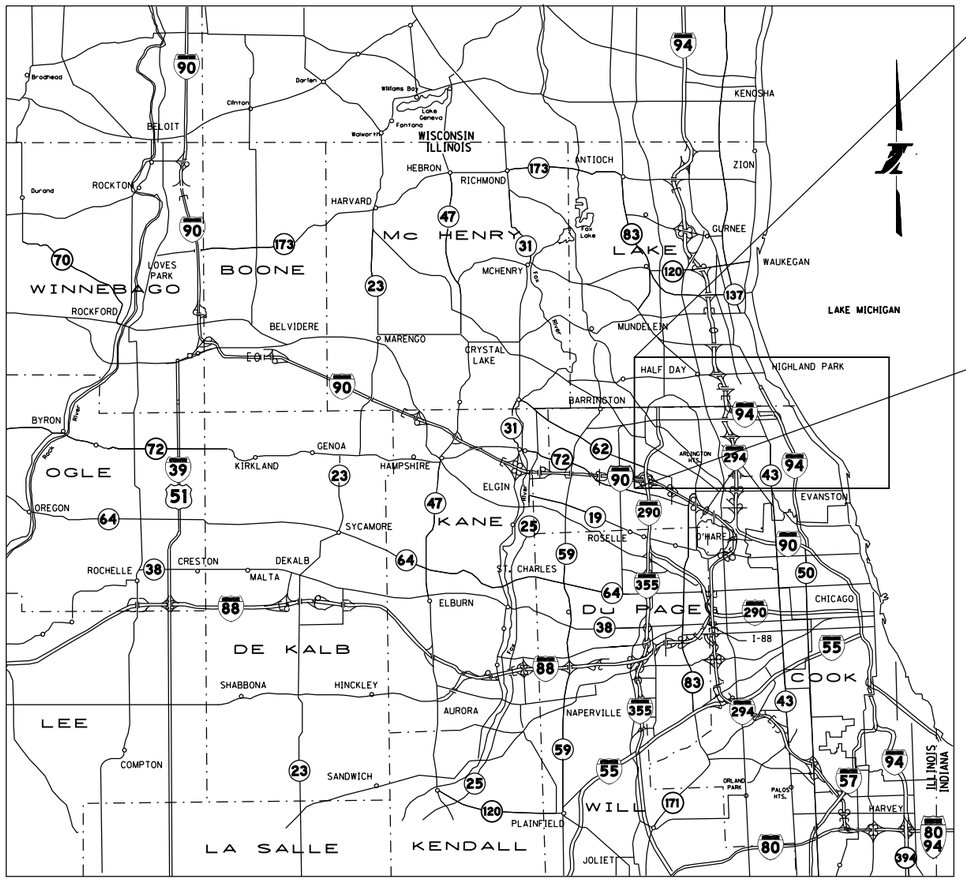
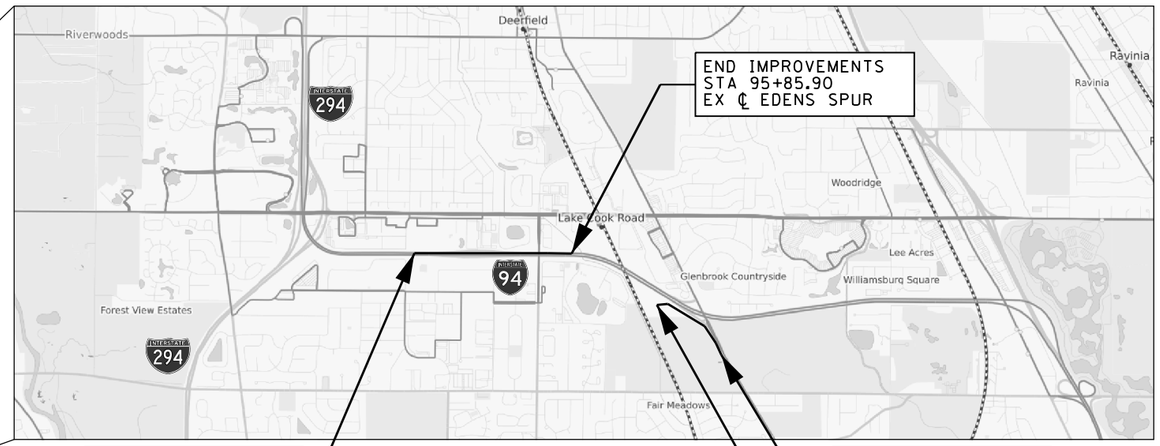
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

CONTRACT I–18–4372

EDENS SPUR (I–94)
ROADWAY REHABILITATION
PLAZA 24 (M.P. 26.25 TO M.P. 26.9)
FRONTAGE ROAD (M.P. 27.5 TO M.P. 27.9)
CONCRETE BEAM FABRICATION (BRIDGE NO. 347,348,353,&354)



LOCATION MAP



CONSTRUCTION AREA MAP

NOT TO SCALE

CIVIL ENGINEER:
FOR SHEETS: 1-54

TRAVIS R. KLUEGEL
062-05948
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

DATE: 2-6-2018
SEAL EXPIRES: 11-30-2019

STRUCTURAL ENGINEER:
FOR SHEETS: 55-66

MATTHEW D. SANTEFORD
081-007244
LICENSED STRUCTURAL ENGINEER OF
STATE OF ILLINOIS

DATE: 2-6-2018
SEAL EXPIRES: 11-30-2018

d'Escoto INC. Where Vision Meets Implementation
1200 NORTH ASHLAND AVE.
6TH FLOOR
CHICAGO, IL 60622
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TranSystems

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IDOT STANDARD DRAWINGS

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001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
442201-03	CLASS C AND D PATCHES
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED

TOLLWAY STANDARD DRAWINGS

STANDARD NO. AND TITLE

SECTION A - ROADWAY / PAVEMENT

A18-03 PRECAST PAVEMENT SLABS

SECTION B - DRAINAGE STRUCTURES, CURBS, CURBS & GUTTER AND DITCHES

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SECTION C - GUARDRAIL / MEDIAN BARRIER

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SECTION D - ROADWAY APPURTENANCES

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E1-06 CONSTRUCTION SIGNS

E2-07 LANE CLOSURE DETAILS

E3-06 SHOULDER CLOSURE DETAILS

SECTION F - SIGN STRUCTURE

NONE

SECTION G - STRUCTURAL

NONE

SECTION H - ROADWAY LIGHTING AND ELECTRICAL

NONE

SECTION K - TEMPORARY EROSION CONTROL

K1-06 TEMPORARY EROSION AND SEDIMENT CONTROLS

ASPHALT MIXES FOR PAVEMENTS/SHOULDERS

LOCATION	OPERATIONS	CODE	ITEM	UNIT	VOIDS	MAX. RAP%	TYPICAL THICKNESS	MIX TYPE
AS INDICATED BY DESIGN	SHOULDER OVERLAY	JI406510	WARM-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	4% @ 70 GYR	10% RAP, 30% Cat. 2 FRAP, & 35% Cat. 1 FRAP	2.00"	WARM MIX ASPHALT SURFACE COURSE, IL-9.5 MIX D, N70 (1)
	SHOULDER PATCHING	JI442416 JI442420 JI442424 JI442428	CLASS D2 PATCHES, TYPE I, 7 INCHES CLASS D2 PATCHES, TYPE II, 7 INCHES CLASS D2 PATCHES, TYPE IIII, 7 INCHES CLASS D2 PATCHES, TYPE IV, 7 INCHES	SQ YD	4% @ 50 GYR	10% RAP, 30% Cat. 2 FRAP, & 35% Cat. 1 FRAP	7.00" (2 EQUAL LIFTS)	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (1)

IDOT MIXTURES TABLE

MIXTURE TYPE	THICKNESS	MIX TYPE	VOIDS @ Ndes	QUALITY MANAGEMENT PROGRAM (QMP)
FRONTAGE ROAD				
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	4"	IL 19.0 mm	4% @ 50 Gyr.	QA/QC
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	2"	IL 9.5 mm	4% @ 50 Gyr.	QA/QC

QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA)

TOLLWAY MIXTURE NOTES:

1. QUANTITIES OF WARM AND HOT MIX ASPHALT ARE BASED ON THE UNTI WEIGHT OF 112.0 LBS/SQYD/IN

IDOT MIXTURE NOTES:

1. THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.
2. FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.
3. FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS.
4. QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE.

DRAWN BY YS DATE N/A /2018
CHECKED BY TRK DATE 2/18/2018

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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

INDEX OF DRAWINGS AND LIST OF STANDARDS

SHT NO. IN-1

DRAWING NO. 2 OF 66

GENERAL NOTES

1. GENERAL SAFETY PROVISIONS: TO PROVIDE ILLINOIS TOLLWAY AND CROSSROAD PATRONS SAFE TRAVEL CONDITIONS DURING THIS CONSTRUCTION PROJECT, AND TO PROVIDE SAFE WORKING CONDITIONS FOR ALL EMPLOYEES, BOTH OF THE ILLINOIS TOLLWAY AND PRIVATE CONTRACTOR, THE RULES, REGULATIONS, AND CONDITIONS WILL PREVAIL FOR THE DURATION OF THIS CONTRACT.

2. THE CONTRACTOR SHALL BE MADE AWARE THAT ALL CONSTRUCTION VEHICLES SHALL BE LIMITED TO 15 FEET ABOVE EXISTING GRADE WHILE CROSSING UNDER COMMONWEALTH EDISON'S TRANSMISSION LINES.

3. DISTRIBUTORS: ALL DISTRIBUTORS FOR ASPHALT PAVING OPERATIONS SHALL BE EQUIPPED WITH SHIELDS TO PREVENT DAMAGES TO MOTORISTS' VEHICLES AND TO ADJACENT HIGHWAY APPURTENANCES.

4. FENCE: EXISTING FENCE THAT HAS TO BE DISCONNECTED AND/OR REMOVED FOR THE CONTRACTOR'S OPERATION SHALL BE RECONNECTED AND / OR REPLACED BY THE CONTRACTOR IN KIND AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY. TEMPORARY FENCE SHOULD BE INSTALLED IF EXISTING FENCE IS TO BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 664 OF THE STANDARD SPECIFICATIONS. ANY RIGHT-OF-WAY MARKERS DISTURBED BY HE CONTRACTOR'S OPERATION SHOULD BE REESTABLISHED BY A REGISTERED LAND SURVEYOR AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

5. THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO FULL SIZE PLANS AND NOT TO THE REDUCED SIZE PLANS.

6. ALL ELEVATIONS ARE BASED ON UNITED STATES COAST AND GEODETIC SURVEY DATUM. BENCHMARKS FOR THE PROJECT ARE DESCRIBED IN THE PLANS.

7. AT THE TIME OF THE PRECONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL, THE PROPOSED CONCRETE TRUCK WASHOUT LOCATIONS. RUNOFF FROM WASH AREAS SHALL BE CONTAINED IN DESIGNATED AREAS SO THAT RUNOFF DOES NOT REACH THE STORM SEWER OR DITCH SYSTEMS.

8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL FIBER OPTIC UTILITIES PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL INITIATE THE LOCATE PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A REQUEST TOLLWAY UTILITIES LOCATE FORM FILLED ON-LINE ON THE ILLINOIS TOLLWAY WEB SITE UNDER DOING BUSINESS / CONSTRUCTION AND ENGINEERING / PERMITS AND UTILITY INFORMATION AT LEAST FOUR (4) DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN GENERAL AREA OF THE FIBER OPTIC CABLE.

9. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ADJACENT TRAFFIC LANES OPEN TO TRAFFIC FROM DEBRIS BEING BLOWN OR OTHERWISE REMOVED FROM THE CONSTRUCTION AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING DEBRIS OFF OF THE ADJACENT TRAVELED LANE SURFACE.

10. VERIFICATION OF DIMENSIONS: IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

11. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT ARE SUBJECT TO PRIOR APPROVAL BY THE APPROPRIATE AGENCY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.

12. ANY MATERIALS DEEMED SALVAGEABLE BY THE TOLLWAY SHALL BE DELIVERED TO THE MAINTENANCE YARD DESIGNATED IN S.P. 114.

13. ANY BURIED FACILITY WITHIN 2 FEET OF AN EXCAVATION LOCATION SHALL FIRST BE EXPOSED BY THE CONTRACTOR BY HAND DIGGING. THIS WORK IS COVERED UNDER PAY ITEM JI213004 EXPLORATION TRENCH UTILITIES (HAND EXCAVATION). ONCE EXPOSED, THE CONTRACTOR SHALL PROTECT THE FACILITY. IF CONTRACTOR CUTS OR DAMAGES THE TOLLWAY FACILITY, EITHER THROUGH CARELESSNESS OR FAILURE TO FOLLOW THE ABOVE PROCEDURE THEY WILL THEN BE RESPONSIBLE FOR THE REPAIR OF THE DAMAGE AT THEIR OWN EXPENSE AND TO THE SATISFACTION OF THE TOLLWAY.

14. CONTACT INFORMATION: DISTRICT SUPERVISOR OPS-TOLL COLLECTION ADMINISTRATION MIGUEL SOTOMEYER (630) 241-6800 X2124

EROSION CONTROL SEQUENCE OF CONSTRUCTION

1. REFER TO SUGGESTED PROGRESS SCHEDULE, SHEET PS-1 FOR DETAILED DESCRIPTION OF PROPOSED CONSTRUCTION SEQUENCE.

2. THE FOLLOWING EROSION CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION:

   A. PLACE INLET FILTER PROTECTION AS SHOWN ON THE EROSION CONTROL PLANS.
   B. PLACE DITCH CHECKS AS SHOWN ON THE EROSION CONTROL PLANS.

EROSION CONTROL GENERAL NOTES

1. TEMPORARY EROSION CONTROL DEVICES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

2. THE CONTRACTOR SHALL CONFINE ACTIVITIES TO FALL WITHIN THE PROPOSED RIGHT-OF -WAY AS SHOWN ON THE PLANS.

3. ANY DEVIATION OF THE TEMPORARY EROSION CONTROL PLAN OR SCHEDULE BY THE CONTRACTOR SHALL BE AT THE DISCRETION OF THE ENGINEER.

4. THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION CONTROL ITEMS PRIOR TO ANY PAVING OPERATIONS. THIS INCLUDES BUT IS NOT LIMITED TO INLET PROTECTION AND TEMPORARY DITCH CHECKS. LOCATIONS AND TREATMENTS OF EROSION CONTROL MEASURES ARE SHOWN ON THE PLAN SHEETS.

5. A NOMINAL QUANTITY FOR ITEM JS251115 MULCH, METHOD 2, JS280150 TEMPORARY STABILIZATION WITH STRAW MULCH, JS250220 SEEDING CLASS 2E, AND EROSION CONTROL BLANKET, SHORT-TERM (JI251005) HAS BEEN PROVIDED FOR FORESLOPE ESC. THE USE OF THESE ITEMS SHALL BE AS APPROVED OR DIRECTED BY THE ENGINEER.

6. TEMPORARY DITCH CHECKS: NO AGGREGATE WITH FILTER FABRIC WILL BE ALLOWED. ROLLED EXCELSIOR WILL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS.

PAVEMENT REMOVAL AND PRECAST CONCRETE PAVEMENT SLAB NOTES

1. PAVEMENT REMOVAL (44000100) SHALL INCLUDE THE FOLLOWING:
   A. REMOVAL OF THE EXISTING BITUMINOUS PRESSURE RELIEF JOINT.
   B. REMOVAL OF 1-FOOT OF JOINTED CONCRETE PAVEMENT AND NECESSARY SAW CUTS, ON BOTH SIDES OF THE EXISTING HMA JOINT.
   C. EXACT DIMENSIONS OF THE CONCRETE REMOVAL SHALL BE DETERMINED IN THE FIELD TO MATCH THE DIMENSIONS OF THE PRECAST CONCRETE SLABS.
   D. SEE REM-2 FOR DETAILS.

PATCHING NOTES

1. ANY PATCHING OF THE EDENS SPUR SHOULDERS OR ADDITIONAL WORK BEYOND THE INTERMITTENT 4" MILLING OF THE FRONTAGE ROAD WILL BE AT THE DIRECTION OF THE ENGINEER.

2. A NOMINAL QUANTITY FOR EDENS SPUR SHOULDER PATCHING HAS BEEN INCLUDED UNDER CLASS D2 PATCHES, OF THE TYPE AND DEPTH SPECIFIED, PAVEMENT PATCHING AND TRAFFIC CONTROL (JT154001), AND UNFORESEEN ADDITIONAL MAINTENANCE OF TRAFFIC (JT154008).

3. ADDITIONAL FRONTAGE ROAD PAVEMENT WORK WILL BE INCLUDED IN PAVEMENT PATCHING AND TRAFFIC CONTROL (JT154001) AND UNFORESEEN ADDITIONAL MAINTENANCE OF TRAFFIC (JT154008).

PROJECT JURISDICTION

I-294	ILLINOIS TOLLWAY
EDENS SPUR (I-94)	ILLINOIS TOLLWAY
FRONTAGE ROAD	ILLINOIS TOLLWAY

DRAWN BY YS DATE N/A /2018
CHECKED BY TRK DATE 2/18/2018

d'Escoto Inc. Where Vision Meets Implementation
1200 North Ashland Ave
6th Floor
Chicago, IL 60622
PHONE: 312.787.0707

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
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ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

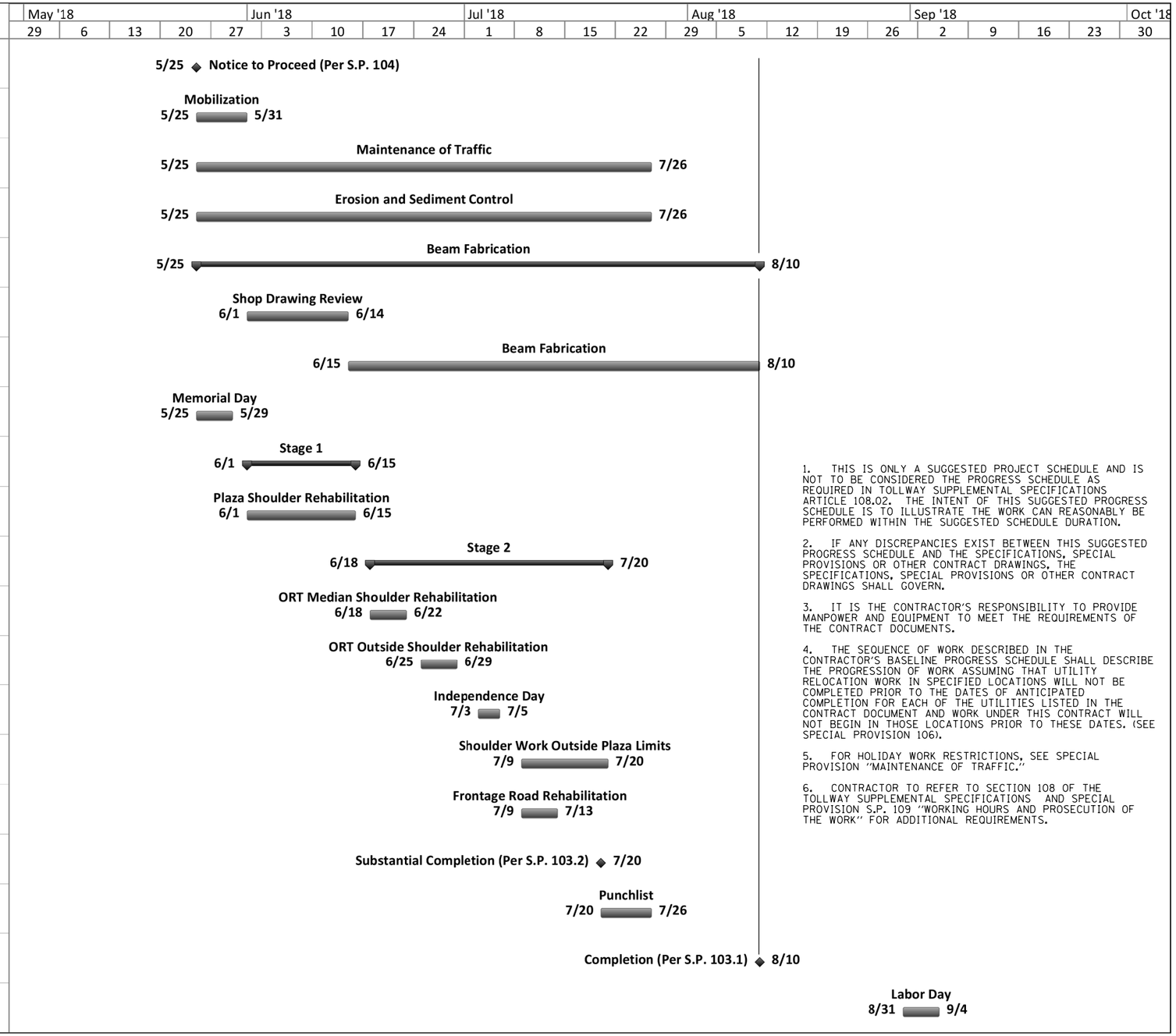
GENERAL NOTES

SHT NO. GEN-1

DRAWING NO. 3 OF 66

CONTRACT NO: I-18-4372: EDENS SPUR (I-94)
ROADWAY REHABILITATION AND CONCRETE BEAM FABRICATION
(M.P. 26.25) - PLAZA 24 TO (M.P. 26.9)
FRONTAGE ROAD (SOUTH OF WAUKEGAN ROAD INTERCHANGE)

ID	Task Name	Start	Finish
1	Notice to Proceed (Per S.P. 104)	Fri 5/25/18	Fri 5/25/18
2	Mobilization	Fri 5/25/18	Thu 5/31/18
3	Maintenance of Traffic	Fri 5/25/18	Thu 7/26/18
4	Erosion and Sediment Control	Fri 5/25/18	Thu 7/26/18
5	**Beam Fabrication**	**Fri 5/25/18**	**Fri 8/10/18**
6	Shop Drawing Review	Fri 6/1/18	Thu 6/14/18
7	Beam Fabrication	Fri 6/15/18	Fri 8/10/18
8	Memorial Day	Fri 5/25/18	Tue 5/29/18
9	**Stage 1**	**Fri 6/1/18**	**Fri 6/15/18**
10	Plaza Shoulder Rehabilitation	Fri 6/1/18	Fri 6/15/18
11	**Stage 2**	**Mon 6/18/18**	**Fri 7/20/18**
12	ORT Median Shoulder Rehabilitation	Mon 6/18/18	Fri 6/22/18
13	ORT Outside Shoulder Rehabilitation	Mon 6/25/18	Fri 6/29/18
14	Independence Day	Tue 7/3/18	Thu 7/5/18
15	Shoulder Work Outside Plaza Limits	Mon 7/9/18	Fri 7/20/18
16	Frontage Road Rehabilitation	Mon 7/9/18	Fri 7/13/18
17	Substantial Completion (Per S.P. 103.2)	Fri 7/20/18	Fri 7/20/18
18	Punchlist	Fri 7/20/18	Thu 7/26/18
19	Completion (Per S.P. 103.1)	Fri 8/10/18	Fri 8/10/18
20	Labor Day	Fri 8/31/18	Tue 9/4/18



1. THIS IS ONLY A SUGGESTED PROJECT SCHEDULE AND IS NOT TO BE CONSIDERED THE PROGRESS SCHEDULE AS REQUIRED IN TOLLWAY SUPPLEMENTAL SPECIFICATIONS ARTICLE 108.02. THE INTENT OF THIS SUGGESTED PROGRESS SCHEDULE IS TO ILLUSTRATE THE WORK CAN REASONABLY BE PERFORMED WITHIN THE SUGGESTED SCHEDULE DURATION.

2. IF ANY DISCREPANCIES EXIST BETWEEN THIS SUGGESTED PROGRESS SCHEDULE AND THE SPECIFICATIONS, SPECIAL PROVISIONS OR OTHER CONTRACT DRAWINGS, THE SPECIFICATIONS, SPECIAL PROVISIONS OR OTHER CONTRACT DRAWINGS SHALL GOVERN.

3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MANPOWER AND EQUIPMENT TO MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

4. THE SEQUENCE OF WORK DESCRIBED IN THE CONTRACTOR'S BASELINE PROGRESS SCHEDULE SHALL DESCRIBE THE PROGRESSION OF WORK ASSUMING THAT UTILITY RELOCATION WORK IN SPECIFIED LOCATIONS WILL NOT BE COMPLETED PRIOR TO THE DATES OF ANTICIPATED COMPLETION FOR EACH OF THE UTILITIES LISTED IN THE CONTRACT DOCUMENT AND WORK UNDER THIS CONTRACT WILL NOT BEGIN IN THOSE LOCATIONS PRIOR TO THESE DATES. (SEE SPECIAL PROVISION 106).

5. FOR HOLIDAY WORK RESTRICTIONS, SEE SPECIAL PROVISION "MAINTENANCE OF TRAFFIC."

6. CONTRACTOR TO REFER TO SECTION 108 OF THE TOLLWAY SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISION S.P. 109 "WORKING HOURS AND PROSECUTION OF THE WORK" FOR ADDITIONAL REQUIREMENTS.

DRAWN BY YS DATE N/A ·/2018
CHECKED BY TRK DATE 2/18/2018

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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
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ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

SUGGESTED PROGRESS SCHEDULE

SHT NO. PS-1

DRAWING NO. 4 OF 66

PROP. CURVE EDENS-1
PI STA. = 21+09.79
Δ = 68° 49' 07.02" (LT)
D = 4° 59' 59.93"
R = 1,145.92'
T = 784.90'
L = 1,376.38'
E = 243.04'
PC STA. = 13+24.89
PT STA. = 27+01.27
DESIGN SPEED = 60 MPH

25+00
CURVE EDENS-1
30+00
35+00
PT 27+01.27
N: 1,997,450.00
E: 1,110,111.35
40+00

MATCH LINE STA. 45+00 SEE BELOW

MATCH LINE STA. 45+00 SEE ABOVE

EXISTING ℄ EDENS SPUR (I-94)

45+00
50+00
55+00
60+00
BEGIN IMPROVEMENTS
60+47.37
65+00
70+00
℄ PLAZA 24
69+90.25
75+00
80+00
85+00
90+00
95+00
END IMPROVEMENTS
95+85.90
100+00
PC 98+60.87
N: 1,997,465.05
E: 1,116,804.82
CURVE EDENS-2

MATCH LINE STA. 105+00 SEE BELOW

EX. CURVE EDENS 2
PI STA. = 106+59.18
Δ = 31° 08' 33.08" (RT)
D = 2° 00' 00.00"
R = 2,864.79'
T = 798.31'
L = 1,557.13'
E = 109.15'
PC STA. = 98+60.87
PT STA. = 114+17.99
DESIGN SPEED = 60 MPH
STA. 86+52.68 (NORMAL)
STA. 89+53.68 TO 102+85.80 (4.5% SE)
STA. 105+85.80 (NORMAL)

CURVE EDENS-2
EXISTING ℄ WAUKEGAN ROAD
EXISTING ℄ RAMP
EXISTING ℄ RAMP
PC 134+87.19
N: 1,995,989.37
E: 1,120,060.72
110+00
115+00
PT 114+17.99
N: 1,997,055.51
E: 1,118,287.32
120+00
EXISTING ℄ EDENS SPUR (I-94)
125+00
130+00
135+00
140+00
145+00
150+00
155+00
PT 154+49.74
N: 1,995,609.38
E: 1,121,947.22
CURVE EDENS-3

EXIST. CURVE FRONTAGE-1
PI STA. = 23+63.66
Δ = 29° 15' 14" (RT)
D = 28° 38' 52"
R = 200.00'
T = 52.20'
L = 102.12'
E = 6.70'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 23+11.46
P.T. STA. = 24+13.57
DESIGN SPEED = 25 MPH

BEGIN IMPROVEMENTS
POT 10+00.00
N: 1,996,019.74
E: 1,119,641.44
10+00
15+00
20+00
PC 23+11.46
N: 1,995,344.02
E: 1,120,765.42
CURVE FRONTAGE-1
25+00
PT 24+13.57
N: 1,995,271.81
E: 1,120,836.04
30+00
END IMPROVEMENTS
POT 33+14.20
N: 1,994,496.98
E: 1,121,278.58

EX. CURVE EDENS-3
PI STA. = 145+08.73
Δ = 39° 15' 03.30" (LT)
D = 2° 00' 00.00"
R = 2,864.79'
T = 1,021.54'
L = 1,962.55'
E = 176.68'
PC STA. = 134+87.19
PT STA. = 154+49.74
DESIGN SPEED = 60 MPH
STA. 122+80.00 (NORMAL)
STA. 125+80.00 TO 143+17.54 (4.5% SE)
STA. 146+17.54 (NORMAL)

MATCH LINE STA. 105+00 SEE ABOVE

DRAWN BY YS DATE 1"=200'/2018
CHECKED BY TRK DATE 2/18/2018

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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

ALIGNMENT AND TIES

SHT NO. AT-1

DRAWING NO.
5 OF 66

SUMMARY OF QUANTITIES

SP	ITEM	DESCRIPTION	UNIT	TOTAL QUANTITIY	RECORD QUANTITY
	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	2,667	
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	104	
	40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	519	
	44000100	PAVEMENT REMOVAL	SQ YD	289	
	44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	21,641	
	44000165	HOT-MIX ASPHALT SURFACE REMOVAL, 4"	SQ YD	463	
	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	5,209	
*	JI213004	EXPLORATION TRENCH, UTILITIES (HAND EXCAVATION)	FOOT	500	
*	JI213006	EXPLORATION TRENCH, UTILITIES (VACUUM EXCAVATION)	FOOT	500	
*	JI251005	EROSION CONTROL BLANKET, SHORT-TERM	SQ YD	200	
*	JI406108	ASPHALT TACK COAT (NON-TRACKING)	POUND	8,423	
*	JI406510	WARM-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	1,911	
*	JI406900	CONSTRUCTING WARM MIX ASPHALT TEST STRIP	EACH	2	
*	JI442416	CLASS D2 PATCHES, TYPE I, 7 INCHES	SQ YD	50	
*	JI442420	CLASS D2 PATCHES, TYPE II, 7 INCHES	SQ YD	100	
*	JI442424	CLASS D2 PATCHES, TYPE III, 7 INCHES	SQ YD	100	
*	JI442428	CLASS D2 PATCHES, TYPE IV, 7 INCHES	SQ YD	150	
*	JI504050	FURNISHING PRECAST PRESTRESSED CONCRETE IL45-2438 BEAMS	FOOT	1,529	
*	JI642014	ASPHALT SHOULDER RUMBLE STRIP, 16 INCH	FOOT	25,434	
**	JS120100	TRAILER MOUNTED FULL MATRIX PORTABLE CHANGEABLE MESSAGE SIGNS	EACH	2	
**	JS250220	SEEDING, CLASS 2E	ACRE	1.0	
**	JS251115	MULCH, METHOD 2	ACRE	1.0	
**	JS280020	MANAGEMENT OF EROSION AND SEDIMENT CONTROL	CAL MO	2	
**	JS280150	TEMPORARY STABILIZATION WITH STRAW MULCH	ACRE	1.0	
**	JS280205	FILTER FABRIC INLET PROTECTION, COVER TYPE	EACH	78	
**	JS280305	TEMPORARY DITCH CHECKS	FOOT	32	
**	JS670CM0	FIELD OFFICE, TYPE C (MODIFIED)	CAL MO	5	
**	JS671010	MOBILIZATION, TOLLWAY	L SUM	1	

SP	ITEM	DESCRIPTION	UNIT	TOTAL QUANTITIY	RECORD QUANTITY
*	JS701010	MAINTENANCE OF TRAFFIC	L SUM	1	
*	JT154001	PAVEMENT PATCHING AND TRAFFIC CONTROL	UNIT	25,000	
*	JT154008	UNFORESEEN ADDITIONAL MAINTENANCE OF TRAFFIC	UNIT	25,000	
*	JT155001	CONTRACTOR'S QUALITY PROGRAM	L SUM	1	
*	JT415010	AGGREGATE FOR BASE COURSE RESTORATION, SPECIAL	TON	96	
*	JT485012	STANDARD PRECAST CONCRETE PAVEMENT SLABS, 12.5'	SQ FT	600	
*	JT485014	STANDARD PRECAST CONCRETE PAVEMENT SLABS, 13.5'	SQ FT	156	
*	JT485015	CUSTOM PRECAST CONCRETE PAVEMENT SLABS	SQ FT	1,750	
*	JT701030	SUPPLEMENTAL BARRICADE	EACH/DAY	100	
*	JT701031	SUPPLEMENTAL SIGNING	SQ FT	100	
*	JT701032	SUPPLEMENTAL FLASHING ARROW BOARD (PER DAY)	EACH/DAY	14	
*	JT701033	SUPPLEMENTAL FLASHING ARROW BOARD (PER WEEK)	EACH/WEEK	20	
*	JT701034	SUPPLEMENTAL FLASHING ARROW BOARD (PER MONTH)	EACH/MONTH	7	
*	JT701035	SUPPLEMENTAL MAINTENANCE OF TRAFFIC	DAY	14	
*	JT701200	PORTABLE CHANGEABLE MESSAGE SIGN	CAL DAY	205	
*	JT701210	PORTABLE CHANGEABLE MESSAGE SIGN	WEEK	30	
*	JT701220	PORTABLE CHANGEABLE MESSAGE SIGN	CAL MO	7	

- • INDICATES SPECIAL PROVISION
- •• INDICATES TOLLWAY SUPPLEMENTAL SPECIFICATIONS
- ••• INDICATES IDOT RECURRING SPECIAL PROVISIONS

BDE INDICATES IDOT BDE SPECIAL PROVISION
GBSP INDICATES IDOT GUIDE BRIDGE SPECIAL PROVISION

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PHONE: 312.787.0707

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

SUMMARY OF QUANTITIES

SHT NO. S00-1

DRAWING NO. 6 OF 66

JT485012					
STANDARD PRECAST CONCRETE PAVEMENT SLABS, 12.5'					
STATION	STATION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	DESCRIPTION
EDENS SPUR					
64+30.35	64+40.35	6.0	12.5	75	EB-LANE 1
64+30.35	64+40.35	6.0	12.5	75	EB-LANE 2
65+32.32	65+42.32	6.0	12.5	75	WB-LANE 1
65+32.32	65+42.32	6.0	12.5	75	WB-LANE 2
81+86.42	81+96.42	6.0	12.5	75	EB-LANE 1
81+86.42	81+96.42	6.0	12.5	75	EB-LANE 2
81+86.42	81+96.42	6.0	12.5	75	WB-LANE 1
81+86.42	81+96.42	6.0	12.5	75	WB-LANE 2
			TOTAL	600	

JT485014					
STANDARD PRECAST CONCRETE PAVEMENT SLABS, 13.5'					
STATION	STATION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	DESCRIPTION
EDENS SPUR					
81+86.42	81+96.42	6.0	13.0	78	EB PLAZA
81+86.42	81+96.42	6.0	13.0	78	WB PLAZA
			TOTAL	156	

JT485015					
CUSTOM PRECAST CONCRETE PAVEMENT SLABS					
STATION	STATION	LENGTH (LF)	WIDTH (LF)	AREA (SF)	DESCRIPTION
EDENS SPUR					
68+05.31	68+15.31	6.0	15.3	92	EB PLAZA-OUTSIDE
68+05.31	68+15.31	6.0	16.5	99	EB PLAZA
68+05.31	68+15.31	6.0	16.5	99	EB PLAZA
68+05.31	68+15.31	6.0	16.5	99	EB PLAZA
68+05.31	68+15.31	6.0	10.5	63	EB PLAZA-INSIDE
68+05.31	68+15.31	6.0	15.3	92	WB PLAZA-OUTSIDE
68+05.31	68+15.31	6.0	16.5	99	WB PLAZA
68+05.31	68+15.31	6.0	10.7	65	WB PLAZA
68+05.31	68+15.31	6.0	16.5	99	WB PLAZA
68+05.31	68+15.31	6.0	10.5	63	WB PLAZA-INSIDE
71+63.04	71+73.04	6.0	15.3	92	EB PLAZA-OUTSIDE
71+63.04	71+73.04	6.0	16.5	99	EB PLAZA
71+63.04	71+73.04	6.0	13.4	81	EB PLAZA
71+63.04	71+73.04	6.0	16.5	99	EB PLAZA
71+63.04	71+73.04	6.0	10.5	63	EB PLAZA-INSIDE
71+63.04	71+73.04	6.0	15.3	92	WB PLAZA-OUTSIDE
71+63.04	71+73.04	6.0	16.5	99	WB PLAZA
71+63.04	71+73.04	6.0	16.5	99	WB PLAZA
71+63.04	71+73.04	6.0	16.5	99	WB PLAZA
71+63.04	71+73.04	6.0	9.5	57	WB PLAZA-INSIDE
			TOTAL	1750	

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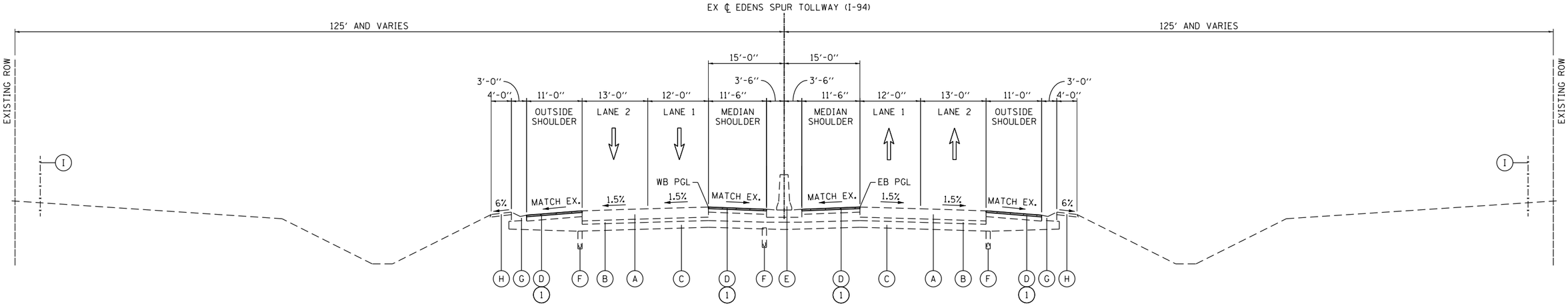
REVISIONS		
NO.	DATE	DESCRIPTION

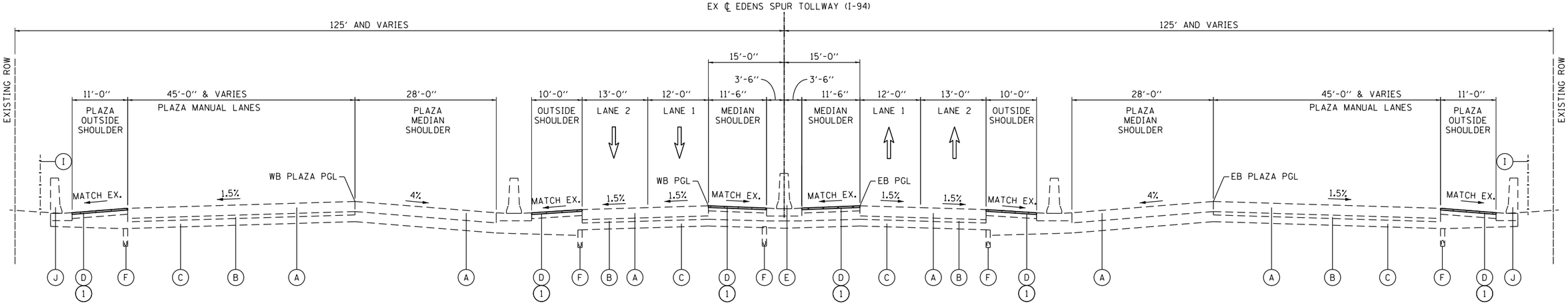
CONTRACT NO. I-18-4372

SCHEDULE OF QUANTITIES

SHT NO.SCH-1

DRAWING NO.
7 OF 66





EXISTING LEGEND

- (A) PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) GRANULAR SUBBASE, 4" AND VARIES
- (C) SELECT SUBGRADE, 8"
- (D) WARM-MIX ASPHALT SHOULDER, 9"
- (E) CONCRETE MEDIAN BARRIER AND BASE, TYPE F
- (F) SUBSURFACE DRAIN
- (G) GUTTER, TYPE G-3
- (H) AGGREGATE SHOULDER, 6"
- (I) RIGHT-OF-WAY FENCE
- (J) SINGLE FACE BARRIER AND BASE, TYPE F
- (K) CLOSED MEDIAN, 6"
- (L) CONCRETE BARRIER AND BASE, TYPE F, TOLL BOOTH
- (M) FRONTAGE ROAD SURFACE COURSE (6" & VARIES)
- (N) FRONTAGE ROAD HMA BASE COURSE (16"-20" & VARIES)
- (O) FRONTAGE ROAD AGGREGATE SUBBASE
- (P) STEEL PLATE BEAM GUARDRAIL

