

**BILL OF MATERIALS
STRUCTURE NO. 032-0007 (NB)**

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	4
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**BILL OF MATERIALS
STRUCTURE NO. 032-0008 (SB)**

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	3
STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5")	SQ FT	38

- STRUCTURAL REPAIR OF CONCRETE
(DEPTH EQUAL TO OR LESS THAN 5")
- STRUCTURAL REPAIR OF CONCRETE
(DEPTH GREATER THAN 5")

MODEL: \\MODELM\MAINTS
FILE: \\maints_cad\work\bridge\calderon\03260431\0366A51-BrIDGE\Bridges\03260431.dgn

USER NAME = calderon1	DESIGNED - BDS	REVISED -
	DRAWN - BDS	REVISED -
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PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

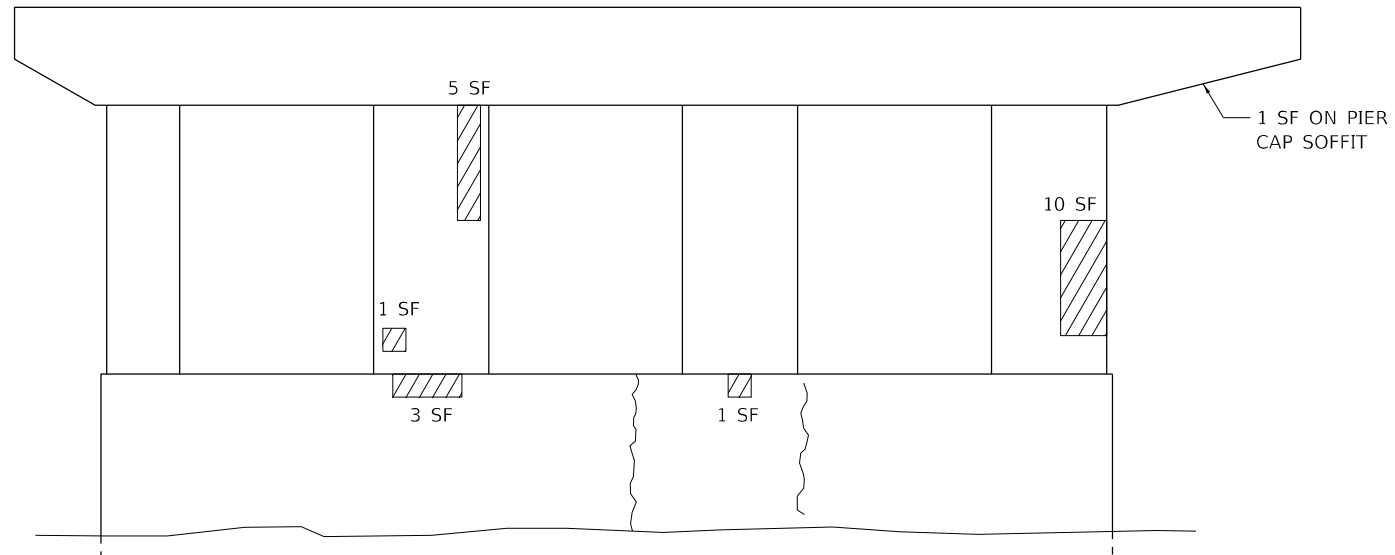
STRUCTURAL REPAIR OF CONCRETE FAI 55 OVER UP RR S.N. 032-0007 (NB) AND S.N. 032-0008 (SB)	
SCALE:	SHEET 11 OF 14 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	101
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

BILL OF MATERIALS

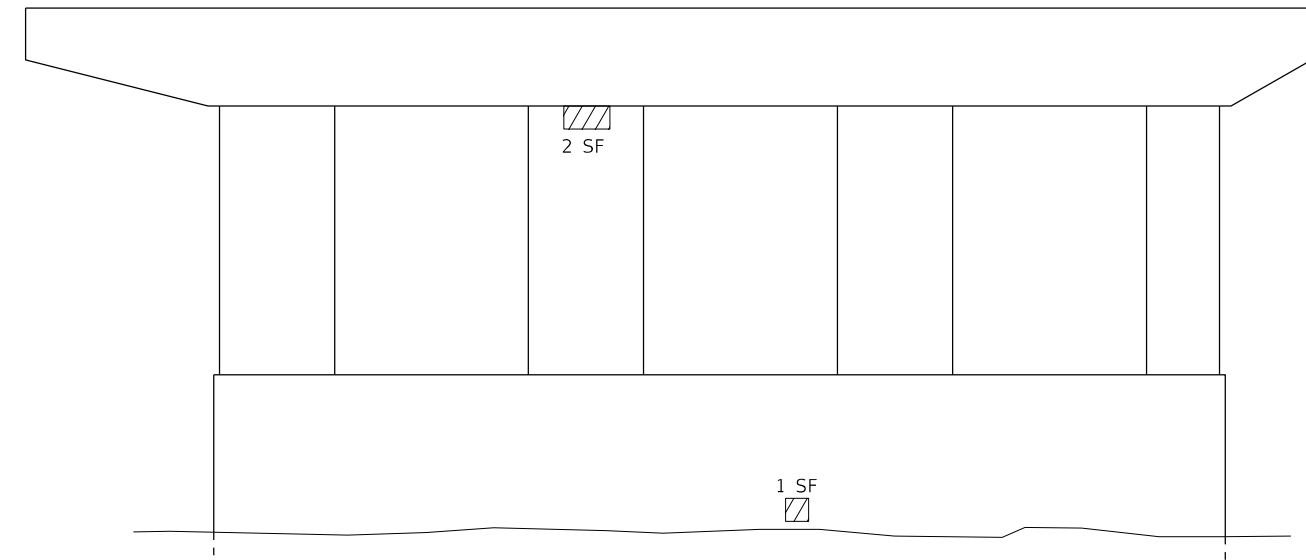
STRUCTURE NO. 032-0008 (SB)

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	56
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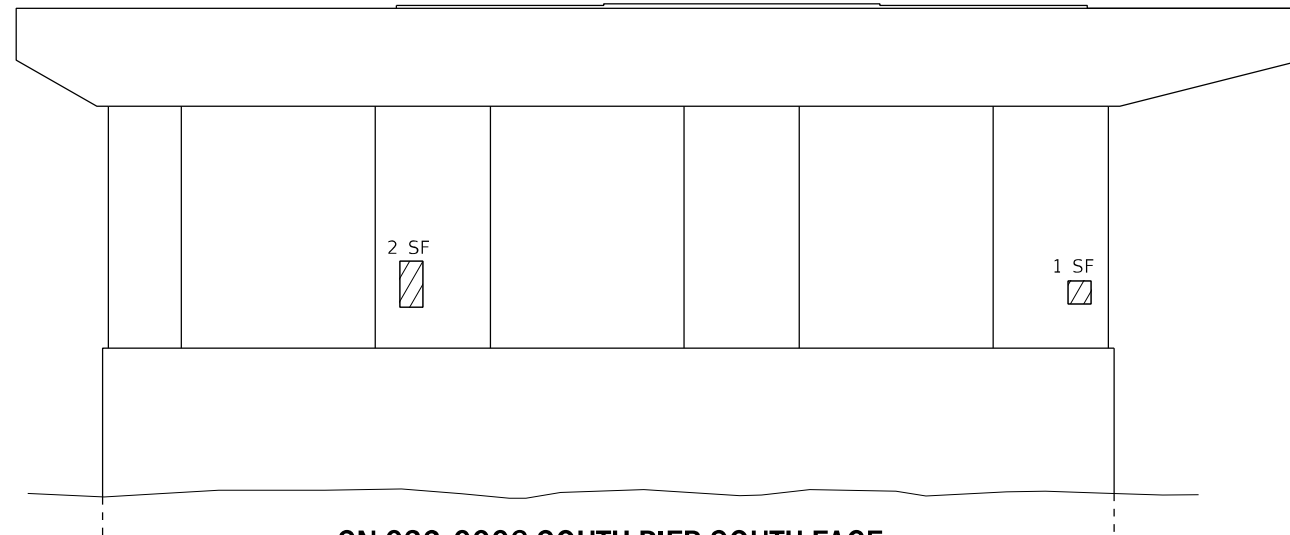


SN 032-0008 NORTH PIER SOUTH FACE

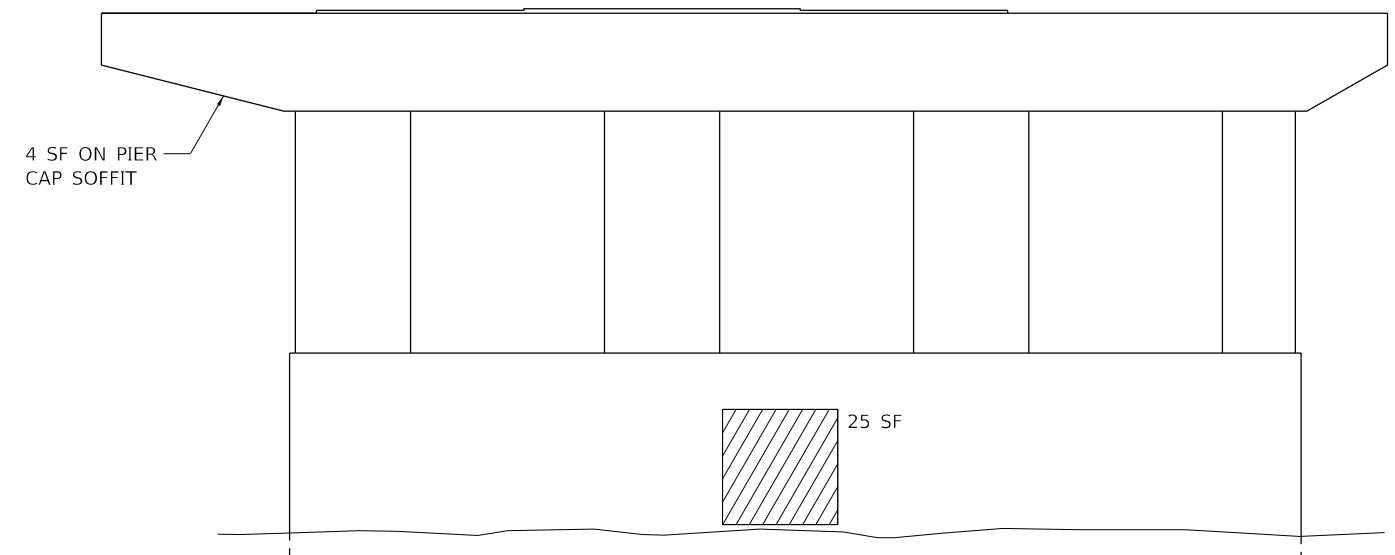
 STRUCTURAL REPAIR OF CONCRETE
(DEPTH EQUAL TO OR LESS THAN 5")



SN 032-0008 NORTH PIER NORTH FACE



SN 032-0008 SOUTH PIER SOUTH FACE



SN 032-0008 SOUTH PIER NORTH FACE

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PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STRUCTURAL REPAIR OF CONCRETE	
FAI 55 OVER UP RR	
S.N. 032-0007 (NB) AND S.N. 032-0008 (SB)	
SCALE:	SHEET 12 OF 14 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	102
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

GENERAL NOTES

ALL STRUCTURAL STEEL SHALL CONFORM TO AASHTO CLASSIFICATION M-270 GR. 36. THE ADJUSTING RING SHALL BE GALVANIZED. BOLTS SHALL BE 1/2"Ø, AASHTO M164 TYPE I, MECHANICALLY GALVANIZED.

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.

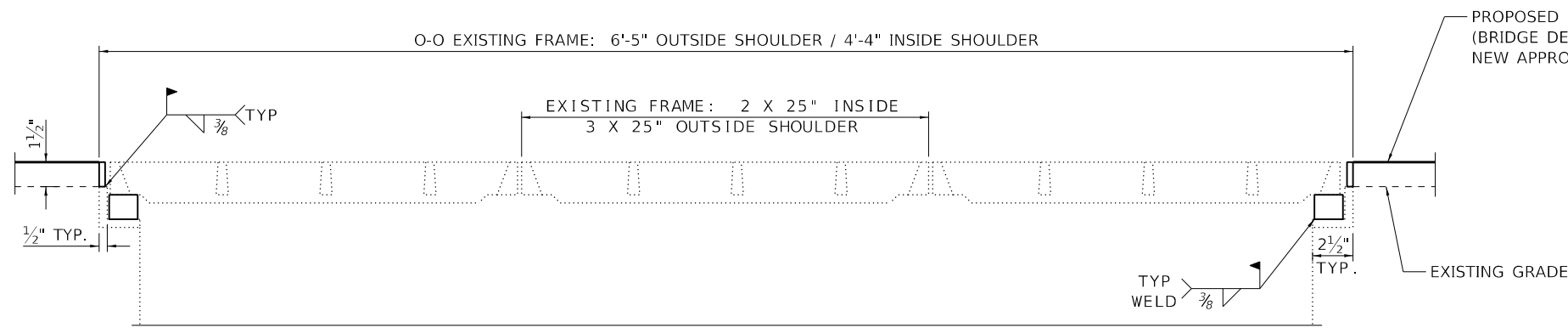
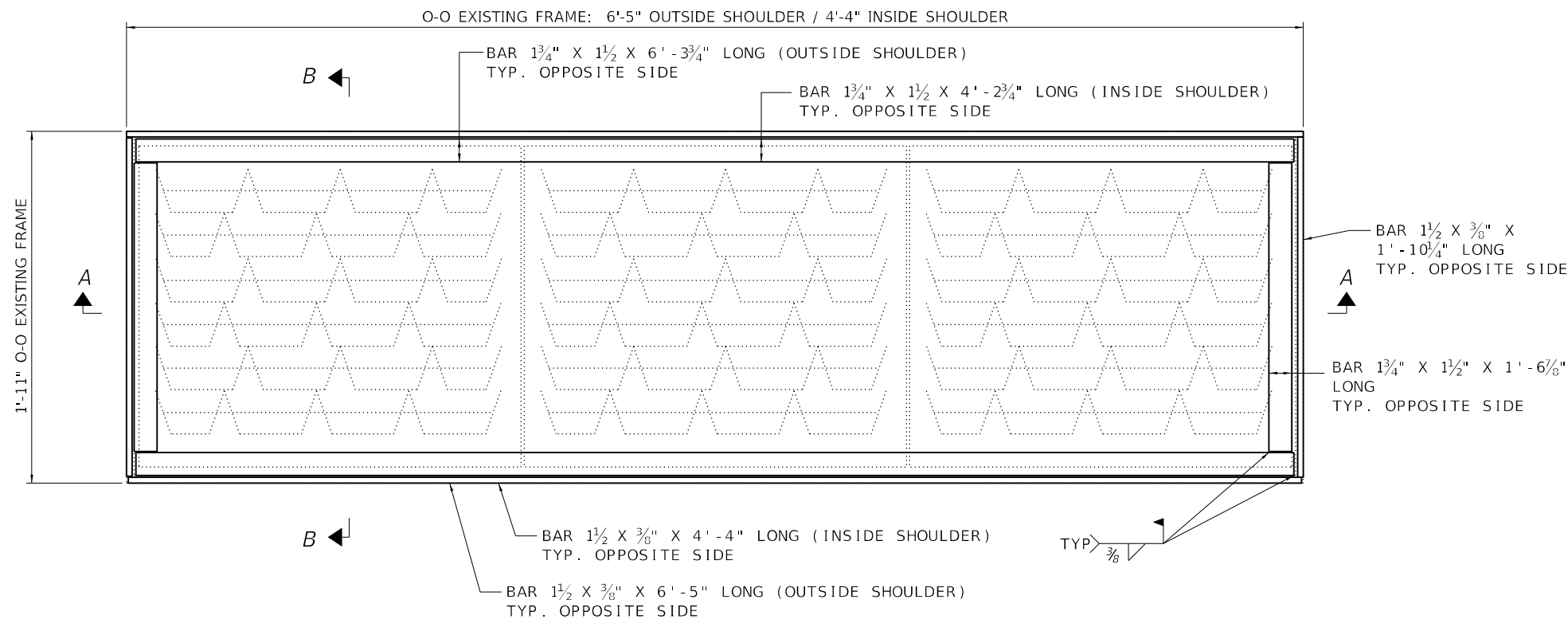
INLET BOXES TO BE ADJUSTED (SPECIAL):

THE FRAME AND GRATE ELEVATION OF THE EXISTING INLET BOXES SHALL BE ADJUSTED BY MEANS OF WELDING THE NEW MATERIAL ONTO THE EXISTING FRAME TO REACH PROPOSED GRADE ELEVATIONS.

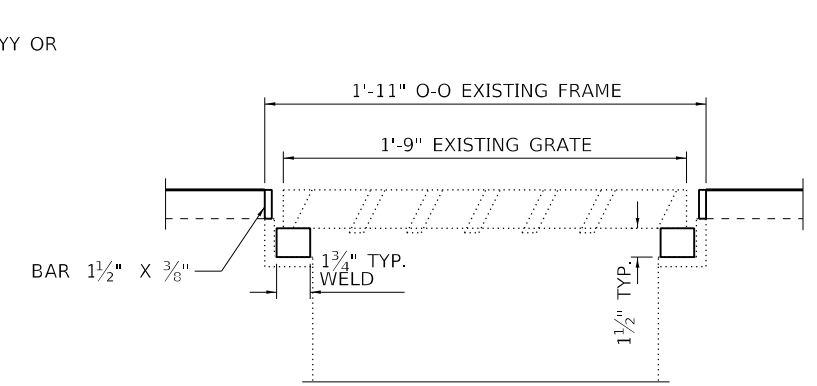
THE REMOVAL AND INSTALLATION METHODS SHALL BE PERFORMED SO THAT NO DAMAGE IS DONE TO EXISTING FRAMES AND GRATES TO BE REUSED AND SURROUNDING DRAINAGE STRUCTURE.

SHOP PLANS FOR PROPOSED ADJUSTING INLET FRAME AND GRATE SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.

COST OF ALL LABOR AND MATERIALS NECESSARY TO REMOVE, ADJUST AND/OR REINSTALL THE INLET FRAME AND GRATE TO THE PROPOSED GRADES SHALL BE INCLUDED IN THE COST PER UNIT OF "EACH" FOR INLET BOXES TO BE ADJUSTED (SPECIAL).



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
INLET BOXES TO BE ADJUSTED (SPECIAL)	Each	8

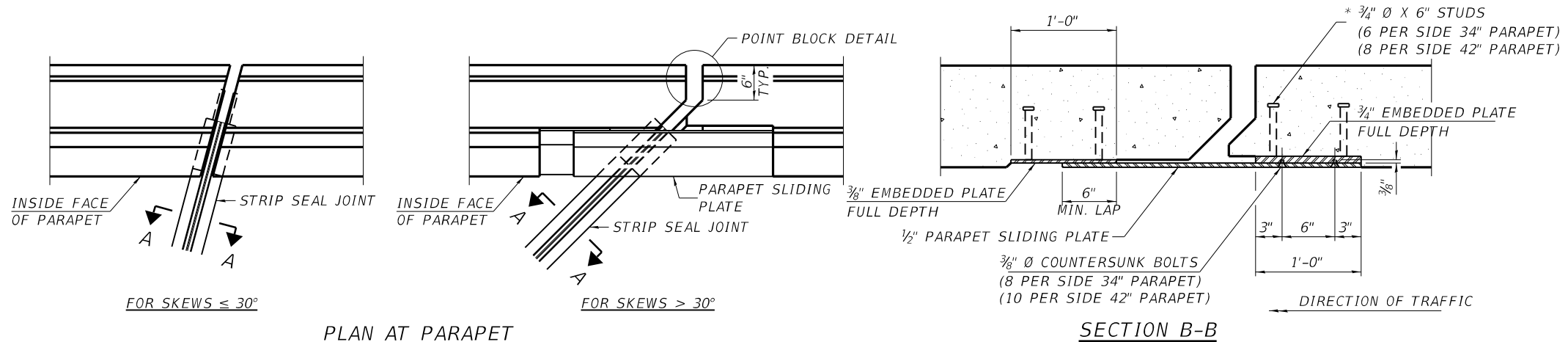
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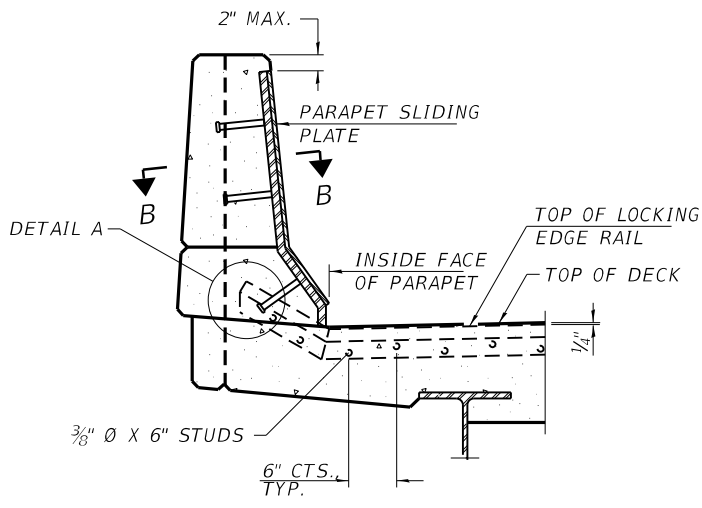
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXISTING INLET BOX ADJUSTMENT DETAIL		
FAI 55 OVER UP RR		
S.N. 032-0007 (NB) AND S.N. 032-0008 (SB)		
SCALE:	SHEET 13 OF 14 SHEETS	STA. TO STA.

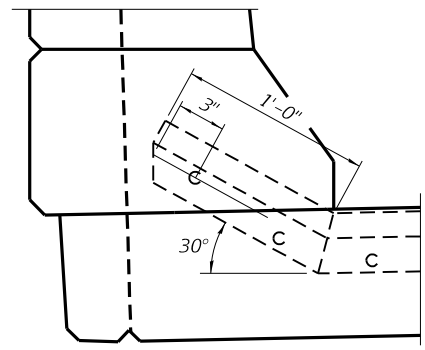
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	103
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				



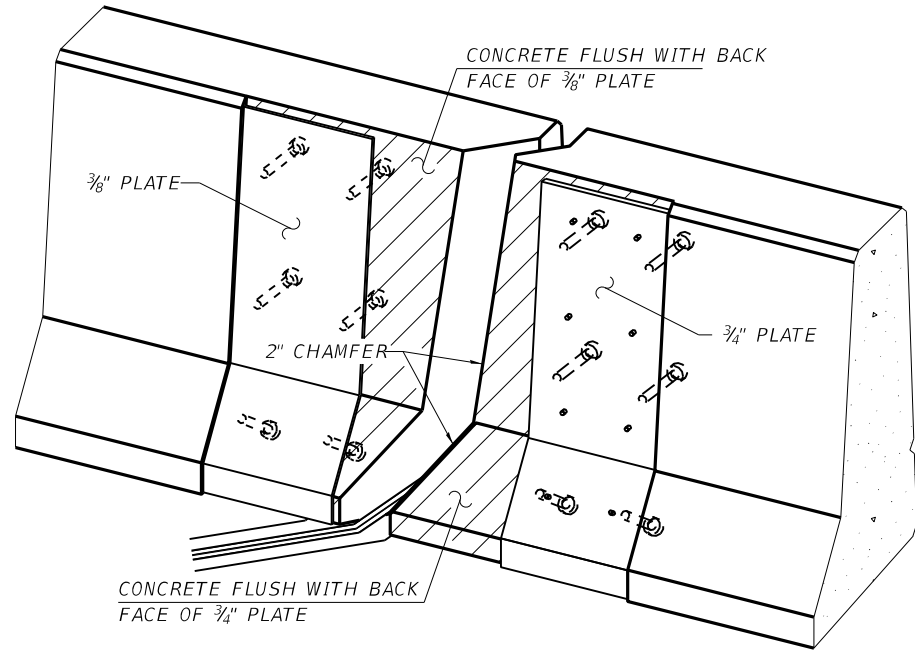
NOTES:
 THE STRIP SEAL SHALL BE MADE CONTINUOUS AND SHALL HAVE A MINIMUM THICKNESS OF 1/4". THE CONFIGURATION OF THE STRIP SEAL SHALL MATCH THE CONFIGURATION OF THE LOCKING EDGE RAILS. OPEN OR "WEBBED" STRIP SEAL GLAND CONFIGURATIONS ARE NOT PERMITTED. THE GLAND SHALL BE SIZED FOR A MAXIMUM RATED MOVEMENT OF 4 INCHES.
 THE LOCKING EDGE RAILS DEPICTED ARE CONFIGURED FOR TYPICAL APPLICATIONS AND ARE CONCEPTUAL ONLY. THE ACTUAL CONFIGURATION OF THE LOCKING EDGE RAILS AND MATCHING STRIP SEAL MAY VARY FROM MANUFACTURER TO MANUFACTURER PROVIDED THEY FIT THE APPLICATION AND MEET THE MINIMUM ANCHORAGE SHOWN. FLANGED EDGE RAILS, HOWEVER, WILL NOT BE ALLOWED. LOCKING EDGE RAILS MAY EXCEED THE 4 1/2" MAXIMUM DEPTH PROVIDED THE ANCHORAGE SYSTEM IS REVISED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.
 THE MANUFACTURER'S RECOMMENDED INSTALLATION METHODS SHALL BE FOLLOWED.
 ALL STEEL COMPONENTS SHALL BE GALVANIZED AFTER FABRICATION ACCORDING TO ARTICLE 520.03 OF THE STANDARD SPECIFICATIONS.
 THE MAXIMUM SPACE BETWEEN LOCKING EDGE RAIL SEGMENTS SHALL BE 1/16" AND SEALED WITH A SUITABLE SEALANT; HOWEVER, ANY RAIL JOINT WITHIN 10' MEASURED PERPENDICULAR TO THE FACE OF THE CURB OR PARAPET SHALL BE WELDED AS SHOWN IN THE LOCKING EDGE RAIL SPLICE DETAIL.
 COST OF PARAPET SLIDING PLATES, EMBEDDED PLATES, AND ANCHORAGE STUDS INCLUDED WITH PREFORMED JOINT STRIP SEAL. 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.



ELEVATION AT PARAPET
 (SKEWS > 30° SHOWN. SKEWS ≤ 30° SIMILAR EXCEPT AS SHOWN IN PLAN VIEW.)



DETAIL A



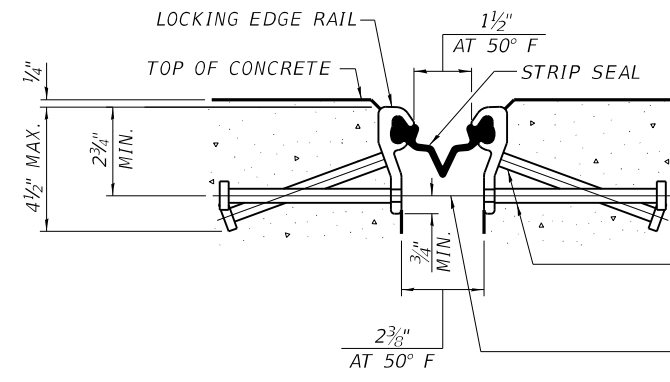
TRIMETRIC VIEW
 (SHOWING EMBEDDED PLATES ONLY)

BILL OF MATERIAL
STRUCTURE NO. 032-0007 (NB)

ITEM	UNIT	TOTAL
PREFORMED JOINT STRIP SEAL	FOOT	117.5

BILL OF MATERIAL
STRUCTURE NO. 032-0008 (SB)

ITEM	UNIT	TOTAL
PREFORMED JOINT STRIP SEAL	FOOT	117.5

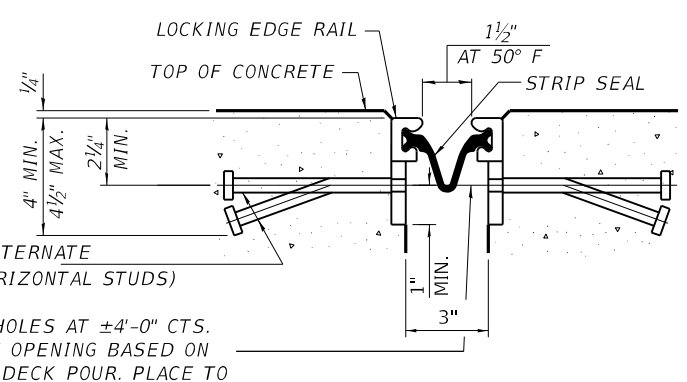


SHOWING ROLLED RAIL JOINT

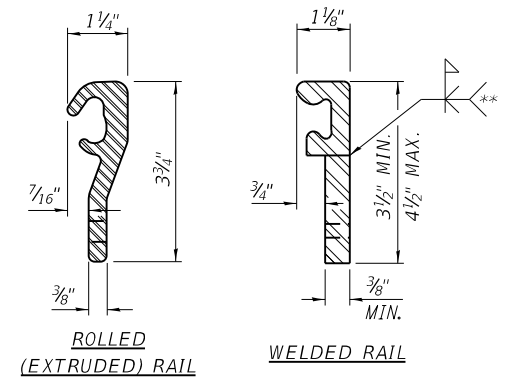
* 5/8" Ø X 6" STUDS @ 6" CTS. (ALTERNATE ANGLED/BENT STUDS WITH HORIZONTAL STUDS)
 3/8" Ø THREADED RODS IN 7/16" Ø HOLES AT ±4'-0" CTS. FOR HOLDING THE PROPER JOINT OPENING BASED ON THE TEMPERATURE DURING THE DECK POUR. PLACE TO MISS STUDS. ALL RODS SHALL BE BURNED, OR SAWED OFF FLUSH WITH THE PLATES AFTER CONCRETE IS SET.

SECTION A-A

* GRANULAR OR SOLID FLUX FILLED HEADED STUDS CONFORMING TO ARTICLE 1006.32 OF THE STD. SPECS., AUTOMATICALLY END WELDED.

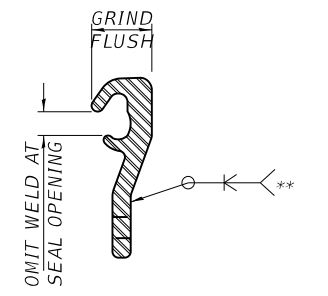


SHOWING WELDED RAIL JOINT



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.

EJ-SS

8-11-17

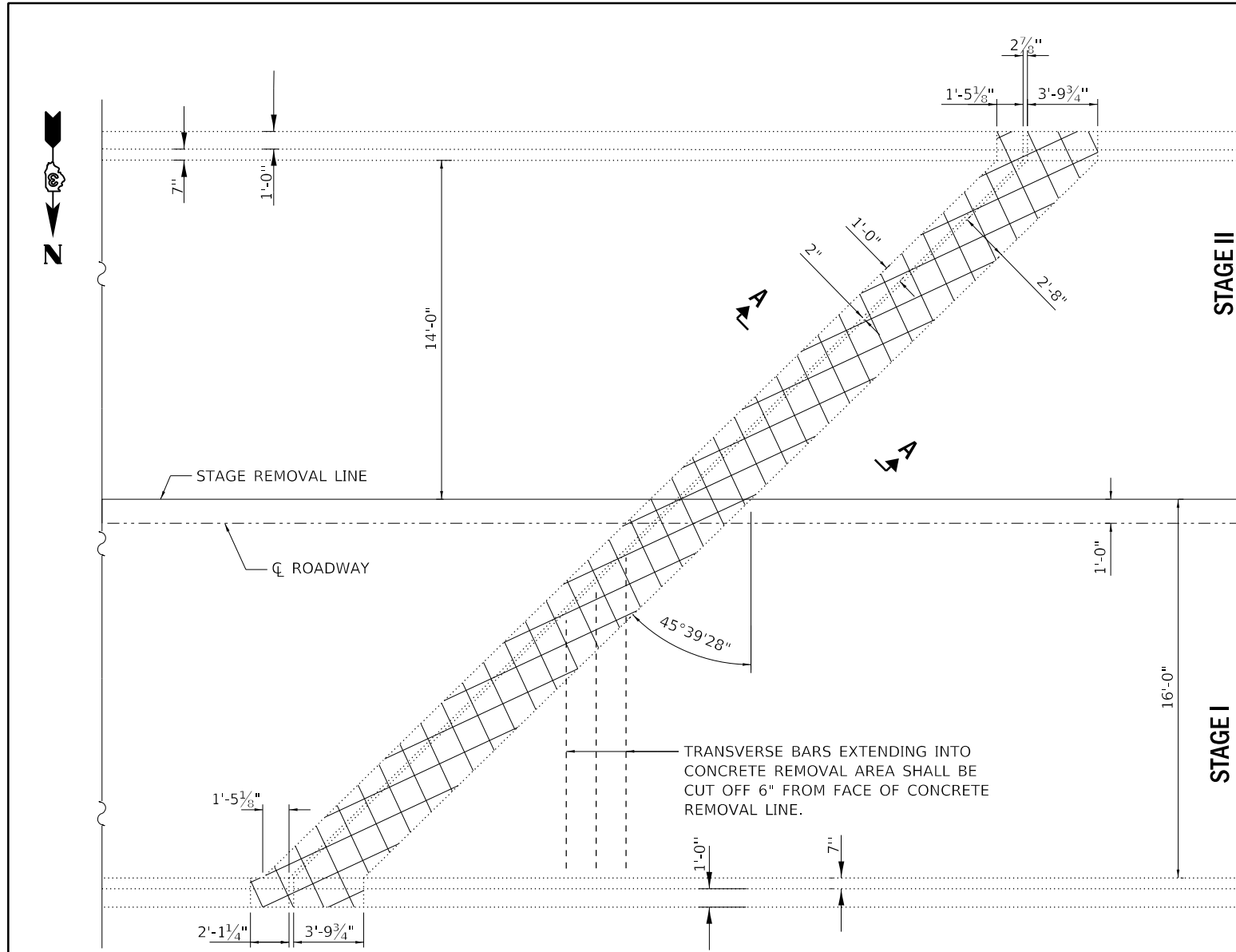
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL DETAILS
FAI 55 OVER UP RR
S.N. 032-0007 (NB) AND S.N. 032-0008 (SB)

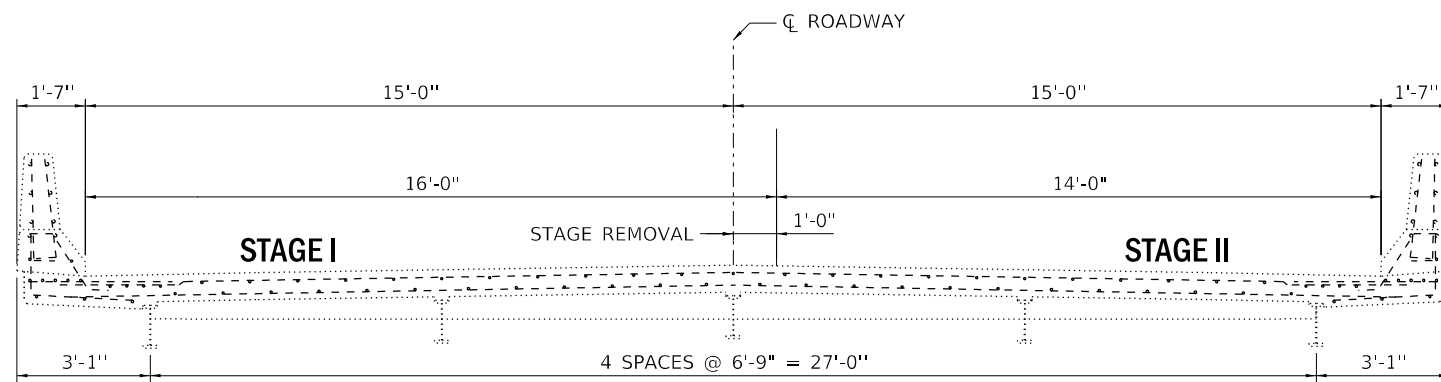
SCALE:	SHEET 14 OF 14 SHEETS	STA.	TO STA.
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
180	(06-2HB)BRR	BUREAU	154	104
				CONTRACT NO. 66H27
ILLINOIS FED. AID PROJECT				



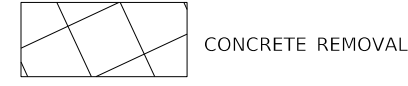
PLAN VIEW

EAST ABUT. SHOWN. WEST ABUT. SIMILAR THRU 180° ROTATION



CROSS SECTION

LOOKING WEST AT EXPANSION JOINT

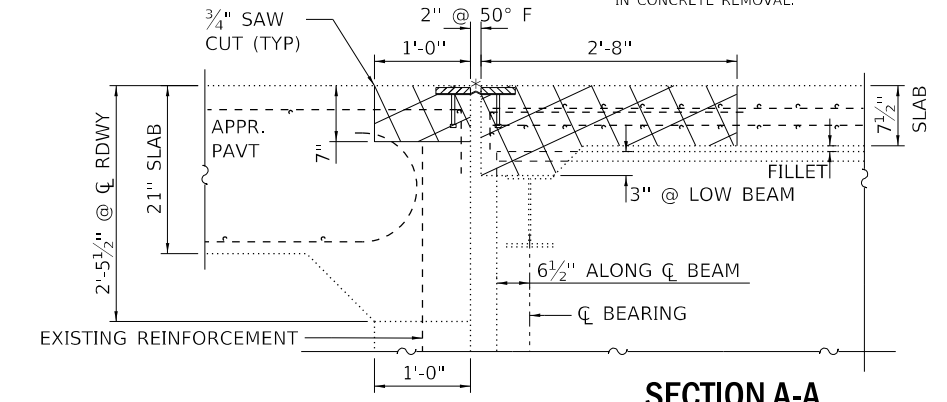


NOTES

EXISTING LONGITUDINAL REINFORCEMENT BARS EXTENDING INTO THE REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION, UNLESS NOTED OTHERWISE. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL SHALL BE REPLACED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST INCLUDED WITH CONCRETE REMOVAL.

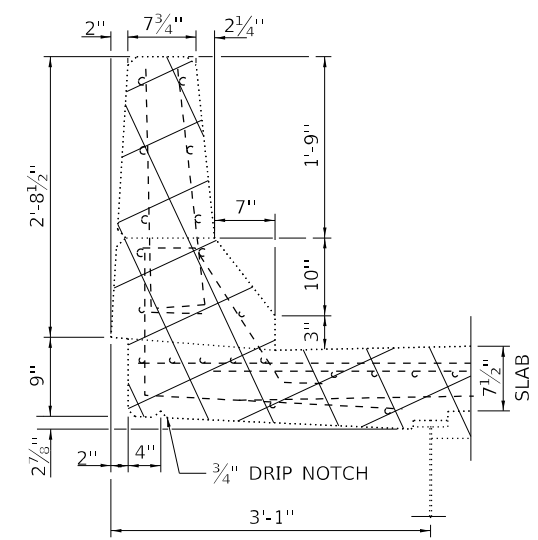
EXISTING REINFORCEMENT WITHIN CONCRETE REMOVAL AREAS SHALL BE REMOVED.

*EXIST. NEOPRENE JOINT TO BE REMOVED. COST INCLUDED IN CONCRETE REMOVAL.



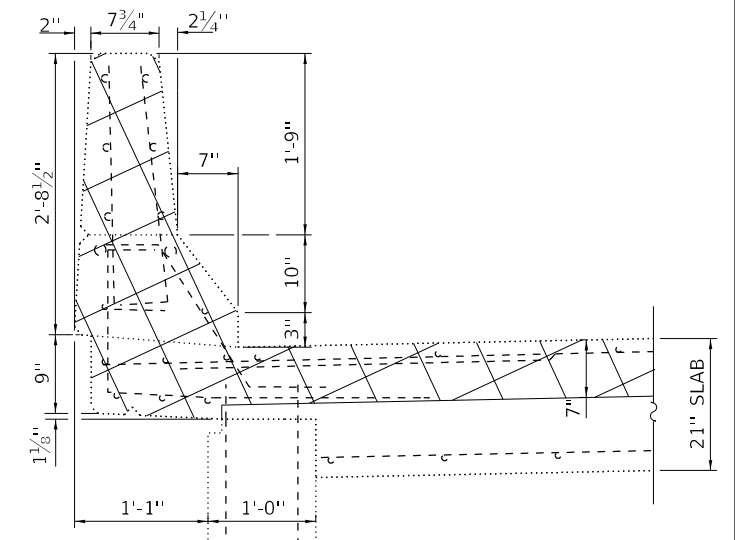
SECTION A-A

SHOWING REMOVALS
ALL DIMENSIONS AT RT. ZS UNLESS NOTED



SECTION THRU PARAPET DECK

DECK



SECTION THRU PARAPET APPROACH

APPROACH

MODEL: \\MODELS\MARIS
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	DRAWN - SC	REVISED -
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PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

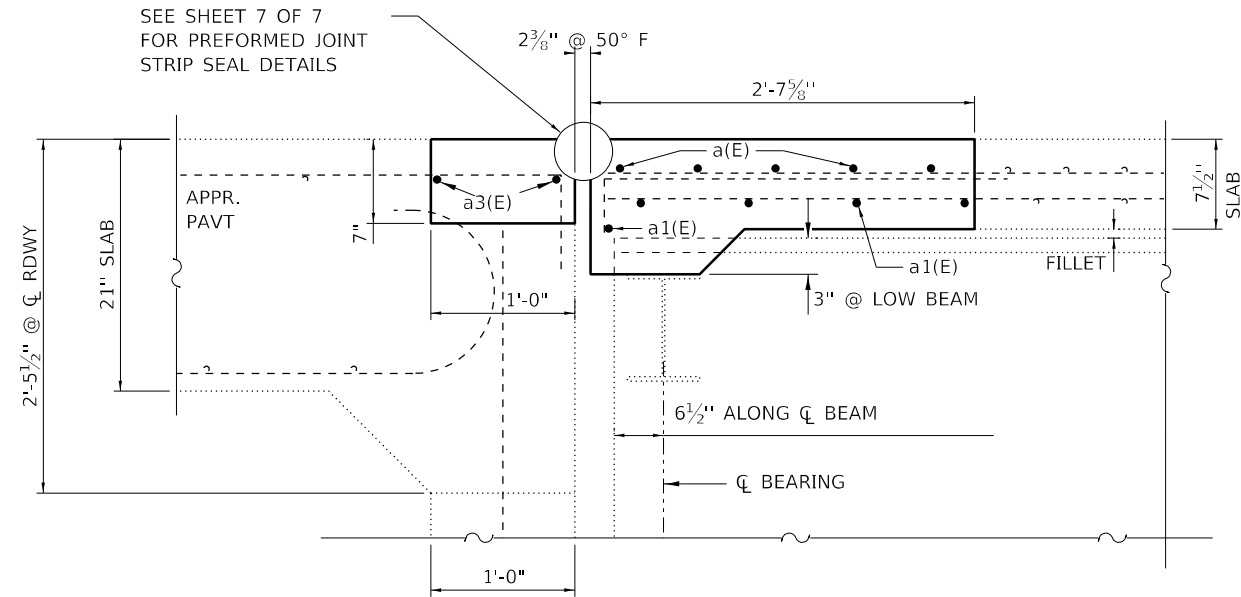
**SUPERSTRUCTURE REMOVAL DETAILS
SN 032-0090**

SCALE: SHEET 2 OF 7 SHEETS STA. TO STA.

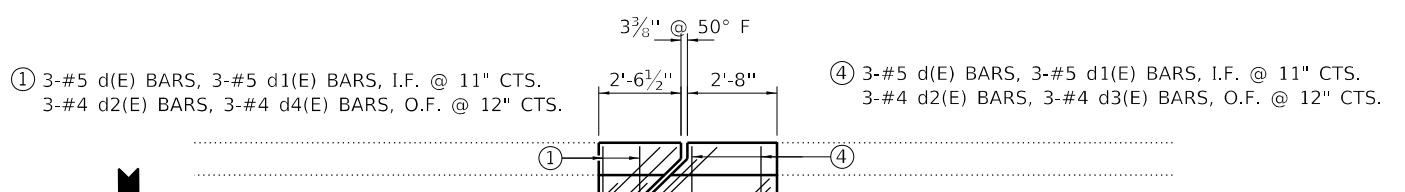
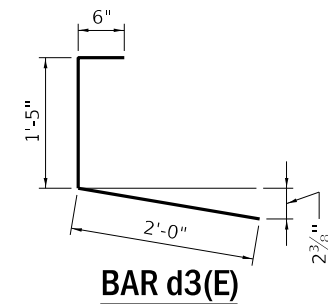
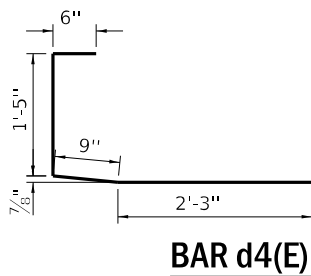
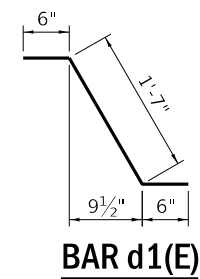
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	106
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

NOTES

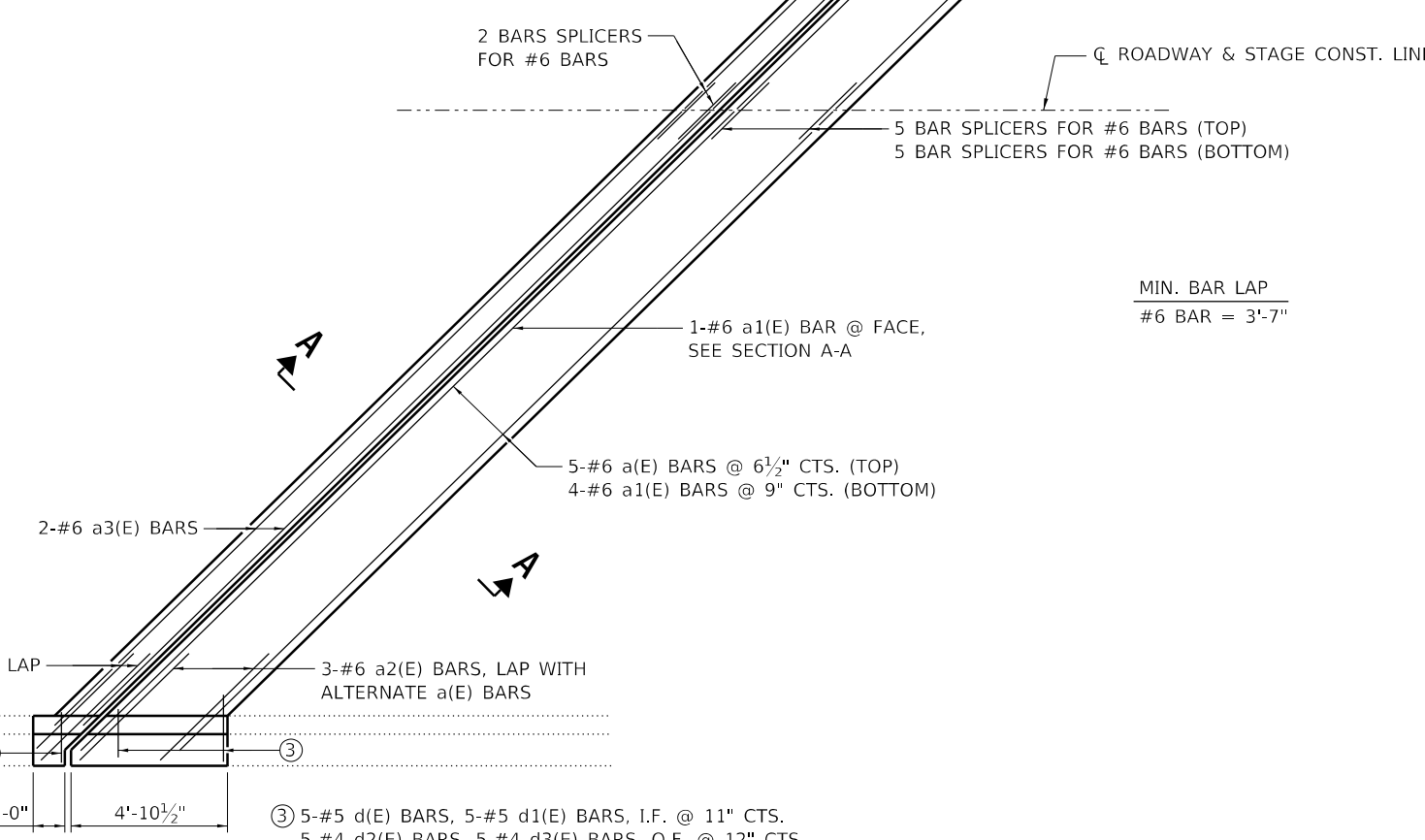
ALL REINFORCEMENT BARS SHALL BE ORDERED FULL LENGTH. WHENEVER NECESSARY THE REINFORCEMENT BARS SHALL BE CUT TO FIT THE NEW CONSTRUCTION.



