

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	1
ILLINOIS			CONTRACT NO. 66K13	

INDEX OF SHEETS

1. COVER SHEET
2. GENERAL NOTES
- 3 - 4. SUMMARY OF QUANTITIES
5. TYPICAL SECTION
- 6 - 8. TRAFFIC CONTROL AND PROTECTION, STANDARD 701321
- 9 - 15. EXISTING STRUCTURE DETAILS: FOR INFORMATION ONLY
16. TEMPORARY INFORMATION SIGNING

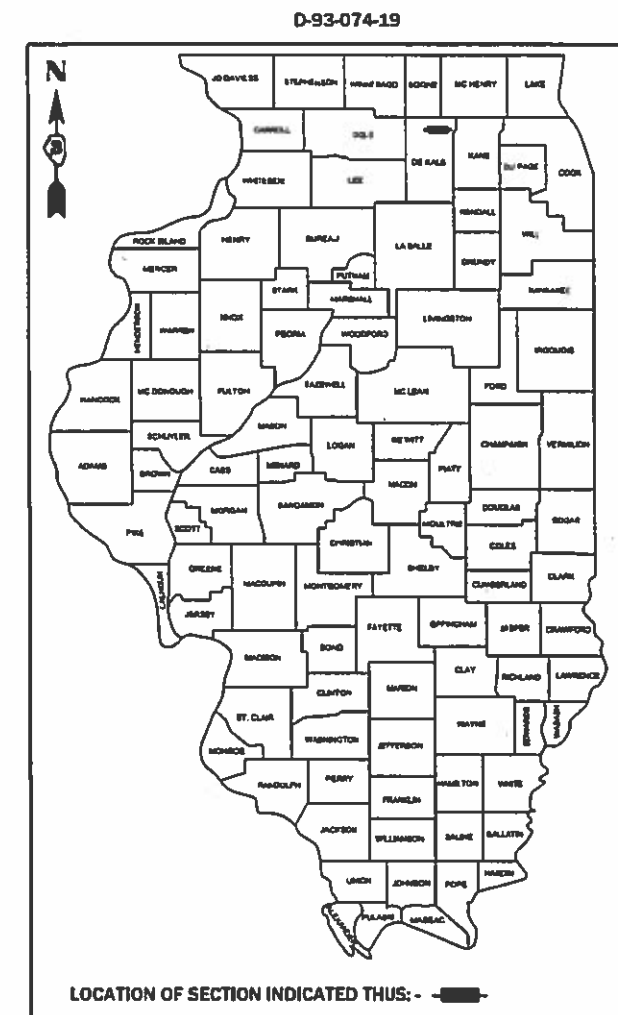
STANDARDS

- | | |
|-----------|--|
| 000001-07 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 701001-02 | OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' (4.5 m) AWAY |
| 701006-05 | OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE |
| 701201-05 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH |
| 701206-05 | LANE CLOSURE, 2L, 2W, NIGHT ONLY, FOR SPEEDS ≥ 45 MPH |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701311-03 | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY |
| 701901-08 | TRAFFIC CONTROL DEVICES |
| 704001-08 | TEMPORARY CONCRETE BARRIER |
| 782006 | GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS |
| 701321-17 | LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER |

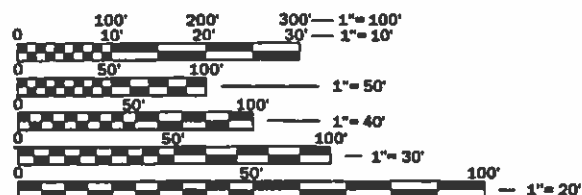
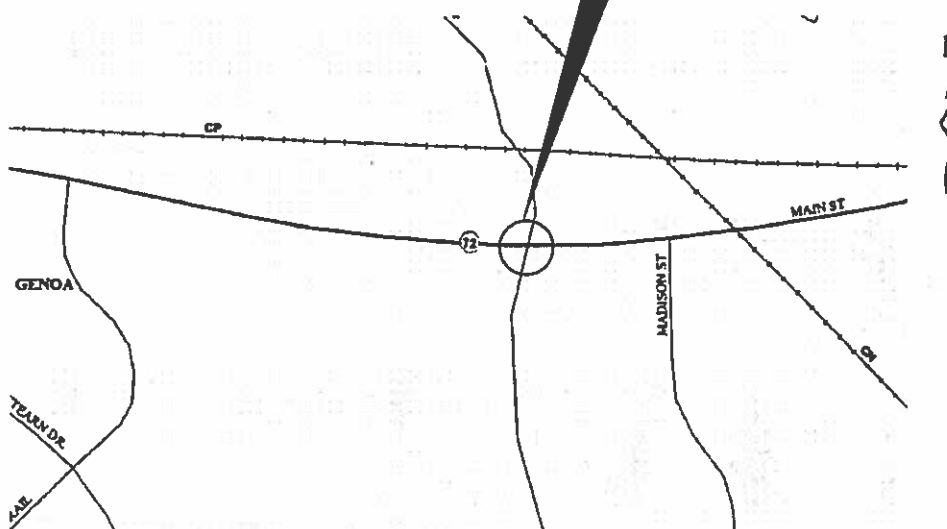
PROPOSED HIGHWAY PLANS

FAP ROUTE 553 (IL 72)
SECTION (127BR-1)BP
PROJECT STP-M3VQ(043)
BRIDGE CLEANING & PAINTING
DEKALB COUNTY

C-93-098-19



PROJECT LOCATION
SN 019-0026
CARRYING FAP 553 (IL 72) OVER THE
S BRANCH OF KISHWAUKEE RIVER
WEST EDGE OF GENOA



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

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

PROJECT ENGINEER: JOE KANNEL, P.E.
UNIT CHIEF: RON WOODSHANK
DISTRICT 3 NO. (815) 434-6131
CONTRACT NO. 66K13

GROSS LENGTH = x.xx FT. = x.xxx MILE
NET LENGTH = x.xx FT. = x.xxx MILE

FUNCTIONAL CLASSIFICATION
URBAN
2017 ADT - 4950
PV = 91.2% SU = 4.3% MU = 4.5%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 03/26 2019
Kevin Karch
REGIONAL ENGINEER

May 10 2019
Paul A. [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

May 10 2019
Paul [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

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 WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

STRUCTURE NO. 019-0026 SHALL BE DESIGNATED AS "LOCATION 1".

THE SSPC-QP1 AND SSPC-QP-2 "PAINTING CONTRACTOR CERTIFICATIONS" WILL BE REQUIRED FOR THIS PROJECT.

A MINIMUM OF TWO AIR MONITORS SHALL BE REQUIRED FOR EACH STRUCTURE. THE CONTRACTOR SHALL FURNISH AND INSTALL THE MONITORS AS DIRECTED BY THE ENGINEER. (SEE THE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".)

CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND AS SPECIFIED BELOW.

- a) ALL EXISTING STRUCTURAL STEEL, (INCLUDING BEAMS, DIAPHRAGMS, DRAINS, CROSS/LATERAL FRAMING WHEN PRESENT AND EXPOSED SURFACES OF BEARING ASSEMBLIES SHALL BE CLEANED PER THE REQUIREMENTS OF "NEAR WHITE BLAST CLEANING - SSPC-SP-10".
- b) ALL EXISTING STRUCTURAL STEEL, (INCLUDING BEAMS, DIAPHRAGMS, DRAINS, CROSS/LATERAL FRAMING WHEN PRESENT AND EXPOSED SURFACES OF BEARING ASSEMBLIES SHALL BE PAINTED PER THE REQUIREMENT OF "PAINT SYSTEM 1-OZ/E/U.
 - 1) THE FINAL FINISH COAT FOR ALL INTERIOR STRUCTURAL STEEL SHALL BE "GRAY, MUNSELL NO. 5B 7/1".
 - 2) FINISH COAT FOR EXTERIOR FACE, BOTTOM FLANGE AND BEARING ASSEMBLIES OF THE FASCIA BEAMS SHALL BE "GREEN, MUNSELL NO. 7.5G 1/2.

THE CONTRACTOR SHALL BE REQUIRED TO SECURE WASTE CONTAINERS THAT REMAIN ON THE JOB SITE. THIS WILL ENTAIL THAT ALL WASTE CONTAINERS CAN NOT BE MOVED OR OPENED DURING NON-WORKING HOURS.

WORKING DAYS SHALL BE CHARGED UNTIL THE CONTRACTOR/SUBCONTRACTOR LISCENSED TO DISPOSE OF LEAD PAINT RESIDUES HAS REMOVED THE WASTE MATERIAL FROM THE JOB SITE ACCORDING TO ALL FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES. IF THE LISCENSED CONTRACTOR OR SUBCONTRACTOR FAILS TO DISPOSE OF THE LEAD PAINT RESIDUES ON OR BEFORE THE SPECIFIED COMPLETION DATE, LIQUIDATED DAMAGES SHALL BE CHARGED PER CALENDAR DAY ACCORDING TO ARTICLE 108.09 OF THE STANDARD SPECIFICATIONS UNTIL SUCH TIME THAT ALL PAINT RESIDUE MATERIALS HAVE BEEN PROPERLY REMOVED AND DISPOSED OF.

COMMITMENTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE
AS BUILT INFORMATION

SUPERVISING CONSTRUCTION FIELD ENGINEER

RESIDENT ENGINEER / TECHNICIAN

START & END DATES
OF CONSTRUCTION:

INSPECTORS:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: *D. Beaulieu*
DISTRICT STUDIES & PLANS ENGINEER

DATE: 03-20-19

EXAMINED BY: *High Verley*
DISTRICT CONSTRUCTION ENGINEER

Michael A. Street
DISTRICT MATERIALS ENGINEER

Tom Hagan
DISTRICT OPERATIONS ENGINEER

FILE NAME =	USER NAME = woodshankr	DESIGNED - RW	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	2
CONTRACT NO. 66K13				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				URBAN	
				BRIDGE PAINTING	
				80% FED	20% STATE
				BRIDGE	
				0047	
				S.N. 019-0026	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	
70100455	TRAFFIC CONTROL AND PROTECTION, STANDARD 701206	L SUM	1	1	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	285	285	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	285	285	
70600251	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1	1	
70600352	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1	1	
* 78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	190	190	
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	95	95	
X2700001	TEMPORARY RUMBLE STRIPS (SPECIAL)	EACH	6	6	
Z0007114	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES	L SUM	1	1	

*SPECIALITY ITEM

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DRAWN - RW	REVISIED -	553					(127BR-1)BP	DEKALB	16	3	
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PLOT DATE = 3/18/2019	DATE - 2/20/2019	REVISIED -		ILLINOIS FED. AID PROJECT							

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	
				CONSTR. CODE	
				80% FED	20% STATE
				BRIDGE	
				0047	
				S.N. 019-0026	
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1		1
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	42		42

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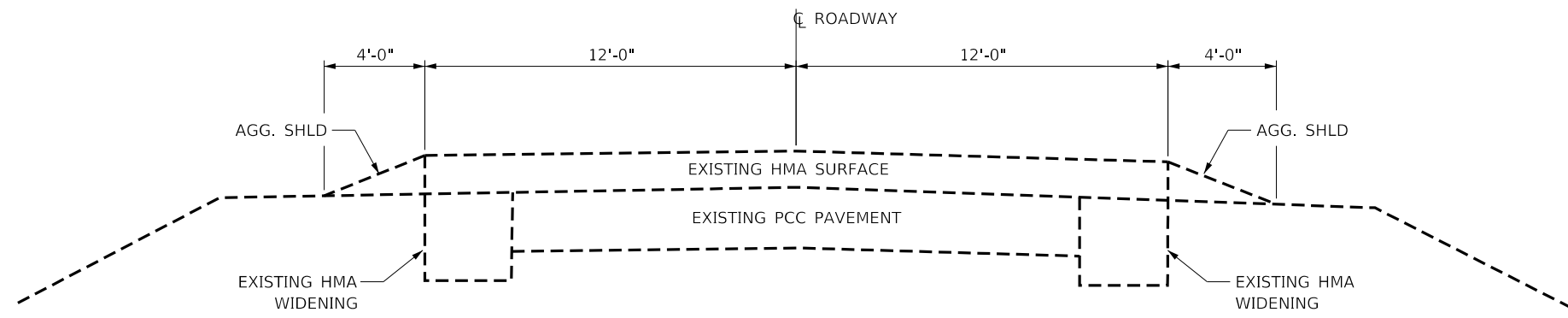
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PLOT DATE = 3/18/2019	DATE - 2/20/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66K13	



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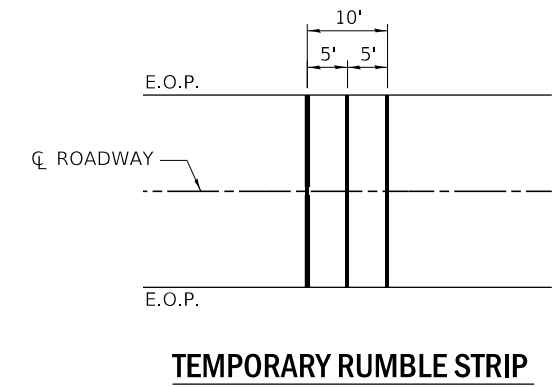
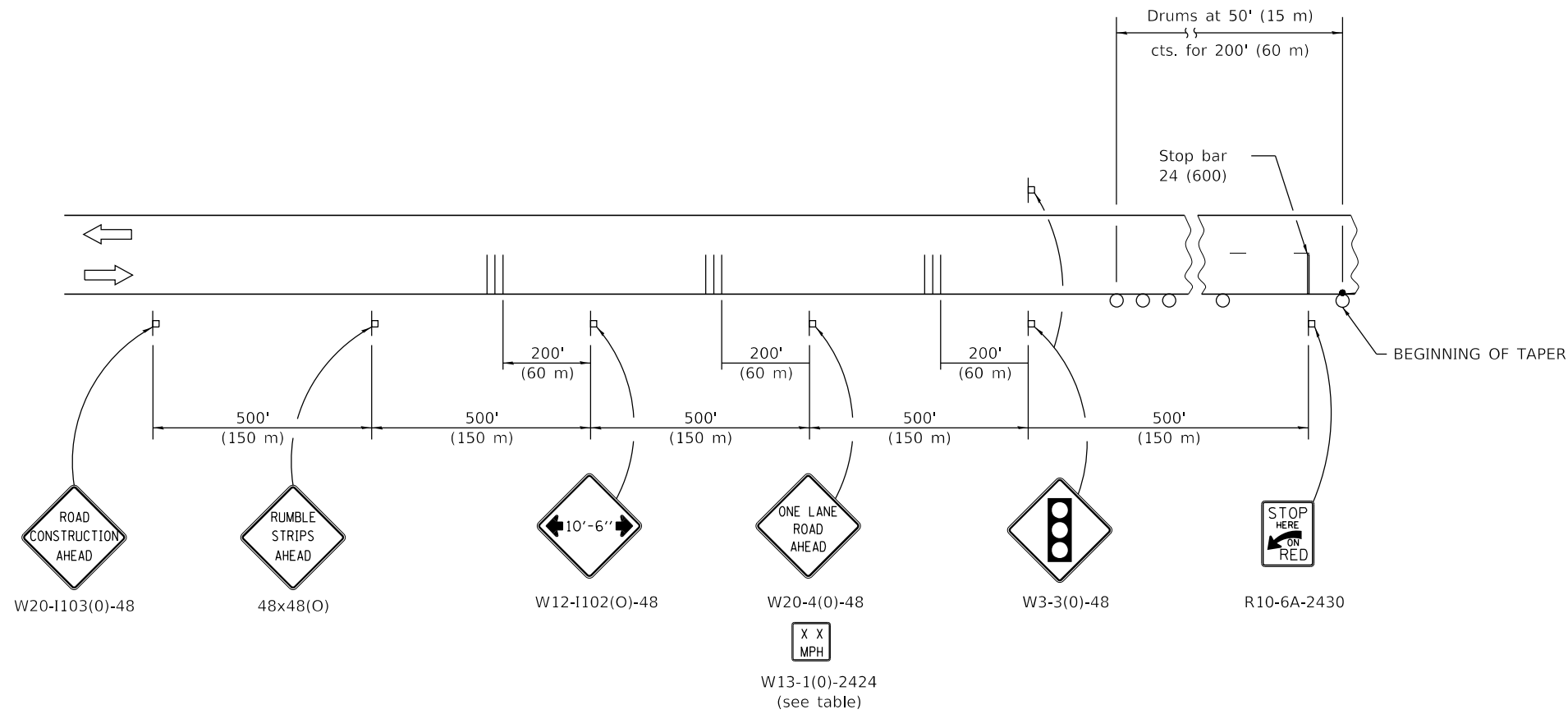
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

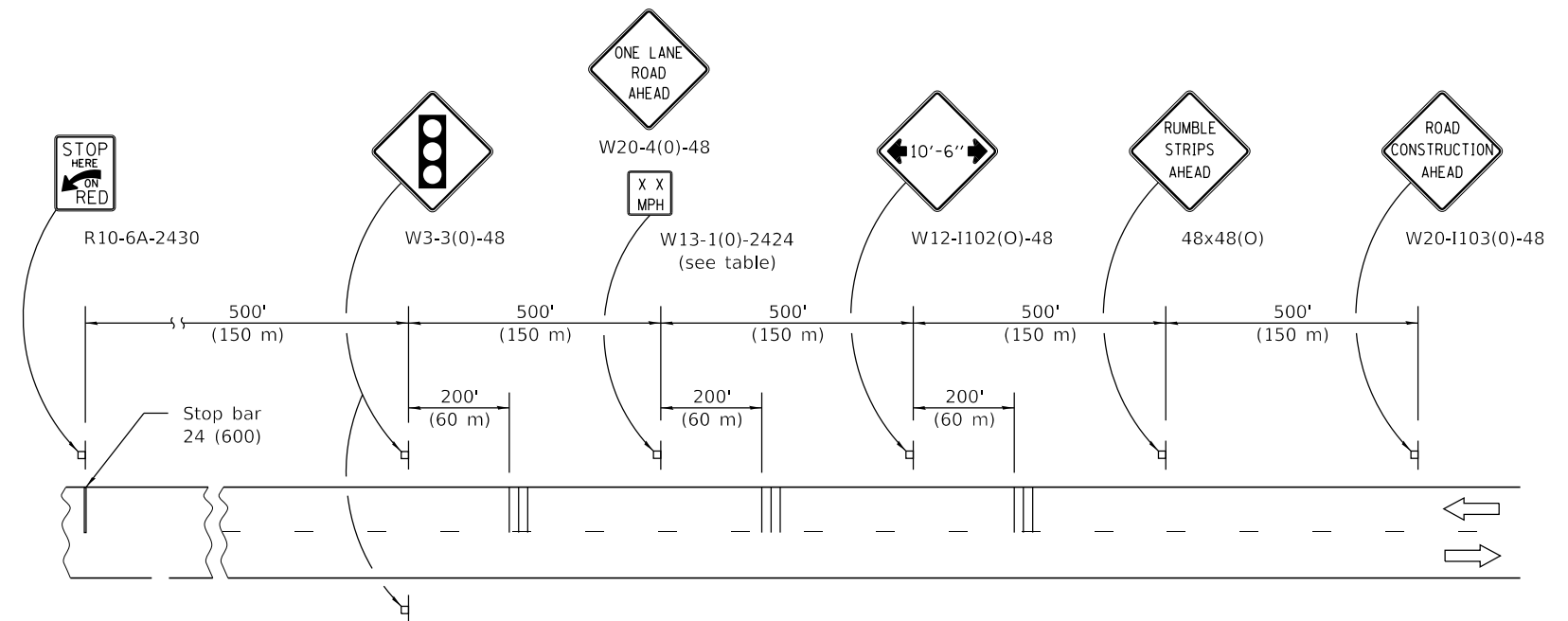
TYPICAL SECTION

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	5
CONTRACT NO. 66K13			ILLINOIS FED. AID PROJECT	