EXISTING LEGEND

- (1) HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)
- (2) HOT-MIX ASPHALT SURFACE REMOVAL, 4" (44000165) (AT INTERMITTENT LOCATIONS ALONG FRONTAGE ROAD)

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ILLINOIS 60515

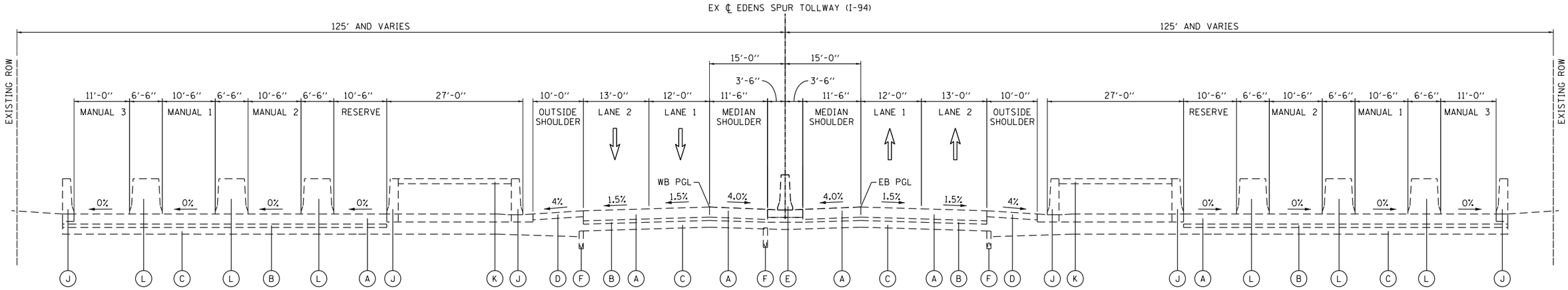
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

EXISTING TYPICAL SECTIONS

SHT NO. TYP-1

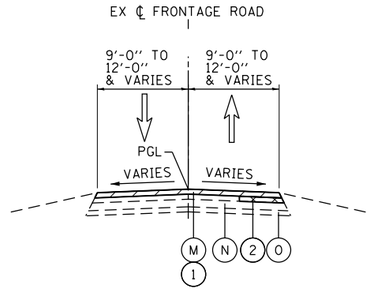
DRAWING NO. 8 OF 66



WESTBOUND **EASTBOUND**

EXISTING TYPICAL SECTION

STA. 69+35.00 TO STA. 70+35.00
(SHOULDER REMOVAL OMISSION)



EXISTING FRONTAGE ROAD TYPICAL SECTION

STA. 10+00.00 TO STA. 33+14.20

EXISTING LEGEND

- (A) PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) GRANULAR SUBBASE, 4" AND VARIES
- (C) SELECT SUBGRADE, 8"
- (D) WARM-MIX ASPHALT SHOULDER, 9"
- (E) CONCRETE MEDIAN BARRIER AND BASE, TYPE F
- (F) SUBSURFACE DRAIN
- (G) GUTTER, TYPE G-3
- (H) AGGREGATE SHOULDER, 6"
- (I) RIGHT-OF-WAY FENCE
- (J) SINGLE FACE BARRIER AND BASE, TYPE F
- (K) CLOSED MEDIAN, 6"
- (L) CONCRETE BARRIER AND BASE, TYPE F, TOLL BOOTH
- (M) FRONTAGE ROAD SURFACE COURSE (6" & VARIES)
- (N) FRONTAGE ROAD HMA BASE COURSE (16"-20" & VARIES)
- (O) FRONTAGE ROAD AGGREGATE SUBBASE
- (P) STEEL PLATE BEAM GUARDRAIL

EXISTING LEGEND

- (1) HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)
- (2) HOT-MIX ASPHALT SURFACE REMOVAL, 4" (44000165) (AT INTERMITTENT LOCATIONS ALONG FRONTAGE ROAD)

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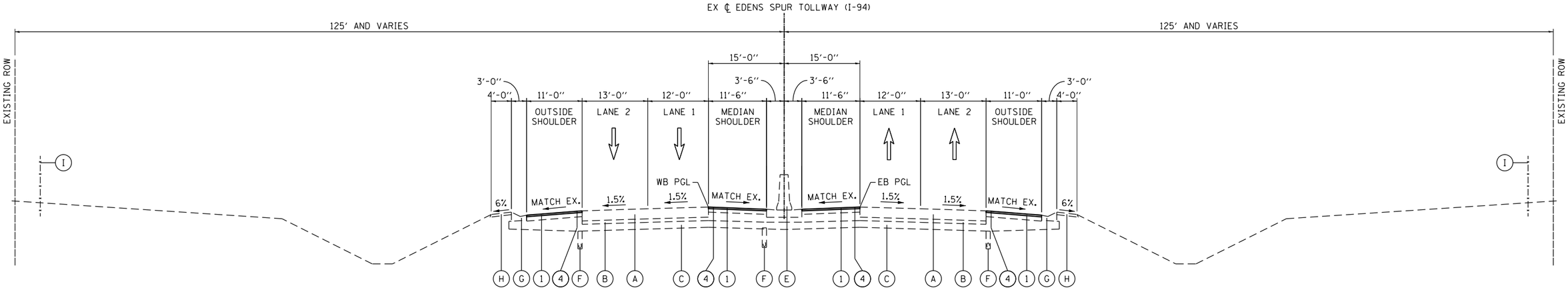
CONTRACT NO. I-18-4372

EXISTING
TYPICAL SECTIONS

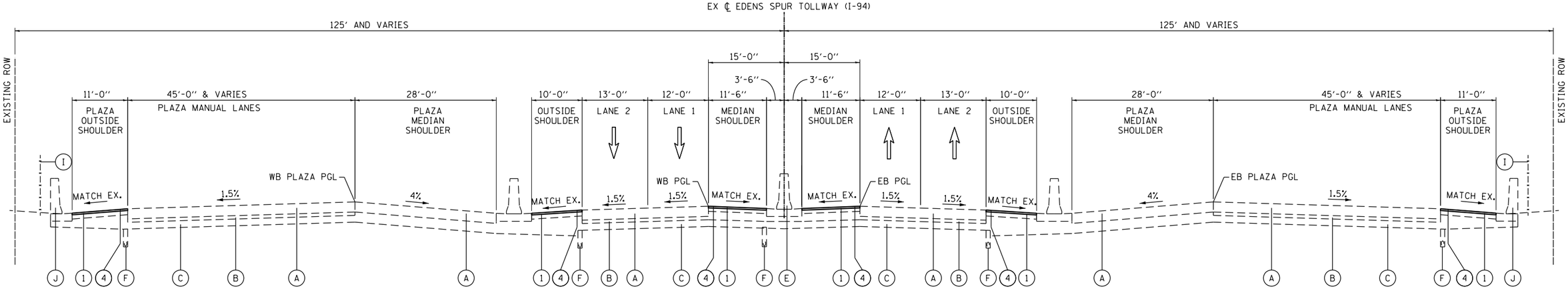
SHT NO.TYP-2

DRAWING NO.
9 OF 66



WESTBOUND **PROPOSED TYPICAL SECTION** **EASTBOUND**

STA. 93+00.00 TO STA. 95+85.90



WESTBOUND **PROPOSED TYPICAL SECTION** **EASTBOUND**

STA. 60+47.37 TO STA. 69+35.00
STA. 70+35.00 TO STA. 93+00.00

EXISTING LEGEND

- (A) PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) GRANULAR SUBBASE, 4" AND VARIES
- (C) SELECT SUBGRADE, 8"
- (D) WARM-MIX ASPHALT SHOULDER, 9"
- (E) CONCRETE MEDIAN BARRIER AND BASE, TYPE F
- (F) SUBSURFACE DRAIN
- (G) GUTTER, TYPE G-3
- (H) AGGREGATE SHOULDER, 6"
- (I) RIGHT-OF-WAY FENCE
- (J) SINGLE FACE BARRIER AND BASE, TYPE F
- (K) CLOSED MEDIAN, 6"
- (L) CONCRETE BARRIER AND BASE, TYPE F, TOLL BOOTH
- (M) FRONTAGE ROAD SURFACE COURSE (6" & VARIES)
- (N) FRONTAGE ROAD HMA BASE COURSE (16"-20" & VARIES)
- (O) FRONTAGE ROAD AGGREGATE SUBBASE
- (P) STEEL PLATE BEAM GUARDRAIL

PROPOSED LEGEND

- ☐ PROPOSED WORK
- (1) WARM-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (JI406510) (2")
- (2) FRONTAGE ROAD
  HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (40603335) (2")
- (3) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (40603080) (4")
  (AT INTERMITTENT LOCATIONS ALONG FRONTAGE ROAD)
- (4) ASPHALT SHOULDER RUMBLE STRIP, 16 INCH (JI642014)

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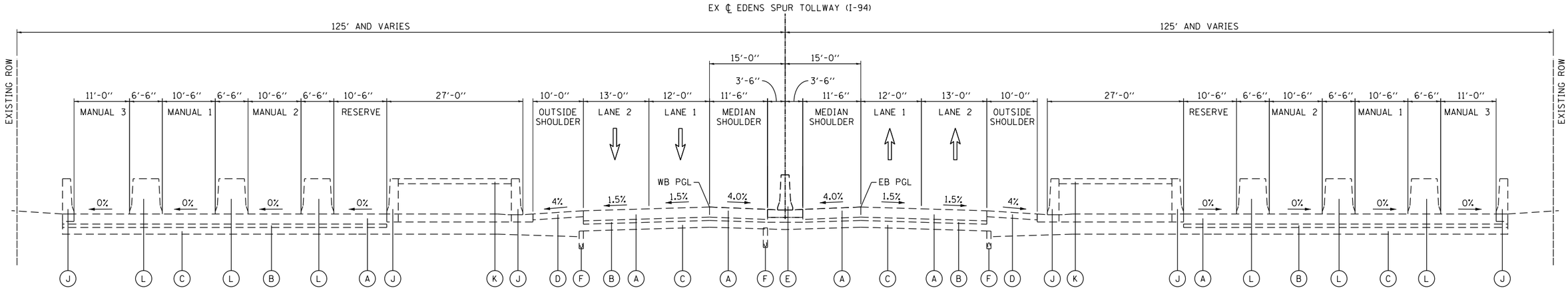
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

PROPOSED TYPICAL SECTIONS

SHT NO. TYP-3

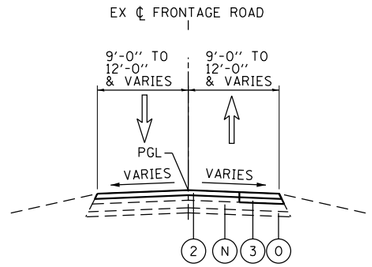
DRAWING NO. 10 OF 66



WESTBOUND **EASTBOUND**

PROPOSED TYPICAL SECTION

STA. 69+35.00 TO STA. 70+35.00
(SHOULDER REMOVAL OMISSION)



PROPOSED FRONTAGE ROAD TYPICAL SECTION

STA. 10+00.00 TO STA. 33+14.20

EXISTING LEGEND

- (A) PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) GRANULAR SUBBASE, 4" AND VARIES
- (C) SELECT SUBGRADE, 8"
- (D) WARM-MIX ASPHALT SHOULDER, 9"
- (E) CONCRETE MEDIAN BARRIER AND BASE, TYPE F
- (F) SUBSURFACE DRAIN
- (G) GUTTER, TYPE G-3
- (H) AGGREGATE SHOULDER, 6"
- (I) RIGHT-OF-WAY FENCE
- (J) SINGLE FACE BARRIER AND BASE, TYPE F
- (K) CLOSED MEDIAN, 6"
- (L) CONCRETE BARRIER AND BASE, TYPE F, TOLL BOOTH
- (M) FRONTAGE ROAD SURFACE COURSE (6" & VARIES)
- (N) FRONTAGE ROAD HMA BASE COURSE (16"-20" & VARIES)
- (O) FRONTAGE ROAD AGGREGATE SUBBASE
- (P) STEEL PLATE BEAM GUARDRAIL

PROPOSED LEGEND

- PROPOSED WORK
- (1) WARM-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (JI406510) (2")
- (2) FRONTAGE ROAD
  HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (40603335) (2")
- (3) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (40603080) (4")
  (AT INTERMITTENT LOCATIONS ALONG FRONTAGE ROAD)
- (4) ASPHALT SHOULDER RUMBLE STRIP, 16 INCH (JI642014)

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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372	SHT NO.TYP-4
PROPOSED TYPICAL SECTIONS	DRAWING NO. 11 OF 66

MAINTENANCE OF TRAFFIC GENERAL NOTES

1. THE TRAFFIC CONTROL PLANS SHALL SERVE AS A GUIDE FOR SAFE DIVERSION OF TRAFFIC DURING EXECUTION OF THIS CONTRACT. HOWEVER, THE CONTRACTOR MAY MODIFY THE TRAFFIC CONTROL PLANS TO MEET CONSTRUCTION NEEDS, BUT NOT AT THE EXPENSE OF PUBLIC SAFETY OR CONVENIENCE. ANY CHANGES TO THE TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR APPROVAL. THE ENGINEER SHALL BE INFORMED IN WRITING A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF ANY CHANGE TO THE TRAFFIC CONTROL PLANS. NO ADDITIONAL COMPENSATION SHALL BE DUE TO THE CONTRACTOR IF A MODIFIED PLAN IS PROPOSED.

2. TRAFFIC CONDITIONS, ACCIDENTS, AND OTHER UNFORESEEN CIRCUMSTANCES MAY REQUIRE THE ENGINEER TO RESTRICT, MODIFY, OR REMOVE LANE CLOSURES OR REPAIR EXISTING TRAFFIC CONTROL. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER WITHOUT DELAY. THE CONTRACTOR SHALL RESPOND WITHIN 30 MINUTES FROM THE TIME OF NOTIFICATION BY THE ENGINEER TO ANY REQUEST MADE BY THE ENGINEER FOR CORRECTION, IMPROVEMENT, OR MODIFICATION OF THE MAINTENANCE OF TRAFFIC CONTROL DEVICES. FAILURE TO RESPOND WITHIN THE ABOVE TIME LIMIT WILL RESULT IN A PENALTY PER THE SPECIAL PROVISIONS WHENEVER THE ENGINEER DETERMINES THAT THE CONTRACTOR OR HIS SUBCONTRACTOR HAS NOT COMPLIED.

3. ALL TRAFFIC CONTROL DEVICES USED FOR MAINTENANCE OF TRAFFIC AND DETAILED ON THE PLANS, SHALL BE REFLECTORIZED, AND IN NEW OR LIKE NEW CONDITION PRIOR TO THE INITIAL INSTALLATION, AND CLEANED, REFURBISHED OR REPLACED AS NECESSARY THROUGH THE DURATION OF THE CONTRACT.

4. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THEIR CONSTRUCTION OPERATIONS WITH THE CONSTRUCTION AND MAINTENANCE OPERATIONS OF OTHER CONTRACTORS WORKING WITHIN AND ADJACENT TO THE LIMITS OF THE PROJECT.

5. CONSTRUCTION SIGN PLACEMENT MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS.

6. CONSTRUCTION SIGNS SHALL BE POST MOUNTED OR ATTACHED TO PORTABLE SUPPORTS AND SHALL BE INSTALLED 8′ TO 12′ FROM ADJACENT TRAVEL LANE WHEREVER POSSIBLE. UNDER NO CONDITIONS SHALL SIGNS BE LOCATED TO PROVIDE LESS THAN 2′ CLEARANCE BETWEEN THE EDGE OF SIGN AND ADJACENT TRAVEL LANE.

7. THE FOLLOWING SHALL APPLY TO CONSTRUCTION SIGNING:

   A) THE CONTRACTOR SHALL FURNISH ALL SIGNS.

   B) ALL SIGNS AND ASSEMBLIES MUST MEET THE APPLICABLE REQUIREMENTS OF NCHRP REPORT 350, TEST LEVEL 3.

   C) ALL SIGNS SHALL BE BOLTED TO THE SIGN SUPPORTS, UNLESS OTHERWISE NOTED.

   D) ALL SIGNS SHALL BE POST-MOUNTED UNLESS THE SIGNS ARE LOCATED ON THE PAVEMENT OR DEFINE A MOVING INTERMITTENT OPERATION. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THE SIGN SUPPORT BASES ARE PROPERLY WEIGHTED FOR EXISTING WIND CONDITIONS.

   E) ALL CONSTRUCTION WARNING SIGNS SHALL BE BLACK LEGEND ON ORANGE BACKGROUND WITH 48″ X 48″ DIMENSION.

   F) ALL "ROAD CONSTRUCTION AHEAD" WARNING SIGNS SHALL BE EQUIPPED WITH HIGH INTENSITY FLASHING LIGHTS.

   G) THE CONSTRUCTION MANAGER SHALL APPROVE ALL TEMPORARY SIGN SUPPORTS. ALL SIGN ASSEMBLIES SHALL BE CERTIFIED BY THE CONTRACTOR AS MEETING THE APPLICABLE REQUIREMENTS OF NCHRP REPORT 350, TEST LEVEL 3.

MAINTENANCE OF TRAFFIC SUGGESTED SEQUENCE OF CONSTRUCTION

CLOSURE REQUIREMENTS APPLICABLE TO ALL STAGES (EDENS SPUR)

OFF-PEAK LANE AND SHOULDER CLOSURES MAY NOT OCCUR AT THE SAME TIME FOR THE EASTBOUND AND WESTBOUND LANES. EASTBOUND AND WESTBOUND CONSTRUCTION ZONES SHALL NOT OCCUR DURING THE SAME OFF-PEAK TIME FRAME.

STAGE 1 – EDENS SPUR – OUTSIDE SHOULDERS AT PLAZA

TRAFFIC (OFF-PEAK):
EASTBOUND AND WESTBOUND OUTSIDE LANE WILL BE CLOSED (PER TOLLWAY STANDARD E2) FOR OUTSIDE SHOULDER WORK ZONE. SEE THE SPECIAL PROVISIONS FOR ALLOWABLE OFF-PEAK CLOSURE TIMES AND DURATIONS.

MAINTENANCE OF TRAFFIC SHEETS MOT-01 TO MOT-04 DEPICT A TYPICAL USE OF THE ADVANCE WARNING SIGNAGE FOR THE OUTSIDE SHOULDER CLOSURES. AS THE CONTRACTOR'S NIGHTLY WORKZONE WILL VARY, THESE SHEETS AND APPROPRIATE TOLLWAY STANDARDS SHOULD BE USED AS A BASIS FOR THE ADVANCED SIGNAGE. THE ACTUAL SIGN POSITIONS WILL BE DETERMINED NIGHTLY AND PLACED IN POSITIONS AS DIRECTED BY THE ENGINEER.

COORDINATE CLOSURE OF PLAZA TOLL BOOTHS WITH DISTRICT SUPERVISOR, OPS-TOLL COLLECTION ADMINSTRATION REPRESENTATIVE, MIGUEL SOTOMEYER.

NO PERMENENT SHOULDER CLOSURES OR DROP-OFFS WILL BE ALLOWED FOR DAYTIME TRAFFIC CONDITIONS.

CONSTRUCTION:
MILL AND OVERLAY EXISTING OUTSIDE SHOULDERS.
REMOVE AND REPLACE BITUMINOUS EXPANSION JOINTS.

STAGE 1A – EDENS SPUR – PRECAST CONCRETE PANELS AT HMA EXPANSION JOINT PLAZA LOCATIONS

TRAFFIC (OFF-PEAK):
PLAZA TRAFFIC STAGED FOR BITUMINOUS EXPANSION JOINT REMOVAL AND REPLACEMENT.
SEE THE SPECIAL PROVISIONS FOR ALLOWABLE OFF-PEAK CLOSURE TIMES AND DURATIONS.

NO PERMENENT SHOULDER CLOSURES OR DROP-OFFS WILL BE ALLOWED FOR DAYTIME TRAFFIC CONDITIONS.

CONSTRUCTION:
REMOVE AND REPLACE BITUMINOUS EXPANSION JOINTS.
COORDINATE CLOSURE OF PLAZA TOLL BOOTHS WITH DISTRICT SUPERVISOR, OPS-TOLL COLLECTION ADMINSTRATION REPRESENTATIVE, MIGUEL SOTOMEYER.

STAGE 2 – EDENS SPUR – ORT MEDIAN AND OUTSIDE SHOULDERS AT PLAZA

TRAFFIC OFF-PEAK:
ALL EASTBOUND AND WESTBOUND TRAFFIC WILL BE SHIFTED (PER TOLLWAY STANDARD E2 AND E3) TO THE PLAZA MANUAL LANES. SEE THE SPECIAL PROVISIONS FOR ALLOWABLE OFF-PEAK CLOSURE TIMES AND DURATIONS.

NO PERMENENT SHOULDER CLOSURES OR DROP-OFFS WILL BE ALLOWED FOR DAYTIME TRAFFIC CONDITIONS.

MILL AND OVERLAY ORT SHOULDERS.
REMOVE AND REPLACE BITUMINOUS EXPANSION JOINTS.

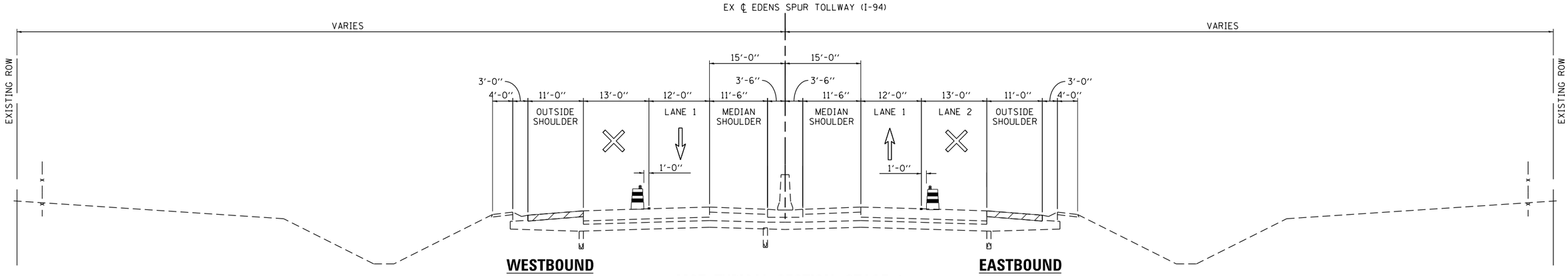
STAGE 2 – FRONTAGE ROAD

TRAFFIC:
FRONTAGE ROAD TRAFFIC WILL BE REDUCED TO ONE LANE PER IDOT STANDARD 701501.

CONSTRUCTION:
MILL AND OVERLAY PAVEMENT. PERFORM ADDITIONAL MILL AND OVERLAY AT LOCATIONS DIRECTED BY THE ENGINEER.

OFF–PEAK TIMES DEFINITION TABLE (EDENS SPUR)

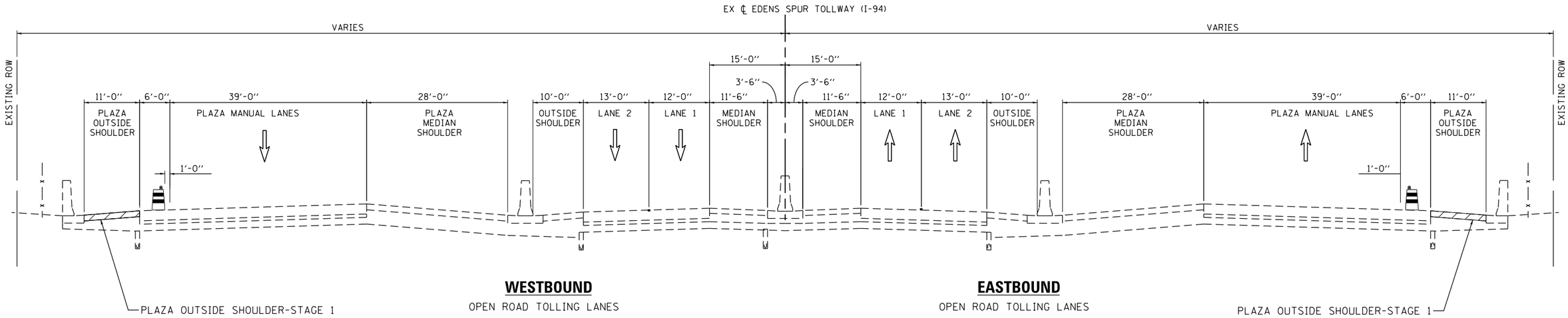
START DAY	ALLOWABLE OFF-PEAK ONE-LANE CLOSURE TIMES EDENS SPUR (ORT), STAGES 1, 1A, AND 2: M.P. 26.25 to M.P. 26.9	
	Eastbound	Westbound
Monday	7:00 p.m. – 6:00 a.m. Tues.	7:00 p.m. – 6:00 a.m. Tues.
Tuesday	7:00 p.m. – 6:00 a.m. Wed.	7:00 p.m. – 6:00 a.m. Wed.
Wednesday	7:00 p.m. – 6:00 a.m. Thurs.	7:00 p.m. – 6:00 a.m. Thurs.
Thursday	7:00 p.m. – 6:00 a.m. Fri.	7:00 p.m. – 6:00 a.m. Fri.
Friday	7:00 p.m. – 6:00 a.m. Sat.	7:00 p.m. – 6:00 a.m. Sat.



MOT TYPICAL SECTION STAGE 1

STA. 93+00.00 TO STA. 95+85.90

NOTE: EASTBOUND AND WESTBOOUND SHOULDERS OR LANES SHALL NOT BE CLOSED AT THE SAME TIME.



MOT TYPICAL SECTION STAGE 1

STA. 60+47.37 TO STA. 69+35.00

STA. 70+35.00 TO STA. 93+00.00

NOTE: EASTBOUND AND WESTBOOUND SHOULDERS OR LANES SHALL NOT BE CLOSED AT THE SAME TIME.

MOT LEGEND

- WORK ZONE
- DIRECTION OF TRAFFIC
- DAY-TIME LANE CLOSURE (WITH FLAGGING)
- LANE CLOSURE (OFF-PEAK)
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT

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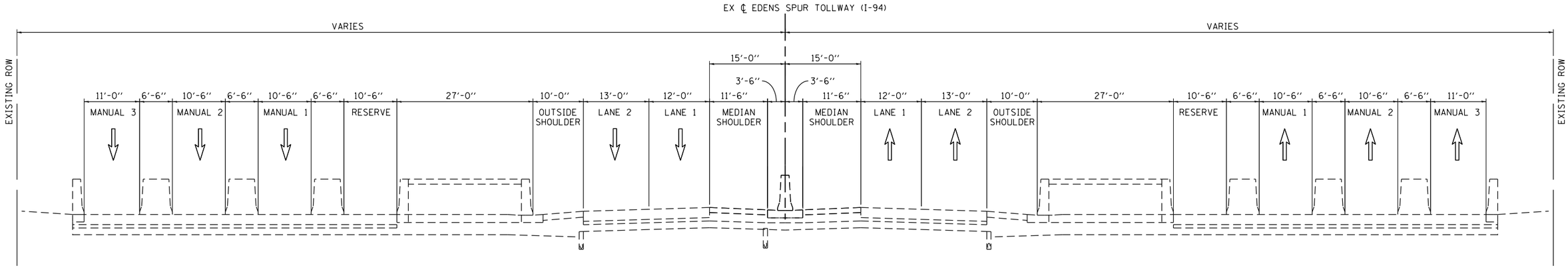
CHECKED BY TRK	DATE 2/18/2018				CONTRACT NO. I-18-4372
					MAINTENANCE OF TRAFFIC TYPICAL SECTION
					SHT NO.MTT-1 DRAWING NO. 13 OF 66

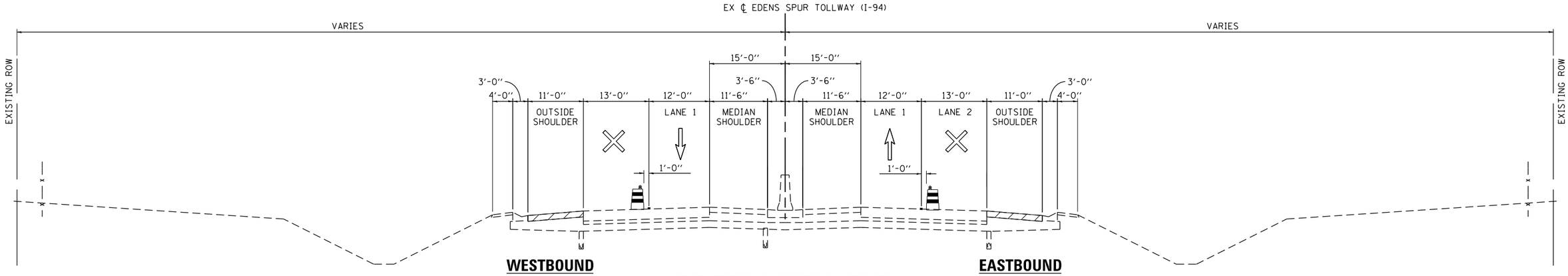


WESTBOUND **EASTBOUND**

MOT TYPICAL SECTION – PLAZA 24 – STAGE 1

STA. 69+35.00 TO STA. 70+35.00

NOTE: EASTBOUND AND WESTBOOUND SHOULDERS OR LANES SHALL NOT BE CLOSED AT THE SAME TIME.



WESTBOUND **EASTBOUND**

MOT TYPICAL SECTION STAGE 2

STA. 95+85.90 TO STA.232+02.66

NOTE: EASTBOUND AND WESTBOOUND SHOULDERS OR LANES SHALL NOT BE CLOSED AT THE SAME TIME.

MOT LEGEND

- WORK ZONE
- DIRECTION OF TRAFFIC
- DAY-TIME LANE CLOSURE (WITH FLAGGING)
- LANE CLOSURE (OFF-PEAK)
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT

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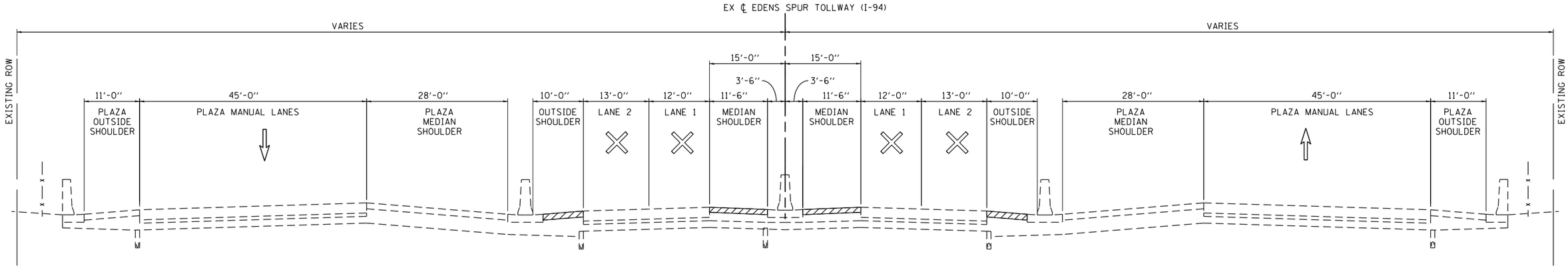
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372	SHT NO. MTT-2
MAINTENANCE OF TRAFFIC TYPICAL SECTION	DRAWING NO. 14 OF 66



WESTBOUND

OPEN ROAD TOLLING LANES

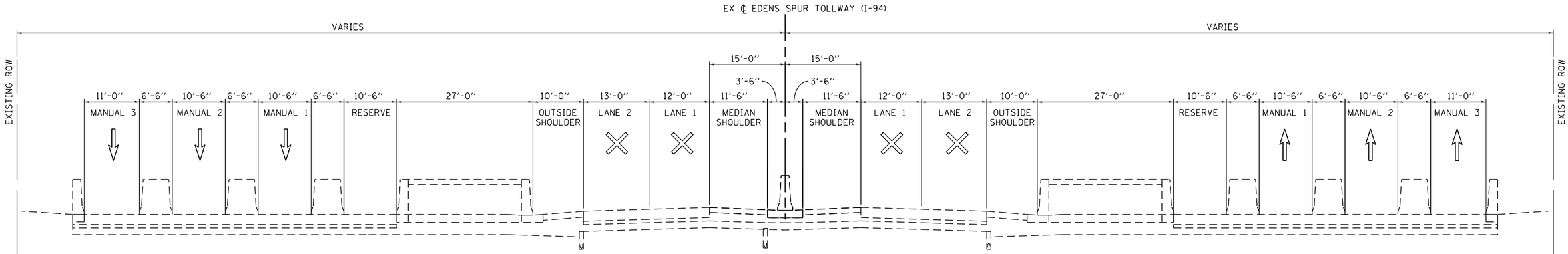
EASTBOUND

OPEN ROAD TOLLING LANES

MOT TYPICAL SECTION STAGE 2

STA. 60+47.37 TO STA. 69+35.00
STA. 70+35.00 TO STA. 95+85.90

NOTE: EASTBOUND AND WESTBOOUND SHOULDERS OR LANES SHALL NOT BE CLOSED AT THE SAME TIME.



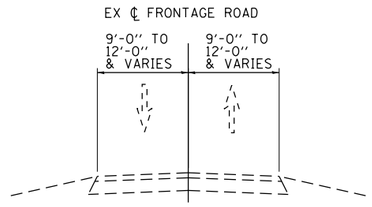
WESTBOUND

EASTBOUND

MOT TYPICAL SECTION – PLAZA 24 – STAGE 2

STA. 69+35.00 TO STA. 70+35.00

NOTE: EASTBOUND AND WESTBOOUND SHOULDERS OR LANES SHALL NOT BE CLOSED AT THE SAME TIME.



MOT TYPICAL SECTION – FRONTAGE ROAD – STAGE 2

STA. 10+00.00 TO STA. 33+14.20
LANE CLOSURES PER IDOT STANDARD 701501

MOT LEGEND

- WORK ZONE
- DIRECTION OF TRAFFIC
- DAY-TIME LANE CLOSURE (WITH FLAGGING)
- LANE CLOSURE (OFF-PEAK)
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT

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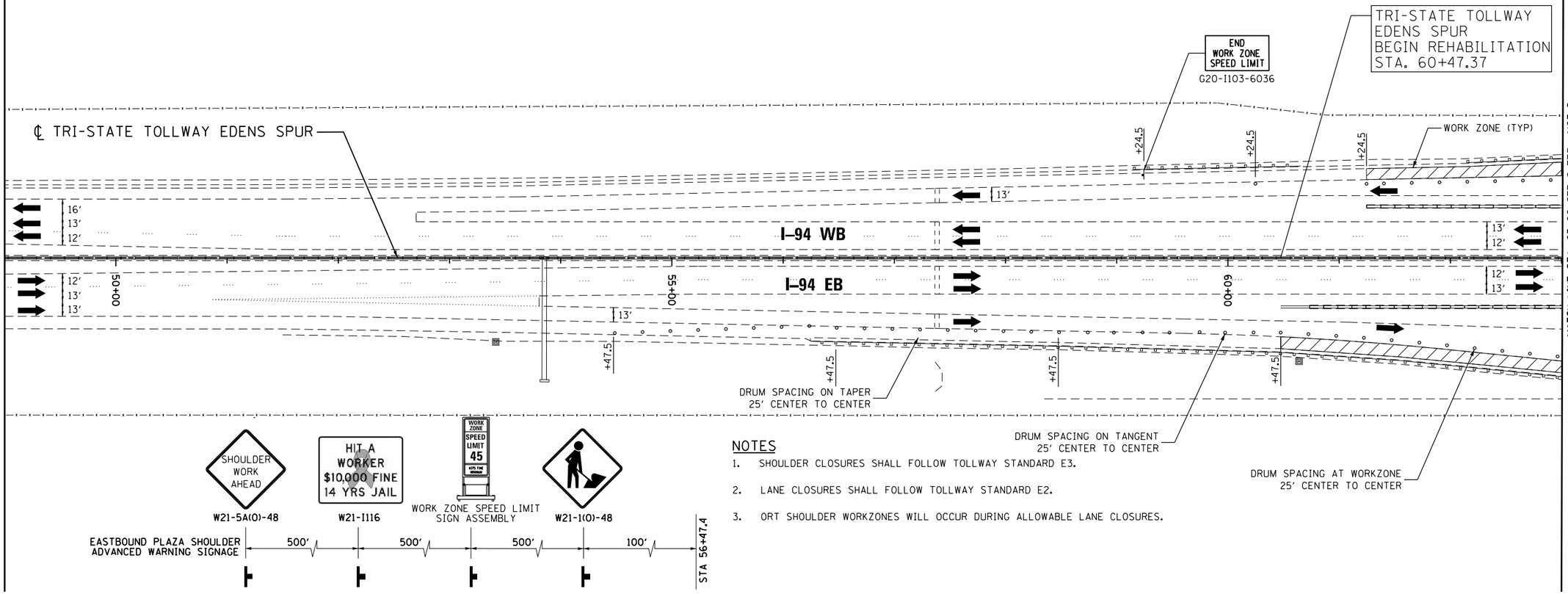
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372	SHT NO.MTT-3
MAINTENANCE OF TRAFFIC TYPICAL SECTION	DRAWING NO. 15 OF 66



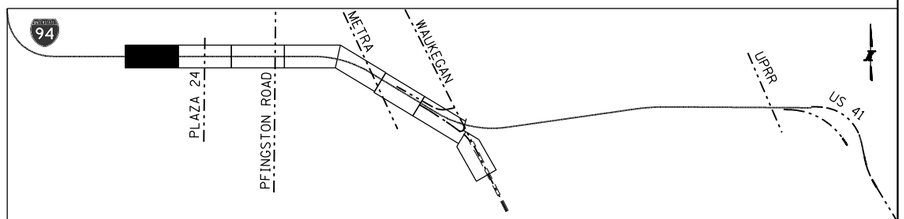
NOTES

1. SHOULDER CLOSURES SHALL FOLLOW TOLLWAY STANDARD E3.
2. LANE CLOSURES SHALL FOLLOW TOLLWAY STANDARD E2.
3. ORT SHOULDER WORKZONES WILL OCCUR DURING ALLOWABLE LANE CLOSURES.

MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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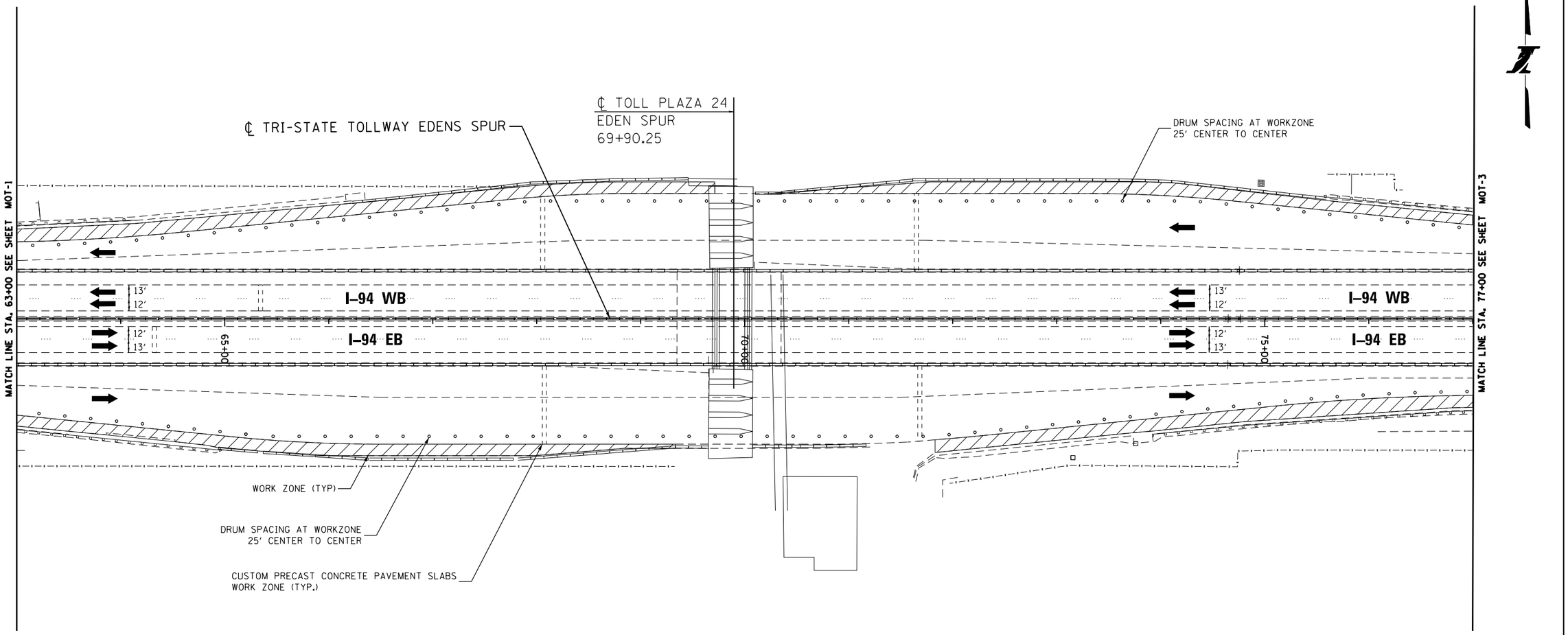
CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 1
STA. 49+00 TO STA. 63+00

SHT NO. MOT-1

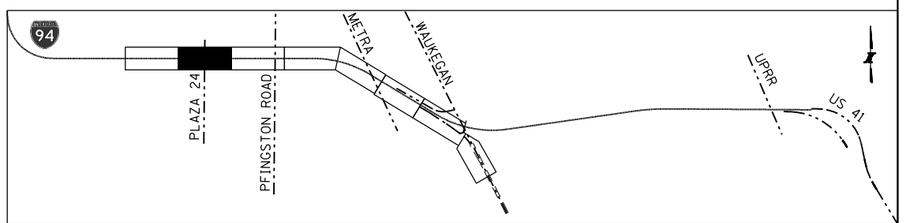
DRAWING NO.
16 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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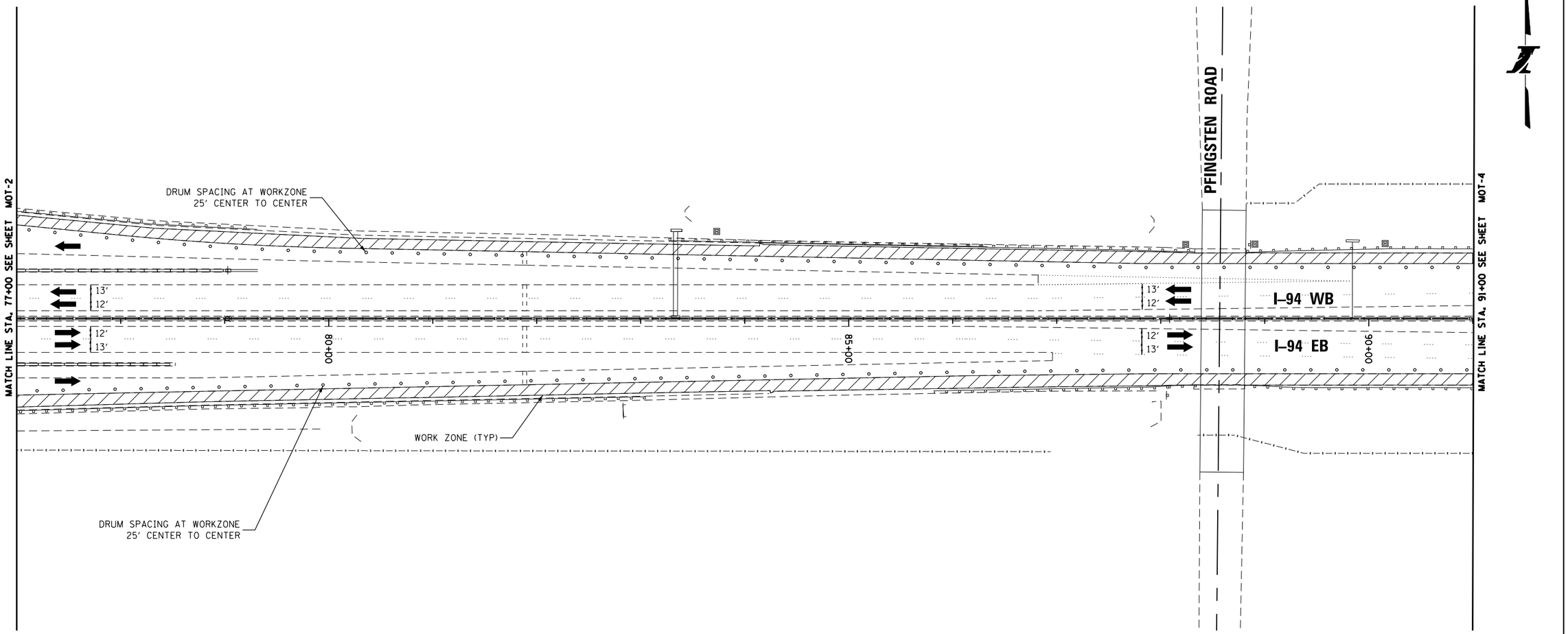
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 1
STA. 63+00 TO STA. 77+00

SHT NO.MOT-2

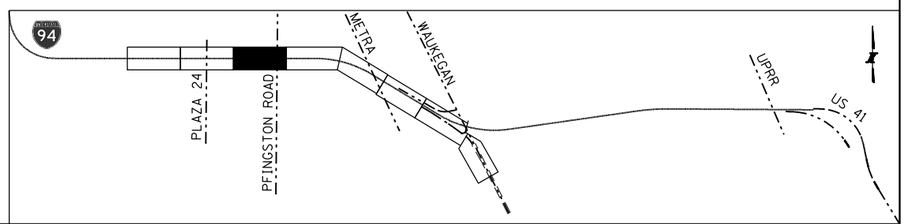
DRAWING NO.
17 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 1
STA. 77+00 TO STA. 91+00

SHT NO.MOT-3

DRAWING NO.
18 OF 66

TRI-STATE TOLLWAY
EDENS SPUR
END REHABILITATION
STA. 95+85.90

℄ TRI-STATE
TOLLWAY EDENS SPUR

MATCH LINE STA. 91+00 SEE SHEET MOT-3

MATCH LINE STA. 105+00 SEE SHEET MOT-5

STA 99+85.9

W21-1(0)-48 — 100′ — WORK ZONE SPEED LIMIT 45 — WORK ZONE SPEED LIMIT SIGN ASSEMBLY — 500′ — HIT A WORKER $10,000 FINE 14 YRS JAIL — W21-1116 — 500′ — SHOULDER WORK AHEAD — W21-5A(0)-48 — 500′ — WESTBOUND PLAZA SHOULDER ADVANCED WARNING SIGNAGE

DRUM SPACING AT WORKZONE
25′ CENTER TO CENTER

DRUM SPACING ON TANGENT
50′ CENTER TO CENTER

DRUM SPACING ON TAPER
25′ CENTER TO CENTER

I–94 WB

I–94 EB

13′
13′
12′

12′
13′
13′

95+00

100+00

+86.0

WORK ZONE (TYP)

END
WORK ZONE
SPEED LIMIT
G20-1103-6036

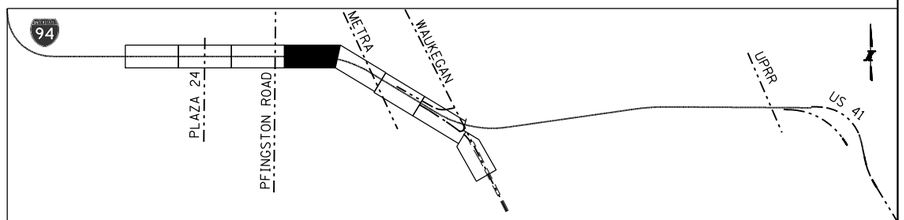
W. FORK OF N. BRANCH CHICAGO RIVER

DRUM SPACING AT WORKZONE
25′ CENTER TO CENTER

MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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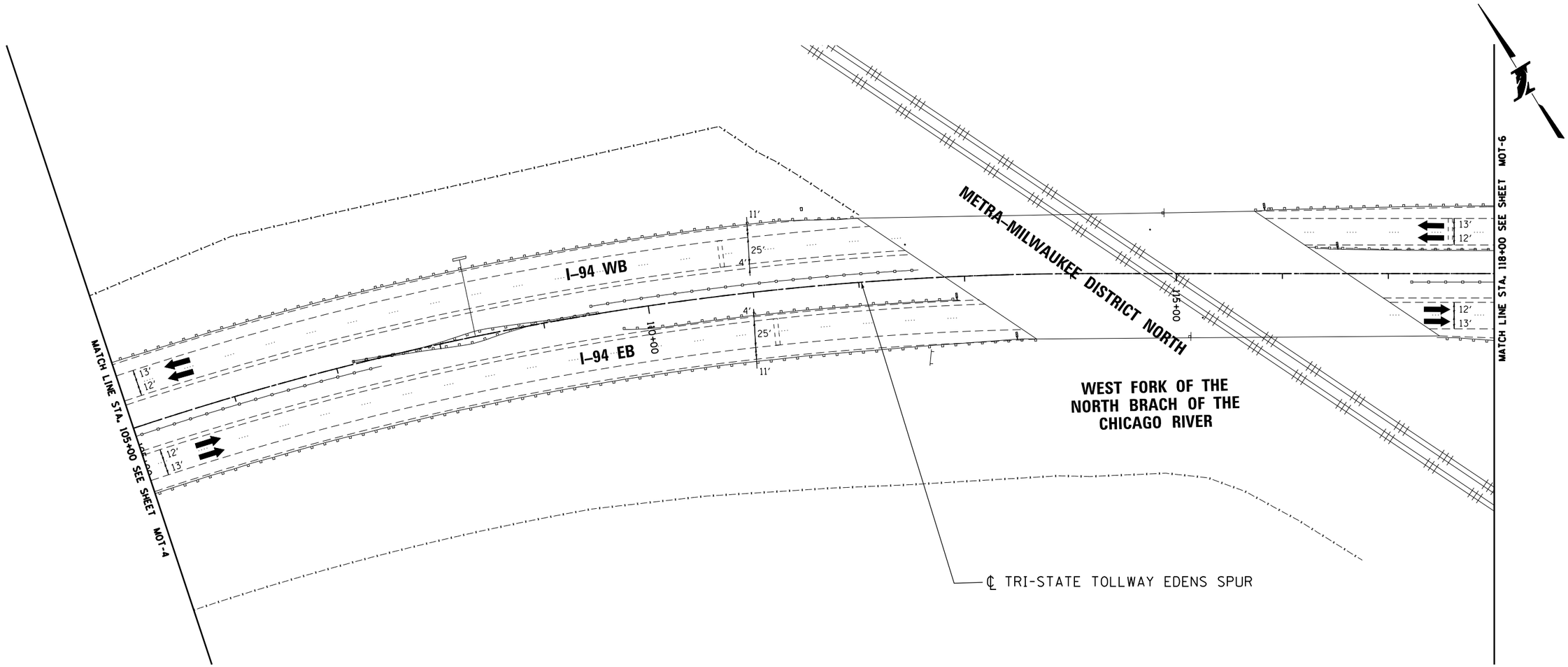
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 1
STA. 91+00 TO STA. 105+00

SHT NO. MOT-4

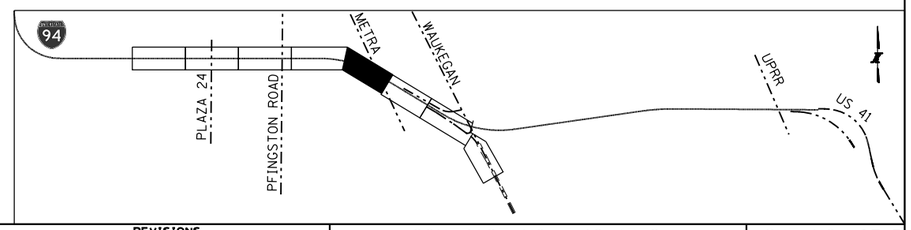
DRAWING NO. 19 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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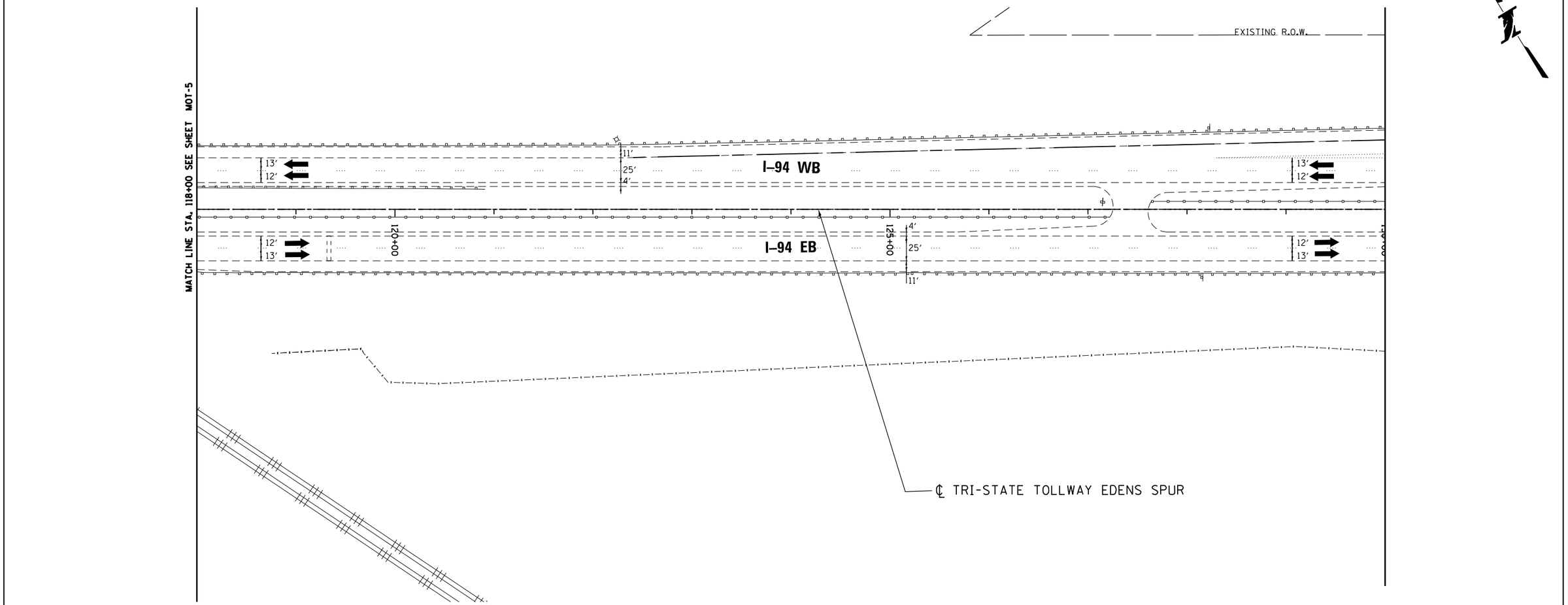
REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 1
STA. 105+00 TO STA. 118+00

SHT NO.MOT-5

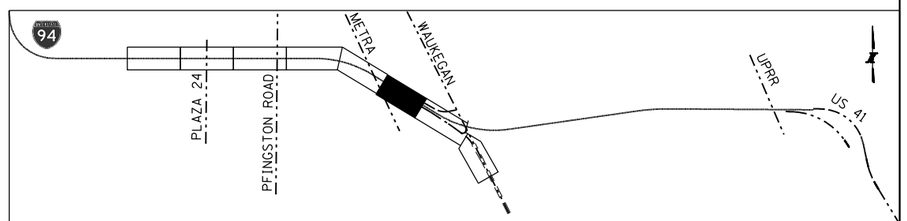
DRAWING NO.
20 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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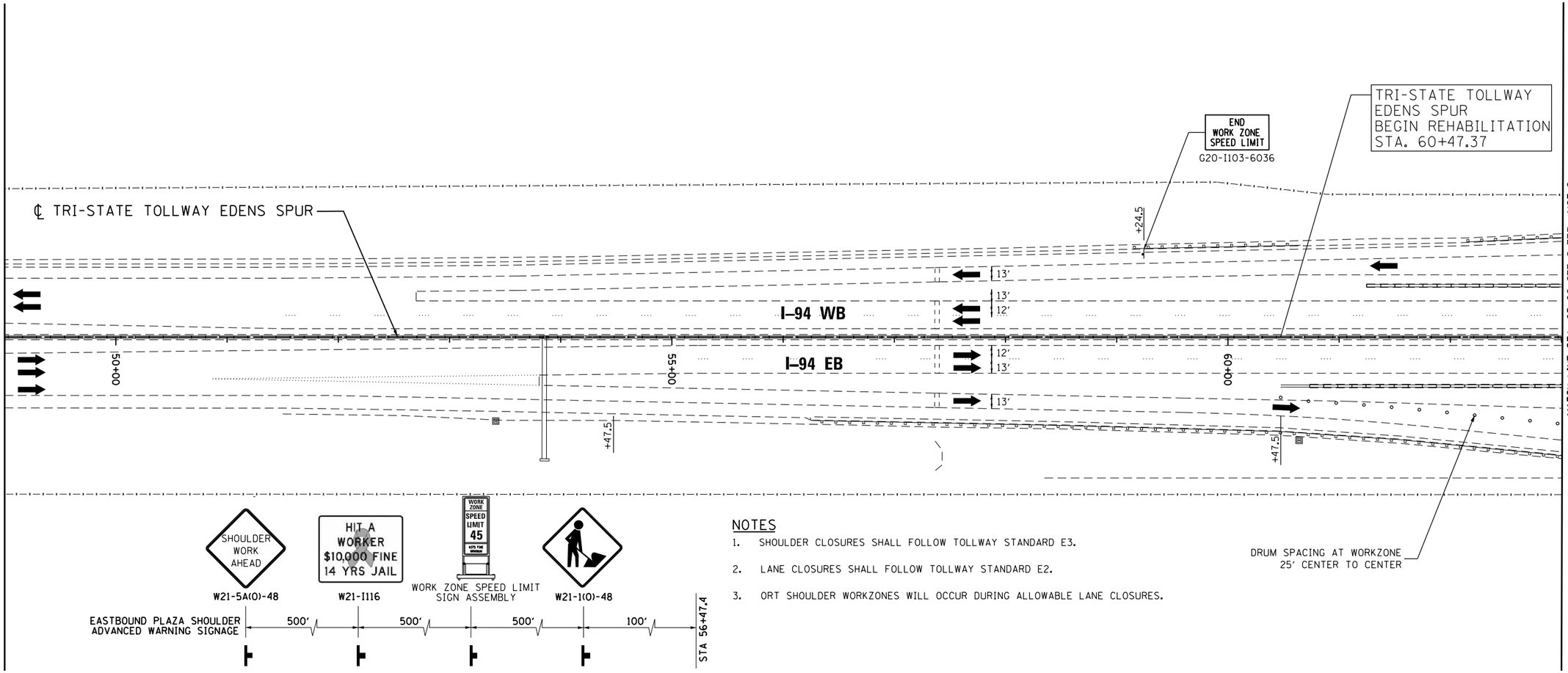
MAINTENANCE OF TRAFFIC PLAN - STAGE 1
STA. 118+00 TO STA. 130+00

SHT NO.MOT-6

DRAWING NO.
21 OF 66



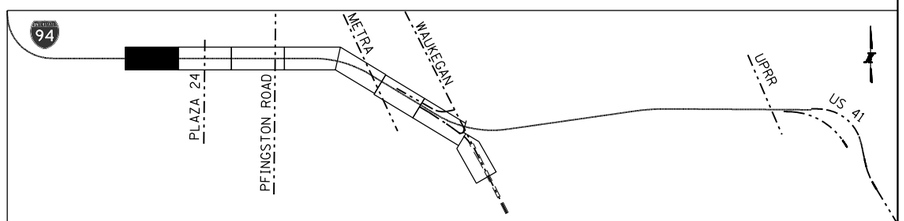
NOTES

1. SHOULDER CLOSURES SHALL FOLLOW TOLLWAY STANDARD E3.
2. LANE CLOSURES SHALL FOLLOW TOLLWAY STANDARD E2.
3. ORT SHOULDER WORKZONES WILL OCCUR DURING ALLOWABLE LANE CLOSURES.

MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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REVISIONS		
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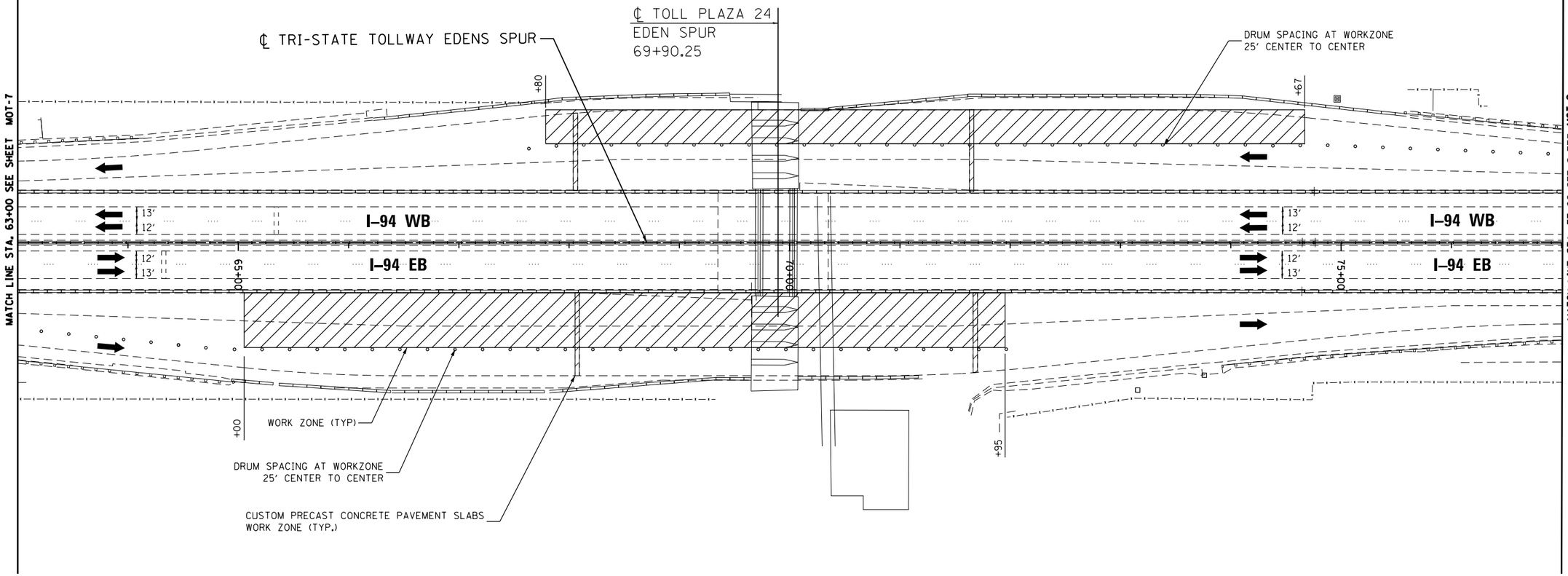
CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN-STAGE 1A
STA. 49+00 TO STA. 63+00

SHT NO.MOT-7

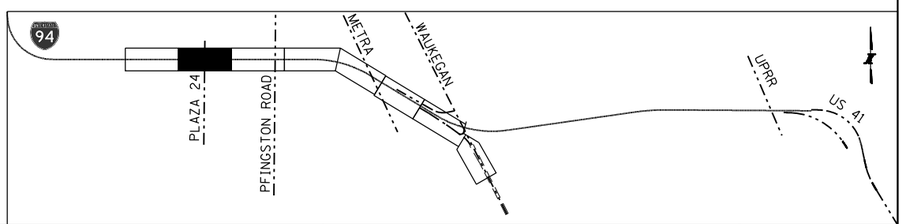
DRAWING NO.
22 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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ILLINOIS 60515

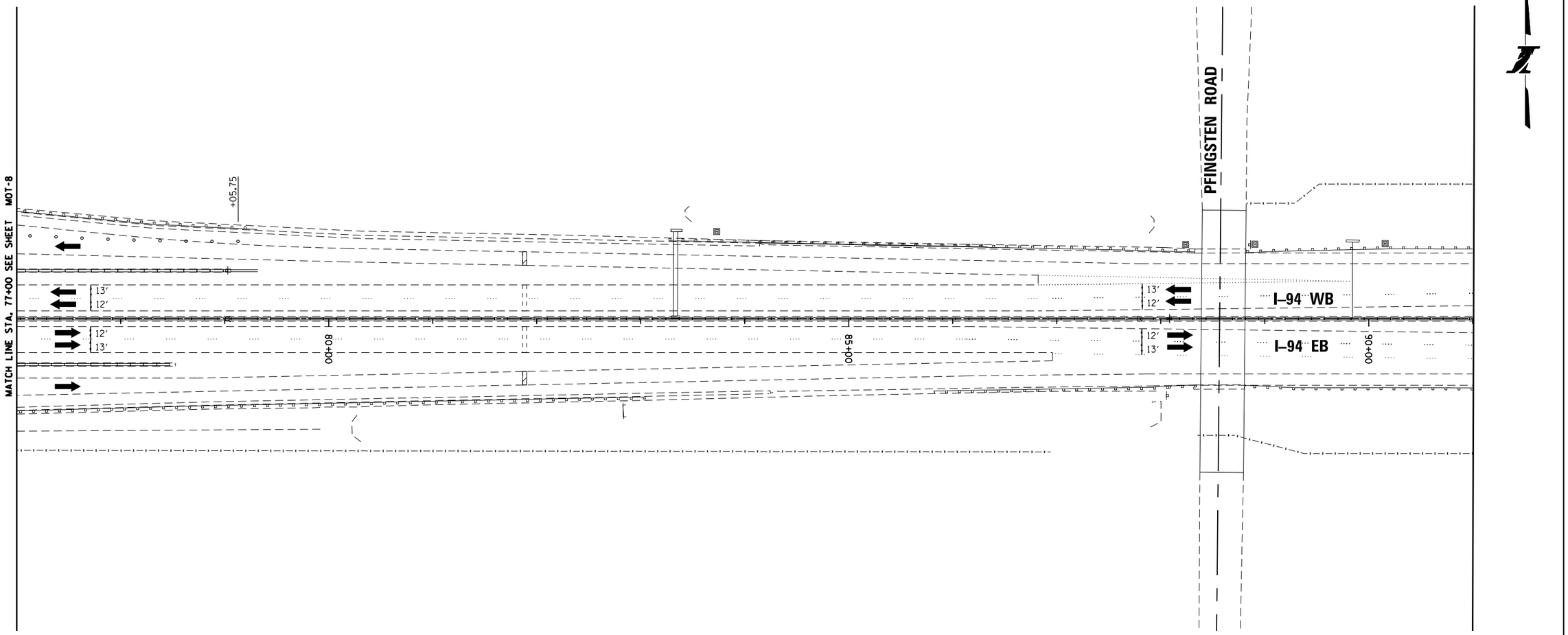
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN-STAGE 1A
STA. 63+00 TO STA. 77+00

SHT NO.MOT-8

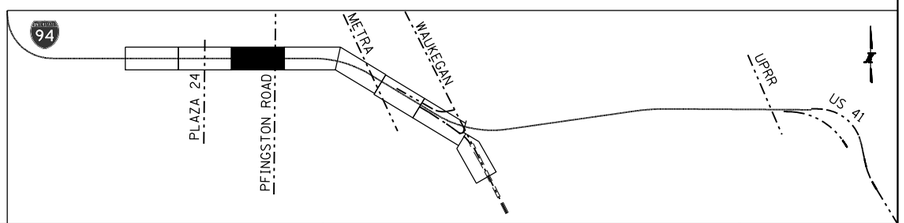
DRAWING NO.
23 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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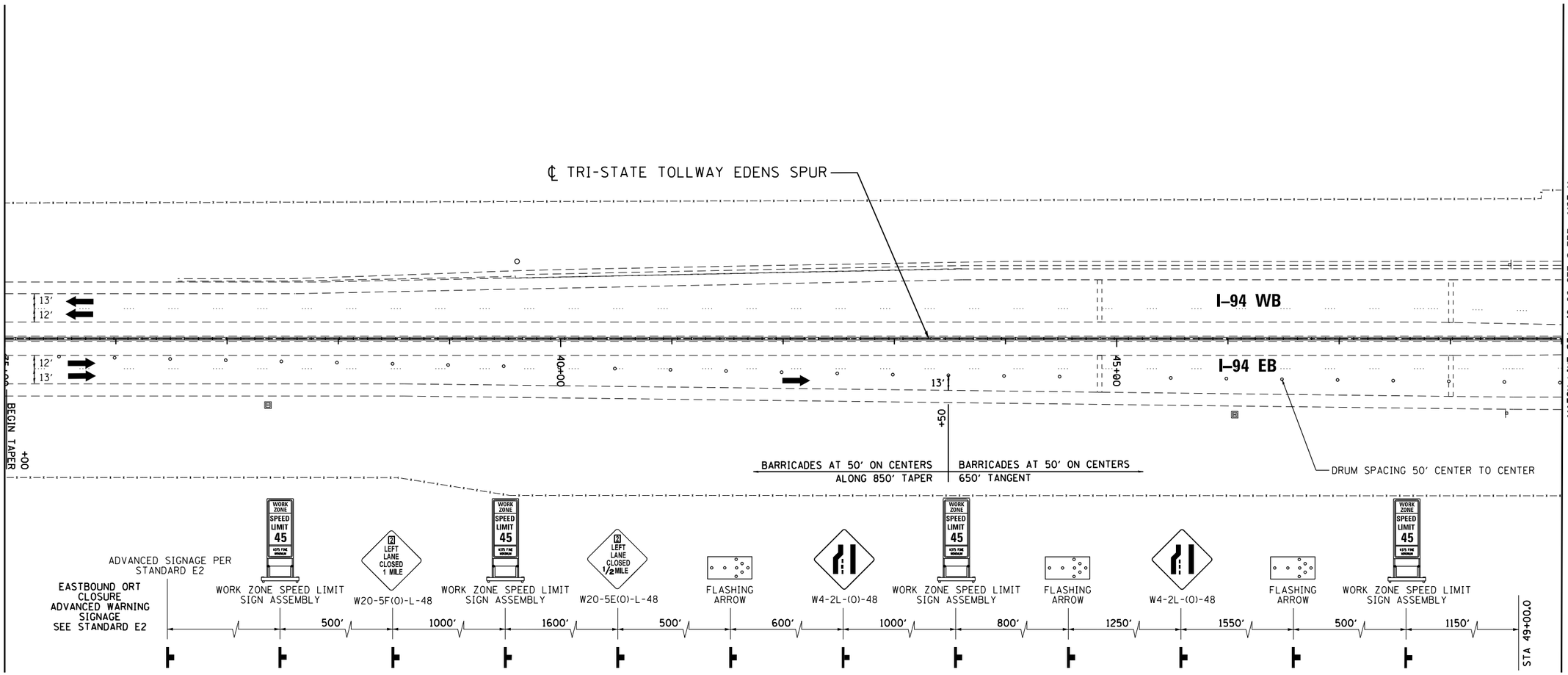
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN-STAGE 1A
STA. 77+00 TO STA. 91+00

SHT NO.MOT-9

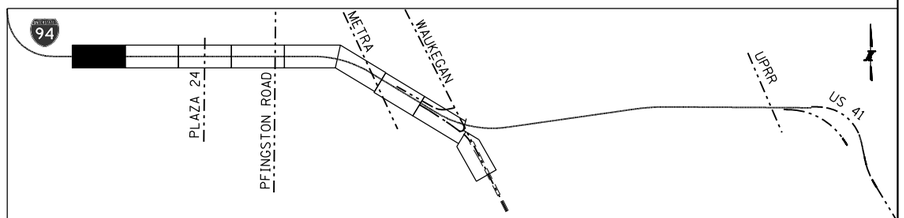
DRAWING NO.
24 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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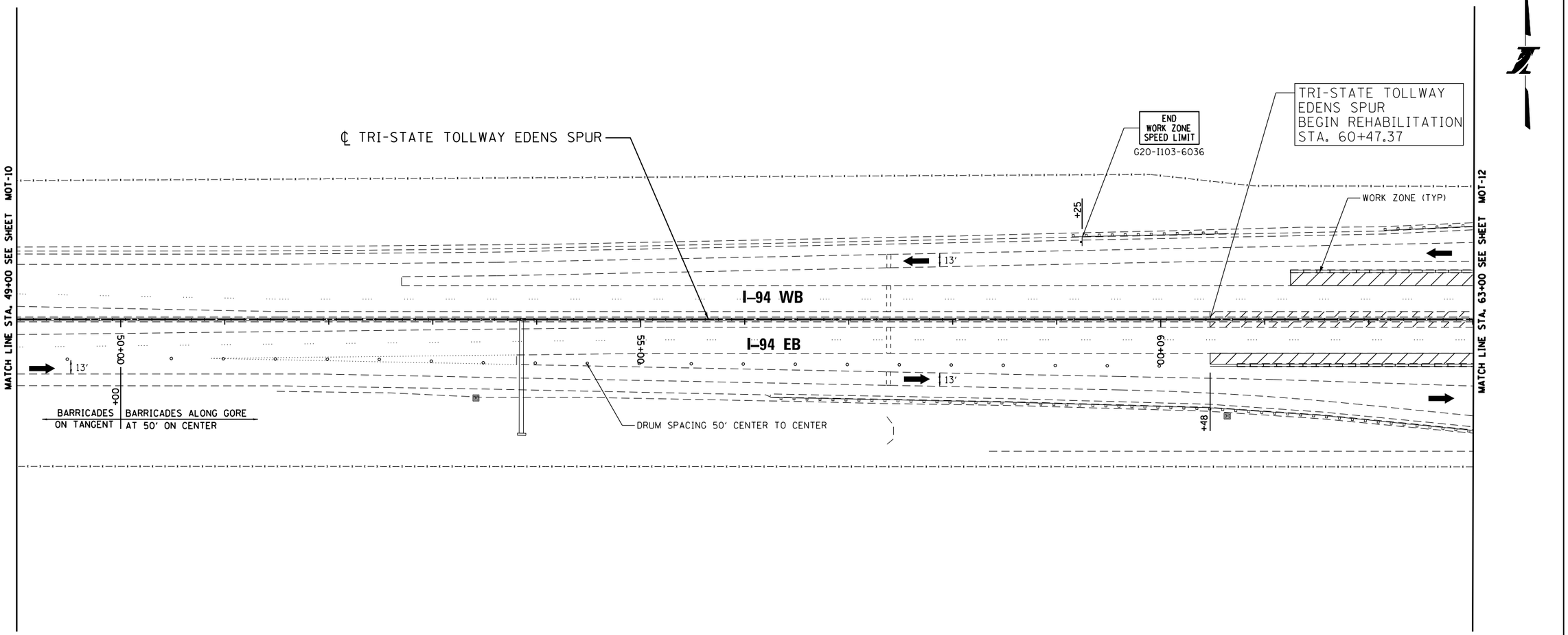
MAINTENANCE OF TRAFFIC PLAN - STAGE 2
STA. 35+00 TO STA. 49+00

SHT NO. M0T-10

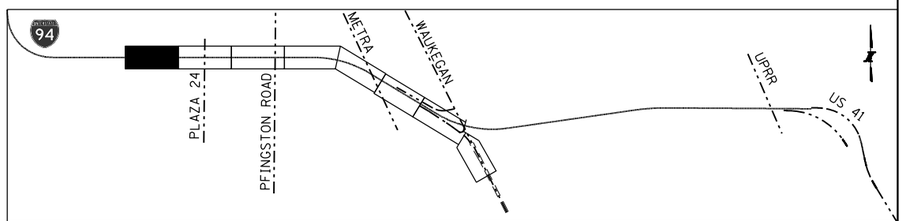
DRAWING NO. 25 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

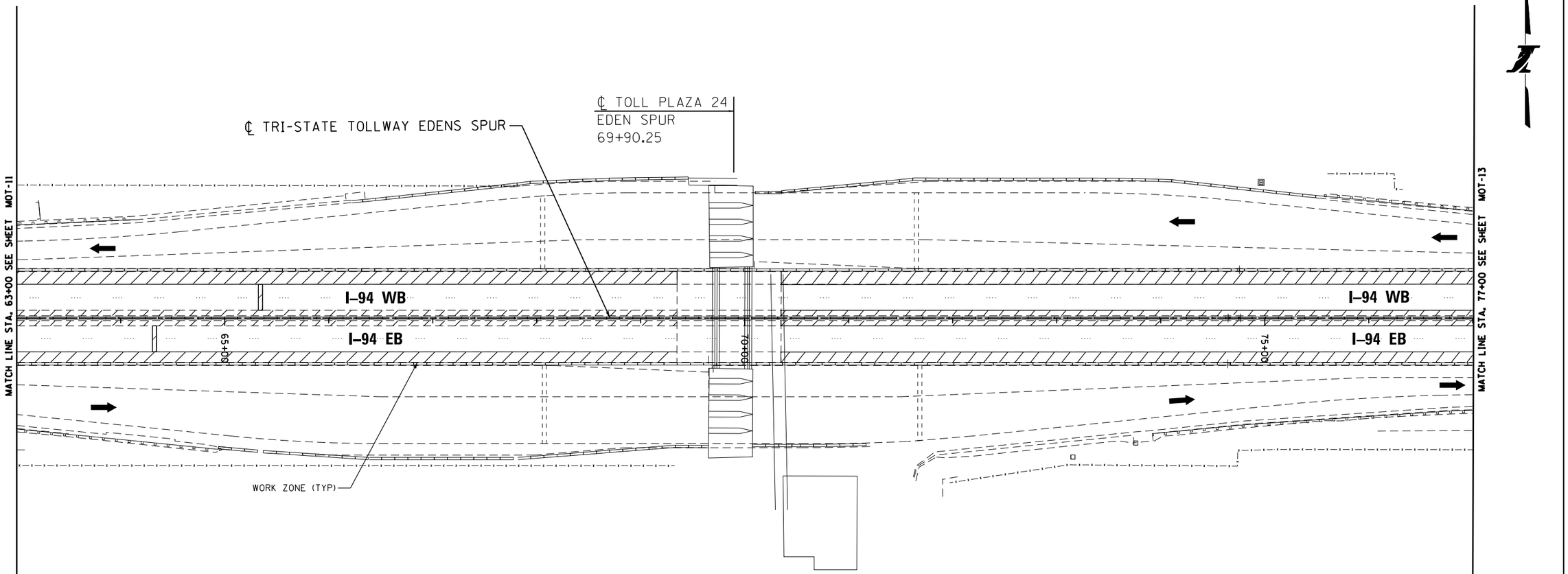
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 2
STA. 49+00 TO STA. 63+00

