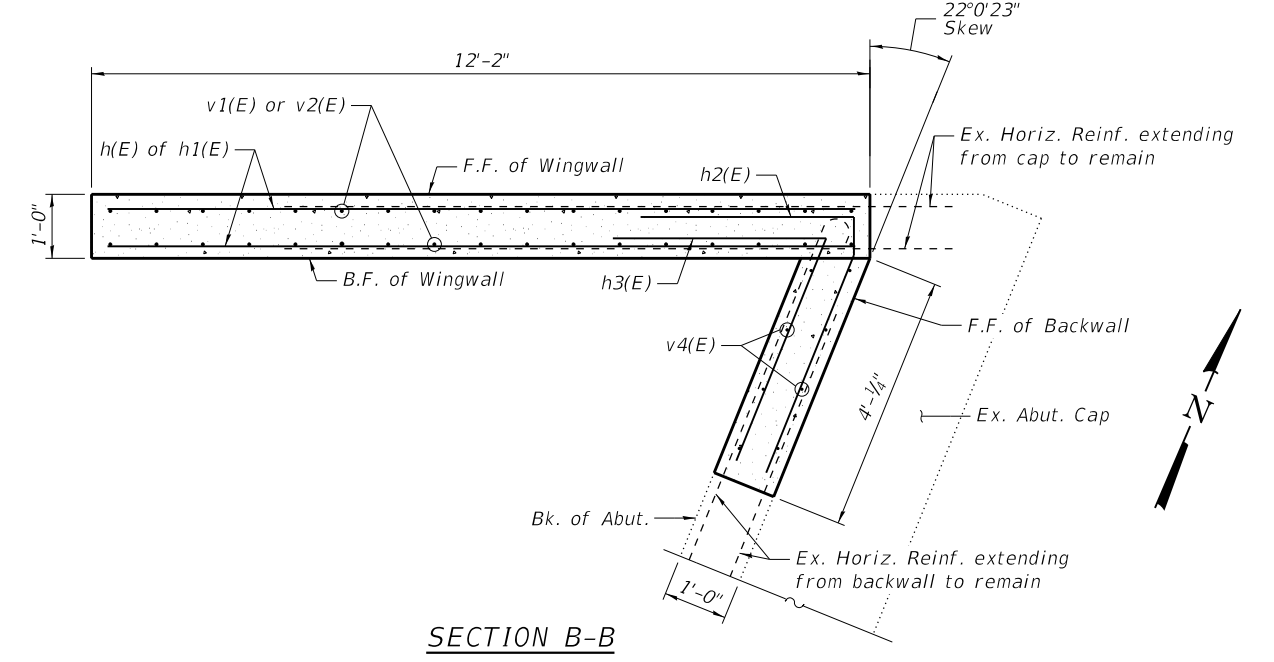
ILLINOIS FED. AID PROJECT



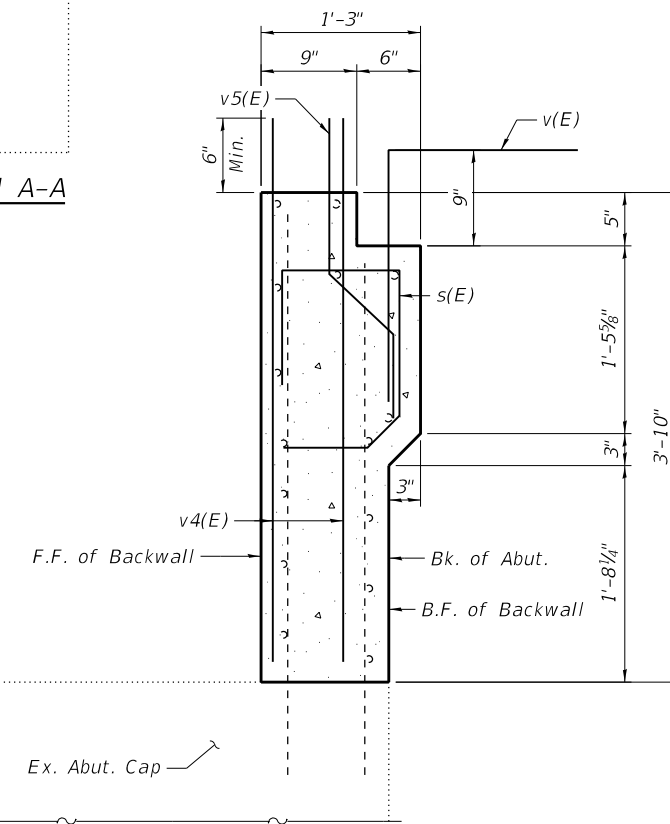
**ELEVATION NW WINGWALL**



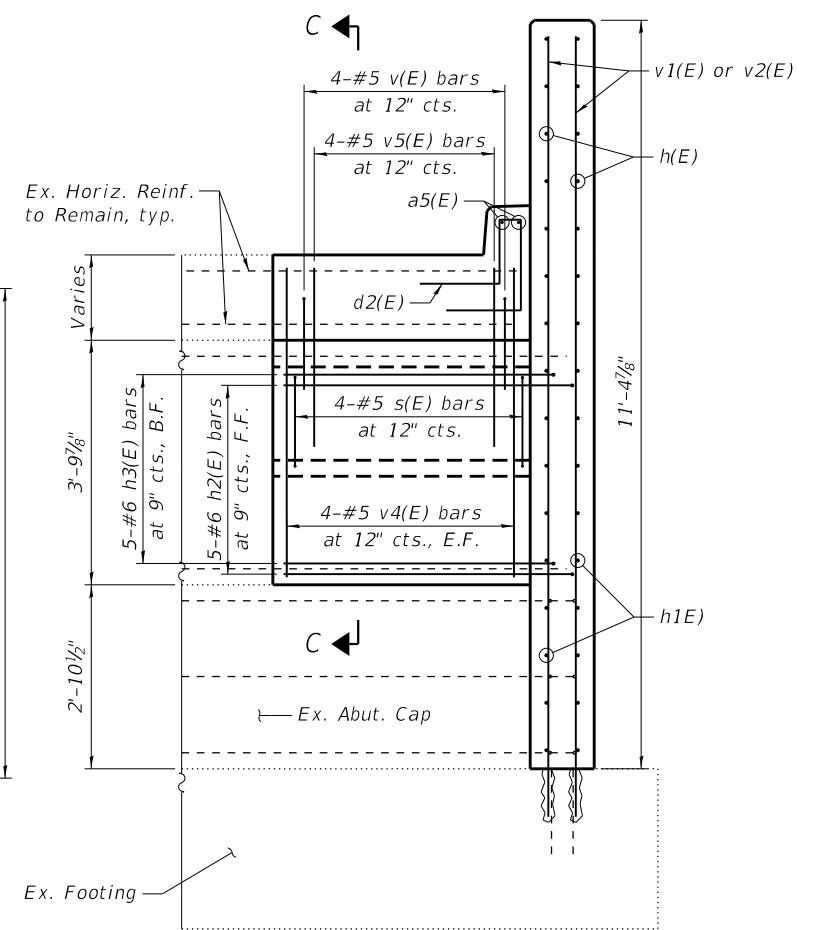
**SECTION A-A**



**SECTION B-B**



**SECTION C-C**



**BACKWALL ELEVATION**

Notes:  
 Epoxy grout v1(E) bars in 12" min. holes according to Article 584 of the Standard Specifications. Cost included with Concrete Superstructure.  
 See sheet 14 of 17 for Bill of Material, bar field cutting diagrams, and bar details.