SECTION A-A
ALL DIMENSIONS AT RT. Z/S UNLESS NOTED



STAGE II



PLAN VIEW
EAST ABUT. SHOWN. WEST ABUT. SIMILAR THRU 180° ROTATION

MIN. BAR LAP
#6 BAR = 3'-7"

BILL OF MATERIALS
STRUCTURE NO. 032-0090

BAR	NO.	SIZE	LENGTH	SHAPE	
a (E)	20	#6	23' - 3"	—	
a1 (E)	20	#6	21' - 10"	—	
a2 (E)	20	#6	5' - 9"	—	
a3 (E)	8	#6	22' - 2"	—	
d (E)	24	#5	3' - 0"	┌	
d1 (E)	24	#5	2' - 7"	┌	
d2 (E)	24	#4	3' - 0"	┌	
d3 (E)	16	#4	3' - 11"	┌	
d4 (E)	8	#4	4' - 11"	┌	
CONCRETE REMOVAL				CU YD	14.6
CONCRETE SUPERSTRUCTURE				CU YD	14.6
REINFORCEMENT BARS, EPOXY COATED				POUND	2050
BAR SPLICER				EACH	24

MODEL: \\MODELS\MARIS... FILE: MARIS... 10/22/2019

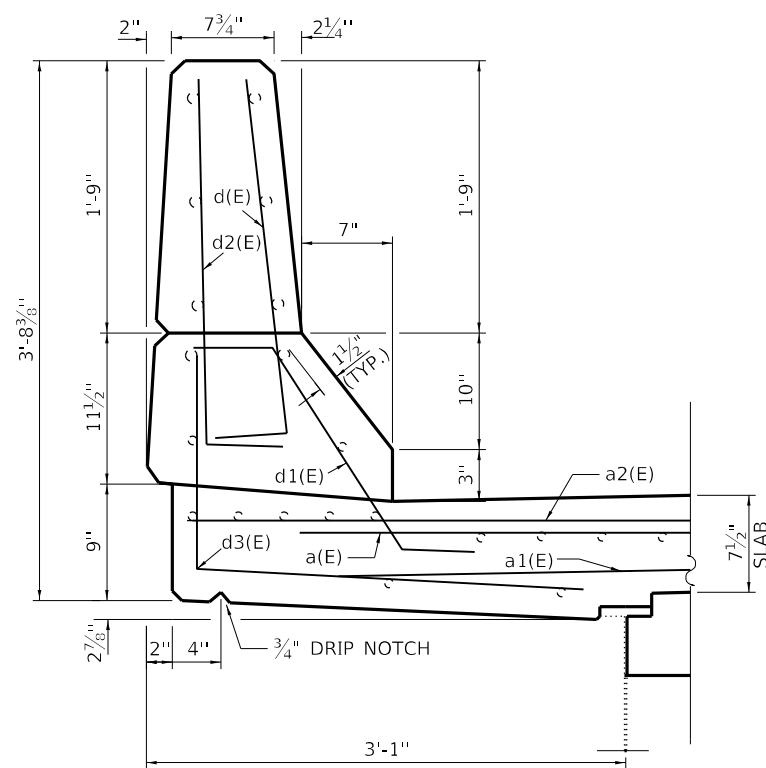
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

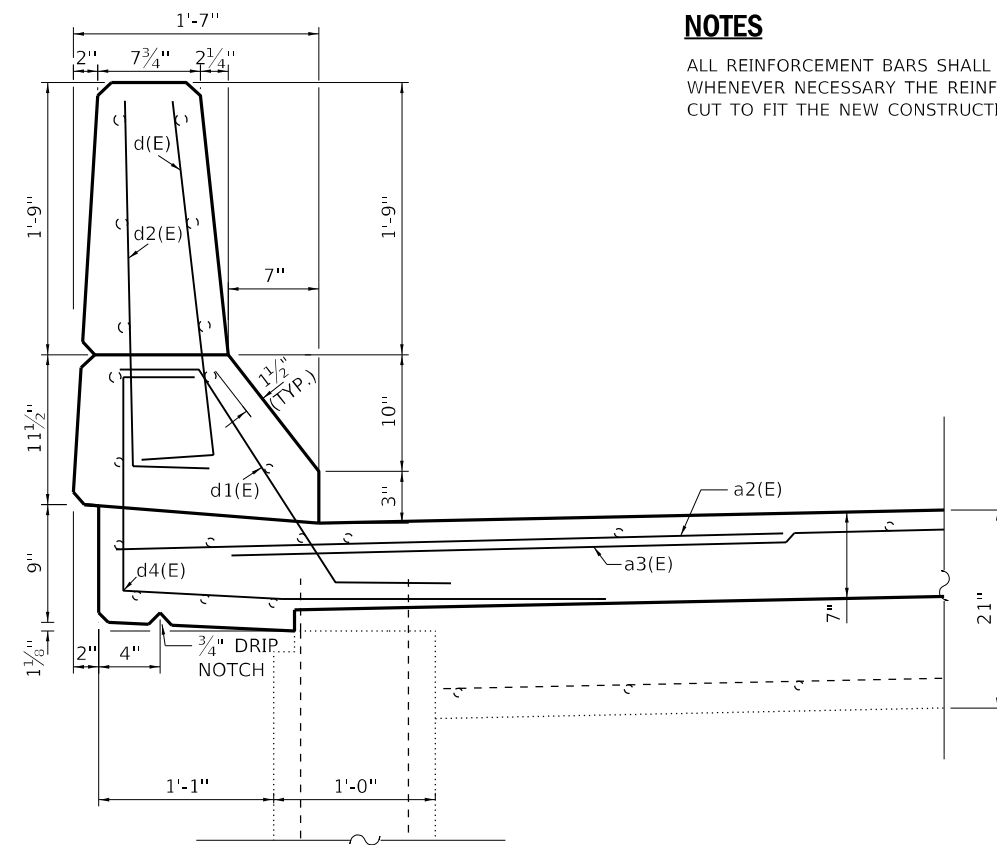
STRUCTURE REPAIR DETAILS
SN 032-0090

SCALE: SHEET 3 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	107
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	



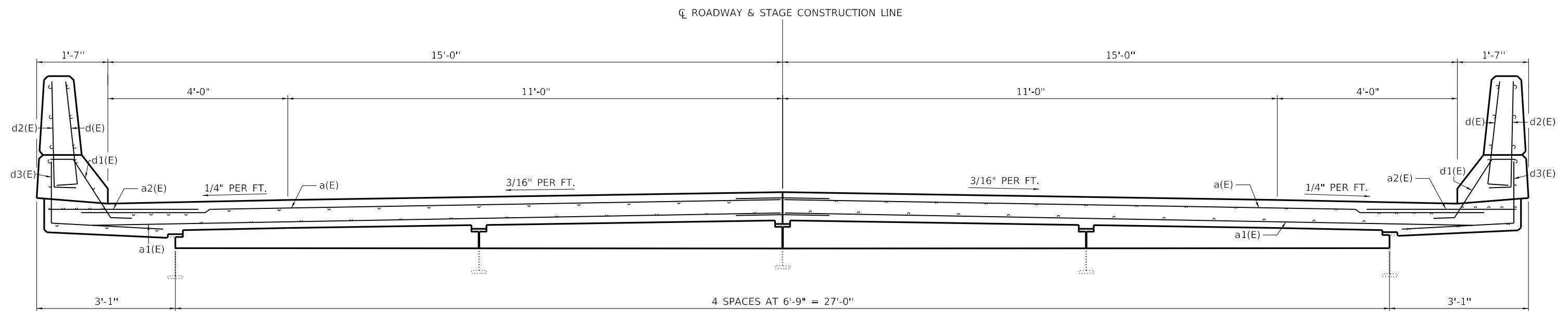
**SECTION THRU PARAPET
DECK**



**SECTION THRU PARAPET
APPROACH**

NOTES

ALL REINFORCEMENT BARS SHALL BE ORDERED FULL LENGTH. WHENEVER NECESSARY THE REINFORCEMENT BARS SHALL BE CUT TO FIT THE NEW CONSTRUCTION.



CROSS SECTION

LOOKING WEST AT WEST ABUTMENT EXPANSION JOINT
LOOKING EAST AT EAST ABUTMENT EXPANSION JOINT

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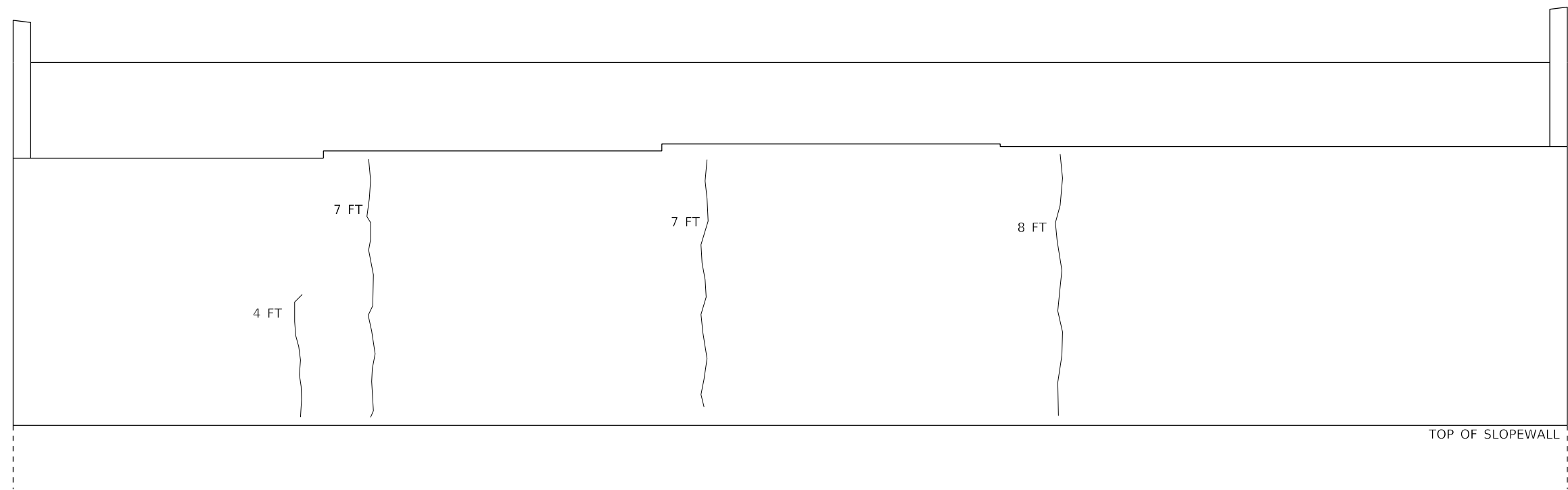
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PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE REPAIR DETAILS
SN 032-0090**

SCALE: SHEET 4 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	108
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				



SN 032-0090 EAST ABUTMENT

EPOXY CRACK INJECTION

BILL OF MATERIALS
STRUCTURE NO. 032-0090 (EB)

EPOXY CRACK INJECTION	FT	26
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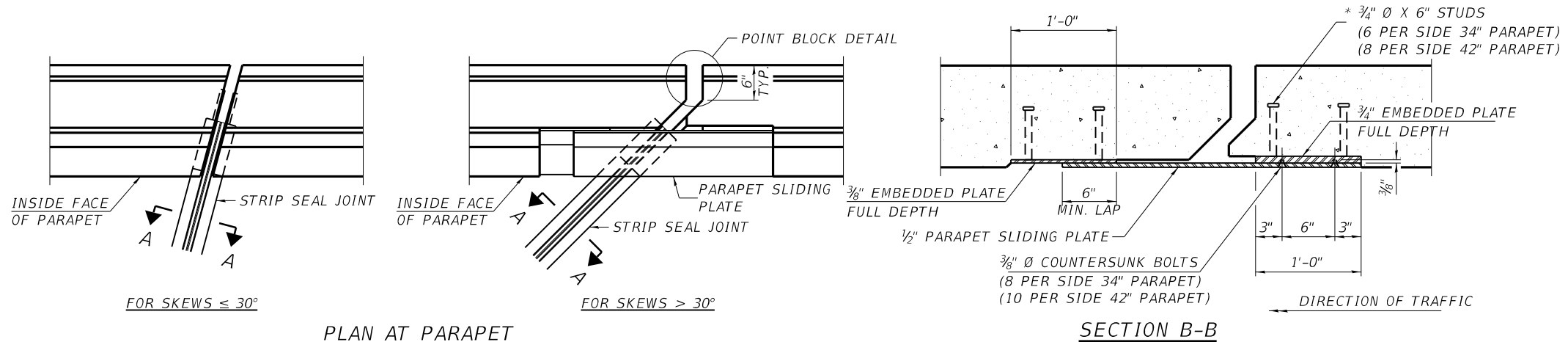
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PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EPOXY CRACK INJECTION DETAILS
SN 032-0090

SCALE: SHEET 5 OF 7 SHEETS STA. TO STA.

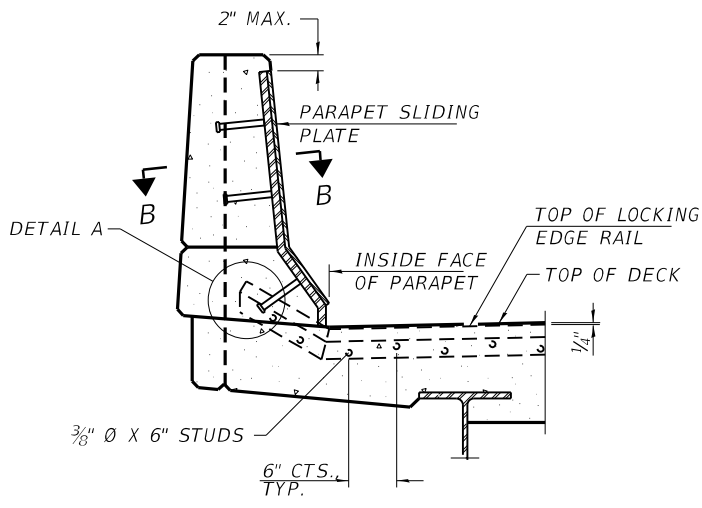
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	109
			CONTRACT NO. 66A51	
			ILLINOIS FED. AID PROJECT	



PLAN AT PARAPET

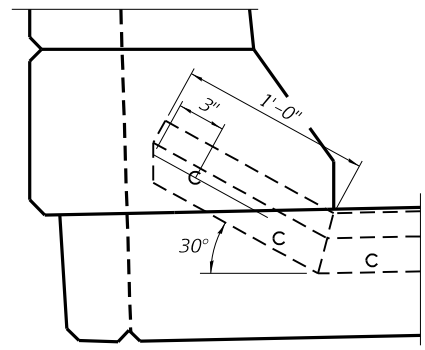
SECTION B-B

NOTES:
 THE STRIP SEAL SHALL BE MADE CONTINUOUS AND SHALL HAVE A MINIMUM THICKNESS OF 1/4". THE CONFIGURATION OF THE STRIP SEAL SHALL MATCH THE CONFIGURATION OF THE LOCKING EDGE RAILS. OPEN OR "WEBBED" STRIP SEAL GLAND CONFIGURATIONS ARE NOT PERMITTED. THE GLAND SHALL BE SIZED FOR A MAXIMUM RATED MOVEMENT OF 4 INCHES.
 THE LOCKING EDGE RAILS DEPICTED ARE CONFIGURED FOR TYPICAL APPLICATIONS AND ARE CONCEPTUAL ONLY. THE ACTUAL CONFIGURATION OF THE LOCKING EDGE RAILS AND MATCHING STRIP SEAL MAY VARY FROM MANUFACTURER TO MANUFACTURER PROVIDED THEY FIT THE APPLICATION AND MEET THE MINIMUM ANCHORAGE SHOWN. FLANGED EDGE RAILS, HOWEVER, WILL NOT BE ALLOWED. LOCKING EDGE RAILS MAY EXCEED THE 4 1/2" MAXIMUM DEPTH PROVIDED THE ANCHORAGE SYSTEM IS REVISED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.
 THE MANUFACTURER'S RECOMMENDED INSTALLATION METHODS SHALL BE FOLLOWED.
 ALL STEEL COMPONENTS SHALL BE GALVANIZED AFTER FABRICATION ACCORDING TO ARTICLE 520.03 OF THE STANDARD SPECIFICATIONS.
 THE MAXIMUM SPACE BETWEEN LOCKING EDGE RAIL SEGMENTS SHALL BE 1/16" AND SEALED WITH A SUITABLE SEALANT; HOWEVER, ANY RAIL JOINT WITHIN 10' MEASURED PERPENDICULAR TO THE FACE OF THE CURB OR PARAPET SHALL BE WELDED AS SHOWN IN THE LOCKING EDGE RAIL SPLICE DETAIL.
 COST OF PARAPET SLIDING PLATES, EMBEDDED PLATES, AND ANCHORAGE STUDS INCLUDED WITH PREFORMED JOINT STRIP SEAL. 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.

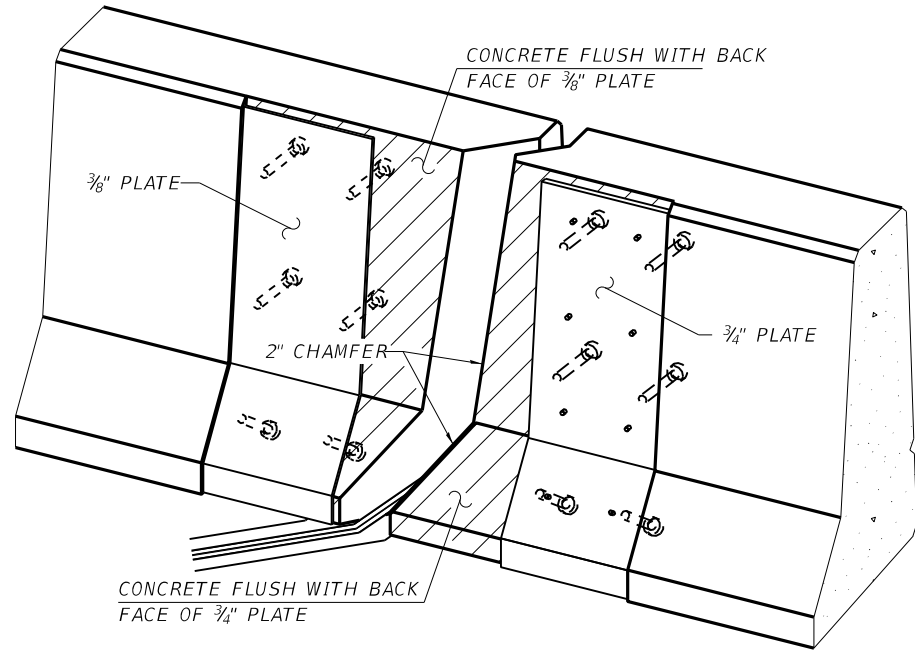


ELEVATION AT PARAPET

(SKEWS > 30° SHOWN. SKEWS ≤ 30° SIMILAR EXCEPT AS SHOWN IN PLAN VIEW.)



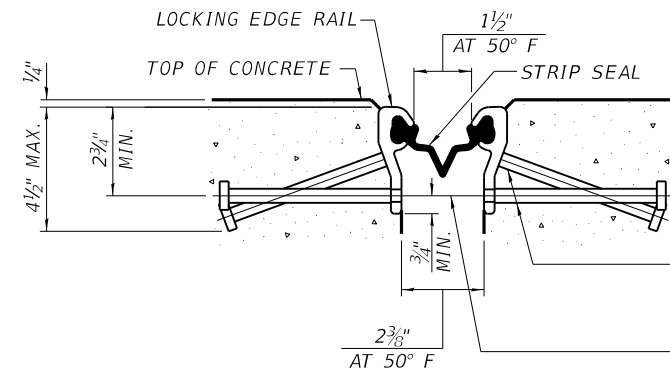
DETAIL A



TRIMETRIC VIEW (SHOWING EMBEDDED PLATES ONLY)

BILL OF MATERIAL
 STRUCTURE NO. 032-0090

ITEM	UNIT	TOTAL
PREFORMED JOINT STRIP SEAL	FOOT	92



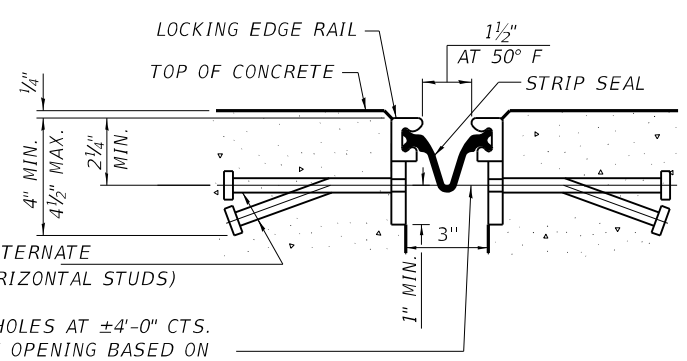
SHOWING ROLLED RAIL JOINT

* 5/8" Ø X 6" STUDS @ 6" CTS. (ALTERNATE ANGLED/BENT STUDS WITH HORIZONTAL STUDS)

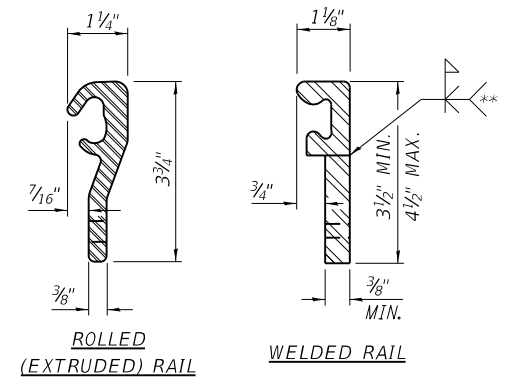
3/8" Ø THREADED RODS IN 7/16" Ø HOLES AT ±4'-0" CTS. FOR HOLDING THE PROPER JOINT OPENING BASED ON THE TEMPERATURE DURING THE DECK POUR. PLACE TO MISS STUDS. ALL RODS SHALL BE BURNED, OR SAWED OFF FLUSH WITH THE PLATES AFTER CONCRETE IS SET.

SECTION A-A

* GRANULAR OR SOLID FLUX FILLED HEADED STUDS CONFORMING TO ARTICLE 1006.32 OF THE STD. SPECS., AUTOMATICALLY END WELDED.

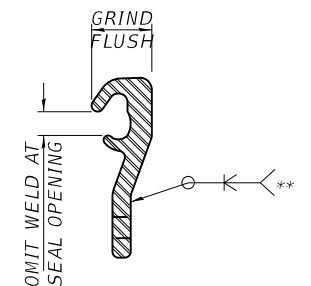


SHOWING WELDED RAIL JOINT



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.

EJ-SS

8-11-17

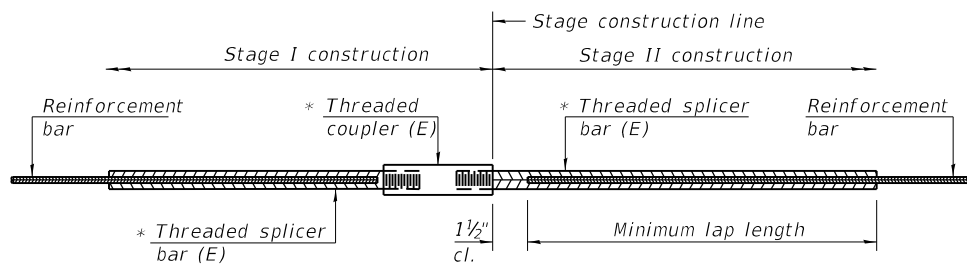
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL DETAILS
 SN 032-0090

SCALE: SHEET 6 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1) RS-4	GRUNDY	154	110
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66A51	



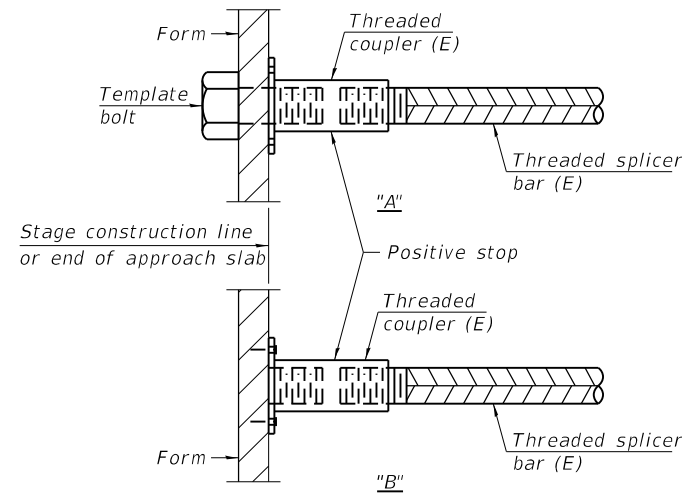
STANDARD BAR SPLICER ASSEMBLY

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.

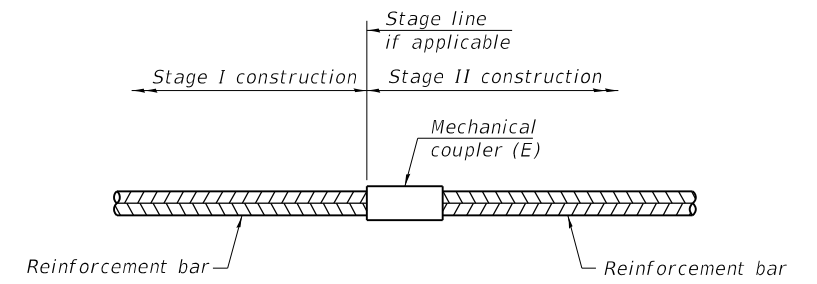
**BILL OF MATERIAL
STRUCTURE NO. 032-0090**

Location	Bar size	No. assemblies required	Minimum lap length
EAST APPROACH	#6	2	3'-7"
EAST END DECK	#6	10	3'-7"
WEST APPROACH	#6	2	3'-7"
WEST END DECK	#6	10	3'-7"
TOTAL		24	



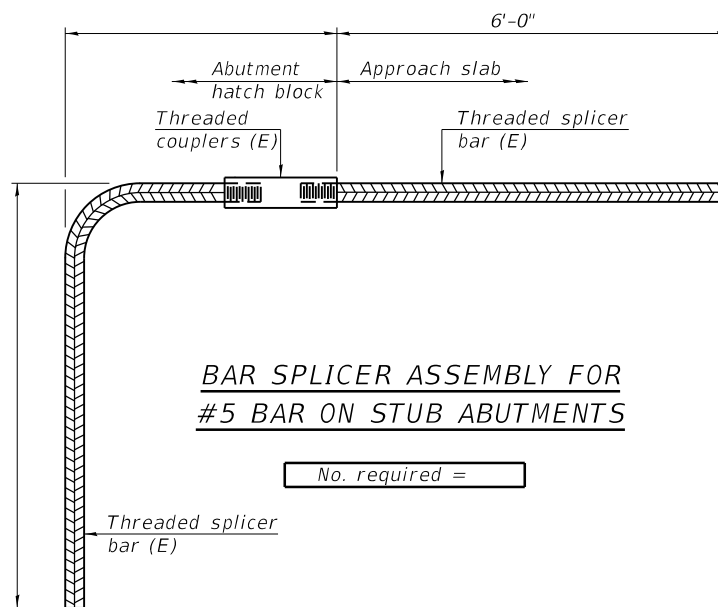
INSTALLATION AND SETTING METHODS

"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



**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: \\MODELMANIFEST
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BSD-1 2-17-2017

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 032-0090**

SCALE: SHEET 7 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	111
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				

EXISTING STRUCTURE: SN 032-0091 IS A 4-SPAN BRIDGE CONSISTING OF A 2-SPAN 48" PPC I-BEAM UNIT AND TWO REINFORCED CONCRETE SLAB APPROACH SPANS ON FILLED VAULT ABUTMENTS AND A CAP & COLUMN PIER. IT WAS CONSTRUCTED IN 1996 AS SECTION (32-1)HBR-K. IN 2012 AND 2016 CONCRETE SEALER WAS APPLIED TO THE DECK. TRAFFIC WILL BE MAINTAINED BY STAGE CONSTRUCTION.

GENERAL NOTES

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.

PROTECTIVE COAT SHALL BE APPLIED TO ALL NEWLY PLACED CONCRETE SURFACES, INCLUDING THE APPROACHES AND TOP AND INSIDE FACES OF THE PARAPET.

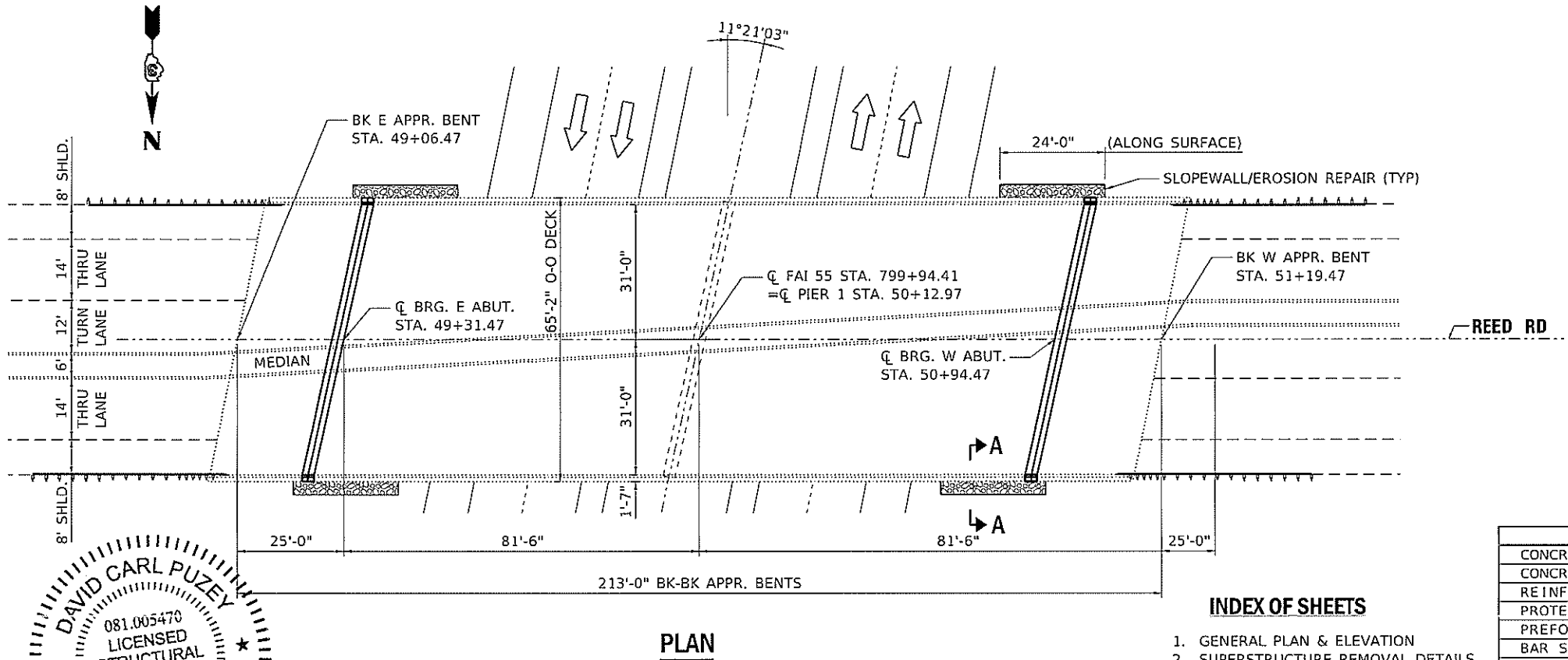
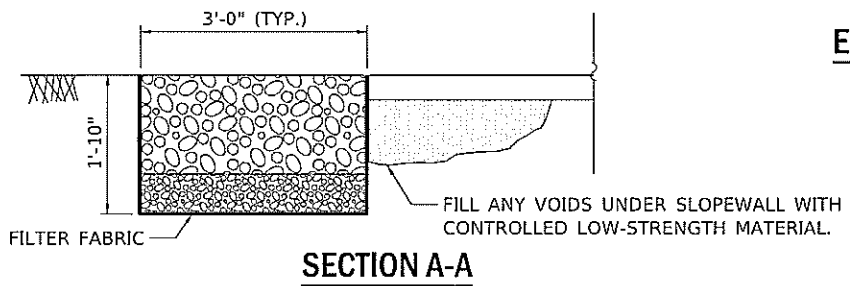
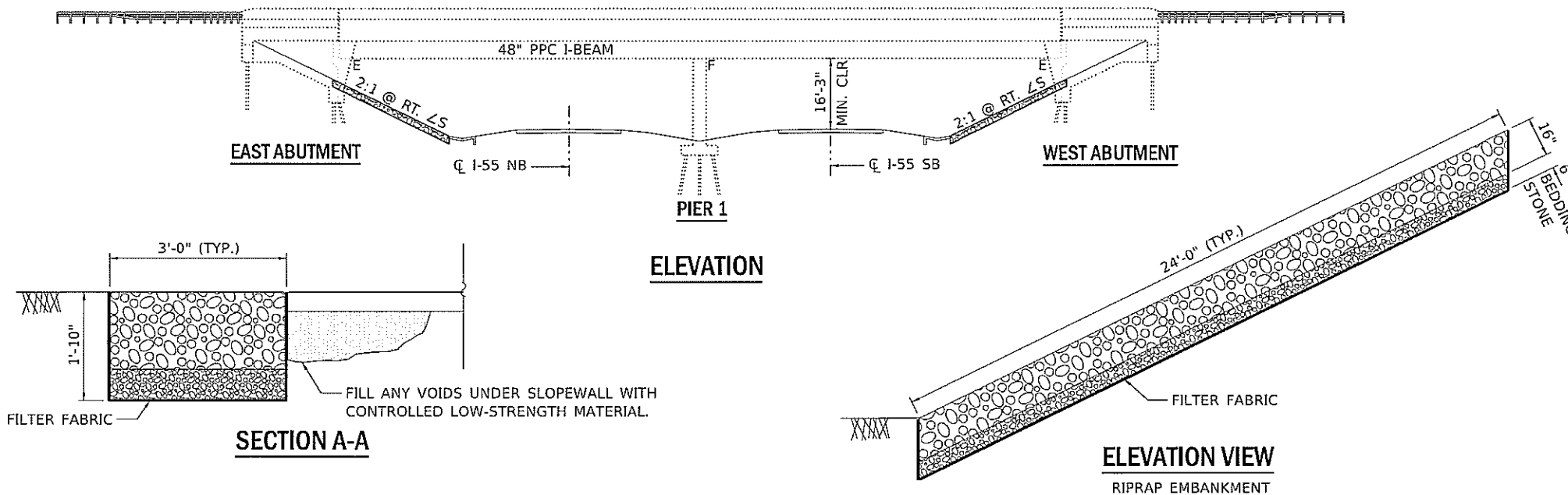
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

EXISTING REINFORCEMENT BARS EXTENDING INTO THE REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION, UNLESS NOTED OTHERWISE. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL SHALL BE REPLACED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST INCLUDED WITH CONCRETE REMOVAL.

JOINT OPENING SHALL BE ADJUSTED ACCORDING TO ARTICLE 520.04 OF THE STANDARD SPECIFICATIONS WHEN THE DECK IS POURED AT AN AMBIENT TEMPERATURE OTHER THAN 50 DEGREES F.

THE CONTRACTOR SHALL USE EXTREME CARE DURING CONCRETE REMOVAL SO AS NOT TO DAMAGE THE PPC I-BEAM OR THREADED RODS.

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 BASED AT THE UNIT PRICE BID FOR THE WORK.



SCOPE OF WORK

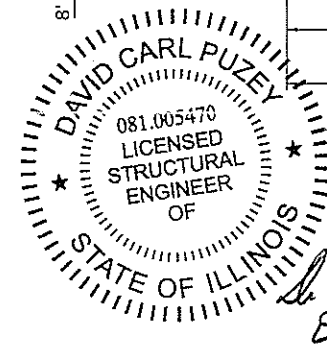
1. REMOVE AND REPLACE EXISTING EXPANSION JOINTS AT ABUTMENTS WITH PREFORMED JOINT STRIP SEALS.
2. PERFORM STRUCTURAL REPAIR OF CONCRETE ON SUBSTRUCTURE.
3. PLACE RIPRAP AND CLSM ALONG SLOPEWALLS.

TOTAL BILL OF MATERIAL
1 STRUCTURE

ITEM	UNIT	SUPER	SUB	TOTAL
CONCRETE REMOVAL	CU YD	7.0		7.0
CONCRETE SUPERSTRUCTURE	CU YD	7.1		7.1
REINFORCEMENT BARS, EPOXY COATED	POUND	1110		1110
PROTECTIVE COAT	SO YD	32		32
PREFORMED JOINT STRIP SEAL	FOOT	128		128
BAR SPLICER	EACH	8		8
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT		25	25
CONTROLLED LOW-STRENGTH MATERIAL	CU YD		5	5
STONE DUMPED RIPRAP, CLASS A4	SQ YD		32	32
FILTER FABRIC	SQ YD		32	32

INDEX OF SHEETS

1. GENERAL PLAN & ELEVATION
2. SUPERSTRUCTURE REMOVAL DETAILS
3. SUPERSTRUCTURE REPAIR DETAILS 1
4. SUPERSTRUCTURE REPAIR DETAILS 2
5. ABUTMENT REPAIRS
6. PREFORMED JOINT STRIP SEAL
7. BAR SPLICER DETAILS



David Carl Puzey 11/26/19
Expires 11/30/20

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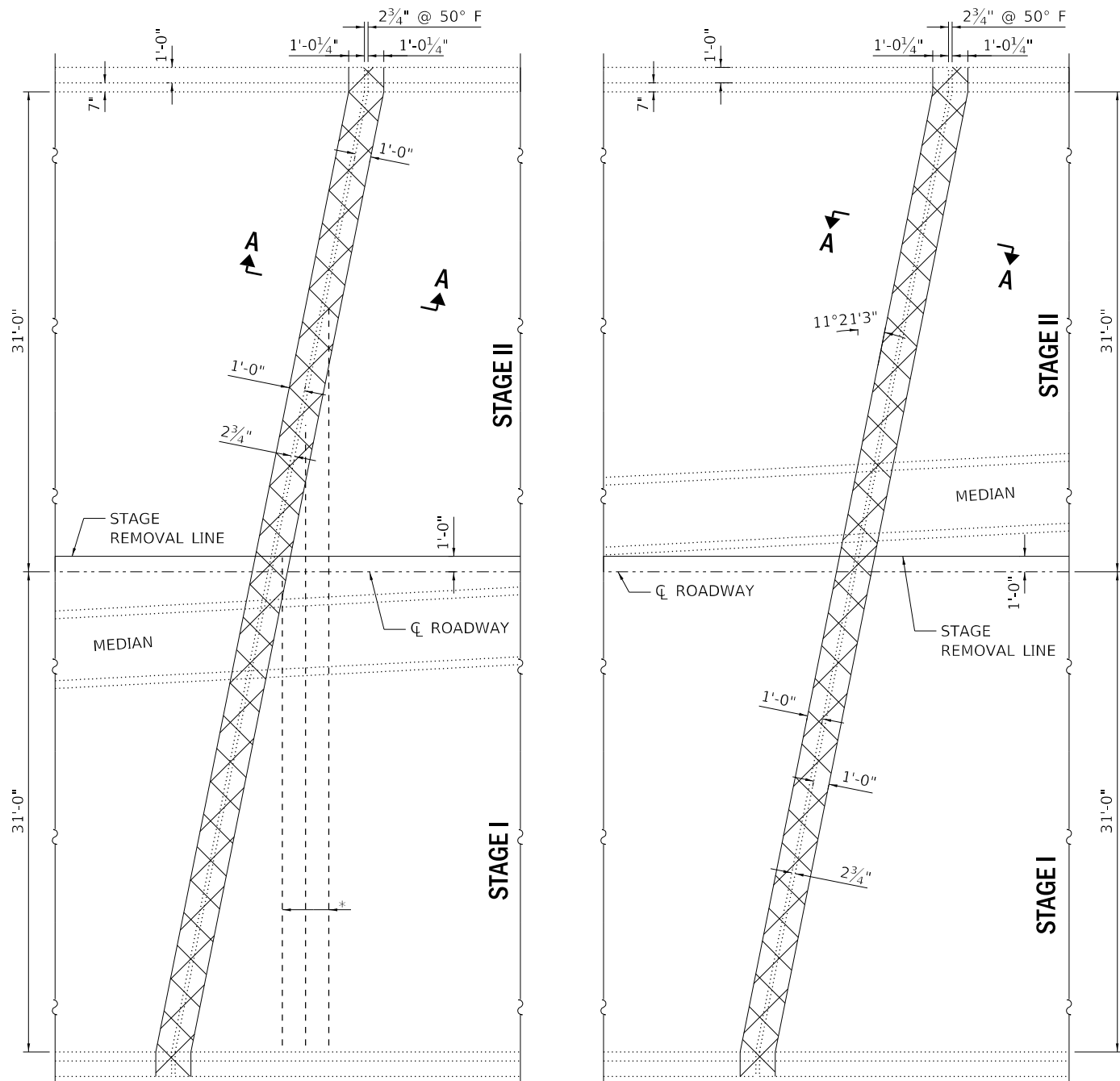
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SN 032-0091

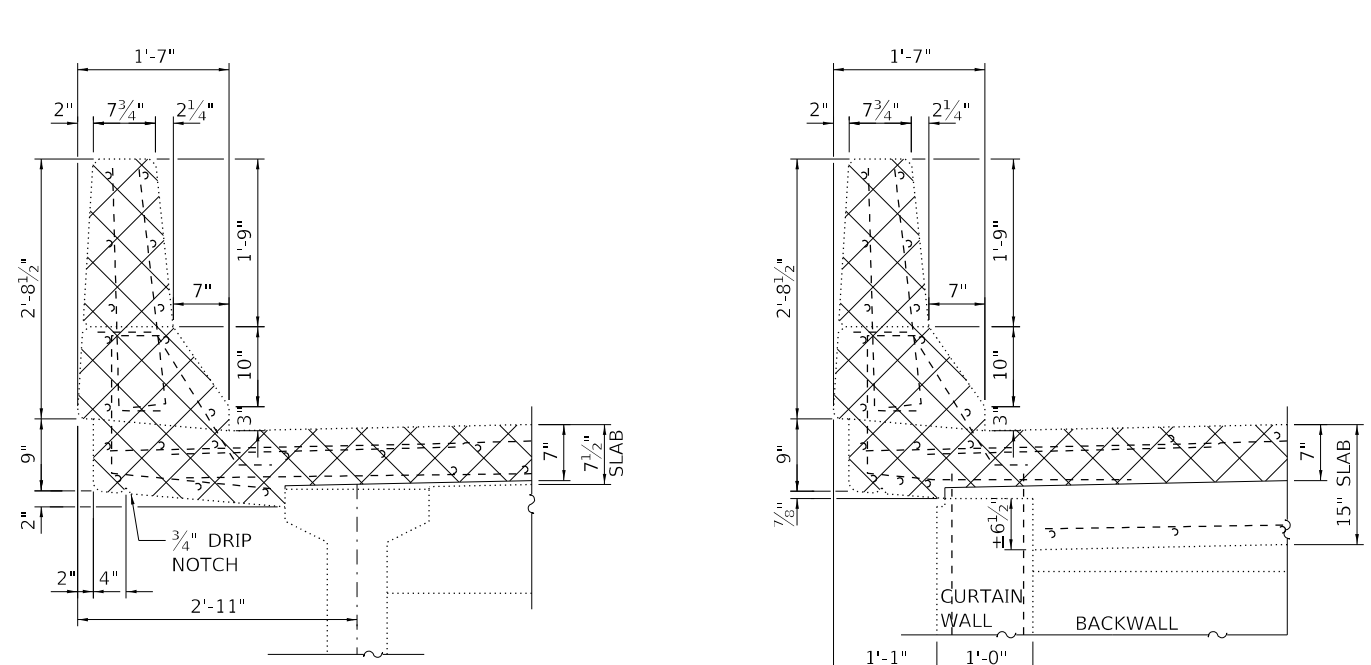
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	194	112
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66A51	

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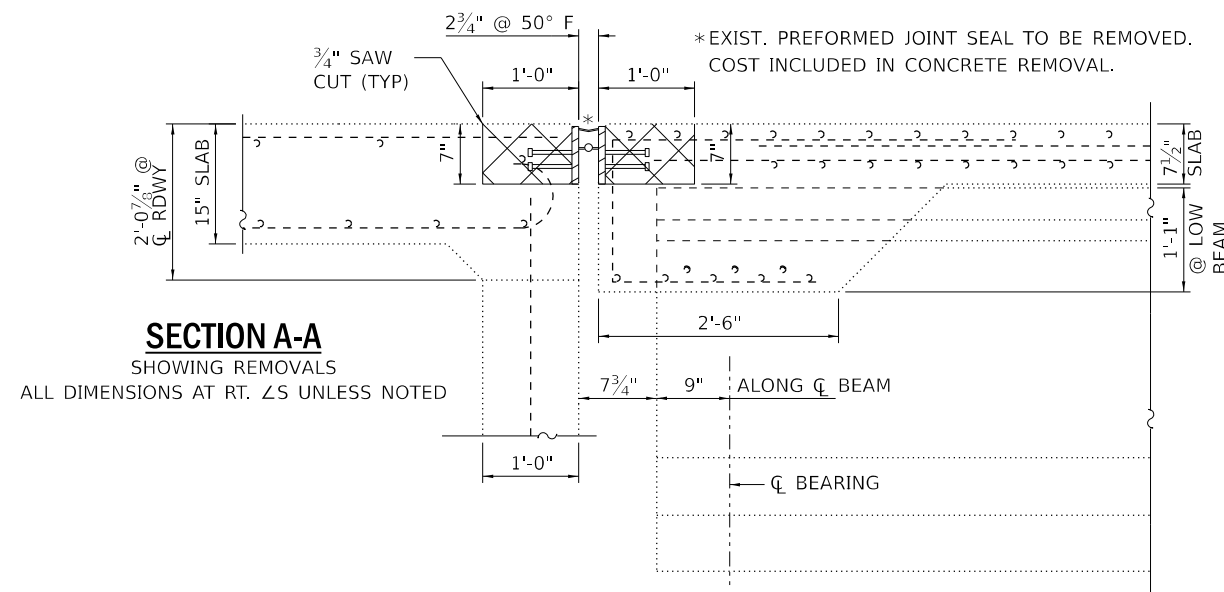


*TRANSVERSE BARS EXTENDING INTO CONCRETE REMOVAL AREA SHALL BE CUT OFF 6" FROM FACE OF CONCRETE REMOVAL LINE.