- SYMBOLS**
- SIGN
 - TEMPORARY RUMBLE STRIP (SEE DETAIL & SPECIAL PROVISION)
 - DRUM
 - DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT



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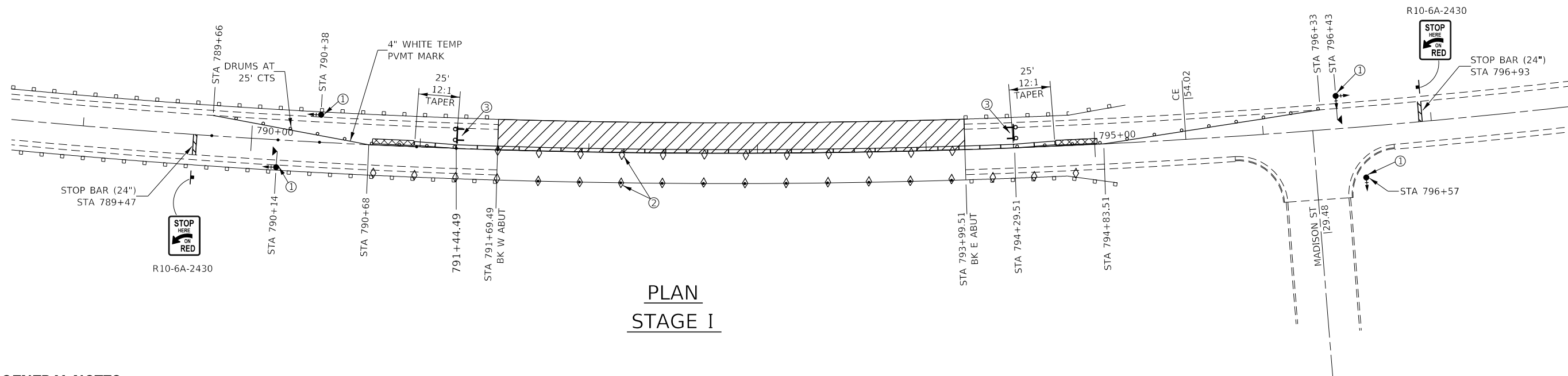
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PLOT DATE = 3/18/2019	DATE - 2/20/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION, STANDARD 701321
ADVANCE SIGNING

SCALE: SHEET 1 OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	6
CONTRACT NO. 66K13				
ILLINOIS FED. AID PROJECT				



**PLAN
STAGE I**

GENERAL NOTES

THIS STANDARD IS USED WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS, OR THEIR ACTIVITIES WILL ENCROACH ON ONE LANE OF A BRIDGE. TRAFFIC SIGNALS AND A POSITIVE BARRIER 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 SHALL CONFORM TO STANDARD 701201 OR 701206.

TEMPORARY CONCRETE BARRIER SHALL BE ACCORDING TO STANDARD 704001.

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

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

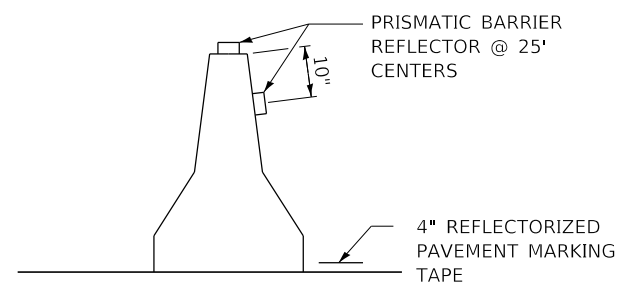
TEMPORARY PAVEMENT MARKING AS SHOWN ON THIS DETAIL, SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE STANDARD.

THE ARROW ON THE BACKSIDE OF THE DIRECTIONAL INDICATOR BARRICADES MUST BE COVERED OR REMOVED. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE COST OF THE APPLICABLE TRAFFIC CONTROL STANDARD.

TRAFFIC SIGNAL SEQUENCE						
PHASE	A			B		
INTERVAL	1	2	3	4	5	6
NORTHBOUND OR EASTBOUND	G	Y	R	R	R	R
SOUTHBOUND OR WESTBOUND	R	R	R	G	Y	R

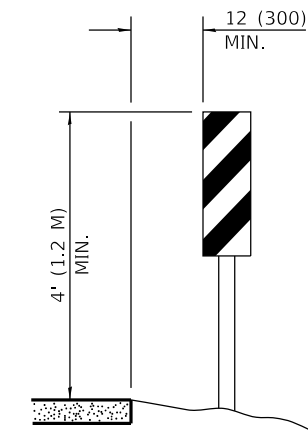
TEMPORARY CONCRETE BARRIER	
NORMAL POSTED SPEED	TAPER RATIO
40 mph AND ABOVE	12:1
BELOW 40 mph	8:1

ADVISORY SPEED LIMIT	
NORMAL POSTED SPEED	ADVISORY SPEED
55 - 45 mph	40 mph
40 mph	35 mph
35 - 30 mph	30 mph



TEMPORARY CONCRETE BARRIER WALL DETAILS

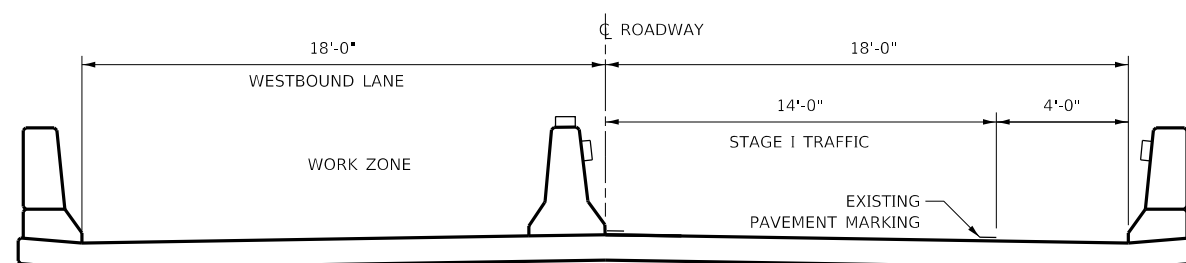
- ① THE EDGE OF THE POST MOUNTED SIGNAL HEAD SHALL BE BETWEEN 24 (610) AND 6' (1.8 M) FROM EDGE OF SHOULDER.
- ② GUARDRAIL/BARRIER WALL REFLECTORS AT 25' (7.6 M) CTS. SEE STANDARDS 704001 & 782006.
- ③ TYPE III BARRICADE TO BE PLACED WHEN NO WORK IS BEING PERFORMED.



VERTICAL PANELS
(POST MOUNTED, ONE EACH SIDE)

SYMBOLS

- WORK AREA
- SIGN
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TRAFFIC SIGNAL WITH BACKPLATE
- TEMPORARY IMPACT ATTENUATOR (NARROW)
- MICROWAVE DETECTOR
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT (TAPERS)
- DRUM (TANGENTS)
- TEMPORARY CONCRETE BARRIER
- CRYSTAL, BIDIRECTIONAL GUARDRAIL/BARRIER WALL REFLECTOR



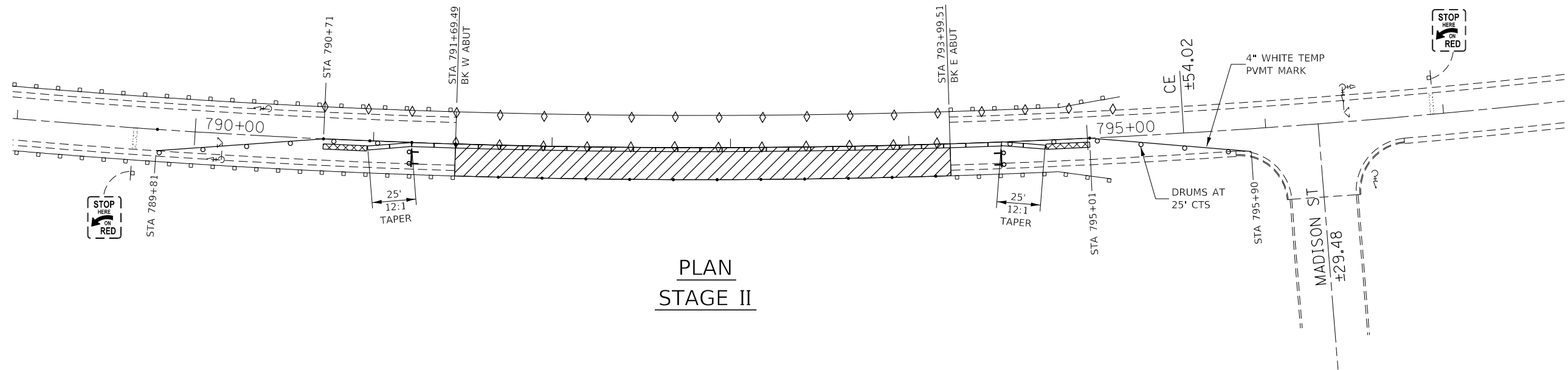
CROSS SECTION STAGE I
LOOKING EAST

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION, STANDARD 701321
STAGE I**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	7
CONTRACT NO. 66K13				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET 2 OF SHEETS STA. TO STA.