MODEL: \$MODELNAME\$  
 FILE NAME: \$FILES\$



QUIGG ENGINEERING INC

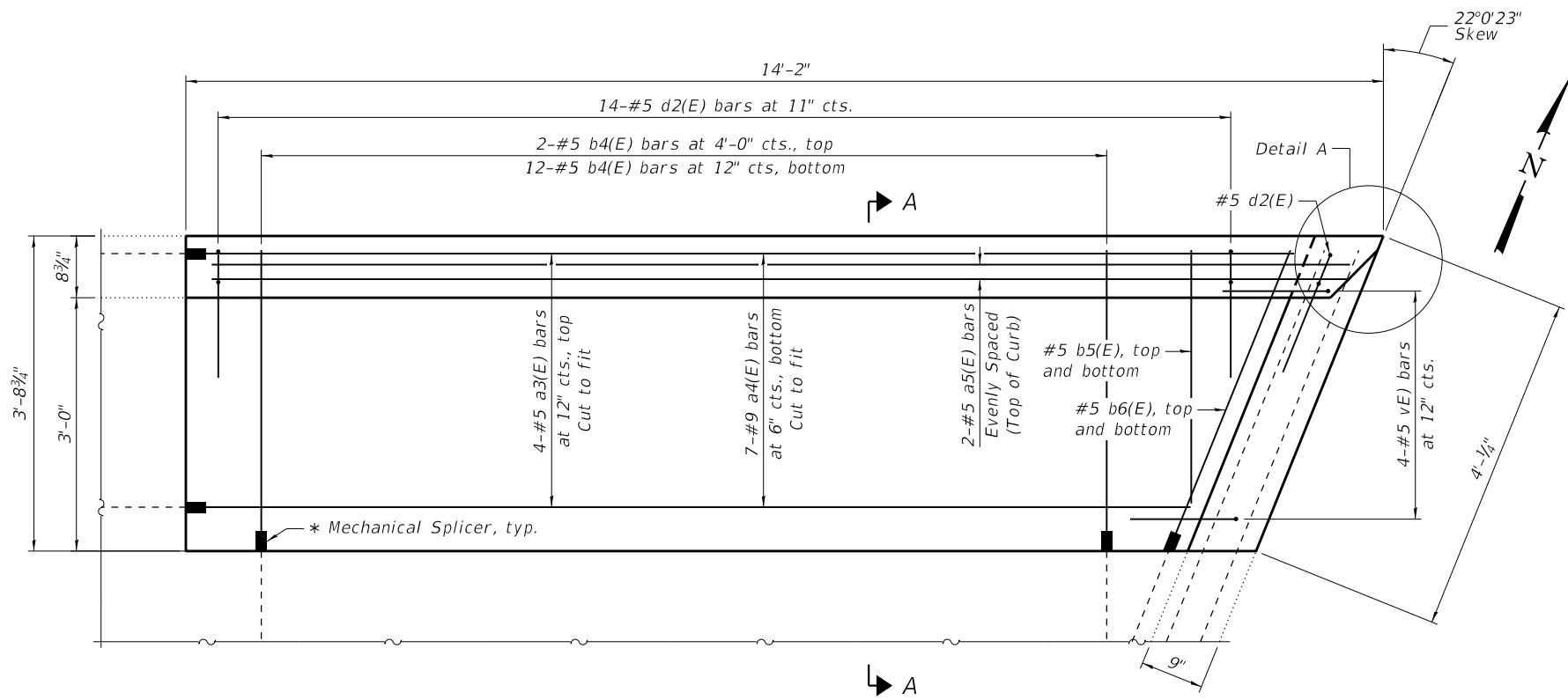
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PLOT DATE =	12/11/2019	CHECKED -	MDC	REVISED -	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

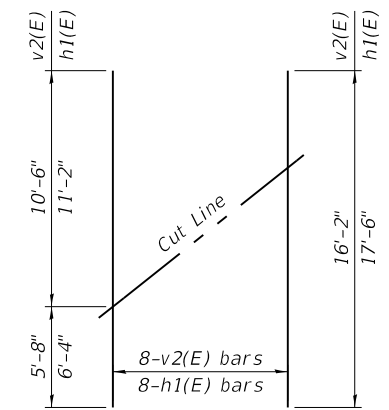
WEST ABUTMENT WINGWALL REPAIR  
 STRUCTURE NO. 016-0018

SHEET 13 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	21
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				



**PART PLAN OF APPROACH SLAB**

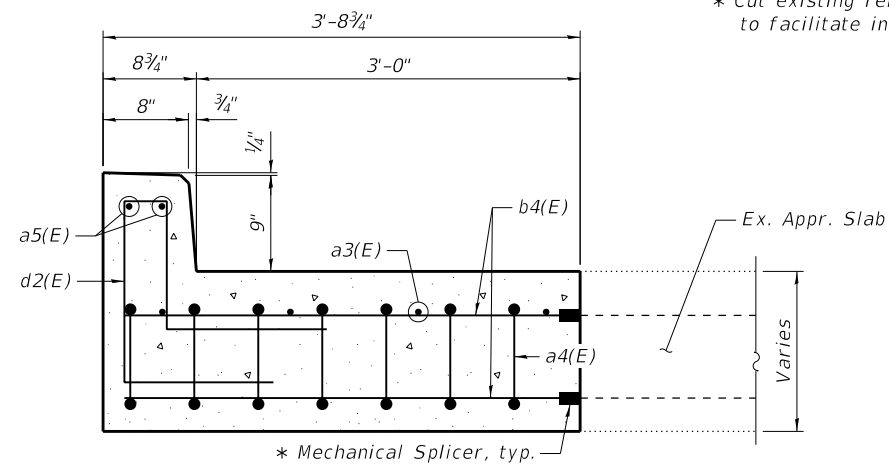


**FIELD CUTTING DIAGRAM**

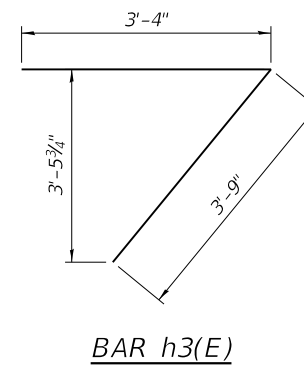
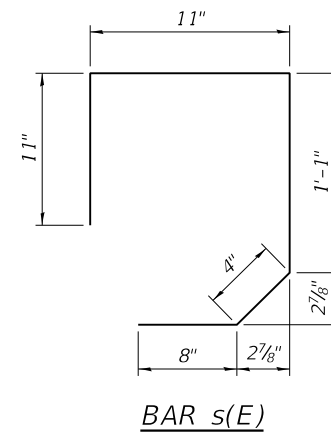
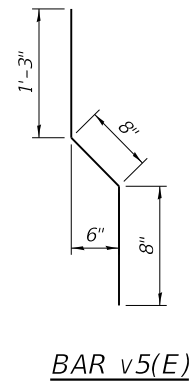
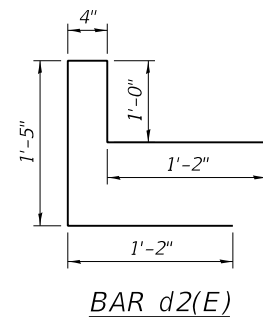
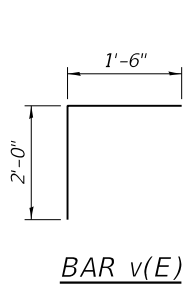
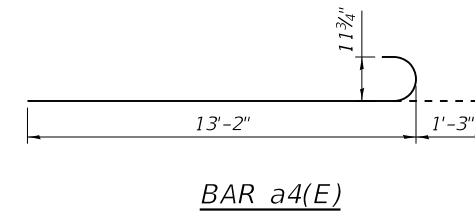
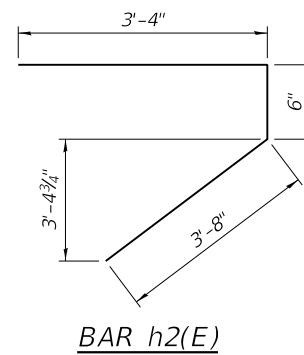
Order v2(E) and h1(E) bars full length. Cut to fit and use the remainder of bars in opposite face.

Notes:  
 Hatchblock shall be paid for as Concrete Superstructure. See sheet 8 of 17 for Bill of Material.  
 See sheet 8 of 17 for detail A.

\* Cut existing reinforcement 6" min. from removal line to facilitate installation of mechanical splicers.



**SECTION A-A**



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a3(E)	4	#5	13'-2"	—
a4(E)	7	#9	14'-5"	—
a5(E)	2	#5	13'-6"	—
b4(E)	14	#5	3'-7"	—
b5(E)	2	#5	3'-0"	—
b6(E)	2	#5	3'-10"	—
d2(E)	15	#5	5'-1"	└
h(E)	16	#6	11'-10"	—
h1(E)	8	#6	17'-6"	—
h2(E)	5	#6	7'-6"	└
h3(E)	5	#6	7'-1"	└
s(E)	4	#5	3'-11"	└
v(E)	4	#5	3'-6"	└
v1(E)	20	#6	12'-3"	—
v2(E)	8	#6	16'-2"	—
v3(E)	2	#5	7'-8"	—
v4(E)	8	#5	4'-2"	—
v5(E)	4	#5	2'-7"	└
Item			Unit	Total
Reinforcement Bars, Epoxy Coated			Pound	1,600
Concrete Removal			Cu. Yd.	7.6
Concrete Superstructure (Approach Slab)			Cu. Yd.	2.5

MODEL: \$MODELNAME\$  
 FILE NAME: \$FILES\$



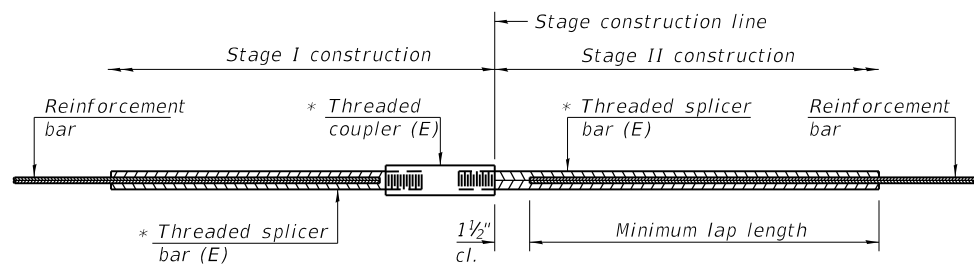
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PLOT DATE =	12/11/2019	CHECKED -	MDC	REVISED -	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT WINGWALL REPAIR  
 STRUCTURE NO. 016-0018

