### STATE OF ILLINOIS

# **DEPARTMENT OF TRANSPORTATION**

**DIVISION OF HIGHWAYS** 

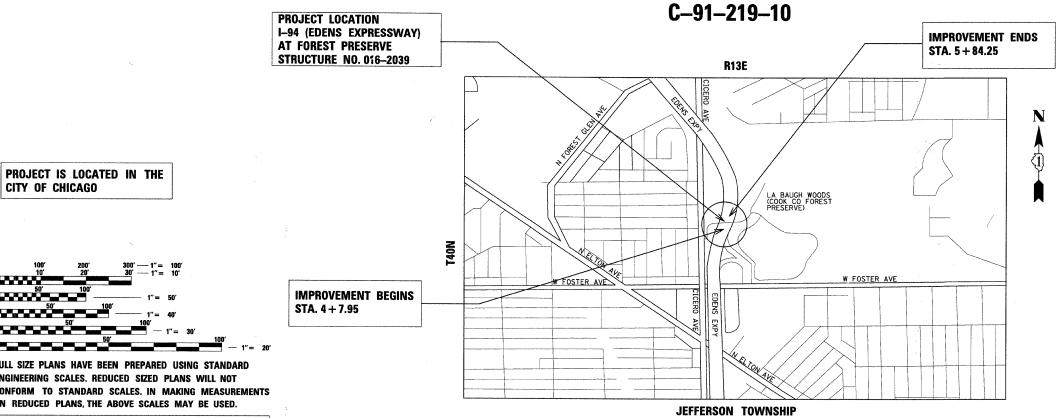
FOR INDEX OF SHEETS, SEE SHEET NO. 2

# **PROPOSED** HIGHWAY PLANS

TRAFFIC DATA:

POSTED SPEED = 15 MPH

FAI 94 / I-94 (EDENS EXPRESSWAY) AT FOREST PRESERVE **BRIDGE DECK OVERLAY, JOINT REPAIR SECTION 0101.15-I** PROJECT NO. IM-094-2(245)043 **COOK COUNTY** 



ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 OR 811

GROSS LENGTH OF PROJECT = 176.3 FEET = 0.033 MILES NET LENGTH OF PROJECT = 176.3 FEET = 0.033 MILES

**LOCATION MAP** 

NOT TO SCALE

PROJECT MANAGER RAJENDRA SHAH (847) 705-4555 PROJECT ENGINEER MICHELLE AQUINO (847) 705-4606

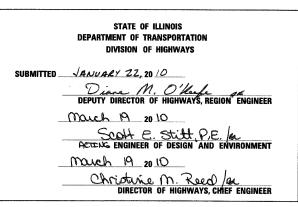
CONTRACT NO. 60J29



TOTAL SHEET NO. SECTION COUNTY 0101 15-I COOK FED ROAD DIST No. 1 ILLINOIS CONTRACT NO. 60J29

#### D-91-219-10





#### PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS



TED W. LACHUS P.E. EXPIRES 11-30-2011

1-29-2010

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- 20 TC-22 DISTRICT ONE ARTERIAL ROAD INFORMATION SIGN

HOT-MIX ASPHALT MIXTURE REQUI	REMENTS
MIXTURE TYPE	AIR VOIDS

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

The "AC Type" for Polymerized HMA Mixes SHALL BE "SBS/SBR PG 70 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" shall be "PG 64 -22" UNLESS modified by District ONE Special Provisions, FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

4% @ 50 Gyr.

Note: For proposed section see sheet number \$4.

HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50

#### **GENERAL NOTES:**

- 1. THESE PLANS HAVE BEEN PREPARED FROM INFORMATION ACQUIRED FROM EXISTING PLANS AND NOTES RECEIVED FROM IDOT FIELD MAINTENANCE ENGINEERS.
- 2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO VARIATIONS FOUND IN THE FIELD. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. ANY ADJUSTMENTS PROPOSED BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED BASED UPON THE UNIT PRICE.
- 3. QUANTITIES FOR DECK SLAB REPAIR ARE APPROXIMATE. LOCATIONS WILL BE DETERMINED BY THE ENGINEER FOLLOWING REMOVAL OF THE HMA SURFACE COURSE AND HYDRO-SCARIFICATION. ACTUAL REPAIR LOCATIONS SHALL BE SHOWN ON THE AS-BUILT PLANS.
- 4. FORTY- EIGHT HOURS BEFORE STARTING EXCAVATION, THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) OR 811 FOR LOCATIONS OF THE EXISTING UTILITIES.
- 5. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- 6. SAW CUTTING PRIOR TO ANY REMOVAL ITEMS NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEMS BEING REMOVED.
- 7. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- 8. THE CONTRACTOR SHALL USE CARE IN REMOVING OR EXCAVATING NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 9. WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AS WELL AS ADJOINING RESIDENTIAL AREAS.
- 10. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, AS REQUIRED, PRIOR TO COMMENCING WITH CONSTRUCTION.
- 11. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ASSURE THAT NO DEBRIS FALLS INTO THE WATERWAY. THE COST OF THIS WORK SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.
- 12. THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.
- 13. THE CONTRACTOR SHALL CONTACT WALTER CZARNY, THE AREA TRAFFIC FIELD ENGINEER, AT (773) 685 4342 TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- 14. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OUTSIDE THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 15. ALL RAISED REFLECTIVE PAVEMENT MARKERS (BRIDGE) SHALL BE LOW PROFILE.

SCALE:

16. ACCESS SHALL BE PROVIDED AT ALL TIMES TO PROPERTIES ABUTTING THE PROPOSED IMPROVEMENT.

#### **COMMITMENTS**

DESIGNED - VEA REVISED DRAWN - VFA REVISED CHECKED REVISED - 1/29/2010 REVISED

**STATE STANDARDS** 

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

APPROACH TO LANE CLOSURE, FREEWAY / EXPRESSWAY

701406-05 LANE CLOSURE, FREEWAY / EXPRESSWAY DAY OPERATIONS ONLY

LANE CLOSURE 2 LANE 2 WAY MOVING OPERATIONS DAY ONLY

LANE CLOSURE 2 LANE 2 WAY, BRIDGE REPAIR WITH BARRIER

AREAS OF REINFORCEMENT BARS

TRAFFIC CONTROL DEVICES

DECIMAL OF AN INCH AND OF A FOOT

LANE CLOSURE, FREEWAY / EXPRESSWAY

000001-05

001001-02

701311-03

701321-10

701901-01

701400-04

701401-05

001006

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

INDEX OF SHEET, STATE STANDARDS, **GENERAL NOTES AND COMMITMENTS** SHEET NO. OF SHEETS STA.

TO STA.

SECTION COUNTY 0101 15-I COOK 20 CONTRACT NO. 60J29 ILLINOIS FED. AID PROJECT

	SUMMARY OF QUANTITIES	URBAN 90%.FED. 10%.STATE	CONTRUCTION TYPE CODE		
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	O16-2039 SFTY-2A QUANTITY	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	14	14	
42001300	PROTECTIVE COAT	SQ YD	397	397	
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	115	115	
44000915	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	368	368	
50157301	PROTECTIVE SHIELD (PERMANENT)	SQ YD	514	514	
50300260	BRIDGE DECK GROOVING	SQ YD	368	368	
59000200	EPOXY CRACK INJECTION	FOOT	24	24	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3	
67100100	MOBILIZATION	L SUM	1	1	
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	10	10	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	623	623	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	200	200	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	200	200	
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	422	422	
78006110	PREFORMED THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	129	129	
			120	120	-

	SUMMARY OF QUANTITIES		URBAN 901. FED. 101. STATE	TYPE CODE	
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	SFTY-2A QUANTITY	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	184	184	
X0320887	POLYMER CONCRETE	CU FT	7	7	
X0322489	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/2 INCHES	\$Q YD	368	368	
X0322256	TEMPORARY INFORMATION SIGNING	SQFT	51	51	
<del>-X0322276</del>	CLEANING AND PAINTING EXPOSED REBAR	L-SUM	1	1-	
X0323076	SILICONE JOINT SEALER, 1 3/4"	FOOT	127	127	
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	259	259	
X0325775	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 4 INCH	FOOT	1580	1580	
X0325841	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 24 INCH	FOOT	48	48	
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1	
X7013820	TRAFFIC CONTROL SURVEILLANCE, EXPRESSWAYS	CAL DA	20	20	
X8900005	TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION	EACH	1	1	
Z0006204	BRIDGE DECK HYDRO-SCARIFICATION 1/2"	SQ YD	368	368	
Z0016002	DECK SLAB REPAIR (FULL DEPTH TYPE II)	SQ YD	5	5	
Z0030260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	. 2	
Z0030330	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3	EACH	2	2	