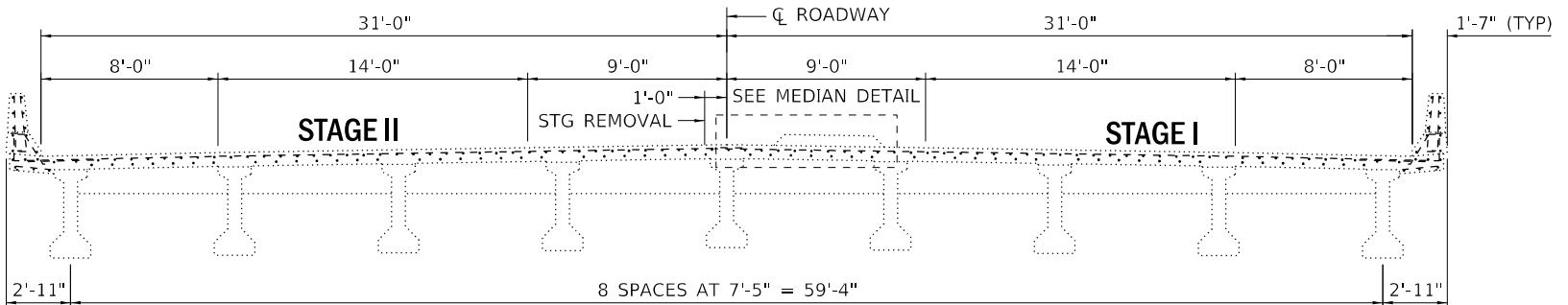
SECTION THRU PARAPET DECK

SECTION THRU PARAPET APPROACH

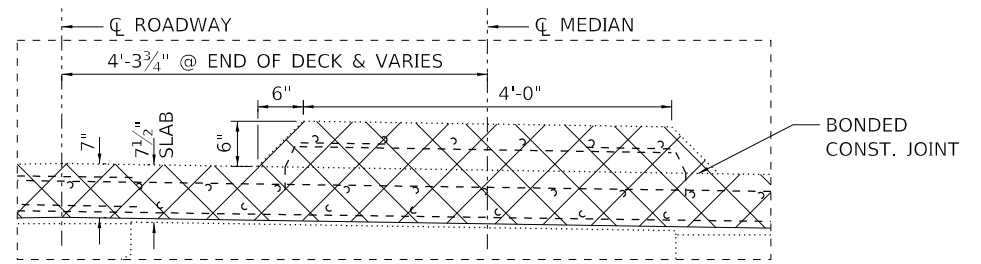


SECTION A-A

SHOWING REMOVALS
ALL DIMENSIONS AT RT. ANGLES UNLESS NOTED



CROSS SECTION
LOOKING WEST AT EXPANSION JOINT



MEDIAN DETAIL

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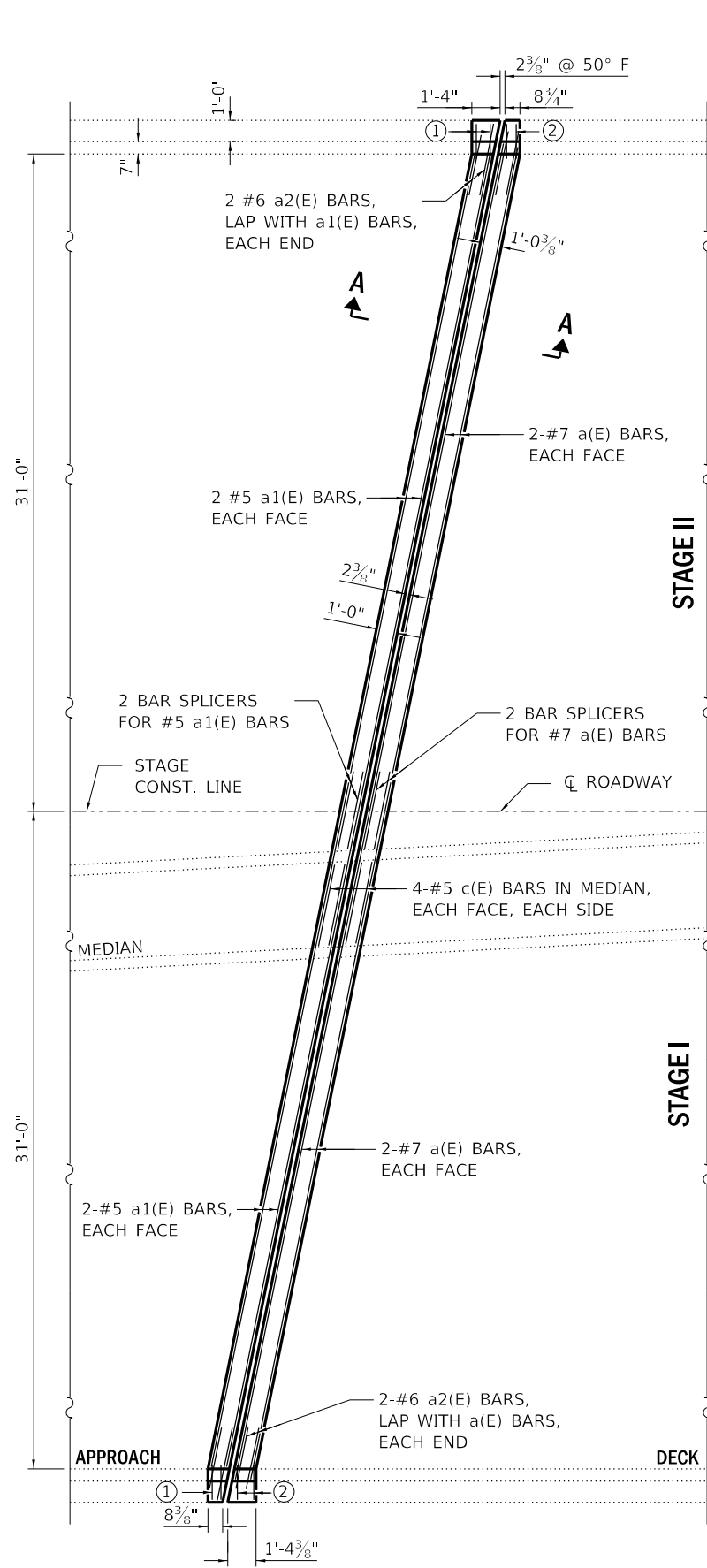
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REMOVAL DETAILS
SN 032-0091

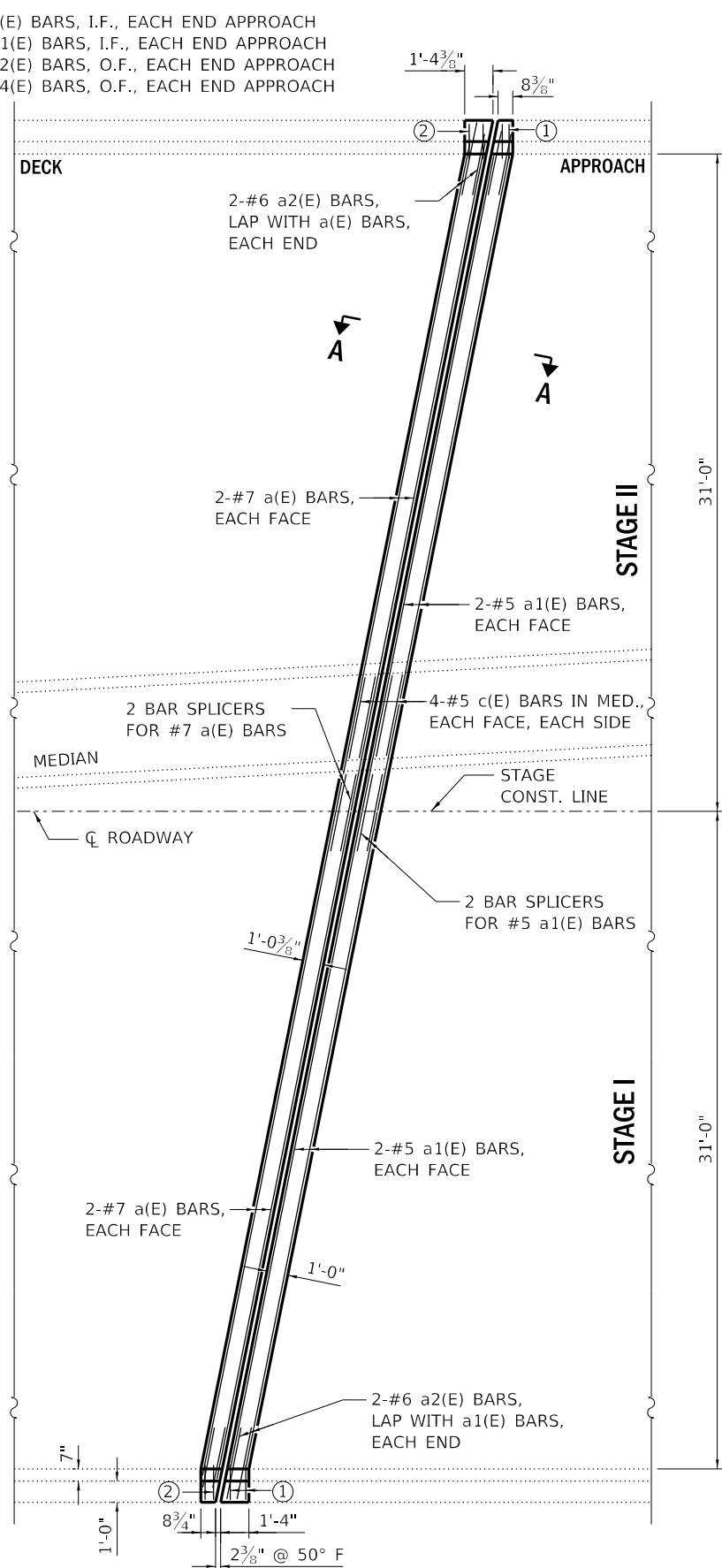
SCALE: SHEET 2 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	113
CONTRACT NO. 66A51				
ILLINOIS		FED. AID PROJECT		



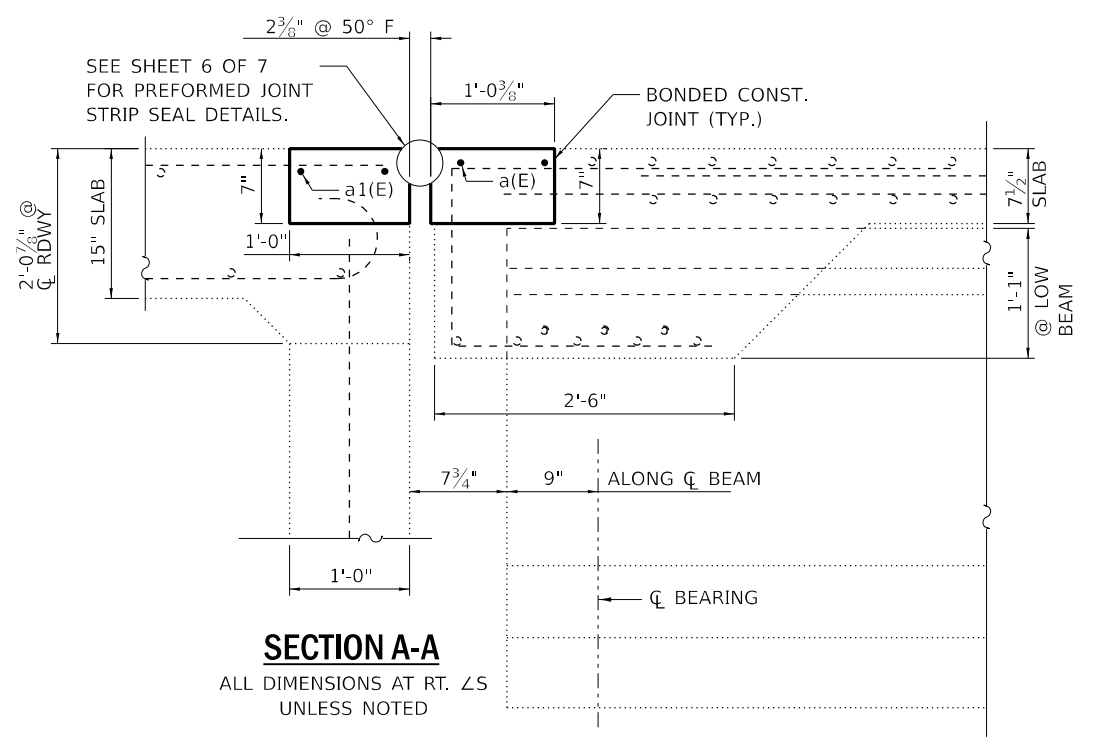
PLAN VIEW
EAST ABUTMENT

- ① 2-#5 d(E) BARS, I.F., EACH END APPROACH
- 2-#5 d1(E) BARS, I.F., EACH END APPROACH
- 2-#5 d2(E) BARS, O.F., EACH END APPROACH
- 2-#5 d4(E) BARS, O.F., EACH END APPROACH



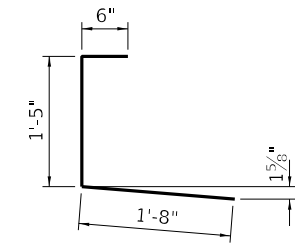
PLAN VIEW
WEST ABUTMENT

- ② 2-#5 d(E) BARS, I.F., EACH END DECK
- 2-#5 d1(E) BARS, I.F., EACH END DECK
- 2-#5 d2(E) BARS, O.F., EACH END DECK
- 2-#5 d3(E) BARS, O.F., EACH END DECK

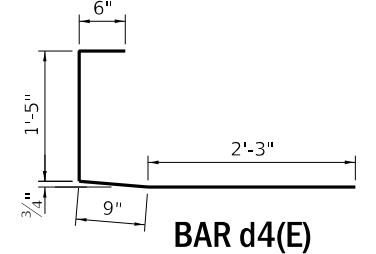


SECTION A-A

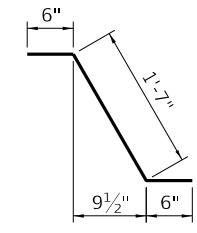
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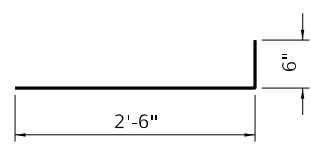
BAR d3(E)



BAR d4(E)



BAR d1(E)



BAR d(E) & d2(E)

BILL OF MATERIALS
STRUCTURE NO. 032-0091

BAR	NO.	SIZE	LENGTH	SHAPE	
a (E)	8	#7	32' - 11"	—	
a1 (E)	8	#5	32' - 3"	—	
a2 (E)	16	#6	4' - 1"	—	
c (E)	8	#5	3' - 11"	—	
d (E)	16	#5	3' - 0"	┌┐	
d1 (E)	16	#5	2' - 7"	┌┐	
d2 (E)	16	#4	3' - 0"	┌┐	
d3 (E)	8	#4	3' - 7"	┌┐	
d4 (E)	8	#4	4' - 11"	┌┐	
CONCRETE REMOVAL				CU YD	7.0
CONCRETE SUPERSTRUCTURE				CU YD	7.1
REINFORCEMENT BARS, EPOXY COATED				POUND	1110
BAR SPLICERS				EACH	8
PROTECTIVE COAT				SQ YD	32

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

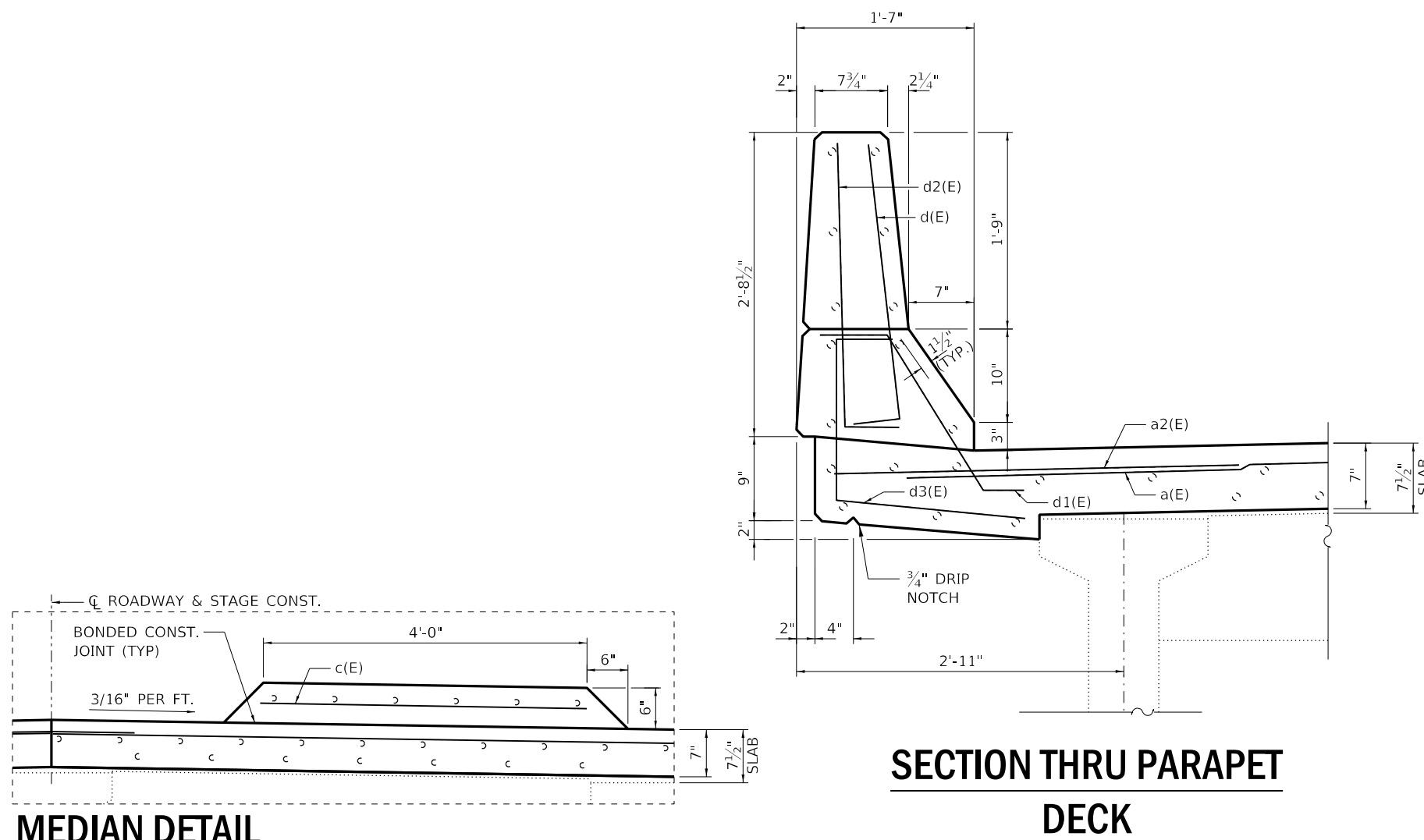
SUPERSTRUCTURE REPAIR DETAILS
SN 032-0091

SCALE: SHEET 3 OF 7 SHEETS STA. TO STA.

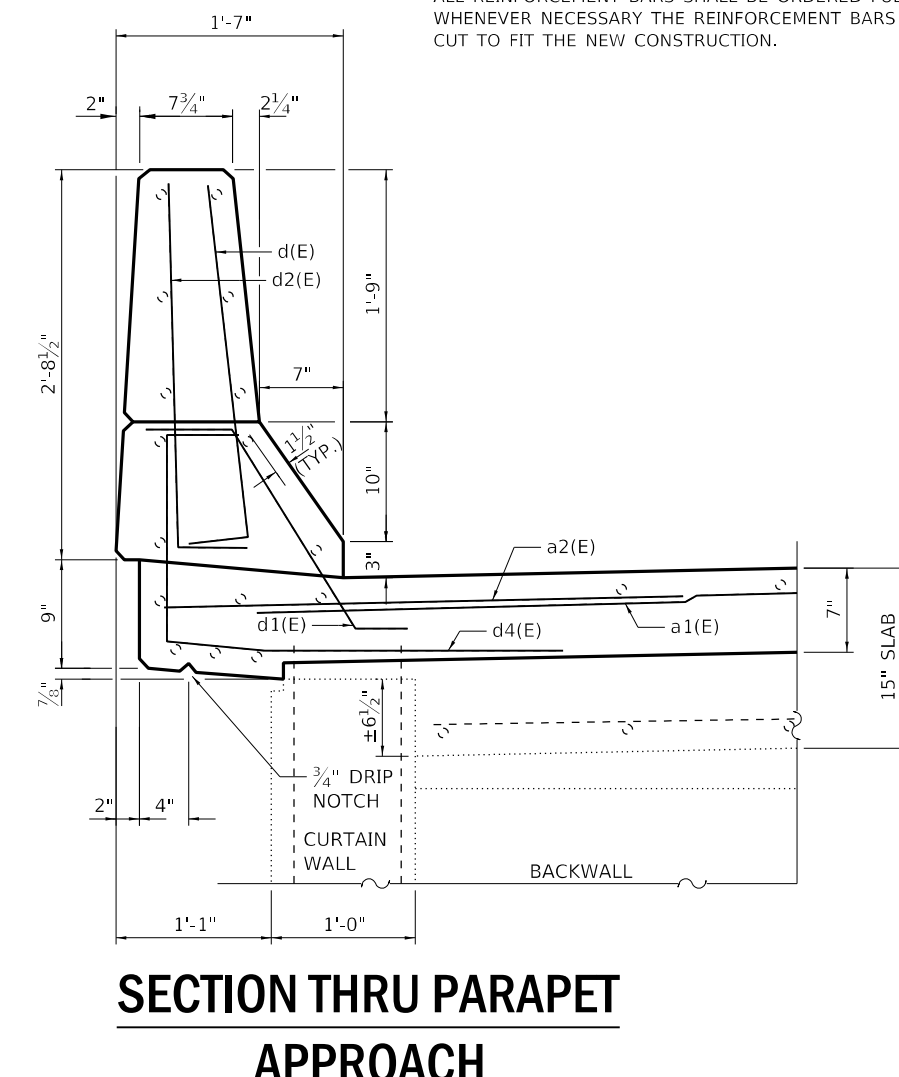
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55	(32-1)RS-4	GRUNDY	154	114
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

NOTES

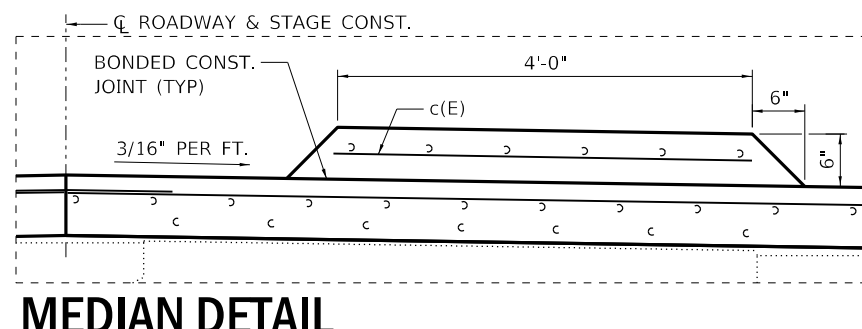
ALL REINFORCEMENT BARS SHALL BE ORDERED FULL LENGTH. WHENEVER NECESSARY THE REINFORCEMENT BARS SHALL BE CUT TO FIT THE NEW CONSTRUCTION.



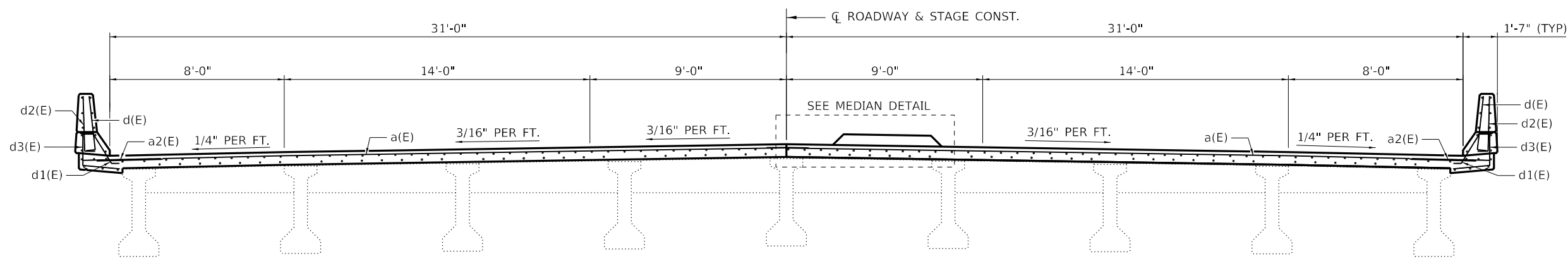
SECTION THRU PARAPET DECK



SECTION THRU PARAPET APPROACH



MEDIAN DETAIL



CROSS SECTION
LOOKING WEST AT WEST ABUTMENT EXPANSION JOINT
LOOKING EAST AT EAST ABUTMENT EXPANSION JOINT

MODEL: \\MODELMAR\MS... FILE: \\MODELMAR\MS... 10/22/2019

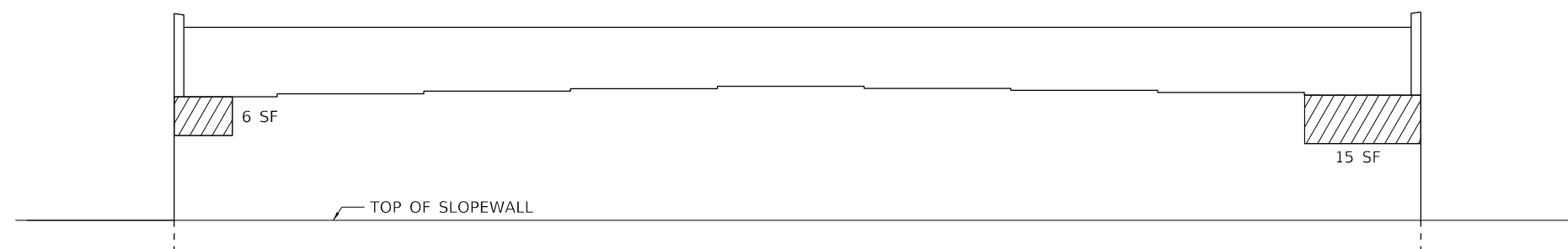
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIR DETAILS
SN 032-0091

SCALE: SHEET 4 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	115
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				

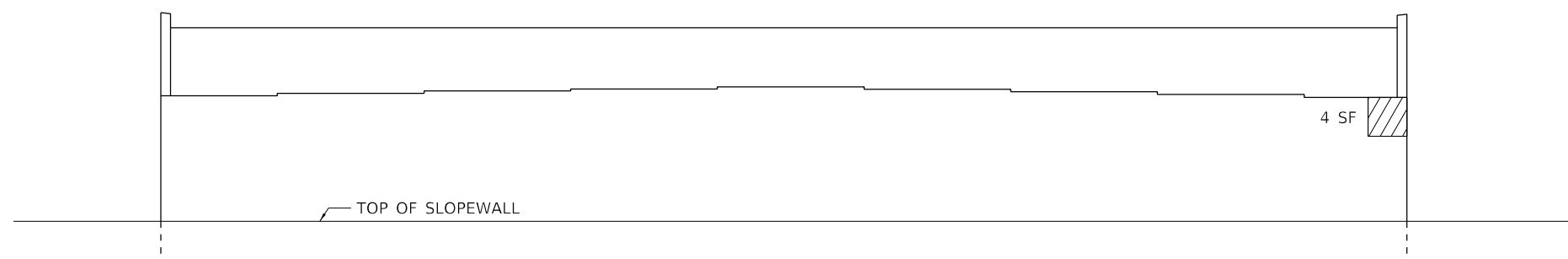


EAST ABUTMENT

BILL OF MATERIALS
STRUCTURE NO. 032-0091

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	25
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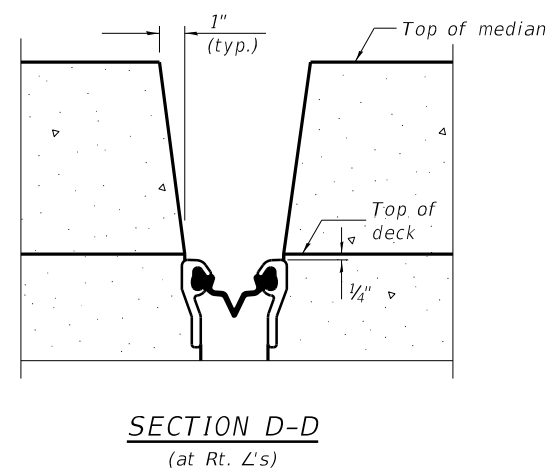
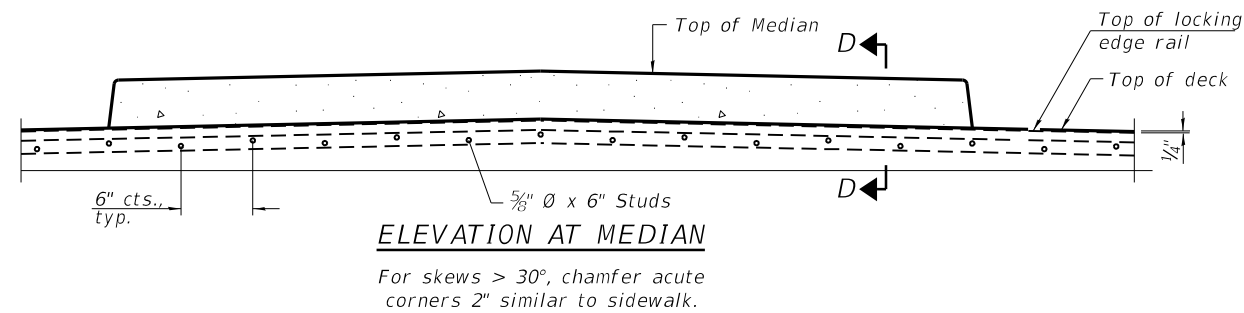
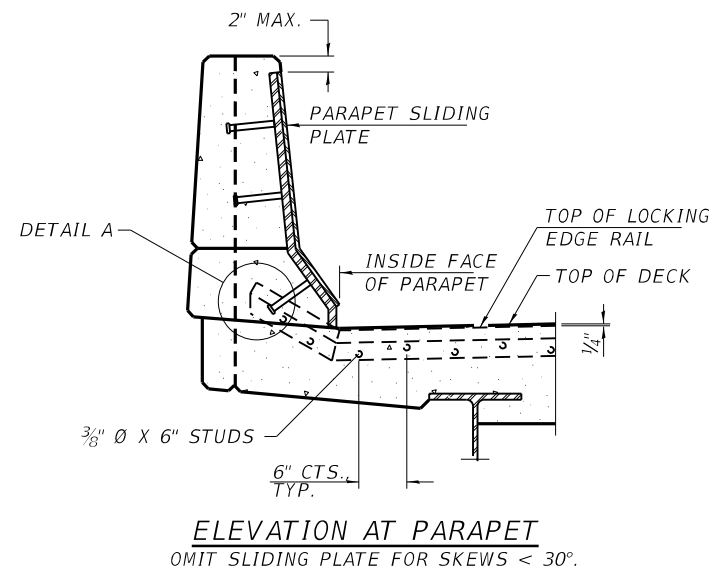
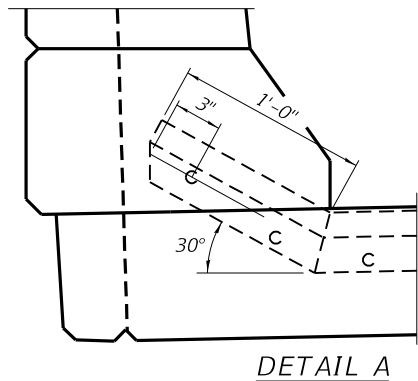
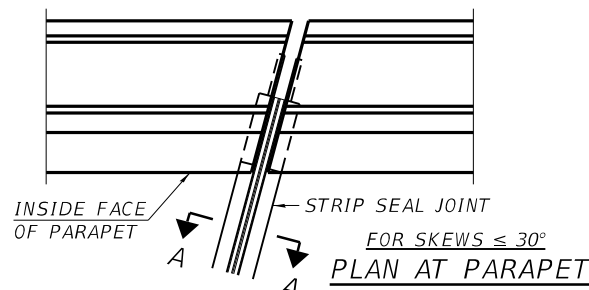
STRUCTURAL REPAIR OF CONCRETE
(DEPTH EQUAL TO OR LESS THAN 5")



WEST ABUTMENT

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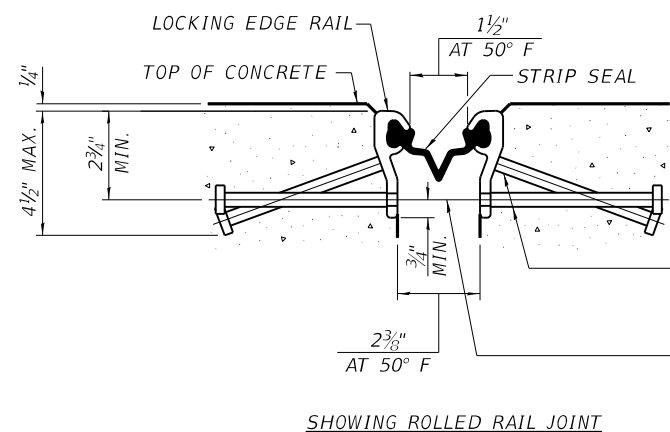
USER NAME = calderon1	DESIGNED - BDS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT REPAIRS SN 032-0091	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN - BDS	REVISIED -	55			(32-1)RS-4	GRUNDY	154	116	
PLOT SCALE = 100.0000' / in.	CHECKED - SPF	REVISIED -			CONTRACT NO. 66A51				
PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISIED -			ILLINOIS FED. AID PROJECT				
SCALE:					SHEET 5	OF 7	SHEETS	STA.	TO STA.



NOTES:
THE STRIP SEAL SHALL BE MADE CONTINUOUS AND SHALL HAVE A MINIMUM THICKNESS OF 1/4". THE CONFIGURATION OF THE STRIP SEAL SHALL MATCH THE CONFIGURATION OF THE LOCKING EDGE RAILS. OPEN OR "WEBBED" STRIP SEAL GLAND CONFIGURATIONS ARE NOT PERMITTED. THE GLAND SHALL BE SIZED FOR A MAXIMUM RATED MOVEMENT OF 4 INCHES.
THE LOCKING EDGE RAILS DEPICTED ARE CONFIGURED FOR TYPICAL APPLICATIONS AND ARE CONCEPTUAL ONLY. THE ACTUAL CONFIGURATION OF THE LOCKING EDGE RAILS AND MATCHING STRIP SEAL MAY VARY FROM MANUFACTURER TO MANUFACTURER PROVIDED THEY FIT THE APPLICATION AND MEET THE MINIMUM ANCHORAGE SHOWN. FLANGED EDGE RAILS, HOWEVER, WILL NOT BE ALLOWED. LOCKING EDGE RAILS MAY EXCEED THE 4 1/2" MAXIMUM DEPTH PROVIDED THE ANCHORAGE SYSTEM IS REVISED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.
THE MANUFACTURER'S RECOMMENDED INSTALLATION METHODS SHALL BE FOLLOWED.
ALL STEEL COMPONENTS SHALL BE GALVANIZED AFTER FABRICATION ACCORDING TO ARTICLE 520.03 OF THE STANDARD SPECIFICATIONS.
THE MAXIMUM SPACE BETWEEN LOCKING EDGE RAIL SEGMENTS SHALL BE 1/16" AND SEALED WITH A SUITABLE SEALANT; HOWEVER, ANY RAIL JOINT WITHIN 10' MEASURED PERPENDICULAR TO THE FACE OF THE CURB OR PARAPET SHALL BE WELDED AS SHOWN IN THE LOCKING EDGE RAIL SPLICE DETAIL.
COST OF PARAPET SLIDING PLATES, EMBEDDED PLATES, AND ANCHORAGE STUDS INCLUDED WITH PREFORMED JOINT STRIP SEAL. 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.

BILL OF MATERIAL
STRUCTURE NO. 032-0091 (STAGE 1)

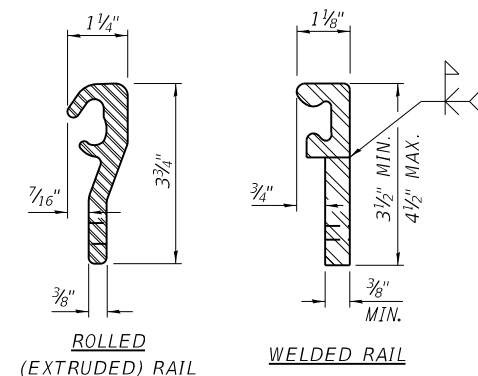
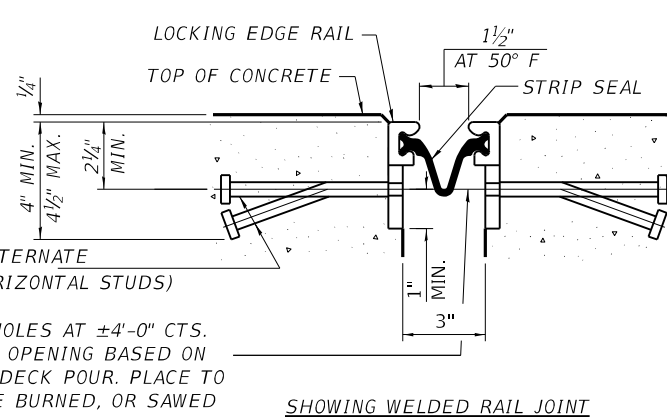
ITEM	UNIT	TOTAL
PREFORMED JOINT STRIP SEAL	FOOT	128



* 5/8" Ø X 6" STUDS @ 6" CTS. (ALTERNATE ANGLED/BENT STUDS WITH HORIZONTAL STUDS)
3/8" Ø THREADED RODS IN 7/16" Ø HOLES AT ±4'-0" CTS. FOR HOLDING THE PROPER JOINT OPENING BASED ON THE TEMPERATURE DURING THE DECK POUR. PLACE TO MISS STUDS. ALL RODS SHALL BE BURNED, OR SAWED OFF FLUSH WITH THE PLATES AFTER CONCRETE IS SET.

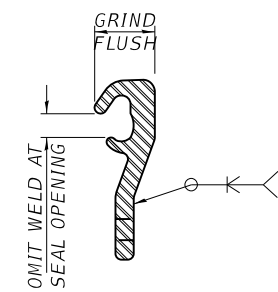
SECTION A-A

* GRANULAR OR SOLID FLUX FILLED HEADED STUDS CONFORMING TO ARTICLE 1006.32 OF THE STD. SPECS., AUTOMATICALLY END WELDED.



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.

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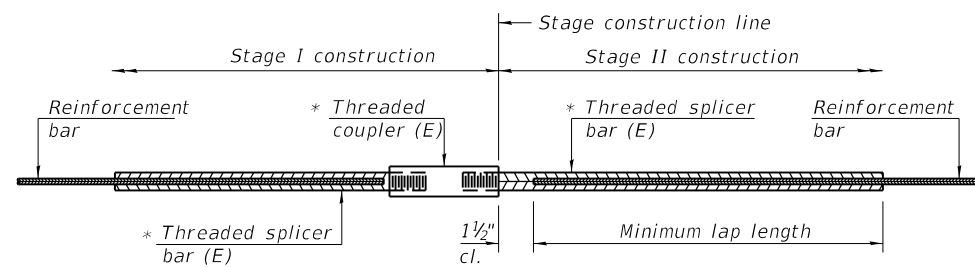
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	DRAWN - BDS	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - SPF	REVISED -
PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
SN 032-0091

SCALE: SHEET 6 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	117
				CONTRACT NO. 66A51
ILLINOIS FED. AID PROJECT				



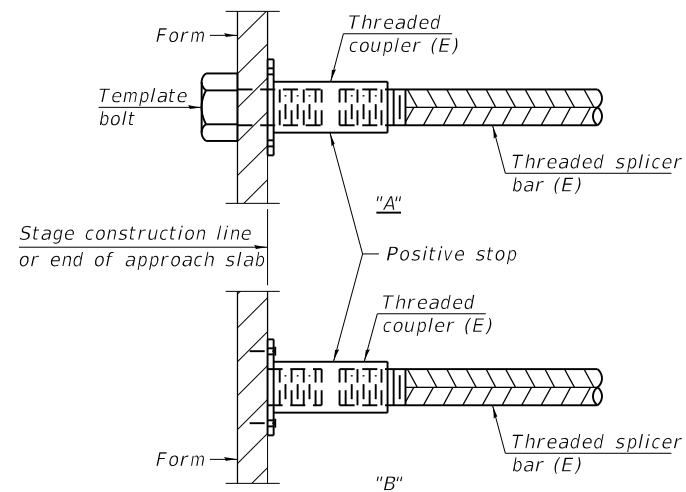
STANDARD BAR SPLICER ASSEMBLY

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.

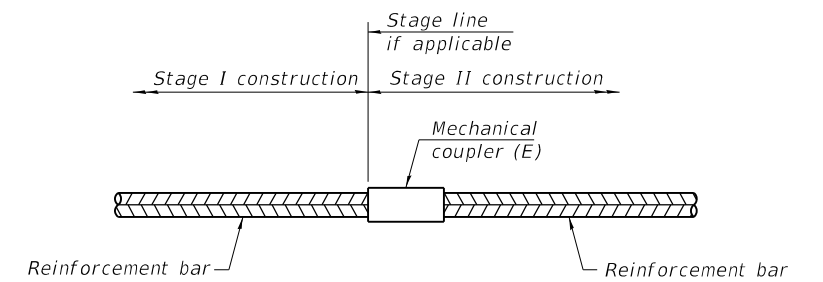
**BILL OF MATERIAL
STRUCTURE NO. 032-00091**

LOCATION	BAR SIZE	NO. ASSEMBLIES REQUIRED	MINIMUM LAP LENGTH
WEST APPROACH	#5	2	3'-0"
WEST END DECK	#7	2	4'-2"
EAST END DECK	#7	2	4'-2"
EAST APPROACH	#5	2	3'-0"
TOTAL		8	



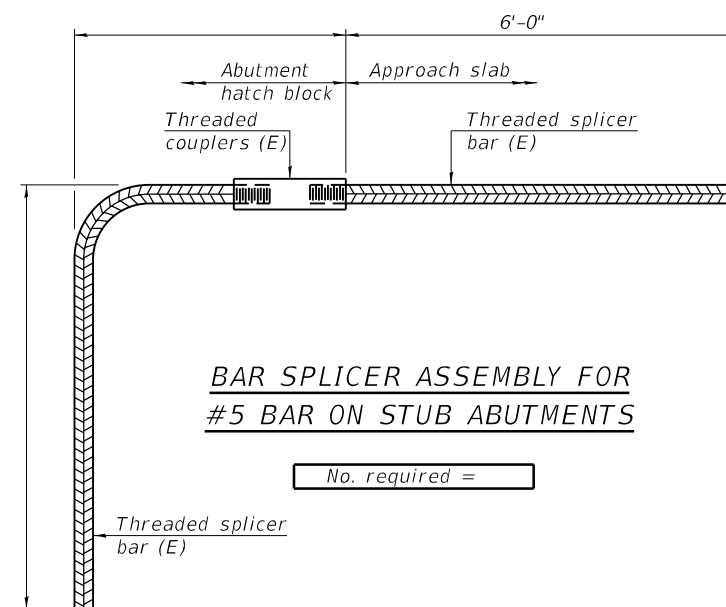
INSTALLATION AND SETTING METHODS

"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



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

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: \\MODELMAN\FILES... FILE: \\MODELMAN\... \work\splicers\calderon\03260431\03260431-1\19191919.dgn

BSD-1 2-17-2017

USER NAME = calderon1	DESIGNED - BDS	REVISED -
	DRAWN - BDS	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - SPF	REVISED -
PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

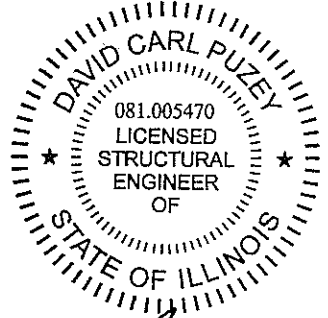
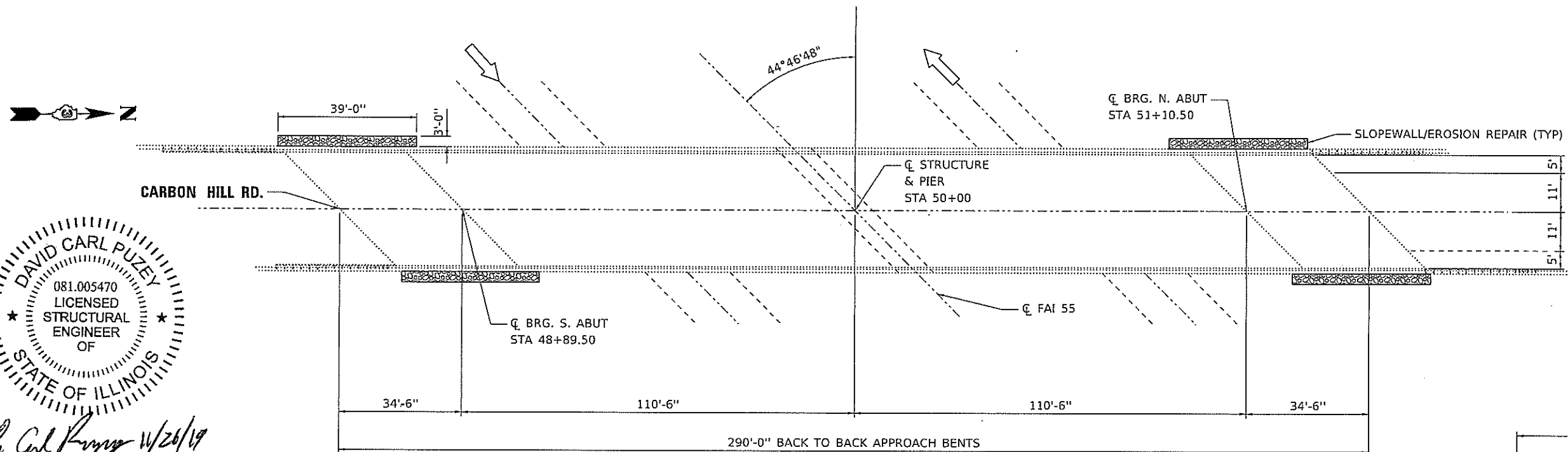
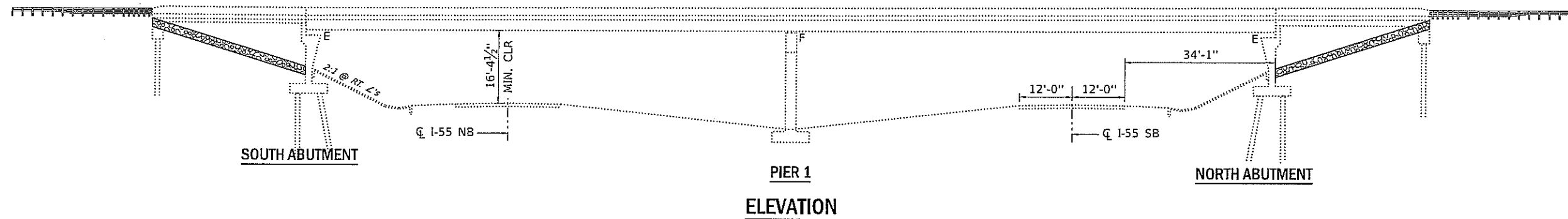
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 032-0091**

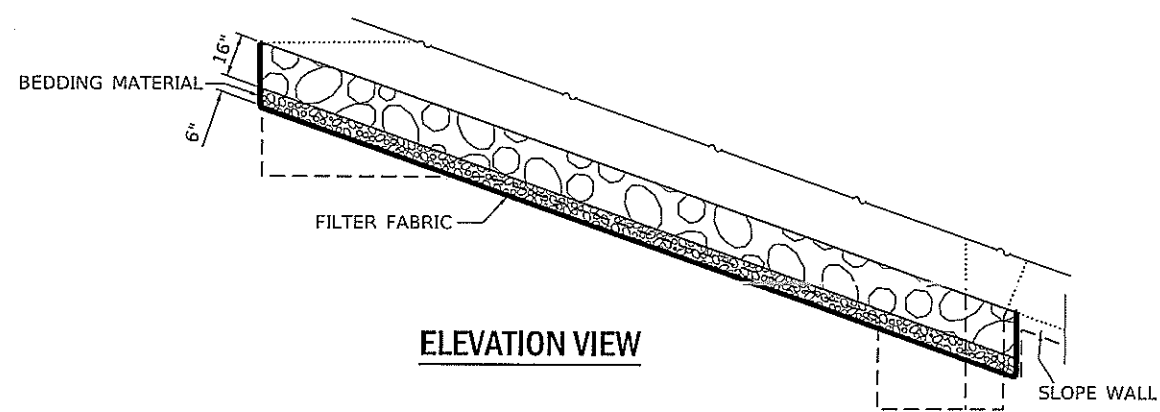
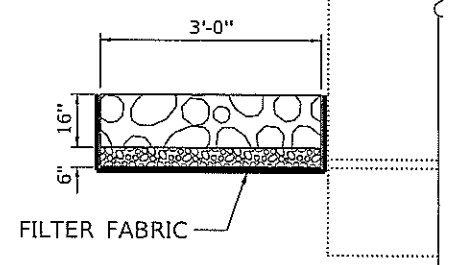
SCALE: SHEET 7 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	118
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

EXISTING STRUCTURE: SN 032-0090 IS A 4-SPAN BRIDGE CONSISTING OF A 2-SPAN CONTINUOUS COMPOSITE WELDED STEEL PLATE GIRDER UNIT AND TWO REINFORCED CONCRETE SLAB APPROACH SPANS ON FILLED VAULT ABUTMENTS AND AN OPEN COLUMN PIER. IT WAS CONSTRUCTED IN 1994 AS SECTION (32-1)HBR-2. IN 2012 AND 2016 CONCRETE SEALER WAS APPLIED TO THE DECK. TRAFFIC WILL BE MAINTAINED BY STAGE CONSTRUCTION.