SHT NO. MOT-11

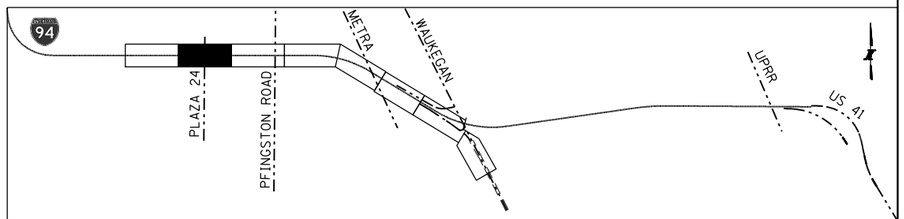
DRAWING NO.
26 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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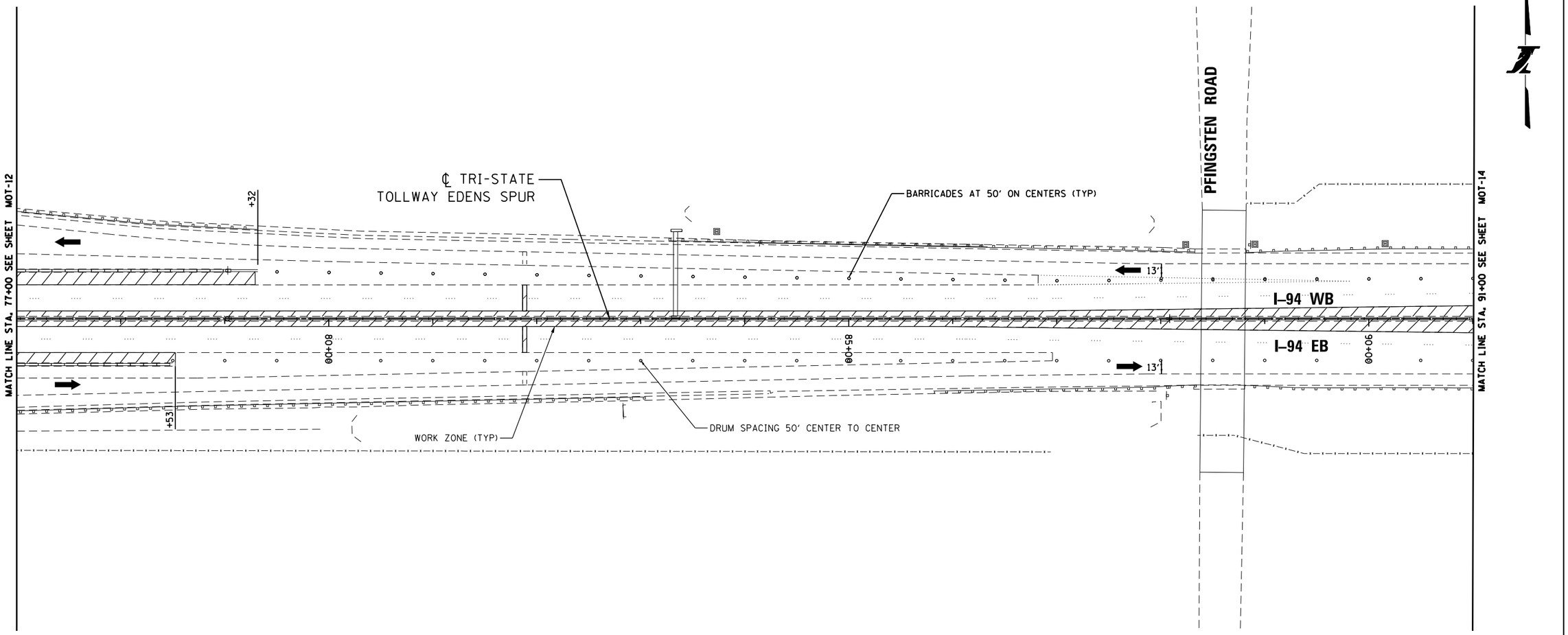
CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 2
STA. 63+00 TO STA. 77+00

SHT NO. MOT-12

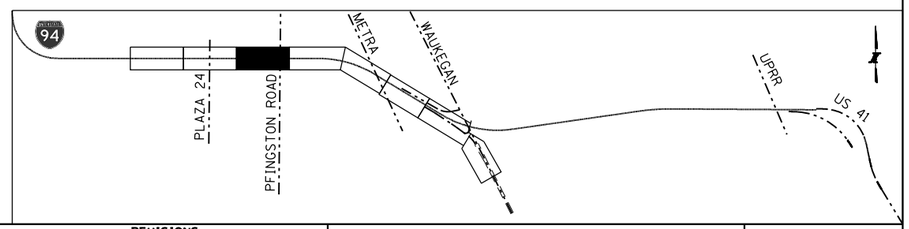
DRAWING NO.
27 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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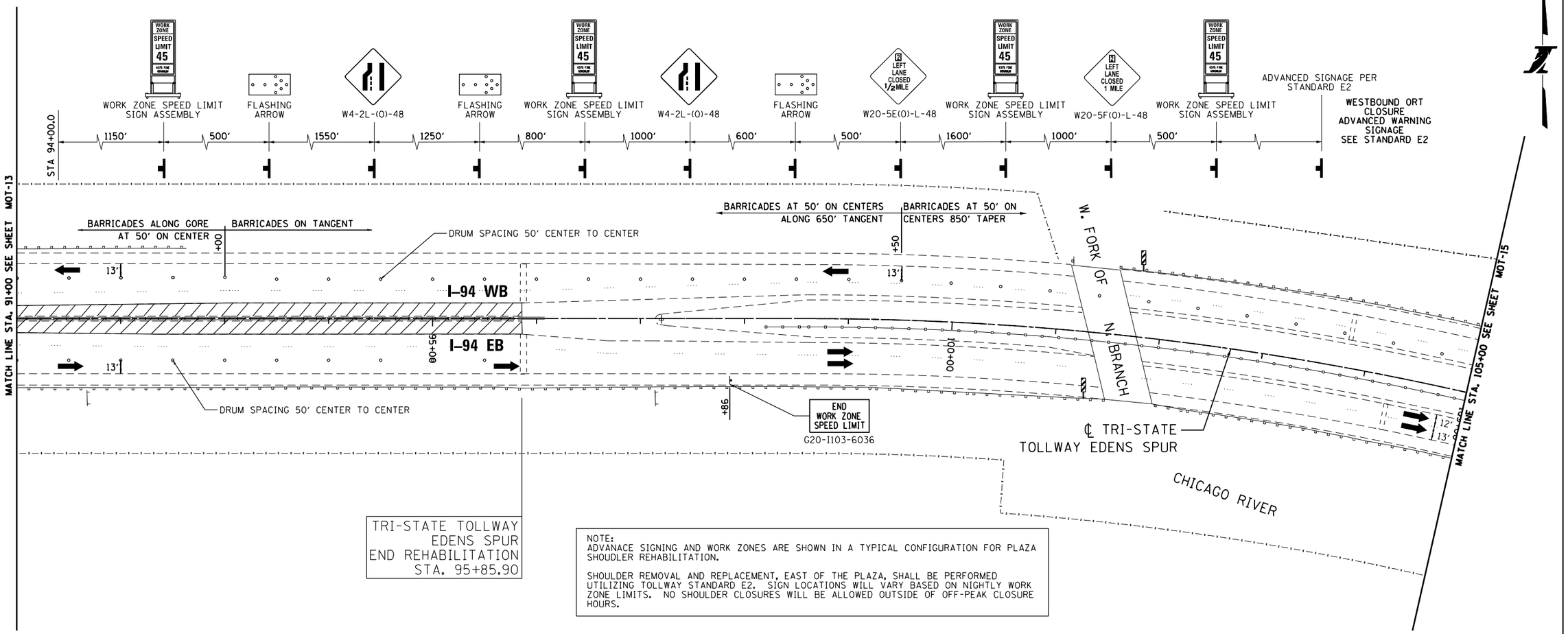
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 2
STA. 77+00 TO STA. 91+00

SHT NO. MOT-13

DRAWING NO.
28 OF 66



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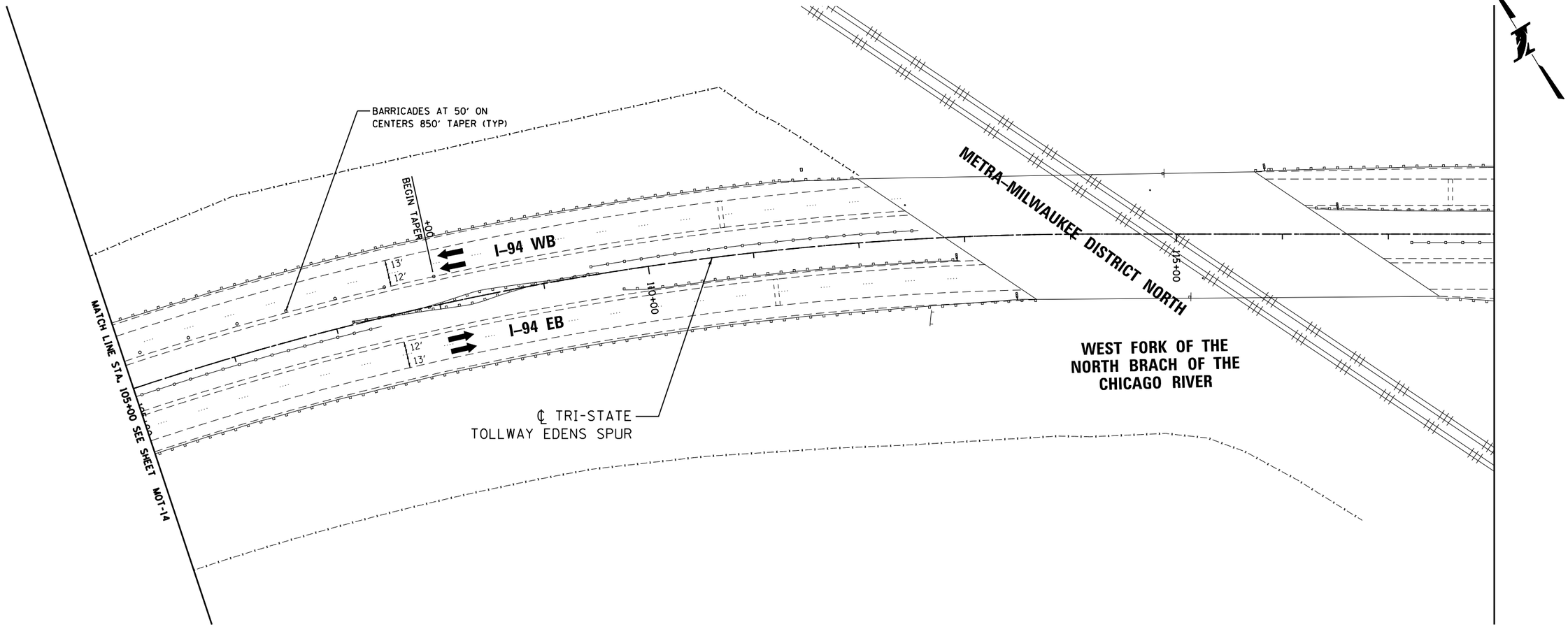
CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 2
STA. 91+00 TO STA. 105+00

SHT NO. MOT-14

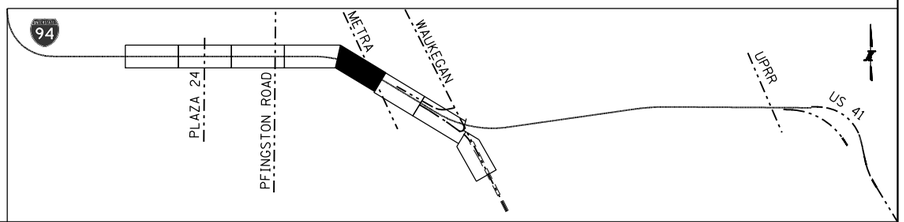
DRAWING NO.
29 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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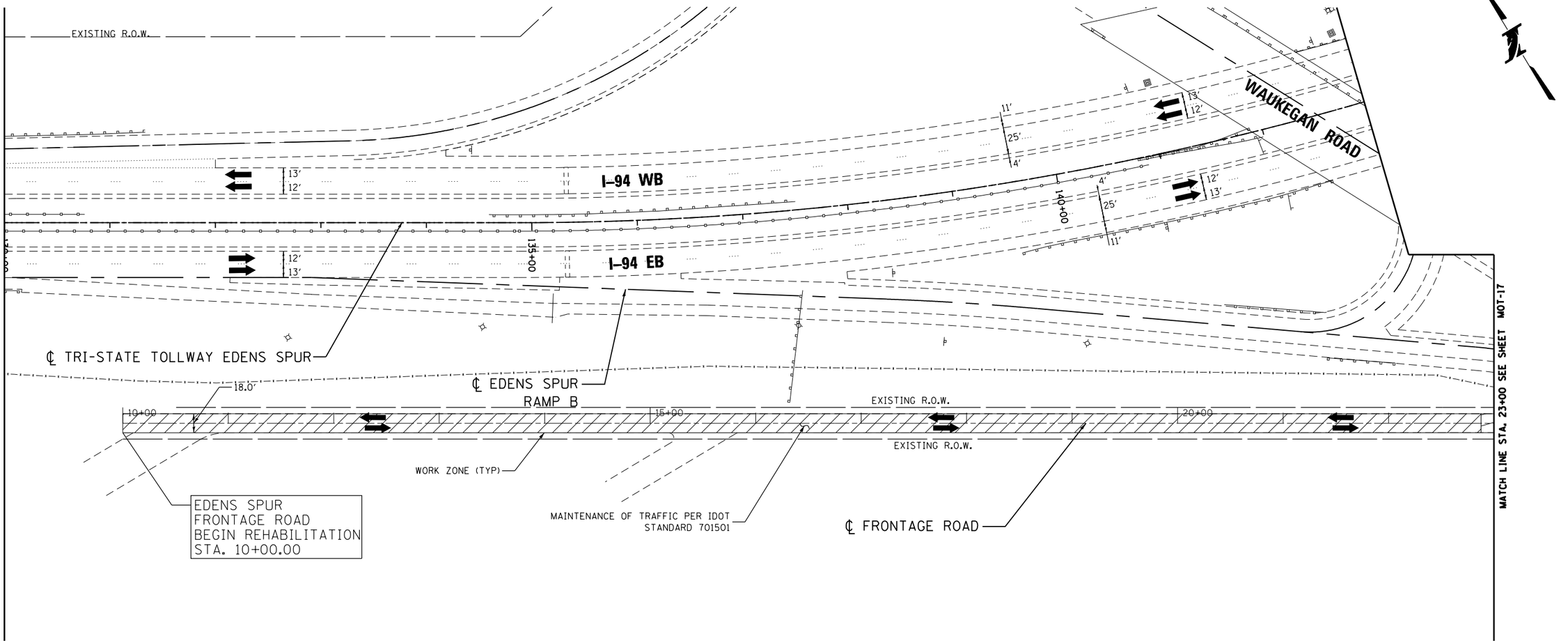
CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 2
STA. 105+00 TO STA. 118+00

SHT NO. MOT-15

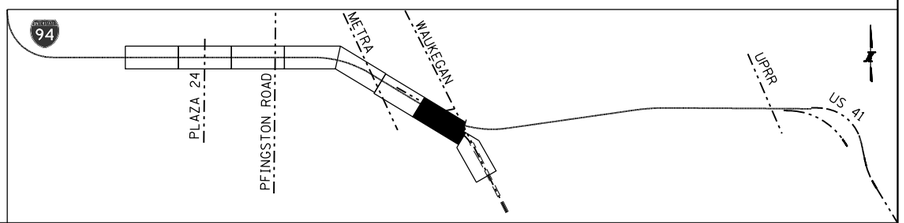
DRAWING NO.
30 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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ILLINOIS 60515

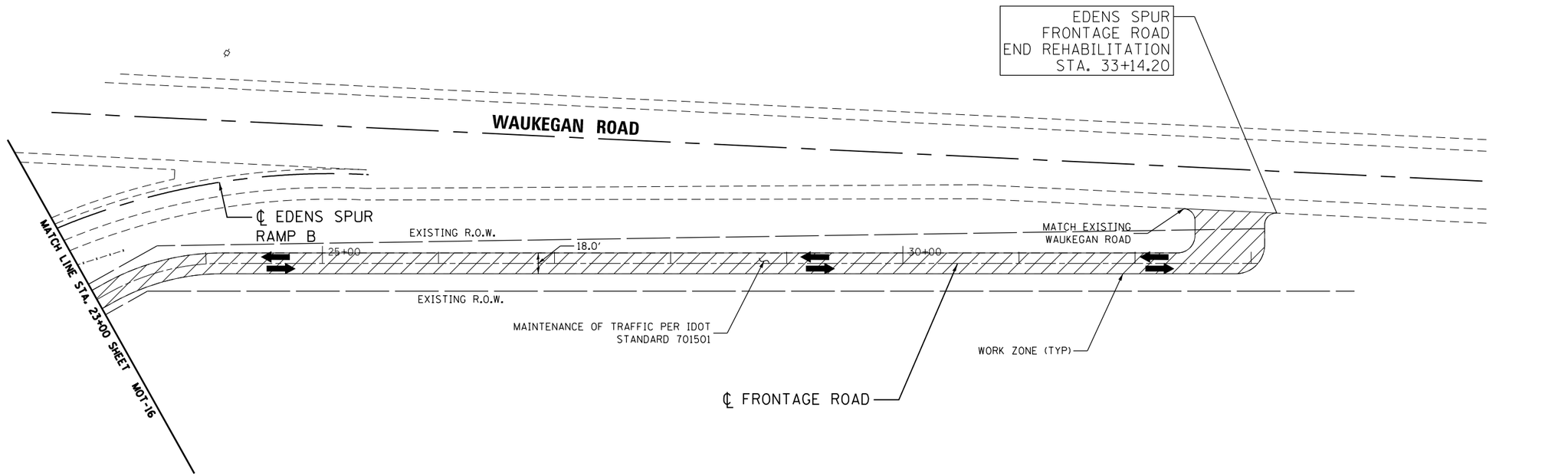
REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 2
FRONTAGE ROAD

SHT NO. MOT-16

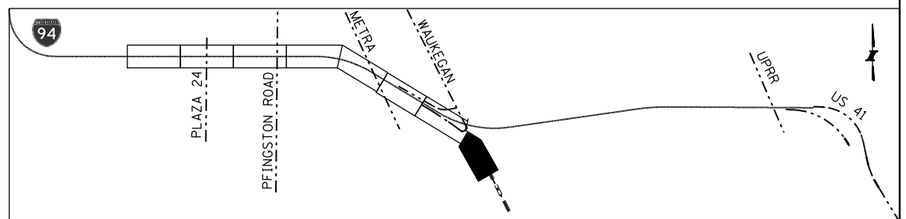
DRAWING NO.
31 OF 66



MAINTENANCE OF TRAFFIC LEGEND

- DIRECTION OF TRAFFIC
- OFF-PEAK LANE CLOSURE
- WORK ZONE
- MAINTENANCE OF TRAFFIC SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT

0 50 100 150
SCALE IN FEET



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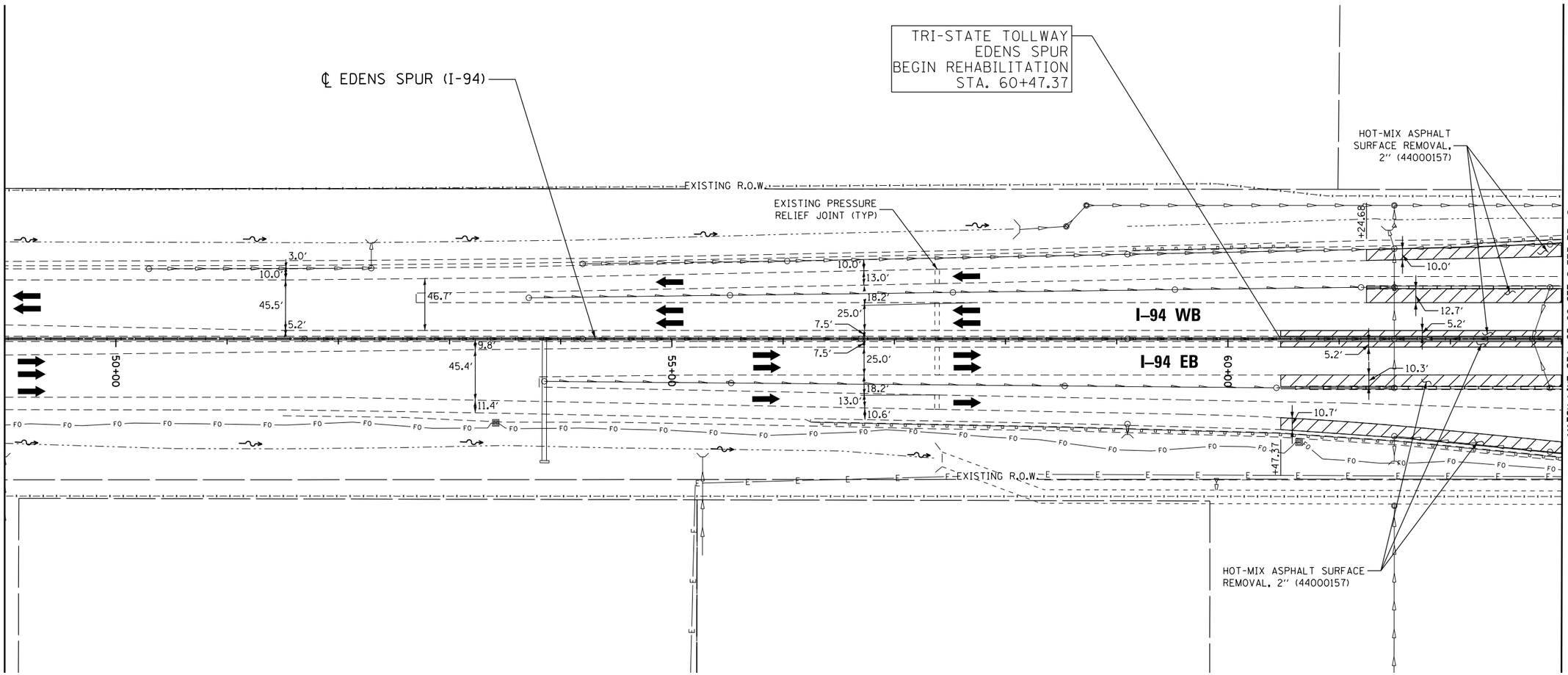
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

MAINTENANCE OF TRAFFIC PLAN - STAGE 2
FRONTAGE ROAD

SHT NO. M0T-17

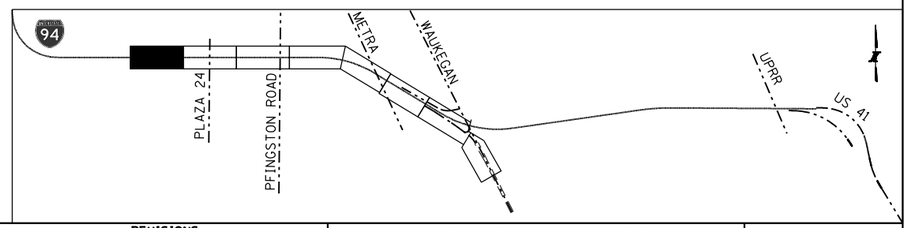
DRAWING NO.
32 OF 66



REMOVAL LEGEND

- HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)
- PAVEMENT REMOVAL (44000100)

0 50 100 150
SCALE IN FEET



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ILLINOIS 60515

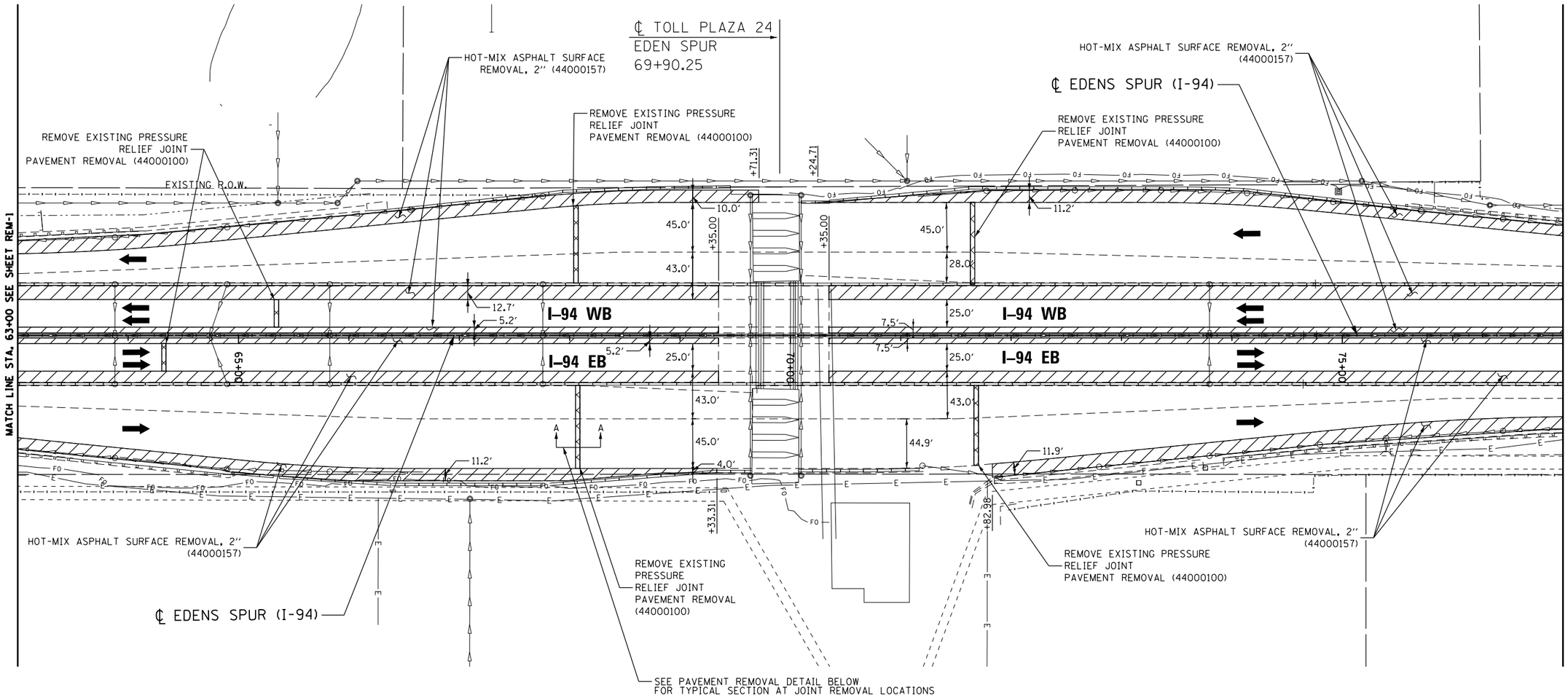
REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

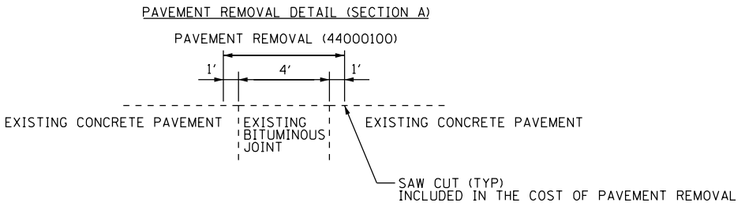
ROADWAY REMOVAL PLAN
STA. 49+00 TO STA. 63+00

SHT NO. REM-1

DRAWING NO.
33 OF 66



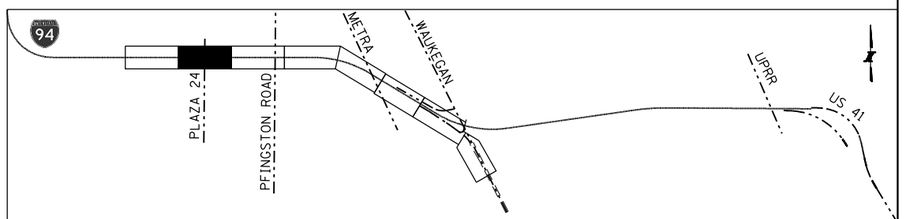
PAVEMENT REMOVAL DETAIL (SECTION A)



REMOVAL LEGEND

- HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)
- PAVEMENT REMOVAL (44000100)

0 50 100 150
SCALE IN FEET



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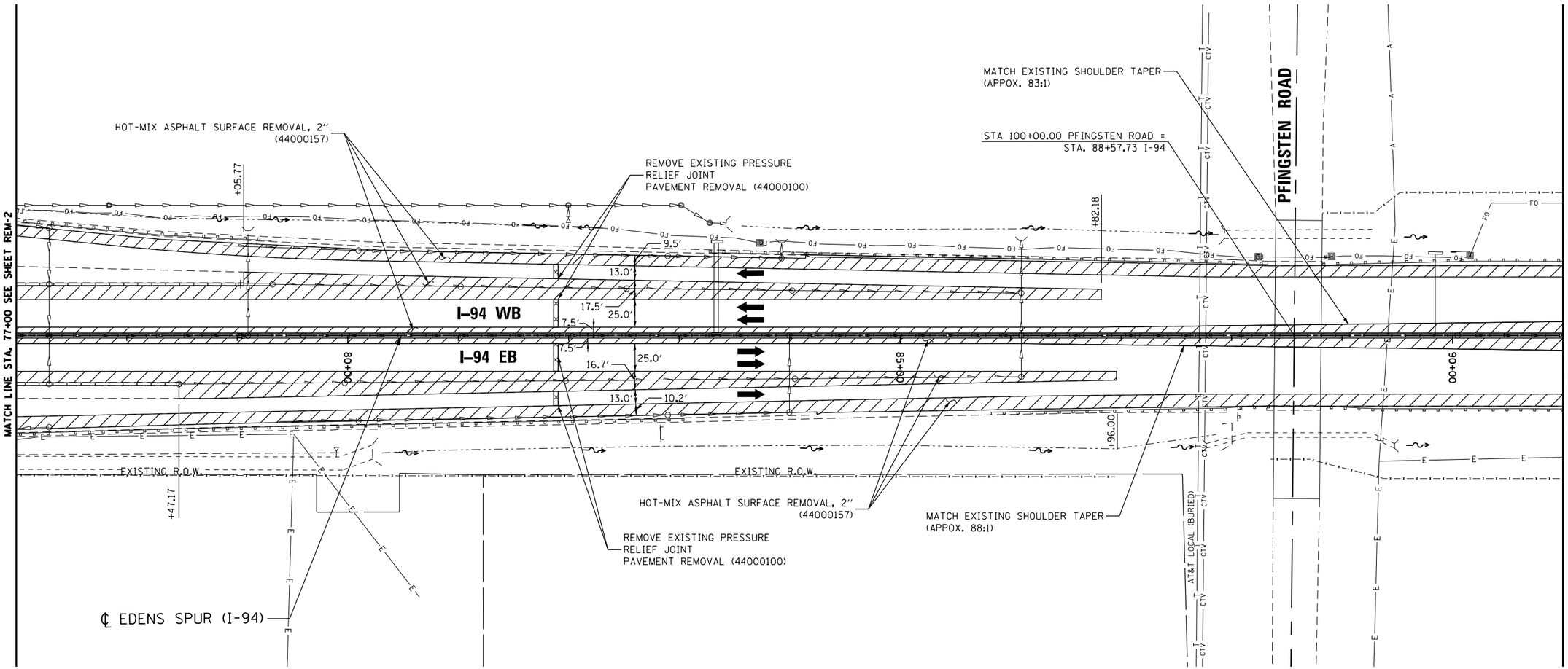
REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

ROADWAY REMOVAL PLAN
STA. 63+00 TO STA. 77+00

SHT NO.REM-2

DRAWING NO. 34 OF 66



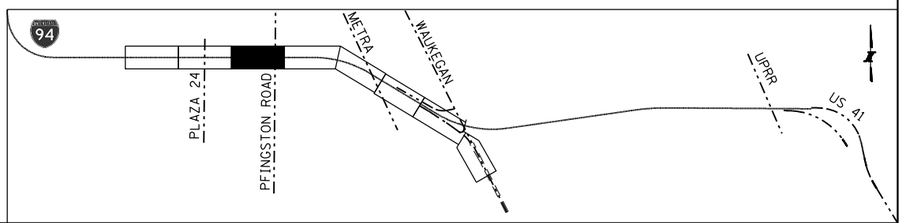
REMOVAL LEGEND

HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)

PAVEMENT REMOVAL (44000100)

0 50 100 150

SCALE IN FEET



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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

ROADWAY REMOVAL PLAN
STA. 77+00 TO STA. 91+00

SHT NO.REM-3

DRAWING NO.
35 OF 66

MATCH LINE STA. 91+00 SEE SHEET REM-3

HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)

MATCH EXISTING SHOULDER TAPER (APPOX. 83:1)

NICOR 2"

+04.15

10.1'

13.0'

25.0'

15.0'

I-94 WB

I-94 EB

15.0'

38.0'

+69.2

11.0'

HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)

MATCH EXISTING SHOULDER TAPER (APPOX. 88:1)

95+00

TRI-STATE TOLLWAY
EDENS SPUR
END REHABILITATION
STA. 95+85.90

11.0'

29.0'

5.0'

5.0'

29.8'

11.0'

100+00

W. FORK OF N. BRANCH

EXISTING R.O.W.

I-94 WB

I-94 EB

CHICAGO RIVER

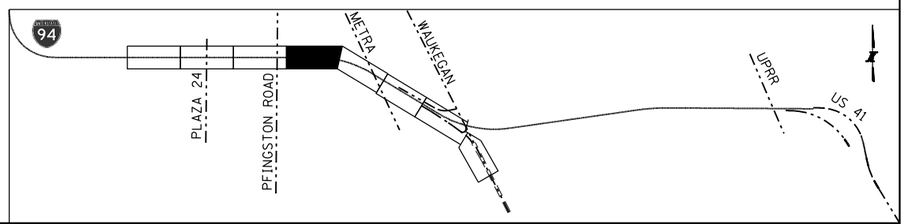
℄ EDENS SPUR (I-94)

REMOVAL LEGEND

HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)

PAVEMENT REMOVAL (44000100)

0 50 100 150
SCALE IN FEET



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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

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NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

ROADWAY REMOVAL PLAN
STA. 91+00 TO STA. 105+00

SHT NO. REM-4

DRAWING NO. 36 OF 66

EXISTING R.O.W.

COMM ED

TOLLWAY LIGHTING

I-94 WB

WAUKEGAN ROAD

11'
25'
4'

4'
25'
11'

135+00

140+00

TOLLWAY LIGHTING

℄ EDENS SPUR (I-94)

NICOR 6"

TDS METROCOM - USES AT&T CONDUIT

EXISTING R.O.W.

ILLINOIS BELL TELEPHONE

18.0'

10+00

15+00

20+00

NICOR 2"

EXISTING R.O.W.

FRONTAGE ROAD
HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)

EDENS SPUR
FRONTAGE ROAD
BEGIN REHABILITATION
STA. 10+00.00

NICOR 2"

℄ FRONTAGE ROAD

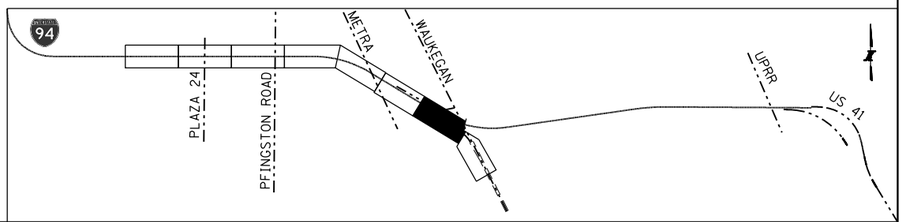
NOTE:
FOLLOWING THE 2" MILLING OPERATION, THE ROADWAY WILL BE INSPECTED AND HOT-MIX ASPHALT SURFACE REMOVAL, 4" (44000165) WILL BE USED AT INTERMITTENT LOCATIONS ALONG THE FRONTAGE ROAD AS DETERMINED BY THE ENGINEER.

MATCH LINE STA. 23+00 SEE SHEET REM-6

REMOVAL LEGEND

- HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)
- PAVEMENT REMOVAL (44000100)

0 50 100 150
SCALE IN FEET



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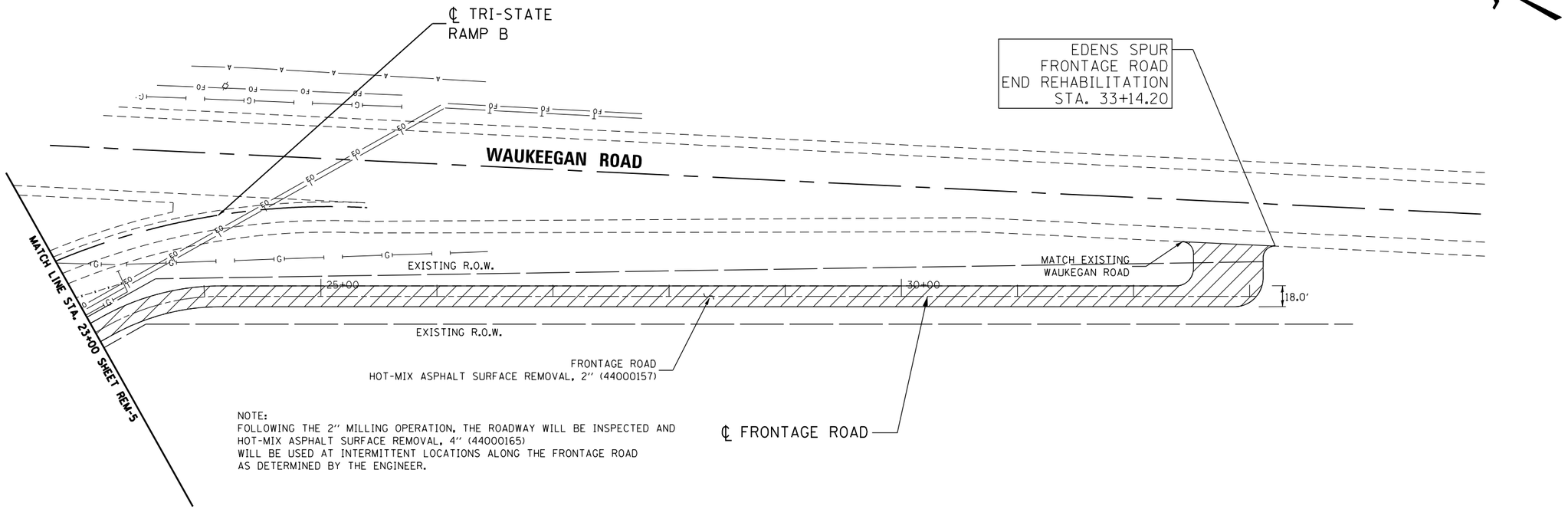
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

ROADWAY REMOVAL PLAN
FRONTAGE ROAD

SHT NO. REM-5

DRAWING NO.
37 OF 66



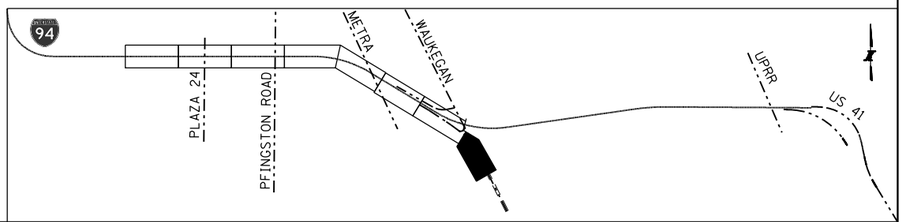
NOTE:
FOLLOWING THE 2" MILLING OPERATION, THE ROADWAY WILL BE INSPECTED AND HOT-MIX ASPHALT SURFACE REMOVAL, 4" (44000165) WILL BE USED AT INTERMITTENT LOCATIONS ALONG THE FRONTAGE ROAD AS DETERMINED BY THE ENGINEER.