\* Specialty Items

FILE NAME = \$FILEL\$



DESIGNED		VEA	REVISED	
DRAWN	-	VEA	REVISED	-
CHECKED	-	TWL	REVISED	-
DATE	-	1/29/2010	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					F.A.I. RTE.	SECTION	COUNTY	TOTAL	SHE
SUMMARY OF QUANTITIES					94	0101 15-I	COOK	20	3
							CONTRACT	NO.	60J2
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		

#### **MAINTENANCE OF TRAFFIC GENERAL NOTES**

- 1. THE MAINTENANCE OF TRAFFIC CONTROL (MOT) PLANS SHALL SERVE AS A GUIDE FOR SAFE DIVERSION OF TRAFFIC DURING EXECUTION OF THIS CONTRACT. HOWEVER, THE CONTRACTOR MAY MODIFY THE MOT PLANS TO MEET CONSTRUCTION NEEDS BUT NOT AT THE EXPENSE OF PUBLIC SAFETY OR CONVENIENCE. ANY CHANGES TO THE MOT PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- 2. THE ENGINEER SHALL BE INFORMED 48 HOURS IN ADVANCE OF ANY CHANGE TO THE MOT PLANS.
- 3. ALL EXISTING PAVEMENT MARKING IN CONFLICT WITH THE MAINTENANCE OF TRAFFIC STRIPING SHALL BE REMOVED. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT, "PAVEMENT MARKING REMOVAL".
- 4. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY PAVEMENT MARKING TAPE WHICH CONFLICT WITH THE NEXT STAGE OR FINAL STRIPING, REMOVAL OF TEMPORARY PAVEMENT MARKING TAPE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT, "WORK ZONE PAVEMENT MARKING REMOVAL".
- 5. ALL TRAFFIC CONTROL DEVICES USED FOR THE MAINTENANCE OF TRAFFIC, AS DETAILED ON THE PLANS, OR HIGHWAY STANDARD SHALL BE REFLETECTORIZED PRIOR TO INSTALLATION AND CLEANED AS SPECIFIED IN MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.
- 6. ALL DRUMS, VERTICAL PANELS AND BARRICADES ADJACENT TO THE EDGE OF TRAVELED WAY SHALL BE EQUIPPED WITH STEADY-BURNING LIGHTS.
- 7. ALL EXISTING SIGNS WITHIN THE LIMITS OF MAINTENANCE OF TRAFFIC WHICH ARE OBSCURED BY OR OTHERWISE INTERFERED WITH BY THE CONSTRUCTION OPERATIONS AND MAINTENANCE OF TRAFFIC, SHALL BE COVERED OR REMOVED BY THE CONTRACTOR UNLESS SPECIFIED IN THE PLANS OR WHEN DIRECTED BY THE ENGINEER. THIS WORK SHALL BE IN ACCORDANCE WITH ARTICLE 107.25 OF THE IDOT STANDARD SPECIFICATIONS.
- 8. TEMPORARY, OFF-PEAK HOUR LANE CLOSURES MUST BE REQUESTED THROUGH THE ENGINEER AND AS SPECIFIED IN THE SPECIAL PROVISIONS, WHEN OFF-PEAK HOUR OR WEEKEND LANE CLOSURES ARE REQUIRED, A PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE INSTALLED ONE WEEK PRIOR TO THE CLOSURE, THE MESSAGE SIGN WORDING AND LOCATION WILL BE DETERMINED BY THE ENGINEER.
- 9. THE CONTRACTOR SHALL PLACE A CHANGEABLE MESSAGE SIGN AT EACH END OF THE PROJECT AND/OR AS DIRECTED BY THE ENGINEER TO INFORM MOTORISTS OF UPCOMING CONSTRUCTION ACTIVITIES. THE MESSAGE SIGNS WITH THE APPROPRIATE INFORMATION SHALL BE IN PLACED TWO WEEKS BEFORE START OF CONSTRUCTION ACTIVITY. THIS WORK IS TO BE PAID FOR AT THE CONTRACT UNIT PRICE PER CALENDAR MONTH, "CHANGEABLE MESSAGE SIGN".
- 10. ALL TEMPORARY INFORMATION SIGNS SHALL BE PAID FOR SEPARATELY AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR "TEMPORARY INFORMATION SIGNING".
- 11. FOR ADDITIONAL BRIDGE CONSTRUCTION STAGING INFORMATION, SEE STRUCTURAL PLANS.

#### SUGGESTED CONSTRUCTION SEQUENCING

#### PRESTAGE

CONSTRUCTION:

INSTALL TEMPORARY TRAFFIC SIGNAL PER PLAN. IMPLEMENT STAGE 1 MOT PAVEMENT MARKING

MAINTENANCE OF TRAFFIC: UTILIZE STANDARDS 701321-10, 701311-03 AND 701501-05

#### STAGE 1

CONSTRUCTION:

EASTBOUND LANES: REMOVE HMA OVERLAY AND WATER PROOFING MEMBRANE, HYDROSCARIFY CONCRETE SLAB SURFACE, PERFORM DECK REPAIRS, PLACE LATEX CONCRETE OVERLAY, PERFORM SUBSTRUCTURE REPAIRS AND INSTALL PERMANENT PROTECTIVE SHIELD.

MAINTENANCE OF TRAFFIC: UTILIZE MAINTENANCE OF TRAFFIC DETAILS IN THE PLANS AND STANDARDS 701321-10, 701400-04, 701401-5 AND 701406-5.

#### STAGE 2

CONSTRUCTION:

WESTBOUND LANES: REMOVE BITUMINOUS OVERLAY AND WATER PROOFING MEMBRANE, HYDROSCARIFY CONCRETE SLAB SURFACE, PERFORM DECK REPAIRS. PLACE LATEX CONCRETE OVERLAY, PERFORM SUBSTRUCTURE REPAIRS AND INSTALL PERMANENT PROTECTIVE SHIELD.

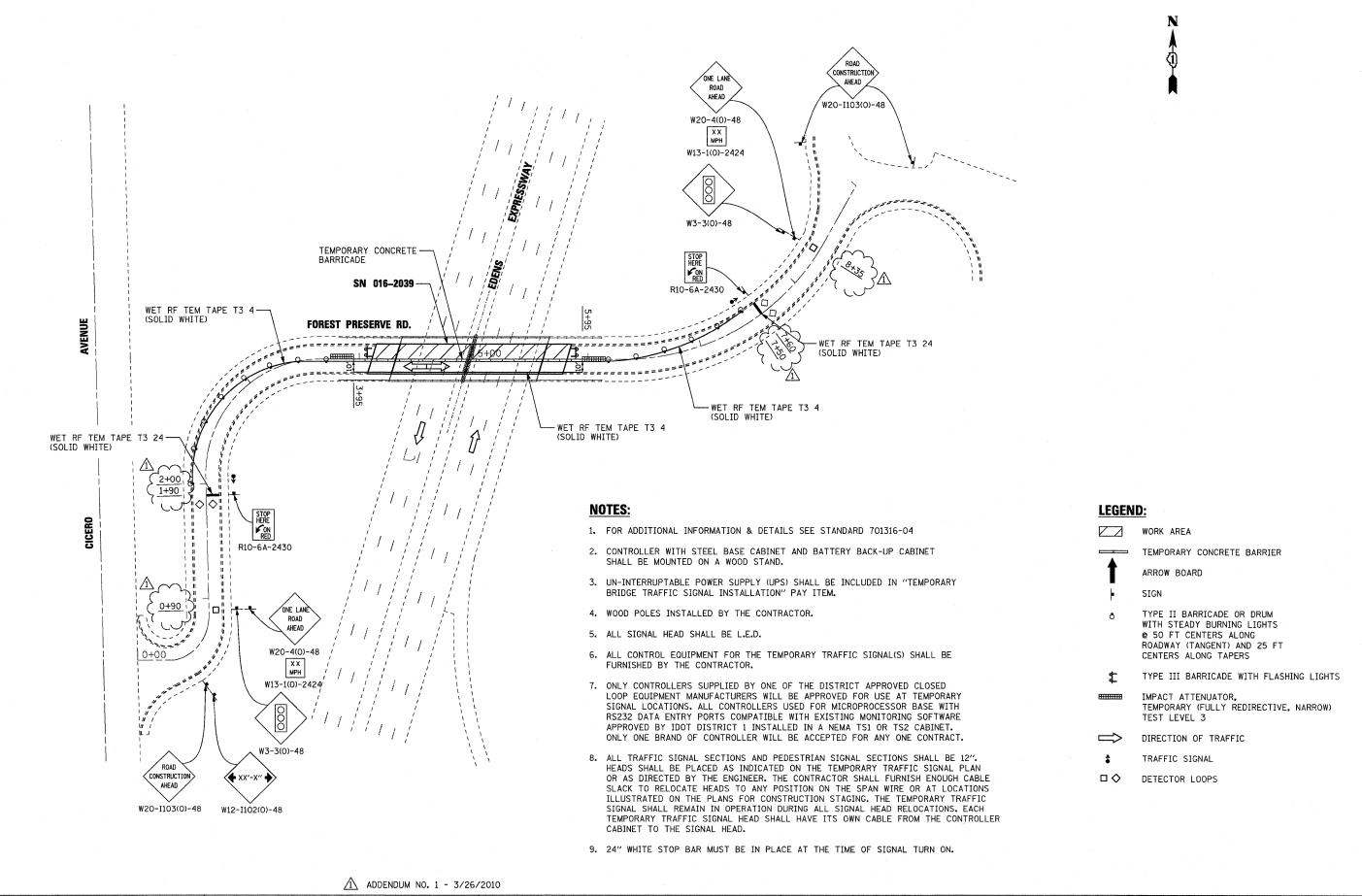
MAINTENANCE OF TRAFFIC: UTILIZING MAINTENANCE OF TRAFFIC DETAILS IN THE PLANS AND STANDARDS 701321-10, 701400-04, 701401-5 AND 701406-5.