*David Carl Puzey 11/26/19
Expires 11/30/20*



PLAN

NOTES

BEDDING MATERIAL WILL BE INCLUDED WITH THE COST OF STONE DUMPED RIPRAP CL A4.

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 BASED AT THE UNIT PRICE BID FOR THE WORK.

CROSS SECTION

SCOPE OF WORK

REPAIR EROSION AT EDGE OF SLOPE WALL AT ALL FOUR QUADRANTS

BILL OF MATERIAL

ITEM	UNIT	TOTAL
STONE DUMPED RIPRAP CL A4	SQ YD	52
FILTER FABRIC	SQ YD	52

USER NAME = calderoni	DESIGNED - BDS	REVISOR -
	DRAWN - BDS	REVISIONS -
PLOT SCALE = 100,0000' / in.	CHECKED - BDS	
PLOT DATE = 10/22/2019	DATE - 3/21/2019	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SN 032-0092

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	164	119
			CONTRACT NO. 66A51	
ILLINOIS FED. AID PROJECT				

MODEL: 3MODELNAME
PLOT NAME: C:\pwworking\calderoni\0320092\10320092.dwg

EXISTING STRUCTURE: SN 032-0093 IS A 4-SPAN BRIDGE CONSISTING OF A 2-SPAN 48" PPC I-BEAM UNIT AND TWO REINFORCED CONCRETE SLAB APPROACH SPANS ON FILLED VAULT ABUTMENTS AND A CAP & COLUMN PIER. IT WAS CONSTRUCTED IN 1997 AS SECTION (32-1)HBR-3. IN 2012 AND 2016 CONCRETE SEALER WAS APPLIED TO THE DECK. TRAFFIC WILL BE MAINTAINED BY STAGE CONSTRUCTION.

GENERAL NOTES

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.

PROTECTIVE COAT SHALL BE APPLIED TO ALL NEWLY PLACED CONCRETE SURFACES, INCLUDING THE APPROACHES AND TOP AND INSIDE FACES OF THE PARAPET.

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

EXISTING REINFORCEMENT BARS EXTENDING INTO THE REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION, UNLESS NOTED OTHERWISE. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL SHALL BE REPLACED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST INCLUDED WITH CONCRETE REMOVAL.

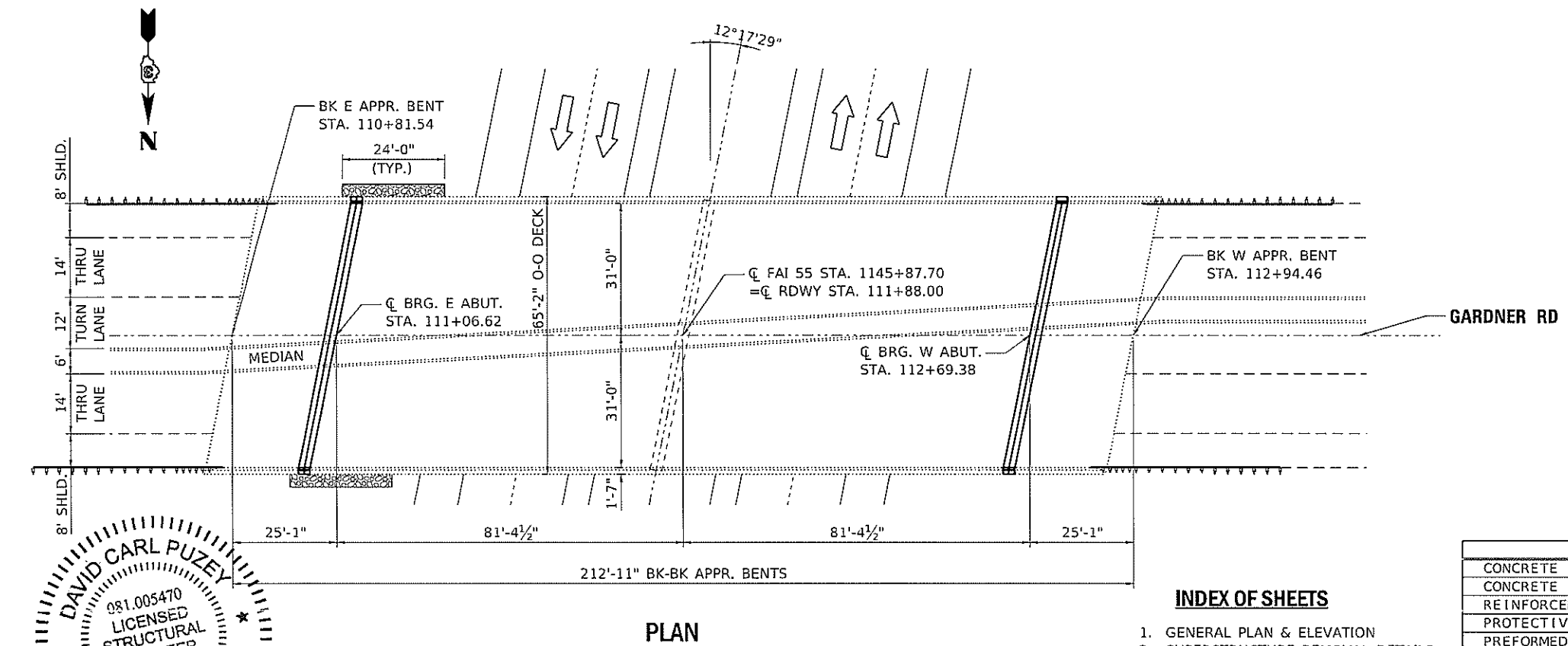
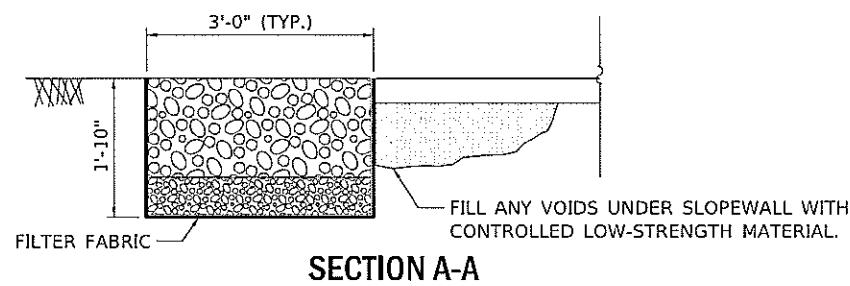
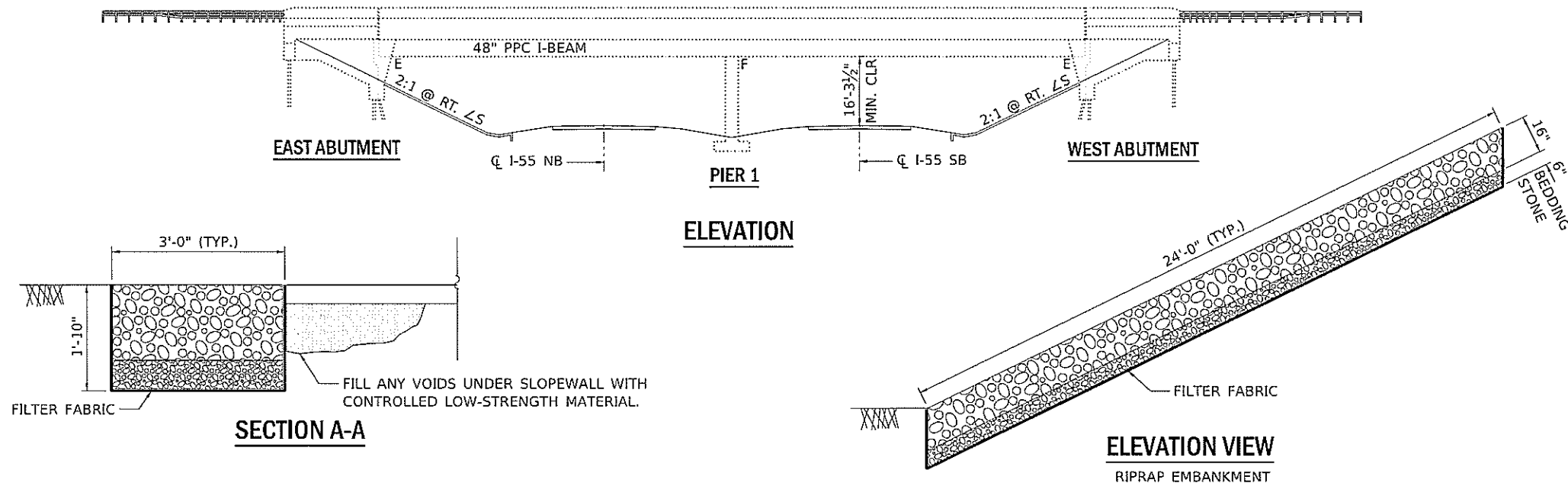
JOINT OPENING SHALL BE ADJUSTED ACCORDING TO ARTICLE 520.04 OF THE STANDARD SPECIFICATIONS WHEN THE DECK IS POURED AT AN AMBIENT TEMPERATURE OTHER THAN 50 DEGREES F.

AREAS OF DECK REPAIRS ARE ESTIMATED. THE ENGINEER SHALL SHOW ACTUAL LOCATIONS OF DECK REPAIRS ON AS-BUILT PLANS.

THE CONTRACTOR SHALL USE EXTREME CARE DURING CONCRETE REMOVAL SO AS NOT TO DAMAGE THE PPC I-BEAM OR THREADED RODS.

WORK TO BE COMPLETED UNDER STAGE CONSTRUCTION.

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 BASED AT THE UNIT PRICE BID FOR THE WORK.



SCOPE OF WORK

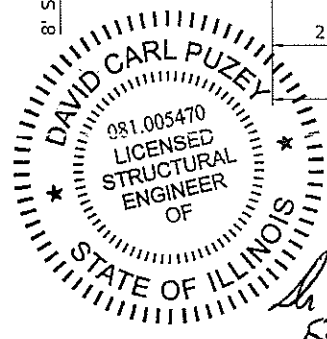
1. REMOVE AND REPLACE EXISTING EXPANSION JOINTS AT ABUTMENTS WITH PREFORMED JOINT STRIP SEALS.
2. PERFORM DECK SLAB REPAIRS.
3. PERFORM STRUCTURAL REPAIR OF CONCRETE ON SUBSTRUCTURE.
4. PLACE RIPRAP AND CLSM ALONG SLOPEWALLS.

TOTAL BILL OF MATERIAL
1 STRUCTURE

ITEM	UNIT	SUPER	SUB	TOTAL
CONCRETE REMOVAL	CU YD	7.0		7.0
CONCRETE SUPERSTRUCTURE	CU YD	7.1		7.1
REINFORCEMENT BARS, EPOXY COATED	POUND	1110		1110
PROTECTIVE COAT	SQ YD	32		32
PREFORMED JOINT STRIP SEAL	FOOT	128		128
BAR SPLICER	EACH	8		8
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT		2	2
CONTROLLED LOW-STRENGTH MATERIAL	CU YD		1	1
STONE DUMPED RIPRAP, CLASS A4	SQ YD		16	16
FILTER FABRIC	SQ YD		16	16

INDEX OF SHEETS

1. GENERAL PLAN & ELEVATION
2. SUPERSTRUCTURE REMOVAL DETAILS
3. SUPERSTRUCTURE REPAIR DETAILS 1
4. SUPERSTRUCTURE REPAIR DETAILS 2
5. PIER REPAIRS
6. PREFORMED JOINT STRIP SEAL
7. BAR SPLICER DETAILS



David Carl Puzey W/26/19
Expires W/30/20

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DRAWN - BDS	REVISIONS -	
PLOT SCALE = 100.0000' / in.	CHECKED - BDS	REVISED -
PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

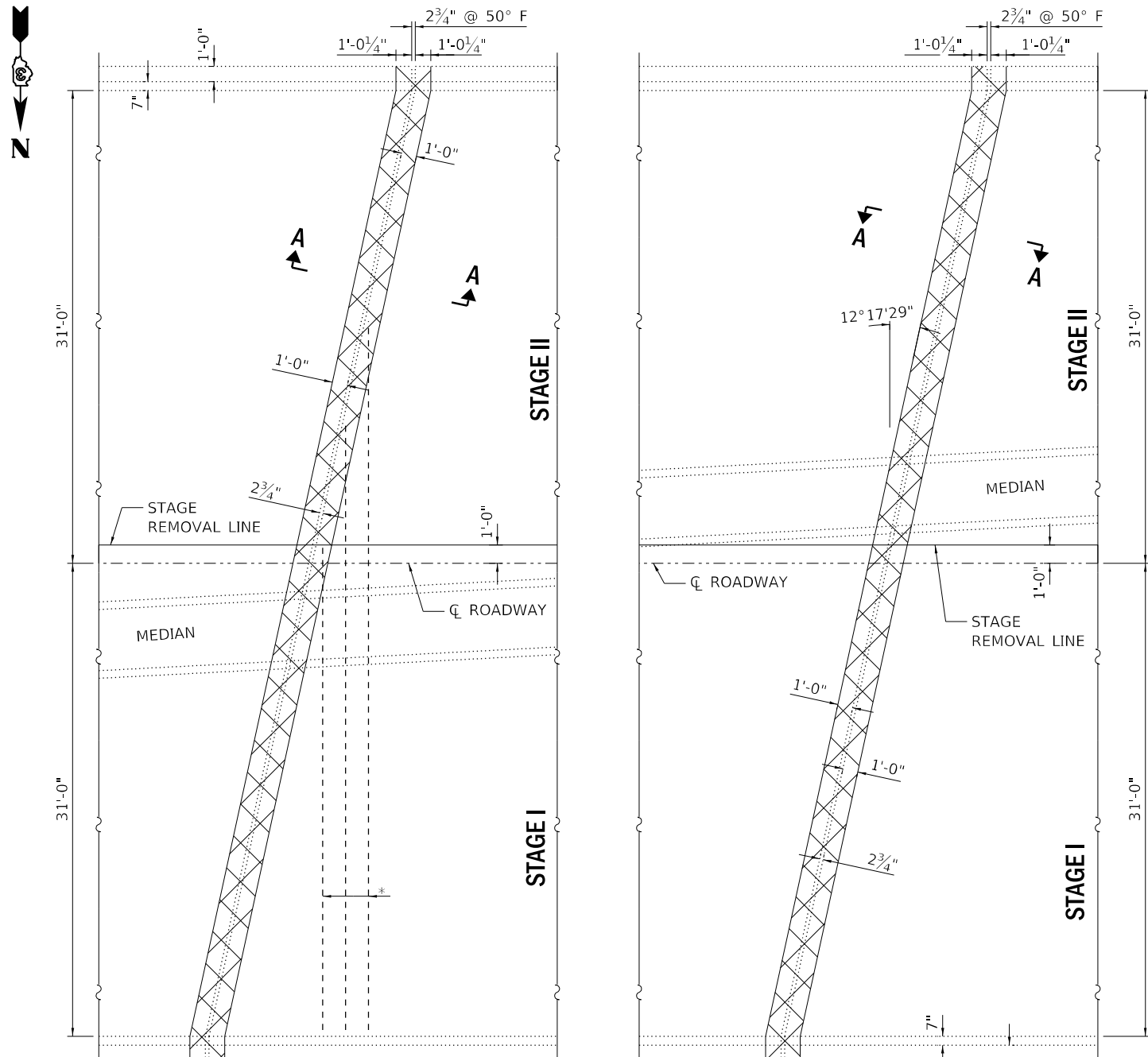
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SN 032-0093

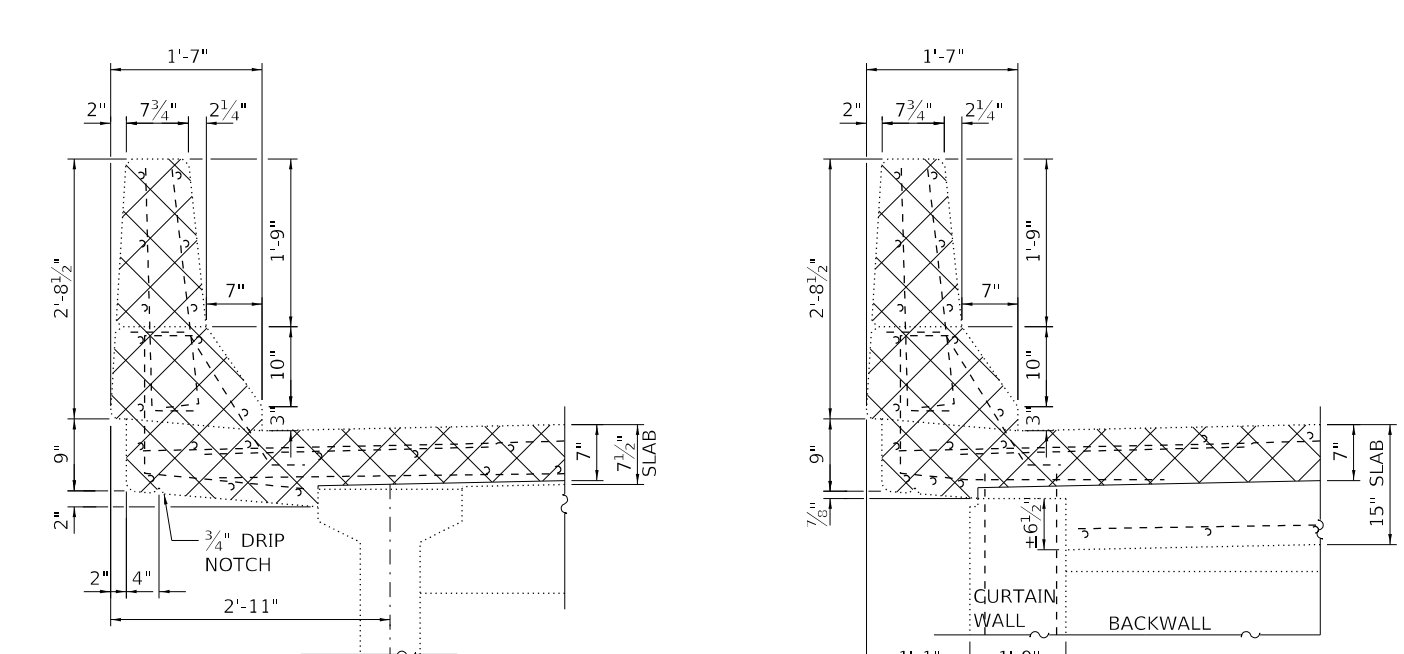
SCALE: SHEET 1 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	120
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

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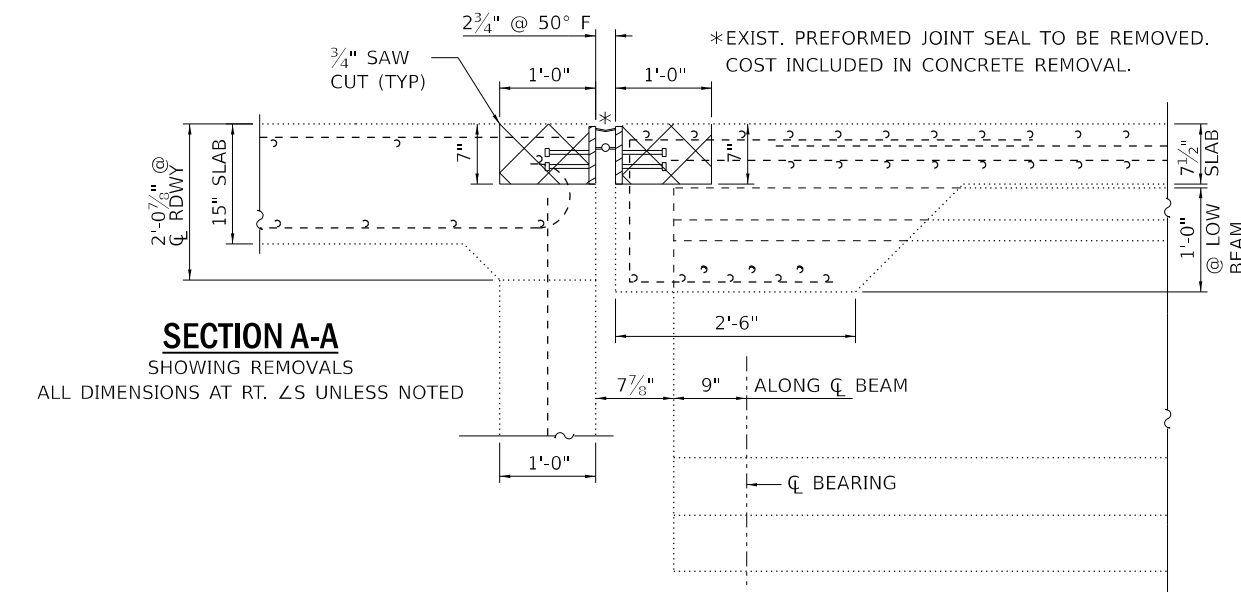


*TRANSVERSE BARS EXTENDING INTO CONCRETE REMOVAL AREA SHALL BE CUT OFF 6" FROM FACE OF CONCRETE REMOVAL LINE.

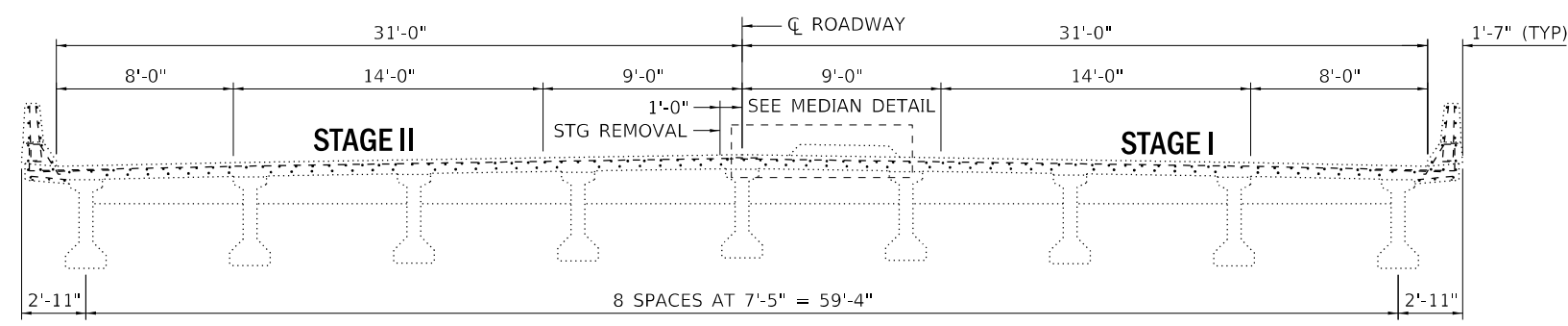


SECTION THRU PARAPET DECK

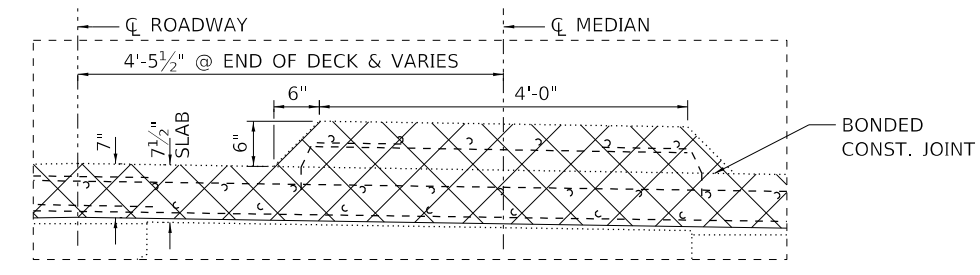
SECTION THRU PARAPET APPROACH



SECTION A-A
SHOWING REMOVALS
ALL DIMENSIONS AT RT. ANGLES UNLESS NOTED



CROSS SECTION
LOOKING WEST AT EXPANSION JOINT



MEDIAN DETAIL

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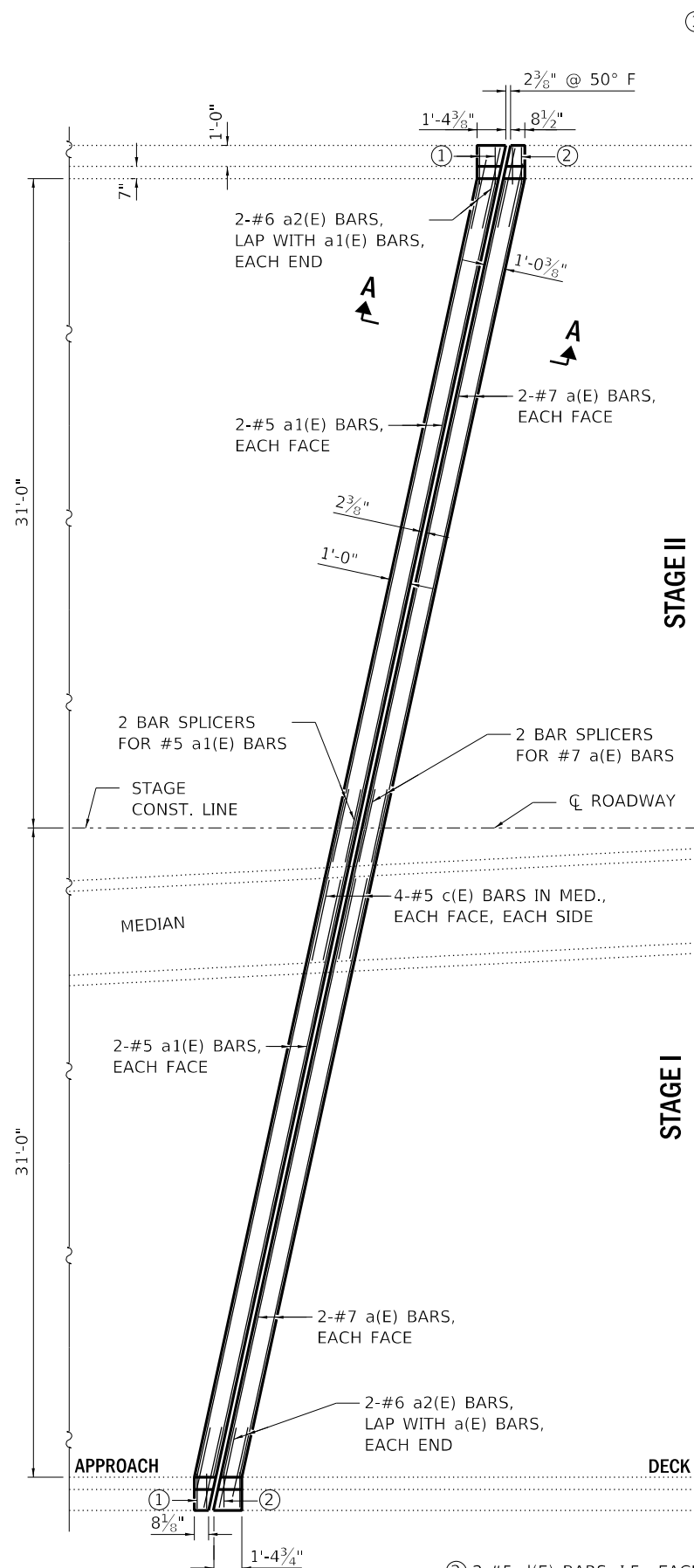
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PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REMOVAL DETAILS
SN 032-0093

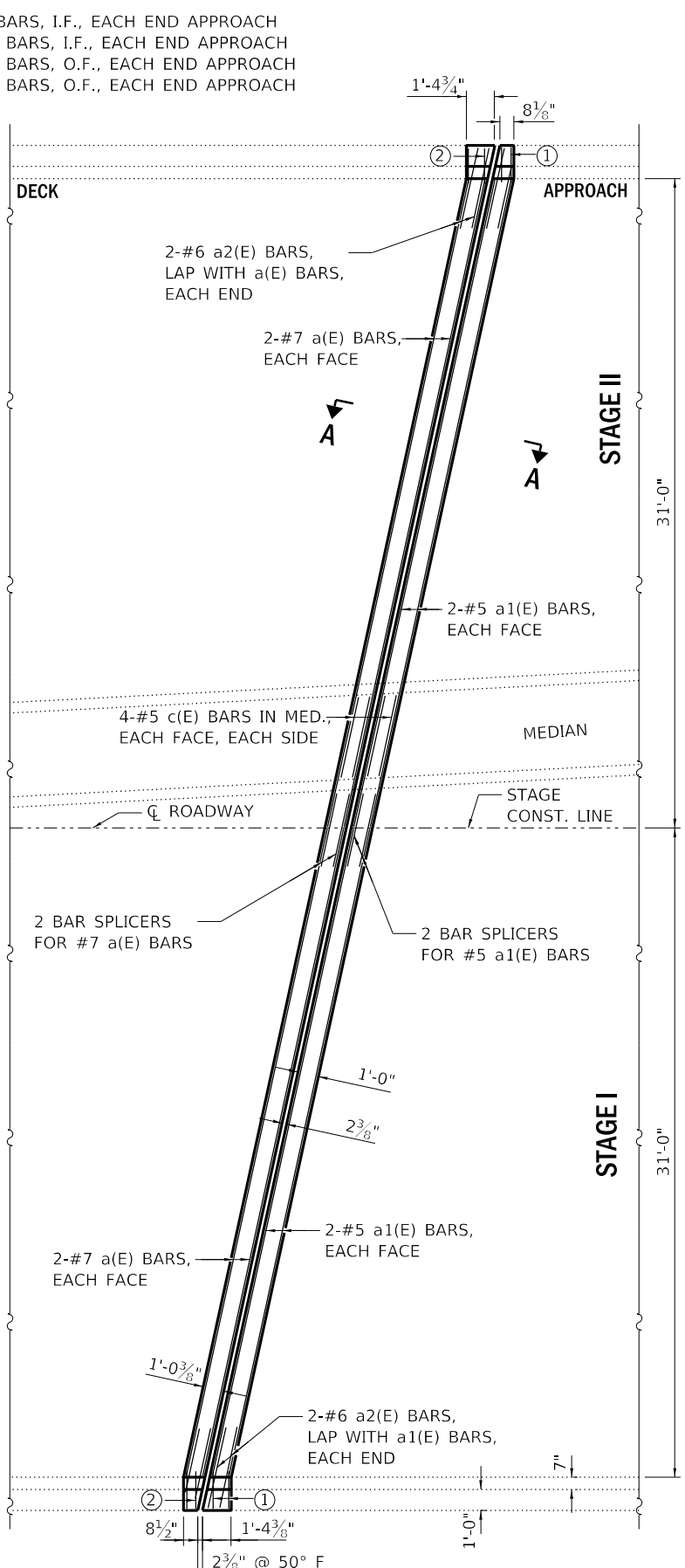
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	121
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

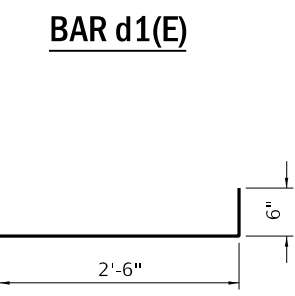
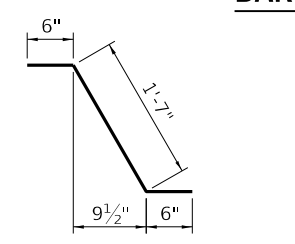
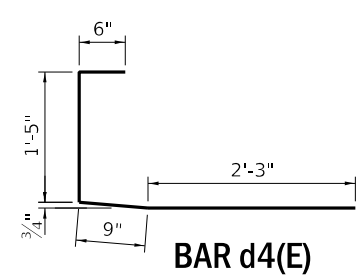
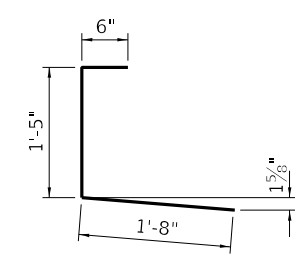
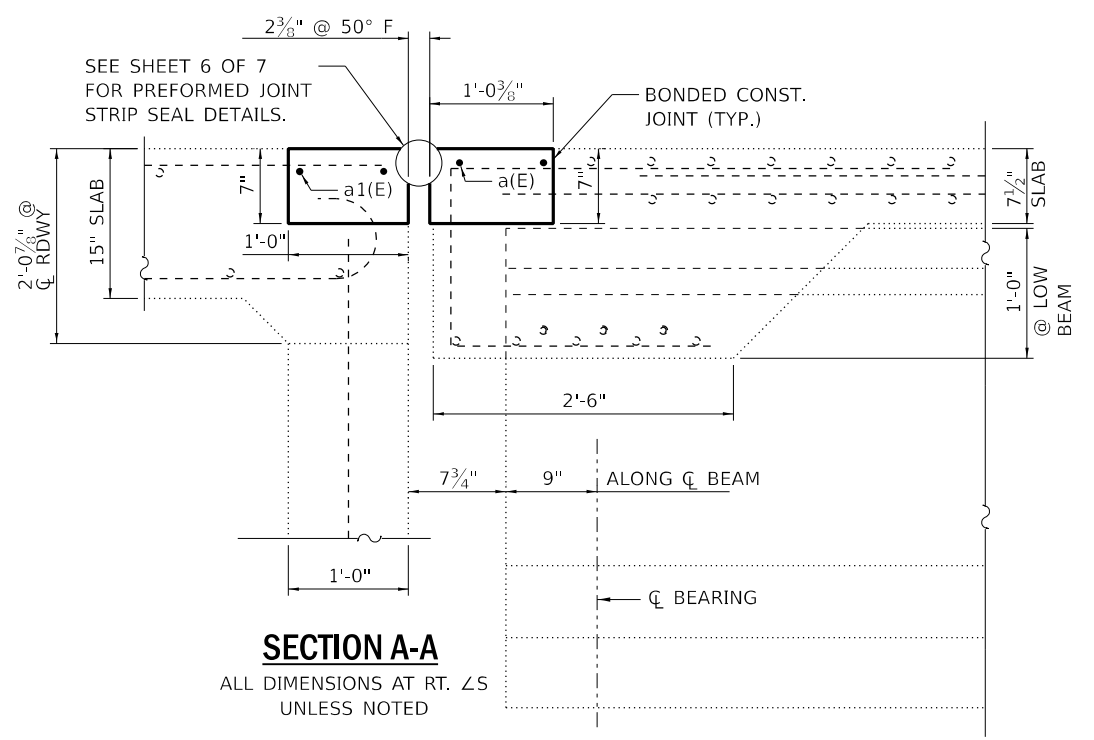


PLAN VIEW
EAST ABUTMENT

- ② 2-#5 d(E) BARS, I.F., EACH END DECK
 2-#5 d1(E) BARS, I.F., EACH END DECK
 2-#5 d2(E) BARS, O.F., EACH END DECK
 2-#5 d3(E) BARS, O.F., EACH END DECK



PLAN VIEW
WEST ABUTMENT



BILL OF MATERIALS
STRUCTURE NO. 032-0093

BAR	NO.	SIZE	LENGTH	SHAPE	
a (E)	8	#7	33' - 0"	—	
a1 (E)	8	#5	32' - 5"	—	
a2 (E)	16	#6	4' - 1"	—	
c (E)	8	#5	3' - 11"	—	
d (E)	16	#5	3' - 0"	┌┐	
d1 (E)	16	#5	2' - 7"	┌┐	
d2 (E)	16	#4	3' - 0"	┌┐	
d3 (E)	8	#4	3' - 7"	┌┐	
d4 (E)	8	#4	4' - 11"	┌┐	
CONCRETE REMOVAL				CU YD	7.0
CONCRETE SUPERSTRUCTURE				CU YD	7.1
REINFORCEMENT BARS, EPOXY COATED				POUND	1110
BAR SPlicERS				EACH	8
PROTECTIVE COAT				SQ FT	288

MODEL: \\MODELS\MARIS
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USER NAME = calderoni	DESIGNED - BDS	REVISED -
DRAWN - BDS	REVISED -	
PLOT SCALE = 100.0000' / in.	CHECKED - SPF	REVISED -
PLOT DATE = 10/22/2019	DATE - 3/21/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

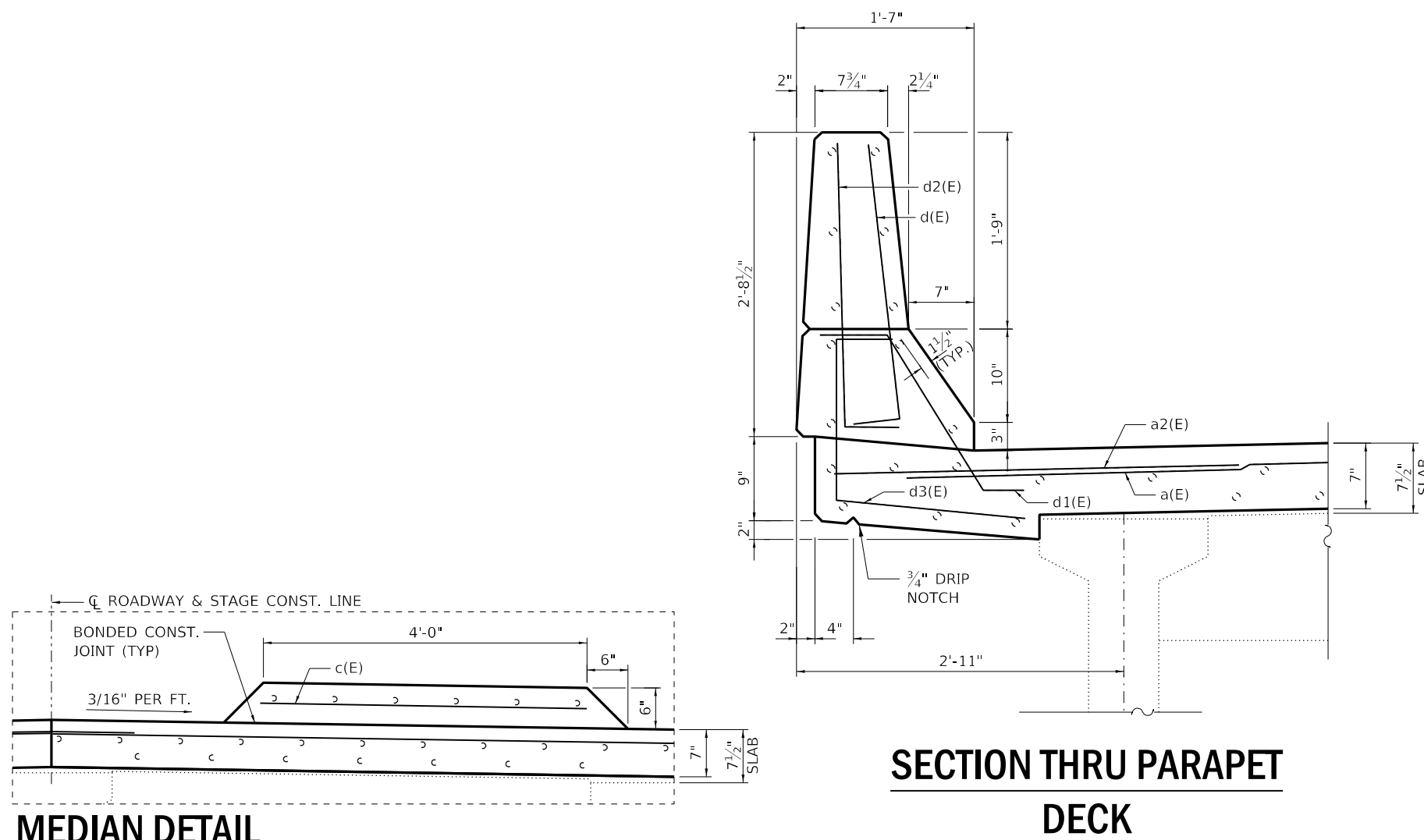
SUPERSTRUCTURE REPAIR DETAILS
SN 032-0093

SCALE: SHEET 3 OF 7 SHEETS STA. TO STA.

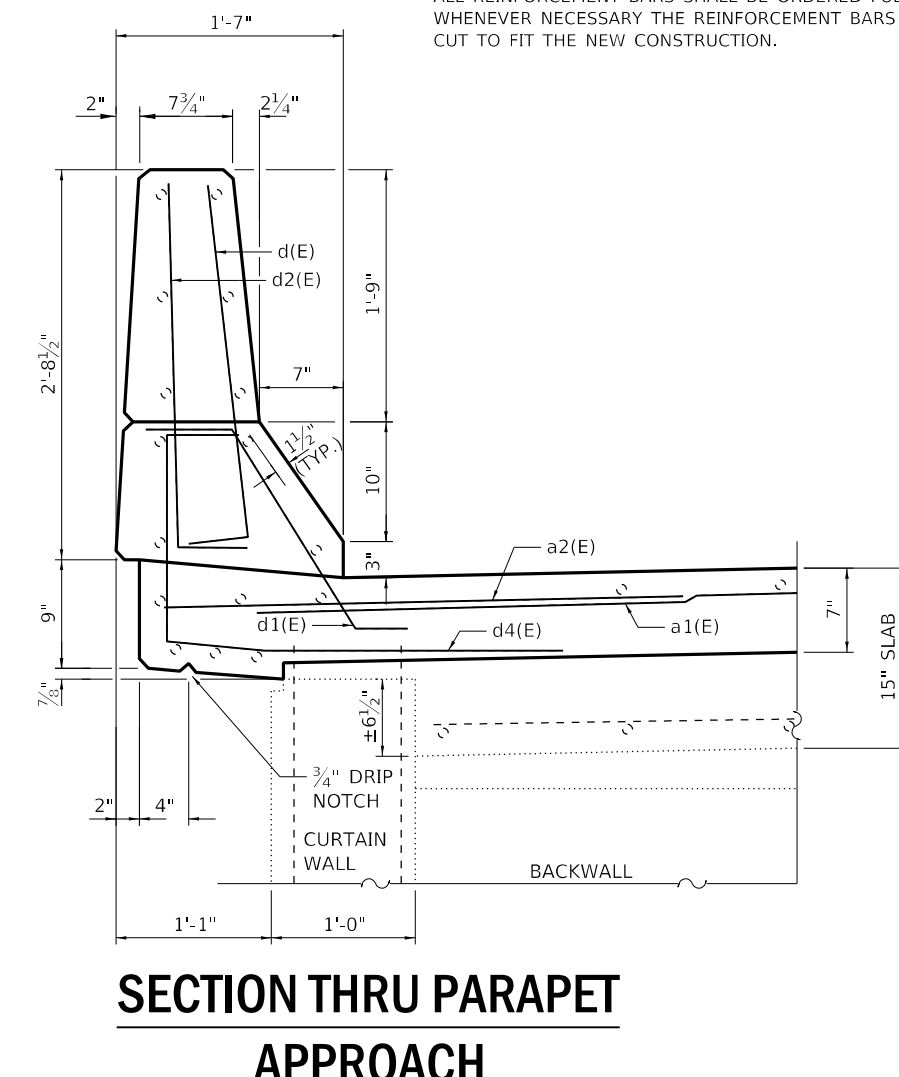
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	122
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

NOTES

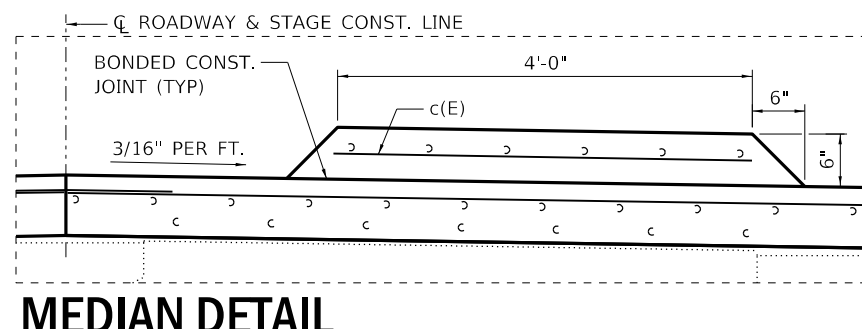
ALL REINFORCEMENT BARS SHALL BE ORDERED FULL LENGTH. WHENEVER NECESSARY THE REINFORCEMENT BARS SHALL BE CUT TO FIT THE NEW CONSTRUCTION.