**PLAN
STAGE II**

GENERAL NOTES

THIS STANDARD IS USED WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS, OR THEIR ACTIVITIES WILL ENCROACH ON ONE LANE OF A BRIDGE. TRAFFIC SIGNALS AND A POSITIVE BARRIER 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 SHALL CONFORM TO STANDARD 701201 OR 701206.

TEMPORARY CONCRETE BARRIER SHALL BE ACCORDING TO STANDARD 704001.

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

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

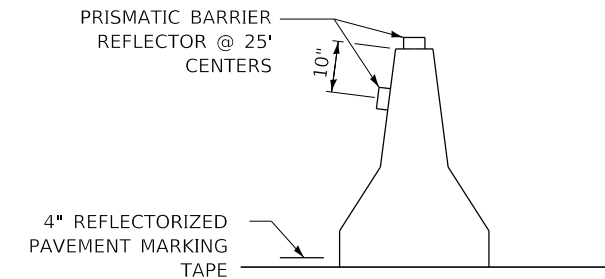
TEMPORARY PAVEMENT MARKING AS SHOWN ON THIS DETAIL, SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE STANDARD.

THE ARROW ON THE BACKSIDE OF THE DIRECTIONAL INDICATOR BARRICADES MUST BE COVERED OR REMOVED. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE COST OF THE APPLICABLE TRAFFIC CONTROL STANDARD.

TRAFFIC SIGNAL SEQUENCE						
PHASE	A			B		
INTERVAL	1	2	3	4	5	6
NORTHBOUND OR EASTBOUND	G	Y	R	R	R	R
SOUTHBOUND OR WESTBOUND	R	R	R	G	Y	R

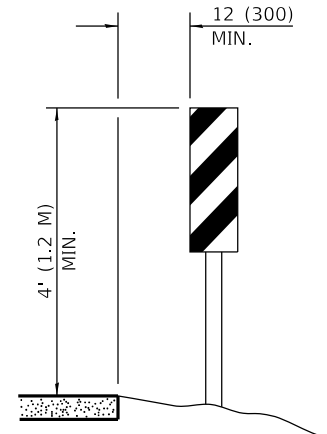
TEMPORARY CONCRETE BARRIER	
NORMAL POSTED SPEED	TAPER RATIO
40 mph AND ABOVE	12:1
BELOW 40 mph	8:1

ADVISORY SPEED LIMIT	
NORMAL POSTED SPEED	ADVISORY SPEED
55 - 45 mph	40 mph
40 mph	35 mph
35 - 30 mph	30 mph



TEMPORARY CONCRETE BARRIER WALL DETAILS

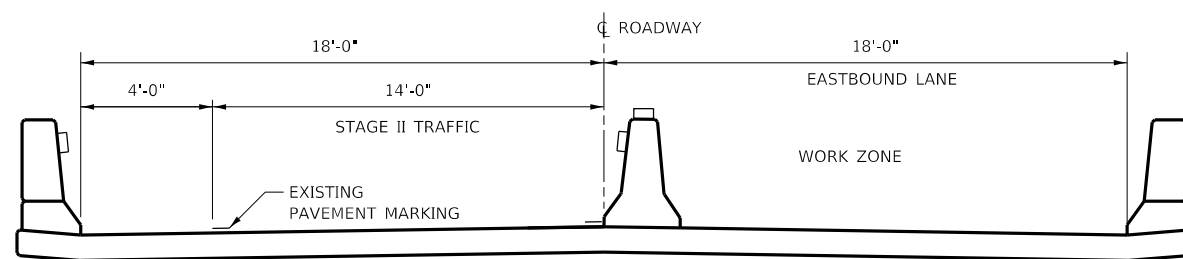
- ① THE EDGE OF THE POST MOUNTED SIGNAL HEAD SHALL BE BETWEEN 24 (610) AND 6' (1.8 M) FROM EDGE OF SHOULDER.
- ② GUARDRAIL/BARRIER WALL REFLECTORS AT 25' (7.6 M) CTS. SEE STANDARDS 704001 & 782006.
- ③ TYPE III BARRICADE TO BE PLACED WHEN NO WORK IS BEING PERFORMED.



VERTICAL PANELS
(POST MOUNTED, ONE EACH SIDE)

SYMBOLS

- WORK AREA
- SIGN
- TYPE III BARRICADE WITH FLASHING LIGHTS
- TRAFFIC SIGNAL WITH BACKPLATE INSTALLED FOR STAGE I
- TEMPORARY IMPACT ATTENUATOR (NARROW)
- MICROWAVE DETECTOR INSTALLED FOR STAGE I
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT (TAPERS)
- DRUM (TANGENTS)
- TEMPORARY CONCRETE BARRIER
- CRYSTAL, BIDIRECTIONAL GUARDRAIL/BARRIER WALL REFLECTOR



CROSS SECTION STAGE II
LOOKING EAST

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USER NAME = woodshankr	DESIGNED - RW	REVISED -
	DRAWN - RW	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED - EP	REVISED -
PLOT DATE = 3/18/2019	DATE - 2/20/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION, STANDARD 701321
STAGE II**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	8
CONTRACT NO. 66K13			ILLINOIS FED. AID PROJECT	

BENCH MARK:

U.S.C. & G.S. standard dist. of 1001M001 w/width of existing bridge, Elev. 801.62

DESCRIPTION OF IMPROVEMENT:

The improvement includes total replacement of the existing superstructure and the widening of the existing substructure units. The existing structure, S.N. 019 - 0026, built in 1931, is a five-span reinforced concrete deck girder 230'-0" back to back of abutments and 32'-7" out to out. The existing structure shall be replaced with a five-span continuous steel beam superstructure with widened abutments and piers supported on piling. Stage construction shall be used to maintain one lane of traffic at all times. No salvage.

F.A.S. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.S. 553	127 BR-1	DEKALB	46	9	3
FED. ROAD DIST. NO. 7		SHEET NO.		FED. AID PROJECT	

DESIGN DATA

DESIGN SPECIFICATIONS:
A.A.S.M.T.O. 1983 (New Construction Only) with 1984 & 1985 Interims

DESIGN LOAD: HS 20-44
Allow 25 pounds per square foot for future wearing surfaces.

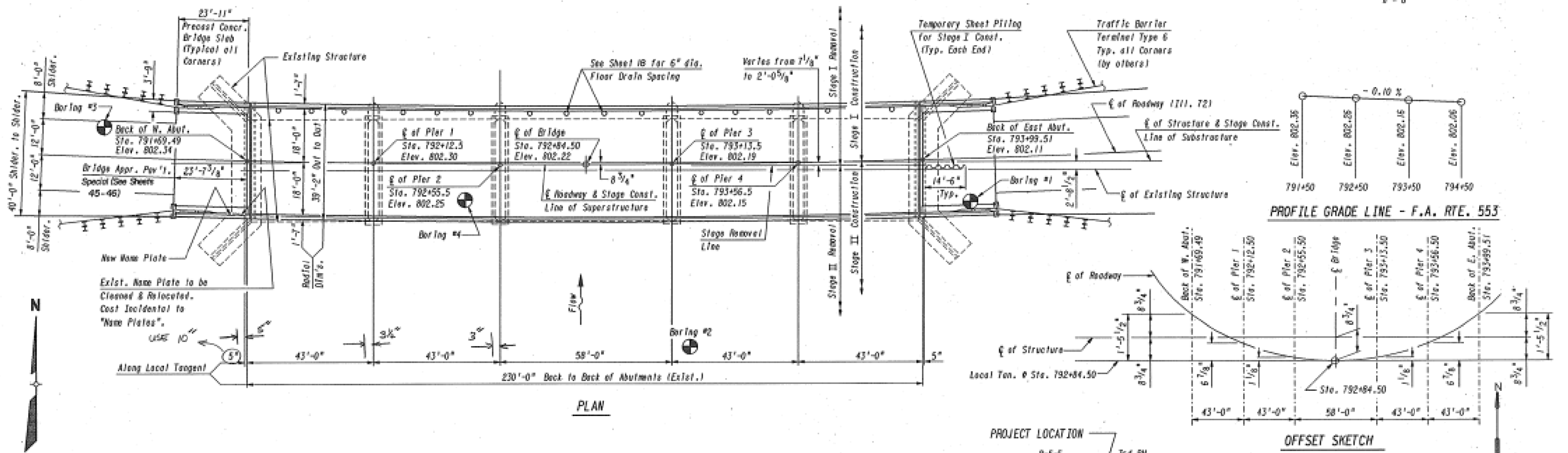
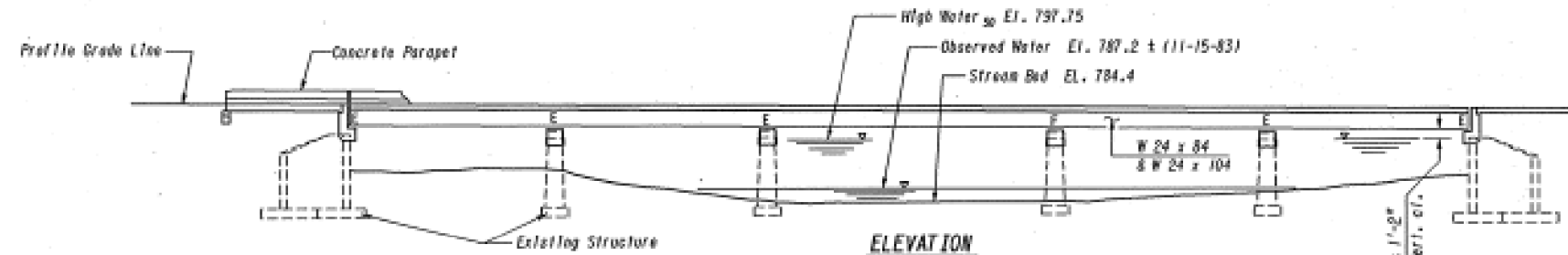
NEW DESIGN STRESSES:
Field Girders
 $f_c = 3,500$ P.S.I.
 $f_y = 60,000$ P.S.I. (Relief.)
 $f_y = 38,000$ P.S.I. (W183)
 $f_y = 50,000$ P.S.I. (W273, Grade 50)