REMOVAL LEGEND

HOT-MIX ASPHALT SURFACE REMOVAL, 2" (44000157)

PAVEMENT REMOVAL (44000100)

0 50 100 150
SCALE IN FEET



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NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

ROADWAY REMOVAL PLAN
FRONTAGE ROAD

SHT NO. REM-6

DRAWING NO.
38 OF 66

TRI-STATE TOLLWAY
EDENS SPUR
BEGIN REHABILITATION
STA. 60+47.37

WARM-MIX ASPHALT SURFACE COURSE,
MIX "D", N70 (JI406510)

EXISTING CONCRETE PAVEMENT

EXISTING R.O.W.

EXISTING PRESSURE
RELIEF JOINT (TYP)

3.0'
10.0'
45.5'
46.7'
7.5'
9.7'
45.4'
11.0'

50+00

55+00

11.0'
13.0'
15.8'
25.0'
7.5'
7.5'
25.0'
16.5'
13.0'
11.0'

I-94 WB

I-94 EB

60+00

+24.68

10.0'
12.7'
5.2'
5.2'
10.3'
10.7'

+47.37

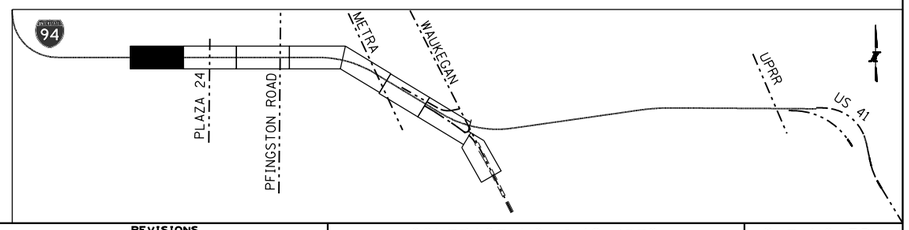
EXISTING R.O.W.

MATCH LINE STA. 63+00 SEE SHEET RDY-2

℄ EDENS SPUR (I-94)

WARM-MIX ASPHALT SURFACE COURSE,
MIX "D", N70 (JI406510)

0 50 100 150
SCALE IN FEET



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CONTRACT NO. I-18-4372

PROPOSED ROADWAY PLAN
STA. 49+00 TO STA. 63+00

SHT NO. RDY-1

DRAWING NO.
39 OF 66

PRECAST NOTES:
1. ORT PATCHING SHALL CONSIST OF:
TWO X STANDARD PRECAST CONCRETE PAVEMENT SLABS, 12.5' (JT485012)
2. PATCH LENGTH IS APPROXIMATELY 4'. CONTRACTOR TO VERIFY.
3. SEE SCHEDULE FOR DETAILS.

MATCH LINE STA. 63+00 SEE SHEET RDY-01

MATCH LINE STA. 77+00 SEE SHEET RDY-03

WARM-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (JI406510)

SEE PRECAST NOTE 1

EXISTING CONCRETE PAVEMENT TO REMAIN

EXISTING R.O.W.

CUSTOM PRECAST CONCRETE PAVEMENT SLABS (JT485015)

℄ TOLL PLAZA 24
EDEN SPUR
69+90.25

+71.31

+24.71

+63.04

+32.32

+30.35

+35.00

+35.00

11.0'

45.0'

43.0'

25.0'

7.5'

7.5'

25.0'

I-94 WB

I-94 EB

60+00

70+00

75+00

11.2'

11.2'

11.9'

+05.31

4.0'

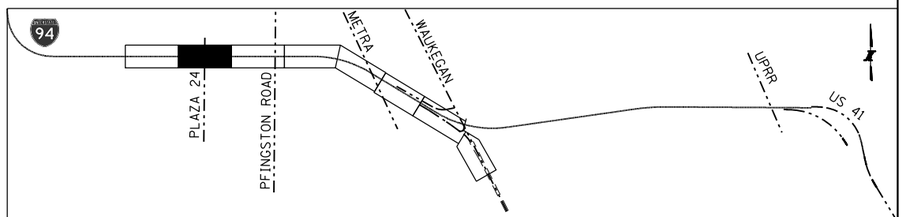
+33.31

+82.98

CONTROL BUILDING

℄ EDENS SPUR (I-94)

0 50 100 150
SCALE IN FEET



DRAWN BY	YS	DATE	2/16/2018
CHECKED BY	TRK	DATE	2/18/2018

d'Escoto INC
Where Vision Meets Implementation
1200 North Ashland Ave
6th Floor
Chicago, IL 60622
PHONE: 312.787.0707

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

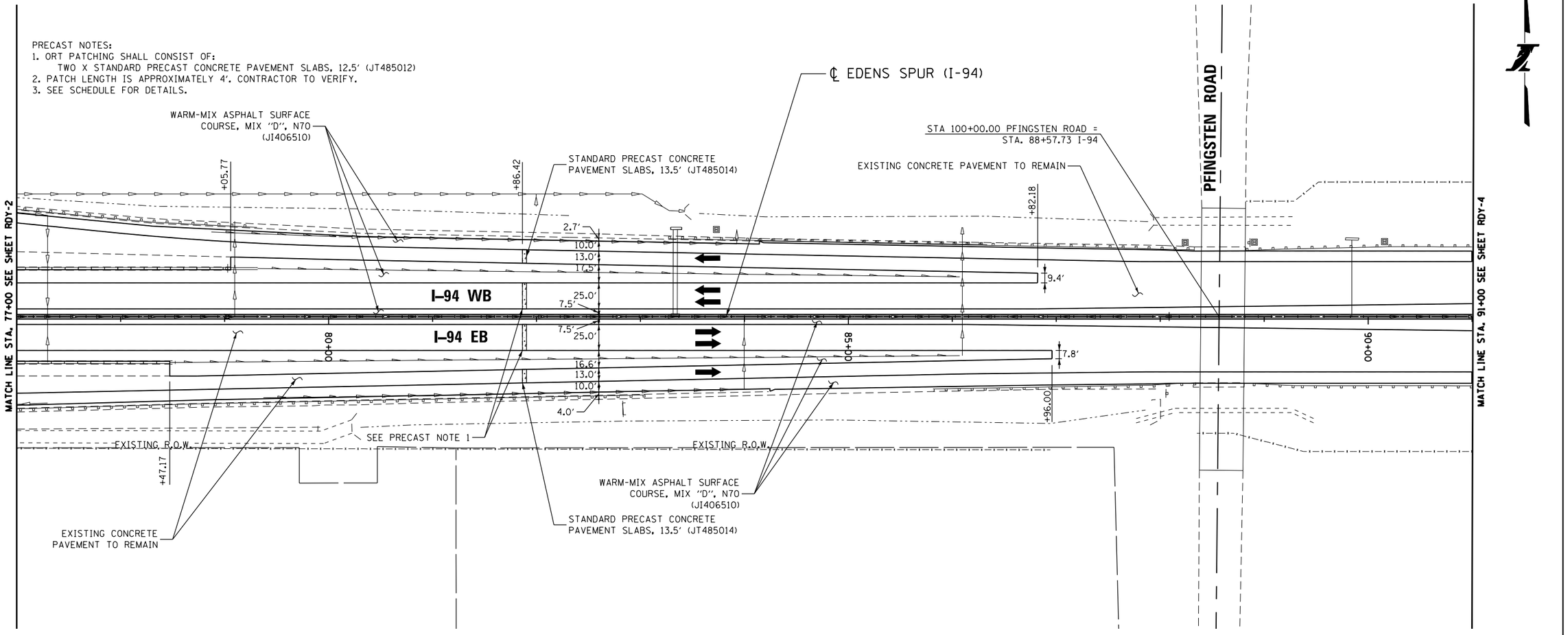
CONTRACT NO. I-18-4372

PROPOSED ROADWAY PLAN
STA. 63+00 TO STA. 77+00

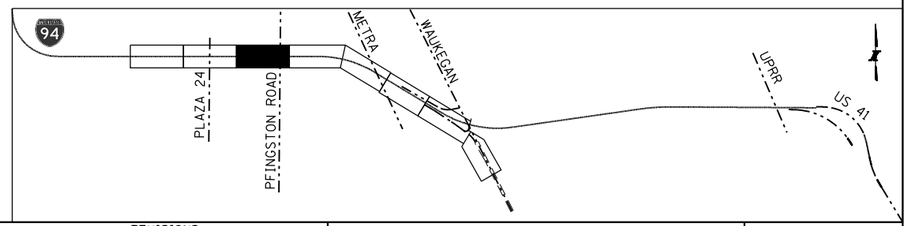
SHT NO. RDY-2

DRAWING NO.
40 OF 66

PRECAST NOTES:
1. ORT PATCHING SHALL CONSIST OF:
   TWO X STANDARD PRECAST CONCRETE PAVEMENT SLABS, 12.5' (JT485012)
2. PATCH LENGTH IS APPROXIMATELY 4'. CONTRACTOR TO VERIFY.
3. SEE SCHEDULE FOR DETAILS.



0 50 100 150
SCALE IN FEET



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CHECKED BY TRK	DATE 2/18/2018	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	

REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

PROPOSED ROADWAY PLAN
STA. 77+00 TO STA. 91+00

SHT NO. RDY-3

DRAWING NO. 41 OF 66

MATCH LINE STA. 91+00 SEE SHEET RDY-3

WARM-MIX ASPHALT SURFACE COURSE,MIX "D", N70 (JI406510)

EXISTING PRESSURE RELIEF JOINT TO REMAIN

PC Sta 88+41.18

W. FORK OF N. BRANCH

EXISTING R.O.W.

I–94 WB

I–94 EB

10.0′
13.0′
25.0′
15.0′
15.0′
38.0′
11.0′

95+00

100+00

11.0′
29.0′
5.0′
5.0′
29.8′
11.0′

EXISTING CONCRETE PAVEMENT TO REMAIN

WARM-MIX ASPHALT SURFACE COURSE,MIX "D", N70 (JI406510)

TRI-STATE TOLLWAY
EDENS SPUR
END REHABILITATION
STA. 95+85.90

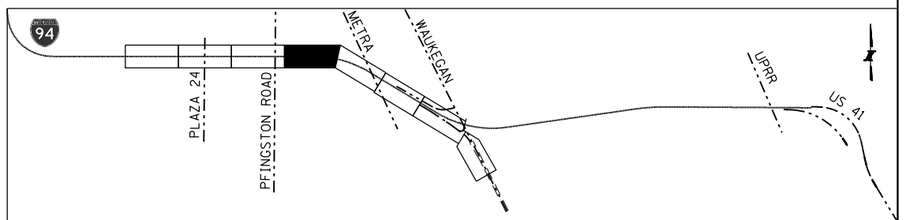
℄ EDENS SPUR (I-94)

CHICAGO RIVER

I–94 WB

I–94 EB

0 50 100 150
SCALE IN FEET



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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

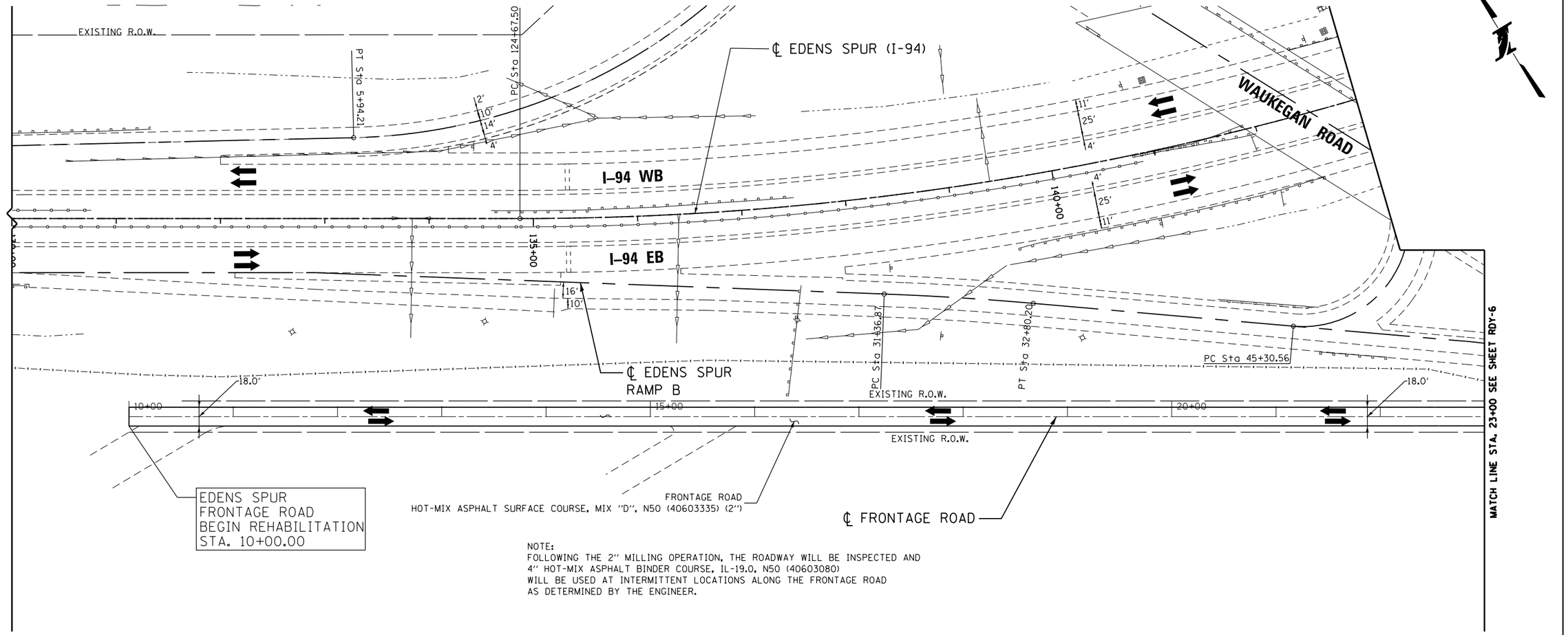
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

PROPOSED ROADWAY PLAN
STA. 91+00 TO STA. 105+00

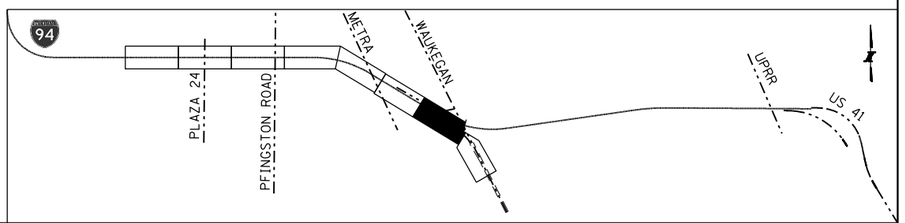
SHT NO. RDY-4

DRAWING NO.
42 OF 66



NOTE:
FOLLOWING THE 2" MILLING OPERATION, THE ROADWAY WILL BE INSPECTED AND 4" HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (40603080) WILL BE USED AT INTERMITTENT LOCATIONS ALONG THE FRONTAGE ROAD AS DETERMINED BY THE ENGINEER.

0 50 100 150
SCALE IN FEET



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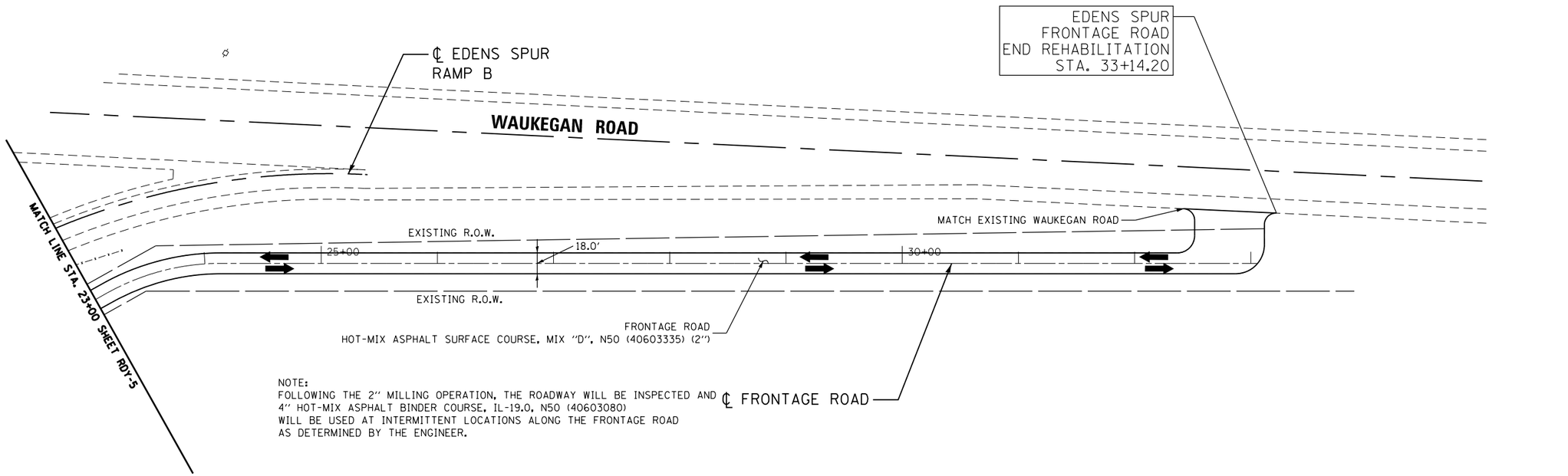
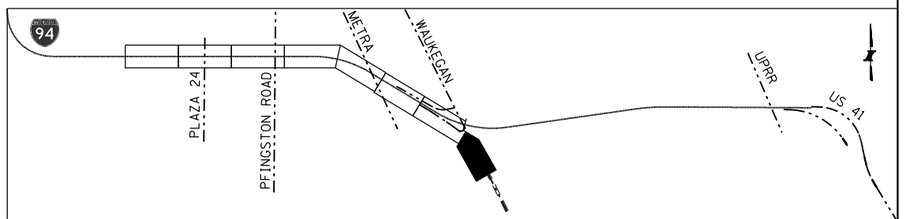
CHECKED BY TRK	DATE 2/18/2018	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY, 2700 OGDEN AVENUE, DOWNERS GROVE, ILLINOIS 60515	

REVISIONS			CONTRACT NO. I-18-4372	SHT NO. RDY-5
NO.	DATE	DESCRIPTION	PROPOSED ROADWAY PLAN FRONTAGE ROAD	DRAWING NO. 43 OF 66



NOTE:
FOLLOWING THE 2" MILLING OPERATION, THE ROADWAY WILL BE INSPECTED AND 4" HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (40603080) WILL BE USED AT INTERMITTENT LOCATIONS ALONG THE FRONTAGE ROAD AS DETERMINED BY THE ENGINEER.

0 50 100 150
SCALE IN FEET



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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

PROPOSED ROADWDAY PLAN
FRONTAGE ROAD

SHT NO. RDY-6

DRAWING NO. 44 OF 66

	UTILITY INFORMATION				STATUS OF UTILITIES								WORK ORDER/PERMITS									
					CROSSROAD OR PARALLEL UTILITY CONFLICT	EXISTING UTILITY CONFLICT SHOWN ON PLANS		EXISTING UTILITY CONFLICT SHOWN ON CROSS SECTIONS		TEMPORARY OR STAGE CONSTRUCTION		COMMENTS	TOLLWAY UTILITY JOB NUMBER	ORDER FOR UTILITY WORK AND PLANS APPROVED AND AVAILABLE	NO RELOCATION - WATCH AND PROTECT	RELOCATION BY UTILITY COMPANY UNDER THIS CONTRACT			RELOCATION BY CONTRACTOR UNDER THIS CONTRACT	UTILITY SERVICE AGREEMENT PROCESSED	PERMIT OR AGREEMENT IN PLACE	SPECIAL REQUIREMENTS OR COMMENTS
	UTILITY COMPANY	UTILITY COMPANY ADDRESS	UTILITY COMPANY CONTACT PERSON	CONTACT PERSON TELEPHONE NUMBER	CROSSROAD (C), PARALLEL (P)	YES/NO	SHEET NO.	YES/NO	SHEET NO.	YES/NO	SHEET NO.	PROPOSED UTILITY RELOCATIONS ARE SHOWN ON PLANS INCLUDED AS PART OF THE UTILITY WORK ORDER AND SHALL BE MADE AVAILABLE TO THE CONTRACTOR. ONLY EXISTING UTILITY FACILITIES ARE SHOWN ON THE CONTRACT DRAWINGS.		YES/NO	YES/NO	YES/NO	ESTIMATED START OF RELOCATION	ESTIMATED COMPLETION OF RELOCATION	YES/NO	YES/NO	YES/NO	
ABOVE GROUND																						
ELECTRICAL	COMED	ONE LINCOLN CENTRE SUITE 600 OAKBROOK TERRACE, IL 60181	ANGELA HARRELL	630-576-6185	C					N	N/A	AERIAL ELECTRIC LINES ON POLES NORTHEAST OF PFINGSTEN ROAD BRIDGE. WEST OF LAKE COOK METRA BRIDGE. CROSSING AT APPROXIMATE STATION 170+00.							N	N/A	Y	
CABLE																						
TELEPHONE																						
FIBER OPTIC																						
BELOW GROUND-DRY																						
ELECTRICAL	COMED	ONE LINCOLN CENTRE SUITE 600 OAKBROOK TERRACE, IL 60181	ANGELA HARRELL	630-576-6185	C					N	N/A	UNDERGROUND ELECTRIC EAST OF PFINGSTEN ROAD BRIDGE							N	N/A	Y	
	COMED	ONE LINCOLN CENTRE SUITE 600 OAKBROOK TERRACE, IL 60181	ANGELA HARRELL	630-576-6185	P					N	N/A	UNDERGROUND ELECTRIC NORTH OF WESTBOUND EDENS SPUR										
	COMED	ONE LINCOLN CENTRE SUITE 600 OAKBROOK TERRACE, IL 60181	ANGELA HARRELL	630-576-6185	P					N	N/A	UNDERGROUND ELECTRIC SOUTH OF EASTBOUND EDENS SPUR										
CABLE	AT&T	1000 COMMERCE DRIVE OAK BROOK, IL 60523	ALEX BRYANT	630-573-6456	C					N	N/A	UNDERGROUND CABLE TV AND TELEPHONE WEST OF PFINGSETN ROAD BRIDGE							N	N/A	Y	
	AT&T	1000 COMMERCE DRIVE OAK BROOK, IL 60523	ALEX BRYANT	630-573-6456	P					N	N/A	UNDERGROUND ELECTRIC NORTH OF WESTBOUND EDENS SPUR. NORTH OF FRONTAGE ROAD.							N	N/A	Y	
FIBER OPTIC																			N	N/A	Y	
TELEPHONE	AT&T	1000 COMMERCE DRIVE OAK BROOK, IL 60523	ALEX BRYANT	630-573-6456	C					N	N/A	UNDERGROUND CABLE TV AND TELEPHONE WEST OF PFINGSETN ROAD BRIDGE							N	N/A	Y	
BELOW GROUND-WET																						
WATER																						
SANITARY SEWER																						
GAS	NICOR	1844 FERRY ROAD NAPERVILLE, IL 60563	BRUCE KOPPANG	630-388-3046	C					N	N/A	UNDERGROUND GAS NORTH OF PLAZA 24.							N	N/A	Y	
	NICOR	1844 FERRY ROAD NAPERVILLE, IL 60563	BRUCE KOPPANG	630-388-3046	C/P					N	N/A	UNDERGROUND GAS NORTH FRONTAGE ROAD							N	N/A	Y	

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d'Escoto INC
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

UTILITY MATRIX

SHT NO. UTL-1

DRAWING NO. 45 OF 66

EROSION AND SEDIMENT CONTROL SCHEDULE OF QUANTITIES

JS280205			
FILTER FABRIC INLET PROTECTION, COVER TYPE			
STATION	OFFSET	EACH	SHEET
EDENS SPUR			
60+32.67	43.97' R	1	ESC-1
61+08.72	46.36' L	1	ESC-1
61+38.67	43.97' R	1	ESC-1
61+38.69	0.03' L	1	ESC-1
61+38.69	81.03' L	1	ESC-1
61+38.69	87.47' R	1	ESC-1
61+38.72	46.36' L	1	ESC-1
62+62.69	0.03' L	1	ESC-1
62+78.67	43.97' R	1	ESC-1
62+78.69	85.03' L	1	ESC-1
62+78.69	101.47' R	1	ESC-1
62+78.72	46.36' L	1	ESC-1
63+76.95	43.97' R	1	ESC-2
63+76.97	0.03' L	1	ESC-2
63+76.97	110.97' R	1	ESC-2
63+76.97	89.03' L	1	ESC-2
63+77.00	46.36' L	1	ESC-2
64+62.69	0.03' L	1	ESC-2
64+78.67	43.97' R	1	ESC-2
64+78.69	120.97' R	1	ESC-2
64+78.69	98.03' L	1	ESC-2
64+78.72	46.36' L	1	ESC-2
65+71.67	43.97' R	1	ESC-2
65+71.69	0.03' L	1	ESC-2
65+71.72	46.36' L	1	ESC-2
66+44.69	114.03' L	1	ESC-2
67+64.67	43.97' R	1	ESC-2
67+64.69	0.03' L	1	ESC-2
67+64.69	126.03' L	1	ESC-2
67+64.72	46.36' L	1	ESC-2
69+52.69	0.03' L	1	ESC-2
69+52.69	126.97' R	1	ESC-2
69+52.69	127.03' L	1	ESC-2
69+98.69	0.03' L	1	ESC-2
69+98.69	126.97' R	1	ESC-2
69+98.69	127.03' L	1	ESC-2
71+08.69	117.97' R	1	ESC-2
71+66.69	131.03' L	1	ESC-2
71+78.69	127.97' R	1	ESC-2
72+46.69	131.53' L	1	ESC-2
73+24.69	131.53' L	1	ESC-2
73+68.67	43.97' R	1	ESC-2
73+68.69	46.36' L	1	ESC-2
73+68.69	0.03' L	1	ESC-2
73+68.69	108.97' R	1	ESC-2
74+02.69	129.03' L	1	ESC-2
74+68.69	98.97' R	1	ESC-2
74+80.69	121.03' L	1	ESC-2
75+28.69	92.97' R	1	ESC-2
75+60.69	113.03' L	1	ESC-2
76+34.69	86.47' R	1	ESC-2
77+18.67	43.97' R	1	ESC-3
77+18.69	82.97' R	1	ESC-3
77+18.69	0.03' L	1	ESC-3

JS280205			
FILTER FABRIC INLET PROTECTION, COVER TYPE			
STATION	OFFSET	EACH	SHEET
77+18.69	97.53' L	1	ESC-3
78+36.20	44.02' R	1	ESC-3
78+98.69	0.12' R	1	ESC-3
79+20.79	46.35' L	1	ESC-3
79+86.20	42.84' R	1	ESC-3
79+98.69	76.97' R	1	ESC-3
79+98.69	77.03' L	1	ESC-3
80+91.20	44.35' L	1	ESC-3
81+78.69	0.03' L	1	ESC-3
81+86.20	40.98' R	1	ESC-3
82+41.45	42.60' L	1	ESC-3
82+78.69	72.03' L	1	ESC-3
83+81.69	70.03' L	1	ESC-3
83+88.69	69.47' R	1	ESC-3
83+88.69	0.03' L	1	ESC-3
83+91.20	40.85' L	1	ESC-3
83+93.69	39.17' R	1	ESC-3
85+98.67	37.42' R	1	ESC-3
85+98.69	38.44' L	1	ESC-3
85+98.69	0.03' L	1	ESC-3
94+48.69	0.03' L	1	ESC-4
96+76.36	0.17' L	1	ESC-4
97+11.64	0.03' L	1	ESC-4
97+38.64	0.03' L	1	ESC-4
	Total	78	

JS280305			
TEMPORARY DITCH CHECKS			
STATION	OFFSET	LENGTH (FT)	SHEET
EDENS SPUR			
94+52.30	97.06' R	8	ESC-4
96+09.20	99.16' L	8	ESC-4
96+50.43	91.79' R	8	ESC-4
97+60.57	103.58' L	8	ESC-4
	Total	32	

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d'Escoto Inc. Where Vision Meets Implementation
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

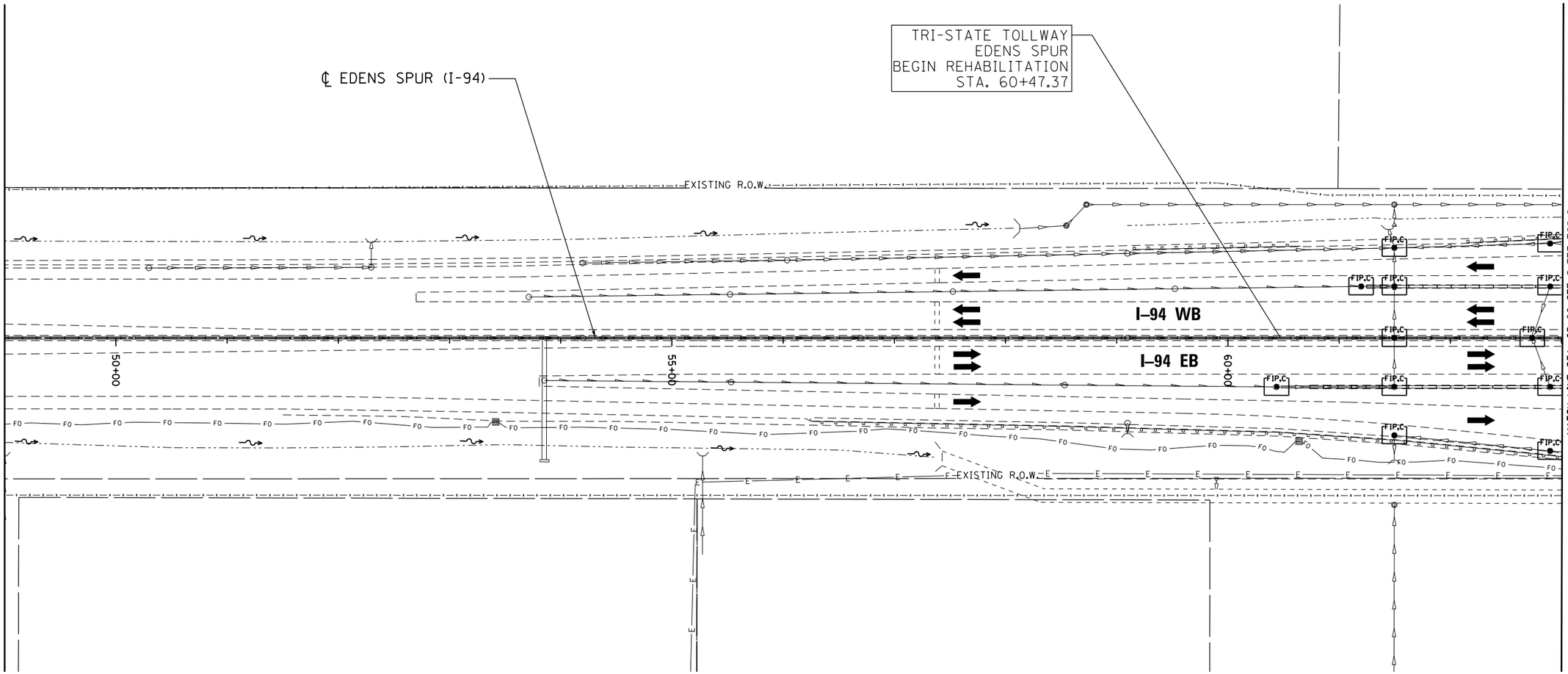
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

EROSION AND SEDIMENT CONTROL SCHEDULE

SHT NO. ES-1

DRAWING NO. 46 OF 66



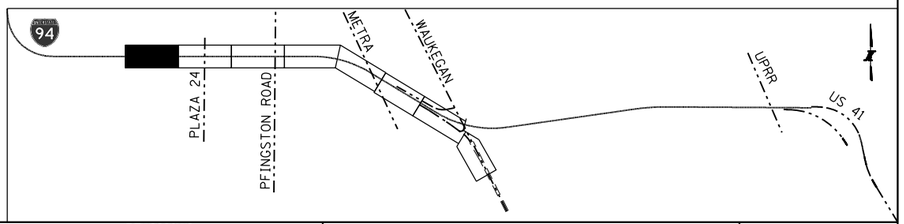
EROSION SEDIMENT CONTROL LEGEND

FIP.C — FILTER FABRIC INLET PROTECTION, COVER TYPE (JS280205)

T — TEMPORARY DITCH CHECKS (JS280305)

FLOOD PLAIN LIMITS

0 50 100 150
SCALE IN FEET



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2700 OGDEN AVENUE
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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

EROSION & SEDIMENT CONTROL PLAN
STA. 49+00 TO STA. 63+00

SHT NO.ESC-1

DRAWING NO.
47 OF 66

MATCH LINE STA. 63+00 SEE SHEET ESC-1

MATCH LINE STA. 77+00 SEE SHEET ESC-3

EXISTING R.O.W.

I–94 WB

I–94 EB

I–94 WB

I–94 EB

65+00

70+00

75+00

℄ EDENS SPUR (I-94)

N

EROSION SEDIMENT CONTROL LEGEND

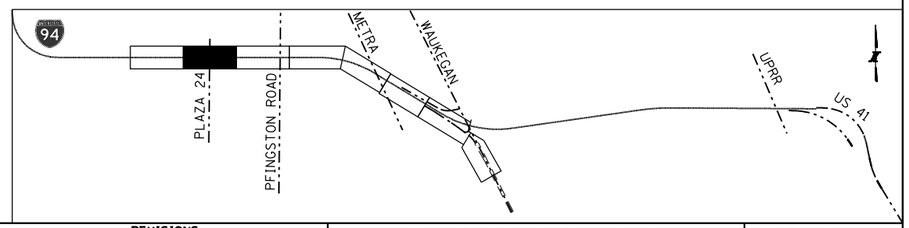
FIP.C — FILTER FABRIC INLET PROTECTION, COVER TYPE (JS280205)

T — TEMPORARY DITCH CHECKS (JS280305)

– – – – – FLOOD PLAIN LIMITS

0 50 100 150

SCALE IN FEET



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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

EROSION & SEDIMENT CONTROL PLAN
STA. 63+00 TO STA. 77+00

SHT NO. ECS-2

DRAWING NO. 48 OF 66

MATCH LINE STA. 77+00 SEE SHEET ESC-2

MATCH LINE STA. 91+00 SEE SHEET ESC-4

I–94 WB

I–94 EB

PFINGSTEN ROAD

80+00

85+00

90+00

EXISTING R.O.W.

EXISTING R.O.W.

℄ TRI-STATE TOLLWAY EDENS SPUR

EROSION SEDIMENT CONTROL LEGEND

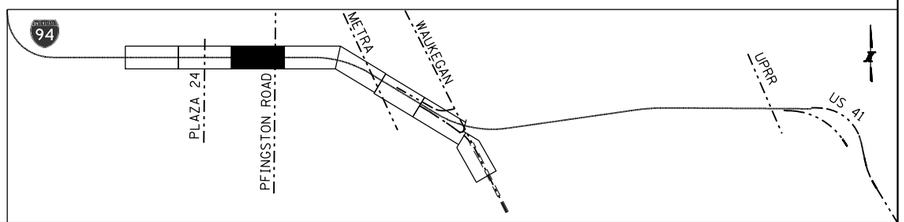
FIP.C — FILTER FABRIC INLET PROTECTION, COVER TYPE (JS280205)

T — TEMPORARY DITCH CHECKS (JS280305)

---- FLOOD PLAIN LIMITS

0 50 100 150

SCALE IN FEET



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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

EROSION & SEDIMENT CONTROL PLAN
STA. 77+00 TO STA. 91+00

SHT NO. ESC-3

DRAWING NO.
49 OF 66

MATCH LINE STA. 91+00 SEE SHEET ESC-3

I–94 WB

I–94 EB

FIP.C

95+00

I–94 WB

I–94 EB

100+00

W. FORK OF N. BRANCH

EXISTING R.O.W.