SHEET 14 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	22
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				

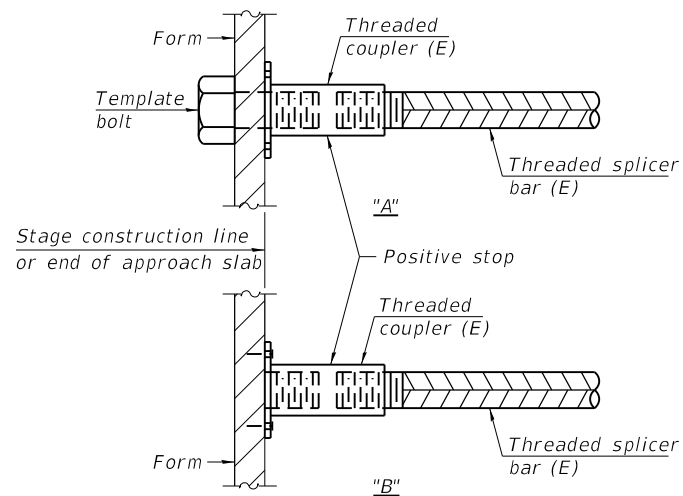


**STANDARD BAR SPLICER ASSEMBLY**

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

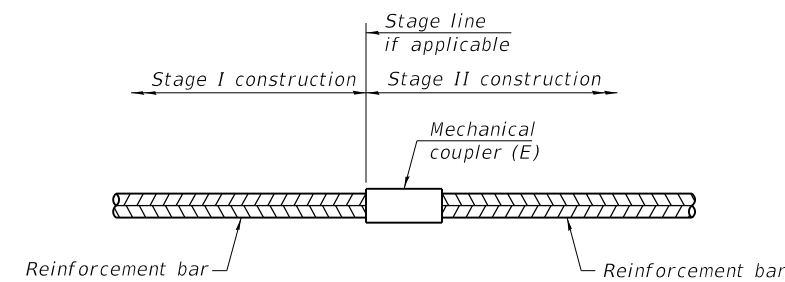
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length



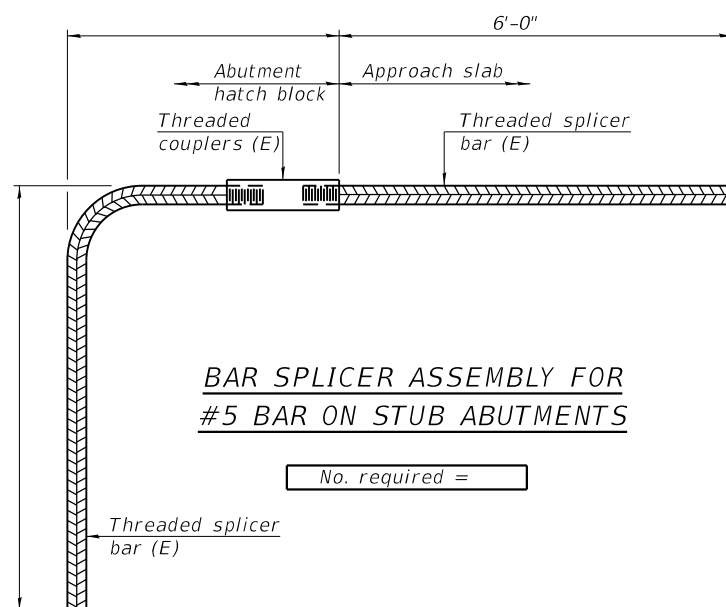
**INSTALLATION AND SETTING METHODS**

"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
Trans. Appr. Slab	#5	16
Long. Appr. Slab, Top	#5	4
Long. Appr. Slab, Bottom	#9	7



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. 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.

MODEL: \$MODELNAME\$  
 FILE NAME: \$FILEL\$

BSD-1

2-17-2017



USER NAME = \$USERS\$	DESIGNED - CFS	REVISED -
\$FILEL\$	CHECKED - SDY	REVISED -
PLOT SCALE = \$SCALE\$	DRAWN - KFO/CFS	REVISED -
PLOT DATE = 12/11/2019	CHECKED - MDC	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 016-0018

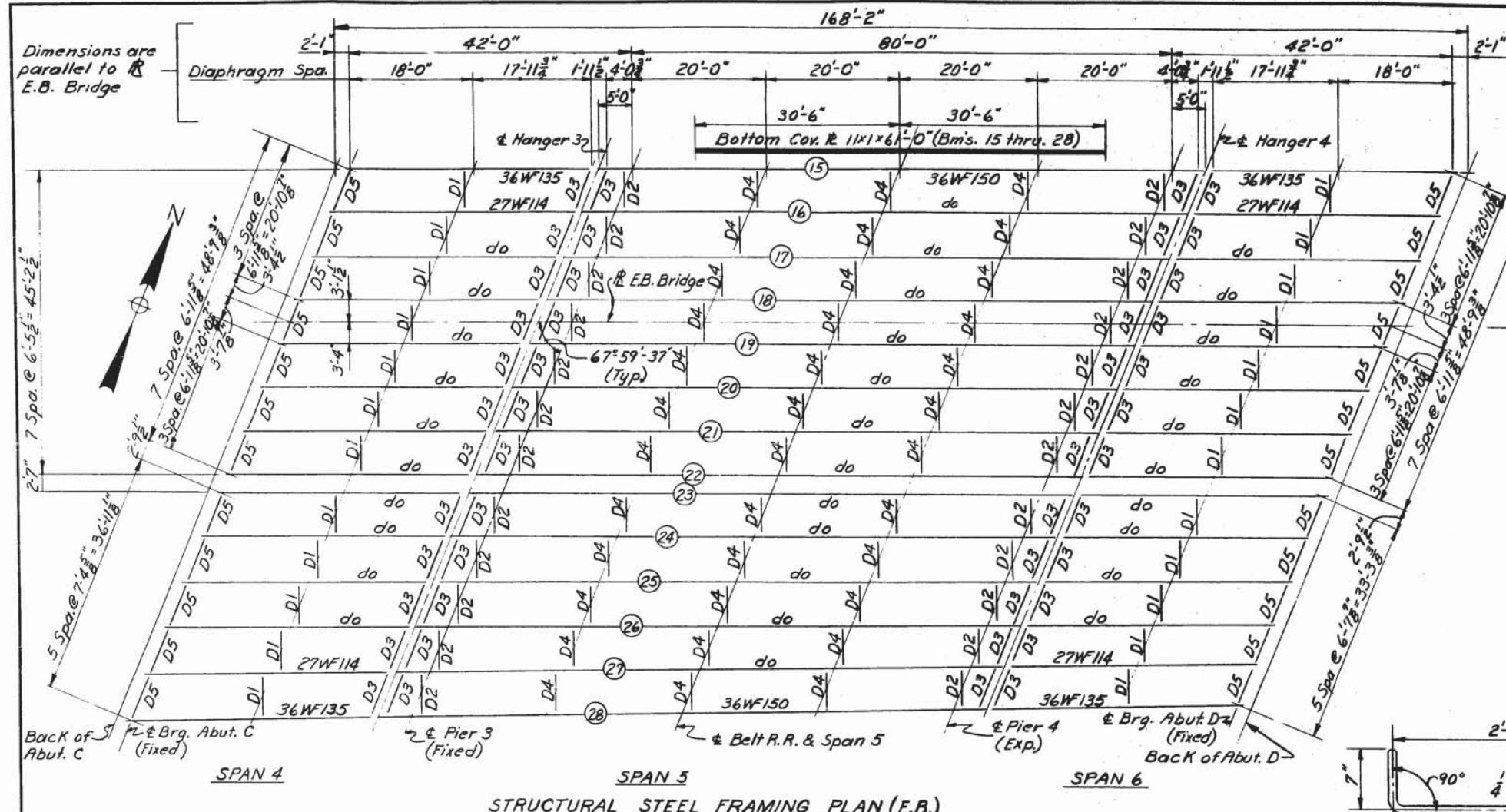
SHEET 15 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	23
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K20	

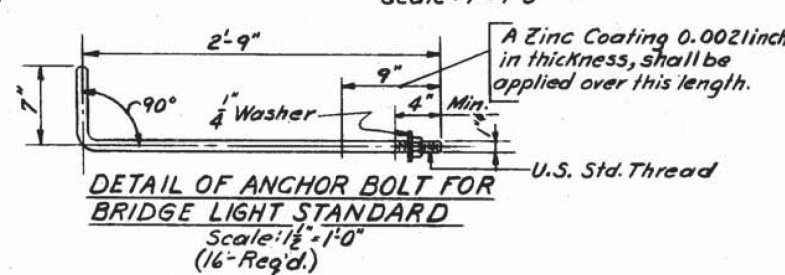
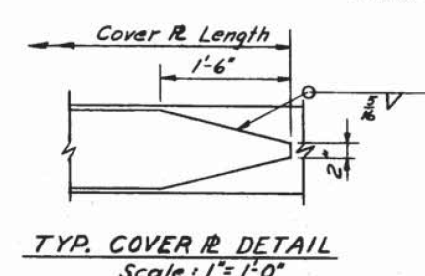
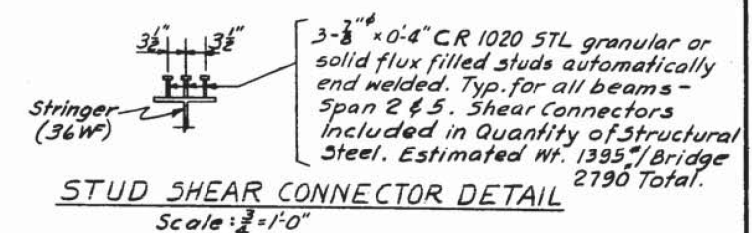