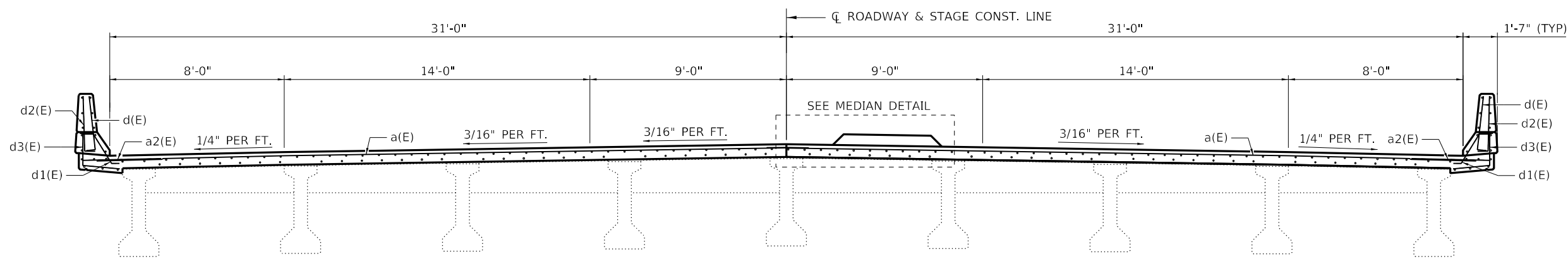
SECTION THRU PARAPET DECK



SECTION THRU PARAPET APPROACH



MEDIAN DETAIL



CROSS SECTION
LOOKING WEST AT WEST ABUTMENT EXPANSION JOINT
LOOKING EAST AT EAST ABUTMENT EXPANSION JOINT

MODEL: \\MODELMARTE
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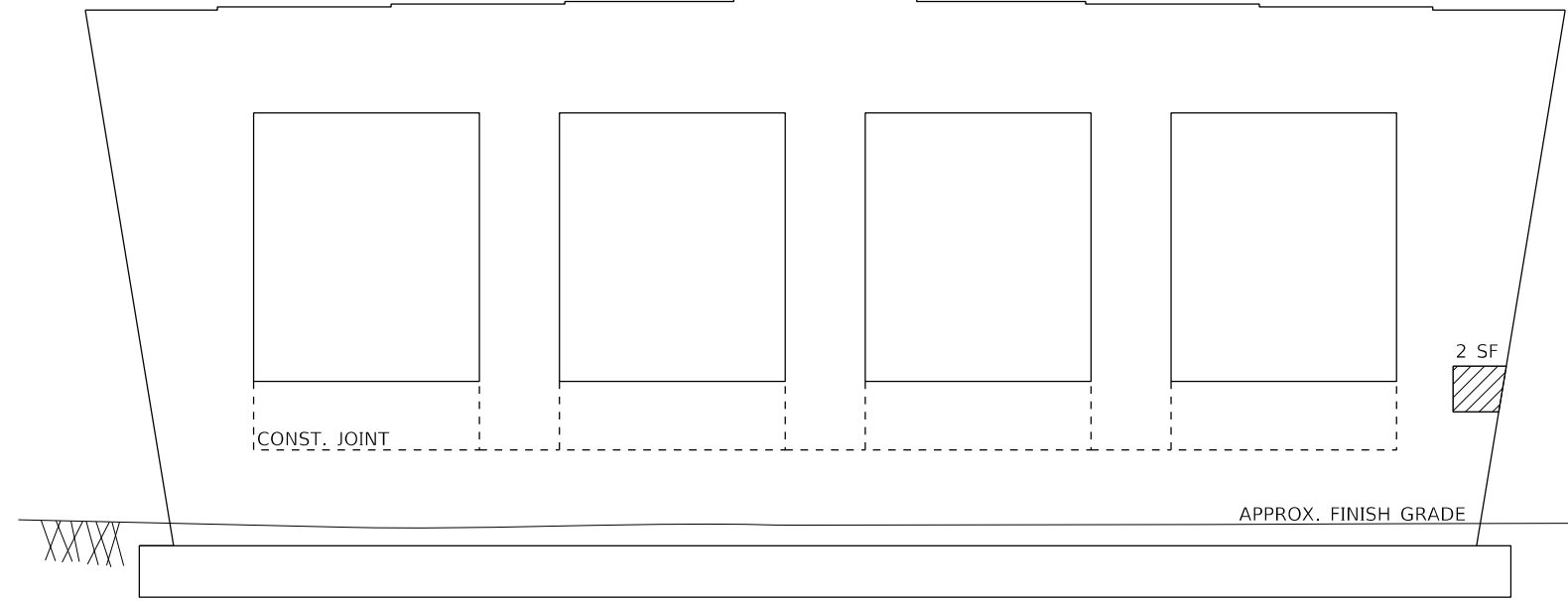
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIR DETAILS
SN 032-0093

SCALE: SHEET 4 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	123
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				



PIER 1 WEST FACE

BILL OF MATERIALS
STRUCTURE NO. 032-0093

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	2
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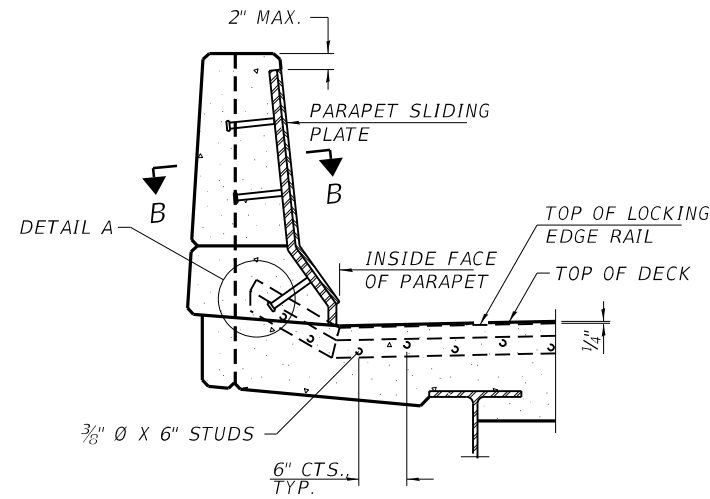
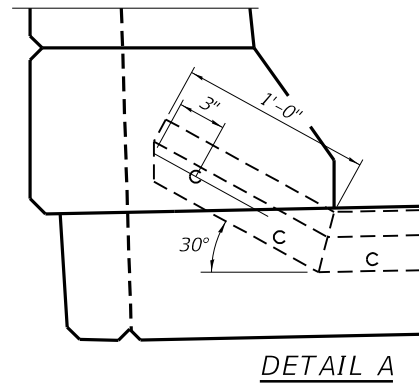
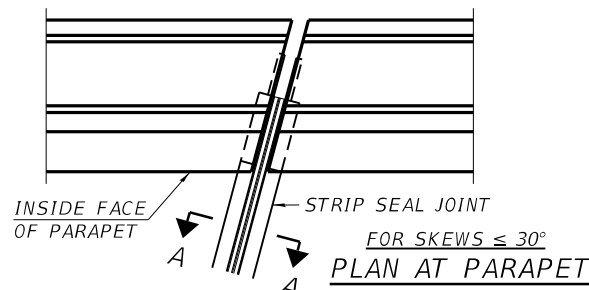
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

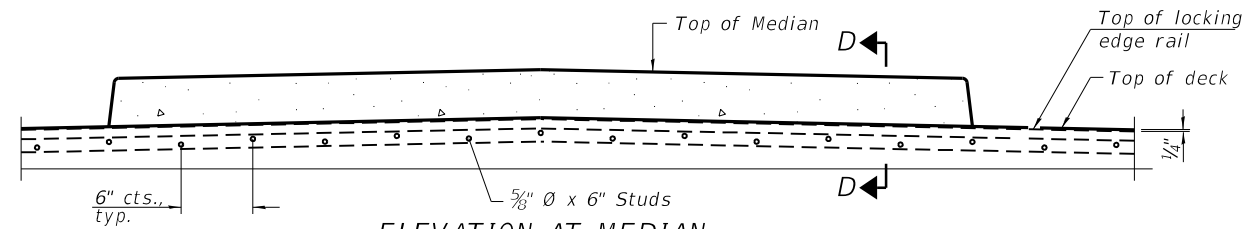
PIER REPAIR DETAILS
SN 032-0093

SCALE: SHEET 5 OF 7 SHEETS STA. TO STA.

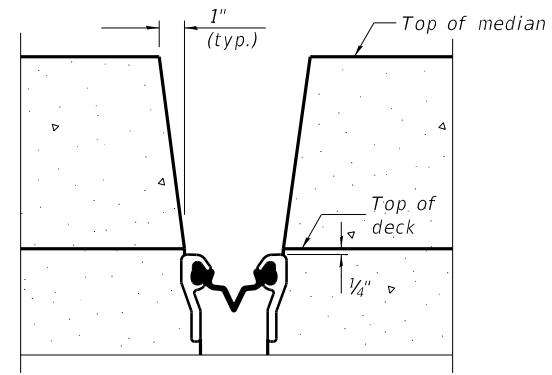
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	124
			CONTRACT NO. 66A51	
ILLINOIS FED. AID PROJECT				



ELEVATION AT PARAPET
OMIT SLIDING PLATE FOR SKEWS < 30°.



ELEVATION AT MEDIAN
FOR SKEWS > 30°, CHAMFER ACUTE CORNERS 2" SIMILAR TO SIDEWALK.

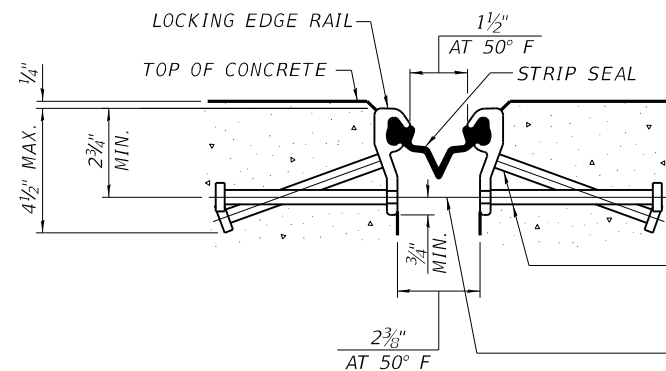


SECTION D-D
(at Rt. L's)

NOTES:
THE STRIP SEAL SHALL BE MADE CONTINUOUS AND SHALL HAVE A MINIMUM THICKNESS OF 1/4". THE CONFIGURATION OF THE STRIP SEAL SHALL MATCH THE CONFIGURATION OF THE LOCKING EDGE RAILS. OPEN OR "WEBBED" STRIP SEAL GLAND CONFIGURATIONS ARE NOT PERMITTED. THE GLAND SHALL BE SIZED FOR A MAXIMUM RATED MOVEMENT OF 4 INCHES.
THE LOCKING EDGE RAILS DEPICTED ARE CONFIGURED FOR TYPICAL APPLICATIONS AND ARE CONCEPTUAL ONLY. THE ACTUAL CONFIGURATION OF THE LOCKING EDGE RAILS AND MATCHING STRIP SEAL MAY VARY FROM MANUFACTURER TO MANUFACTURER PROVIDED THEY FIT THE APPLICATION AND MEET THE MINIMUM ANCHORAGE SHOWN. FLANGED EDGE RAILS, HOWEVER, WILL NOT BE ALLOWED. LOCKING EDGE RAILS MAY EXCEED THE 4 1/2" MAXIMUM DEPTH PROVIDED THE ANCHORAGE SYSTEM IS REVISED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.
THE MANUFACTURER'S RECOMMENDED INSTALLATION METHODS SHALL BE FOLLOWED.
ALL STEEL COMPONENTS SHALL BE GALVANIZED AFTER FABRICATION ACCORDING TO ARTICLE 520.03 OF THE STANDARD SPECIFICATIONS.
THE MAXIMUM SPACE BETWEEN LOCKING EDGE RAIL SEGMENTS SHALL BE 1/16" AND SEALED WITH A SUITABLE SEALANT; HOWEVER, ANY RAIL JOINT WITHIN 10' MEASURED PERPENDICULAR TO THE FACE OF THE CURB OR PARAPET SHALL BE WELDED AS SHOWN IN THE LOCKING EDGE RAIL SPLICE DETAIL.
COST OF PARAPET SLIDING PLATES, EMBEDDED PLATES, AND ANCHORAGE STUDS INCLUDED WITH PREFORMED JOINT STRIP SEAL. 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.

BILL OF MATERIAL
STRUCTURE NO. 032-0093

ITEM	UNIT	TOTAL
PREFORMED JOINT STRIP SEAL	FOOT	128

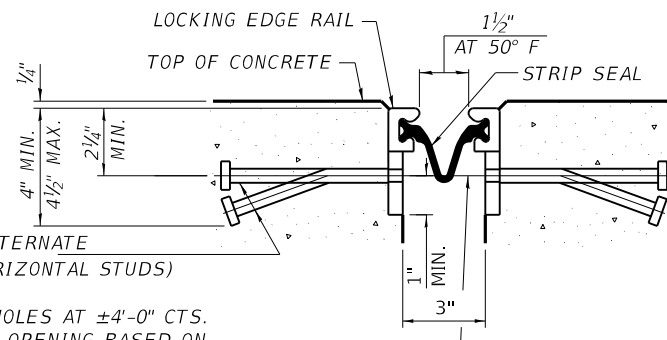


SHOWING ROLLED RAIL JOINT

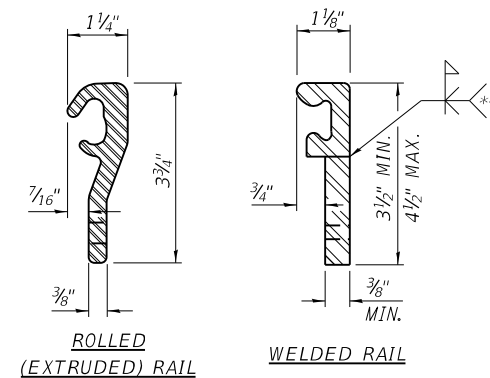
* 5/8" Ø X 6" STUDS @ 6" CTS. (ALTERNATE ANGLED/BENT STUDS WITH HORIZONTAL STUDS)
3/8" Φ THREADED RODS IN 7/16" Φ HOLES AT ±4'-0" CTS. FOR HOLDING THE PROPER JOINT OPENING BASED ON THE TEMPERATURE DURING THE DECK POUR. PLACE TO MISS STUDS. ALL RODS SHALL BE BURNED, OR SAWED OFF FLUSH WITH THE PLATES AFTER CONCRETE IS SET.

SECTION A-A

* GRANULAR OR SOLID FLUX FILLED HEADED STUDS CONFORMING TO ARTICLE 1006.32 OF THE STD. SPECS., AUTOMATICALLY END WELDED.

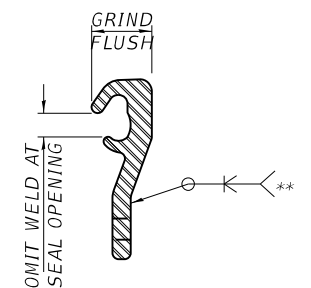


SHOWING WELDED RAIL JOINT



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.

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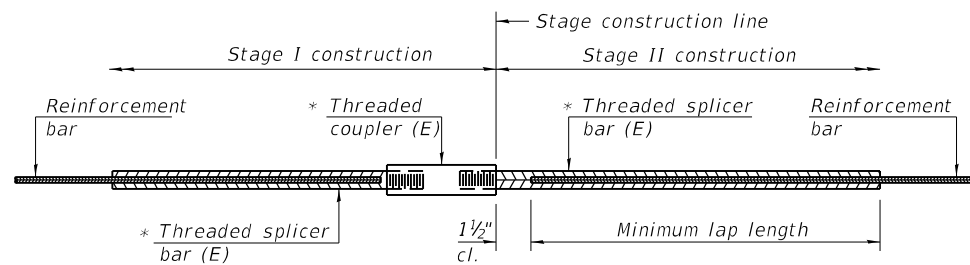
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	DATE - 3/21/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
SN 032-0093

SCALE: SHEET 6 OF 7 SHEETS STA. TO STA.

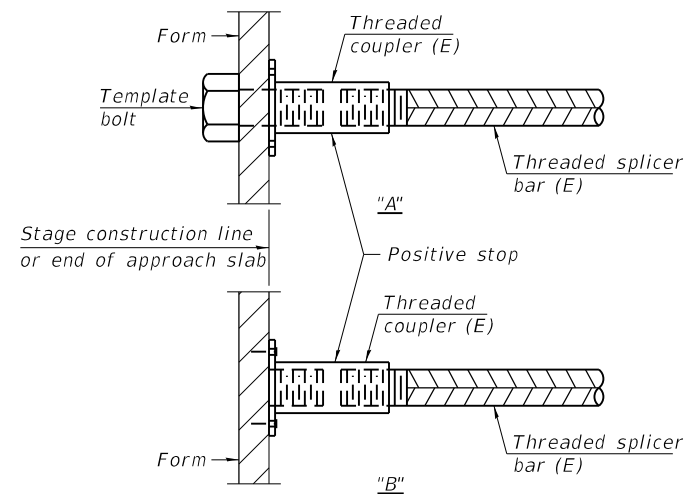
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55	(32-1)RS-4	GRUNDY	154	125
				CONTRACT NO. 66A51
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

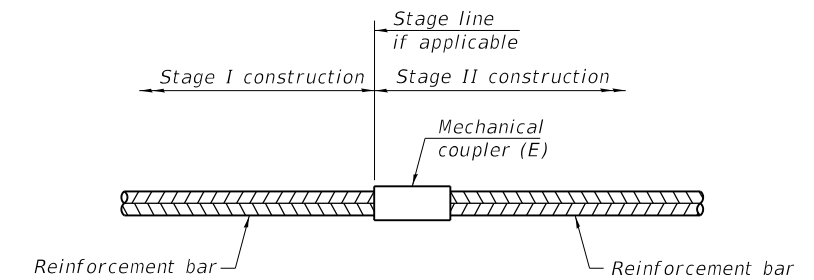
Threaded splicer bar length = min. lap length + 1 1/2" + thread length

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



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.

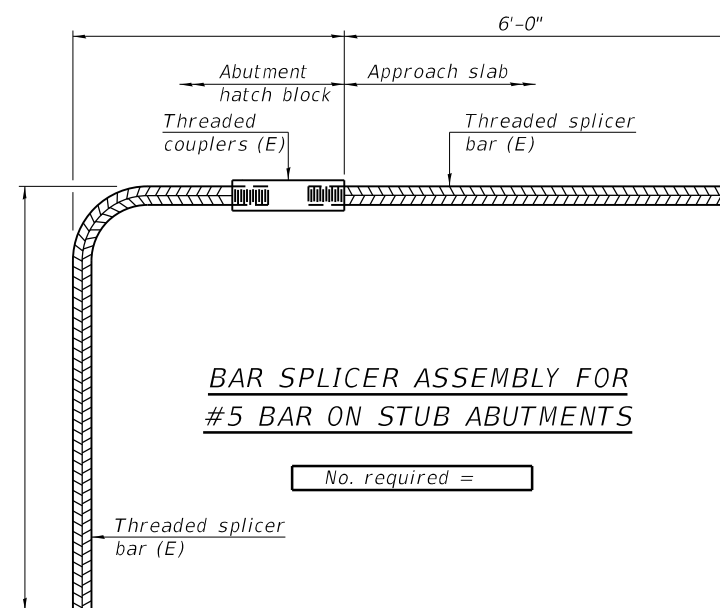


STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

**BILL OF MATERIAL
STRUCTURE NO. 032-0093**

LOCATION	BAR SIZE	NO. ASSEMBLIES REQUIRED	MINIMUM LAP LENGTH
WEST APPROACH	#5	2	3'-0"
WEST END DECK	#7	2	4'-2"
EAST END DECK	#7	2	4'-2"
EAST APPROACH	#5	2	3'-0"
TOTAL		8	



**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.

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BSD-1

2-17-2017

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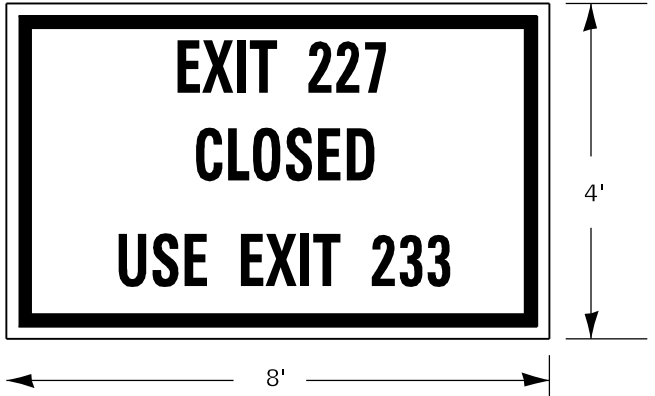
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 032-0093

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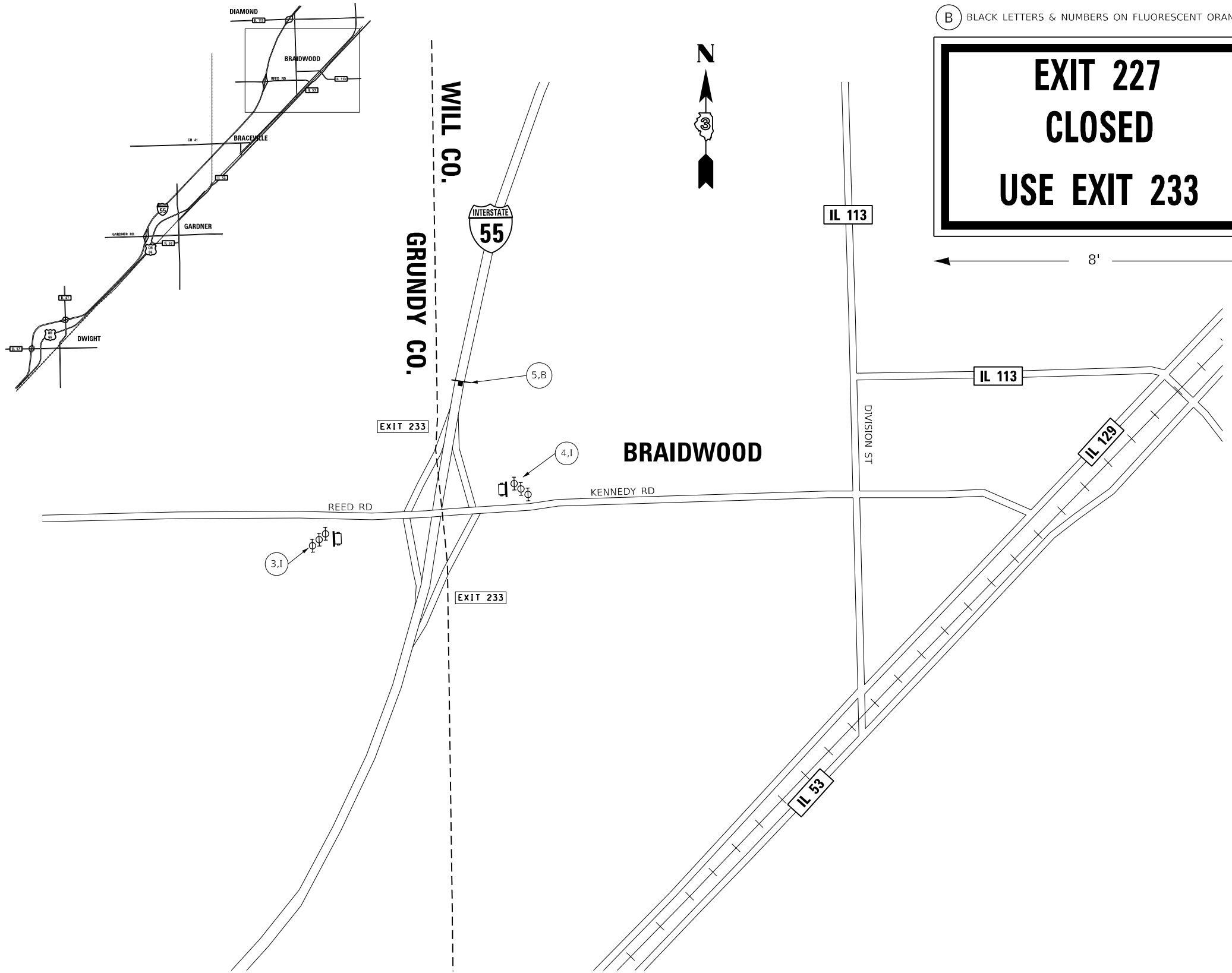
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	126
			CONTRACT NO. 66A51	
ILLINOIS FED. AID PROJECT				

(B) BLACK LETTERS & NUMBERS ON FLUORESCENT ORANGE SHEETING



5.B - INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL)

LOCATION
 3.1 - EB, 500' WEST OF RAMP
 4.1 - WB, 500' EAST OF RAMP



- ☐ PORTABLE CHANGEABLE MESSAGE SIGNS
- ⊕ THREE, TY 2 BARRICADE, DRUM OR VERTICAL BARRICADES WITH MONODIRECTIONAL FLASHING LIGHT AT 25' CENTERS

- NOTES:
- 1.) ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
 - 2.) MESSAGE BOARDS SHALL BE INSTALLED 2 WEEKS PRIOR, SHALL BE USED TO NOTIFY MOTORISTS OF EXIT 227 DURING STAGE 1 CONSTRUCTION.
 - 3.) LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
 - 4.) TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES, THE HIGHWAY STANDARDS AND SPECIAL PROVISIONS.

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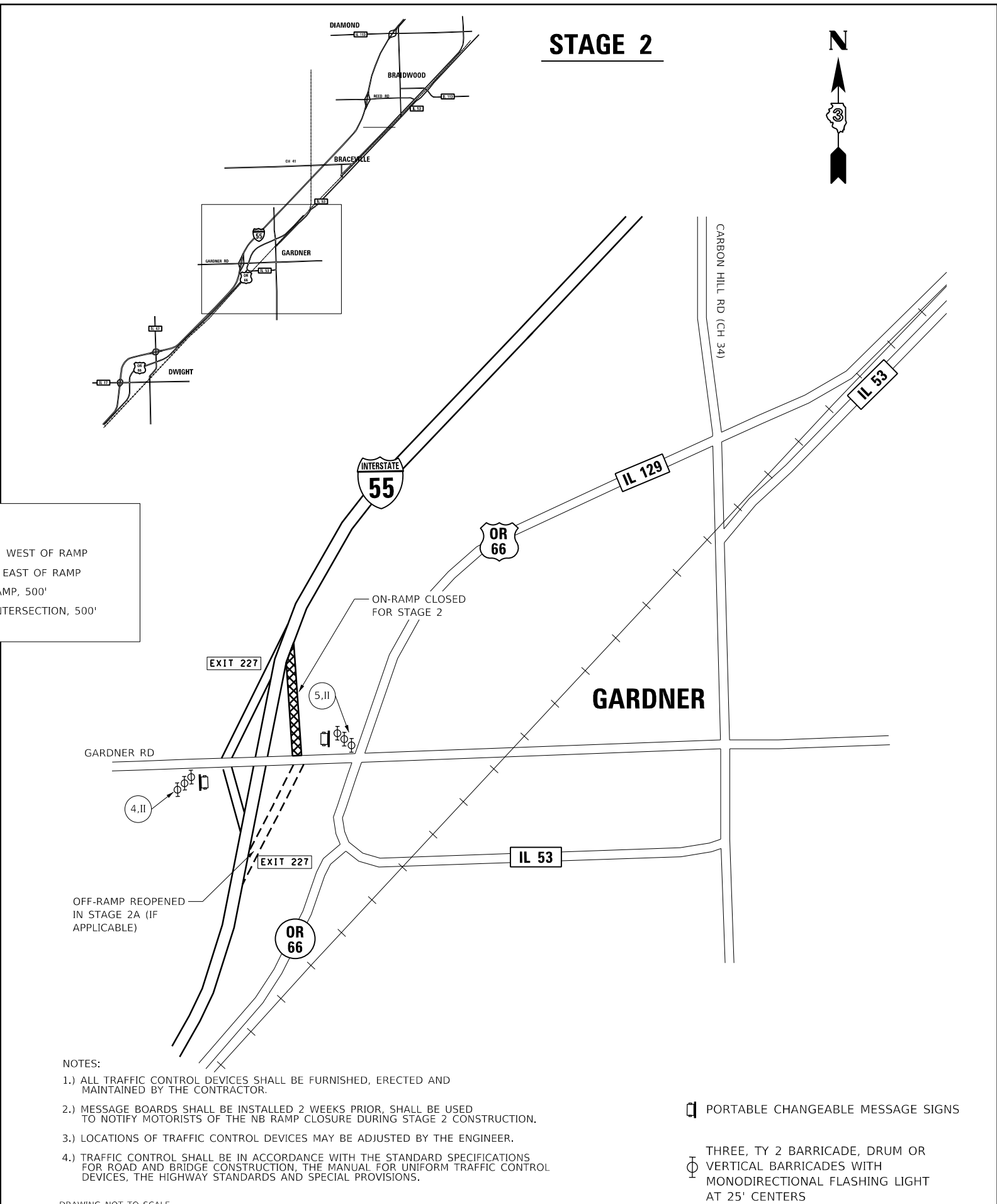
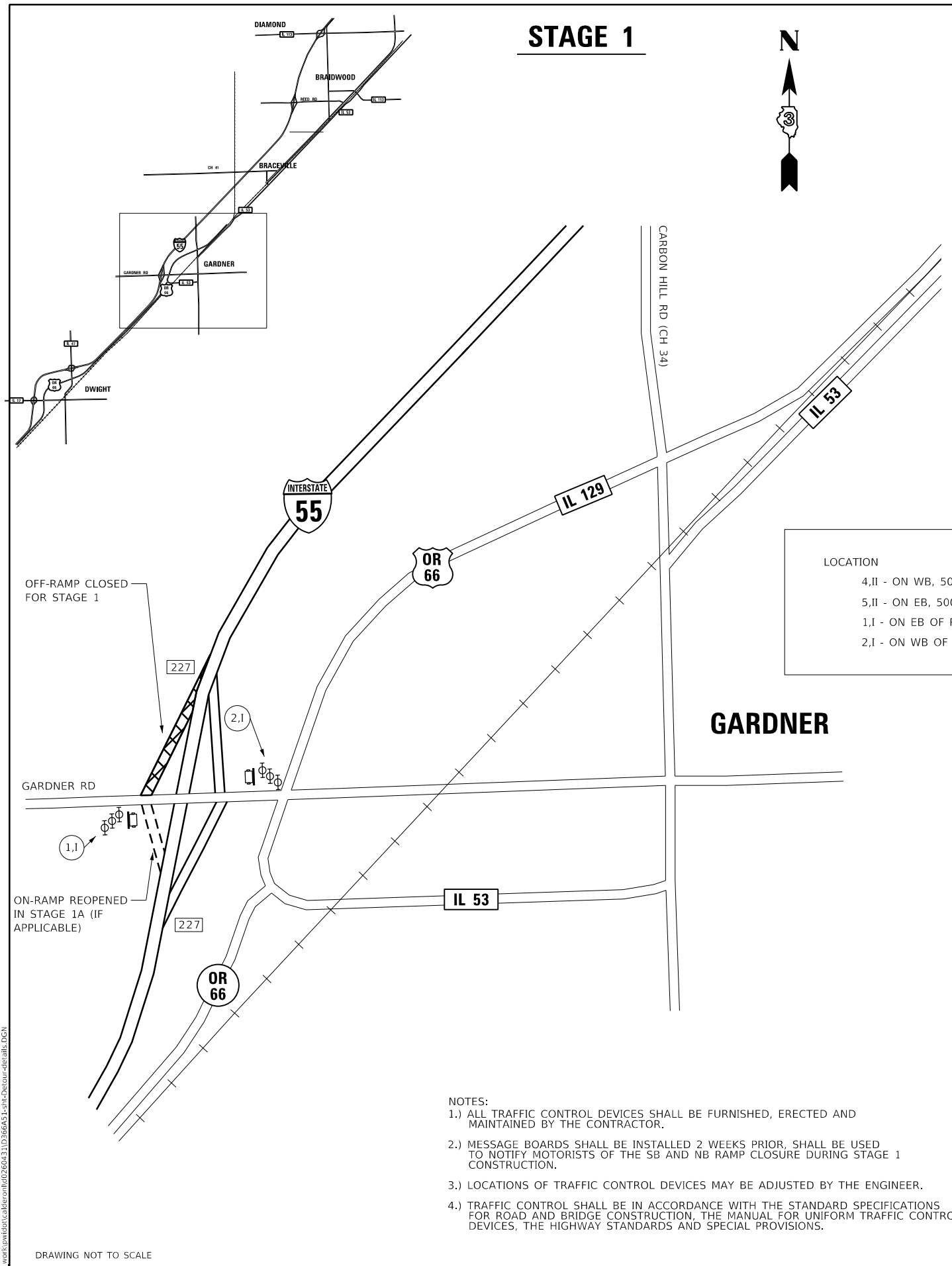
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STAGE 1 SIGNAGE
 DETAILS**

SCALE: SHEET 3 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	127
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				

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LOCATION

- 4,II - ON WB, 500' WEST OF RAMP
- 5,II - ON EB, 500' EAST OF RAMP
- 1,I - ON EB OF RAMP, 500'
- 2,I - ON WB OF INTERSECTION, 500'

☐ PORTABLE CHANGEABLE MESSAGE SIGNS

⊕ THREE, TY 2 BARRICADE, DRUM OR VERTICAL BARRICADES WITH MONODIRECTIONAL FLASHING LIGHT AT 25' CENTERS

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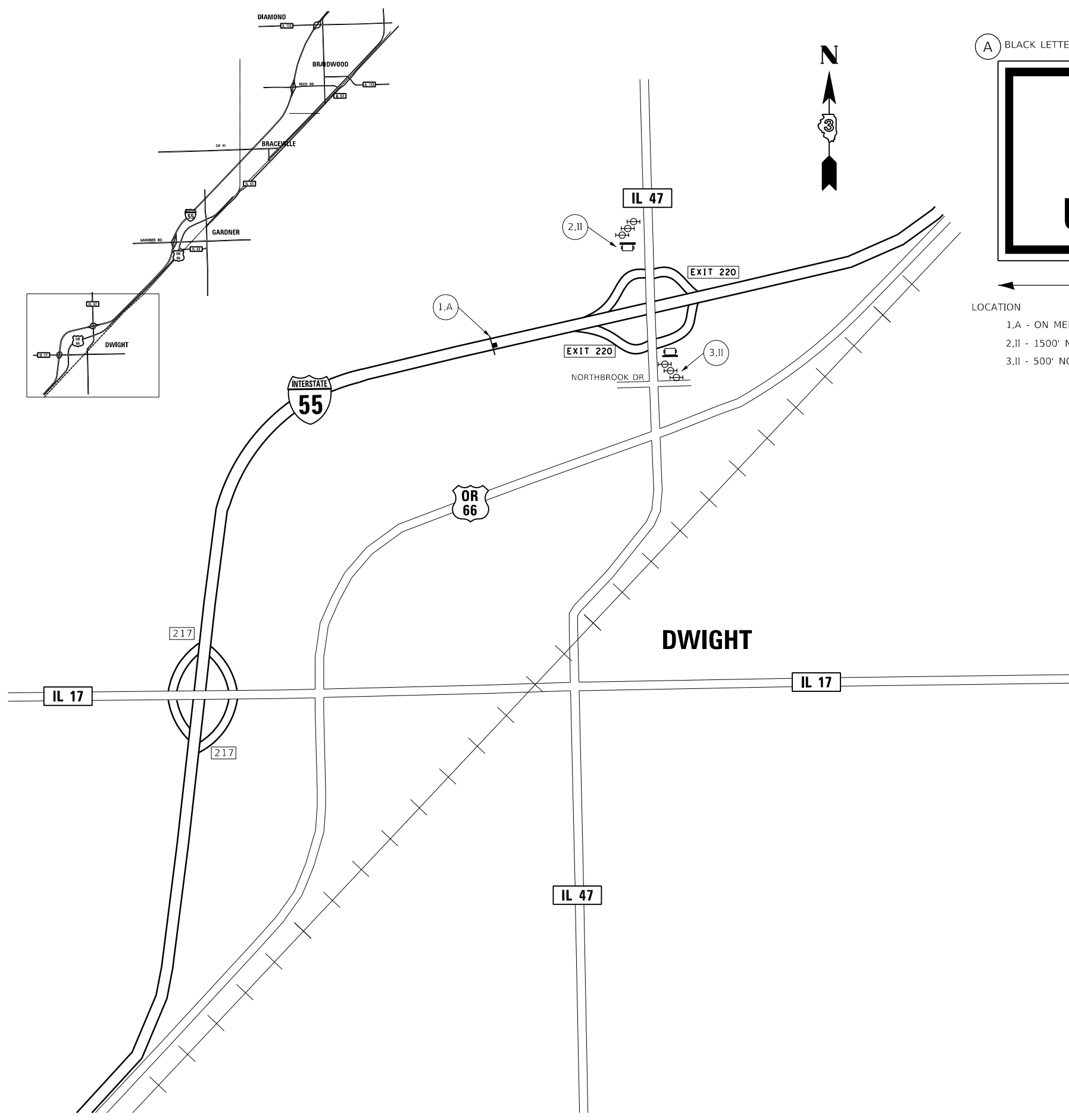
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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE 1 & 2 SIGNAGE
DETAILS**

SCALE: SHEET 3 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	128
				CONTRACT NO. 66A51
ILLINOIS FED. AID PROJECT				



(A) BLACK LETTERS & NUMBERS ON FLUORESCENT ORANGE SHEETING



1,A - INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL)

- LOCATION
- 1,A - ON MEDIAN 1500' SOUTH OF EXIT 220 RAMP
 - 2,II - 1500' NORTH OF INTERCHANGE RAMP
 - 3,II - 500' NORTH OF NORTHBROOK DR

NOTES:

- 1.) ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
- 2.) MESSAGE BOARDS SHALL BE INSTALLED 2 WEEKS PRIOR, AND DURING THE TEMPORARY CLOSURE OF EXIT 227 DURING STAGE 1 CONSTRUCTION.
- 3.) LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
- 4.) TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES, THE HIGHWAY STANDARDS AND SPECIAL PROVISIONS.

☐ PORTABLE CHANGEABLE MESSAGE SIGNS

⊕ THREE, TY 2 BARRICADE, DRUM OR VERTICAL BARRICADES WITH MONODIRECTIONAL FLASHING LIGHT AT 25' CENTERS

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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE 2 SIGNAGE
DETAILS**

SCALE: SHEET 3 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	129
				CONTRACT NO. 66A51
ILLINOIS FED. AID PROJECT				

LEGEND

	EXISTING SERVICE
	PROPOSED SERVICE
	EXISTING LIGHTING CONTROLLER
	PROPOSED TEMPORARY LIGHTING CONTROLLER
	EXISTING LIGHT TOWER
	EXISTING LIGHTING UNIT
	PROPOSED TEMPORARY LIGHTING UNIT, 50 FT WOOD POLE, CLASS 3, WITH LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H
	GUY WIRE ANCHOR
	PROPOSED AERIAL CABLE, SIZED AS NOTED
	PROPOSED DIRECT BURIED CABLE, SIZED AS NOTED
	PROPOSED COILABLE NONMETALLIC CONDUIT 2" DIA. LENTH AS NOTED
	EXISTING UTILITY POLE

CONDUCTOR SCHEDULE

	AERIAL CABLE 2-1C NO. 6 WITH MESSENGER WIRE
	UNDERGROUND ELECTRIC CABLE, ALUMINUM, 600V, 2-1C NO. 2, 1/C NO. 4 GROUND (XLP-TYPE USE) DIRECT BURIED
	UNDERGROUND ELECTRIC CABLE, ALUMINUM, 600V, 2-1C NO. 4, 1/C NO. 6 GROUND (XLP-TYPE USE) DIRECT BURIED

Luminaire Performance Table

Project

Date	Contract Number	Section Number	County
7/10/19	66A51	N/A	GRUNDY
Marked Route Number		Municipality	
I-55: S OF GARDNER RD TO S OF REED RD		UNINCORPORATED	

Roadway

Lane Width	# of Lanes	Median Width	I.E.S Surface Classification	0-Zero Value
12	2	N/A	R3	0,07

Structure

Mounting Height	Arm Length	Set Back	Number of Luminaires (Highmast & Sign Lighting Only)
40 FT	15 FT	30 FT	N/A

Luminaire

Description	I.E.S. Lateral Distribution	I.E.S. Vertical Distribution	
ROADWAY, OUTPUT DESIGNATION H	TYPE III OR IV	MEDIUM	
Total Light Loss Factor (LLF)	BUG Rating	Shields	Dimming Protocol
0.684	U = 0	N/A	0-10V

Layout

Spacing (to Nearest 5 Ft) Configuration (Opposite, Staggered, 1 Sided, or Median)	
230 FT	SINGLE SIDED

Performance

Average Illuminance, E_{AVE} (fc)	Uniformity Ratio, E_{AVE}/E_{MIN}		
N/A	N/A		
Average Luminance, L_{AVE} (cd/m ²)	Uniformity Ratio, L_{AVE}/L_{MIN}	Uniformity Ratio, L_{MAX}/L_{MIN}	Veiling Luminance Ratio, L_v/L_{MIN}
0.40	3.50:1	6.00:1	0.40:1

Light Trespass

Distance to ROW (behind pole)	Max. Horizontal Illuminance at ROW, E	Max. Vertical Illuminance at ROW, E
N/A	N/A	N/A

Notes

- Set Back is from Edge of Pavement (white line) except for sign luminaires when it is vertical and horizontal distance from the sign to the luminaire.
- Lighting calculations shall be performed with all luminaires oriented toward and perpendicular to roadway.
- Total Light Loss Factor (LLF) = the product of "Lumen Maintenance" (LLD) = 0.9, "Dirt Depreciation" (LDD) = 0.8, and "Equipment Factors" (EF) = 0.95.
- Performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions above.

PHOTOMETRIC CALCULATIONS TO BE PERFORMED IN ONE DIRECTION ONLY.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

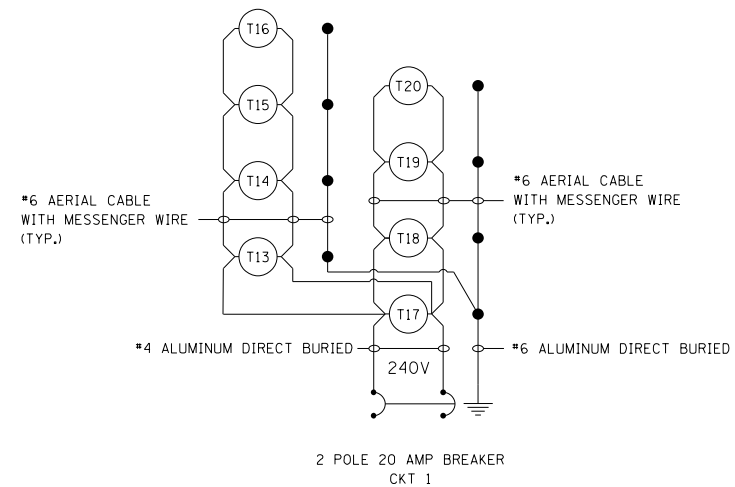
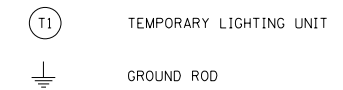
TEMPORARY LIGHTING SYSTEM
DETAILS

SCALE: SHEET 1 OF 7 SHEETS STA. TO STA.

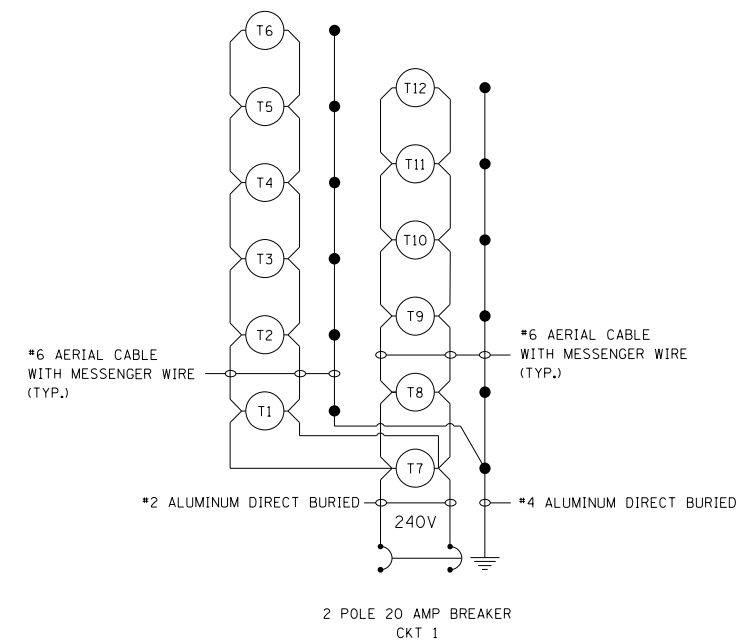
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	130
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

NOTES:

1. ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.