CHICAGO RIVER

TRI-STATE TOLLWAY
EDENS SPUR
END REHABILITATION
STA. 95+85.90

℄ EDENS SPUR (I-94)

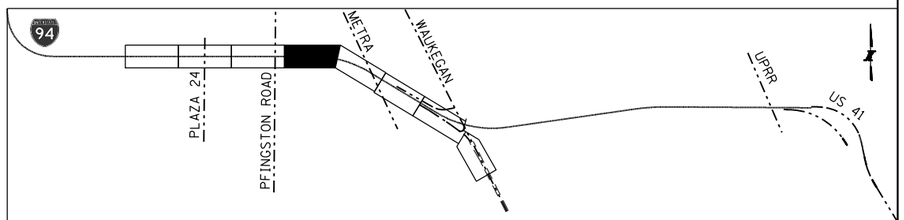
EROSION SEDIMENT CONTROL LEGEND

FIP.C — FILTER FABRIC INLET PROTECTION, COVER TYPE (JS280205)

T — TEMPORARY DITCH CHECKS (JS280305)

FLOOD PLAIN LIMITS

0 50 100 150
SCALE IN FEET



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2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

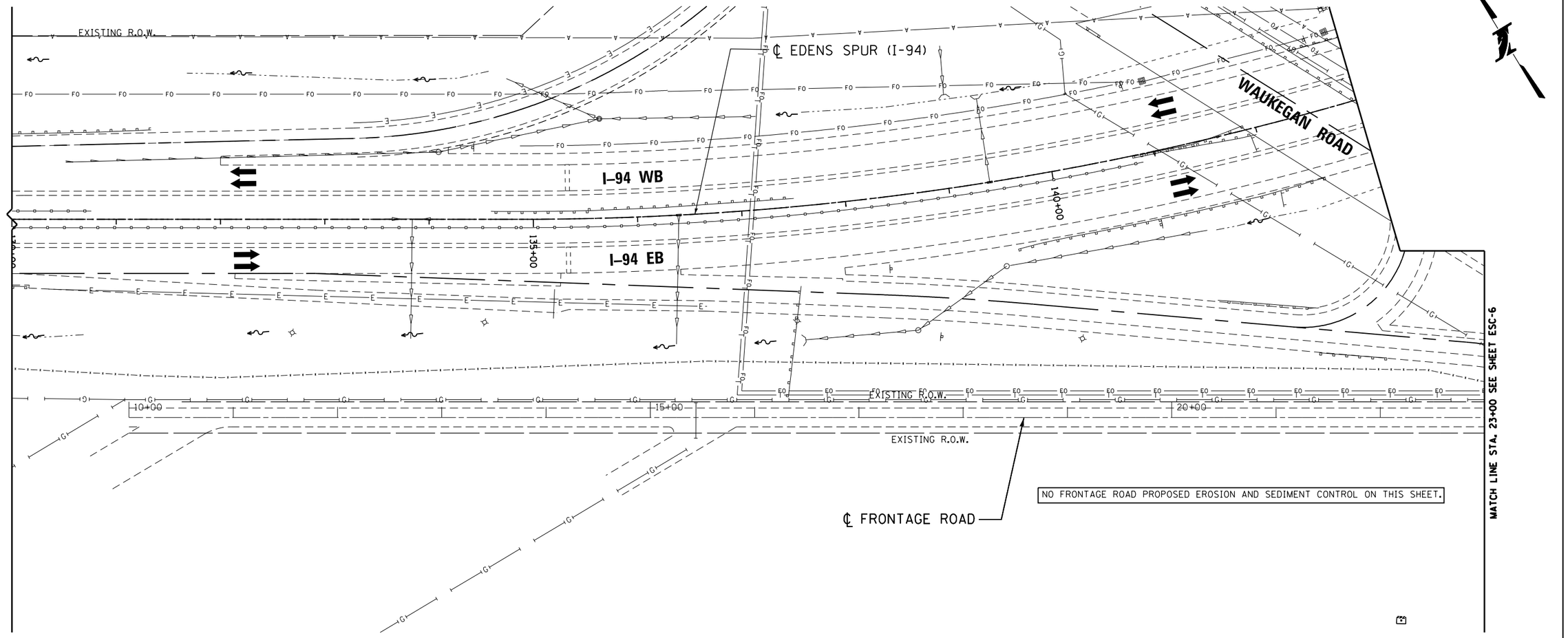
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

SHT NO. ESC-4

EROSION & SEDIMENT CONTROL PLAN
STA. 91+00 TO STA. 105+00

DRAWING NO.
50 OF 66



EROSION SEDIMENT CONTROL LEGEND

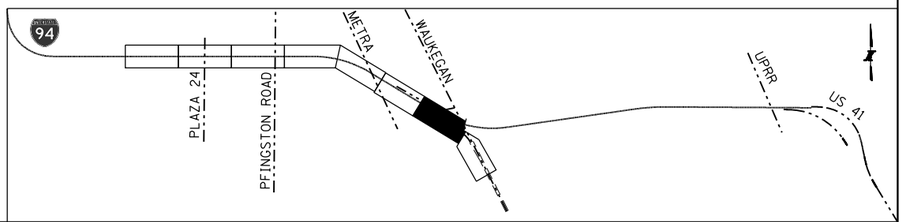
FIP.C FILTER FABRIC INLET PROTECTION, COVER TYPE (JS280205)

T TEMPORARY DITCH CHECKS (JS280305)

FLOOD PLAIN LIMITS

0 50 100 150

SCALE IN FEET



DRAWN BY YS DATE 2/16/2018

CHECKED BY TRK DATE 2/18/2018

d'Escoto INC Where Vision Meets Implementation

1200 North Ashland Ave
6th Floor
Chicago, IL 60622
PHONE: 312.787.0707

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

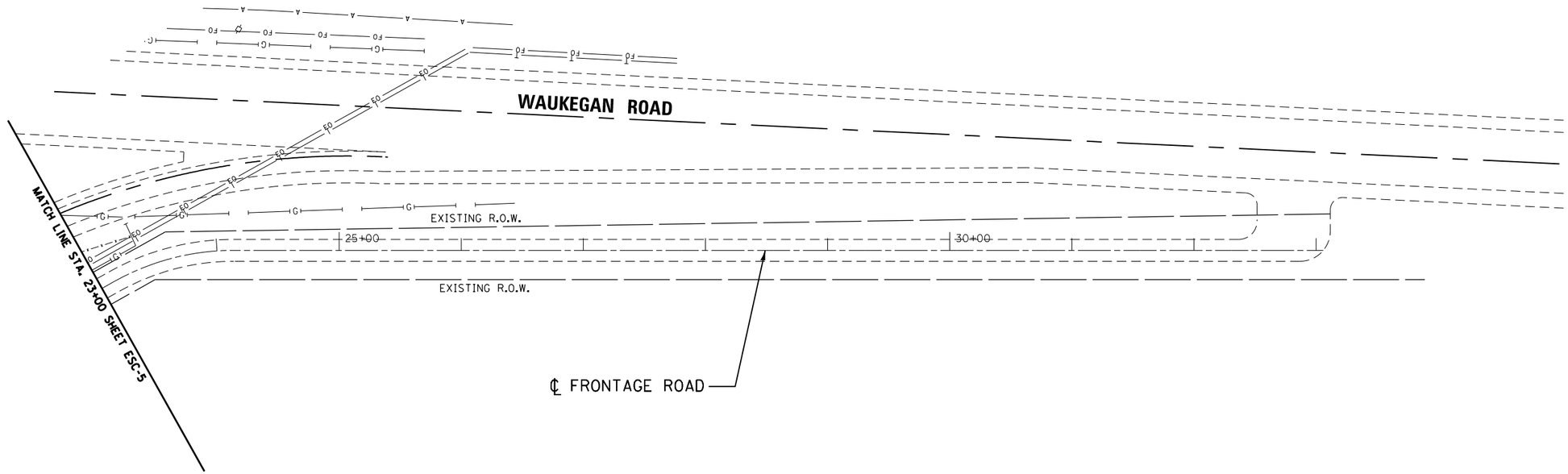
REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

SHT NO. ESC-5

EROSION & SEDIMENT CONTROL PLAN
FRONTAGE ROAD

DRAWING NO.
51 OF 66

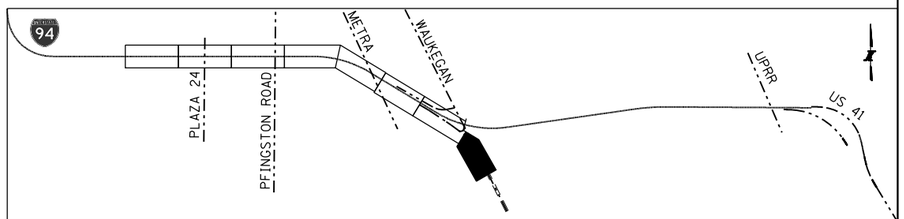


NO FRONTAGE ROAD PROPOSED EROSION AND SEDIMENT CONTROL ON THIS SHEET.

EROSION SEDIMENT CONTROL LEGEND

- FIP.C — FILTER FABRIC INLET PROTECTION, COVER TYPE (JS280205)
- T — TEMPORARY DITCH CHECKS (JS280305)
- FLOOD PLAIN LIMITS

0 50 100 150
SCALE IN FEET



DRAWN BY YS DATE 2/16/2018
CHECKED BY TRK DATE 2/18/2018

d'Escoto INC
Where Vision Meets Implementation

1200 North Ashland Ave
6th Floor
Chicago, IL 60622
PHONE: 312.787.0707

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

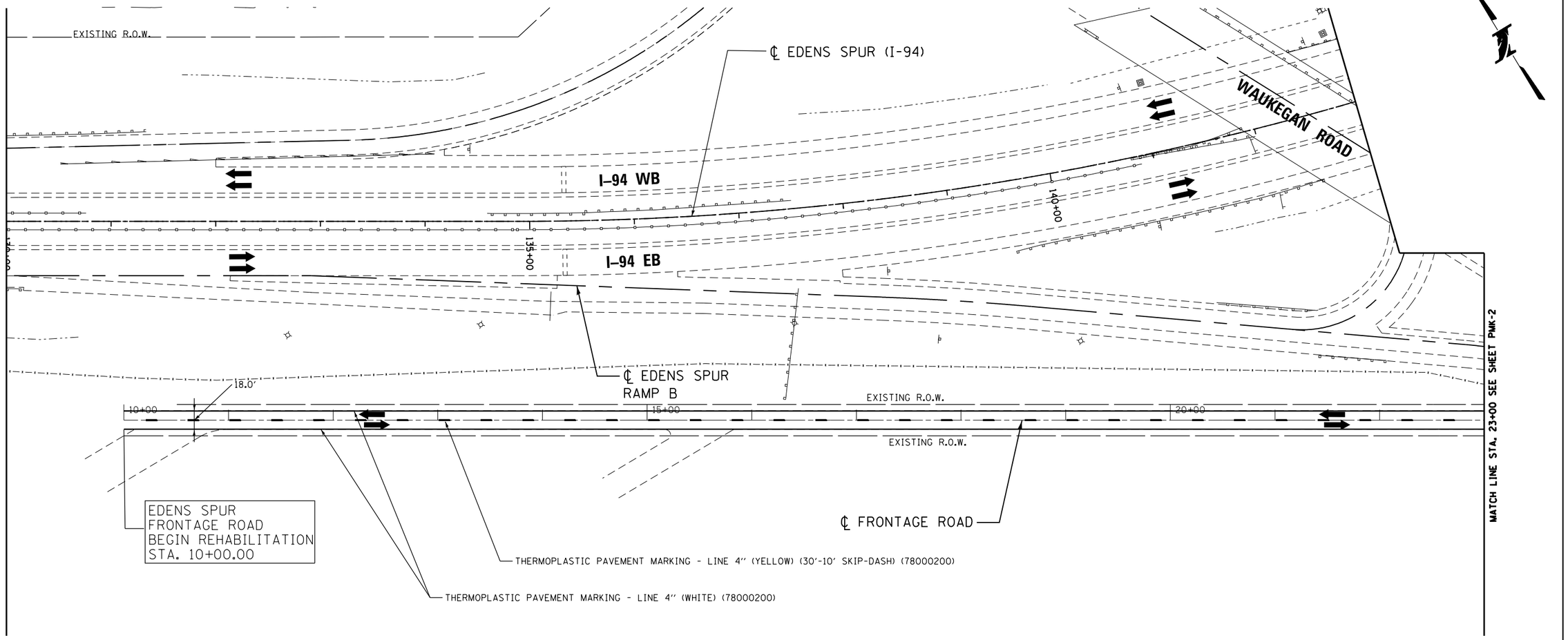
REVISIONS		
NO.	DATE	DESCRIPTION

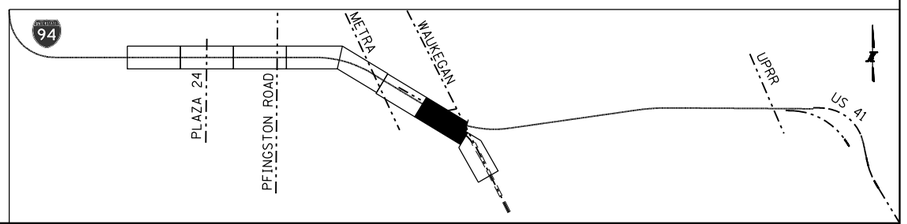
CONTRACT NO. I-18-4372

EROSION & SEDIMENT CONTROL PLAN
FRONTAGE ROAD

SHT NO. ESC-6

DRAWING NO.
52 OF 66





0 50 100 150
SCALE IN FEET

DRAWN BY YS DATE 2/16/2018
CHECKED BY TRK DATE 2/18/2018

d'Escoto INC. Where Vision Meets Implementation

1200 North Ashland Ave
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

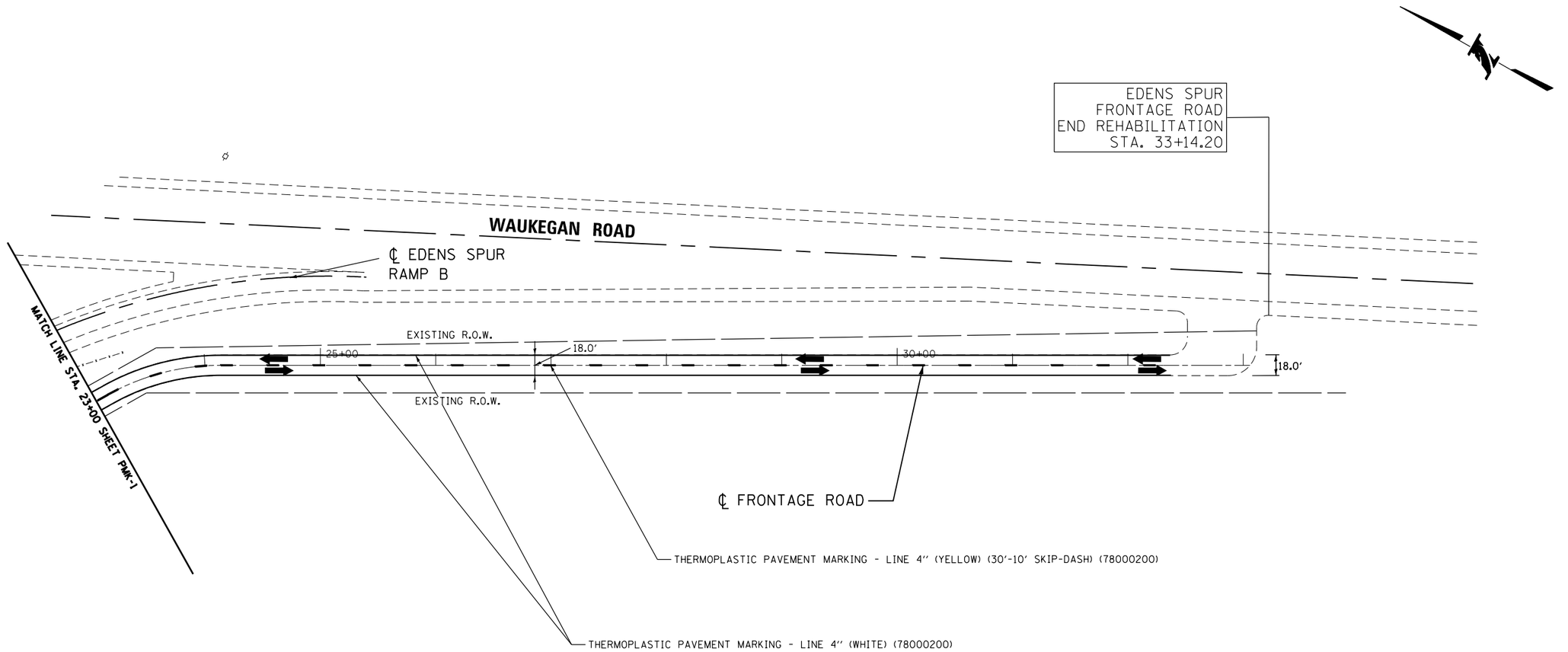
REVISIONS NO.	DATE	DESCRIPTION

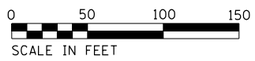
CONTRACT NO. I-18-4372

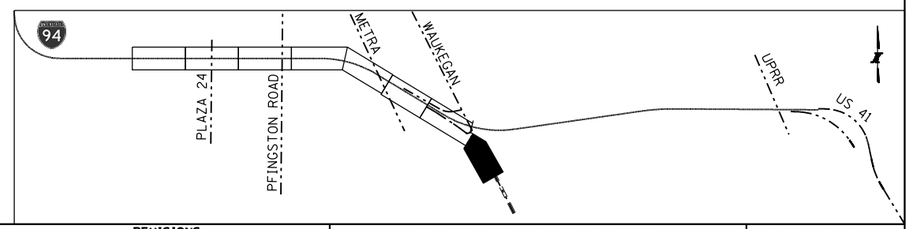
PAVEMENT MARKING PLAN
FRONTAGE ROAD

SHT NO. PMK-1

DRAWING NO.
53 OF 66







DRAWN BY YS	DATE 2/16/2018	d'Escoto INC Where Vision Meets Implementation	1200 North Ashland Ave 6th Floor Chicago, IL 60622 PHONE: 312.787.0707
CHECKED BY TRK	DATE 2/18/2018	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372	SHT NO. PMK-2
PAVEMENT MARKING PLAN FRONTAGE ROAD	DRAWING NO. 54 OF 66

BENCHMARK: CUT SQUARE ON NORTHEAST CORNER OF BRIDGE PARAPET ON BN 348. EL. 668.38.

EXISTING STRUCTURE DESCRIPTION: TOLLWAY BRIDGE NOS. 347 & 348 (IDOT STRUCTURE NOS. 016-9731 & 016-9732) CARRYING EDENS SPUR (I-94) OVER WEST FORK NORTH BRANCH CHICAGO RIVER WERE BUILT UNDER CONTRACT T-11B IN 1957. THE SUPERSTRUCTURE CONSISTS OF A SINGLE SPAN PRECAST PRESTRESSED CONCRETE (PPC) I-BEAMS AND A 7½" CONCRETE DECK WITH 1½" CONCRETE OVERLAY. THE SUBSTRUCTURE CONSISTS OF CLOSED ABUTMENTS SUPPORTED ON METAL SHELL PILES. THE STRUCTURE LENGTH IS 46'-6½" BACK TO BACK OF ABUTMENTS AND THE WIDTH IS 64'-8" OUT-TO-OUT FOR EACH STRUCTURE.

EXISTING STRUCTURE IS TO BE REMOVED AND REPLACED. TRAFFIC TO BE MAINTAINED USING STAGED CONSTRUCTION.

PROPOSED STRUCTURE DESCRIPTION: THE SUPERSTRUCTURE CONSISTS OF A SINGLE SPAN 45" PPC IL-BEAMS AND AN 8" CONCRETE DECK. THE SUBSTRUCTURE CONSISTS OF INTEGRAL ABUTMENTS SUPPORTED ON PILES. THE STRUCTURE LENGTH IS 100'-11¾" BACK TO BACK OF ABUTMENTS AND THE WIDTH IS 57'-8½" OUT-TO-OUT FOR EACH STRUCTURE.

SALVAGE: NONE

CONSTRUCTION SPECIFICATIONS

TOLLWAY SUPPLEMENT SPECIFICATIONS TO THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MARCH 2017

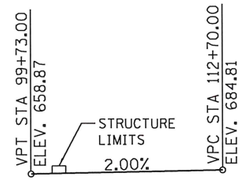
IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED APRIL 1, 2016

IDOT SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JANUARY 1, 2018

IDOT GUIDE BRIDGE SPECIAL PROVISIONS (GBSP)

PROFILE GRADE

(I-94 - ESCL-O-C-CL3-O)
(AT 19'-1½" OFFSET RIGHT & LEFT OF ℄ EDENS SPUR (I-94))



CURVE DATA

(CURVE ESCL-O-C-CL3_6)
P.I. STA. = 106+59.18
Δ = 31°08'33"
D = 2°00'00"
R = 2,864.79'
T = 798.32'
L = 1,557.13'
E = 109.15
e =
T.R. =
S.E. RUN =
P.C. STA. = 98+60.87
P.T. STA. = 114+17.99

DESIGN SPECIFICATIONS

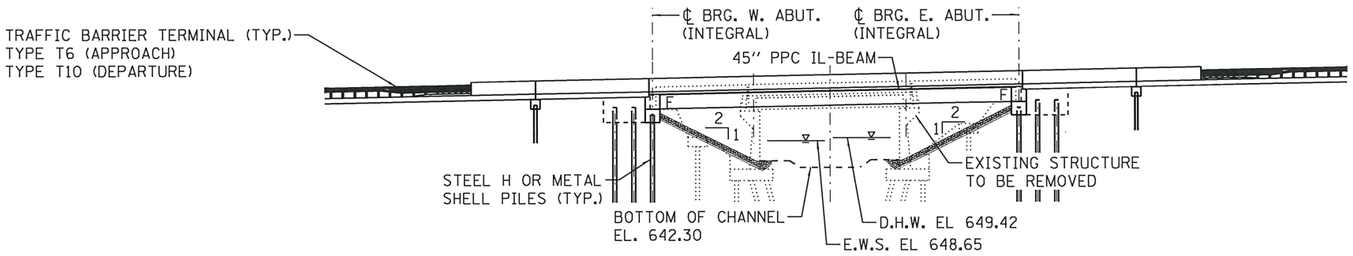
2017 AASHTO LRFD DESIGN SPECIFICATIONS, 8TH EDITION

ILLINOIS STATE TOLL HIGHWAY AUTHORITY STRUCTURE DESIGN MANUAL, MARCH 2017

ILLINOIS STATE TOLL HIGHWAY AUTHORITY GEOTECHNICAL MANUAL, MARCH 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012

ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGNERS MEMORANDUMS



MATTHEW D. SANTEFORD 081-007244 LICENSED STRUCTURAL ENGINEER OF STATE OF ILLINOIS 02-09-2018

MATTHEW D. SANTEFORD, P.E., S.E.
NO. 081-007244
EXP. DATE 11/30/2018

DESIGN STRESSES

FIELD UNITS
f'c= 3,500 PSI (CLASS SI)
f'c= 4,000 PSI (CLASS BS, HIGH PERFORMANCE CONCRETE)
fy = 60,000 PSI (REINFORCEMENT)
fy = 50,000 PSI (M270 GRADE 50)

PRECAST PRESTRESSED UNITS
f'c = 8,500 PSI (CLASS PS)
f'ci = 7,000 PSI (CLASS PS)
fpu = 270,000 PSI (0.6" Ø LOW LAX. STRANDS)
fpBT = 202,300 PSI (0.75 fpu)

ELEVATION

(LOOKING NORTH)

LOADING HL-93 + IL-120

ALLOW 50 PSF FOR FUTURE WEARING SURFACE

LIVE LOAD DEFLECTION

Δ LL + I <= SPAN LENGTH/800

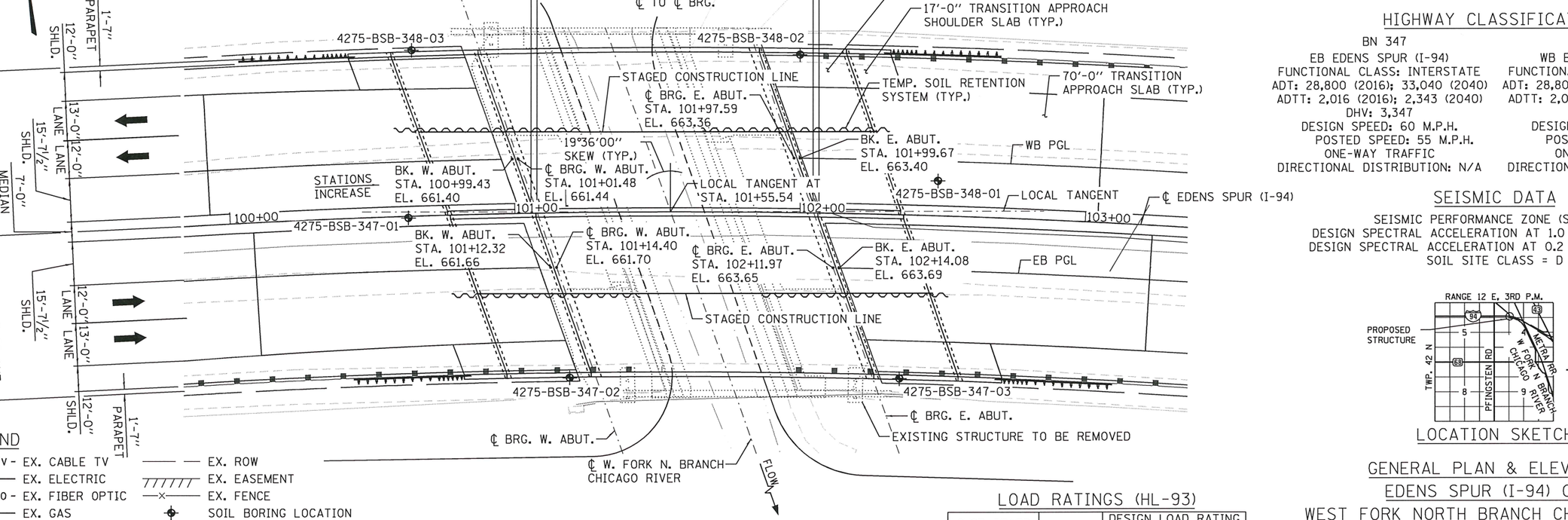
HIGHWAY CLASSIFICATION

BN 347
EB EDENS SPUR (I-94)
FUNCTIONAL CLASS: INTERSTATE
ADT: 28,800 (2016); 33,040 (2040)
ADTT: 2,016 (2016); 2,343 (2040)
DHV: 3,347
DESIGN SPEED: 60 M.P.H.
POSTED SPEED: 55 M.P.H.
ONE-WAY TRAFFIC
DIRECTIONAL DISTRIBUTION: N/A

BN 348
WB EDENS SPUR (I-94)
FUNCTIONAL CLASS: INTERSTATE
ADT: 28,800 (2016); 33,040 (2040)
ADTT: 2,016 (2016); 2,313 (2040)
DHV: 3,304
DESIGN SPEED: 60 M.P.H.
POSTED SPEED: 55 M.P.H.
ONE-WAY TRAFFIC
DIRECTIONAL DISTRIBUTION: N/A

SEISMIC DATA

SEISMIC PERFORMANCE ZONE (SPZ) = 1
DESIGN SPECTRAL ACCELERATION AT 1.0 SEC. (S_{D1}) = 8.0
DESIGN SPECTRAL ACCELERATION AT 0.2 SEC. (S_{DS}) = 13.5
SOIL SITE CLASS = D



PLAN

LOAD RATINGS (HL-93)

LIMIT STATE		DESIGN LOAD RATING	
		INVENTORY	OPERATING
STRENGTH I	FLEXURE	1.87	2.43
	SHEAR	1.24	1.64
SERVICE III	TENSION	2.04	N/A

LOCATION SKETCH

LEGEND

- CTV - EX. CABLE TV
- E - EX. ELECTRIC
- FO - EX. FIBER OPTIC
- G - EX. GAS
- EX. SANITARY SEWER
- EX. STORM SEWER
- T - EX. TELEPHONE
- W - EX. WATER
- EX. ROW
- EX. EASEMENT
- EX. FENCE
- SOIL BORING LOCATION

GENERAL PLAN & ELEVATION
EDENS SPUR (I-94) OVER
WEST FORK NORTH BRANCH CHICAGO RIVER
COOK COUNTY
STATION 101+55.54
BRIDGE NOS. 347 & 348

DRAWN BY TLR DATE 02/09/2018
CHECKED BY MDS DATE 02/09/2018

Tran Systems

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372
I-94 OVER W. FORK CHICAGO RIVER (BNS 347 & 348) - GENERAL PLAN & ELEVATION

SHT NO. SA-1
DRAWING NO. 55 OF 66

GENERAL NOTES

REINFORCEMENT BARS

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

REINFORCEMENT BAR BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.

REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A706), GRADE 60, DEFORMED BARS.

REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.

BARS NOTED THUS, 3X2-#5 INDICATES 3 LINES OF BARS WITH 2 LENGTHS OF BARS PER LINE.

PRECAST CONCRETE

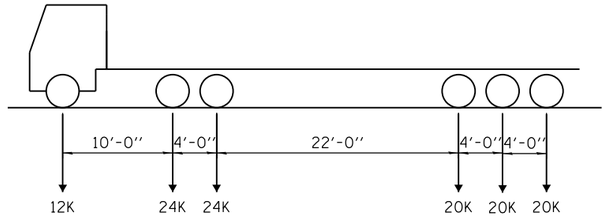
THE FABRICATOR, THE CONTRACTOR AND THE BEAM TRANSPORTATION COMPANY SHALL PROVIDE ADEQUATE BRACING AND SUPPORT FOR THE PPC BEAMS DURING HANDLING, TRANSPORTING, STORING AND ERECTING TO ENSURE THE SAFETY OF THE PERSONNEL ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT.

THE BEAMS BEING FABRICATED IN THIS CONTRACT ARE FOR USE IN THE FUTURE CONTRACT I-18-4373. THE FABRICATOR SHALL COORDINATE ANY NECESSARY STORAGE AND DELIVERY OF BEAMS WITH THE CONTRACTOR FOR CONTRACT I-18-4373.

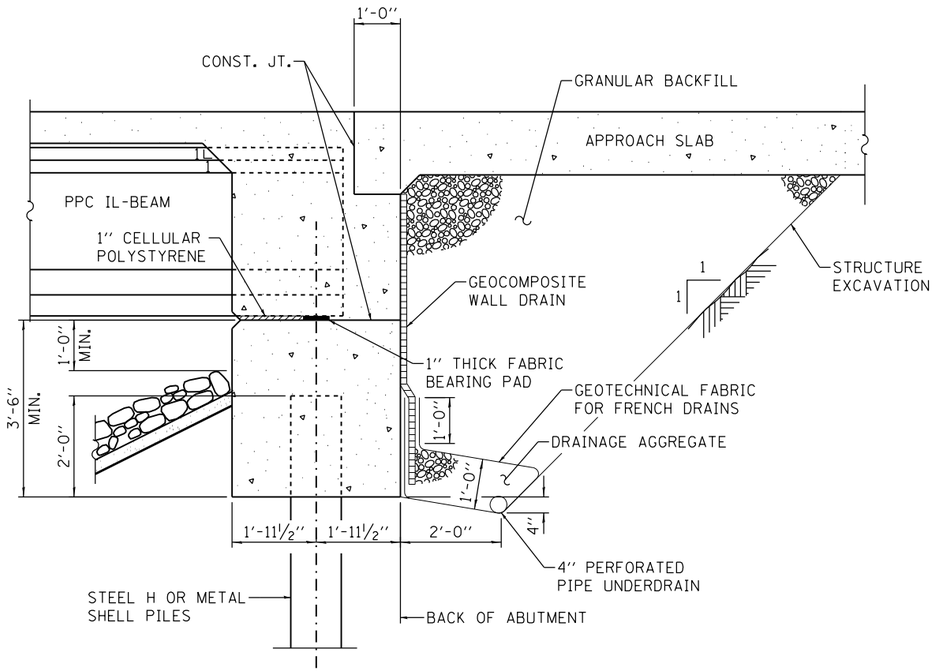
INDEX OF SHEETS

ABBREVIATIONS

P.G.L.	PROFILE GRADE LINE
E.B.L.	EAST BOUND LANES
W.B.L.	WEST BOUND LANES
N. ABUT.	NORTH ABUTMENT
S. ABUT.	SOUTH ABUTMENT
E.F.	EACH FACE
F.F.	FRONT FACE
B.F.	BACK FACE
I.F.	INSIDE FACE
O.F.	OUTSIDE FACE
P.J.F.	PREFORMED JOINT FILLER
P.J.S.	PREFORMED JOINT SEALER
BK/	BACK OF
B/	BOTTOM OF
T/	TOP OF
PROP.	PROPOSED
IN.	INCHES
U.N.O.	UNLESS NOTED OTHERWISE



IL-120 DESIGN TRUCK

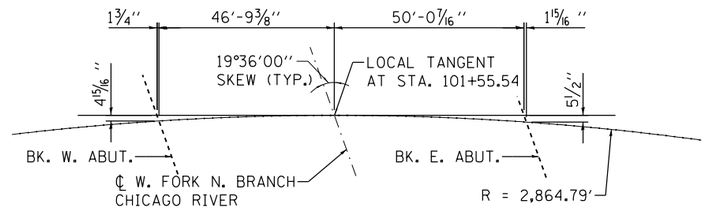


SECTION THRU INTEGRAL ABUTMENT

(HORIZ. DIM. @ RT. ℄'S)

TOTAL BILL OF MATERIAL

PAY ITEM NUMBER	DESCRIPTION	UNIT	SUPER	SUB	TOTAL	RECORD QUANTITY
JI504050	FURNISHING PRECAST PRESTRESSED CONCRETE IL45-2438 BEAMS	FOOT	785		785	



OFFSET SKETCH

DRAWN BY MJR DATE 02/09/2018
CHECKED BY TLR DATE 02/09/2018

Tran Systems

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

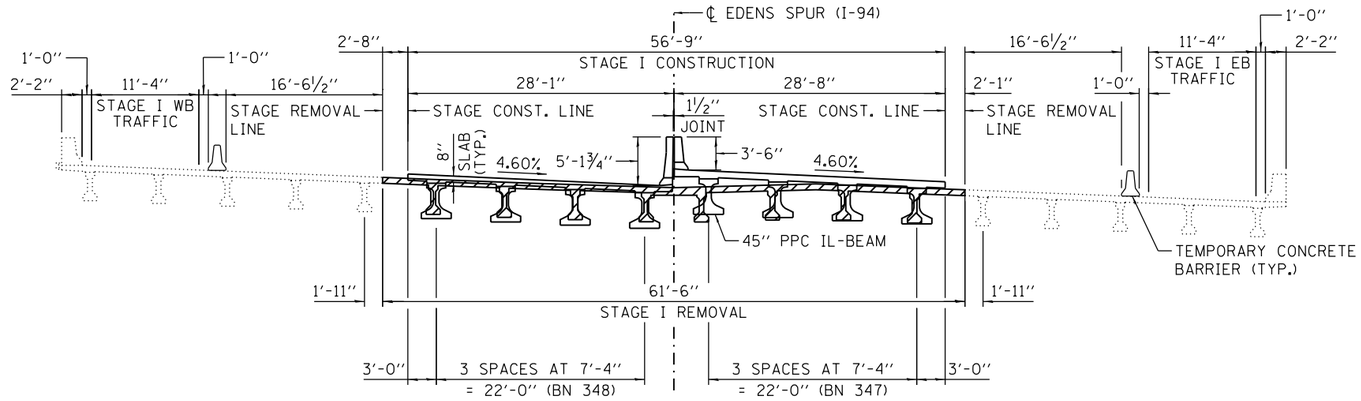
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

I-94 OVER W. FORK CHICAGO RIVER (BNS 347 & 348) - GENERAL NOTES & DETAILS

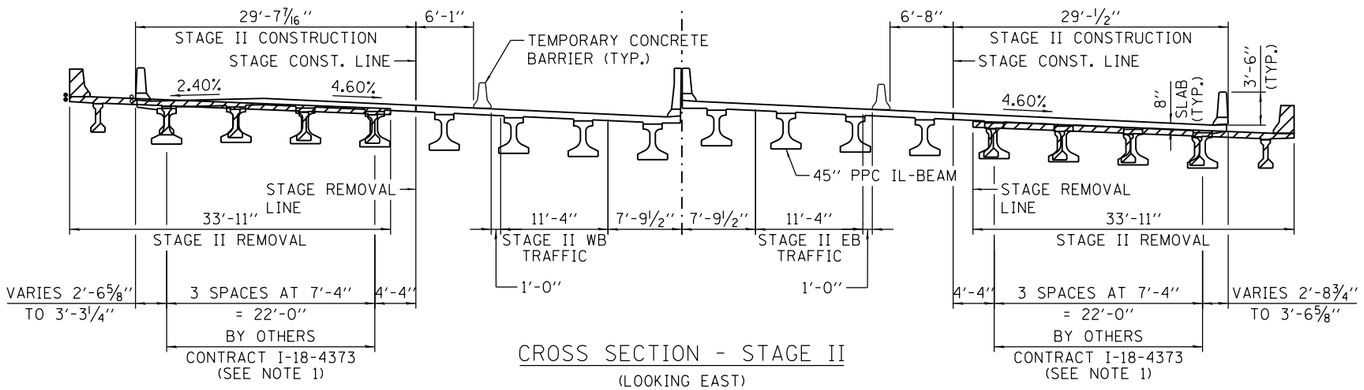
SHT NO. SA-2

DRAWING NO. 56 OF 66



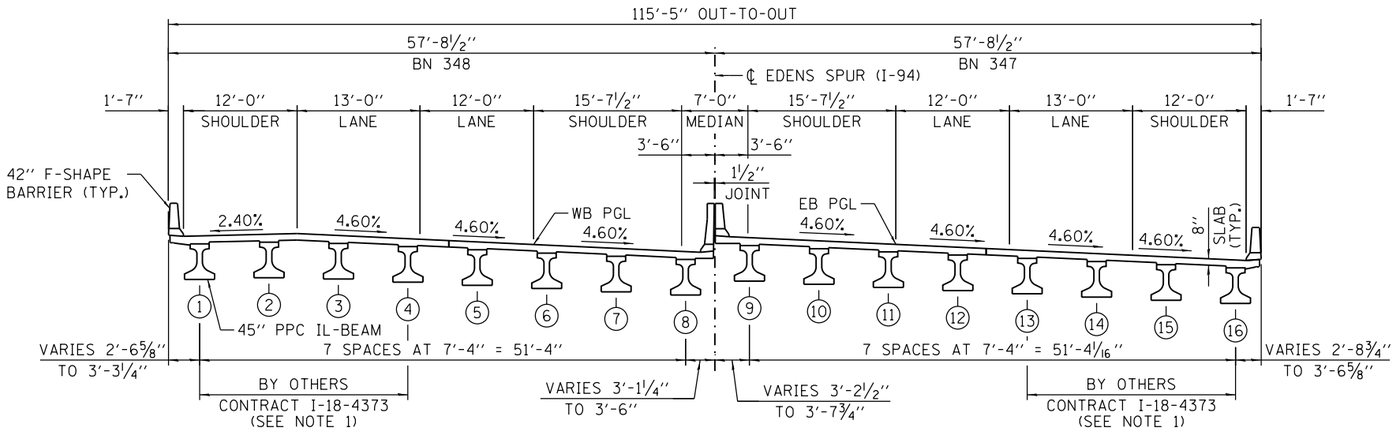
CROSS SECTION - STAGE I

(LOOKING EAST)



CROSS SECTION - STAGE II

(LOOKING EAST)



CROSS SECTION - ULTIMATE

(LOOKING EAST)

LEGEND:

EXISTING STRUCTURE REMOVAL

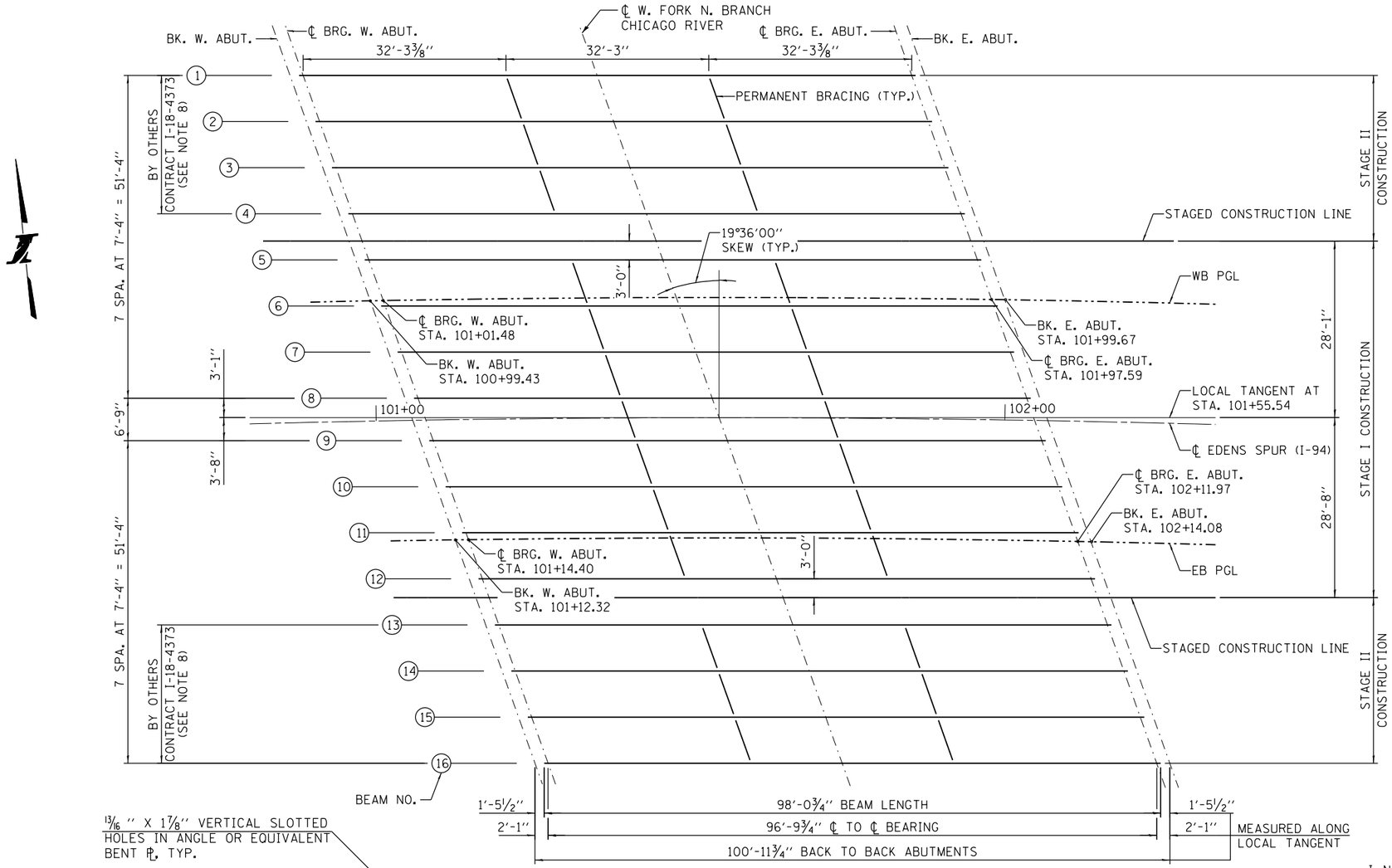
NOTES:

1. BEAMS 5-12 ARE INCLUDED WITH THIS CONTRACT. BEAMS 1-4 AND 13-16 ARE INCLUDED IN CONTRACT I-18-4373.

DRAWN BY TLR	DATE 02/09/2018	TranSystems	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY MDS	DATE 02/09/2018		

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372	SHT NO. SA-3
I-94 OVER W. FORK CHICAGO RIVER (BNS 347 & 348) - CONSTRUCTION STAGING	DRAWING NO. 57 OF 66

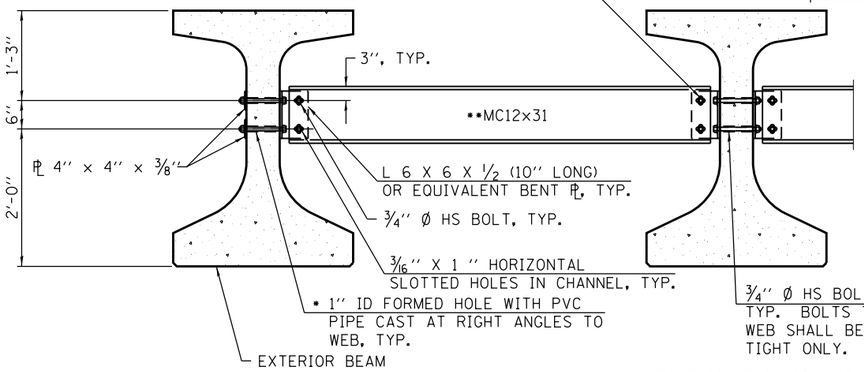


INTERIOR BEAM MOMENT TABLE

		0.5 SPAN
I	(in^4)	182,623
I′	(in^4)	542,150
S_b	(in^3)	10,045
S_b'	(in^3)	16,932
S_t	(in^3)	6,809
S_t'	(in^3)	23,592
DC1	(k/′)	1.96
M_{DC1}	(′k)	1,883
DC2	(k/′)	0.14
M_{DC2}	(′k)	166
DW	(k/′)	0.39
M_{DW}	(′k)	401
M_{LL+IM}	(′k)	1,693

INTERIOR BEAM REACTION TABLE

		W. ABUT.	E. ABUT.
R_{DC1}	(k)	92.9	92.9
R_{DC2}	(k)	7.0	7.0
R_{DW}	(k)	132.3	132.3
R_{LL+IM}	(k)	96.0	96.0
R_{TOTAL}	(k)	328.2	328.2



PERMANENT BRACING DETAILS FOR IL45 BEAMS

• FABRICATOR SHALL LOCATE TO MISS STRANDS WITHIN PERMISSIBLE TOLERANCES.