#### STAGE 3

CONSTRUCTION:

PLACE FINAL PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC: UTILIZE STANDARD 701311-03



FILE NAME =

**:::**Primera

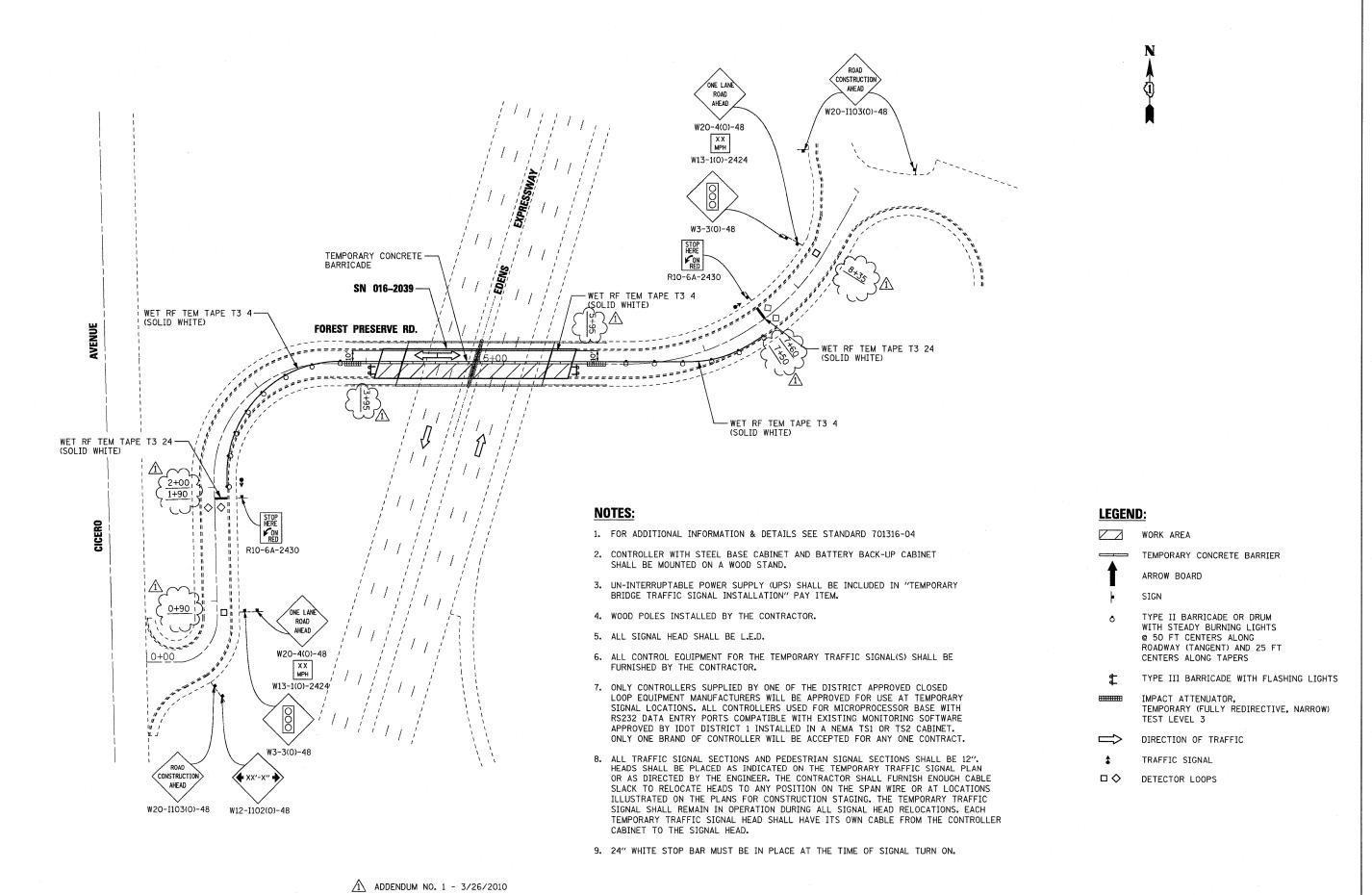
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUGGESTED STAGE OF CONSTRUCTION & TRAFFIC CONTROL STAGE 1
FOREST PRESERVE ROAD

SCALE: 1" = 40' SHEET NO. OF SHEETS STA. TO STA.

A.I. SECTION COUNTY TOTAL SHEET NO. 94 0101 15-1 COOK 20 5

CONTRACT NO. 60J29



FILE NAME :

**:::**Primera

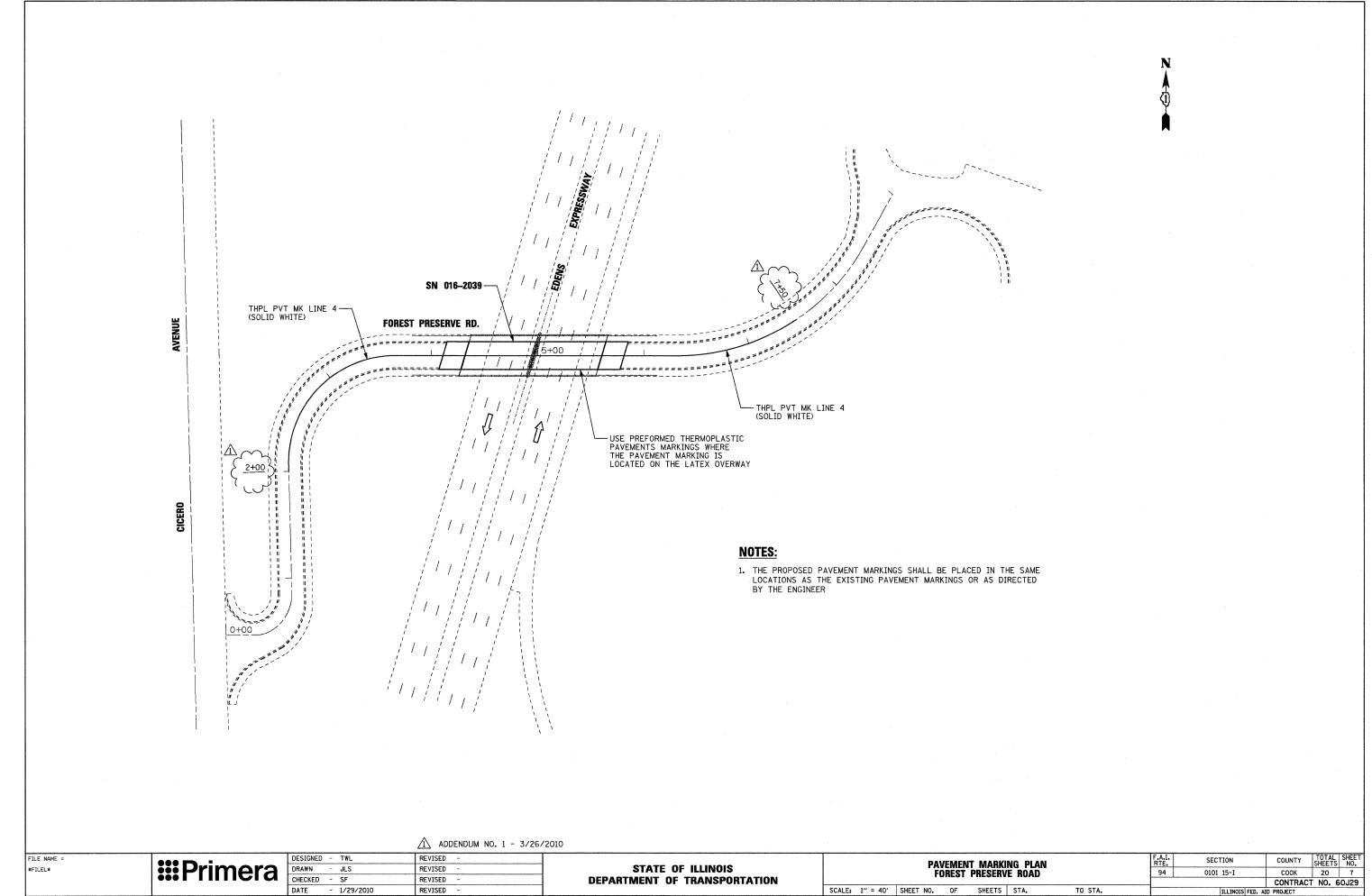
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: 1" = 40' SHEET NO. OF SHEETS STA. TO STA.