NORTH CROSSOVER
 TEMPORARY LIGHTING CONTROLLER
 REED ROAD



SOUTH CROSSOVER
 TEMPORARY LIGHTING CONTROLLER
 GARDNER RD

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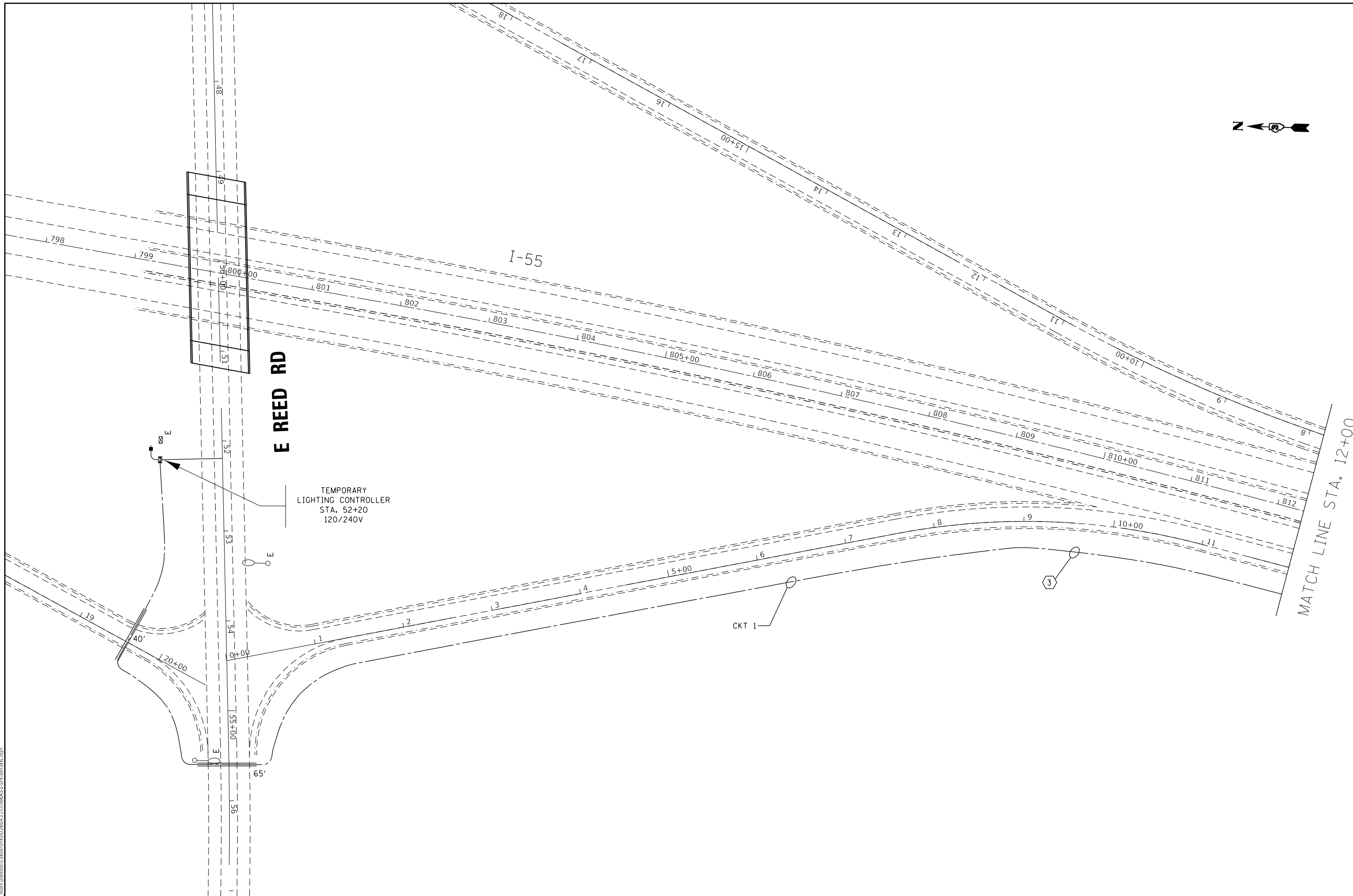
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PLOT DATE = 10/22/2019	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY LIGHTING SYSTEM
 WIRING DIAGRAM**

SCALE: SHEET 2 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	131
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				



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E2

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	DATE -	REVISED -

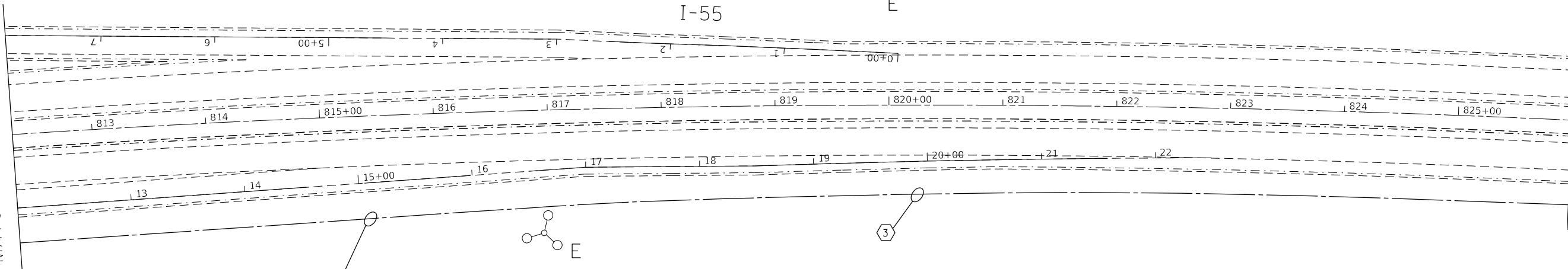
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH CROSSOVER TEMPORARY LIGHTING PLANS			
SCALE:	SHEET 3	OF 7	SHEETS
	STA.		TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	132
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				



MATCH LINE STA. 12+00

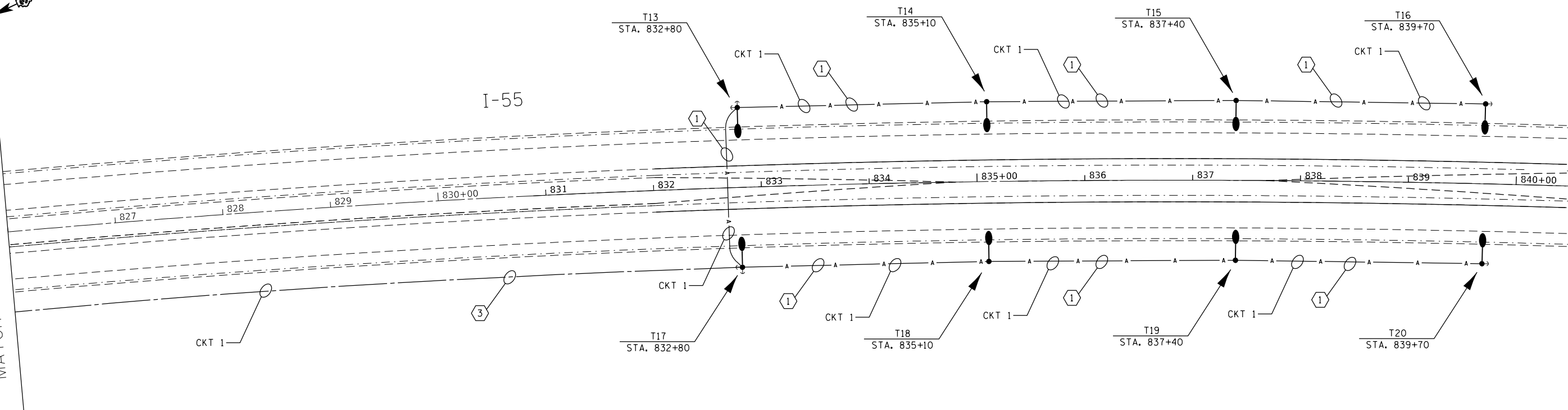


MATCH LINE STA. 828+00



MATCH LINE STA. 828+00

NORTH CROSSOVER



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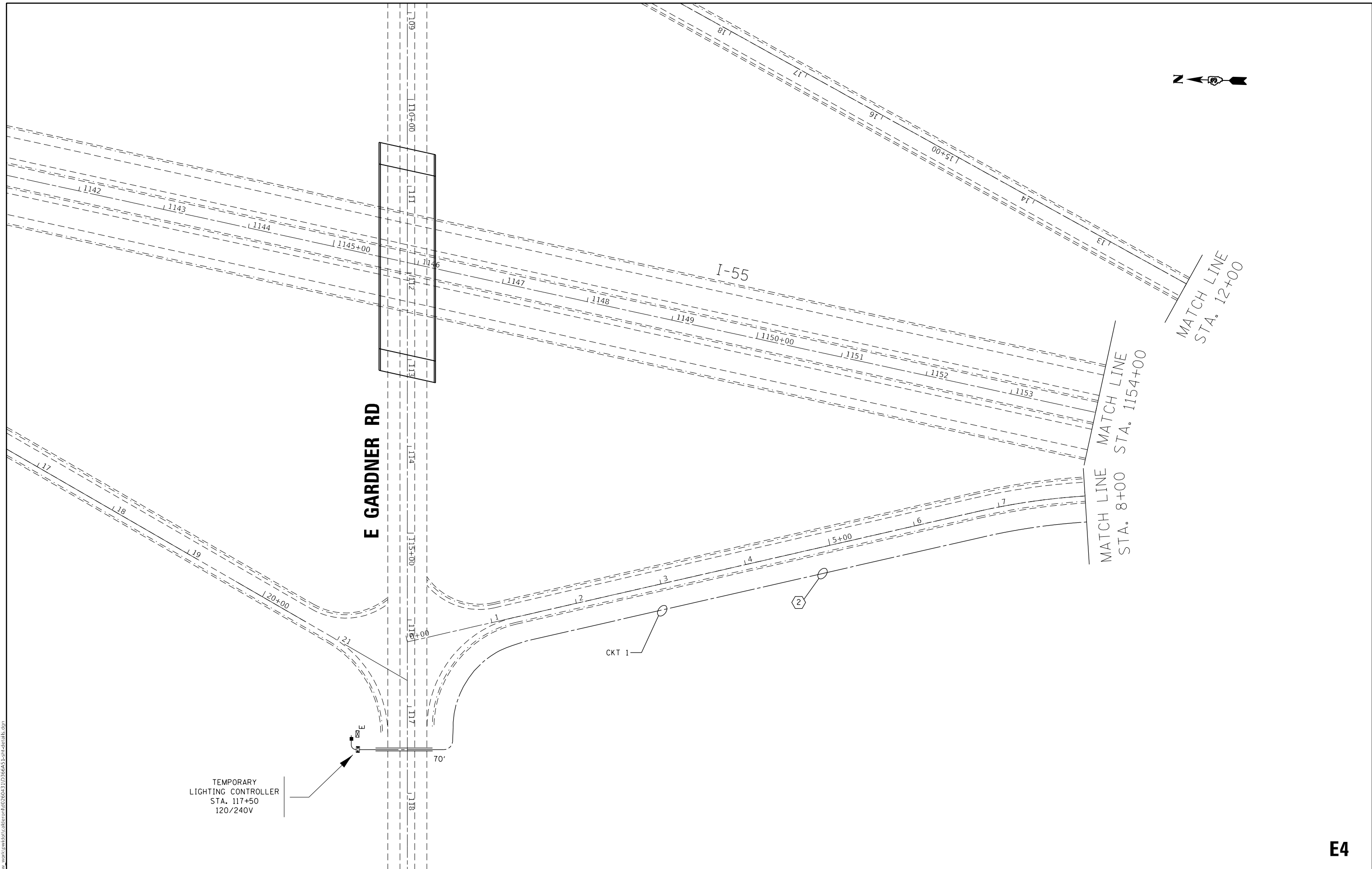
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH CROSSOVER
TEMPORARY LIGHTING PLANS

SCALE: SHEET 4 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	133
			CONTRACT NO. 66A51	
ILLINOIS FED. AID PROJECT				

E3



TEMPORARY
LIGHTING CONTROLLER
STA. 117+50
120/240V

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH CROSSOVER
TEMPORARY LIGHTING PLANS

E4

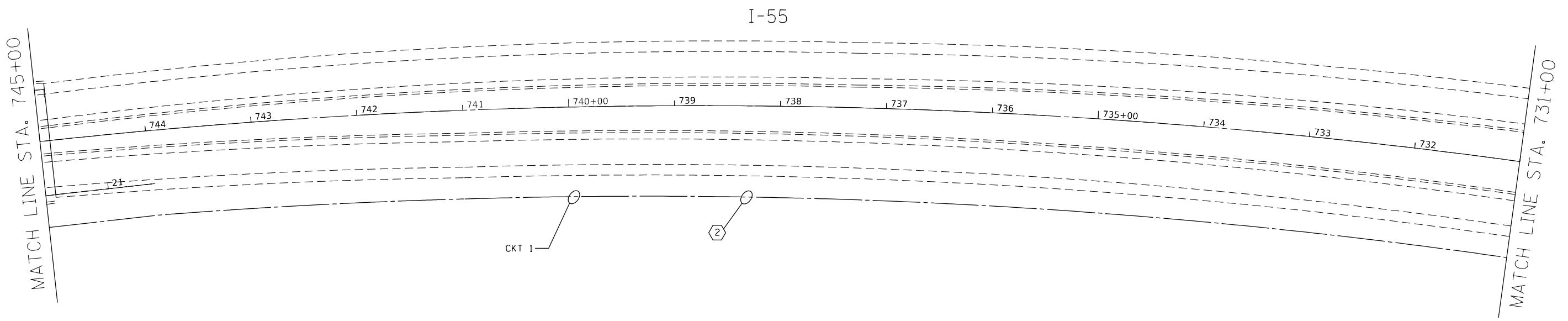
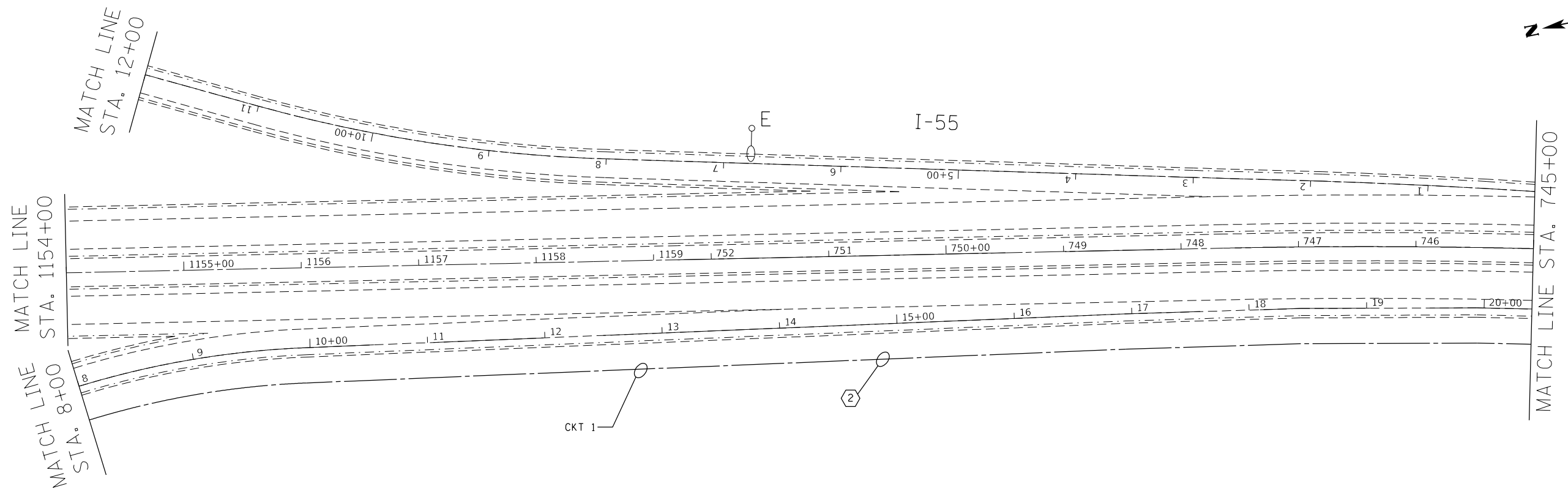
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	DATE -	REVISED -

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

SCALE: SHEET 5 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	134
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				

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E5

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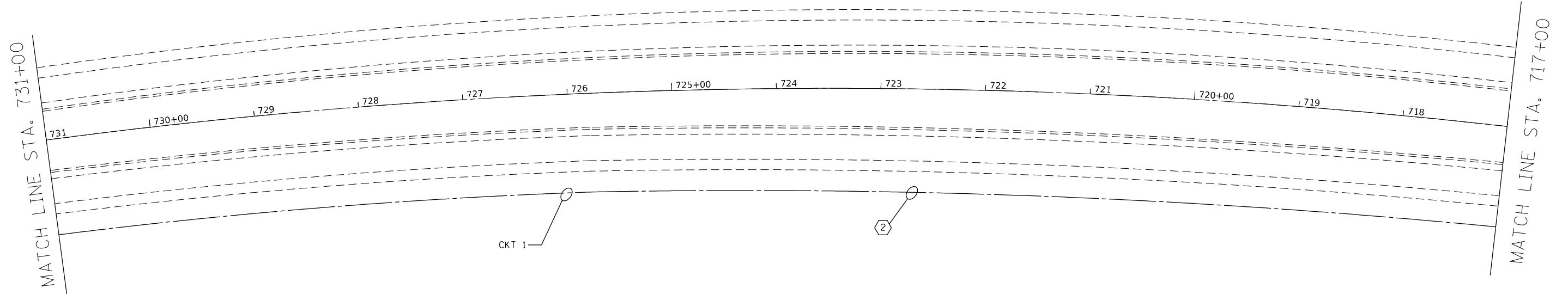
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOUTH CROSSOVER TEMPORARY LIGHTING PLANS			
SCALE:	SHEET 6	OF 7 SHEETS	STA. TO STA.

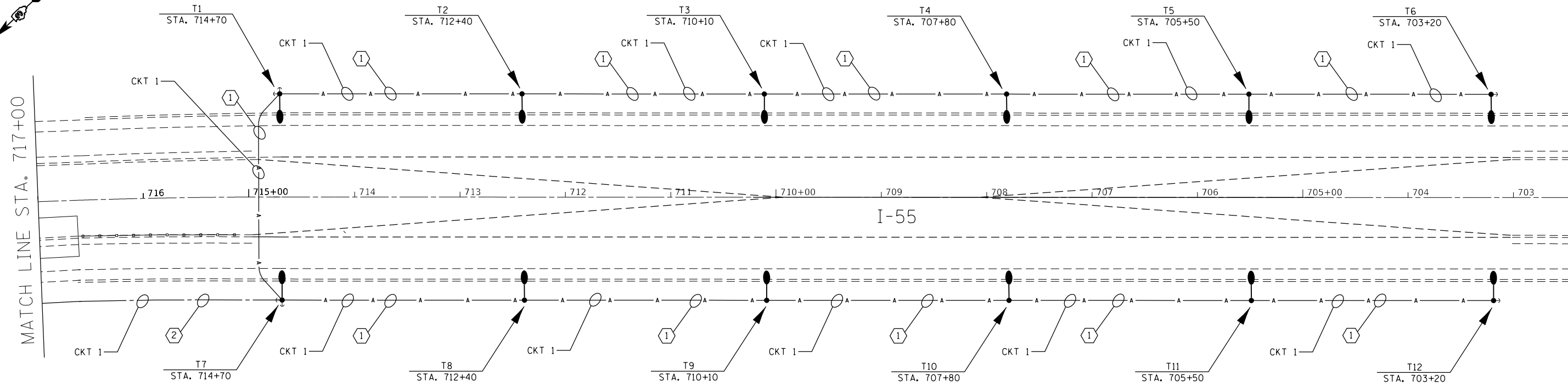
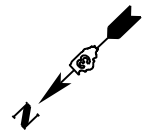
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	135
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				



I-55



SOUTH CROSSOVER



E6

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

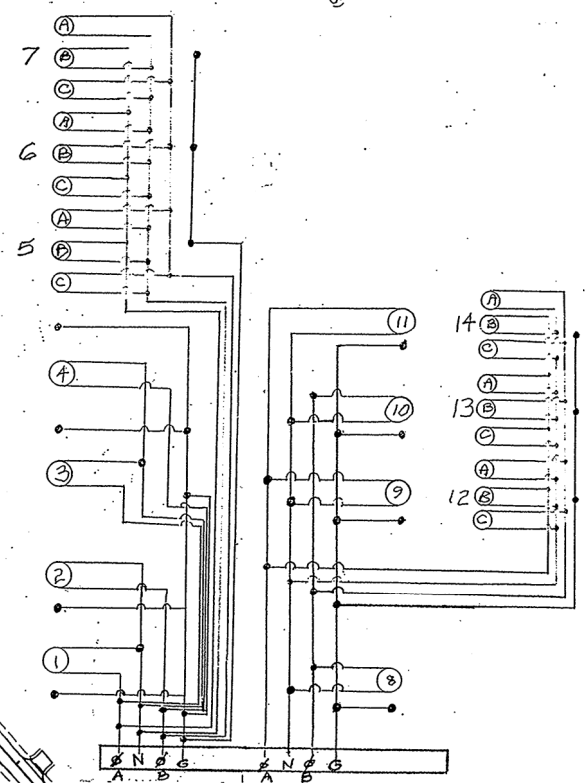
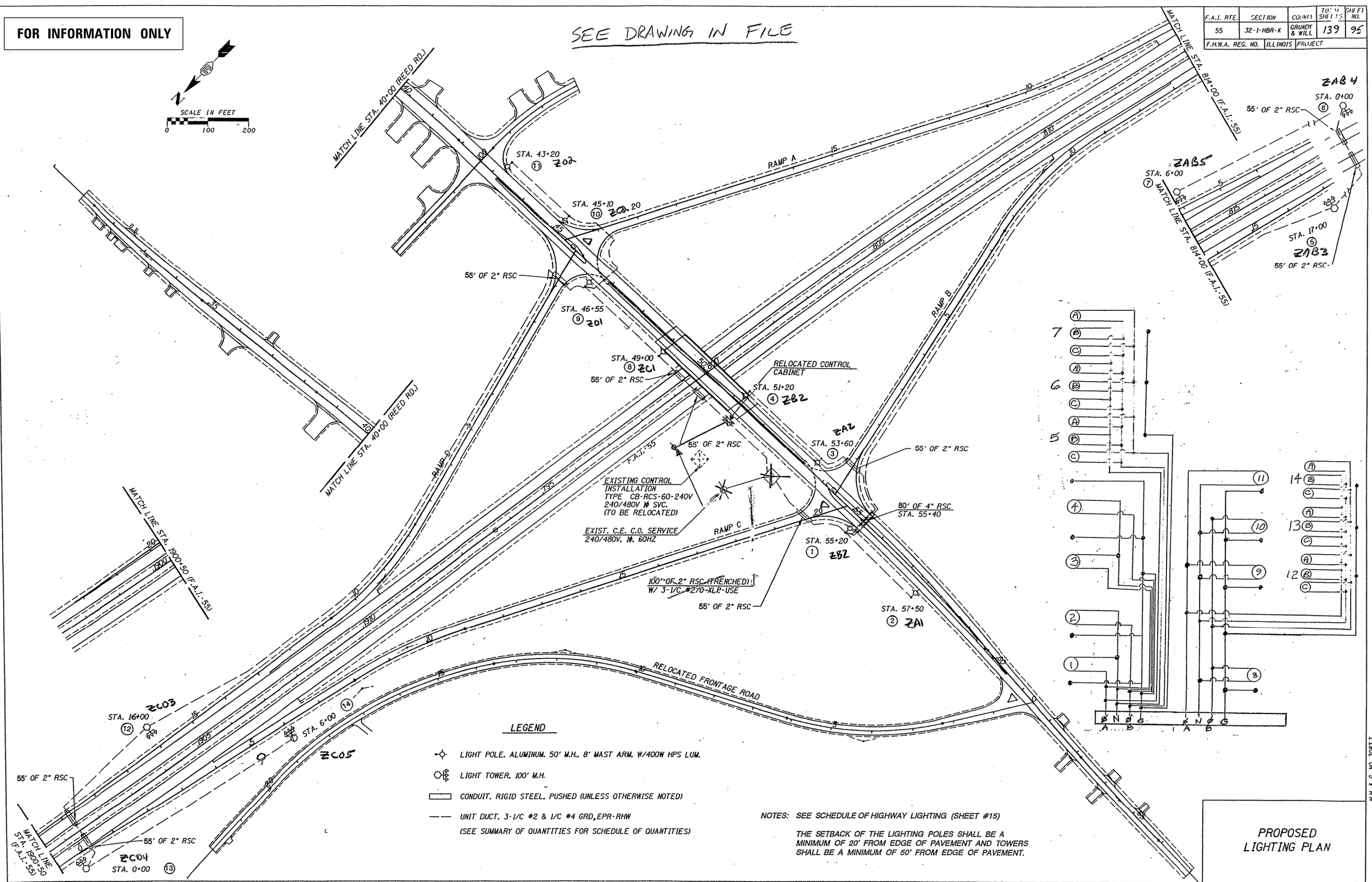
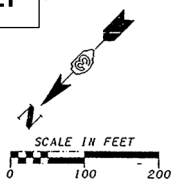
SOUTH CROSSOVER TEMPORARY LIGHTING PLANS			
SCALE:	SHEET 7	OF 7 SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	136
			CONTRACT NO. 66A51	
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

SEE DRAWING IN FILE

F.A.I. RTE.	SECTION	CD#(N)	TO STA.	FROM STA.
55	32-1-HBR-K	GRUNDY & WILL	139	95
F.H.W.A. REG. NO. ILLINOIS PROJECT				



- LEGEND**
- ⊕ LIGHT POLE, ALUMINUM, 50' M.H., 8' MAST ARM, W/400W HPS LUM.
 - ⊙ LIGHT TOWER, 100' M.H.
 - ▭ CONDUIT, RIGID STEEL, PUSHED (UNLESS OTHERWISE NOTED)
 - UNIT DUCT, 3-1/2" #2 & 1/2" #4 GRD, EPR-RHW (SEE SUMMARY OF QUANTITIES FOR SCHEDULE OF QUANTITIES)

NOTES: SEE SCHEDULE OF HIGHWAY LIGHTING (SHEET #15)
 THE SETBACK OF THE LIGHTING POLES SHALL BE A MINIMUM OF 20' FROM EDGE OF PAVEMENT AND TOWERS SHALL BE A MINIMUM OF 50' FROM EDGE OF PAVEMENT.

PROPOSED LIGHTING PLAN

X85-1724/02LT-299.dgn

REV 6-9-95 MJ

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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

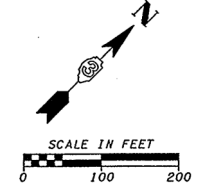
SCALE:		SHEET 1 OF 2 SHEETS		STA. TO STA.	
REED RD		EXISTING LIGHTING DETAILS			

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	137
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				

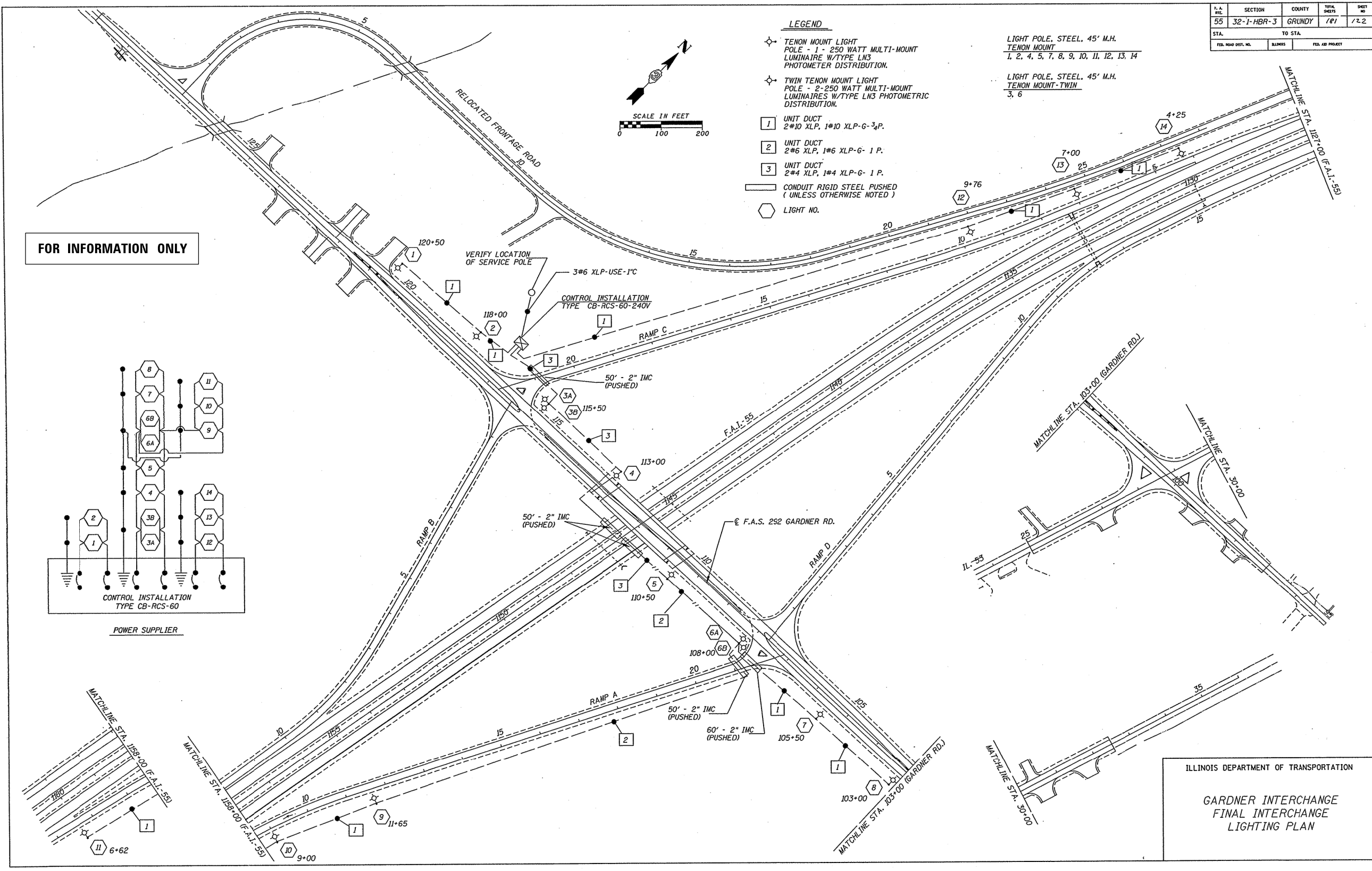
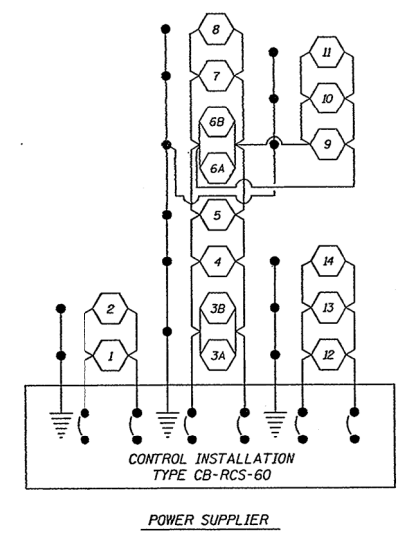
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	32-1-HBR-3	GRUNDY	121	122
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LEGEND

- ⊛ TENON MOUNT LIGHT POLE - 1 - 250 WATT MULTI-MOUNT LUMINAIRE W/TYP L N3 PHOTOMETER DISTRIBUTION.
 - ⊛ TWIN TENON MOUNT LIGHT POLE - 2-250 WATT MULTI-MOUNT LUMINAIRES W/TYP L N3 PHOTOMETER DISTRIBUTION.
 - 1 UNIT DUCT 2#10 XLP, 1#10 XLP-G-3/4 P.
 - 2 UNIT DUCT 2#6 XLP, 1#6 XLP-G-1 P.
 - 3 UNIT DUCT 2#4 XLP, 1#4 XLP-G-1 P.
 - CONDUIT RIGID STEEL PUSHED (UNLESS OTHERWISE NOTED)
 - ⬡ LIGHT NO.
- LIGHT POLE, STEEL, 45' M.H.
TENON MOUNT
1, 2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14
- LIGHT POLE, STEEL, 45' M.H.
TENON MOUNT-TWIN
3, 6



FOR INFORMATION ONLY



ILLINOIS DEPARTMENT OF TRANSPORTATION

**GARDNER INTERCHANGE
FINAL INTERCHANGE
LIGHTING PLAN**

120049010 02/28/19-100W
JAN. 9. 2019

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

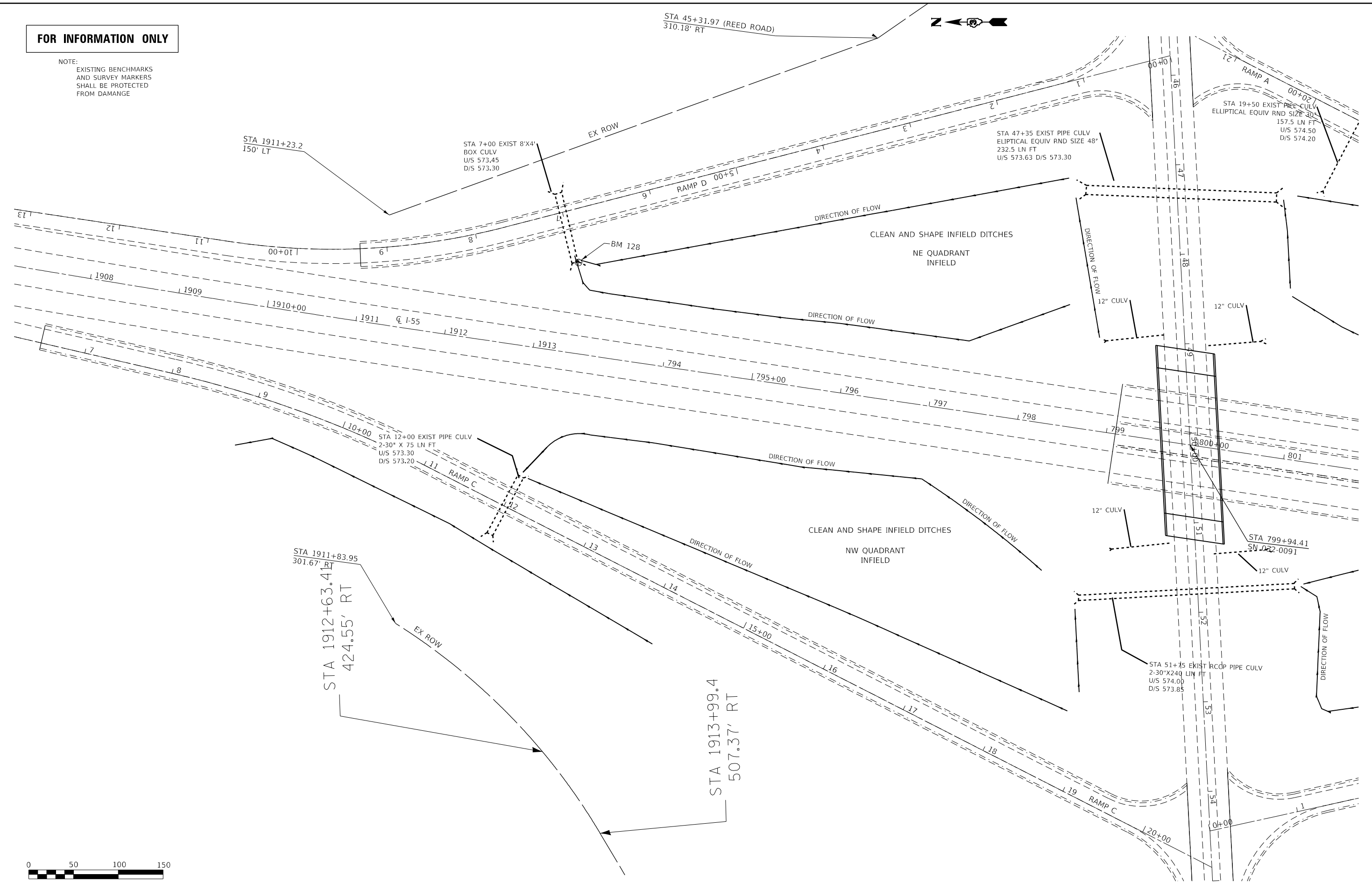
**GARDNER RD
EXISTING LIGHTING DETAILS**

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	138
CONTRACT NO. 66A51				
ILLINOIS		FED. AID PROJECT		

FOR INFORMATION ONLY

NOTE:
EXISTING BENCHMARKS
AND SURVEY MARKERS
SHALL BE PROTECTED
FROM DAMANGE



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

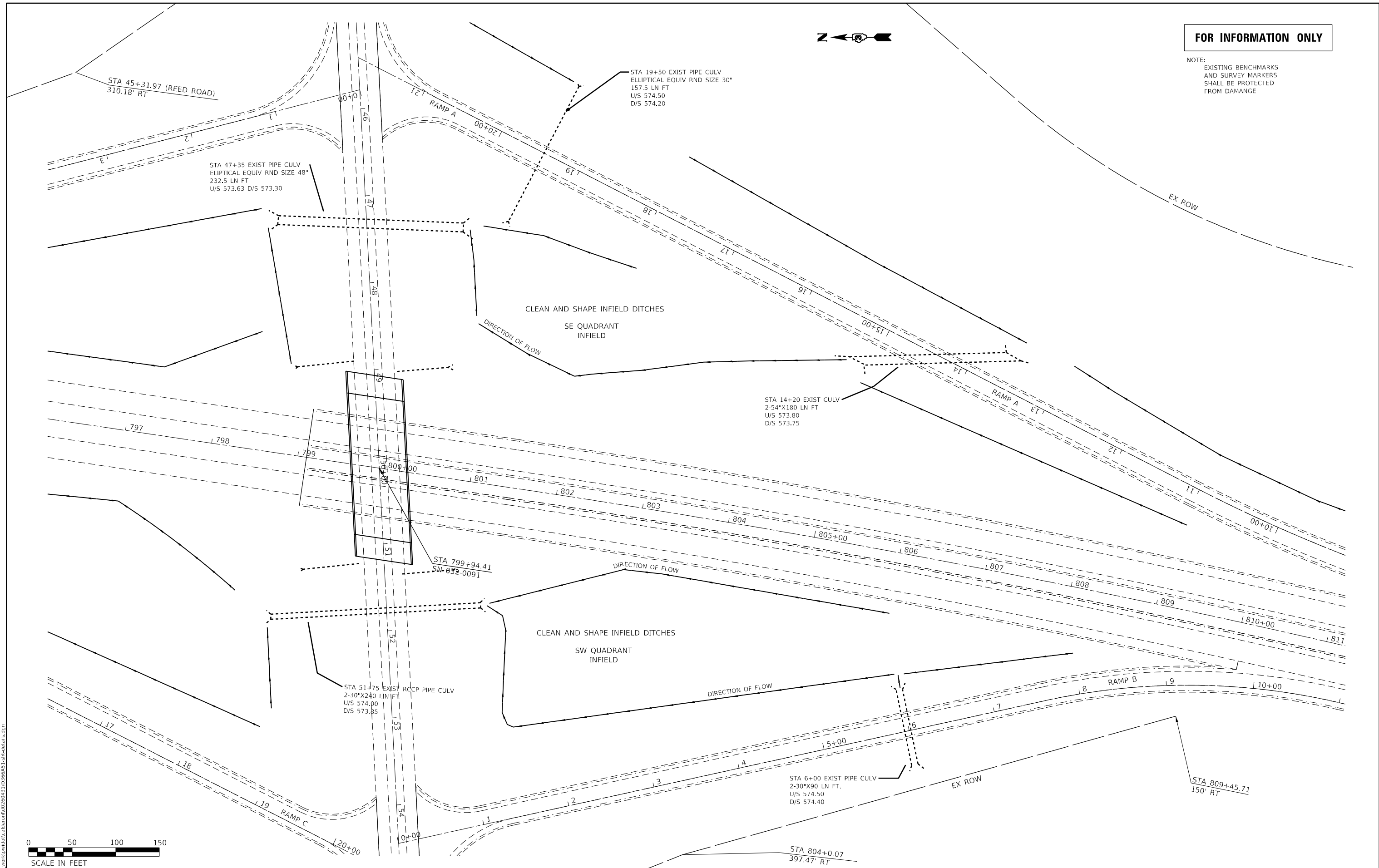
**REED RD INFIELD
DITCH CLEANING DETAILS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	139
CONTRACT NO. 66A51				
ILLINOIS		FED. AID PROJECT		

FOR INFORMATION ONLY

NOTE:
EXISTING BENCHMARKS
AND SURVEY MARKERS
SHALL BE PROTECTED
FROM DAMAGE



STA 45+31.97 (REED ROAD)
310.18' RT

STA 47+35 EXIST PIPE CULV
ELLIPTICAL EQUIV RND SIZE 48"
232.5 LN FT
U/S 573.63 D/S 573.30

STA 19+50 EXIST PIPE CULV
ELLIPTICAL EQUIV RND SIZE 30"
157.5 LN FT
U/S 574.50
D/S 574.20

STA 14+20 EXIST CULV
2-54"x180 LN FT
U/S 573.80
D/S 573.75

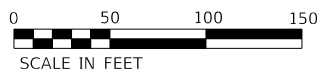
STA 799+94.41
SN-032-0091

STA 51+75 EXIST RCCP PIPE CULV
2-30"x240 LN FT
U/S 574.00
D/S 573.85

STA 6+00 EXIST PIPE CULV
2-30"x90 LN FT.
U/S 574.50
D/S 574.40

STA 804+0.07
397.47' RT

STA 809+45.71
150' RT



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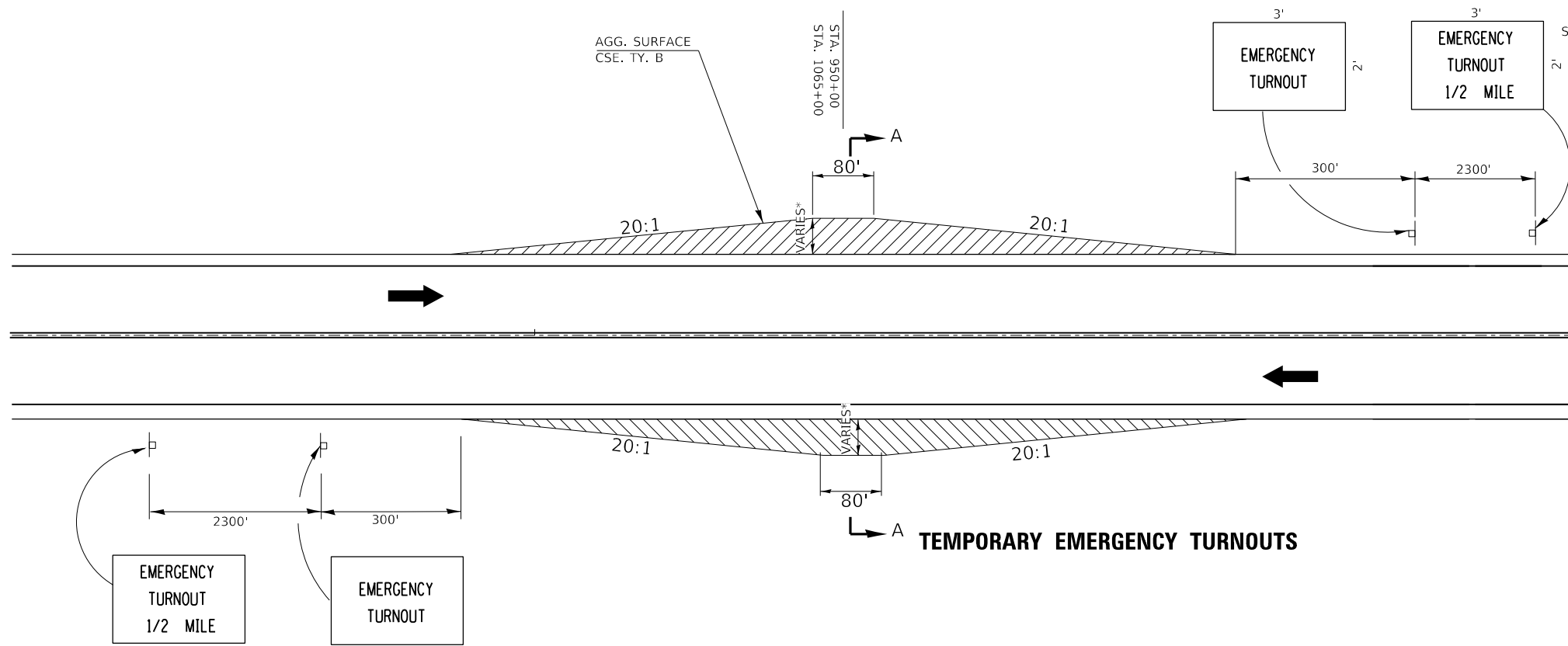
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REED RD INFIELD
DITCH CLEANING DETAILS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	140
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				

***DISTANCE IS 4' FROM EOS ON OUTSIDE AND 8' ON MEDIAN SIDE**



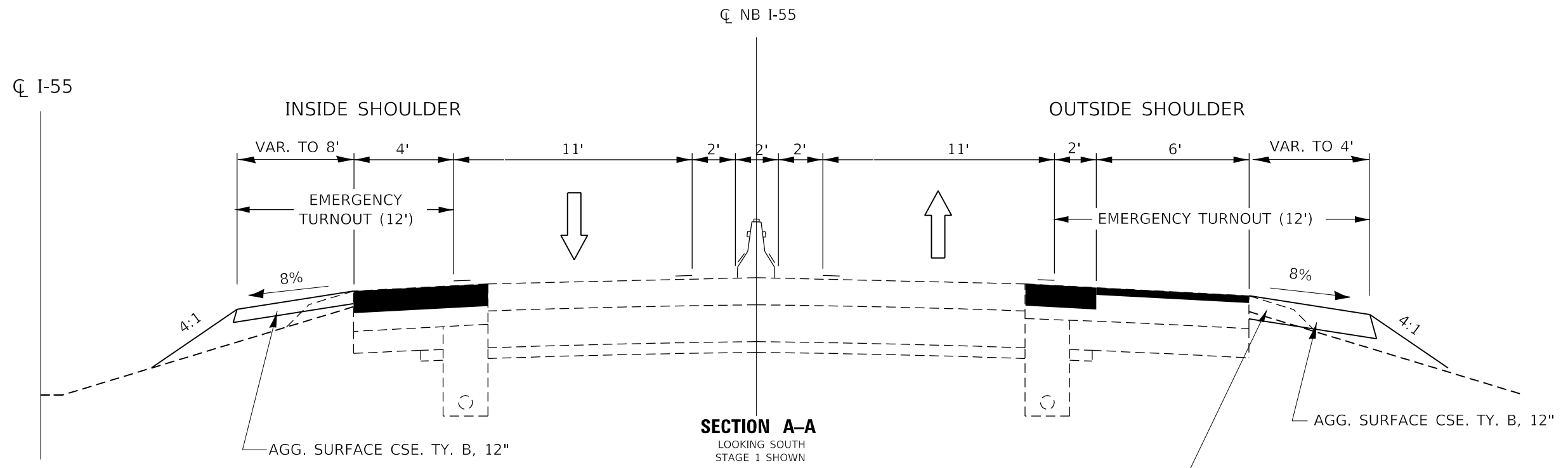
SIGNS ARE BLACK ON WHITE

** APPROXIMATE LOCATIONS ARE AS FOLLOWS:
 STA 950+00 NB & SB / STAGE I & STAGE II
 STA 1065+00 NB & SB / STAGE I & STAGE II

NOTES:

- 1) THE CONTRACTOR SHALL PROVIDE FOR TEMPORARY EMERGENCY TURNOUTS AS SHOWN FOR BOTH NORTH & SOUTH BOUND TRAFFIC DURING STAGES I AND II.
- 2) THERE WILL BE A TOTAL OF EIGHT EMERGENCY TURNOUTS THAT WILL BE CONSTRUCTED: 2 PER LANE PER STAGE. THE TURNOUTS SHALL BE SPACED AT NO LESS THAN 2.25 MILES CTS. EXACT LOCATIONS SHALL BE APPROVED BY THE ENGINEER. THE ENGINEER RESERVES THE RIGHT TO SELECT ALTERNATIVE LOCATIONS.**
- 3) ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO CONSTRUCT, MAINTAIN AND REMOVE THE TEMPORARY EMERGENCY TURNOUTS AND SIGNING AS SHOWN SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR AGGREGATE SURFACE COURSE, TY. B.