FEDERAL AID ROUTE NO.	SECTION	EXPRESSWAY	DATE	SHEET
55	2019-146-BR	COOK	33	15
ILLINOIS DIVISION OF HIGHWAYS				
SOUTHWEST EXPRESSWAY				
B.R.C. OVERPASS STRUCTURE				
FRAMING PLAN - EAST BOUND BRIDGE				
SCALE: AS NOTED DATE: 9-13-63				



WELDED STUD SHEAR CONNECTOR SPACING - SPAN 2 & 5  
Scale: None

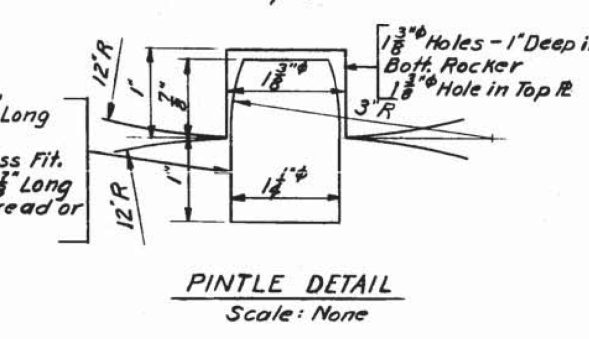
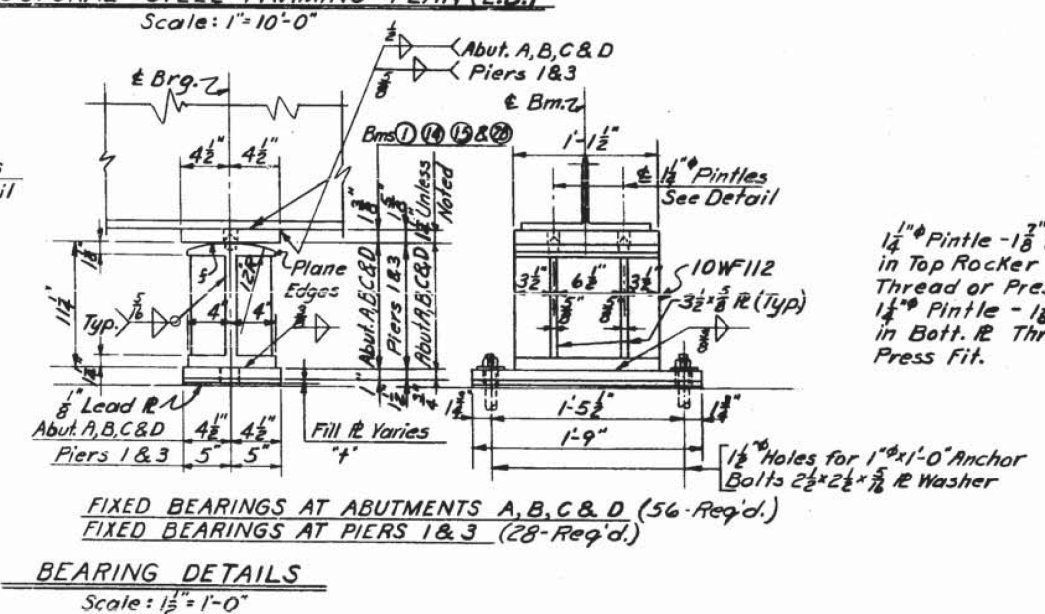
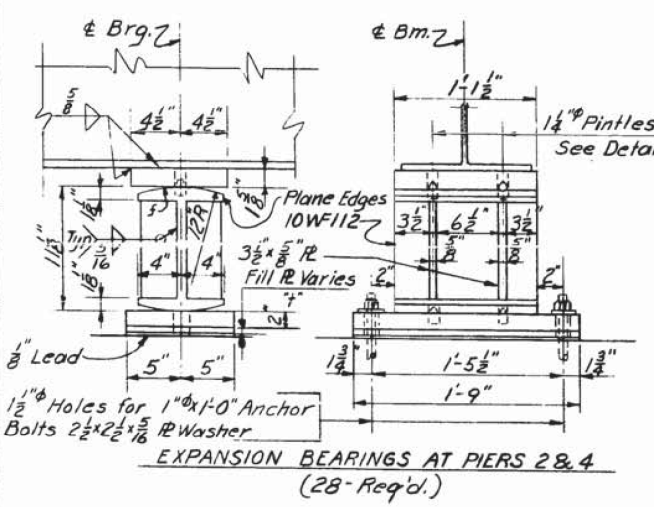


Beam	W.B.			
	Abutment A	Abutment B	Pier 1	Pier 2
1 thru 6	0	0	0	0
8, 13 & 14	0	0	0	0
7	7/8"	5/8"	5/8"	5/8"
9	0	0	1/2"	0
10	0	1 1/2"	7/8"	1/2"
11	4"	7/8"	1/2"	1 1/2"
12	0	1/2"	0	0

Beam	E.B.			
	Abutment C	Abutment D	Pier 3	Pier 4
15, 16 & 24 thru 23	0	0	0	0
17	0	0	1/8"	0
18	1 1/2"	0	0	3/4"
19	0	0	1/4"	1 1/2"
20	0	0	0	1/2"
21	3/8"	0	0	0
22	3/8"	7/8"	5/8"	1/2"
23	3/8"	0	0	0

Estimated weight of all rockers, bolsters, pintles, bearing plates, fill plates, lead plates and all anchor bolts is 17250 Lbs. E.B. Bridge and 17350 Lbs. W.B. Bridge.



FOR INFORMATION ONLY

See Sheet 3 for General Notes  
Work Sheets 14, 15 & 16 Together

ILLINOIS DIVISION OF HIGHWAYS  
SOUTHWEST EXPRESSWAY  
B.R.C. OVERPASS STRUCTURE  
FRAMING PLAN - EAST BOUND BRIDGE  
SCALE: AS NOTED DATE: 9-13-63

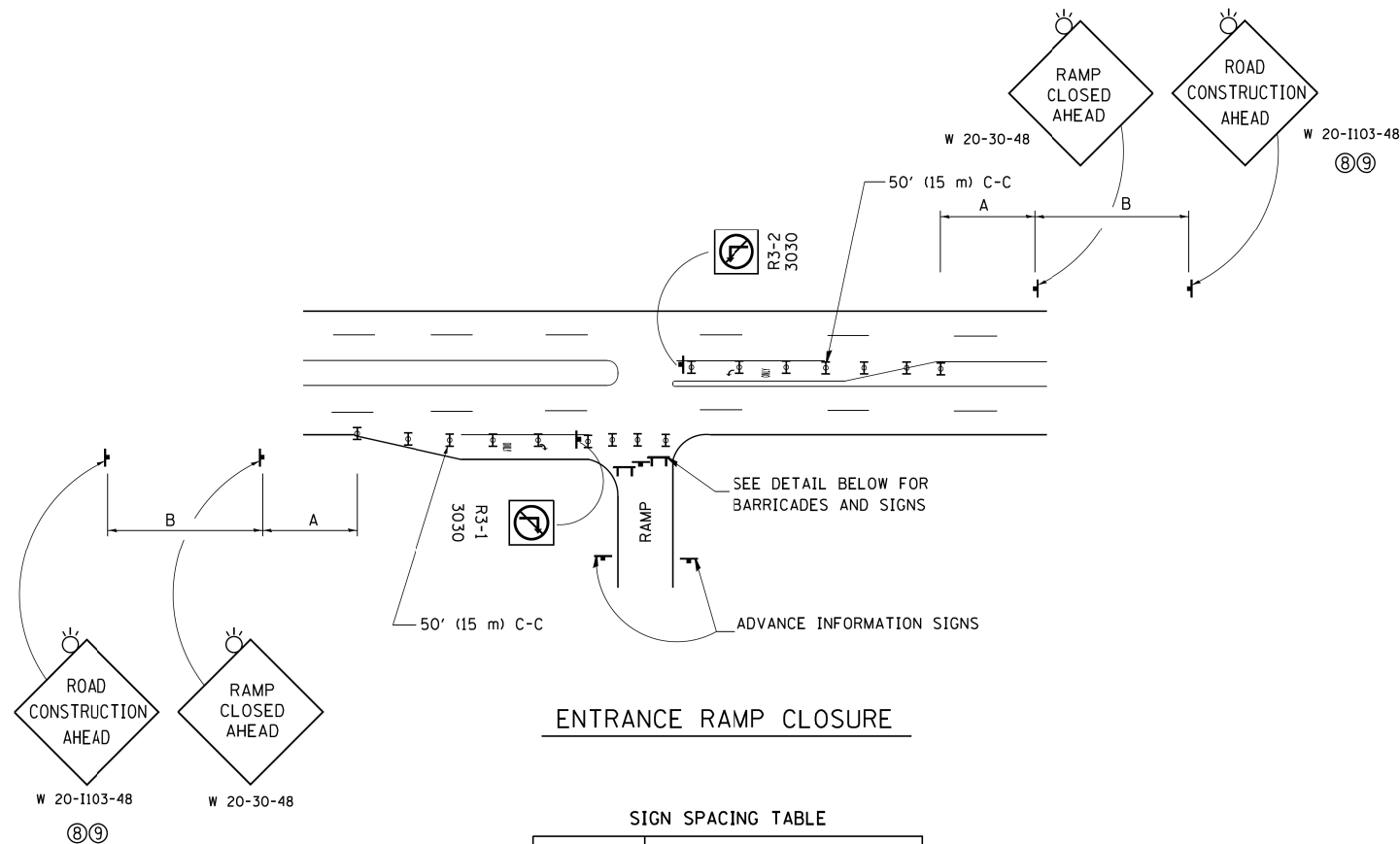
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DATE: 9-13-63  
QUIGG ENGINEERING INC