Precast Concrete Bridge Slabs

$f_c = 4,500$ P.S.I.
 $f_c = 1,800$ P.S.I.
 $f_s = 20,000$ P.S.I.
 $e = 8$

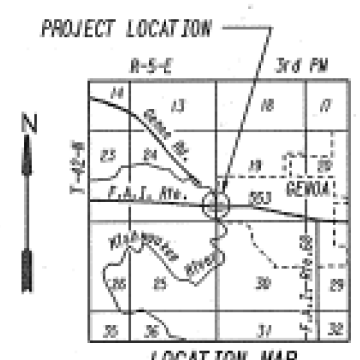
CURVE DATA

$R = 4523.00'$
 $D = 1^\circ-16'-0.4"$
 $\Delta = 20^\circ-41'-27.80"$
 $L = 1633.38'$
 $PI = 792 + 58.23$
 $T = 825.68$
 $E = 74.75$



PROFILE GRADE LINE - F.A. RTE. 553

OFFSET SKETCH

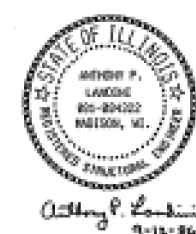


LOCATION MAP

WATERWAY INFORMATION

DRAINAGE AREA = 248.8 SQ. MI. LOW GRADE ELEVATION = 797.0 AT STATION 792 + 00

FLOOD	FREQ. YR.	O	C.F.S.	OPENING SO. FT.		N.W.E.	HEAD - FEET		HEADWATER ELEV.	
				EXISTING	PROPOSED		EXISTING	PROPOSED	EXISTING	PROPOSED
DESIGN	50	8307	1959	1977	797.75	0.28	0.28	798.03	798.03	
BASE	100	9431	1996	2175	798.69	0.20	0.20	798.89	798.89	
OVERTOPPING	20	6822	1800	1800	796.91	0.28	0.28	797.19	797.19	
MAX. CALC.	500									



APPROVED
FOR STRUCTURAL ADOPTION ONLY.
James I. Raybatter
Engineer of Civil

GENERAL PLAN & ELEVATION

F.A. ROUTE 553 (ILLINOIS 72)
OVER KISHWAUKEE RIVER
F.A. ROUTE 553 SECTION 127 BR-1
STRUCTURE NO. 019 - 0026
DEKALB COUNTY
STA. 792 + 84.50

FOR INFORMATION ONLY

Donohue
Engineers & Architects

DESIGN BY: D.S.	DESIGN CR'D. BY: M.T.M.	DRAWN BY: D.F.K.	CHECKED BY: D.S.
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PROJECT NUMBER 13316.406

USER NAME = woodshankr	DESIGNED - RW	REVISED -
PLOT SCALE = 100,000' / in.	DRAWN - RW	REVISED -
PLOT DATE = 3/18/2019	CHECKED - EP	REVISED -
	DATE - 2/20/2019	REVISED -

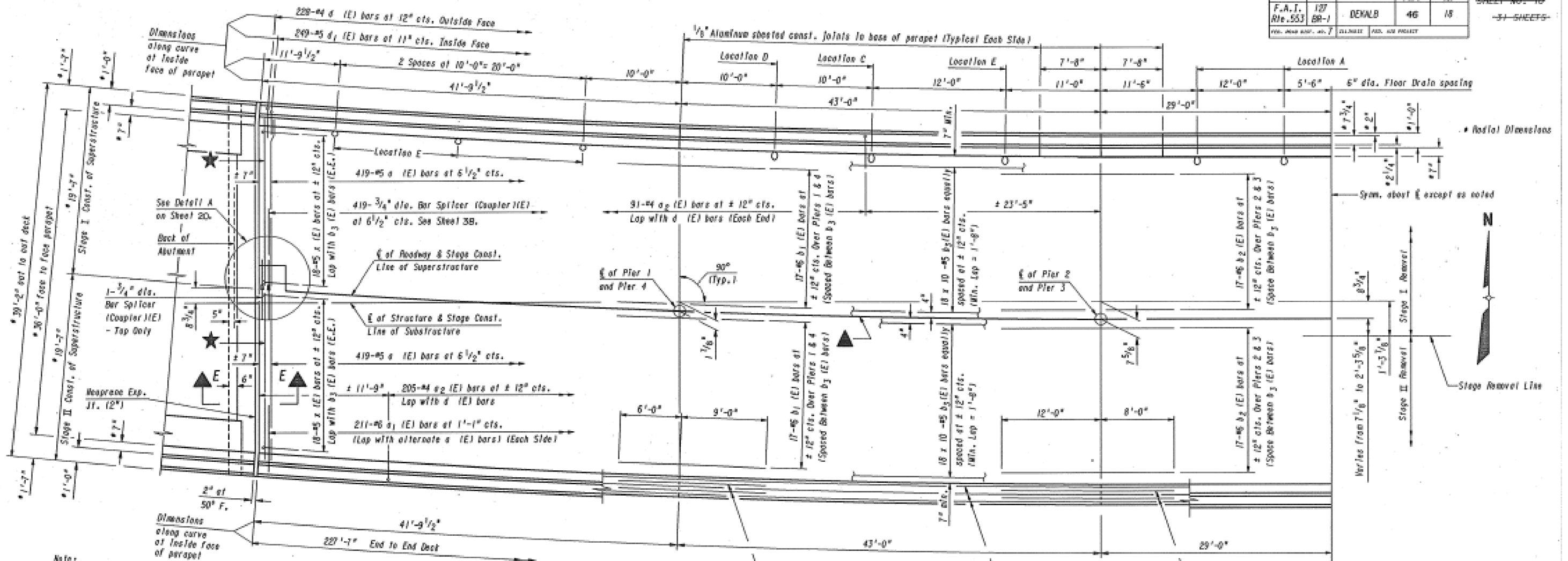
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 019-0026

SCALE: SHEET 1 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	9
CONTRACT NO. 66K13				
ILLINOIS FED. AID PROJECT				

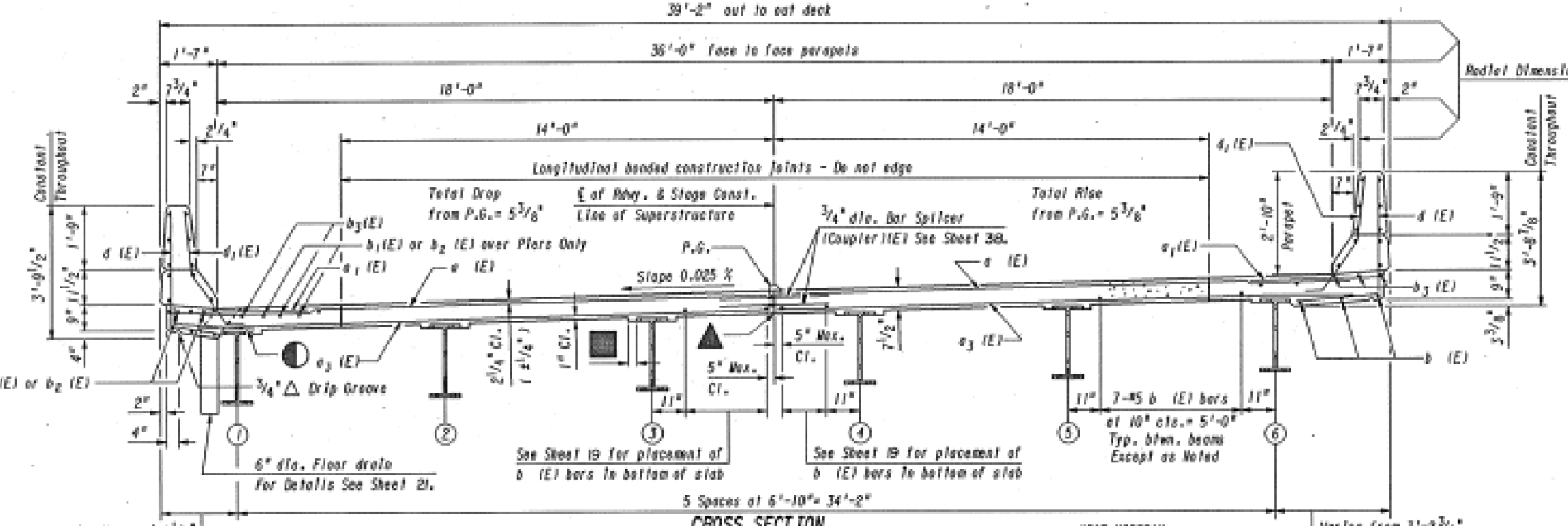
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HALF PLAN - TOP OF SLAB REINFORCEMENT

Note:
All top of slab longitudinal reinforcement bars to be placed parallel to ξ of Roadway.