TEMPORARY EMERGENCY TURNOUTS



SECTION A-A
 LOOKING SOUTH
 STAGE 1 SHOWN

** APPROXIMATE LOCATIONS ARE AS FOLLOWS:
 STA 950+00 NB & SB / STAGE I & STAGE II
 STA 1065+00 NB & SB / STAGE I & STAGE II

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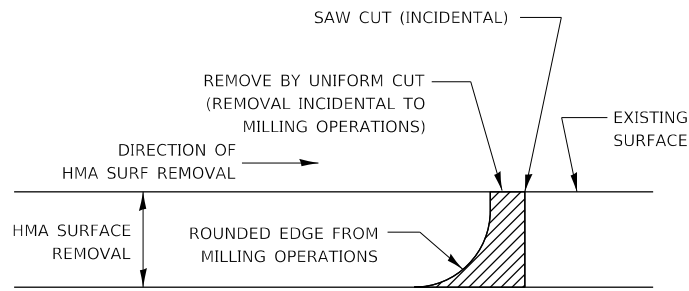
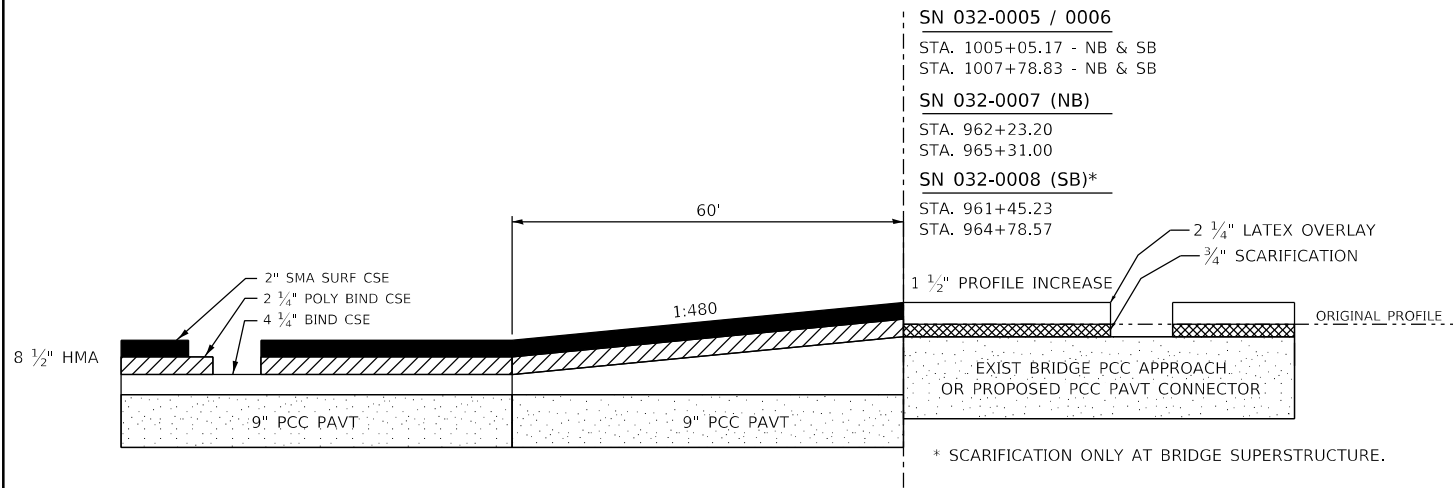
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**EMERGENCY TURNOUT
 DETAILS**

SCALE: SHEET OF SHEETS STA. TO STA.

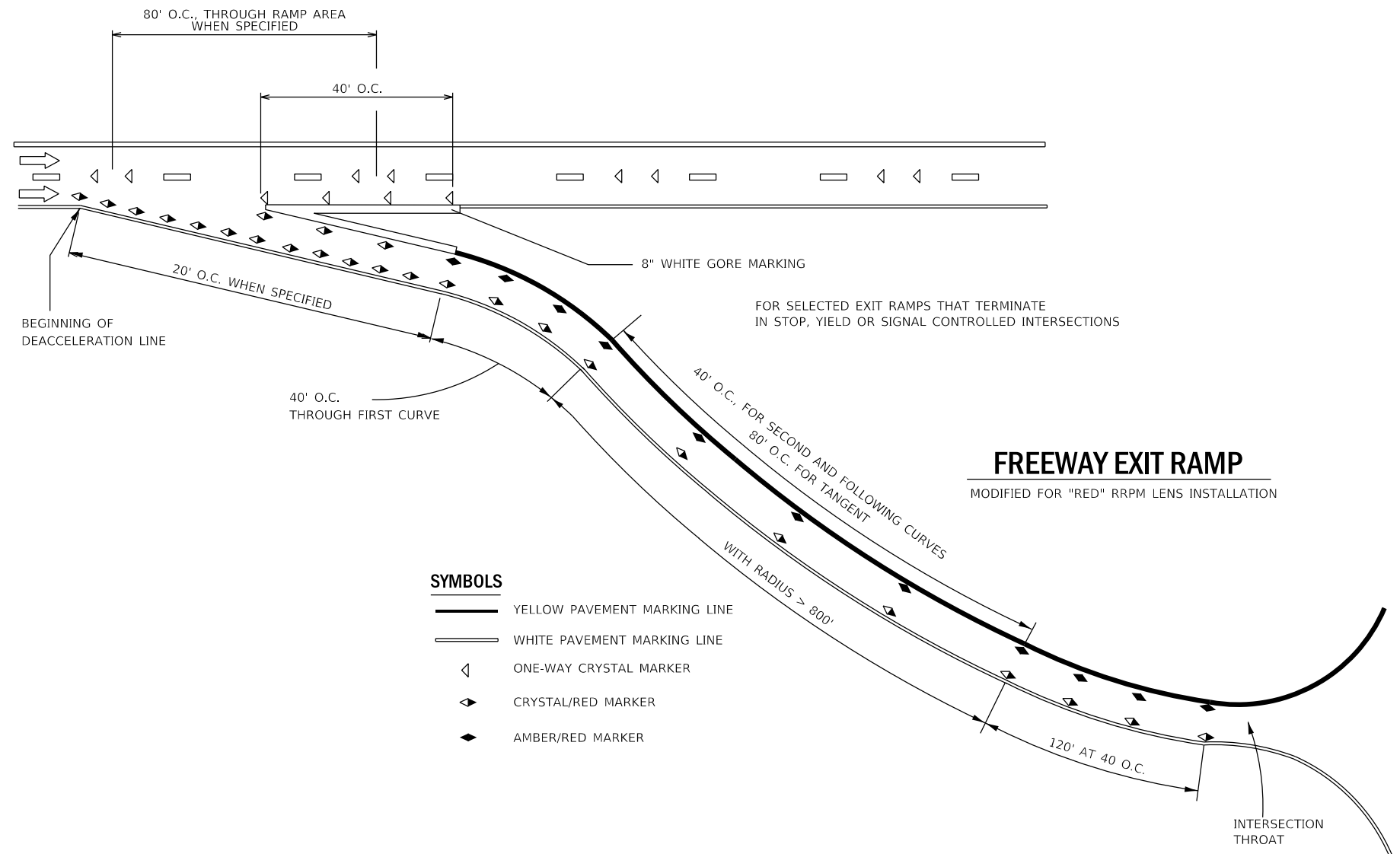
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	141
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66A51	

TAPER DETAILS AT STRUCTURES



NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.

HMA DETAIL AT BUTT JOINTS



SYMBOLS

- YELLOW PAVEMENT MARKING LINE
- WHITE PAVEMENT MARKING LINE
- ONE-WAY CRYSTAL MARKER
- CRYSTAL/RED MARKER
- AMBER/RED MARKER

MODEL: \\MODELMARKETS
FILE: \\marks_cad\work\pav\calderon\103660431\0366A51-1-sh-cad\tblk.dgn

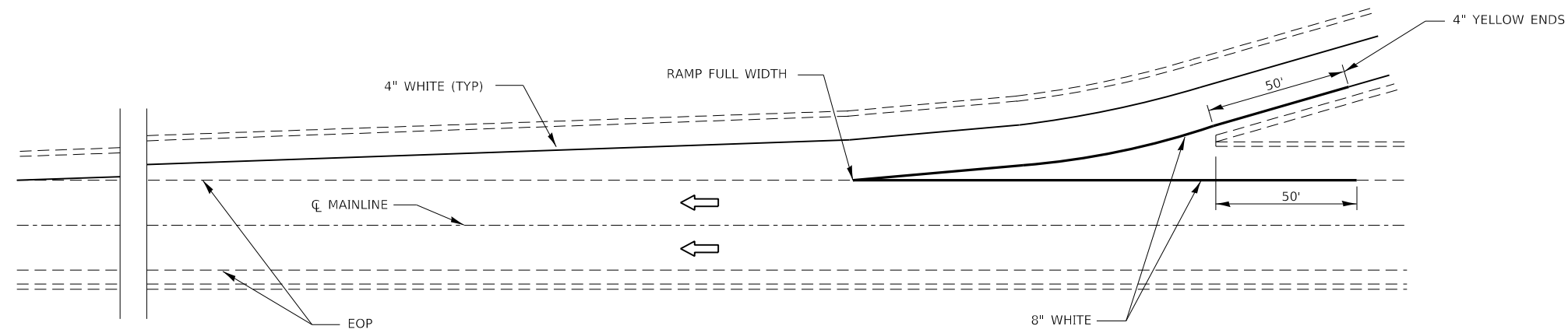
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

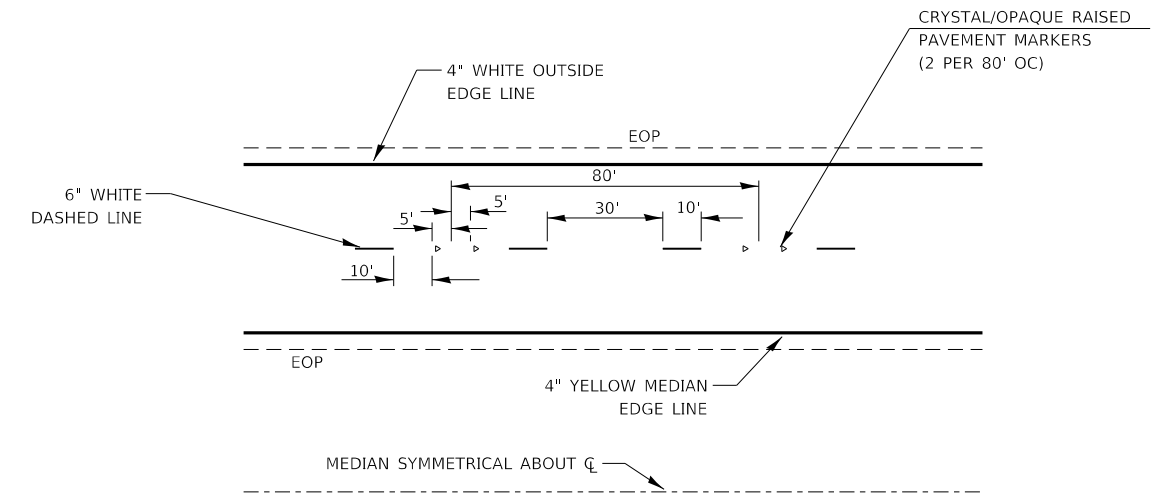
DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

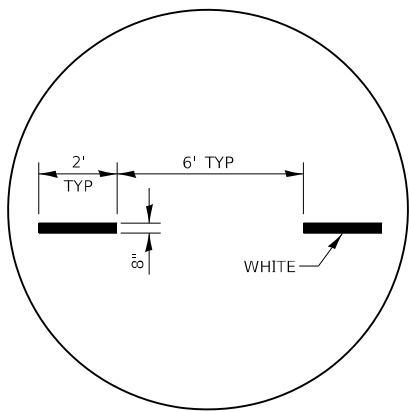
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55	(32-1)RS-4	GRUNDY	154	142
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66A51	



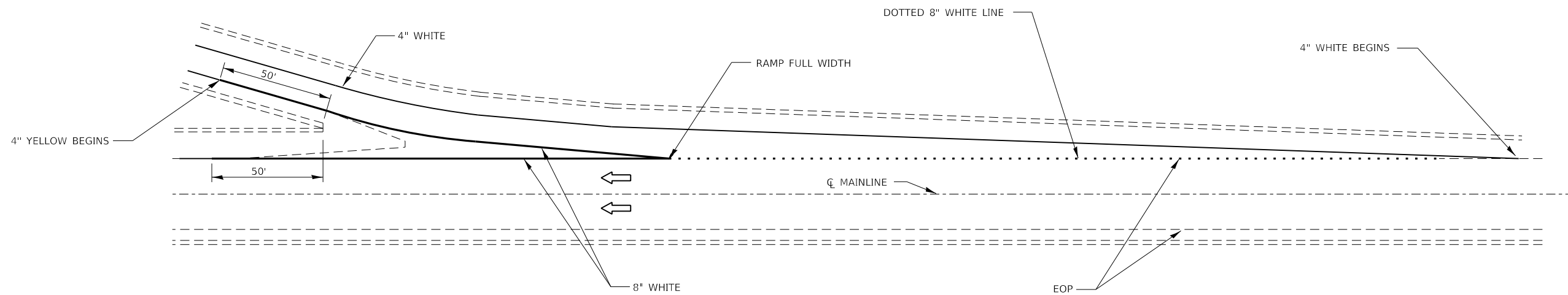
TYPICAL PAVEMENT MARKING FOR ENTRANCE RAMP TERMINALS



TYPICAL PAVEMENT MARKINGS



INTERSTATE RAMP TRANSITION LINE



TYPICAL PAVEMENT MARKINGS FOR EXIT RAMP TERMINALS

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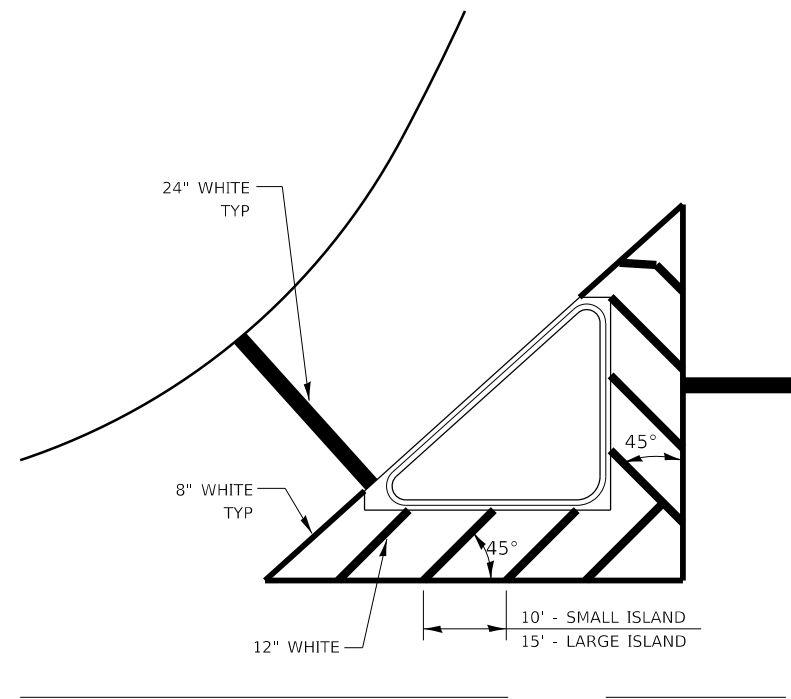
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

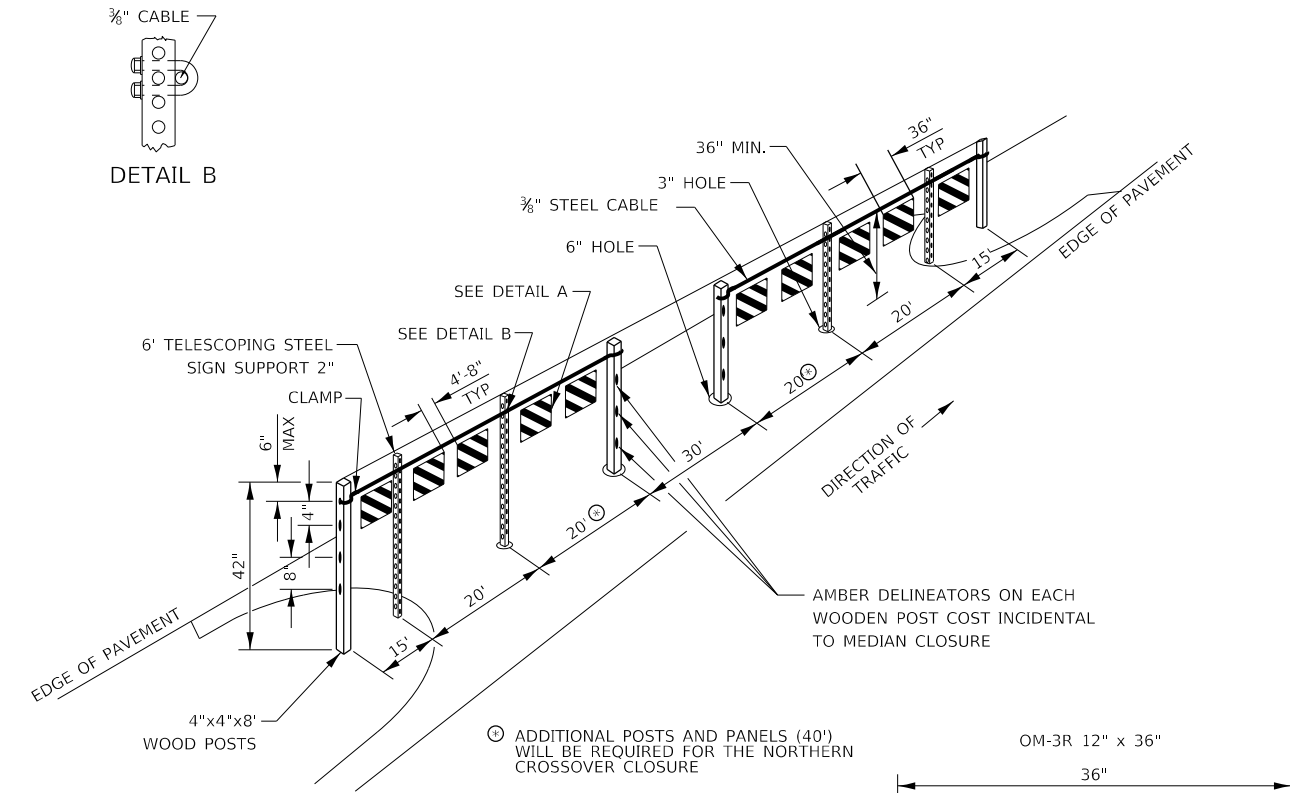
DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	143
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	



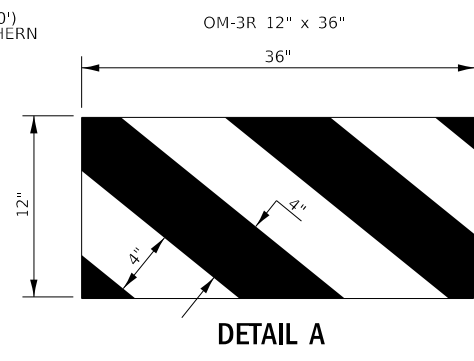
TYPICAL ISLAND



NOTES:

- NORTHERN CROSSOVER:
 - OPENING: 195 FT
 - LENGTH: 845 FT
- SOUTHERN CROSSOVER:
 - OPENING: 130 FT
 - LENGTH: 1195 FT

⊙ ADDITIONAL POSTS AND PANELS (40') WILL BE REQUIRED FOR THE NORTHERN CROSSOVER CLOSURE



DETAIL A

GENERAL NOTES

WOOD POSTS, CABLE, AND SIGN SUPPORTS SHALL BE IN ACCORDANCE WITH SECTION 634 & 636 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE PANELS SHALL BE ANCHORED TO THE 3/8" CABLE IN SUCH A MANNER SO THEY CANNOT SLIDE ALONG THE CABLE.

THE REFLECTIVE SHEETING USED FOR THE PANELS SHALL MEET THE REQUIREMENTS OF ARTICLE 1084.02 OF THE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION AND SHALL BE ON BOTH SIDES.

ALL PANELS SHALL HAVE ALTERNATING REFLECTORIZED WHITE & RED STRIPES SLOPING DOWNWARD AT 45° TOWARD THE SIDE ON WHICH TRAFFIC WILL PASS AND ON BOTH SIDES OF PANEL. THE DRILLING OF 3" AND 4" HOLES SHALL BE INCIDENTAL TO THE MEDIAN CLOSURE.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR MEDIAN CLOSURE.

**TYPICAL MEDIAN CROSSOVER CLOSURE
(WITH EMERGENCY OPENING)**

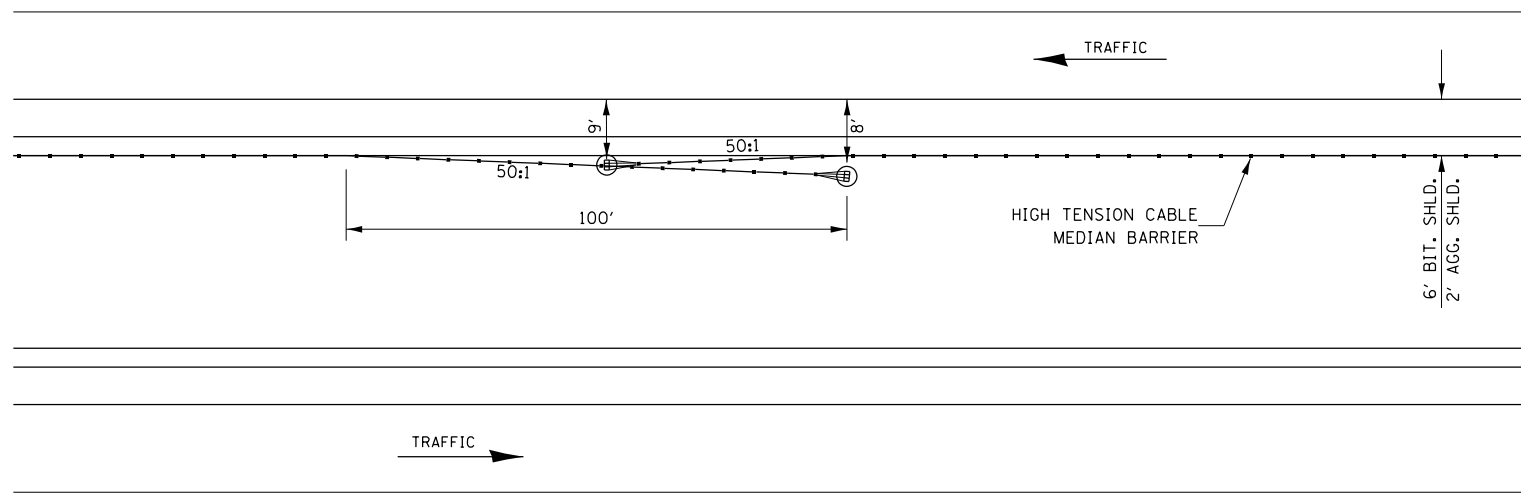
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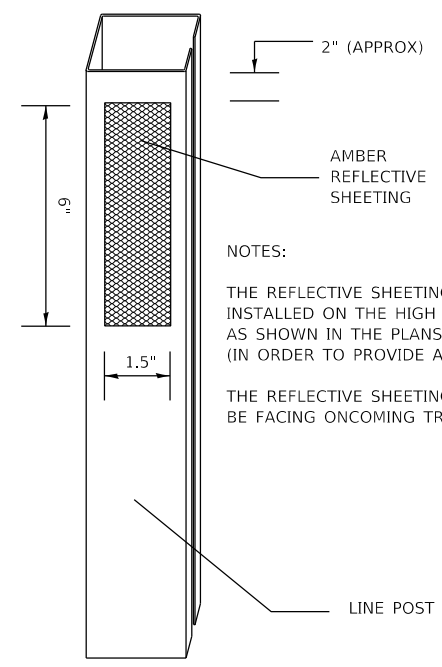
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETAILS	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	144
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66A51	

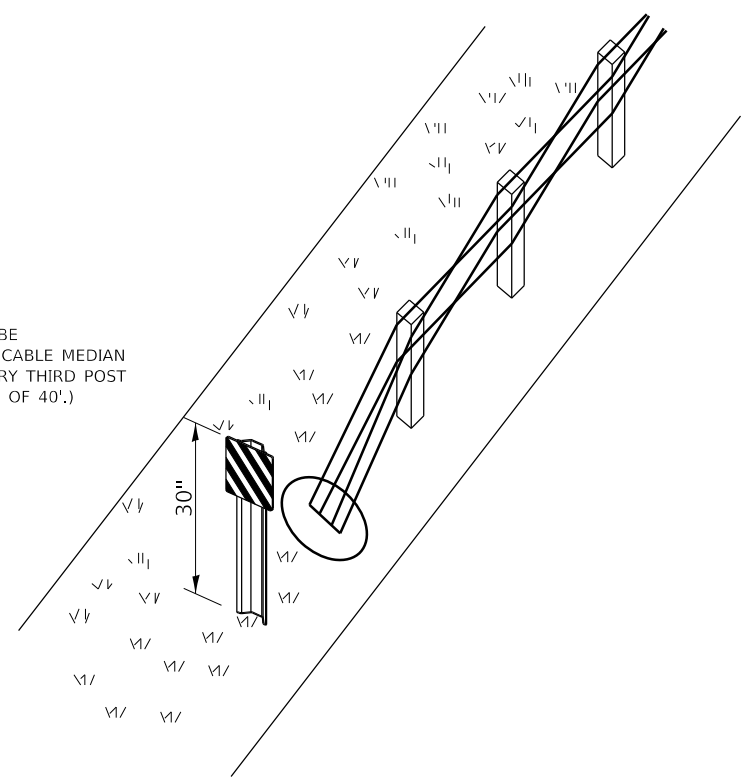


HIGH TENSION CABLE BARRIER OVERLAP DETAIL

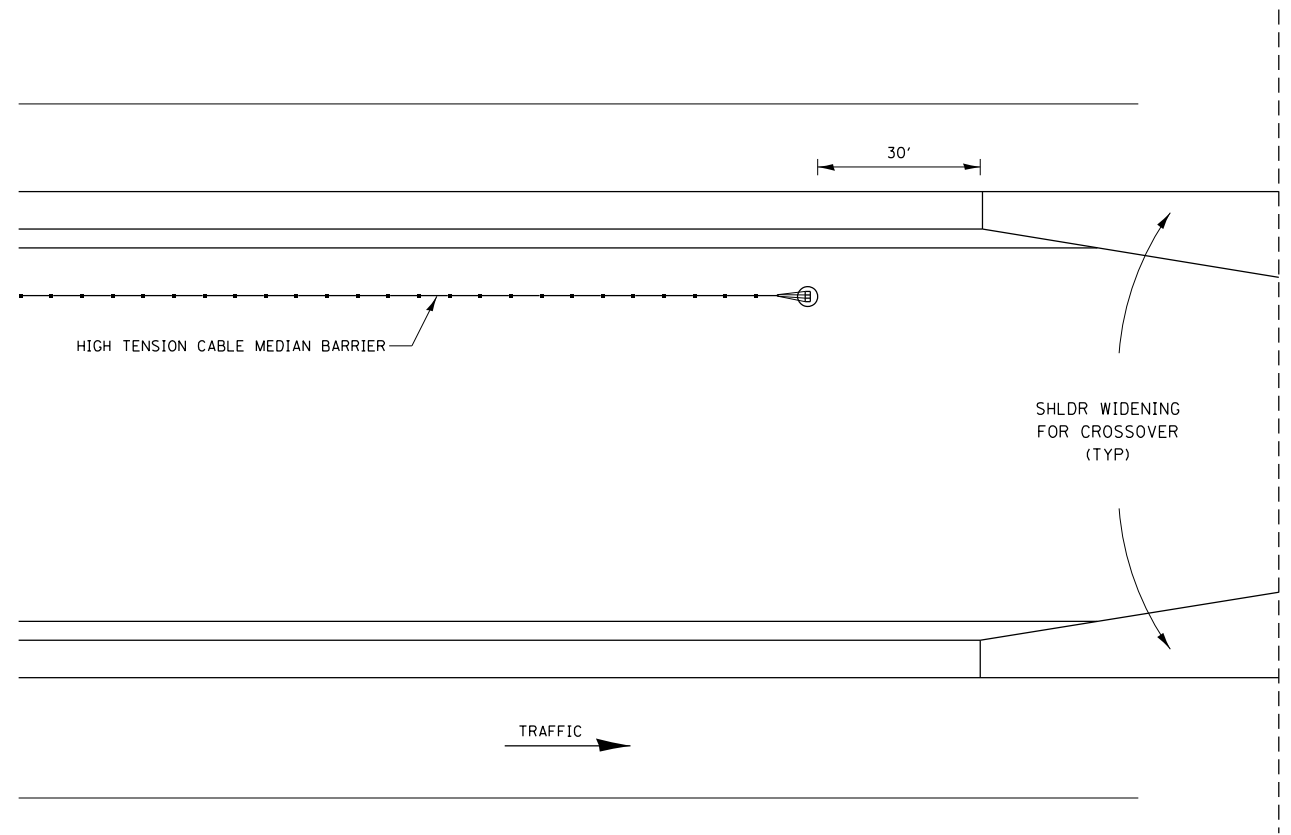


CABLE GUARD MARKER

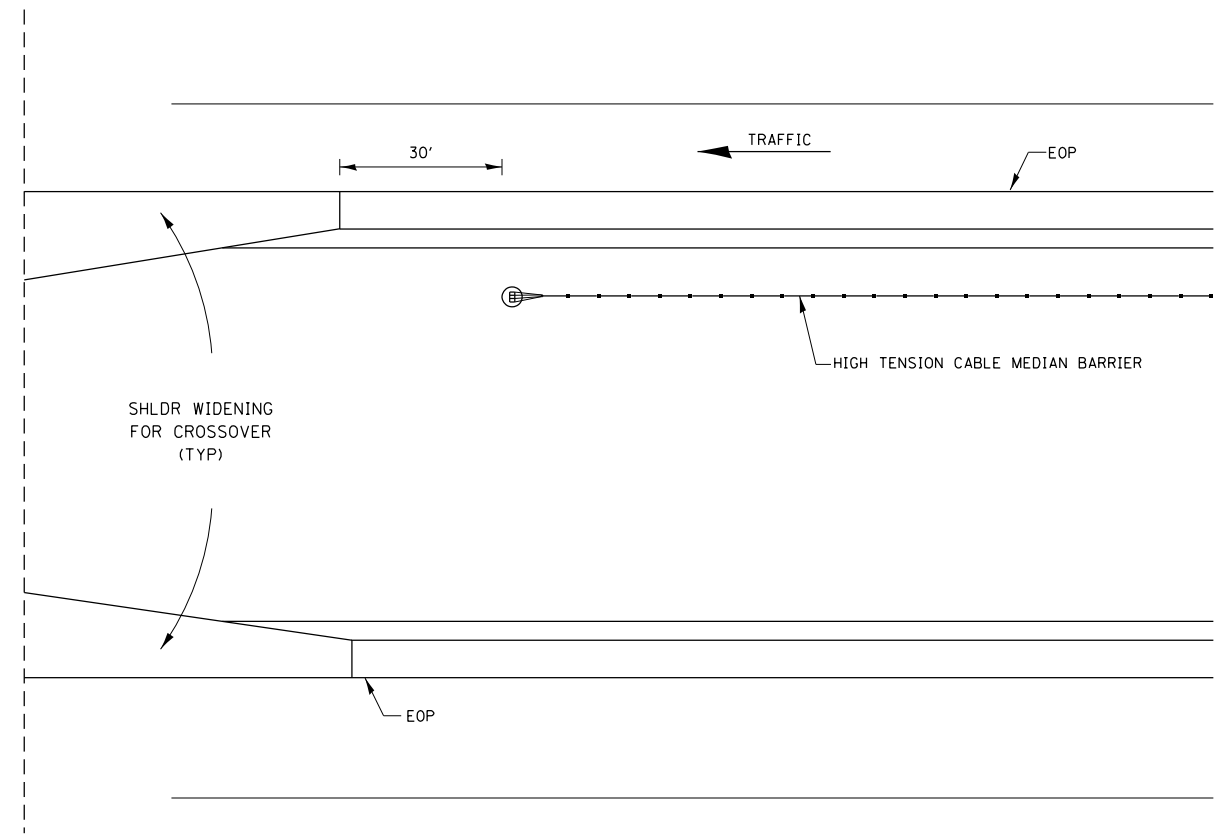
(NOT TO SCALE)



**HIGH TENSION CABLE MEDIAN BARRIER
TERMINAL MARKER DETAIL**



**NORTHERN & SOUTHERN
CROSSOVER (NOT SHOWN)**



HTCMB TERMINALS AT CROSSOVER

MODEL: \\MODELM\AMFES
FILE: \\amfes_csp\work\sp\idb\calderon\603660431\0366A51-1-sh-cdr\tbl.dgn

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PLOT DATE = 10/22/2019	DATE -	REVISED -

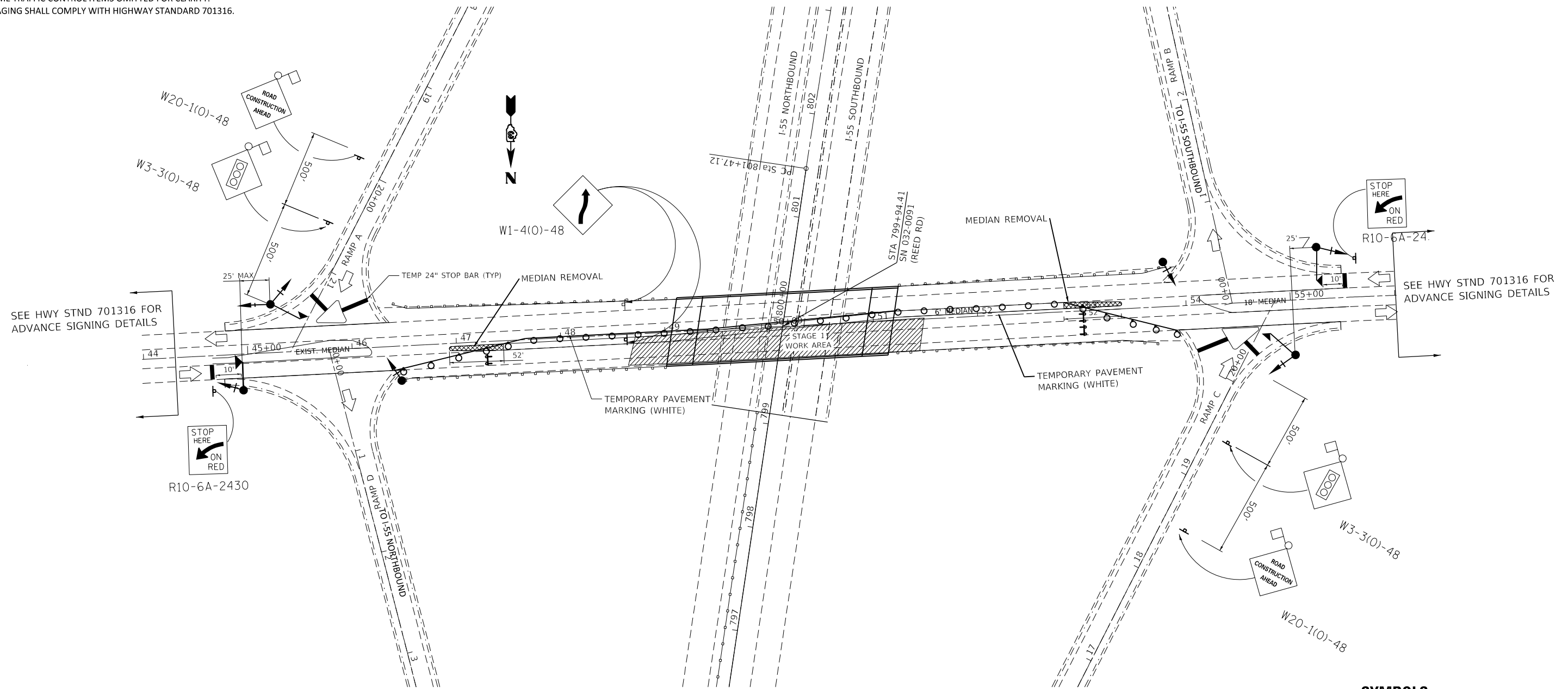
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETAILS	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	145
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				

STAGE 1 TRAFFIC CONTROL – 032-0091 (REED RD)

NOTE:
SOME TRAFFIC CONTROL ITEMS OMITTED FOR CLARITY.
STAGING SHALL COMPLY WITH HIGHWAY STANDARD 701316.



SEE HWY STND 701316 FOR ADVANCE SIGNING DETAILS

SEE HWY STND 701316 FOR ADVANCE SIGNING DETAILS

GENERAL NOTES

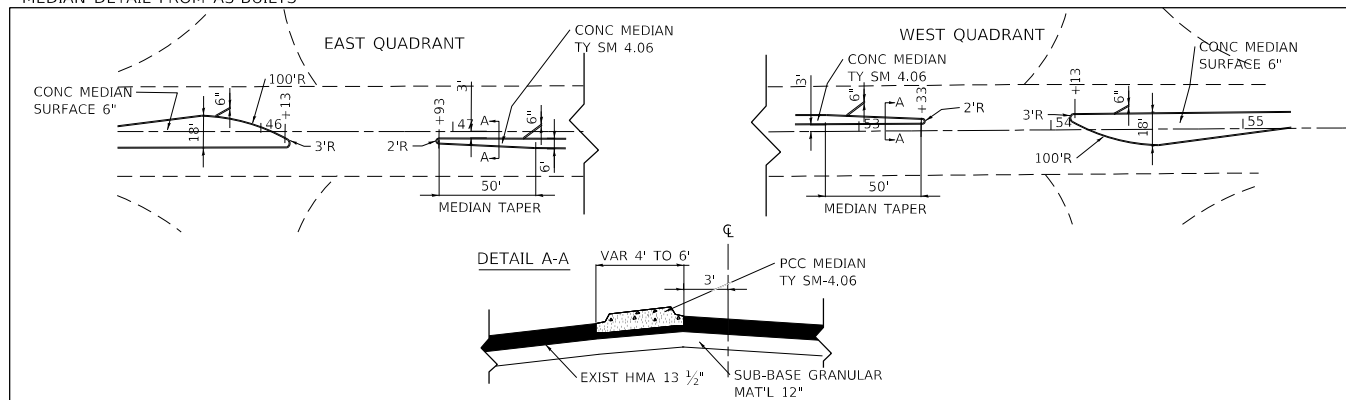
THIS DETAIL IS USED WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS, OR THEIR ACTIVITIES WILL ENCROACH ON ONE LANE OF A BRIDGE AND TRAFFIC SIGNALS ARE REQUIRED.

TRAFFIC SIGNALS SHALL BE OPERATIONAL ONLY WHEN ALL TRAFFIC CONTROLS ARE IN PLACE. WHEN TRAFFIC SIGNALS ARE NOT IN OPERATION, FLAGGERS SHALL BE USED AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO STANDARD 701201 OR 701206 AT NO COST TO THE DEPARTMENT.

SEE TRAFFIC CONTROL AND PROTECTION, STANDARD 701316 FOR ADVANCED SIGNING DETAILS.

EXISTING OR TEMPORARY PAVEMENT MARKINGS SHALL BE ON BOTH SIDES OF OPEN LANE FROM STOP BAR TO STOP BAR.

MEDIAN DETAIL FROM AS-BUILTS



SYMBOLS

- CONCRETE MEDIAN SURFACE REMOVAL
- WORK AREA
- SIGN
- TYPE III BARRICADE WITH FLASHING LIGHTS
- UTILITY POLE
- TRAFFIC SIGNAL WITH BACK PLATE
- MICROWAVE DETECTOR
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT (25' CENTERS)
- DRUM (25' CENTERS)

MODEL: 4\MODEL\MAR15
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PLOT DATE = 10/22/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

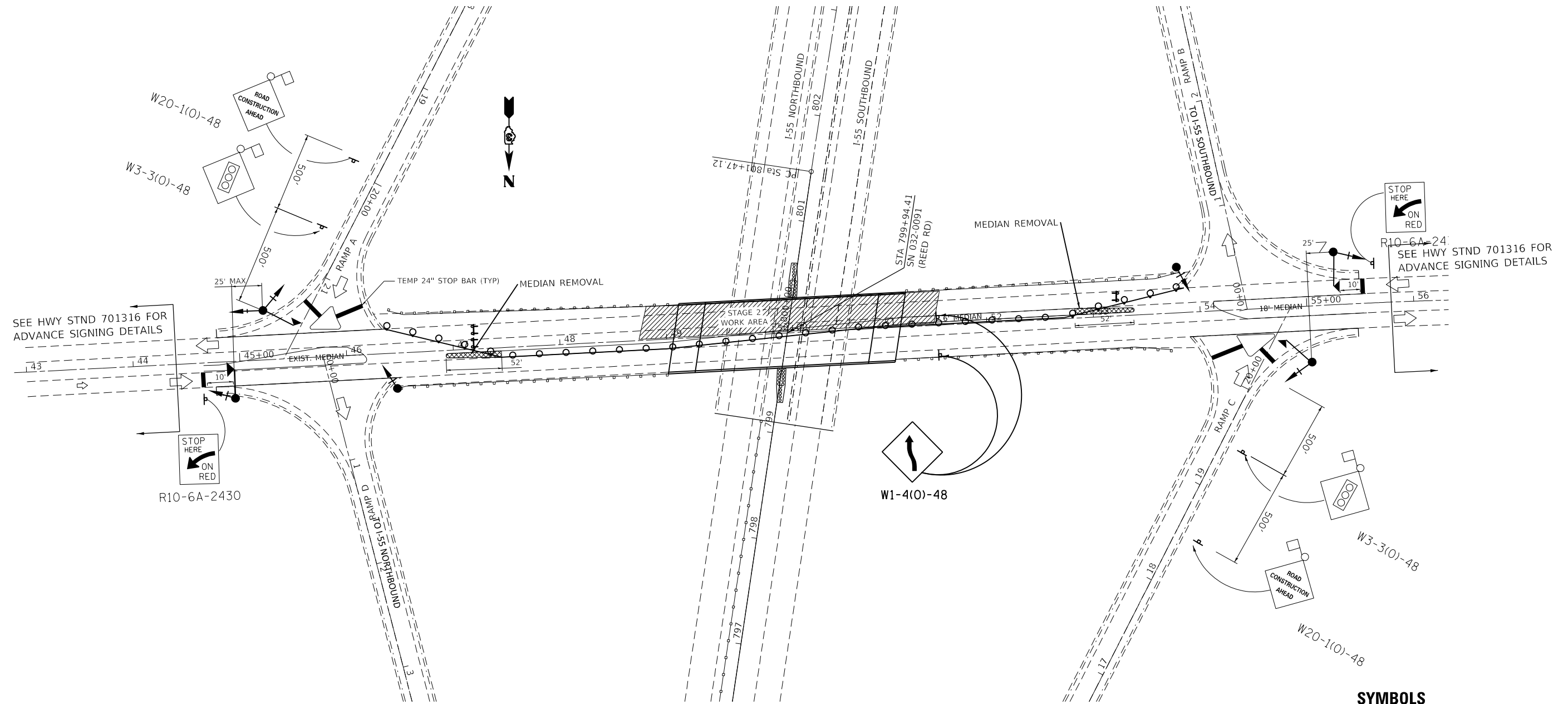
032-0091 STAGING & TEMP TRAFFIC SIGNAL DETAILS
TC&P STANDARD 701316

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	146
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	

STAGE 2 TRAFFIC CONTROL – 032-0091 (REED RD)

NOTE:
SOME TRAFFIC CONTROL ITEMS OMITTED FOR CLARITY.
STAGING SHALL COMPLY WITH HIGHWAY STANDARD 701316.



SEE HWY STND 701316 FOR ADVANCE SIGNING DETAILS

R10-6A-24: SEE HWY STND 701316 FOR ADVANCE SIGNING DETAILS

GENERAL NOTES

THIS DETAIL IS USED WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS, OR THEIR ACTIVITIES WILL ENCROACH ON ONE LANE OF A BRIDGE AND TRAFFIC SIGNALS ARE REQUIRED.

TRAFFIC SIGNALS SHALL BE OPERATIONAL ONLY WHEN ALL TRAFFIC CONTROLS ARE IN PLACE. WHEN TRAFFIC SIGNALS ARE NOT IN OPERATION, FLAGGERS SHALL BE USED AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO STANDARD 701201 OR 701206 AT NO COST TO THE DEPARTMENT.

SEE TRAFFIC CONTROL AND PROTECTION, STANDARD 701316 FOR ADVANCED SIGNING DETAILS.

EXISTING OR TEMPORARY PAVEMENT MARKINGS SHALL BE ON BOTH SIDES OF OPEN LANE FROM STOP BAR TO STOP BAR.

SYMBOLS

- CONCRETE MEDIAN SURFACE REMOVAL
- WORK AREA
- SIGN
- TYPE III BARRICADE WITH FLASHING LIGHTS
- UTILITY POLE
- TRAFFIC SIGNAL WITH BACK PLATE
- MICROWAVE DETECTOR
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT (25' CENTERS)
- DRUM (25' CENTERS)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

032-0091 STAGING & TEMP TRAFFIC SIGNAL DETAILS
TC&P STANDARD 701316

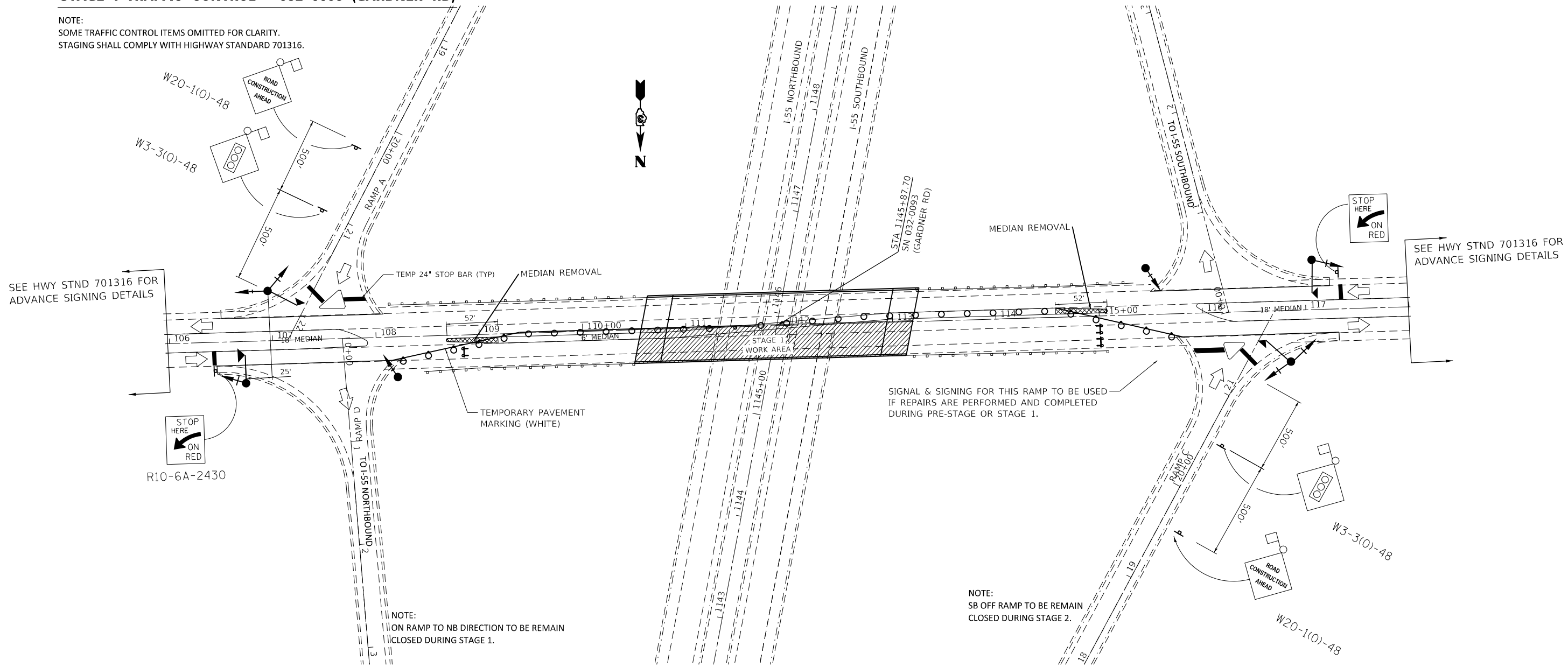
F.A.1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	147
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66A51	

SCALE: SHEET OF SHEETS STA. TO STA.