•• ALTERNATE MC12X35 CHANNELS ARE PERMITTED TO FACILITATE MATERIAL ACQUISITION.

FRAMING PLAN

NOTES:

1. ALL MATERIAL FOR BRACING SHALL BE HOT DIP GALVANIZED ACCORDING TO AASHTO M111 UNLESS OTHERWISE NOTED.
2. TWO HARDENED WASHERS ARE REQUIRED FOR EACH SET OF OVERSIZED HOLES.
3. ALL HOLES SHALL BE 15/16 ″ Ø UNLESS OTHERWISE NOTED.
4. 5/16 ″ X 3″ X 3″ PLATE WASHERS ARE REQUIRED OVER ALL SLOTTED HOLES.
5. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO AASHTO M232.
6. BRACING SHALL BE INSTALLED AS BEAMS ARE ERECTED AND TIGHTENED AS SOON AS POSSIBLE DURING ERECTION.
7. PERMANENT BRACING SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF FURNISHING PRECAST PRESTRESSED CONCRETE IL45-2438 BEAMS.
8. BEAMS 5-12 ARE INCLUDED IN THIS CONTRACT. BEAMS 1-4 AND 13-16 ARE INCLUDED IN CONTRACT I-18-4373.

I: NON-COMPOSITE MOMENT OF INERTIA OF BEAM SECTION (in^4).
I′: COMPOSITE MOMENT OF INERTIA OF BEAM SECTION (in^4).
S_b: NON-COMPOSITE SECTION MODULUS FOR THE BOTTOM FIBER OF THE PRESTRESSED BEAM (in^3).
S_b': COMPOSITE SECTION MODULUS FOR THE BOTTOM FIBER OF THE PRESTRESSED BEAM (in^3).
S_t: NON-COMPOSITE SECTION MODULUS FOR THE TOP FIBER OF THE PRESTRESSED BEAM (in^3).
S_t': COMPOSITE SECTION MODULUS FOR THE TOP FIBER OF THE PRESTRESSED BEAM (in^3).
DC1: UN-FACTORED NON-COMPOSITE DEAD LOAD (kips/ft).
M_{DC1}: UN-FACTORED MOMENT DUE TO NON-COMPOSITE DEAD LOAD (kip-ft).
DC2: UN-FACTORED LONG-TERM COMPOSITE (SUPERIMPOSED EXCLUDING FUTURE WEARING SURFACE) DEAD LOAD (kips/ft).
M_{DC2}: UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED EXCLUDING FUTURE WEARING SURFACE) DEAD LOAD (kip-ft).
DW: UN-FACTORED LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (kips/ft).
M_{DW}: UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (kip-ft).
M_{LL+IM}: UN-FACTORED LIVE LOAD MOMENT PLUS DYNAMIC LOAD ALLOWANCE (IMPACT) (kip-ft).

DRAWN BY JNP DATE 02/09/2018
CHECKED BY MDS DATE 02/09/2018

Tran Systems

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

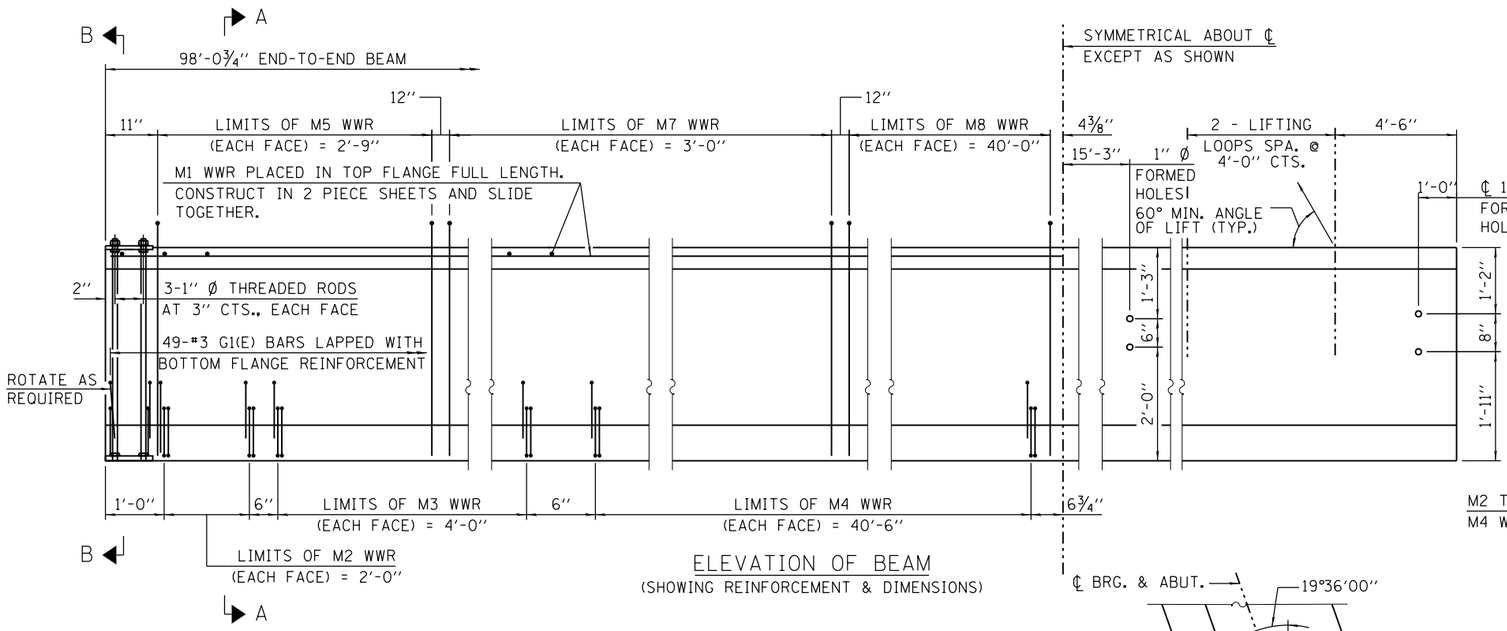
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

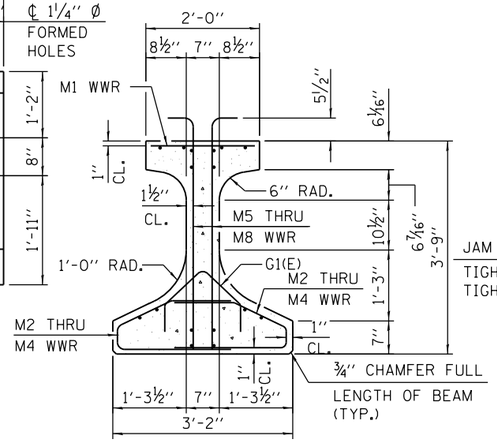
I-94 OVER W. FORK CHICAGO RIVER (BNS 347 & 348) - FRAMING PLAN

SHT NO. SA-4

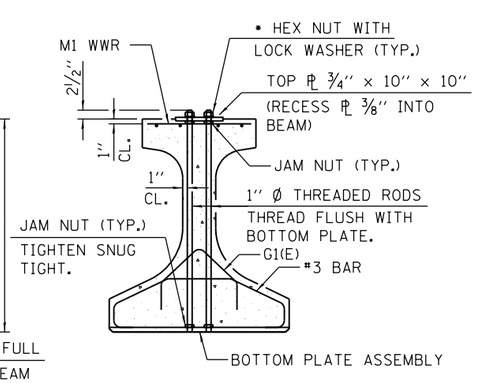
DRAWING NO. 58 OF 66



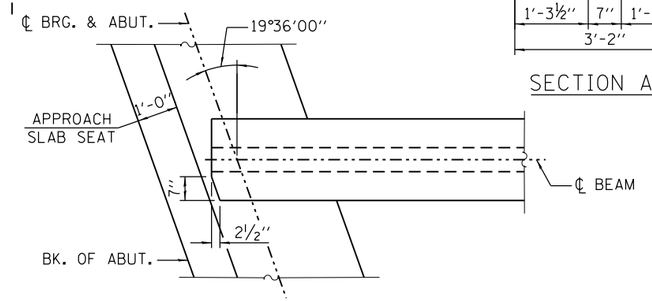
ELEVATION OF BEAM
(SHOWING REINFORCEMENT & DIMENSIONS)



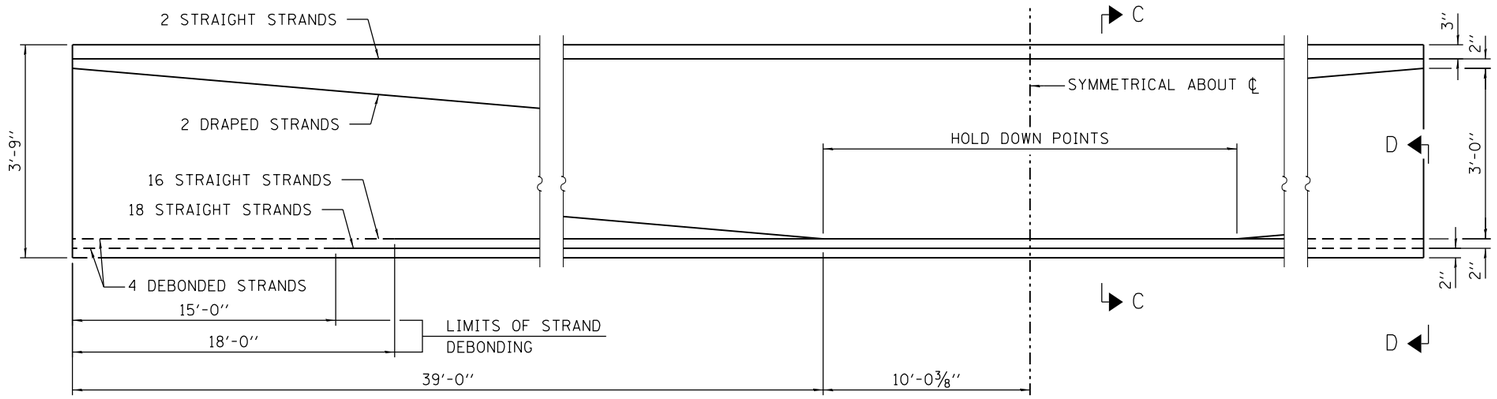
SECTION A-A



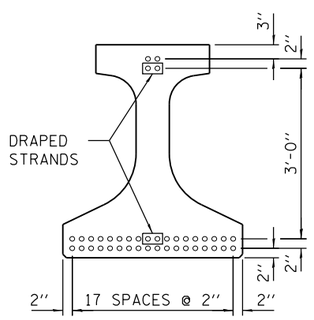
SECTION B-B
•ONLY TIGHTEN SUFFICIENTLY TO
COMPRESS LOCK WASHERS



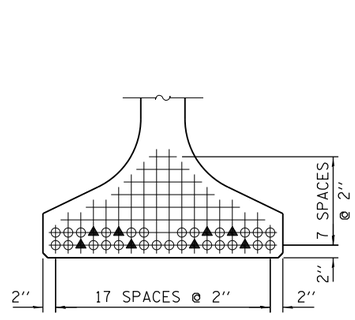
TOP FLANGE CLIP



ELEVATION OF BEAM
(SHOWING PRESTRESSING STEEL)



SECTION C-C
(38-0.6" Ø 270 KSI STRANDS)



VIEW D-D

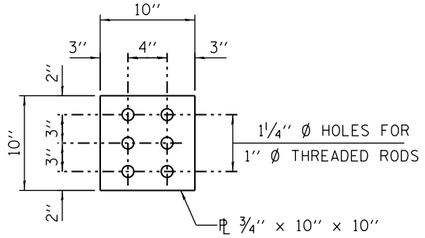
○ FULLY BONDED STRAND

▲ PARTIALLY DEBONDED STRAND

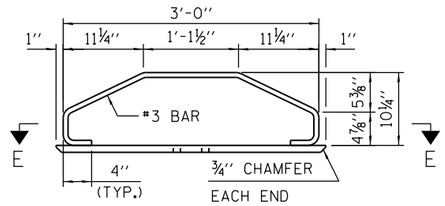
NOTE:

SEE SHEET 60 OF 66 FOR ADDITIONAL
DETAILS AND BILL OF MATERIAL.

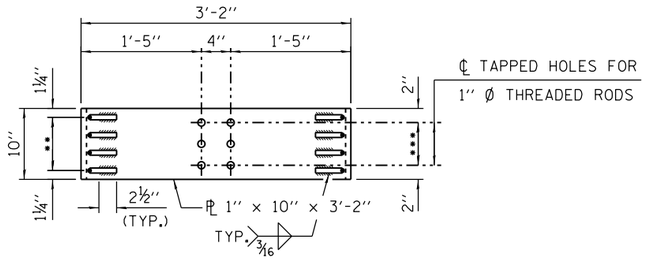
DRAWN BY MJR DATE 02/09/2018 CHECKED BY MDS DATE 02/09/2018	Tran Systems	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. DATE DESCRIPTION
CONTRACT NO. I-18-4372		SHT NO. SA-5	
I-94 OVER W. FORK CHICAGO RIVER (BNS 347 & 348) - 45" PPC IL-BEAM DETAILS 1		DRAWING NO. 59 OF 66	



PLAN - TOP PLATE



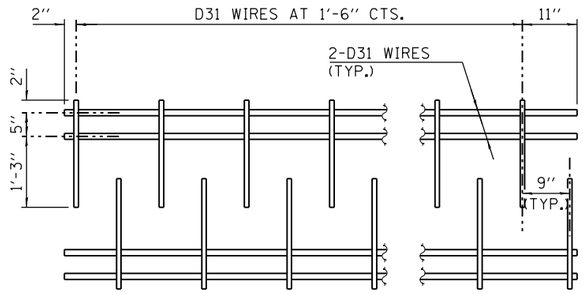
ELEVATION - BOTTOM PLATE ASSEMBLY



SECTION E-E

•• 3 SPACES AT 2½'' = 7½''

••• 2 SPACES AT 3'' = 6''



M1 WWR DETAIL

WHEN MULTIPLE SHEETS OF M1 WWR ARE REQUIRED ALONG THE BEAM LENGTH, #5(E) BARS (5'-0'' LONG) SHALL BE USED TO SPLICE THE LONGITUDINAL D31 WIRES TOGETHER (MIN. LAP 2'-2'').

NOTES

INSERTS FOR ¾'' Ø THREADED DOWEL RODS, WHEN SPECIFIED, ARE TO BE TWO STRUT, FERRULE TYPE FOR INTERIOR BEAMS AND SINGLE FERRULE, FLARED LOOP TYPE FOR EXTERIOR BEAMS.

PRESTRESSING STEEL SHALL BE UNCOATED HIGH STRENGTH, LOW RELAXATION 7-WIRE STRAND, GRADE 270. THE NOMINAL DIAMETER FOR BEAM STRANDS SHALL BE 0.6'' AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.217 SQ. IN. THE NOMINAL DIAMETER FOR LIFTING LOOPS SHALL BE ½'' AND THE NOMINAL CROSS SECTIONAL AREA SHALL BE 0.153 SQ. IN.

THE BEAMS SHALL HAVE A FINAL CONCRETE COMPRESSIVE STRENGTH, f'c, OF 8500 PSI AND A RELEASE CONCRETE COMPRESSIVE STRENGTH, f'ci, OF 7000 PSI.

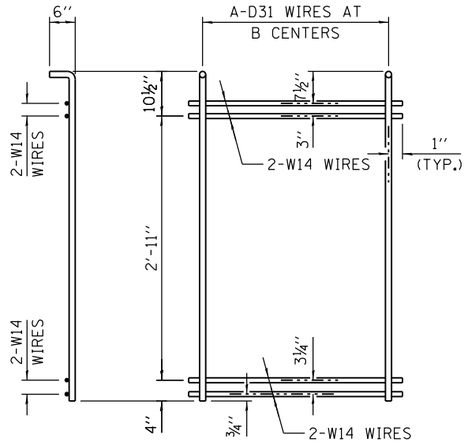
A MINIMUM 2½'' Ø LIFTING PIN SHALL BE USED TO ENGAGE THE LIFTING LOOPS DURING HANDLING. THE TOP AND BOTTOM PLATES SHALL BE AASHTO M270 GRADE 50.

THE TOP PLATES AND BOTTOM PLATE ASSEMBLIES SHALL BE GALVANIZED ACCORDING TO AASHTO M111. THE THREADED RODS, NUTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO AASHTO M232.

THREADED RODS SHALL BE ASTM F 1554 GRADE 55.

BEAMS SHALL NOT BE RELEASED FROM THE FABRICATOR UNTIL THEY HAVE ATTAINED 45 DAYS OF AGE OR OLDER.

WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A884 WITH A CLASS A, TYPE 1 EPOXY COATING.

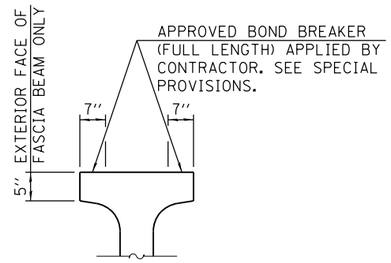


M5 THRU M8 WWR DETAIL

(SEE TABLE OF DIMENSIONS)

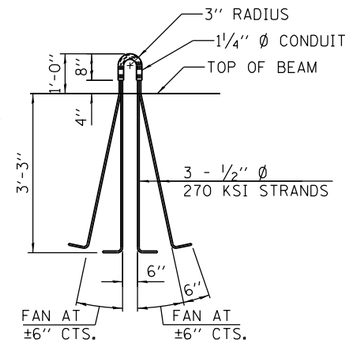
TABLE OF DIMENSIONS

WWR	A	B
M2	9	3''
M3	9	6''
M4	28	1'-6''
M5	12	3''
M6	0	6''
M7	4	1'-0''
M8	21	2'-0''

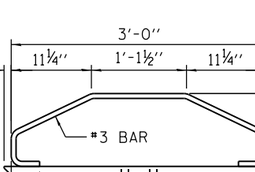


SECTION THRU TOP FLANGE

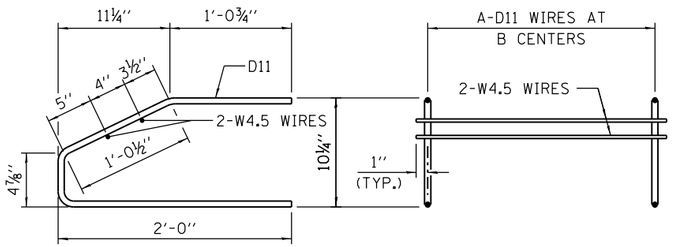
(SHOWING LIMITS OF BOND BREAKER)



LIFTING LOOP DETAIL



BAR G1(E)

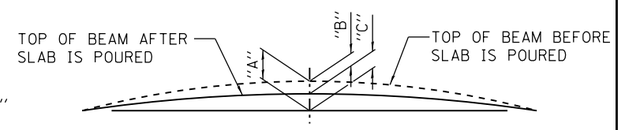


M2 THRU M4 WWR DETAIL

(SEE TABLE OF DIMENSIONS)

- ''A'' = PRESTRESS CAMBER
- ''B'' = DEAD LOAD DEFLECTION
- ''C'' = RESIDUAL CAMBER
- ROUND OFF TO THE NEAREST ⅛''

A	B	C
3⅝''	3⅜''	¼''



CAMBER AND DEFLECTION DIAGRAM

BILL OF MATERIAL

ITEM	UNIT	TOTAL
FURNISHING PRECAST PRESTRESSED CONCRETE IL45-2438 BEAMS	FT.	785

DRAWN BY MJR DATE 02/09/2018

CHECKED BY MDS DATE 02/09/2018

TranSystems

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

I-94 OVER W. FORK CHICAGO RIVER
(BNS 347 & 348) - 45'' PPC IL-BEAM DETAILS 2

SHT NO. SA-6

DRAWING NO. 60 OF 66

BENCHMARK: CUT SQUARE ON NORTHWEST CORNER OF BRIDGE PARAPET ON BN 354. EL. 658.36.

EXISTING STRUCTURE DESCRIPTION: TOLLWAY BRIDGE NOS. 353 & 354 (IDOT STRUCTURE NOS. 016-9735 & 016-9736) CARRYING EDENS SPUR (I-94) OVER MIDDLE FORK NORTH BRANCH CHICAGO RIVER WERE BUILT UNDER CONTRACT T-11B IN 1957. THE SUPERSTRUCTURE CONSISTS OF A SINGLE SPAN PRECAST PRESTRESSED CONCRETE (PPC) I-BEAMS AND A 7½" REINFORCED CONCRETE DECK WITH 1½" CONCRETE OVERLAY. THE SUBSTRUCTURE CONSISTS OF CLOSED ABUTMENTS SUPPORTED ON METAL SHELL PILES. THE STRUCTURE LENGTH IS 64'-3½" BACK TO BACK OF ABUTMENTS AND THE WIDTH IS 61'-2" OUT TO OUT FOR EACH STRUCTURE.

EXISTING STRUCTURES ARE TO BE REMOVED AND REPLACED. TRAFFIC TO BE MAINTAINED USING STAGED CONSTRUCTION.

PROPOSED STRUCTURE DESCRIPTION: THE SUPERSTRUCTURE CONSISTS OF A SINGLE SPAN 45" PPC IL-BEAMS AND AN 8" CONCRETE DECK. THE SUBSTRUCTURE CONSISTS OF INTEGRAL ABUTMENTS SUPPORTED ON PILES. THE STRUCTURE LENGTH IS 95'-7⅝" BACK TO BACK OF ABUTMENTS AND THE WIDTH IS 57'-8½" OUT-TO-OUT FOR EACH STRUCTURE.

SALVAGE: NONE

HIGHWAY CLASSIFICATION

BN 353	BN 354
EB EDENS SPUR (I-94)	WB EDENS SPUR (I-94)
FUNCTIONAL CLASS: INTERSTATE	FUNCTIONAL CLASS: INTERSTATE
ADT: 21,183 (2016); 28,070 (2040)	ADT: 21,613 (2016); 28,640 (2040)
ADTT: 1,483 (2016); 1,965 (2040)	ADTT: 1,513 (2016); 2,005 (2040)
DHV: 2,118 (2016); 2,807 (2040)	DHV: 2,161 (2016); 2,864 (2040)
DESIGN SPEED: 60 M.P.H.	DESIGN SPEED: 60 M.P.H.
POSTED SPEED: 55 M.P.H.	POSTED SPEED: 55 M.P.H.
ONE-WAY TRAFFIC	ONE-WAY TRAFFIC
DIRECTIONAL DISTRIBUTION: N/A	DIRECTIONAL DISTRIBUTION: N/A

DESIGN SPECIFICATIONS

2017 AASHTO LRFD DESIGN SPECIFICATIONS, 8TH EDITION

ILLINOIS STATE TOLL HIGHWAY AUTHORITY STRUCTURE DESIGN MANUAL, MARCH 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012

ILLINOIS STATE TOLL HIGHWAY AUTHORITY GEOTECHNICAL MANUAL, MARCH 2017

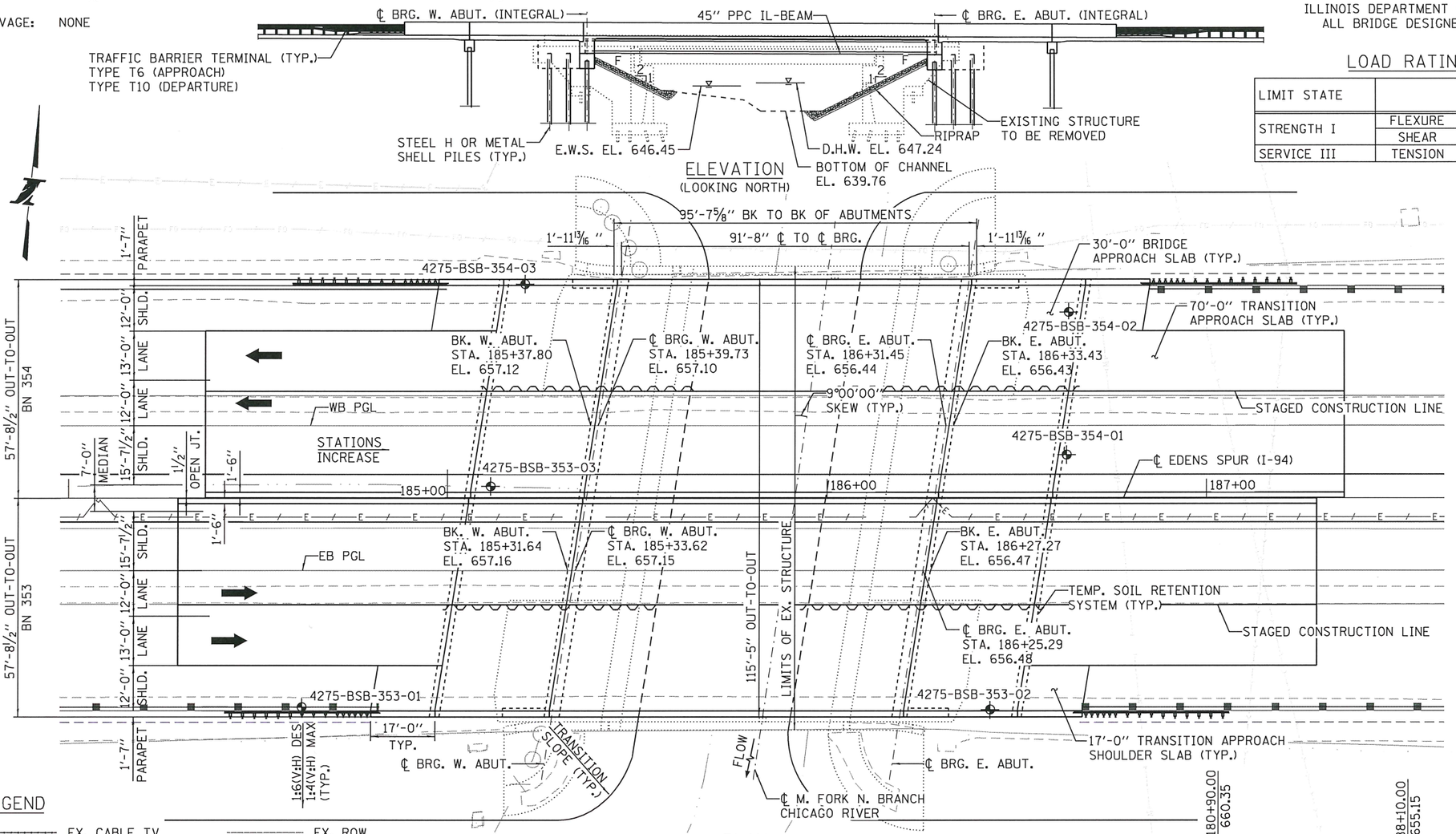
ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGNERS MEMORANDUMS

MATTHEW D. SANTEFORD 081-007244 LICENSED STRUCTURAL ENGINEER OF STATE OF ILLINOIS 02-09-2018

MATTHEW D. SANTEFORD, P.E., S.E.
NO. 081-007244
EXP. DATE 11/30/2018

LOAD RATINGS (HL-93)

LIMIT STATE		DESIGN LOAD RATING	
		INVENTORY	OPERATING
STRENGTH I	FLEXURE	1.72	2.23
	SHEAR	1.94	2.54
SERVICE III	TENSION	1.66	N/A



LEGEND

- EX. CABLE TV
- EX. ELECTRIC
- EX. FIBER OPTIC
- EX. GAS
- EX. SANITARY SEWER
- EX. STORM SEWER
- EX. TELEPHONE
- EX. WATER
- EX. ROW
- EX. EASEMENT
- EX. FENCE
- SOIL BORING LOCATION

SEISMIC DATA

SEISMIC PERFORMANCE ZONE (SPZ) = 1
DESIGN SPECTRAL ACCELERATION AT 1.0 SEC. (S_{D1}) = 8.0
DESIGN SPECTRAL ACCELERATION AT 0.2 SEC. (S_{DS}) = 13.5
SOIL SITE CLASS = D

LOADING HL-93 + IL-120

ALLOW 50 PSF FOR FUTURE WEARING SURFACE

LIVE LOAD DEFLECTION

△ LL + I <= SPAN LENGTH/800

CONSTRUCTION SPECIFICATIONS

TOLLWAY SUPPLEMENT SPECIFICATIONS TO THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MARCH 2017

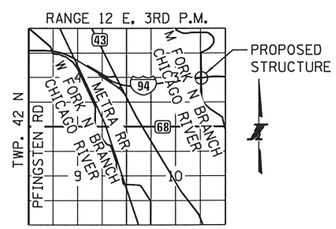
IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED APRIL 1, 2016

IDOT SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JANUARY 1, 2018

IDOT GUIDE BRIDGE SPECIAL PROVISIONS (GBSP)

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 PSI (CLASS SI)
f'c = 4,000 PSI (CLASS BS, HIGH PERFORMANCE CONCRETE)
fy = 60,000 PSI (REINFORCEMENT)
fy = 50,000 PSI (M270 GRADE 50)
PRECAST PRESTRESSED UNITS
f'c = 8,500 PSI (CLASS PS)
f'ci = 7,000 PSI (CLASS PS)
fpu = 270,000 PSI (0.6" Ø LOW LAX. STRANDS)
fpBT = 202,300 PSI (0.75 fpu)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
EDENS SPUR TOLLWAY (I-94) OVER MIDDLE FORK NORTH BRANCH CHICAGO RIVER
COOK COUNTY
STATION 185+91.57
BRIDGE NOS. 353 & 354

DRAWN BY TLR	DATE 02/09/2018		
CHECKED BY MDS	DATE 02/09/2018		

Tran Systems

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372	SHT NO. SB-1
I-94 OVER M. FORK CHICAGO RIVER (BNS 353 & 354) - GENERAL PLAN & ELEVATION	DRAWING NO. 61 OF 66

GENERAL NOTES

REINFORCEMENT BARS

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

REINFORCEMENT BAR BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.

REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A706), GRADE 60, DEFORMED BARS.

REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.

BARS NOTED THUS, 3X2-#5 INDICATES 3 LINES OF BARS WITH 2 LENGTHS OF BARS PER LINE.

PRECAST CONCRETE

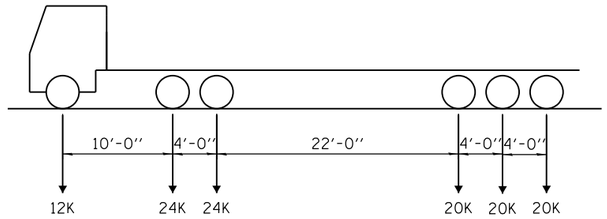
THE FABRICATOR, THE CONTRACTOR AND THE BEAM TRANSPORTATION COMPANY SHALL PROVIDE ADEQUATE BRACING AND SUPPORT FOR THE PPC BEAMS DURING HANDLING, TRANSPORTING, STORING AND ERECTING TO ENSURE THE SAFETY OF THE PERSONNEL ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT.

THE BEAMS BEING FABRICATED IN THIS CONTRACT ARE FOR USE IN THE FUTURE CONTRACT I-18-4373. THE FABRICATOR SHALL COORDINATE ANY NECESSARY STORAGE AND DELIVERY OF BEAMS WITH THE CONTRACTOR FOR CONTRACT I-18-4373.