USER NAME =	SUSERS	DESIGNED -	CFS	REVISED -	
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PLOT DATE =	12/11/2019	CHECKED -	MDC	REVISED -	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN REFERENCE SHEET  
STRUCTURE NO. 016-0018  
SHEET 17 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	25
CONTRACT NO. 62K20				
ILLINOIS FED. AID PROJECT				

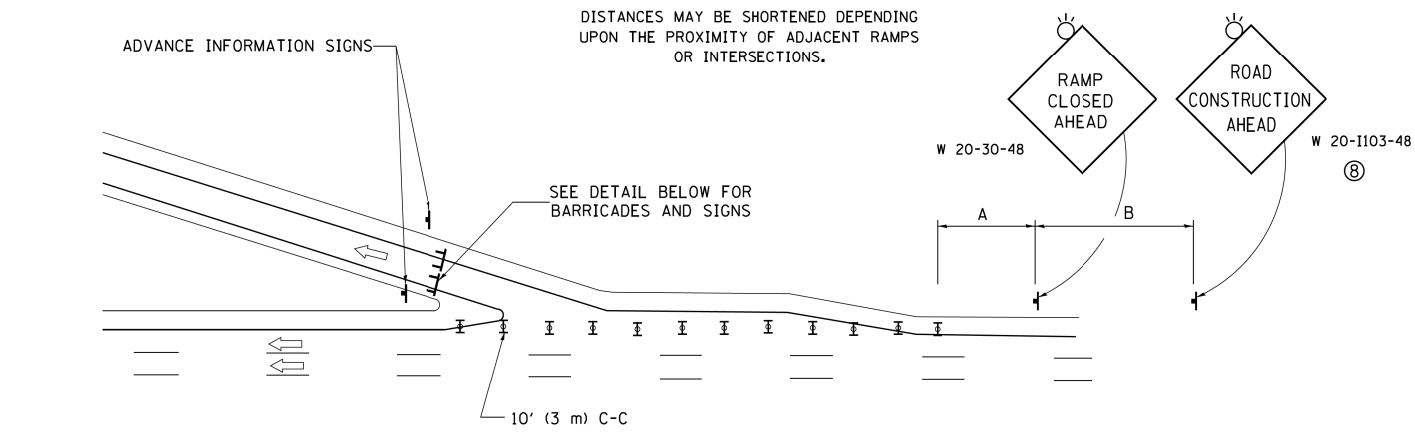


ENTRANCE RAMP CLOSURE

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)

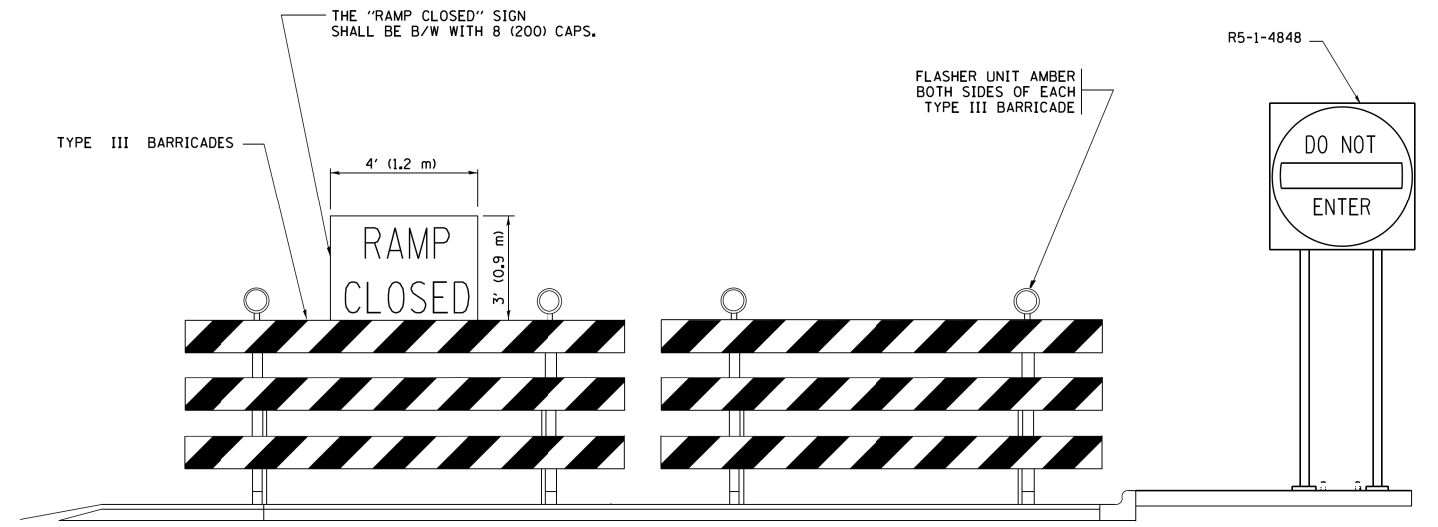
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

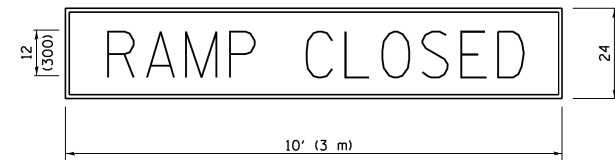
**SYMBOLS**

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



DETAIL FOR REQUIRED BARRICADES & SIGNS

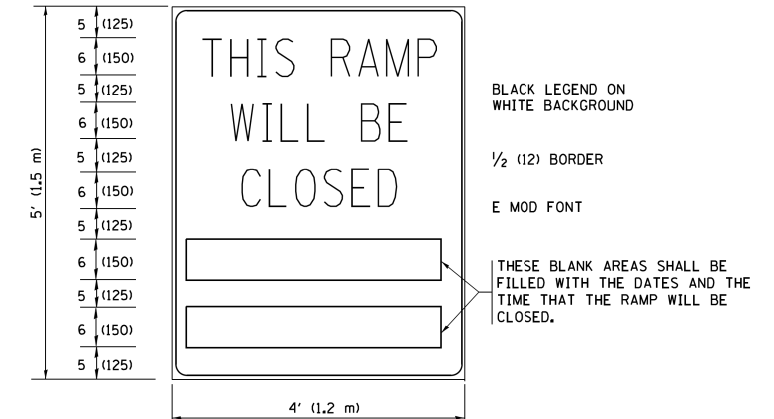
RAMP CLOSURE ADVANCE WARNING SIGN



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.