- ★ 1-#5 (E) bars Top & Bottom See Section E-E on Sheet 20.
- a_2 (E) bars - Place bars 1" min. clear above beam. For location see Half Plan above.
- ▲ Bonded Construction Joint



CROSS SECTION (Looking East)

NOTES:
See Sheet 20 for Sec. E-E, Bar Bend Details, and Bill of Materials.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 21 for Superstructure Details.
3" Wide Shoulder full length, Contractor has the option to increase the 3" wide shoulder to 4 1/8" of locallness of the W 24 x 84.
Drains shall be located clear of all diaphragms.

SUPERSTRUCTURE

F.A. ROUTE 553 (ILLINOIS 72)
OVER KISHWAUKEE RIVER
F.A. ROUTE 553 SECTION 127 BR-1
STRUCTURE NO. 019 - 0026
DEKALB COUNTY
STA. 792 + 84.50

Donohue Engineers & Architects			
DESIGN BY: D.S.	DESIGN CK'D. BY: W.T.H.	DRAWN BY: D.F.K.	CHECKED BY: LEN
PROJECT NUMBER 13316.406			

USER NAME = woodshankr	DESIGNED - RW	REVISED -
	DRAWN - RW	REVISED -
PLOT SCALE = 100,000' / in.	CHECKED - EP	REVISED -
PLOT DATE = 3/18/2019	DATE - 2/20/2019	REVISED -

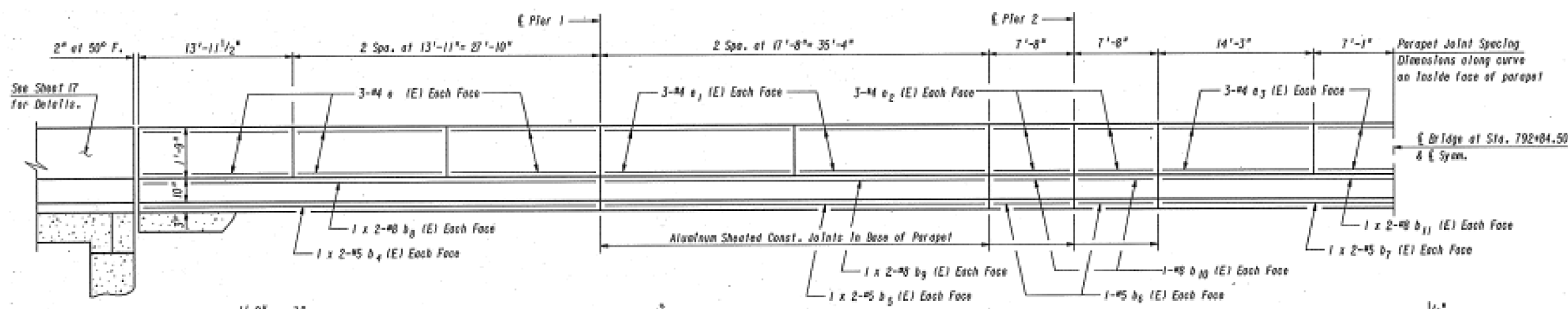
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING STRUCTURE PLANS
STRUCTURE NO. 019-0026**

SCALE: SHEET 2 OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	10
CONTRACT NO. 66K13				
ILLINOIS FED. AID PROJECT				

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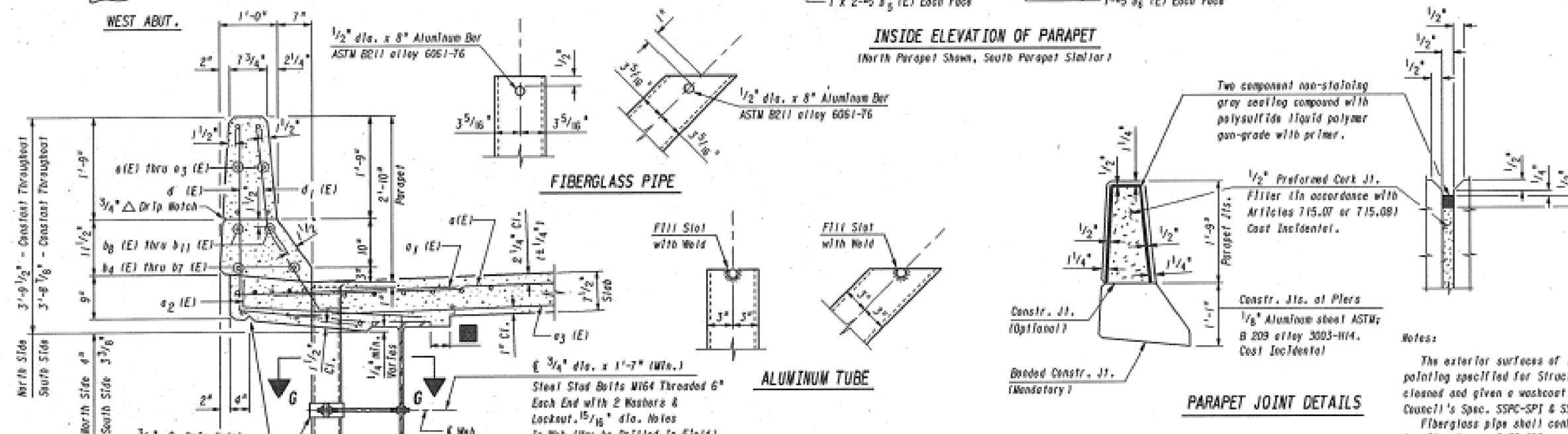


BILL OF MATERIAL - SUPERSTRUCTURE

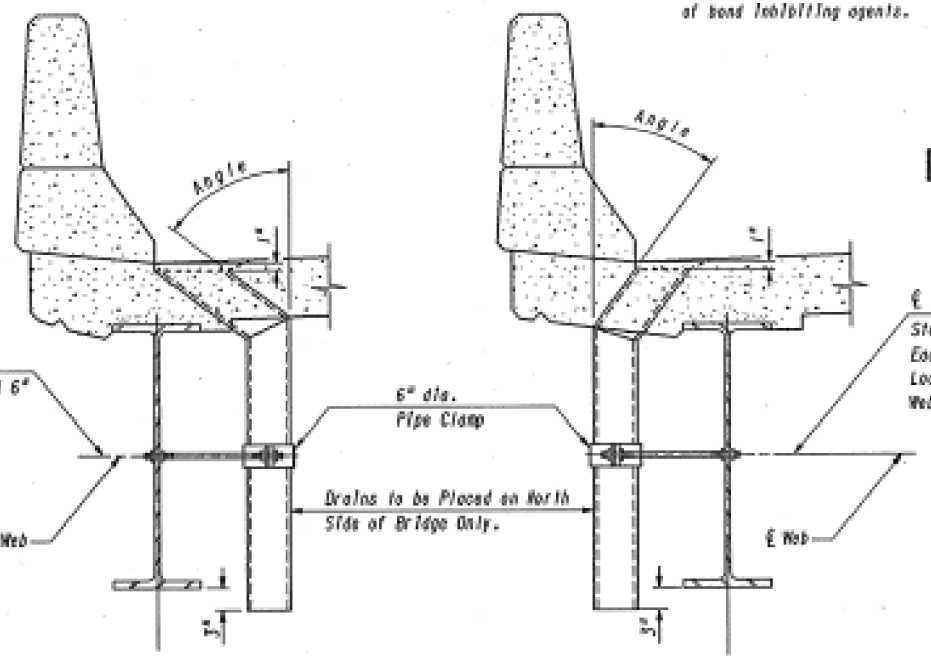
BAR	NUMBER	SIZE	LENGTH	SHAPE
b ₄ (E)	16	# 5	21'-7"	
b ₅ (E)	16	# 5	18'-4"	
b ₆ (E)	16	# 5	7'-4"	
b ₇ (E)	8	# 5	22'-0"	
b ₈ (E)	16	# 8	22'-5"	
b ₉ (E)	16	# 8	19'-2"	
b ₁₀ (E)	16	# 8	7'-4"	
b ₁₁ (E)	8	# 8	22'-10"	
a ₁ (E)	72	# 4	13'-7"	
a ₂ (E)	48	# 4	17'-4"	
a ₃ (E)	48	# 4	7'-4"	
a ₃ (E)	36	# 4	13'-10"	
Reinforcement Bars (Epoxy Coated)		Lbs.	5,330	
Class X Concrete		Cu. Yds.	46.1	

Notes:
 Reinforcement bars designated (E) shall be epoxy coated.
 Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

INSIDE ELEVATION OF PARAPET
 (North Parapet Shown, South Parapet Similar)



PARAPET JOINT DETAILS



Notes:
 The exterior surfaces of the Floor Drains shall be painted with the vinyl enamel coating specified for Structural Steel. The exterior surfaces of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec. SSPC-SP1 & SSPC-Paint 21 prior to painting.
 Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength being tensile stress of 30,000 p.s.i. minimum. The surface of the fiberglass pipe shall be free of bond inhibiting agents.

MIN. BAR LAPS

- #5 Bar - 1'-8"
- #8 Bar - 3'-5"

3" Wide Shoulder full length, Contractor has the option to increase the 3" wide shoulder to 4 1/2" at locations of the W 24 x 84.