F.A.I. SECTION COUNTY TOTAL SHEET NO.

94 0101 15-I COOK 20 6

| CONTRACT NO. 60J29 |
| ILLINOIS FED. AID PROJECT |



DESIGNED	-	TWL	REVISED		
DRAWN	-	JLS	REVISED	-	
CHECKED	-	SF	REVISED	-	
DATE	-	1/29/2010	REVISED	-	

Existing Structure: SN 016-2039, built in 1957 as F.A.I. Rte. 2-Project I-02-2(15) Section 263-0101.15-15D over Edens Expressway (F.A.I-94).

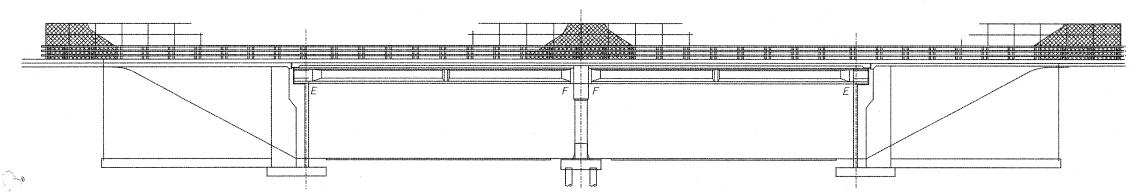
DESIGNED JPM

CHECKED TG DRAWN MPS CHECKED JPM, TG

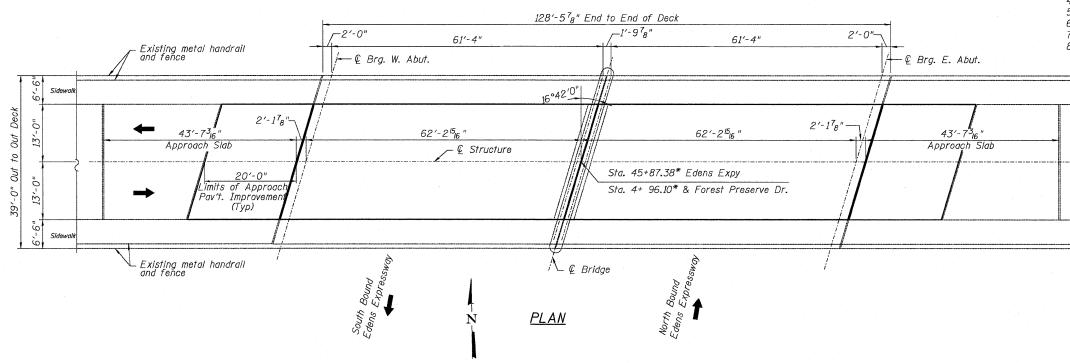
Repaired and resurfaced in 1982 as two equal span Reinforced Concrete deck on Precast Prestressed Concrete Beams.

The structure measures 39'-0" Out to Out Deck and 128'-578" End to End of Deck Slab. The substructure consists of Reinforced Concrete closed abutments and a multi-column Pier. Traffic is to be maintained utilizing staged construction. One lane for both directions will be provided by using temporary traffic signals.

#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



#### SOUTH ELEVATION



\* Information taken from 1981 existing plans.



Whole Cong Theodore P. Georgas Licensed Structural Engineer State of Illinois 081-4609

Expires 11/30/2010

#### 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 the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

#### DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications, 17th Edition.

#### DESIGN STRESSES

FIELD UNITS f'c = 3,500 psify = 60,000 psi

#### LAST DELAMINATION SURVEY

October 2009

#### SCOPE OF WORK

- 1. Remove HMA overlay.
- 2. Full & Partial Depth Slab repairs.
- 3. Hydroscarify  $\frac{1}{2}$  inch deck slab surface.
- 4. Reconstruction of transverse expansion joints.
- 5. Place  $2\frac{1}{2}$  inch latex concrete overlay.
- 6. Epoxy Crack Injection on PPC I-Beam. 7. Structural Repairs of Concrete to substructures.
- 8. Install Permanent Protective Shielding.

#### INDEX OF SHEETS

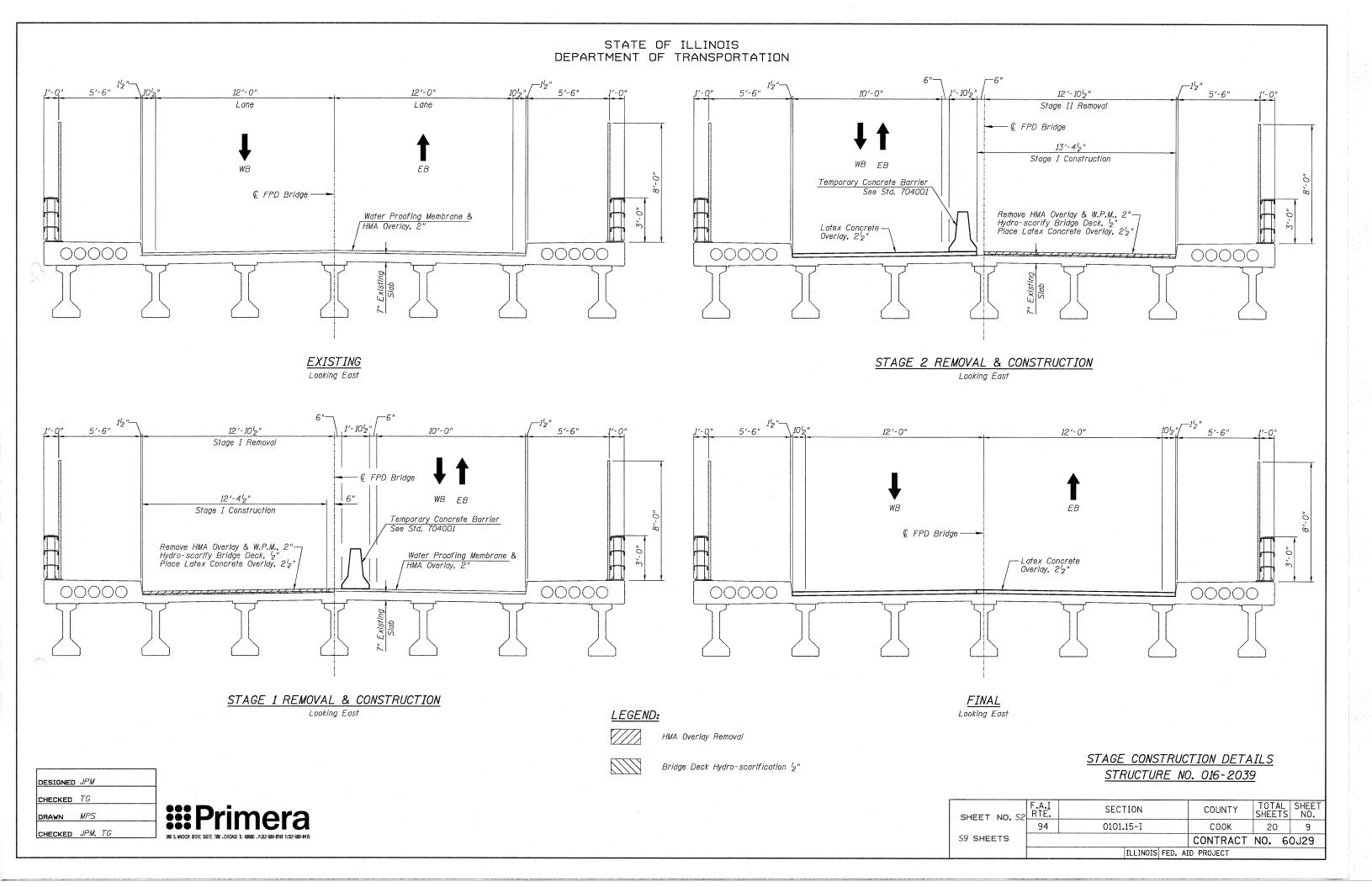
- S1 General Plan & Elevation
- S2 Stage Construction Details S3 - Temporary Concrete Barrier
- S4 Bridge Deck Patching
  - & Hydro-scarification Plan
- S5 Protective Shield Plan & PPC-Beam Repair Detail
- S6 Protective Shield Details
- S7 Abutments Repair Details
- S8 Piers Repair Details
- S9 Transverse Joint Reconstruction Details