MODEL: \\MODELMATHS
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STAGE 1 TRAFFIC CONTROL – 032-0093 (GARDNER RD)

NOTE:
SOME TRAFFIC CONTROL ITEMS OMITTED FOR CLARITY.
STAGING SHALL COMPLY WITH HIGHWAY STANDARD 701316.



NOTE:
ON RAMP TO NB DIRECTION TO BE REMAIN CLOSED DURING STAGE 1.

SIGNAL & SIGNING FOR THIS RAMP TO BE USED IF REPAIRS ARE PERFORMED AND COMPLETED DURING PRE-STAGE OR STAGE 1.

NOTE:
SB OFF RAMP TO BE REMAIN CLOSED DURING STAGE 2.

GENERAL NOTES

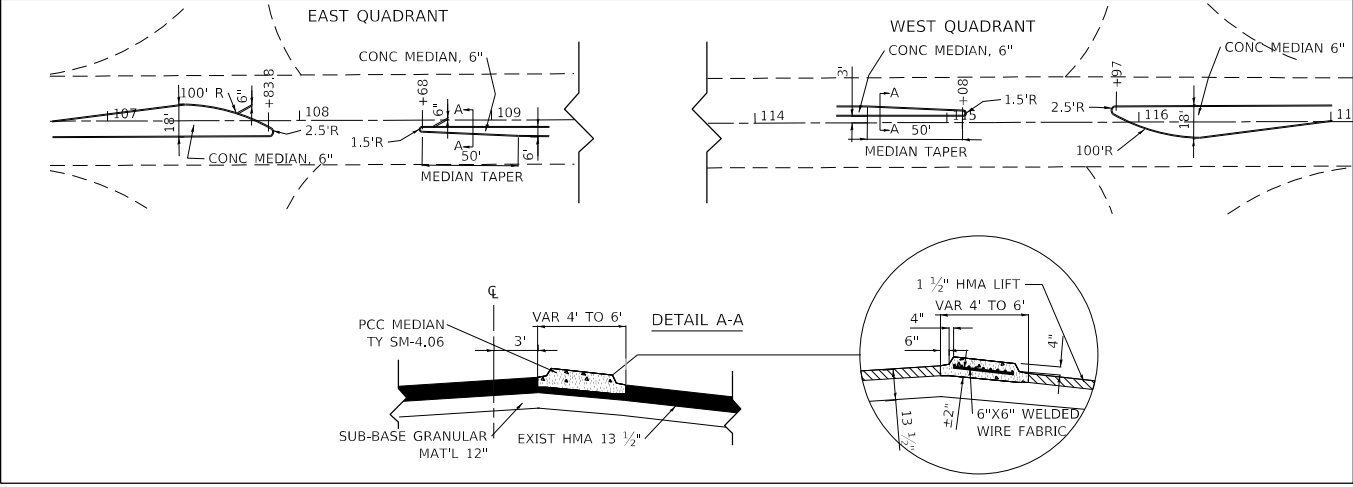
THIS DETAIL IS USED WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS, OR THEIR ACTIVITIES WILL ENCROACH ON ONE LANE OF A BRIDGE AND TRAFFIC SIGNALS ARE REQUIRED.

TRAFFIC SIGNALS SHALL BE OPERATIONAL ONLY WHEN ALL TRAFFIC CONTROLS ARE IN PLACE. WHEN TRAFFIC SIGNALS ARE NOT IN OPERATION, FLAGGERS SHALL BE USED AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO STANDARD 701201 OR 701206 AT NO COST TO THE DEPARTMENT.

SEE TRAFFIC CONTROL AND PROTECTION, STANDARD 701316 FOR ADVANCED SIGNING DETAILS.

EXISTING OR TEMPORARY PAVEMENT MARKINGS SHALL BE ON BOTH SIDES OF OPEN LANE FROM STOP BAR TO STOP BAR.

MEDIAN DETAIL FROM AS-BUILTS



SYMBOLS

- CONCRETE MEDIAN SURFACE REMOVAL
- WORK AREA
- SIGN
- TYPE III BARRICADE WITH FLASHING LIGHTS
- UTILITY POLE
- TRAFFIC SIGNAL WITH BACK PLATE
- MICROWAVE DETECTOR
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT (25' CENTERS)
- DRUM (25' CENTERS)

MODEL: 440DEF1MAMTS
FILE: 66A51-1-11-14-01-01-01.dgn

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	DRAWN -	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**032-0093 STAGING & TEMP TRAFFIC SIGNAL DETAILS
TC&P STANDARD 701316**

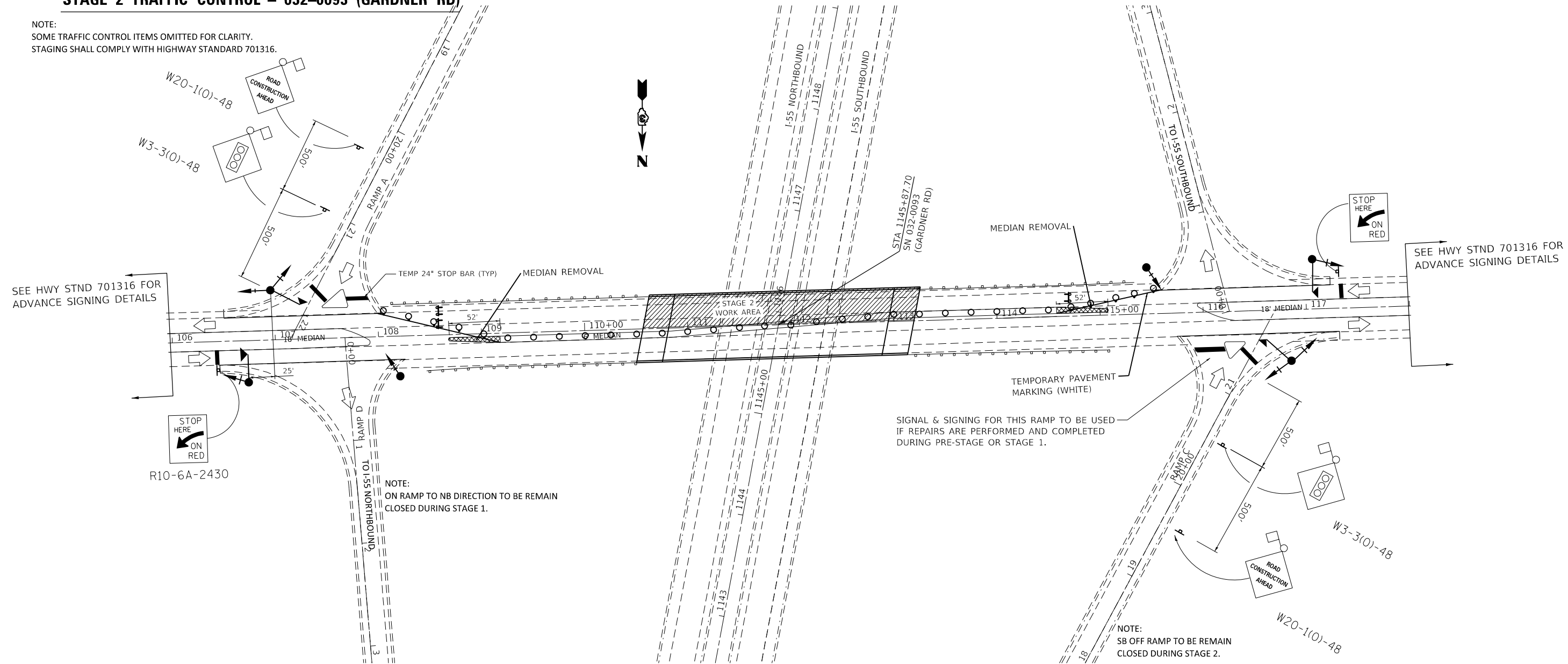
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	148
CONTRACT NO. 66A51				

ILLINOIS FED. AID PROJECT

STAGE 2 TRAFFIC CONTROL – 032-0093 (GARDNER RD)

NOTE:
SOME TRAFFIC CONTROL ITEMS OMITTED FOR CLARITY.
STAGING SHALL COMPLY WITH HIGHWAY STANDARD 701316.



GENERAL NOTES

THIS DETAIL IS USED WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS, OR THEIR ACTIVITIES WILL ENCROACH ON ONE LANE OF A BRIDGE AND TRAFFIC SIGNALS ARE REQUIRED.

TRAFFIC SIGNALS SHALL BE OPERATIONAL ONLY WHEN ALL TRAFFIC CONTROLS ARE IN PLACE. WHEN TRAFFIC SIGNALS ARE NOT IN OPERATION, FLAGGERS SHALL BE USED AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO STANDARD 701201 OR 701206 AT NO COST TO THE DEPARTMENT.

SEE TRAFFIC CONTROL AND PROTECTION, STANDARD 701316 FOR ADVANCED SIGNING DETAILS.

EXISTING OR TEMPORARY PAVEMENT MARKINGS SHALL BE ON BOTH SIDES OF OPEN LANE FROM STOP BAR TO STOP BAR.

SYMBOLS

- CONCRETE MEDIAN SURFACE REMOVAL
- WORK AREA
- SIGN
- TYPE III BARRICADE WITH FLASHING LIGHTS
- UTILITY POLE
- TRAFFIC SIGNAL WITH BACK PLATE
- MICROWAVE DETECTOR
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT (25' CENTERS)
- DRUM (25' CENTERS)

MODEL: \\MODEL\MARFES
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PLOT DATE = 10/22/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

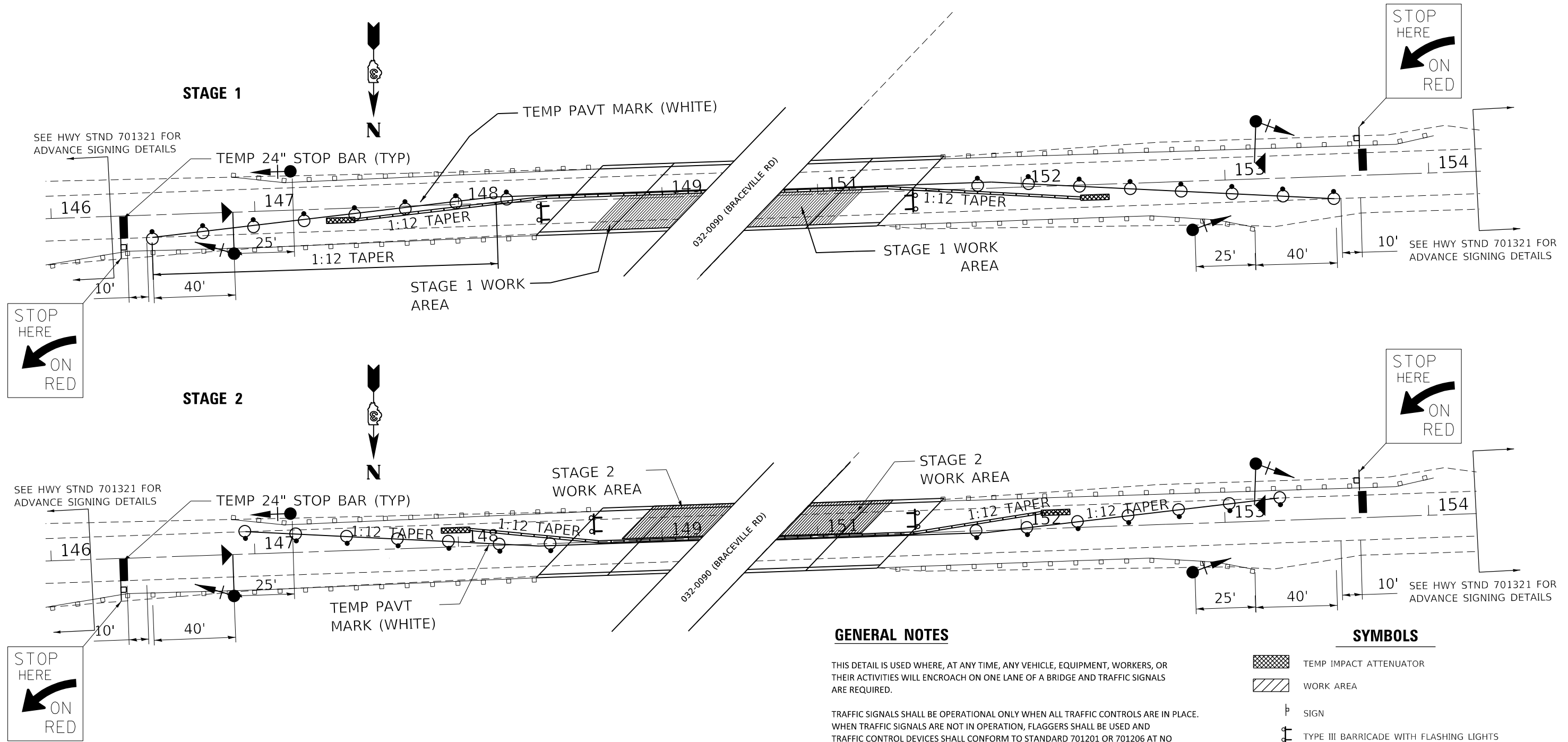
**032-0093 STAGING & TEMP TRAFFIC SIGNAL DETAILS
TC&P STANDARD 701316**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	149
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66A51	

TRAFFIC CONTROL – 032-0090 (BRACEVILLE RD)

NOTE:
SOME TRAFFIC CONTROL ITEMS OMITTED FOR CLARITY.
STAGING SHALL COMPLY WITH HIGHWAY STANDARD 701321.



GENERAL NOTES

THIS DETAIL IS USED WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS, OR THEIR ACTIVITIES WILL ENCROACH ON ONE LANE OF A BRIDGE AND TRAFFIC SIGNALS ARE REQUIRED.

TRAFFIC SIGNALS SHALL BE OPERATIONAL ONLY WHEN ALL TRAFFIC CONTROLS ARE IN PLACE. WHEN TRAFFIC SIGNALS ARE NOT IN OPERATION, FLAGGERS SHALL BE USED AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO STANDARD 701201 OR 701206 AT NO COST TO THE DEPARTMENT.

SEE TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 FOR ADVANCED SIGNING DETAILS.

EXISTING OR TEMPORARY PAVEMENT MARKINGS SHALL BE ON BOTH SIDES OF OPEN LANE FROM STOP BAR TO STOP BAR.

SYMBOLS

- TEMP IMPACT ATTENUATOR
- WORK AREA
- SIGN
- TYPE III BARRICADE WITH FLASHING LIGHTS
- UTILITY POLE
- TRAFFIC SIGNAL WITH BACK PLATE
- MICROWAVE DETECTOR
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT (25' CENTERS)

MODEL: \\MODELS\MH\MS FILES: \\MODELS\work\032-0090\032-0090-03-110-066A51-1-sh-ctrl-018k.dgn

USER NAME = calderoni	DESIGNED -	REVISED -
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PLOT DATE = 10/22/2019	DATE -	REVISED -

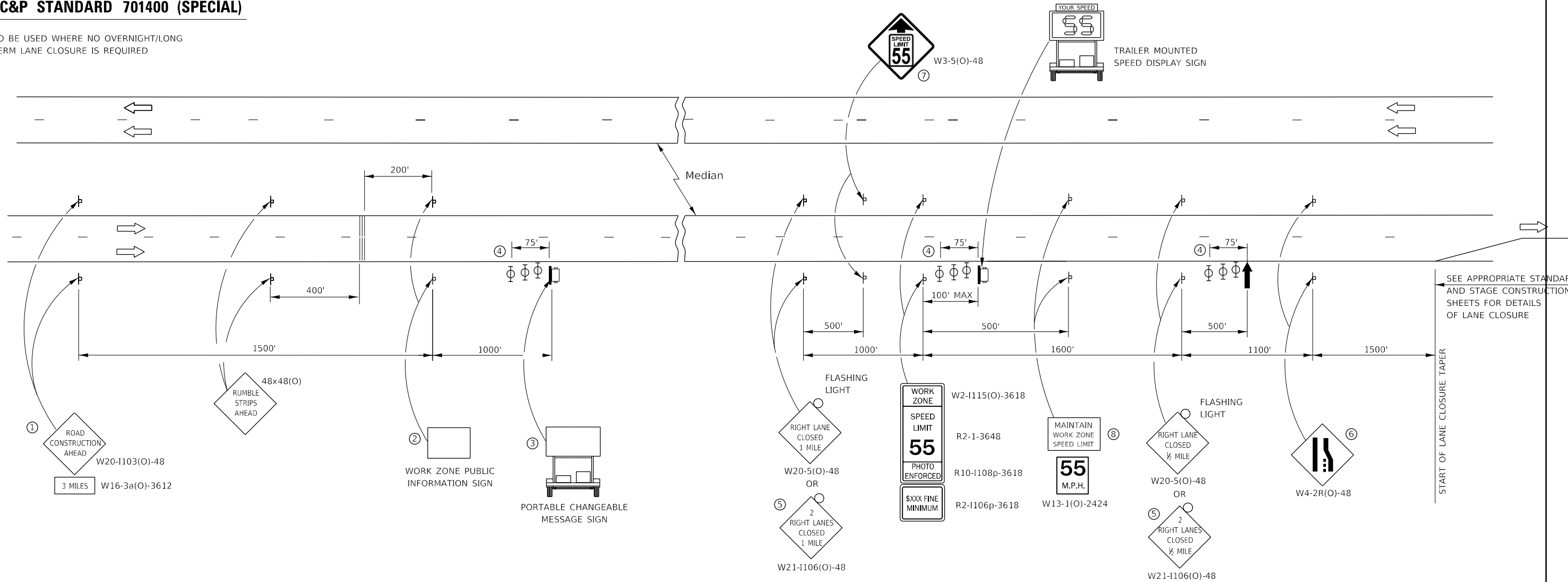
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

032-0092 STAGING & TEMP TRAFFIC SIGNAL DETAILS			
TC&P STANDARD 701321			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	150
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				

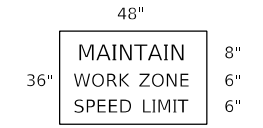
TC&P STANDARD 701400 (SPECIAL)

TO BE USED WHERE NO OVERNIGHT/LONG TERM LANE CLOSURE IS REQUIRED



- ① THE ROAD CONSTRUCTION AHEAD SIGN SHALL BE LOCATED 3 MILES IN ADVANCE OF THE PROJECT LIMITS.
- ② THE MESSAGE AND SIZE OF THE WORK ZONE PUBLIC INFORMATION SIGN SHALL BE AS SPECIFIED BY THE DEPARTMENT.
- ③ TO BE PLACED IN THE MEDIAN WHEN FEASIBLE. THE MESSAGE BOARD SHALL BE USED TO DISPLAY STATUS OF LANES WITHIN THE PROJECT. THE PRIMARY MESSAGES SHALL BE:
"RIGHT LANE CLOSED" / " x MILES AHEAD"
"LEFT LANE CLOSED" / " x MILES AHEAD"
"ALL LANES OPEN"
- ④ THREE, TYPE II BARRICADES, DRUMS, OR VERTICAL BARRICADES AT 25' CENTERS.
- ⑤ THIS SIGN SHALL BE USED WHEN 2 LANES ARE CLOSED.
- ⑥ WHEN THE LEFT LANE IS CLOSED, SWITCH THESE TWO SIGNS AND THE DIRECTION OF THE MERGE ARROW.
- ⑦ THIS SIGN SHALL ONLY BE USED IF THE EXISTING SPEED LIMIT IS GREATER THAN 65 MPH.

⑧ 48"x36" FLUORESCENT ORANGE SIGN WITH BLACK LETTERS.



- ↑ ARROW BOARD
- ☐ PORTABLE CHANGEABLE MESSAGE SIGN
- ⊥ SIGN
- ⊕ TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH MONODIRECTIONAL FLASHING LIGHT
- ▨ TEMPORARY RUMBLE STRIPS (SPECIAL) (SEE DETAIL & SPECIAL PROVISION)
- 🚛 SPEED DISPLAY TRAILER

GENERAL NOTE:

THIS STANDARD IS USED WHERE AT ANY TIME A LANE IS CLOSED ON A FREEWAY/EXPRESSWAY.

WHEN THE LEFT LANE IS CLOSED, LEFT LANE CLOSED SIGNS SHALL BE SUBSTITUTED FOR THE RIGHT LANE CLOSED SIGNS.

THE FIRST THREE SIGNS, RUMBLE STRIPS AND THE MESSAGE BOARD ARE STATIONARY. THE OTHER SIGNS AND ARROWBOARDS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED DISTANCE FROM THE START OF THE LANE CLOSURE TAPER(S).

SEE SPECIAL PROVISIONS.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

MODEL: 4400E1MAM1ES
FILE: 4400E1MAM1ES.ctb
C:\Users\calderoni\OneDrive\Documents\4400E1MAM1ES.ctb

USER NAME = calderoni	DESIGNED -	REVISED -
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PLOT DATE = 10/22/2019	DATE -	REVISED -

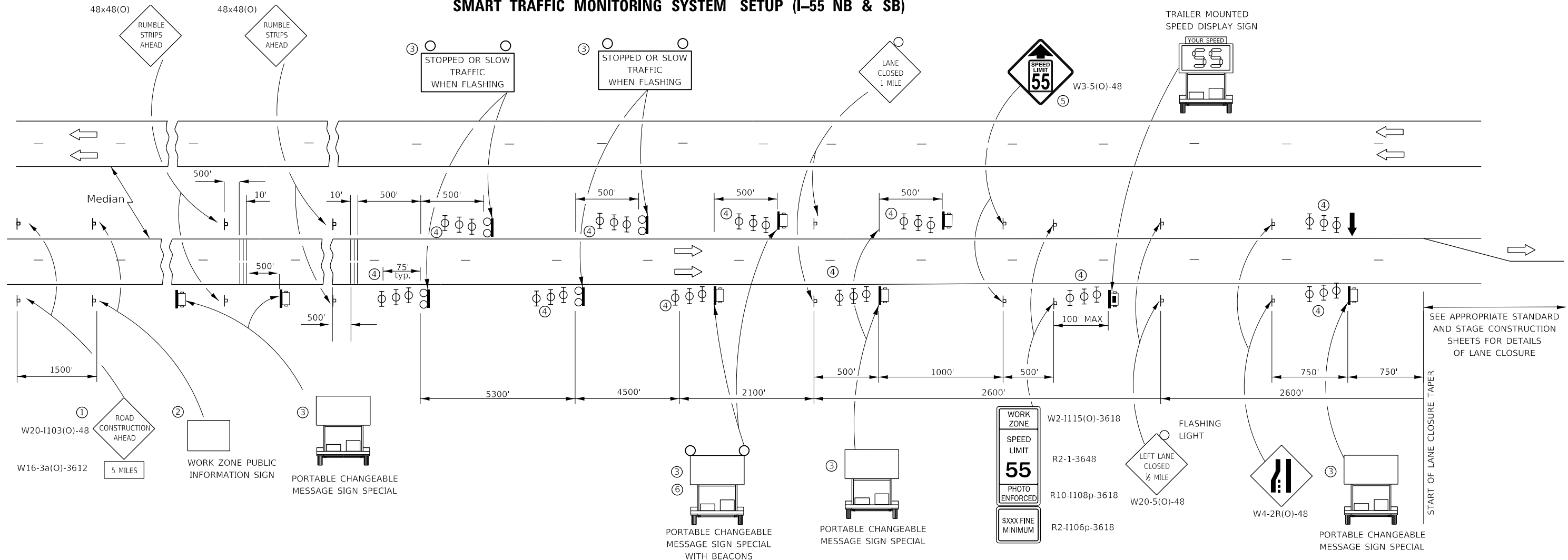
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETAILS	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	151
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				

TC&P STANDARD 701400 (SPECIAL) WITH SMART TRAFFIC CONTROL

SMART TRAFFIC MONITORING SYSTEM SETUP (I-55 NB & SB)

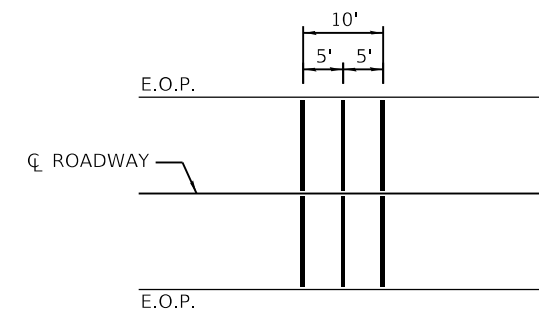


NOTES:

- ① THE ROAD CONSTRUCTION AHEAD SIGN SHALL BE LOCATED 5 MILES IN ADVANCE OF THE PROJECT LIMITS.
- ② THE MESSAGE AND SIZE OF THE WORK ZONE PUBLIC INFORMATION SIGN SHALL BE AS SPECIFIED BY THE DEPARTMENT.
- ③ UNIT TO BE PAID FOR SEPARATELY. TO BE PLACED OUTSIDE OF EXISTING PAVED SHOULDER. ANY REQUIRED EARTHWORK INCLUDED IN THE COST OF THE UNIT.
- ④ THREE, TYPE II BARRICADES, DRUMS, OR VERTICAL BARRICADES AT 25' CENTERS.
- ⑤ THIS SIGN SHALL ONLY BE USED IF THE EXISTING SPEED LIMIT IS GREATER THAN 65 MPH.
- ⑥ WHEN SHOWN, PORTABLE CHANGEABLE MESSAGE SIGN SPECIAL SHALL HAVE EQUIVALENT FLASHING BEACONS AS REAL TIME TRAFFIC CONTROL SIGNING. COST INCLUDED IN PORTABLE CHANGEABLE MESSAGE SIGN SPECIAL.

LEGEND:

- ARROW BOARD
- PORTABLE CHANGEABLE MESSAGE SIGN SPECIAL (PCMS)
- SIGN
- REAL-TIME TRAFFIC CONTROL SIGNING
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH MONODIRECTIONAL FLASHING LIGHT.
- TEMPORARY RUMBLE STRIPS (SPECIAL). SEE DETAIL & SPECIAL PROVISION
- SPEED DISPLAY TRAILER



TEMPORARY RUMBLE STRIP (SPECIAL)

GENERAL NOTE:

THIS STANDARD IS USED WHERE AT ANY TIME LANE CLOSURE IS IN PLACE OR INCLUDING A WEEKEND OR HOLIDAY AS DESCRIBED IN KEEPING ROADS OPEN TO TRAFFIC.

WHEN THE LEFT LANE IS CLOSED, LEFT LANE CLOSED SIGNS SHALL BE SUBSTITUTED FOR THE RIGHT LANE CLOSED SIGNS.

THE FIRST TWO SIGNS ARE STATIONARY. THE OTHER SIGNS, ARROWBOARDS AND MESSAGE BOARDS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED DISTANCE FROM THE START OF THE LANE CLOSURE TAPER(S).

SEE SPECIAL PROVISIONS FOR SMART TRAFFIC MONITORING SYSTEM, PORTABLE CHANGEABLE MESSAGE SIGN SPECIAL AND CONTROL OF WORK.

MODEL: 4400DEI.MAINTS
FILE: 4400DEI.MAINTS.ctb
C:\Users\calderon\OneDrive\Documents\66651-1-11-2019\66651-1-11-2019.dgn

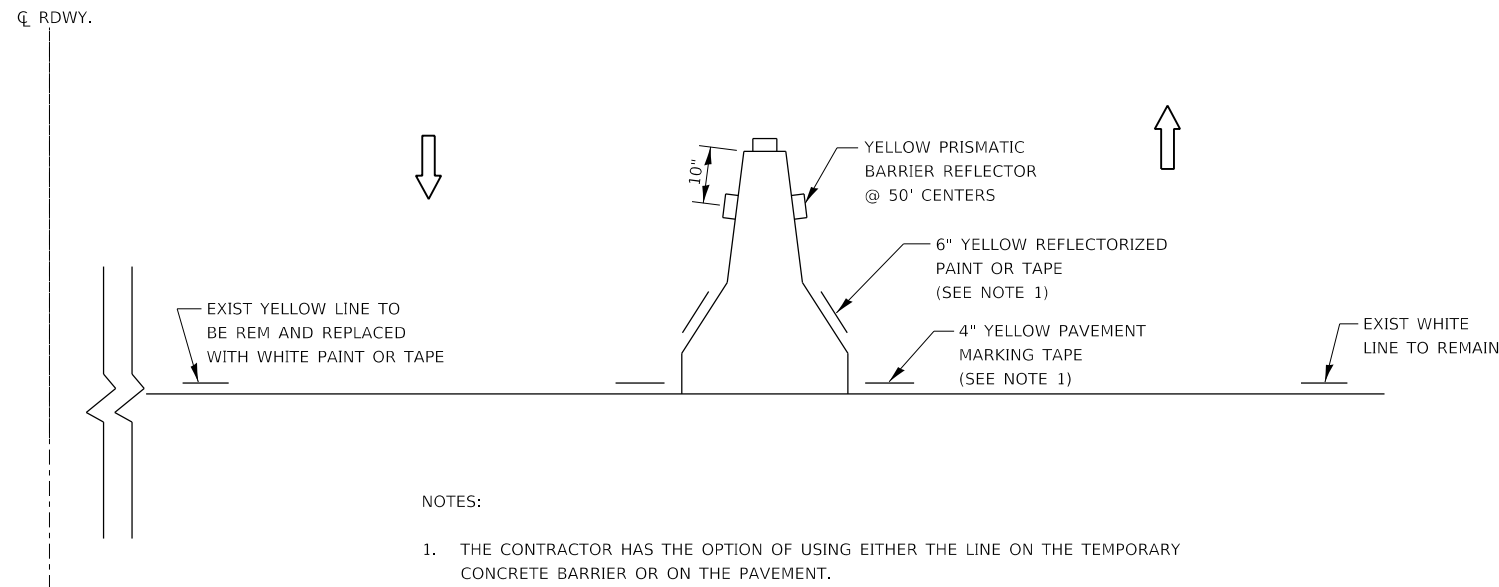
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PLOT DATE = 10/22/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TC&P STANDARD 701400 (SPECIAL) WITH SMART TRAFFIC CONTROL
DETAILS**

SCALE: SHEET OF SHEETS STA. TO STA.

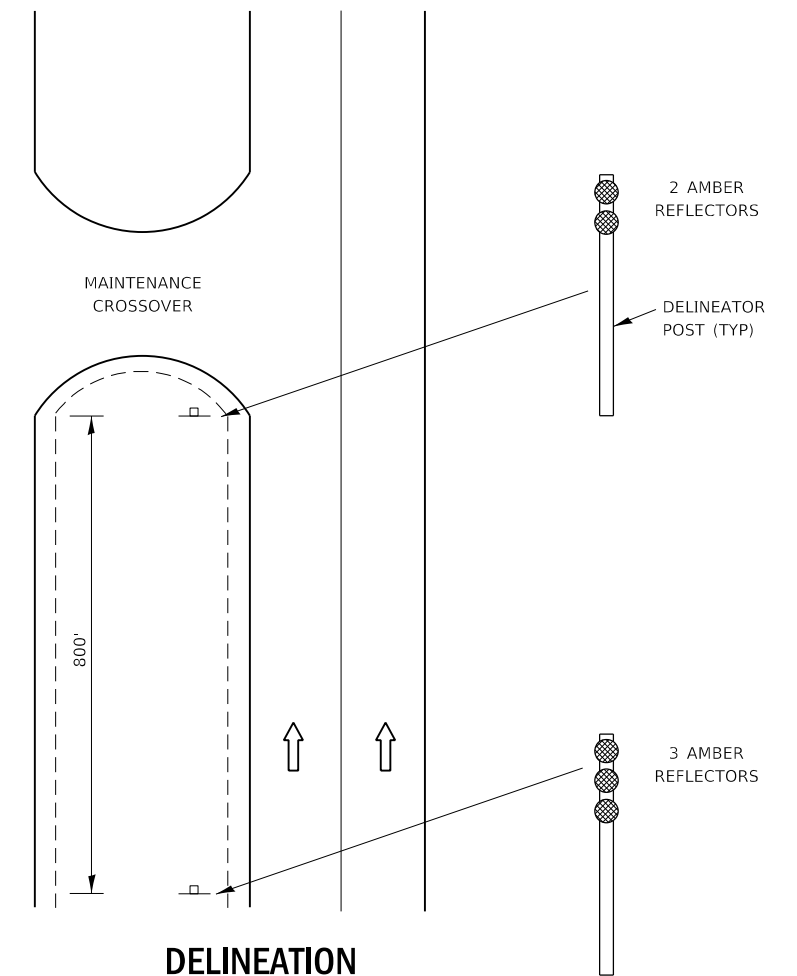
F.A.1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	152
CONTRACT NO. 66A51			ILLINOIS FED. AID PROJECT	



NOTES:

1. THE CONTRACTOR HAS THE OPTION OF USING EITHER THE LINE ON THE TEMPORARY CONCRETE BARRIER OR ON THE PAVEMENT.
2. THE COST OF THE REFLECTORS AND THE BARRIER/PAVEMENT MARKING LINE IS INCLUDED IN THE COST OF THE TEMPORARY CONCRETE BARRIER.

**TRAFFIC CONTROL DETAIL
FOR TEMPORARY CONCRETE BARRIER**



**DELINEATION
FOR MAINTENANCE
CROSSOVER
(TYPICAL FOR BOTH DIRECTIONS)**

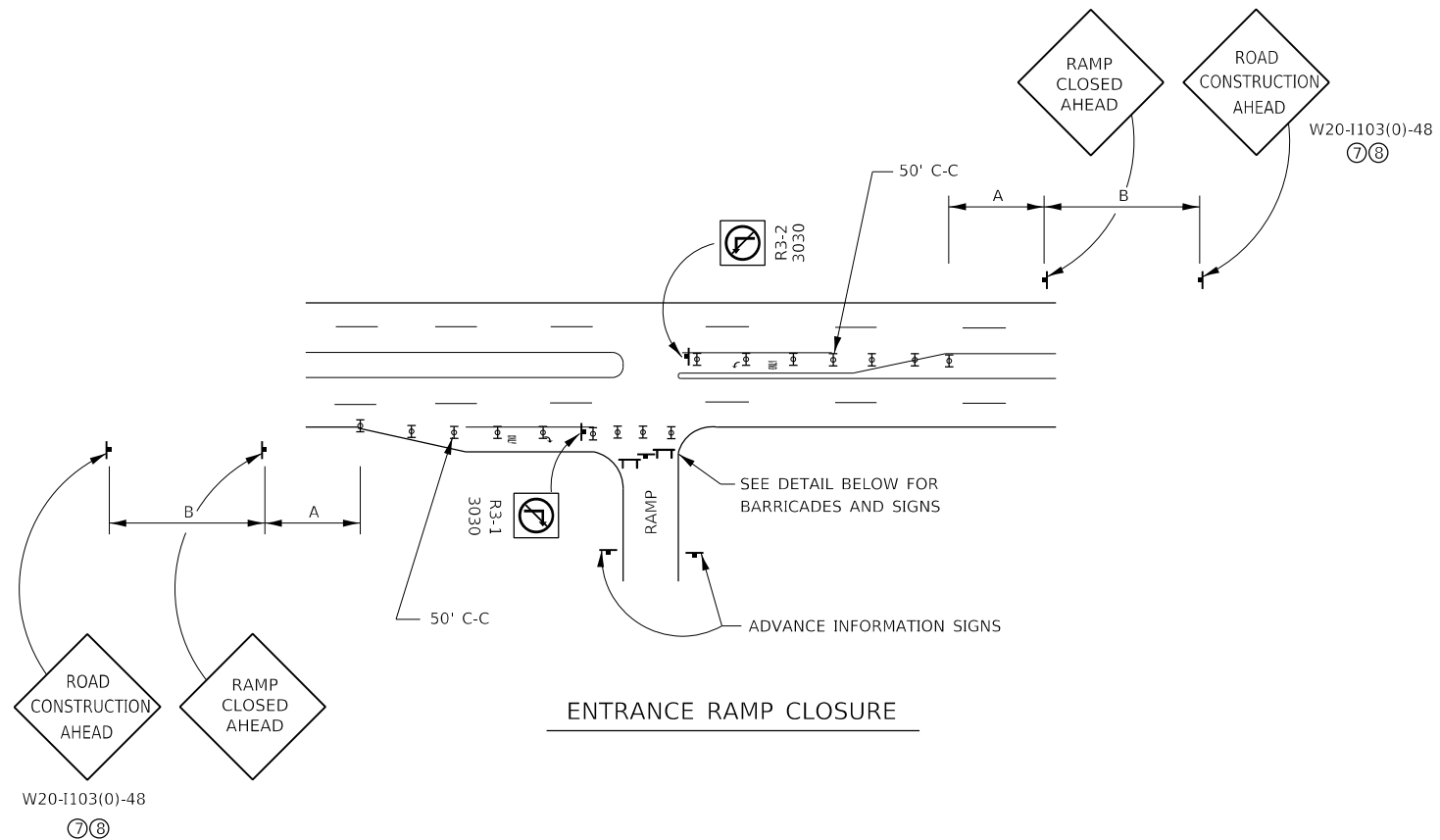
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USER NAME = calderonl	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 10/22/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE:		SHEET OF SHEETS		STA. TO STA.	

F.A.1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	153
			CONTRACT NO. 66A51	
ILLINOIS FED. AID PROJECT				

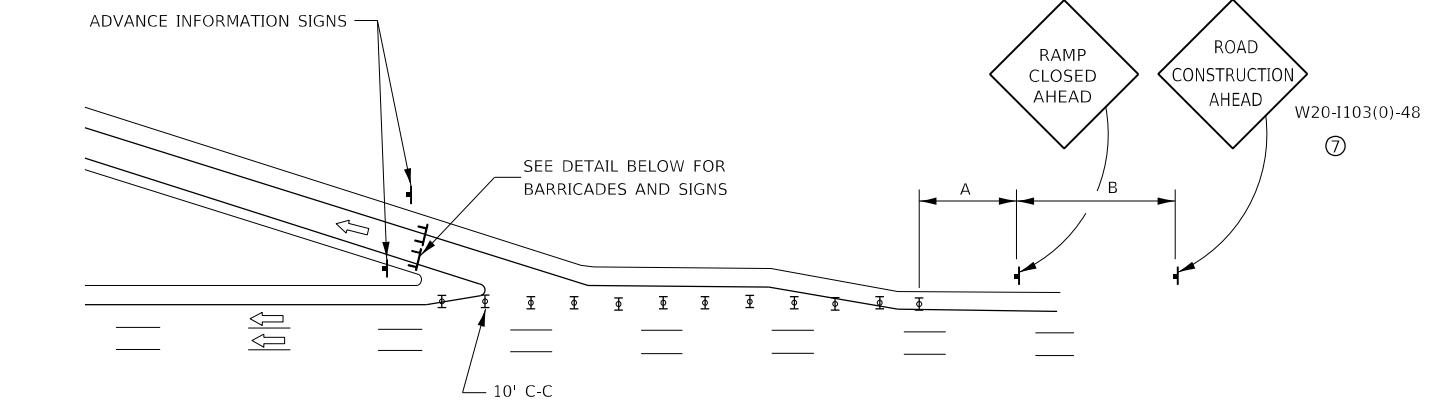


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

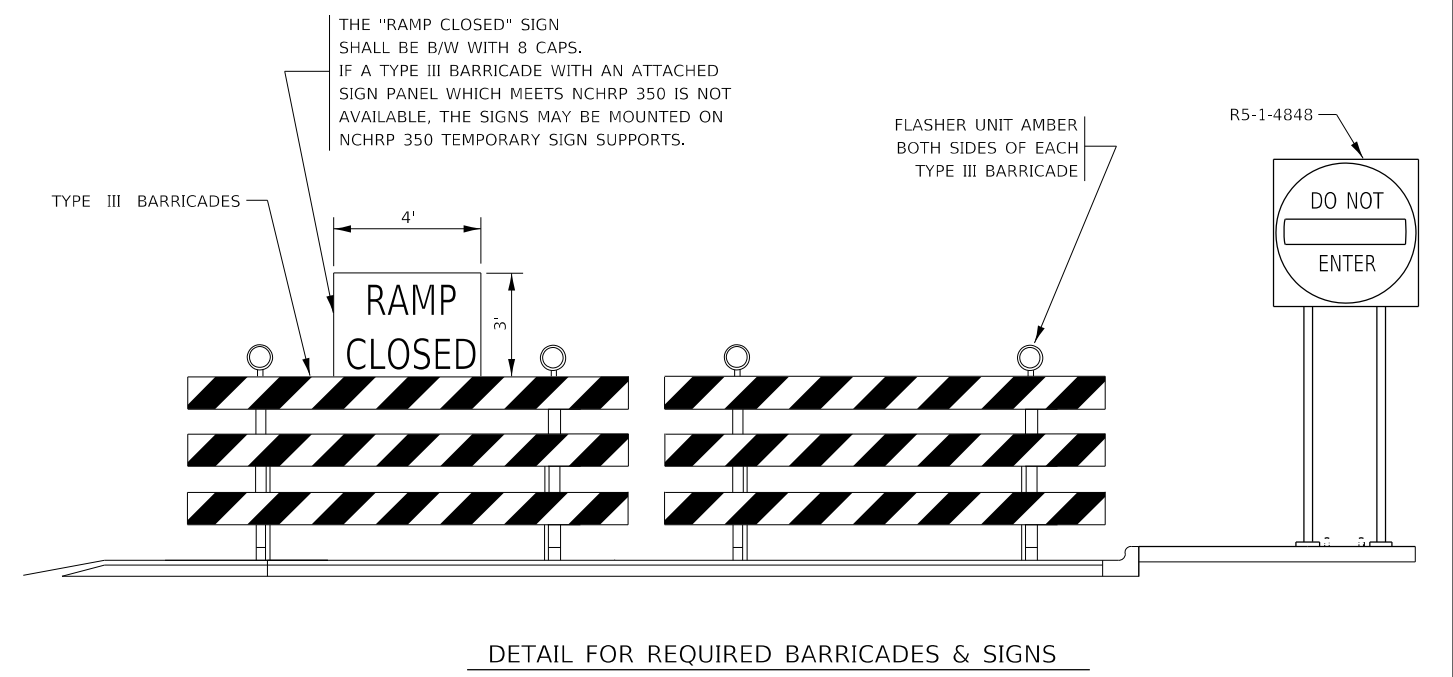
FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000'	1500'
EXPRESSWAY ≤24 HOURS	500'	500'
ARTERIAL ≥45 MPH	350'	350'
ARTERIAL <45 MPH	150'	150'

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



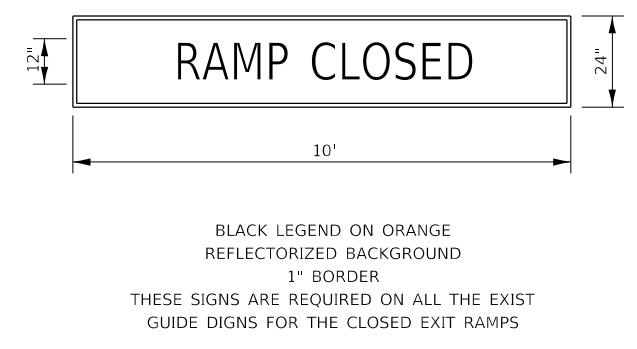
EXIT RAMP CLOSURE

- SYMBOLS**
- ☒ DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
 - ☒ TYPE III BARRICADE WITH FLASHING LIGHT

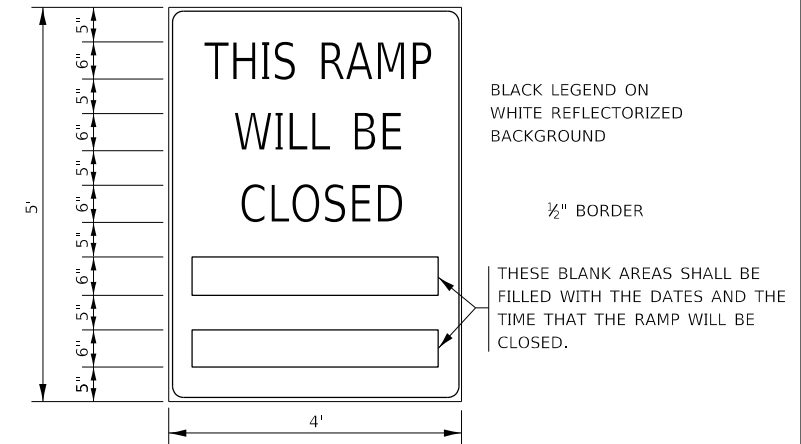


DETAIL FOR REQUIRED BARRICADES & SIGNS

RAMP CLOSURE ADVANCE WARNING SIGN



RAMP CLOSURE ADVANCE INFORMATION SIGN



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

GENERAL NOTES:

- ① STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ② A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
- ③ ALL ROUTE MARKERS AND SIGN ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
- ④ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL).
- ⑤ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF OPERATIONS IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑥ 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 TWENTY-FOUR (24) HOURS IN LENGTH.
- ⑦ 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.
- ⑧ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED ON CLOSURES LESS THAN 24 HOURS IN DURATION.

MODEL: I:\MODELS\MAR15... FILE: I:\MAR15... CALDERON\03604310366A51-1-14-2019.dgn

USER NAME = calderon1	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 10/22/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FREWAY ENTRANCE AND EXIT RAMP CLOSURE DETAILS			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.1 RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(32-1)RS-4	GRUNDY	154	154
CONTRACT NO. 66A51				
ILLINOIS FED. AID PROJECT				