PARAPET DETAILS

F.A. ROUTE 553 (ILLINOIS 72)
 OVER KISHAWOKEE RIVER
 F.A. ROUTE 553 SECTION 127 BR-1
 STRUCTURE NO. 019 - 0026
 DEKALB COUNTY
 STA. 792 + 84.50

SEC. THRU PARAPET - FLOOR DRAIN DETAIL 3

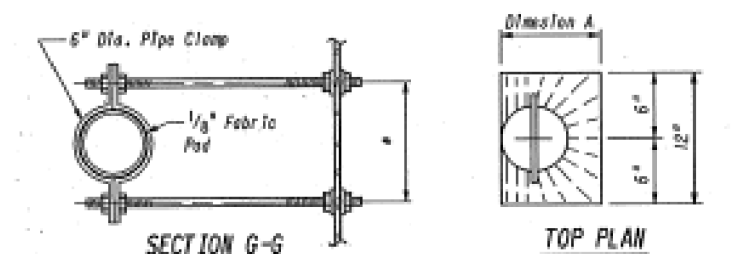


TABLE - FLOOR DRAINS

Location	No. Req'd.	Detail	Angle	Dim. A
A	4	1	48°-30'	12"
B	2	2	58°-00'	14 1/2"
C	2	2	41°-20'	11"
D	2	2	29°-00'	10"
E	8	3	Straight	9"

Note:
 See Sheet 18 for Location of Floor Drains.

SEC. THRU PARAPET - FLOOR DRAIN DETAIL 1

SEC. THRU PARAPET - FLOOR DRAIN DETAIL 2

Donohue
 Engineers & Architects

DESIGN BY: D.S.	DESIGN CK'D. BY: M.T.N.	DRAWN BY: D.F.N.	CHECKED BY: LEN
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 PLOT DATE: 3/18/2019

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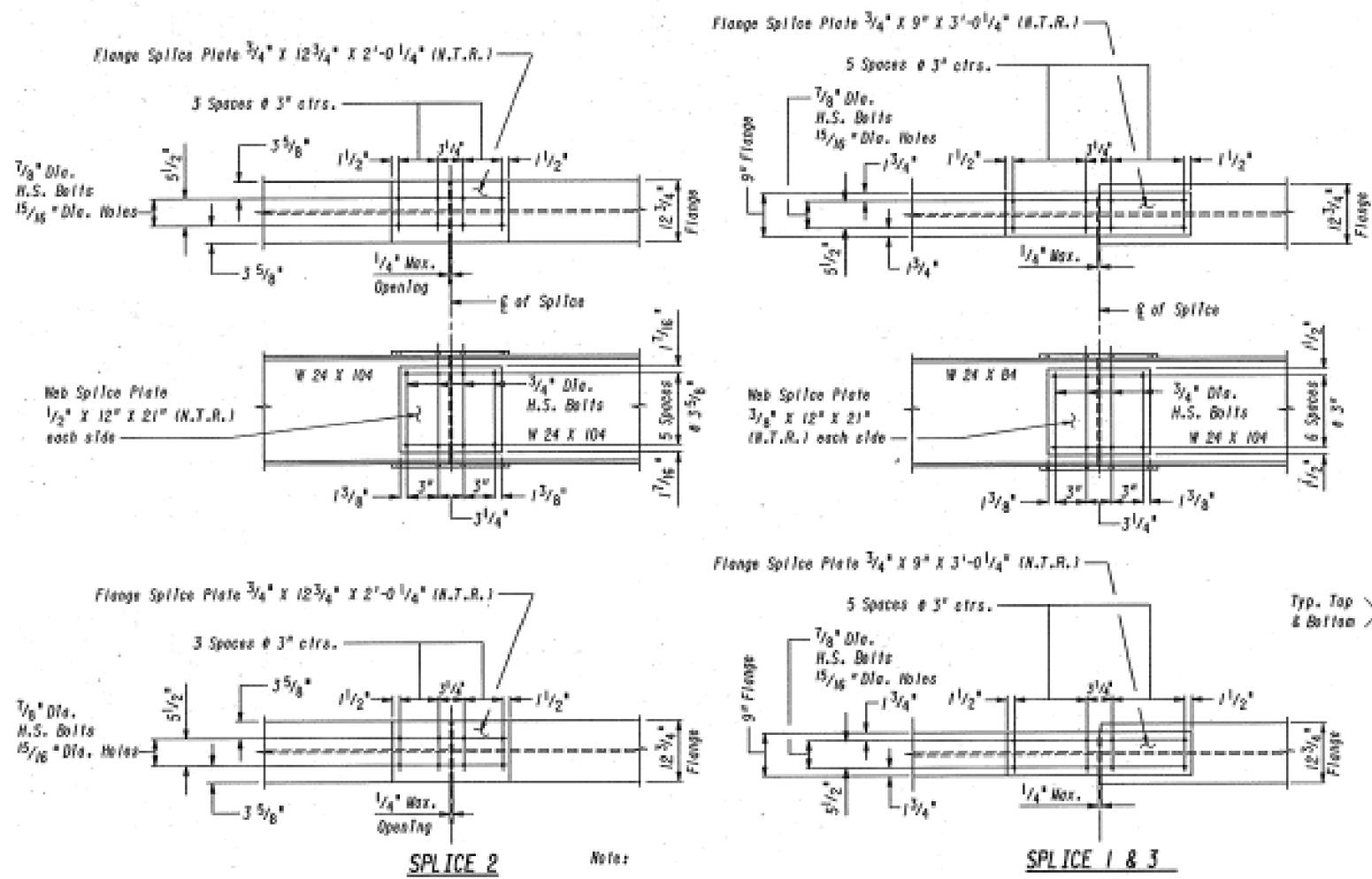
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
 STRUCTURE NO. 019-0026

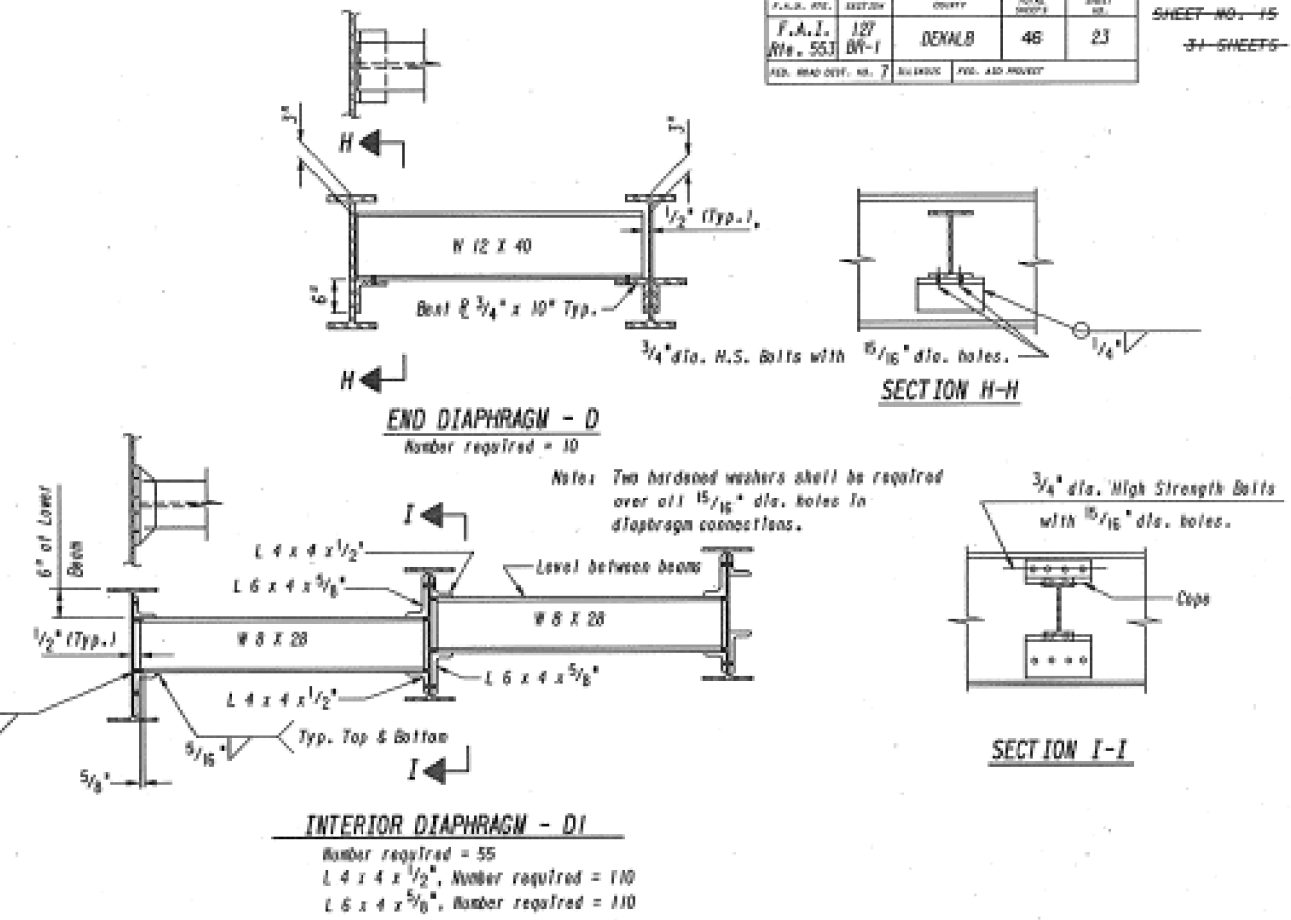
SCALE: SHEET 3 OF SHEETS STA. TO STA.