#### TOTAL BILL OF MATERIAL

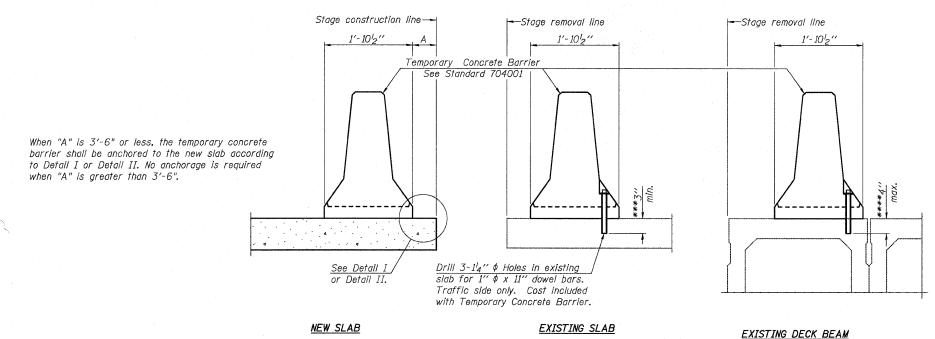
ITEM	UNIT	SUPER	SUB	TOTAL
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	368	-	368
Hot-Mix Asphalt Surface Removal, 2"	Sq. Yd.	115	-	115
Bridge Deck Hydro-scarification 1/2"	Sq. Yd.	368	-	368
Bridge Deck Grooving	Sq. Yd.	368	-	368
Protective Coat	Sq. Yd.	368	29	397
Company of the state of the sta		4.00		
Bridge Deck Latex Concrete Overlay, 21/2"	Sq. Yd.	368		368
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	-	259	259
Silicone Joint Sealer, 1 <sup>3</sup> 4"	Foot	127	-	127
Deck Slab Repair (Full Depth Type II)	Sq. Yd.	5	-	5
Polymer Concrete	Cu. Ft.	7		7
Hot-Mix Asphalt Surface Course, Mix "C", N-50, 2"	Tons	14	<u>.</u> .	14
Protective Shield (Permanent)	Sq. Yd.	<i>514</i>	-	514
Epoxy Crack Injection	Foot	24	-	24

GENERAL PLAN AND ELEVATION FOREST PRESERVE DRIVE OVER F.A.I. 94 (EDENS EXPRESSWAY) COOK COUNTY STA.4+96.10 STRUCTURE NO. 016-2039

SHEET NO. SI	F.A. <u>I</u> RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEET NO. 31	94	0101 <b>.</b> 15-I	соок	20	8
S9 SHEETS			CONTRACT	NO. 6	0J29
	ILLINOIS FED. AID PROJECT				



# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



#### **NOTES**

Detail I - With Bar Splicer or Couplers:

Connect one (1) 1"x7"x10" steel  $\P$  to the top layer of couplers with  $2^{-5}8$ "  $\phi$  bolts screwed to coupler at approximate  $\P$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:

Connect one (1) 1"x7"x 10" steel 1 to the concrete slab or concrete wearing surface with 2-58" \$\phi\$

Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \$\mathbb{L}\$ of each barrier panel.

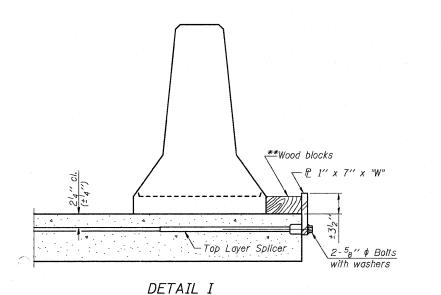
Cost of anchorage is included with Temporary Concrete Barrier.

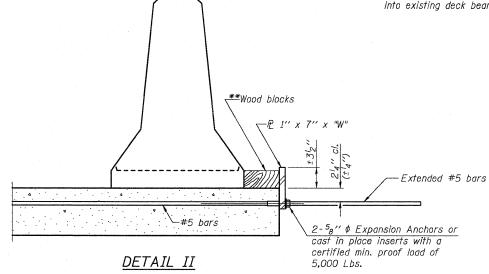
The I' x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

#### SECTIONS THRU SLAB OR DECK BEAM

- \*\*\* Dimension shown is minimum required embedment into concrete.

  If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- \*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.





Top bars Detail I

spacing 3" 3" Detail II

E 1" x 1'2" Notch

STEEL RETAINER P 1" x 7" x 10"

\* Required only with Detail II

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

# TEMPORARY CONCRETE BARRIER STRUCTURE NO. 016-2039

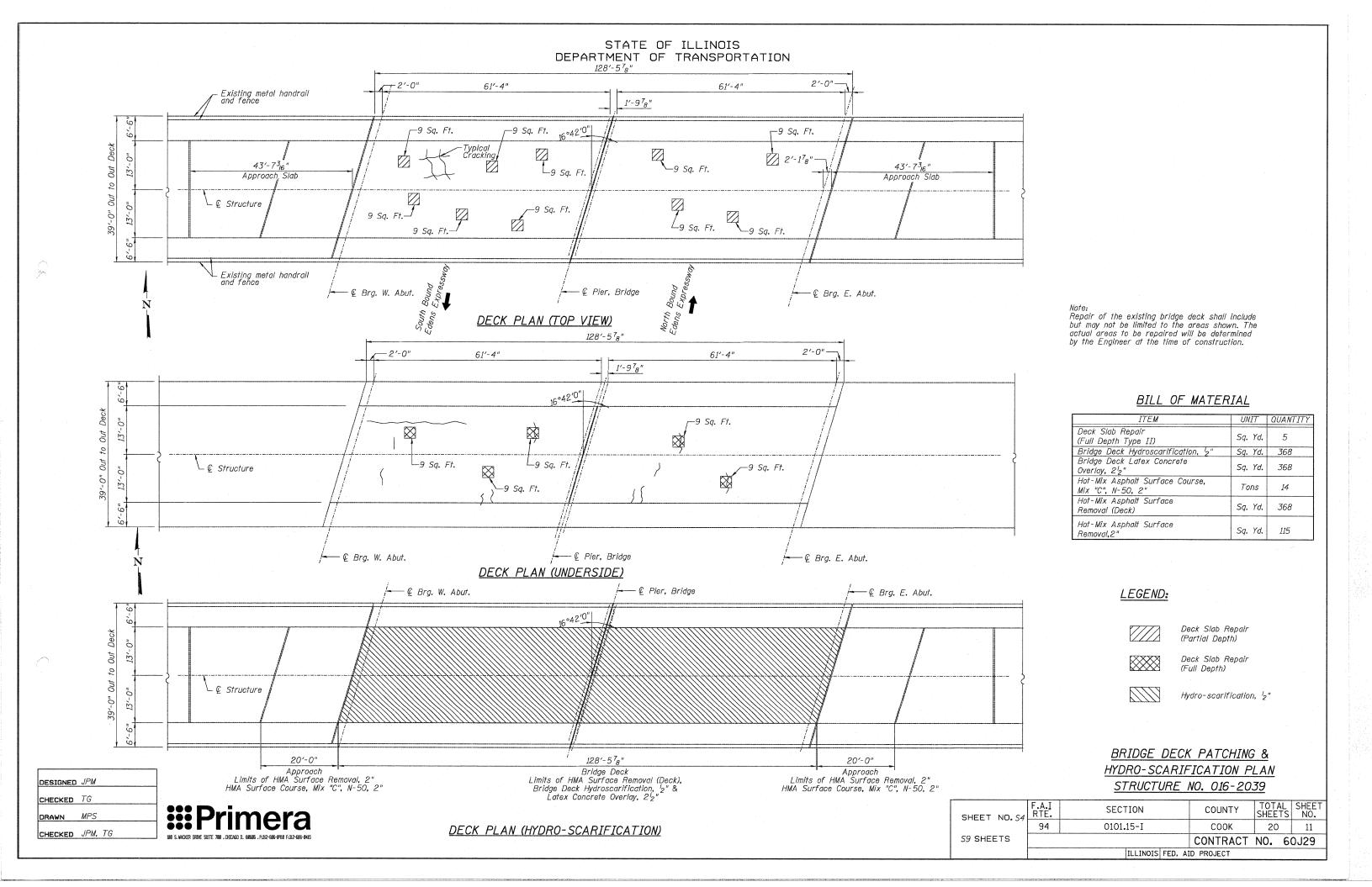
SHEET NO.53	F.A.I RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
	94	0101 <b>.</b> 15-I		COOK	20	10
S9 SHEETS				CONTRACT	NO. 6	0J29
		ILLINOIS	FED. AI	D PROJECT		