FILE NAME =	USER NAME = footemj	DESIGNED - D.W.S.	REVISED - S.P.B. 01-07
pw\j\084EBID\INTEG\illinois.gov\PIWIDT\Documents\IDOT Offices\District 1\Projects\Dist		DRAWN - CADData\CADsheets\c08.dgn	REVISED - S.P.B. 12-09
Default	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED - M.D. 06-13
	PLOT DATE = 11/27/2017	DATE - 02-83	REVISED - M.D. 01-18

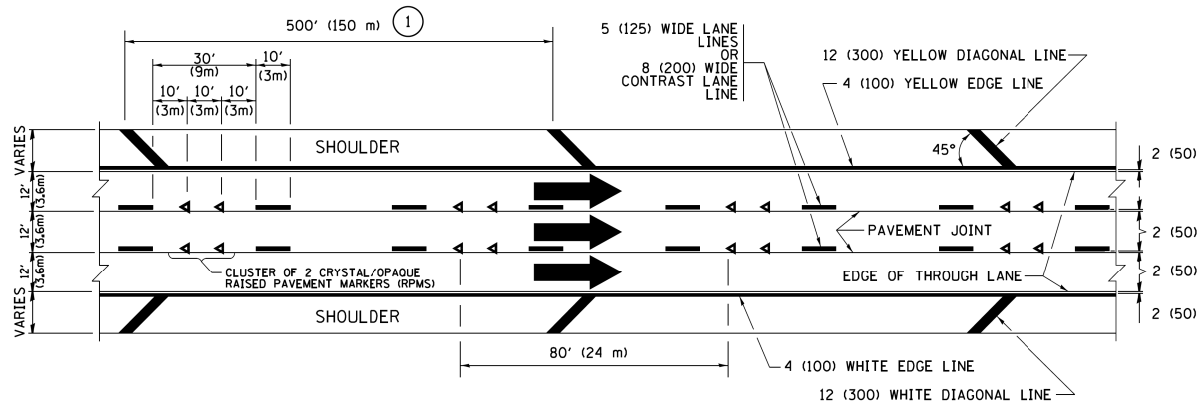
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ENTRANCE AND EXIT RAMP  
CLOSURE DETAILS**

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

F.A. 1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2019-146-BR	COOK	31	26
TC-08			CONTRACT NO. 62K20	
ILLINOIS FED. AID PROJECT				

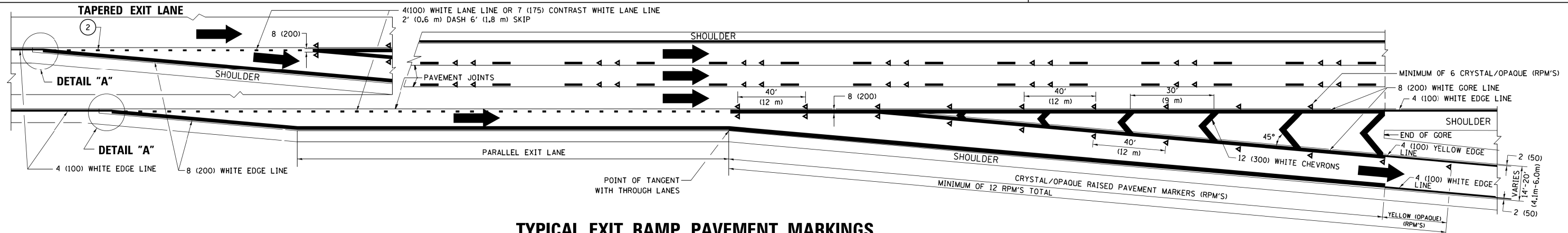




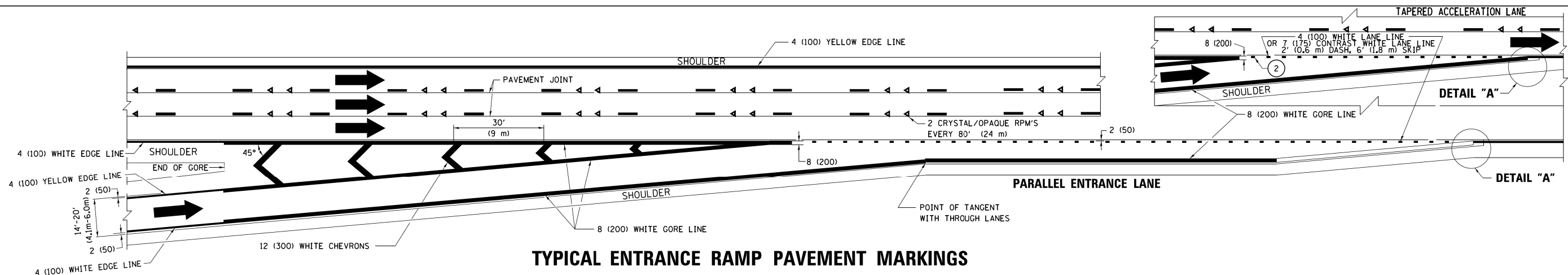
**TYPICAL EDGE LINES & LANE LINES**

**PAVEMENT MARKING MATERIALS**

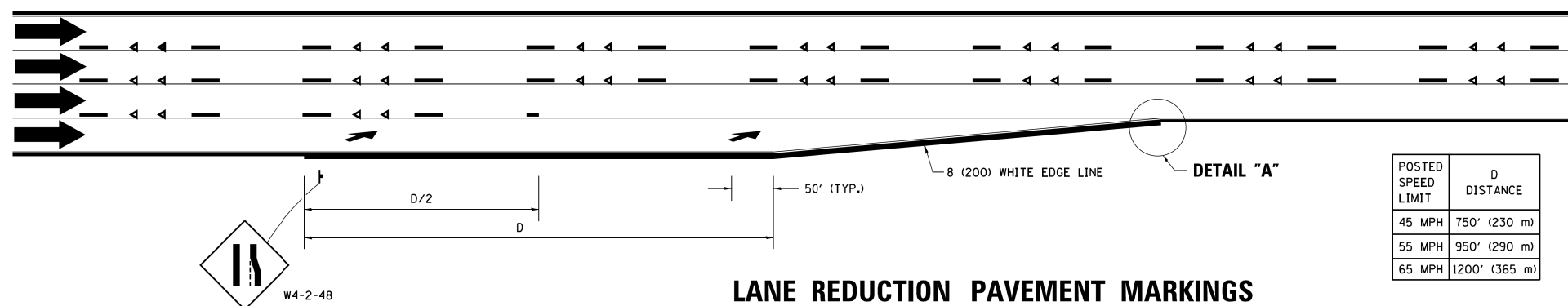
1. THERMOPLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON HMA PAVEMENTS.
2. POLYUREA OR MODIFIED URETHANE PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON PCC PAVEMENTS.
3. PREFORMED PLASTIC PAVEMENT MARKING LINE 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.



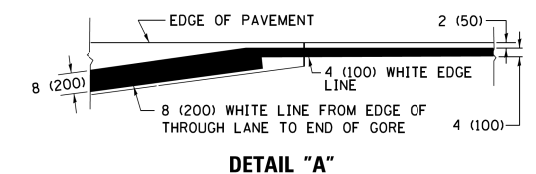
**TYPICAL EXIT RAMP PAVEMENT MARKINGS**



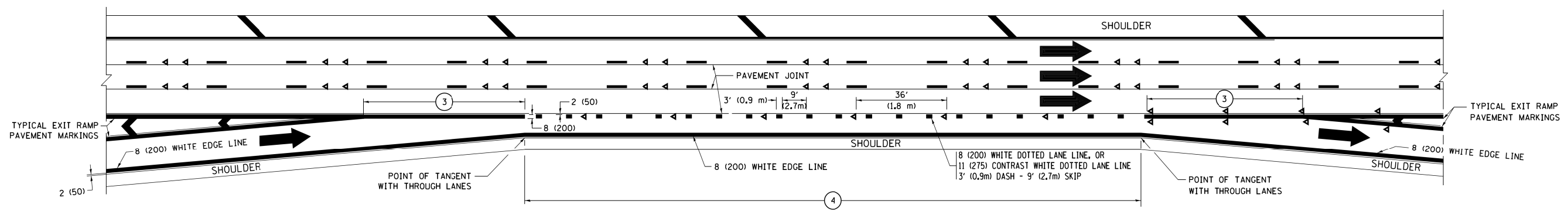
**TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS**



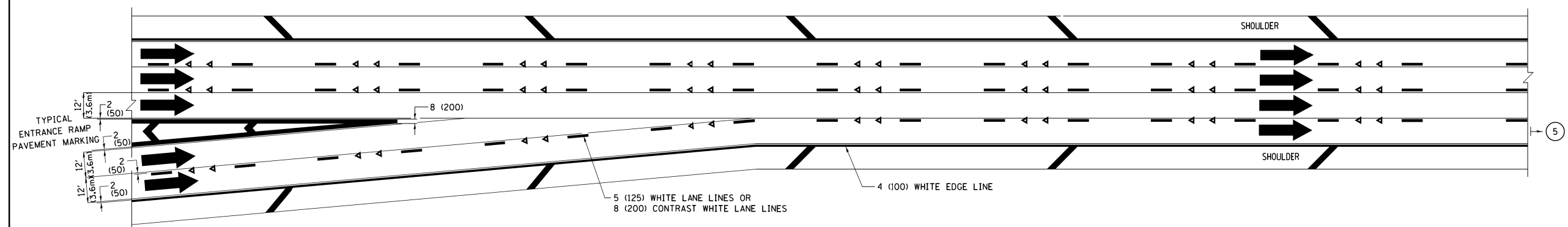
**LANE REDUCTION PAVEMENT MARKINGS**



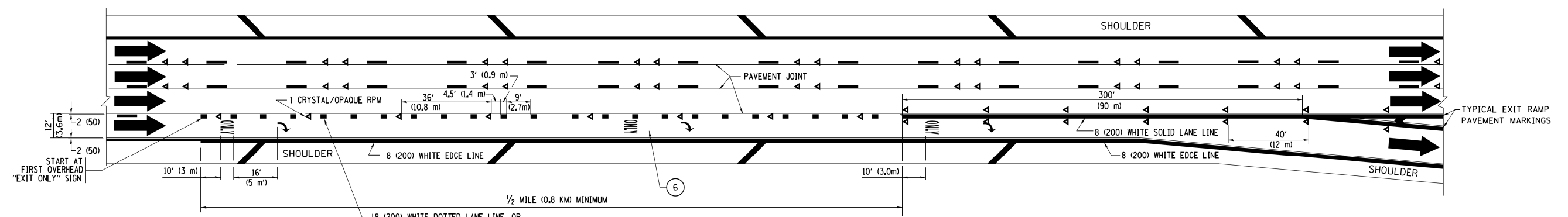
- NOTES:**
- 1 THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
  - 2 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED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