F.A.P. RTE. 553	SECTION (127BR-1)BP	COUNTY DEKALB	TOTAL SHEETS 16	SHEET NO. 11
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66K13	

FOR INFORMATION ONLY



Notes:
 All splice plate material shall conform to the requirements of AASHTO M-223, Grade 50.
 *N.T.R. denotes Notch Toughness Requirements.



Notes:
 Two hardened washers shall be required over all 1 5/16 inch diameter holes in diaphragm connections.

NOTES:
 All diaphragms located between beams 3 & 4 shall be installed during Stage II Construction.
 The Contractor shall temporarily support Diaphragm's Di, located between beams 2 & 3, during the installation of Diaphragm's Di, located between beams 3 & 4 (Cost Incidental). The 3/4 inch diameter high strength bolts used to connect the connection angles of Diaphragm's Di to beams 3 & 4 shall be finger-tightened at locations as noted on sheet 22. After Stage III Construction of the superstructure, these 3/4 inch diameter high strength bolts shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications.

*** TOP OF BEAM ELEVATIONS**

LOCATION	BEAM					
	1	2	3	4	5	6
§ Arg. W. Abut.	801.26	801.43	801.60	801.77	801.94	802.11
§ Arg. Pier 1	801.14	801.31	801.48	801.65	801.82	801.99
§ Splice 1	801.05	801.23	801.40	801.57	801.74	801.91
§ Arg. Pier 2	801.04	801.21	801.38	801.55	801.72	801.90
§ Splice 2	800.99	801.16	801.34	801.51	801.68	801.85
§ Pier 3	800.98	801.15	801.33	801.50	801.67	801.84
§ Splice 3	800.97	801.14	801.31	801.48	801.65	801.82
§ Pier 4	800.99	801.16	801.34	801.51	801.68	801.85
§ Arg. E. Abut.	801.03	801.20	801.38	801.55	801.72	801.89

INTERIOR BEAM MOMENT TABLE

	0.4 Sp. 1 & 0.6 Sp. 5	Piers 1 & 4	0.5 Sp. 2 & 0.5 Sp. 4	Piers 2 & 3	0.5 Sp. 3
I_s (In. ⁴)	2370	2370	2370	3100	3100
S_x (In. ³)	---	196	196	258	258
Z (In. ³)	224	---	---	---	---
Q (K/ft)	1.040	1.040	1.047	1.060	1.060
M_D (K)	143	166	32	252	194
M_L (K)	230	168	196	217	282
M_{Imp} (K)	68	50	58	62	77
M_2 (M ₂ + I) (K)	496	364	424	465	589
M_3 (K)	831	689	594	928	1028
M_4 (K)	933	---	---	---	---
$I_s \bar{Q}$ (In.-s.f.)	8.8	10.2	2.0	11.6	9.0
$I_s \bar{Q}^2$ (In.-s.f.)	30.4	22.3	26.0	21.6	27.9
I_s (Overload M.S.J.)	39.2	32.5	28.0	33.2	36.8
I_s (Total) (In.-s.f.)	---	42.3	36.4	43.2	47.8

INTERIOR BEAM REACTION TABLE

	Abut.	Piers 1 & 4	Piers 2 & 3
R_D (K)	17.2	46.0	55.3
R_L (K)	32.5	41.1	42.0
$Imp.$ (K)	9.8	12.3	12.0
R_{Total} (K)	59.5	99.4	109.4

I_s and S_x are the moment of inertia and section modulus of the steel section used in computing I_s (Total and Overload).
 Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.
 I_s (Total) is the sum of the stresses due to $1.3 CWQ + 5/3 (M_L + I)$
 I_s (Overload) is the sum of the stresses due to $M_D + 5/3 (M + I)$
 M_D - Moment due to dead loads
 M_L - Moment due to live loads
 I - Live load impact
 M_2 - Full Plastic Moment capacity for compact, braced section.
 M_3 - Non-compact section
 M_4 (Applied Moment) = $1.3 CWQ + 5/3 (M_L + I)$

Donohue
 Engineers & Architects
 3000 N. W. 10th St., Ft. Lauderdale, FL 33309
 (954) 576-1111

DESIGN BY: D.S.	DESIGN CHECK BY: M.T.N.	DRAWN BY: D.J.A.	CHECKED BY: D.S.
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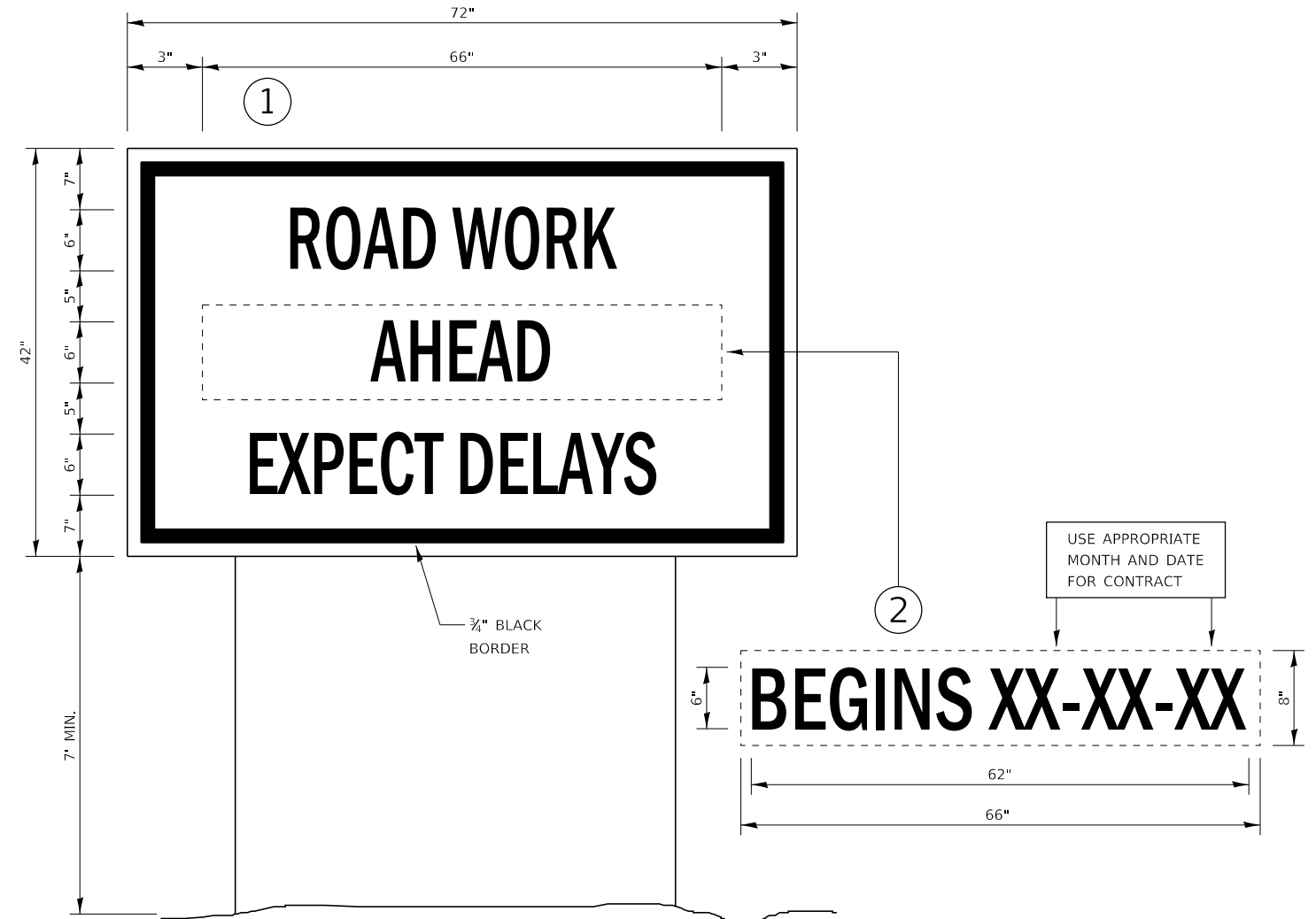
PROJECT NUMBER: 1316.406

* For Fabrication Only

FRAMING PLAN DETAILS

F.A. ROUTE 553 (ILLINOIS 72)
 OVER KISHWAUKEE RIVER
 F.A. ROUTE 553 SECTION 127 BR-1
 STRUCTURE NO. 019 - 0026
 DEKALB COUNTY
 STA. 792 + 84.50

FOR INFORMATION ONLY



TEMPORARY INFORMATION SIGNING

NOTES:

1. USE 6" D BLACK LETTERING ON FLUORESCENT ORANGE BACKGROUND.
2. ERECT SIGNS AT LOCATIONS IN ADVANCE OF THE "ROAD CONSTRUCTION AHEAD" SIGNS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② A MINIMUM OF ONE WEEK PRIOR TO THE START OF THE LANE CLOSURE.
4. REMOVE PANEL ② ON THAT DATE.
5. SEE SPECIAL PROVISION "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. WILL BE PAID FOR PER SQ FT AS "TEMPORARY INFORMATION SIGNING". EACH SIGN = 21 SQ FT AND THE DATE PANEL ② WILL NOT BE MEASURED SEPARATELY FOR PAYMENT.

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PLOT DATE = 3/18/2019	DATE - 2/20/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TEMPORARY INFORMATION SIGNING

SCALE: SHEET 1 OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
553	(127BR-1)BP	DEKALB	16	16
CONTRACT NO. 66K13			ILLINOIS FED. AID PROJECT	