CHECKED TG

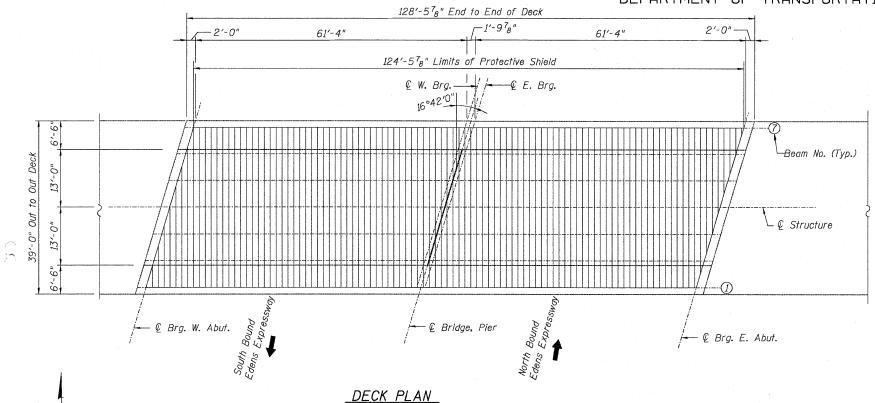
DRAWN MPS

CHECKED JPM, TG

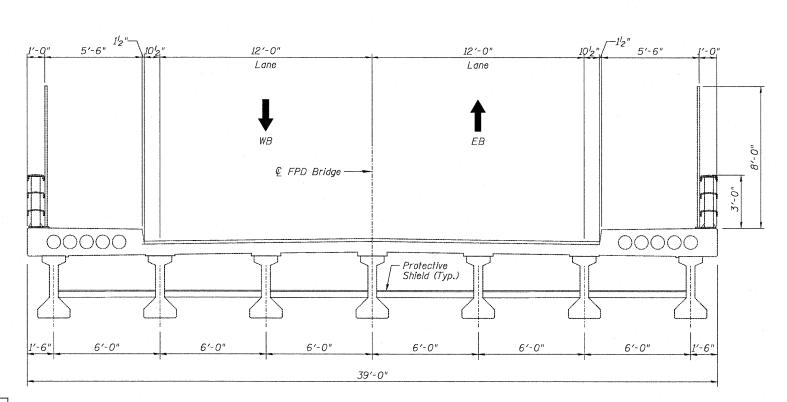
\*\*\*Primera
180 S. MICKER ORIVE SUITE 700 . CHICAGO II. GROOF P. 432-566-6910 F. 432-566-4416

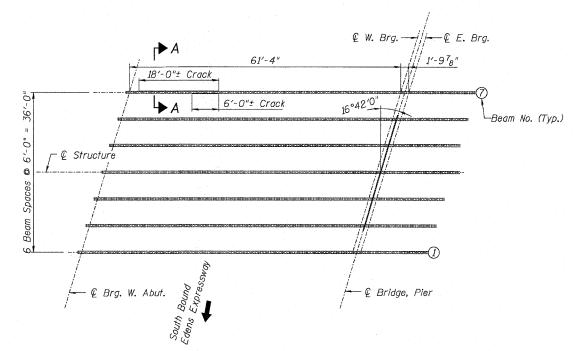


## STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

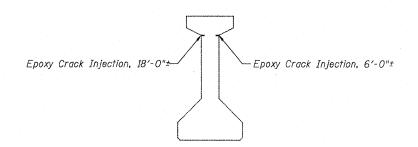


PROTECTIVE SHIELD SHOWN





PARTIAL FRAMING PLAN



### SECTION A-A

#### BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Shield (Permanent)	Sq. Yd.	514
Epoxy Crack Injection	Foot	24

S9 SHEETS

1. Protective Shield shall be installed prior to deck slab repairs.
2. For Protective Shield details, see Sheet S6 of S9.

PROTECTIVE SHIELD PLAN & PPC BEAM REPAIR DETAIL STRUCTURE NO. 016-2039

ILLINOIS FED. AID PROJECT

CONTRACT NO. 60J29

LEGEND:

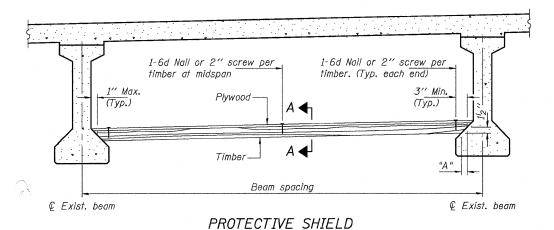
SHEET NO. 55 F.A.I RTE. TOTAL SHEET SHEETS NO. SECTION COUNTY 0101**.**15-I 20 COOK 12

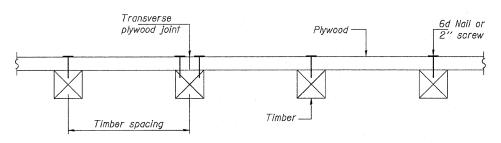
BRIDGE CROSS SECTION Looking East

DESIGNED JPM CHECKED TG DRAWN MPS CHECKED JPM, TG

Protective Shield

#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION





SECTION A-A

#### TIMBER SPACING

	Timber Sizes (in.)					
Beam Spacing (ft.)	4" x 4" with min. Fb=775 psi Fv=135 psi	4" x 6" with min. Fb=775 psi Fv=135 psi	6" x 6" with min. Fb=575 psi Fv=125 psi			
	Maximui	m Timber Spac	ing (in.)			
4.5	<i>1</i> 6	16	16			
4.75	<i>1</i> 6	<i>1</i> 6	16			
5.0	16	<i>1</i> 6	16			
5.25	<i>1</i> 6	16	16			
5.5	<i>1</i> 6	16	16			
5.75	16	<i>1</i> 6	16			
6.0	<i>1</i> 6	<i>1</i> 6	16			
6.25	12	16	16			
6.5	12	16	16			
6.75	12	16	16			
7.0	8	16	16			
7.25	8	16	16			
7.5	- 8	16	16			
7.75	8	16	16			
8.0	. 8	12	16			
8.25	8	12	16			
<b>8.</b> 5	6	12	12			
8.75	6	12	12			
9.0	6	8	12			

#### PPC I-BEAMS AND BULB-T's

BEAM	"A "
36" I-Beam	12"
42" I-Beam	1'2"
48″ I-Beam	1'2"
54'' I-Beam	1 <sup>5</sup> 8′′
63'' Bulb-T	33 <sub>8</sub> "
72'' Bulb-T	338"

See special provision for Temporary Protective Shield System. Timber sizes shown are nominal sizes. Rough sawn timber of the dimensions shown will also be considered acceptable.