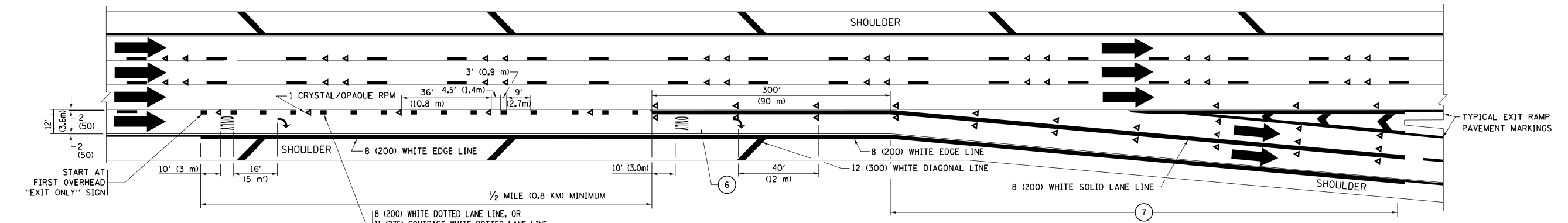
**AUXILIARY LANE MARKINGS**



**TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS**



**EXIT ONLY LANE MARKINGS**

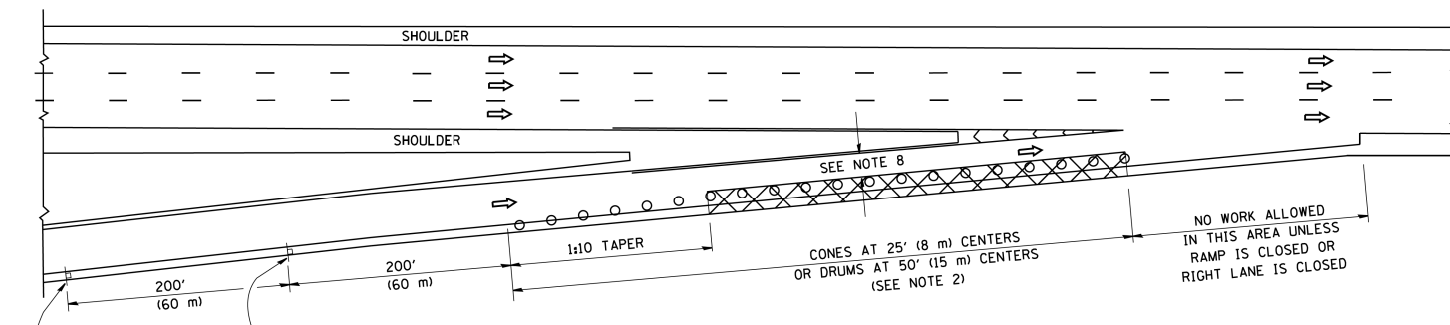


**EXIT ONLY WITH OPTION LANE MARKINGS**

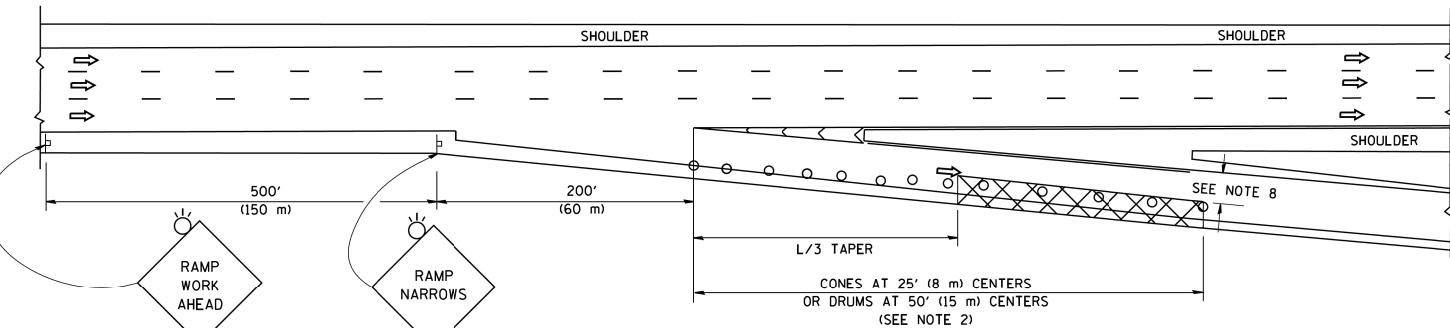
- NOTES:**
- ③ OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
  - ④ 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
  - ⑤ FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS, USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
  - ⑥ ONLY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

FILE NAME =	USER NAME = footemj	DESIGNED - D.W.S.	REVISED - J.A.F. 02-06	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw\j\084EBID\INTEG\illinois.gov\PIWID\Documents\IDOT Offices\District 1\Projects\Dist 1\CADData\CADsheets\c12.dgn	DRAWN	CHECKED -	REVISED - S.P.B. 01-07		SCALE: NONE	SHEET 2	OF 2 SHEETS	STA.	TO STA.	55	2019-146-BR	COOK	31 29
Default	PLOT SCALE = 50,000' / in.	DATE - 01-90	REVISED - S.P.B. 01-10					<b>TC-12</b>		CONTRACT NO. 62K20			
	PLOT DATE = 9/6/2017		REVISED - M.D. 09-17					ILLINOIS FED. AID PROJECT					