The minimum Fb and Fv values shown are the tabulated design values given in the National Design Specification for Wood Construction for No. 2 Spruce-Pine-Fir without adjustment factors applied. Better grades or other species with equal or higher allowable stresses will also be considered acceptable.

The timber spacings shown have been determined using allowable stresses with all adjustment factors necessary for the anticipated service conditions. All timber shall be treated.

Plywood shall be  $5_8$ " rated Exterior type plywood by APA. Plywood shall be placed such that the face grain is perpendicular to the timber supports. When less than a full sheet (4' width) of plywood is used, the width of the strip used shall not be less than 2'. Transverse plywood joints shall be supported by timbers.

When 4" x 6" timbers are used, they shall be placed such that the wide face is horizontal and the narrow face is vertical.

Design load = 200 psf.

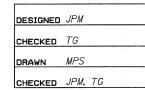
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72" Bulb-T	33 <sub>8</sub> "

### BILL OF MATERIAL

Item	Unit	Total	
Protective Shield (Permanent)	Sq. Yd.	514	

### PROTECTIVE SHIELD DETAILS STRUCTURE NO. 016-2039

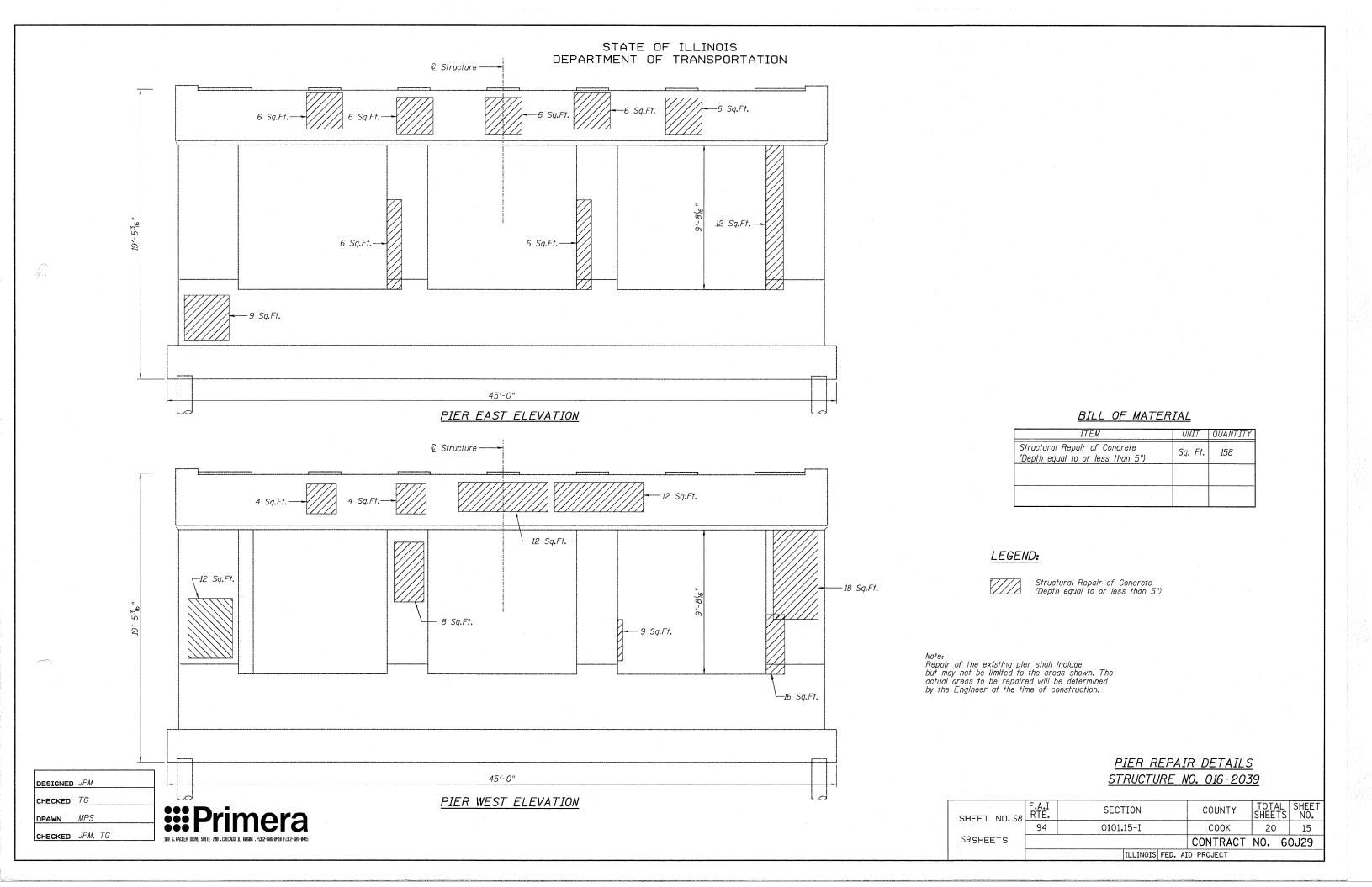
SHEET NO.56	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	94	0101 <b>.</b> 15-I	COOK	20	13	
S9 SHEETS				CONTRACT	NO. 6	0J29
	ILLINOIS FED. AID PROJECT					

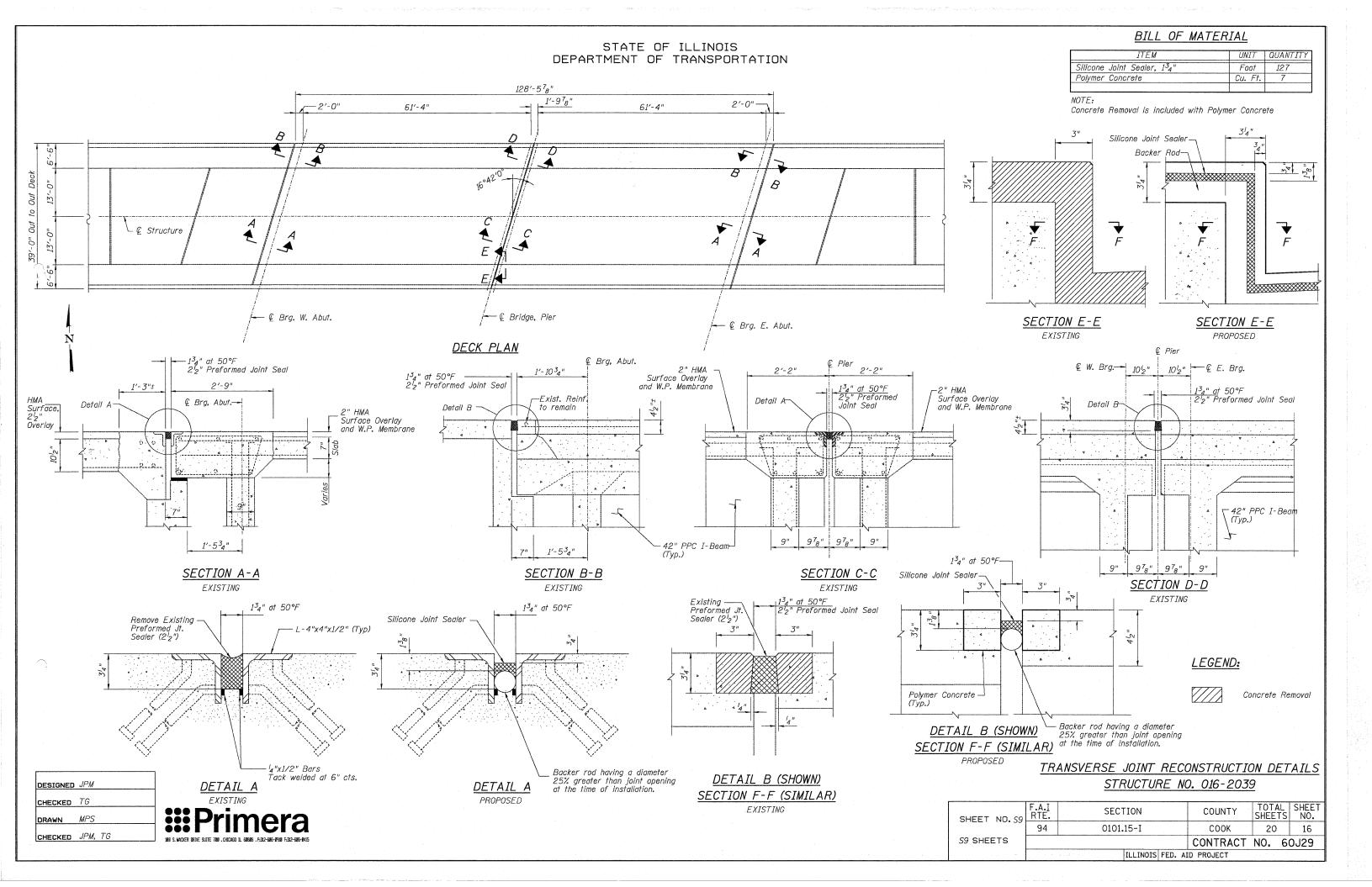


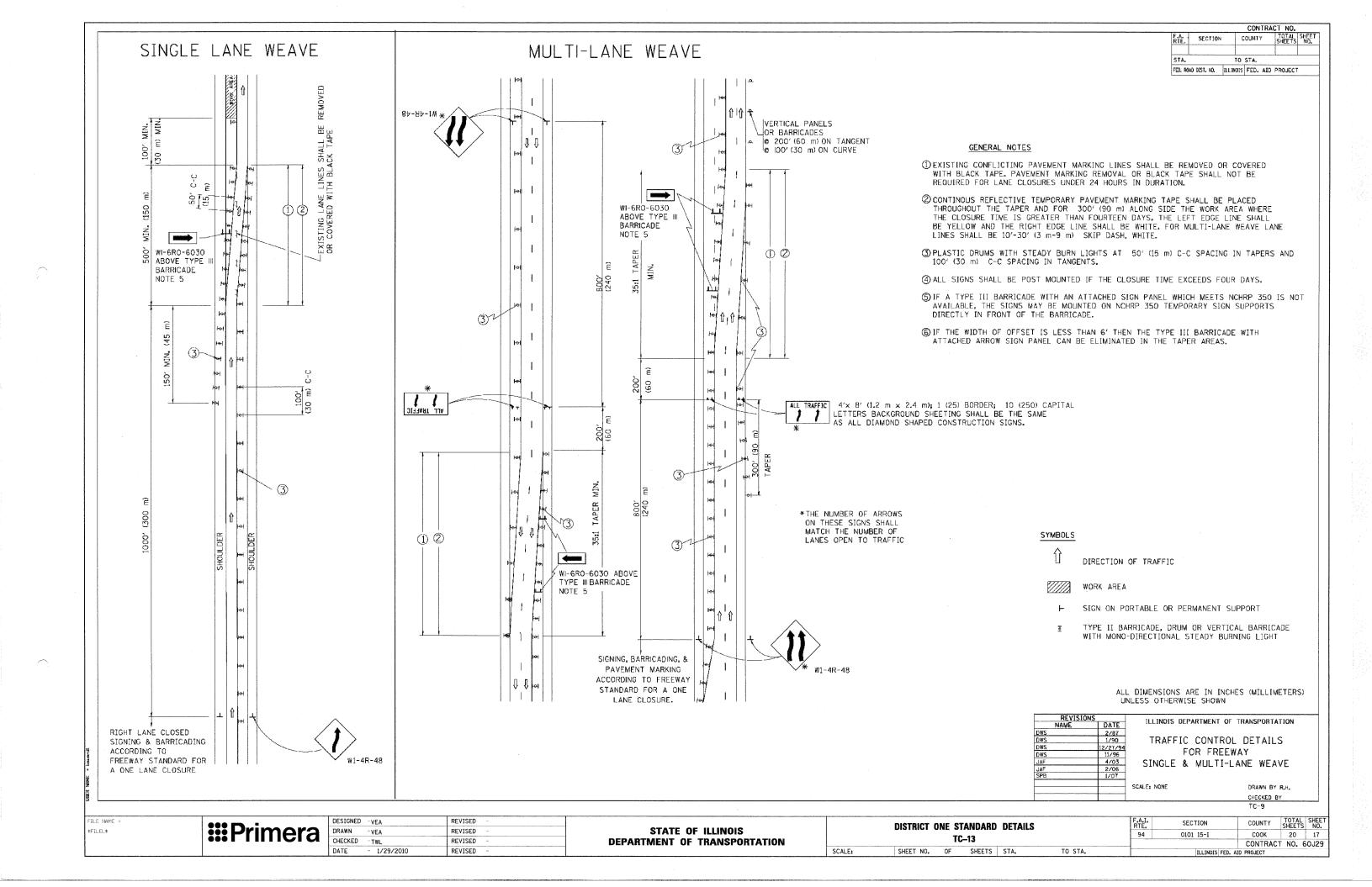


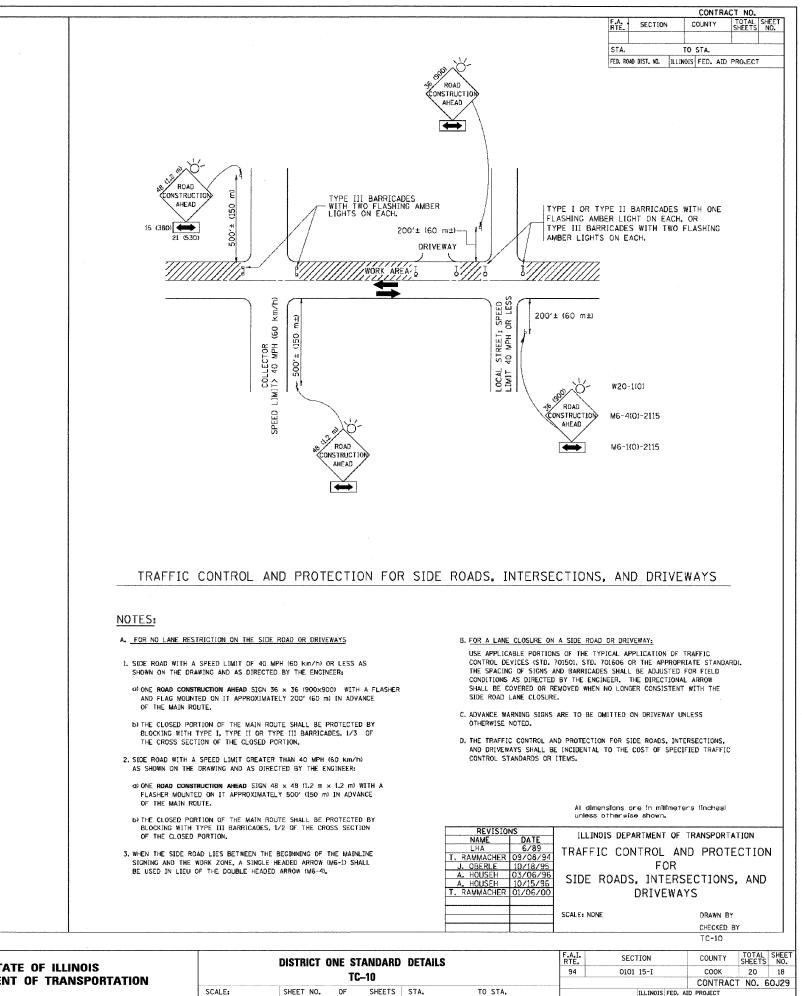
## STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION -8 Sq.Ft. © Structure — \_\_\_36 Sq.Ft. 18 Sq.F -12 Sq.Ft. BILL OF MATERIAL UNIT QUANTITY EAST ABUTMENT ELEVATION Structural Repair of Concrete Sq. Ft. 101 (Depth equal to or less than 5") -1 Sq.Ft. © Structure — LEGEND: Structural Repair of Concrete (Depth equal to or less than 5") \_\_12 Sq.Ft. Note: Repair of the existing abutment shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction. 6 Sq.Ft.-THERE THE TANKS ABUTMENT REPAIR DETAILS STRUCTURE NO. 016-2039 DESIGNED JPM CHECKED TG TOTAL SHEET NO. F.A.<u>I</u> RTE. SECTION COUNTY WEST ABUTMENT ELEVATION SHEET NO. 57 94 0101.15-I COOK 20 CHECKED JPM, TG S9 SHEETS CONTRACT NO. 60J29

ILLINOIS FED. AID PROJECT









FILE NAME = **:::**Primera \$FILEL\$

DESIGNED	-VEA	REVISED -
DRAWN	~VEA	REVISED -
CHECKED	-TWL	REVISED ~
DATE	- 1/29/2010	REVISED -

DISTRICT ONE STANDARD DETAILS TC-10				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.		
				94	0101 15-I	COOK	20	18		
						CONTRACT	NO.	60J29		
	SHEET NO.	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. AI	D PROJECT		