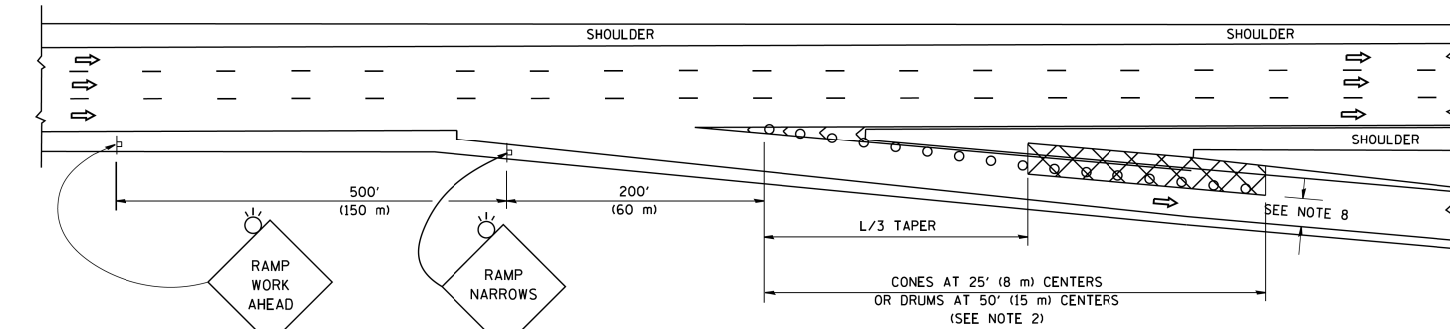
PARTIAL RAMP CLOSURE DETAILS



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

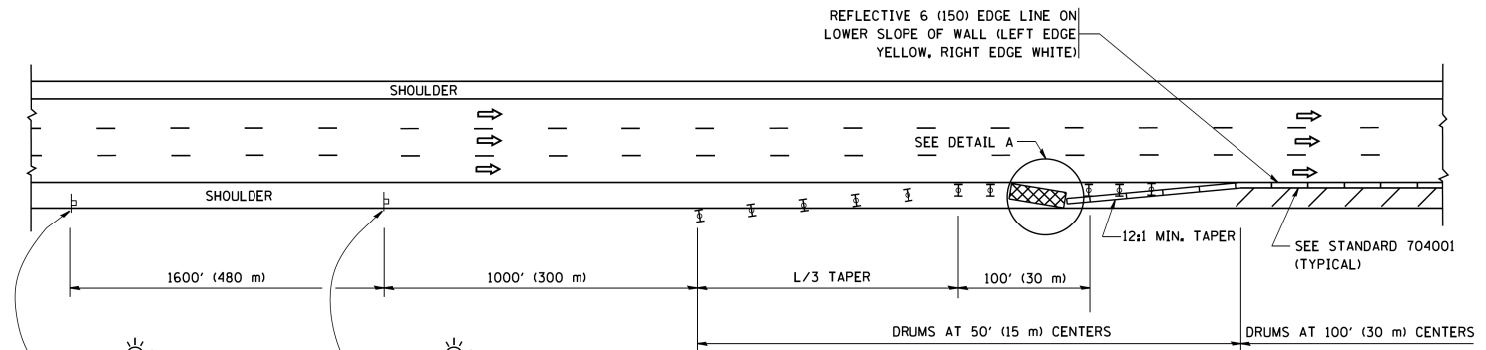
GENERAL NOTES

1. THE "L" DISTANCE EQUALS:
 

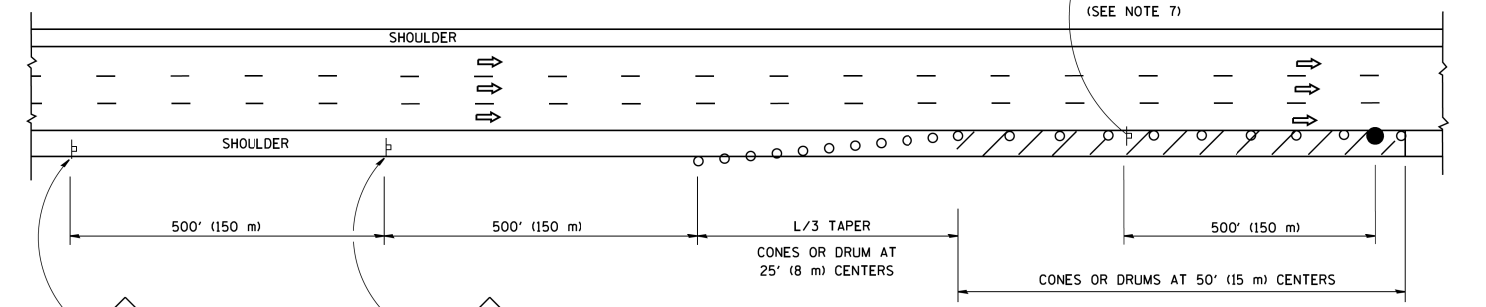
SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC    ENGLISH
	$L = 0.65(W)(S)$ $L = (W)(S)$

W = WIDTH OF OFFSET IN FEET (METERS)  
S = NORMAL POSTED SPEED MPH (KM/H)
2. 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.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS

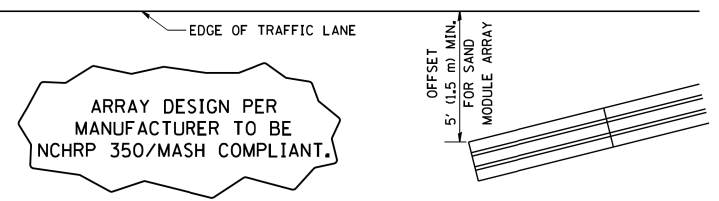


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

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



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

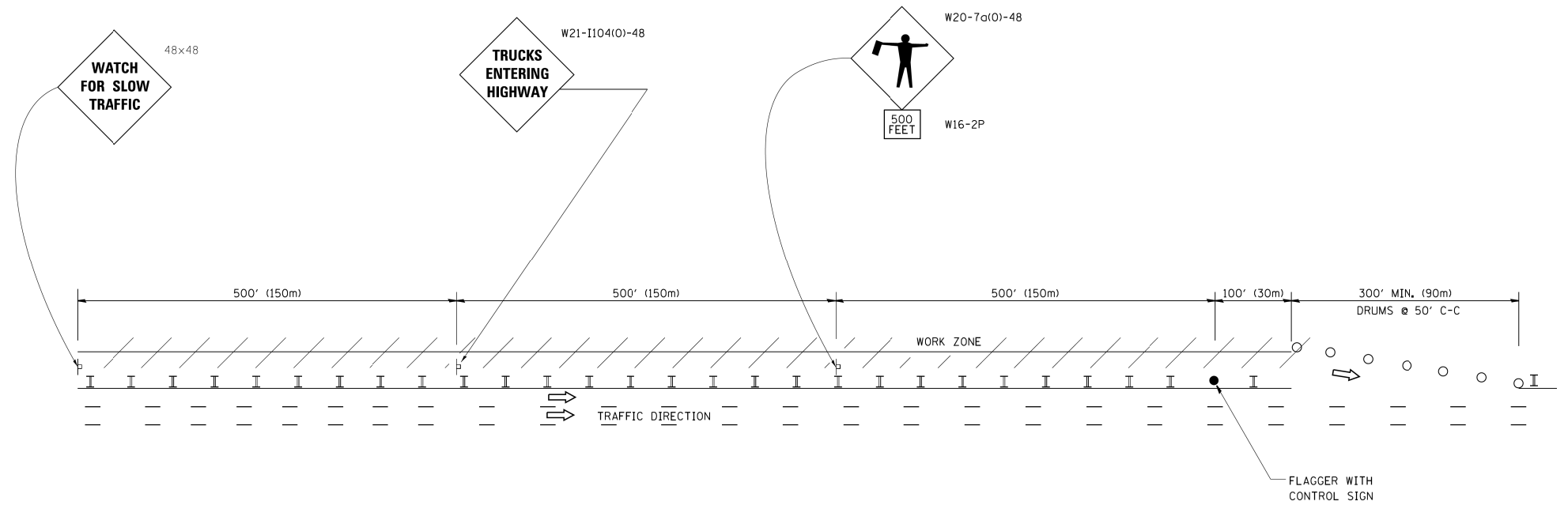
5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - b. THE WORK ACTIVITY REQUIRES FREQUENT ENCRANCHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION  
16' MIN. WIDTH CURVE SECTION.

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

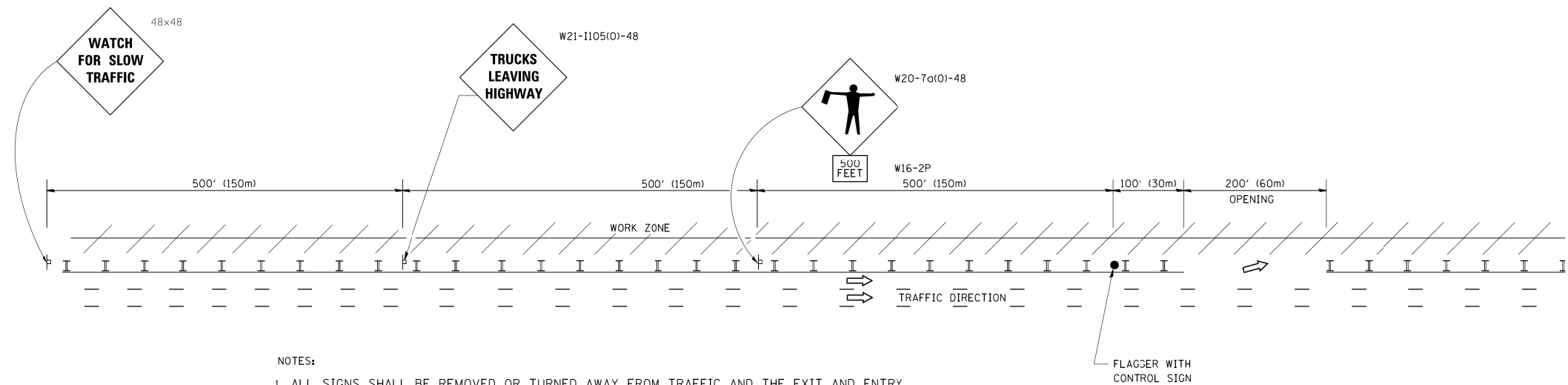
FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - S.P.B. 01-07	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES</b>	F.A. 1	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	pw\j\084EBIDINTEG\111nois.gov\PIW00T\Documents\IDOT Offices\District 1\Projects\Dist 1\CADData\CAD\Drawings\17.dgn	DRAWN -	REVISED - S.P.B. 12-09			55	2019-146-BR	COOK	31	30	
	PLOT SCALE = 50,0000' / in.	CHECKED -	REVISED - M.D. 06-13			<b>TC-17</b>		<b>CONTRACT NO. 62K20</b>			
	PLOT DATE = 11/27/2017	DATE - 11-96	REVISED - M.D. 01-18			SCALE: NONE    SHEET 1 OF 1 SHEETS    STA. TO STA.		ILLINOIS FED. AID PROJECT			

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. ALL SIGNS SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE OPENINGS SHALL BE A MINIMUM OF ONE HALF MILE APART AND A MINIMUM OF ONE QUARTER MILE FROM ALL ENTRANCE AND EXIT RAMPS.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS
5. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - J.A.F. 02-06	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FREEWAY/EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS ON FREEWAYS/EXPRESSWAYS</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwork\pwork\footemj\d0108315\tcl18.dgn	DRAWN -	REVISED - S.P.B. 01-07	55			2019-146-BR	COOK	31	31		
PLOT SCALE = 50.000' / in.	CHECKED -	REVISED - S.P.B. 12-09	<b>TC-18</b>			CONTRACT NO. 62K20					
PLOT DATE = 7/8/2013	DATE -	REVISED - M.D. 06-13	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								
				SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA.		TO STA.	