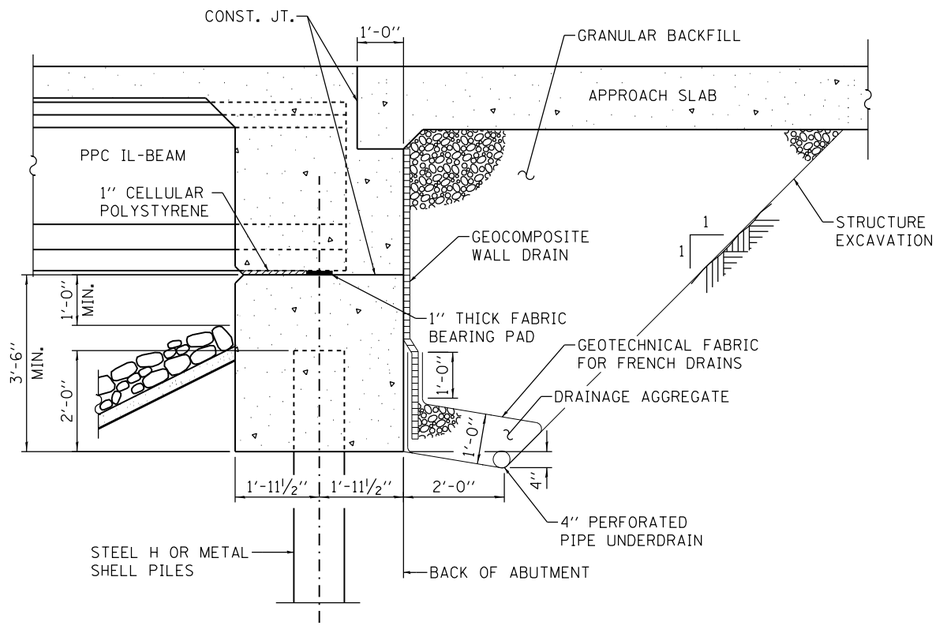
INDEX OF SHEETS

ABBREVIATIONS

P.G.L.	PROFILE GRADE LINE
E.B.L.	EAST BOUND LANES
W.B.L.	WEST BOUND LANES
N. ABUT.	NORTH ABUTMENT
S. ABUT.	SOUTH ABUTMENT
E.F.	EACH FACE
F.F.	FRONT FACE
B.F.	BACK FACE
I.F.	INSIDE FACE
O.F.	OUTSIDE FACE
P.J.F.	PREFORMED JOINT FILLER
P.J.S.	PREFORMED JOINT SEALER
BK/	BACK OF
B/	BOTTOM OF
T/	TOP OF
PROP.	PROPOSED
IN.	INCHES
U.N.O.	UNLESS NOTED OTHERWISE



IL-120 DESIGN TRUCK



SECTION THRU INTEGRAL ABUTMENT

(HORIZ. DIM. @ RT. L'S)

TOTAL BILL OF MATERIAL

PAY ITEM NUMBER	DESCRIPTION	UNIT	SUPER	SUB	TOTAL	RECORD QUANTITY
JI504050	FURNISHING PRECAST PRESTRESSED CONCRETE IL45-2438 BEAMS	FOOT	744		744	

DRAWN BY MJR DATE 02/09/2018
CHECKED BY TLR DATE 02/09/2018

TranSystems

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS

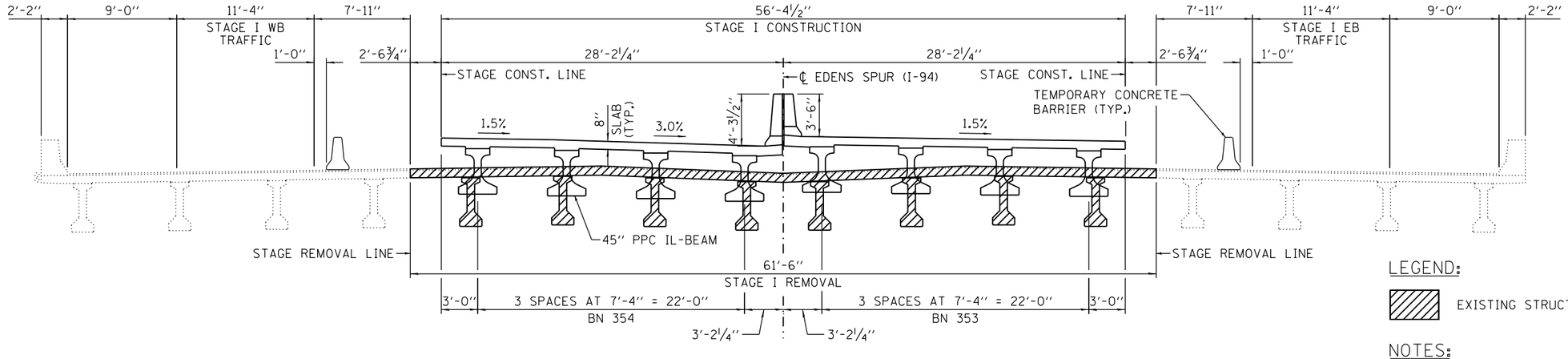
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

I-94 OVER M. FORK CHICAGO RIVER
(BNS 353 & 354) - GENERAL NOTES & DETAILS

SHT NO. SB-2

DRAWING NO. 62 OF 66



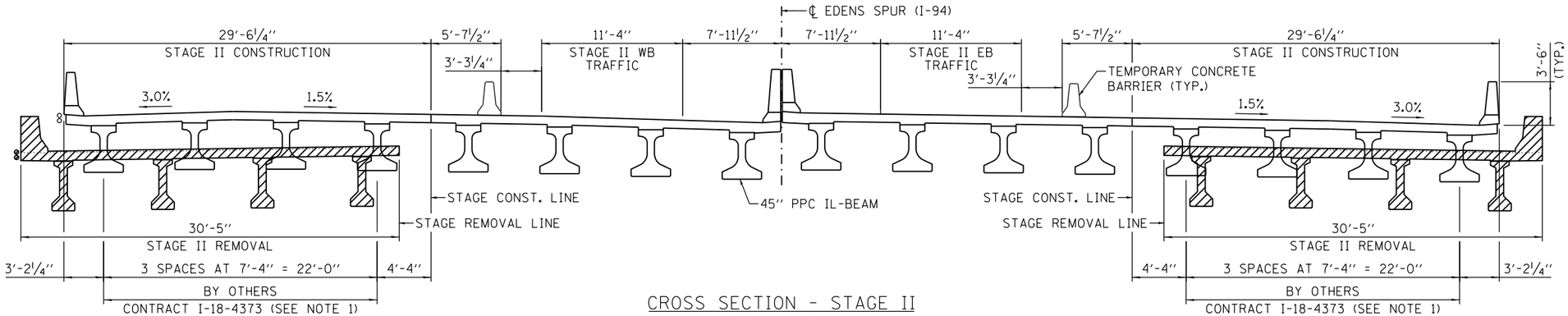
CROSS SECTION - STAGE I
(LOOKING EAST)

LEGEND:

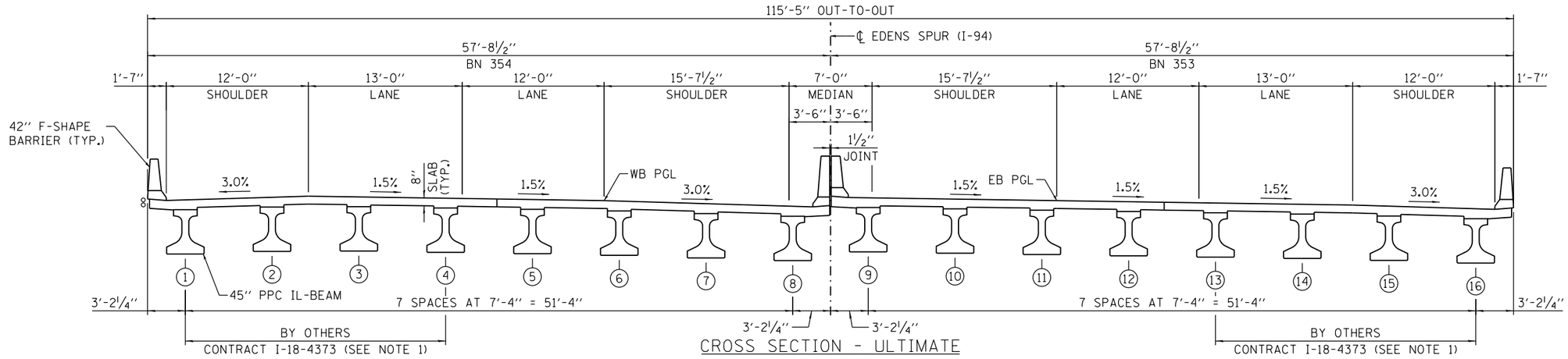
EXISTING STRUCTURE REMOVAL

NOTES:

1. BEAMS 5-12 ARE INCLUDED WITH THIS CONTRACT. BEAMS 1-4 AND 13-16 ARE INCLUDED IN CONTRACT I-18-4373.



CROSS SECTION - STAGE II
(LOOKING EAST)



CROSS SECTION - ULTIMATE
(LOOKING EAST)

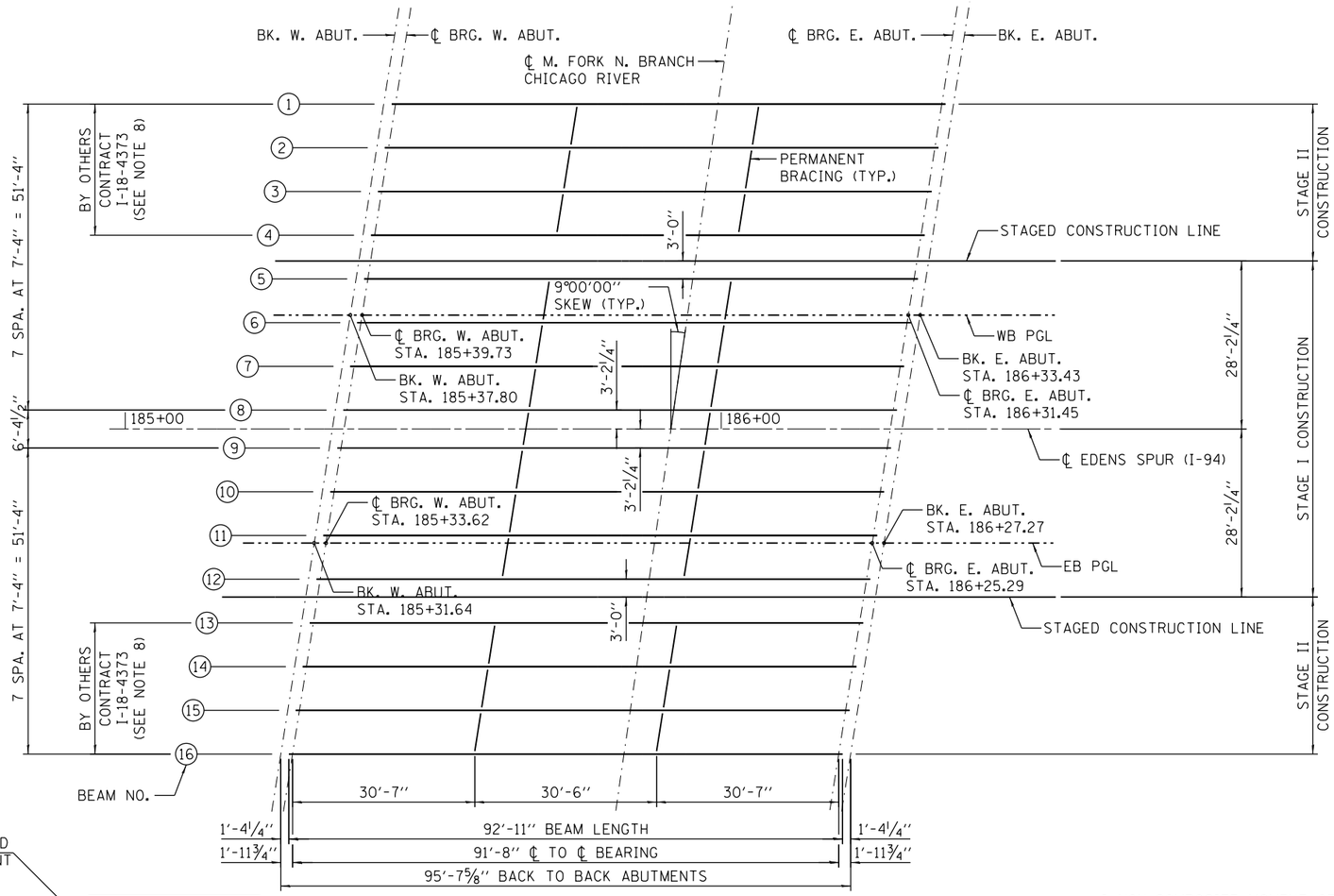
DRAWN BY JNP	DATE 02/09/2018	Tran Systems	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515
CHECKED BY MDS	DATE 02/09/2018		

REVISIONS		
NO.	DATE	DESCRIPTION

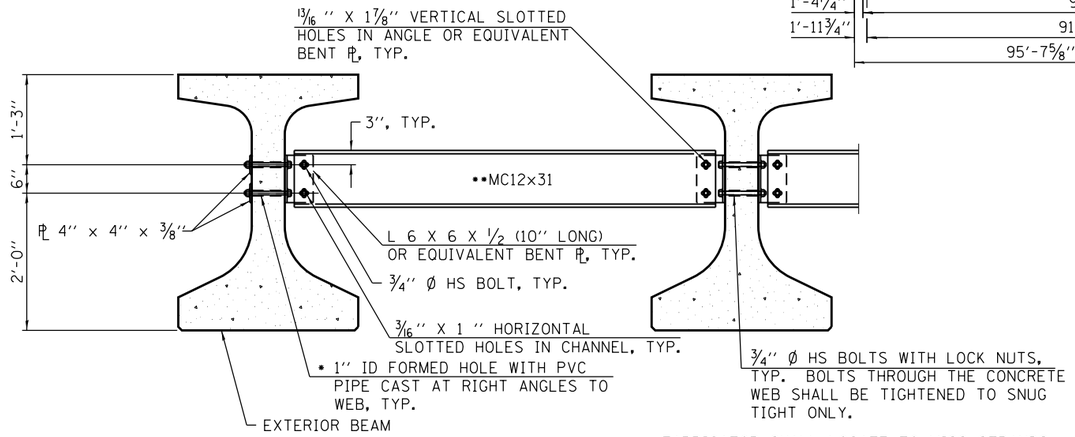
CONTRACT NO. I-18-4372	SHT NO. SB-3
I-94 OVER M. FORK CHICAGO RIVER (BNS 353 & 354) - CONSTRUCTION STAGING	DRAWING NO. 63 OF 66

NOTES:

1. ALL MATERIAL FOR BRACING SHALL BE HOT DIP GALVANIZED ACCORDING TO AASHTO M111 UNLESS OTHERWISE NOTED.
2. TWO HARDENED WASHERS ARE REQUIRED FOR EACH SET OF OVERSIZED HOLES.
3. ALL HOLES SHALL BE 15/16 '' Ø UNLESS OTHERWISE NOTED.
4. 5/16 '' X 3'' X 3'' PLATE WASHERS ARE REQUIRED OVER ALL SLOTTED HOLES.
5. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO AASHTO M232.
6. BRACING SHALL BE INSTALLED AS BEAMS ARE ERECTED AND TIGHTENED AS SOON AS POSSIBLE DURING ERECTION.
7. PERMANENT BRACING SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF FURNISHING PRECAST PRESTRESSED CONCRETE IL45-2438 BEAMS.
8. BEAMS 5-12 ARE INCLUDED IN THIS CONTRACT. BEAMS 1-4 AND 13-16 ARE INCLUDED IN CONTRACT I-18-4373.



FRAMING PLAN



PERMANENT BRACING DETAILS FOR IL45 BEAMS

- • FABRICATOR SHALL LOCATE TO MISS STRANDS WITHIN PERMISSIBLE TOLERANCES.
- •• ALTERNATE MC12X35 CHANNELS ARE PERMITTED TO FACILITATE MATERIAL ACQUISITION.

INTERIOR BEAM MOMENT TABLE

		0.5 SPAN
I	(in^4)	182,623
I'	(in^4)	542,150
S_b	(in^3)	10,045
S_b'	(in^3)	16,932
S_t	(in^3)	6,809
S_t'	(in^3)	23,592
DC1	(k/')	1.98
M_{DC1}	('k)	1883
DC2	(k/')	0.14
M_{DC2}	('k)	150
DW	(k/')	0.39
M_{DW}	('k)	366
M_{LL+IM}	('k)	1,590

INTERIOR BEAM REACTION TABLE

		W. ABUT.	E. ABUT.
R_{DC1}	(k)	88.6	88.6
R_{DC2}	(k)	6.5	6.5
R_{DW}	(k)	125.3	125.3
R_{LL+IM}	(k)	94.0	94.0
R_{TOTAL}	(k)	314.4	314.4

- I: NON-COMPOSITE MOMENT OF INERTIA OF BEAM SECTION (in^4).
- I': COMPOSITE MOMENT OF INERTIA OF BEAM SECTION (in^4).
- S_b: NON-COMPOSITE SECTION MODULUS FOR THE BOTTOM FIBER OF THE PRESTRESSED BEAM (in^3).
- S_b': COMPOSITE SECTION MODULUS FOR THE BOTTOM FIBER OF THE PRESTRESSED BEAM (in^3).
- S_t: NON-COMPOSITE SECTION MODULUS FOR THE TOP FIBER OF THE PRESTRESSED BEAM (in^3).
- S_t': COMPOSITE SECTION MODULUS FOR THE TOP FIBER OF THE PRESTRESSED BEAM (in^3).
- DC1: UN-FACTORED NON-COMPOSITE DEAD LOAD (kips/ft).
- M_{DC1}: UN-FACTORED MOMENT DUE TO NON-COMPOSITE DEAD LOAD (kip-ft).
- DC2: UN-FACTORED LONG-TERM COMPOSITE (SUPERIMPOSED EXCLUDING FUTURE WEARING SURFACE) DEAD LOAD (kips/ft).
- M_{DC2}: UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED EXCLUDING FUTURE WEARING SURFACE) DEAD LOAD (kip-ft).
- DW: UN-FACTORED LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (kips/ft).
- M_{DW}: UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (kip-ft).
- M_{LL+IM}: UN-FACTORED LIVE LOAD MOMENT PLUS DYNAMIC LOAD ALLOWANCE (IMPACT) (kip-ft).

DRAWN BY JNP DATE 02/09/2018
CHECKED BY MDS DATE 02/09/2018

Tran Systems

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

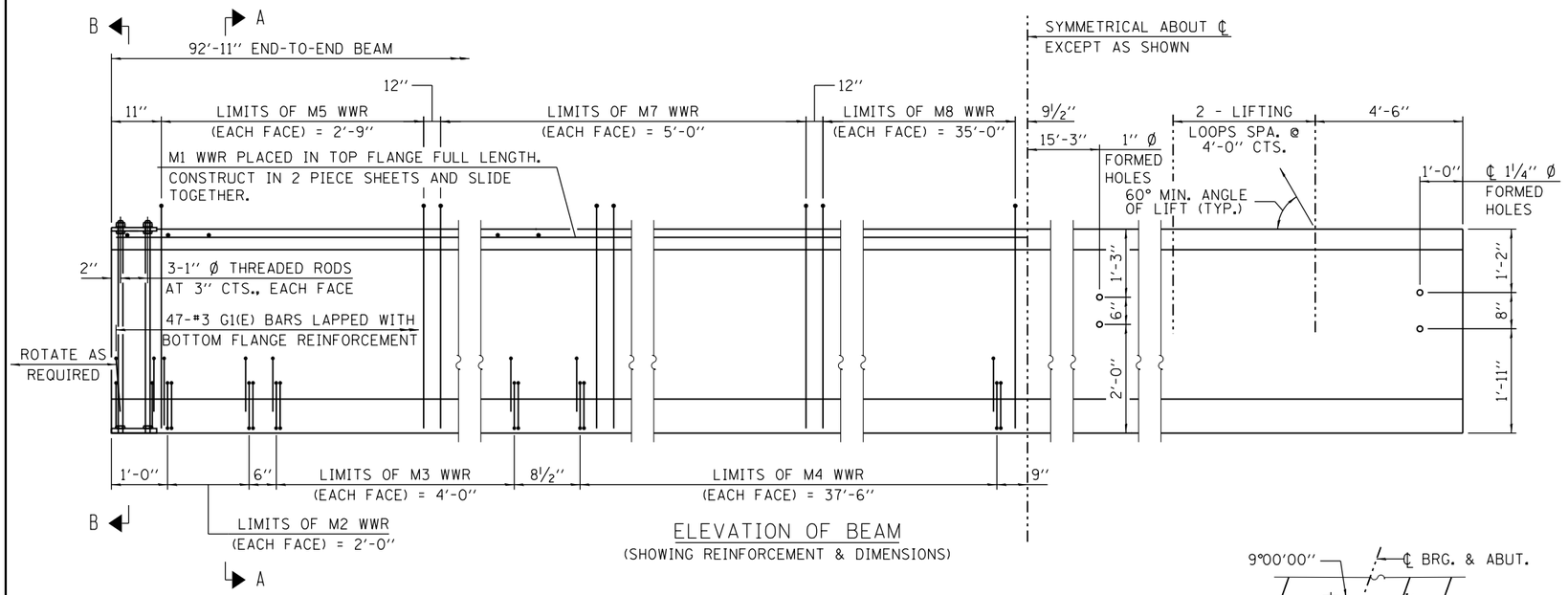
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

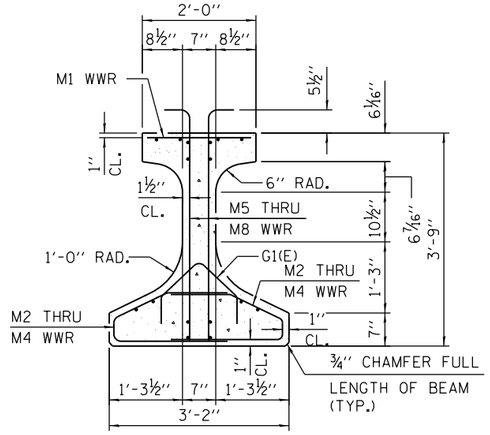
I-94 OVER M. FORK CHICAGO RIVER (BNS 353 & 354) - FRAMING PLAN

SHT NO. SB-4

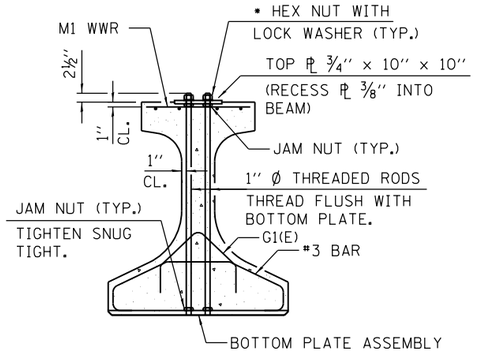
DRAWING NO. 64 OF 66



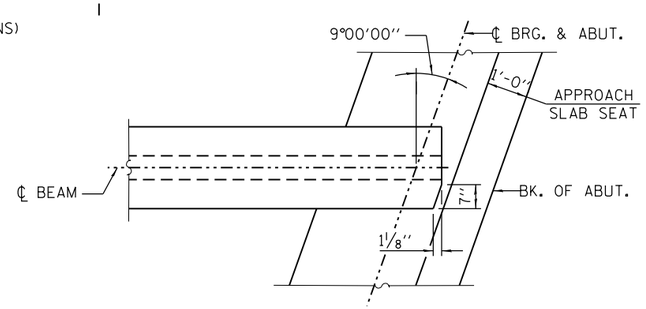
ELEVATION OF BEAM
(SHOWING REINFORCEMENT & DIMENSIONS)



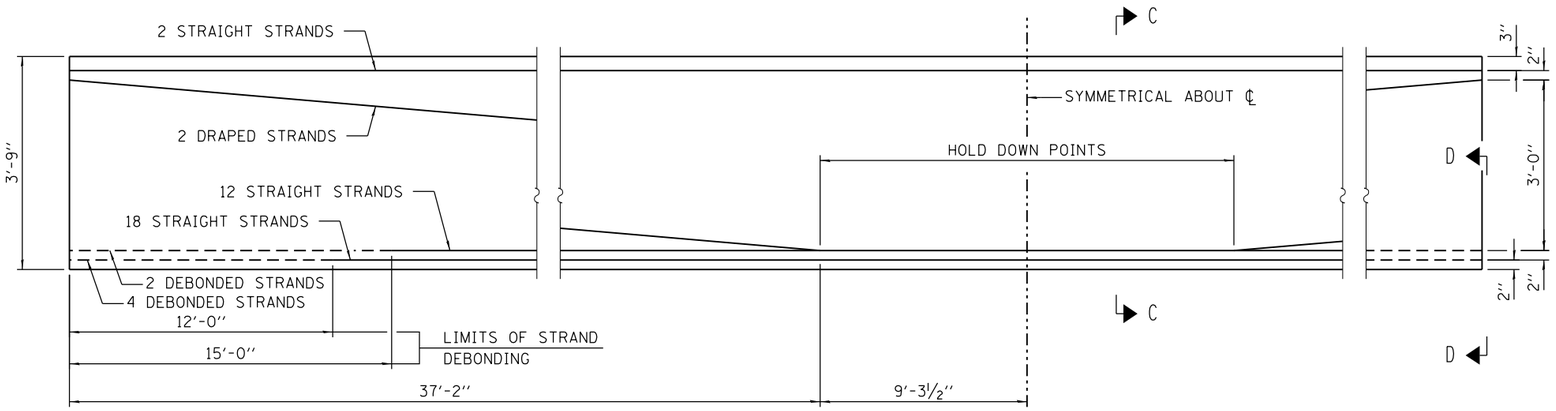
SECTION A-A



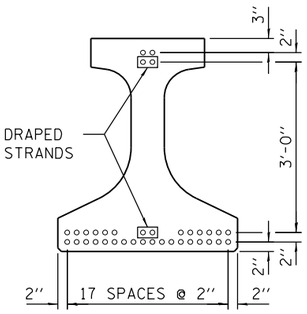
SECTION B-B
•ONLY TIGHTEN SUFFICIENTLY TO COMPRESS LOCK WASHERS



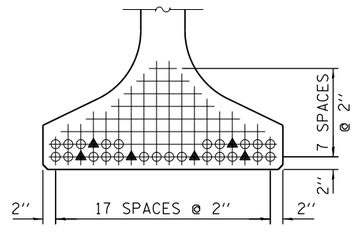
TOP FLANGE CLIP



ELEVATION OF BEAM
(SHOWING PRESTRESSING STEEL)



SECTION C-C
(34-0.6" Ø 270 KSI STRANDS)

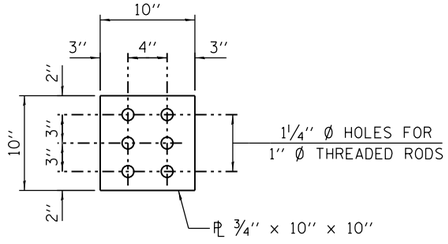


VIEW D-D

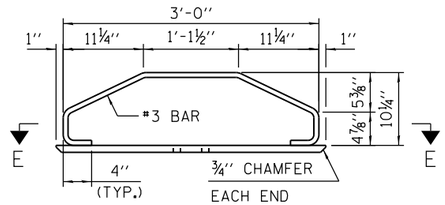
○ FULLY BONDED STRAND
▲ PARTIALLY DEBONDED STRAND

NOTE:
SEE SHEET 66 OF 66 FOR ADDITIONAL DETAILS AND BILL OF MATERIAL.

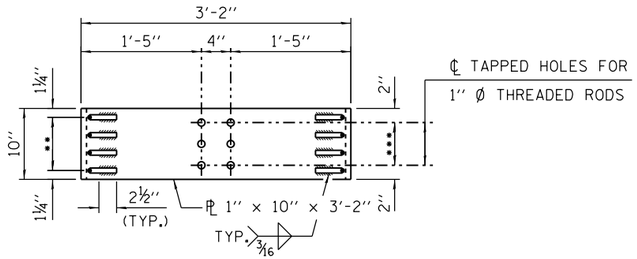
DRAWN BY MJR DATE 02/09/2018 CHECKED BY MDS DATE 02/09/2018	TranSystems	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. DATE DESCRIPTION	CONTRACT NO. I-18-4372 I-94 OVER M. FORK CHICAGO RIVER (BNS 353 & 354) - 45" PPC IL-BEAM DETAILS 1	SHT NO. SB-5 DRAWING NO. 65 OF 66



PLAN - TOP PLATE



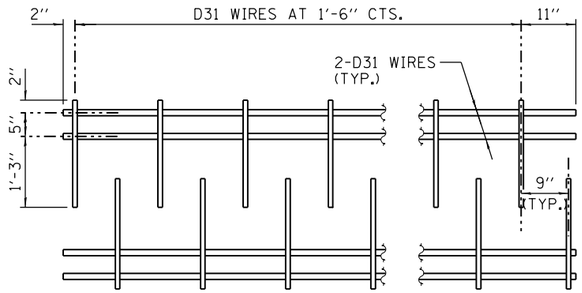
ELEVATION - BOTTOM PLATE ASSEMBLY



SECTION E-E

•• 3 SPACES AT 2½'' = 7½''

••• 2 SPACES AT 3'' = 6''



M1 WWR DETAIL

WHEN MULTIPLE SHEETS OF M1 WWR ARE REQUIRED ALONG THE BEAM LENGTH, #5(E) BARS (5'-0'' LONG) SHALL BE USED TO SPLICE THE LONGITUDINAL D31 WIRES TOGETHER (MIN. LAP 2'-2'').

NOTES

INSERTS FOR ¾'' Ø THREADED DOWEL RODS, WHEN SPECIFIED, ARE TO BE TWO STRUT, FERRULE TYPE FOR INTERIOR BEAMS AND SINGLE FERRULE, FLARED LOOP TYPE FOR EXTERIOR BEAMS.

PRESTRESSING STEEL SHALL BE UNCOATED HIGH STRENGTH, LOW RELAXATION 7-WIRE STRAND, GRADE 270. THE NOMINAL DIAMETER FOR BEAM STRANDS SHALL BE 0.6'' AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.217 SQ. IN. THE NOMINAL DIAMETER FOR LIFTING LOOPS SHALL BE ½'' AND THE NOMINAL CROSS SECTIONAL AREA SHALL BE 0.153 SQ. IN.

THE BEAMS SHALL HAVE A FINAL CONCRETE COMPRESSIVE STRENGTH, f'c, OF 8500 PSI AND A RELEASE CONCRETE COMPRESSIVE STRENGTH, f'ci, OF 7000 PSI.

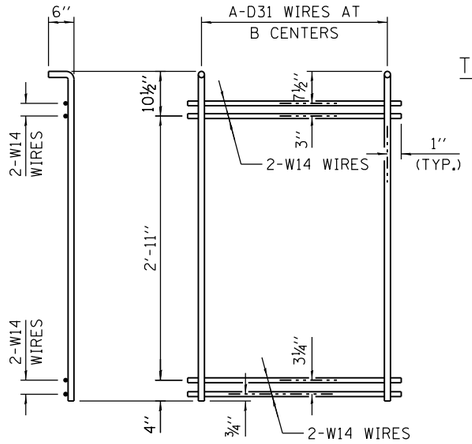
A MINIMUM 2½'' Ø LIFTING PIN SHALL BE USED TO ENGAGE THE LIFTING LOOPS DURING HANDLING. THE TOP AND BOTTOM PLATES SHALL BE AASHTO M270 GRADE 50.

THE TOP PLATES AND BOTTOM PLATE ASSEMBLIES SHALL BE GALVANIZED ACCORDING TO AASHTO M111. THE THREADED RODS, NUTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO AASHTO M232.

THREADED RODS SHALL BE ASTM F 1554 GRADE 55.

BEAMS SHALL NOT BE RELEASED FROM THE FABRICATOR UNTIL THEY HAVE ATTAINED 45 DAYS OF AGE OR OLDER.

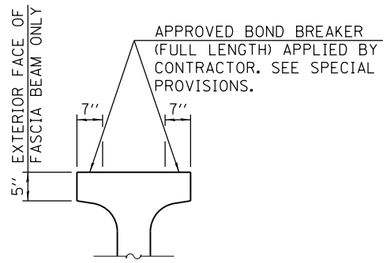
WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A884 WITH A CLASS A, TYPE 1 EPOXY COATING.



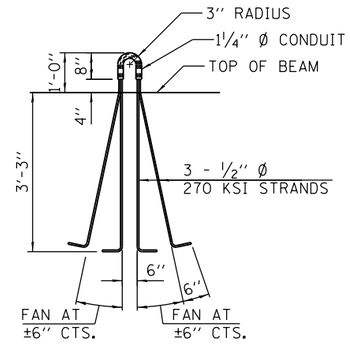
M5 THRU M8 WWR DETAIL
(SEE TABLE OF DIMENSIONS)

TABLE OF DIMENSIONS

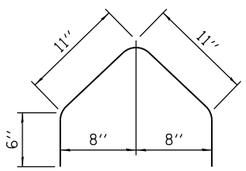
WWR	A	B
M2	9	3''
M3	9	6''
M4	26	1'-6''
M5	12	3''
M6	0	6''
M7	6	1'-0''
M8	36	2'-0''



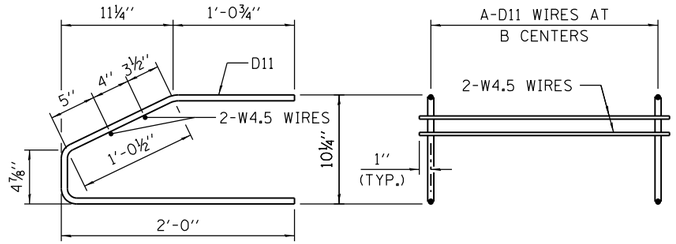
SECTION THRU TOP FLANGE
(SHOWING LIMITS OF BOND BREAKER)



LIFTING LOOP DETAIL



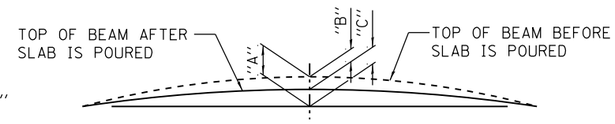
BAR G1(E)



M2 THRU M4 WWR DETAIL
(SEE TABLE OF DIMENSIONS)

- ''A'' = PRESTRESS CAMBER
- ''B'' = DEAD LOAD DEFLECTION
- ''C'' = RESIDUAL CAMBER
- ROUND OFF TO THE NEAREST ⅛''

A	B	C
2⅞''	2¾''	⅛''



CAMBER AND DEFLECTION DIAGRAM

BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
FURNISHING PRECAST PRESTRESSED CONCRETE IL45-2438 BEAMS	FT.	744

DRAWN BY MJR DATE 02/09/2018
CHECKED BY MDS DATE 02/09/2018

TranSystems

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS NO.	DATE	DESCRIPTION

CONTRACT NO. I-18-4372

I-94 OVER M. FORK CHICAGO RIVER
(BNS 353 & 354) - 45'' PPC IL-BEAM DETAILS 2

SHT NO. SB-6

DRAWING NO. 66 OF 66

ABV	ABOVE
A/C	ACCESS CONTROL
AC	ACRE
ADJ	ADJUST
AS	AERIAL SURVEYS
AGG	AGGREGATE
AH	AHEAD
APT	APARTMENT
ASPH	ASPHALT
AUX	AUXILIARY
AGS	AUXILIARY GAS VALVE (SERVICE)
AVE	AVENUE
AX	AXIS OF ROTATION
BK	BACK
B-B	BACK TO BACK
BKPL	BACKPLATE
B	BARN
BARR	BARRICADE
BGN	BEGIN
BM	BENCHMARK
BIND	BINDER
BIT	BITUMINOUS
BTM	BOTTOM
BLVD	BOULEVARD
BRK	BRICK
BBOX	BUFFALO BOX
BLDG	BUILDING
CIP	CAST IRON PIPE
CB	CATCH BASIN
C-C	CENTER TO CENTER
CL	CENTERLINE OR CLEARANCE
CL-E	CENTERLINE TO EDGE
CL-F	CENTERLINE TO FACE
CTS	CENTERS
CERT	CERTIFIED
CHSLD	CHISELED
CS	CITY STREET
CP	CLAY PIPE
CLSD	CLOSED
CLID	CLOSED LID
CT	COAT OR COURT
COMB	COMBINATION
C	COMMERCIAL BUILDING
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CONST	CONSTRUCT
CONTD	CONTINUED
CONT	CONTINUOUS
COR	CORNER
CORR	CORRUGATED
CMP	CORRUGATED METAL PIPE
CNTY	COUNTY
CH	COUNTY HIGHWAY
CSE	COURSE
XSECT	CROSS SECTION
m^3	CUBIC METER
mm^3	CUBIC MILLIMETER
CU YD	CUBIC YARD
CULV	CULVERT
C&G	CURB & GUTTER
D	DEGREE OF CURVE
DC	DEPRESSED CURVE
DET	DETECTOR
DIA	DIAMETER
DIST	DISTRICT
DOM	DOMESTIC
DBL	DOUBLE
DSEL	DOWNSTREAM ELEVATION
DSFL	DOWNSTREAM FLOWLINE
DR	DRAINAGE OR DRIVE
DI	DRAINAGE INLET OR DROP INLET
DRV	DRIVEWAY
DCT	DUCT
EA	EACH
EB	EASTBOUND
EOP	EDGE OF PAVEMENT
E-CL	EDGE TO CENTERLINE
E-E	EDGE TO EDGE
EL	ELEVATION
ENTR	ENTRANCE
EXC	EXCAVATION
EX	EXISTING
EXPWAY	EXPRESSWAY
E	EXTERNAL DISTANCE OF HORIZONTAL CURVE
E	OFFSET DISTANCE TO VERTICAL CURVE
F-F	FACE TO FACE
FA	FEDERAL AID
FAI	FEDERAL AID INTERSTATE
FAP	FEDERAL AID PRIMARY
FAS	FEDERAL AID SECONDARY
FAUS	FEDERAL AID URBAN SECONDARY
FP	FENCE POST
FE	FIELD ENTRANCE
FH	FIRE HYDRANT
FL	FLOW LINE
FB	FOOT BRIDGE
FDN	FOUNDATION
FR	FRAME
F&G	FRAME & GRATE
FRWAY	FREEWAY
GAL	GALLON
GALV	GALVANIZED
G	GARAGE
GM	GAS METER
GV	GAS VALVE
GRAN	GRANULAR
GR	GRATE
GRVL	GRAVEL
GND	GROUND
GUT	GUTTER
GP	GUY POLE
GW	GUY WIRE
HH	HANDHOLE
HATCH	HATCHING
HD	HEAD
HDW	HEADWALL
HDUTY	HEAVY DUTY
ha	HECTARE
HMA	HOT MIX ASPHALT
HWY	HIGHWAY
HORIZ	HORIZONTAL
HSE	HOUSE
IL	ILLINOIS
IMP	IMPROVEMENT
IN DIA	INCH DIAMETER
INL	INLET
INST	INSTALLATION
IDS	INTERSECTION DESIGN STUDY
INV	INVERT
IP	IRON PIPE
IR	IRON ROD
JT	JOINT
kg	KILOGRAM
km	KILOMETER
LS	LANDSCAPING
LN	LANE
LT	LEFT
LP	LIGHT POLE
LGT	LIGHTING
LF	LINEAL FEET OR LINEAR FEET
L	LITER OR CURVE LENGTH
LC	LONG CHORD
LNG	LONGITUDINAL
L SUM	LUMP SUM
MACH	MACHINE
MB	MAIL BOX
MH	MANHOLE
MATL	MATERIAL
MED	MEDIAN
m	METER
METH	METHOD
M	MID-ORDINATE
mm	MILLIMETER
mm DIA	MILLIMETER DIAMETER
MIX	MIXTURE
MBH	MOBILE HOME
MOD	MODIFIED
MFT	MOTOR FUEL TAX
N & BC	NAIL & BOTTLE CAP
N & C	NAIL & CAP
N & W	NAIL & WASHER
NOAA	NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION
NC	NORMAL CROWN
NB	NORTHBOUND
NE	NORTHEAST
NW	NORTHWEST
OLID	OPEN LID
PAT	PATTERN
PVD	PAVED
PVMT	PAVEMENT
PM	PAVEMENT MARKING
PED	PEDESTAL
PNT	POINT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION OF HORIZONTAL CURVE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
POT	POINT ON TANGENT
POLYETH	POLYETHYLENE
PCC	PORTLAND CEMENT CONCRETE
PP	POWER POLE OR PRINCIPAL POINT
PRM	PRIME
PE	PRIVATE ENTRANCE
PROF	PROFILE
PGL	PROFILE GRADELINE
PROJ	PROJECT
P.C.	PROPERTY CORNER
PL	PROPERTY LINE
PR	PROPOSED
R	RADIUS
RR	RAILROAD
RRS	RAILROAD SPIKE
RPS	REFERENCE POINT STAKE
REF	REFLECTIVE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REINF	REINFORCEMENT
REM	REMOVAL
RC	REMOVE CROWN
REP	REPLACEMENT
REST	RESTAURANT
RESURF	RESURFACING
RET	RETAINING
RT	RIGHT
ROW	RIGHT-OF-WAY
RD	ROAD
RDWY	ROADWAY
RTE	ROUTE
SAN	SANITARY
SANS	SANITARY SEWER
SEC	SECTION
SEED	SEEDING
SHAP	SHAPING
S	SHED
SH	SHEET
SHLD	SHOULDER
SW	SIDEWALK OR SOUTHWEST
SIG	SIGNAL
SOD	SODDING
SM	SOLID MEDIAN
SB	SOUTHBOUND
SE	SOUTHEAST
SPL	SPECIAL
SD	SPECIAL DITCH
SQ FT	SQUARE FEET
m^2	SQUARE METER
mm^2	SQUARE MILLIMETER
SQ YD	SQUARE YARD
STB	STABILIZED
STD	STANDARD
SBI	STATE BOND ISSUE
SR	STATE ROUTE
STA	STATION
SPBGR	STEEL PLATE BEAM GUARDRAIL
SS	STORM SEWER
STY	STORY
ST	STREET
STR	STRUCTURE
e	SUPERELEVATION RATE
S.E. RUN.	SUPERELEVATION RUNOFF LENGTH
SURF	SURFACE
SMK	SURVEY MARKER
T	TANGENT DISTANCE
T.R.	TANGENT RUNOUT DISTANCE
TEL	TELEPHONE
TB	TELEPHONE BOX
TP	TELEPHONE POLE
TEMP	TEMPORARY
TBM	TEMPORARY BENCH MARK
TD	TILE DRAIN
TBE	TO BE EXTENDED
TBR	TO BE REMOVED
TBS	TO BE SAVED
TWP	TOWNSHIP
TR	TOWNSHIP ROAD
TS	TRAFFIC SIGNAL
TSCB	TRAFFIC SIGNAL CONTROL BOX
TSC	TRAFFIC SYSTEMS CENTER
TRVS	TRANSVERSE
TRVL	TRAVEL
TRN	TURN
TY	TYPE
T-A	TYPE A
TYP	TYPICAL
UNDGND	UNDERGROUND
USGS	U.S. GEOLOGICAL SURVEY
USEL	UPSTREAM ELEVATION
USFL	UPSTREAM FLOWLINE
UTIL	UTILITY
VBOX	VALVE BOX
VV	VALVE VAULT
VLT	VAULT
VEH	VEHICLE
VP	VENT PIPE
VERT	VERTICAL
VC	VERTICAL CURVE
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
WM	WATER METER
WV	WATER VALVE
WMAIN	WATER MAIN
WB	WESTBOUND
WILDFL	WILDFLOWERS
W	WITH
WO	WITHOUT

Illinois Department of Transportation

PASSED January 1. 2011

Michael Brand

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1. 2011

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS
1-1-11	Updated abbreviations
	and symbols.
1-1-08	Updated abbreviations
	and symbols.

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 1 of 8)

STANDARD 000001–06

ADJUSTMENT ITEMS

	EX	PR
Structure To Be Adjusted		ADJ
Structure To Be Cleaned		C
Main Structure To Be Filled		FM
Structure To Be Filled		F
Structure To Be Filled Special		FSP
Structure To Be Removed		R
Structure To Be Reconstructed		REC
Structure To Be Reconstructed Special		RSP
Frame and Grate To Be Adjusted		A
Frame and Lid To Be Adjusted		A
Domestic Service Box To Be Adjusted		A
Valve Vault To Be Adjusted		A
Special Adjustment		SP
Item To Be Abandoned		AB
Item To Be Moved		M
Item To Be Relocated		REL
Pavement Removal and Replacement		

Illinois Department of Transportation

PASSED January 1. 2011
Michael Brand
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1. 2011
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

ALIGNMENT ITEMS

	EX	PR
Baseline		
Centerline		
Centerline Break Circle		
Baseline Symbol		
Centerline Symbol		
PI Indicator		
Point Indicator		
Horizontal Curve Data (Half Size)	CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=	CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=

BOUNDARIES ITEMS

	EX	PR
Dashed Property Line		
Solid Property/Lot Line		
Section/Grant Line		
Quarter Section Line		
Quarter/Quarter Section Line		
County/Township Line		
State Line		
Iron Pipe Found		
Iron Pipe Set		
Survey Marker		
Property Line Symbol		
Same Ownership Symbol (Half Size)		
Northwest Quarter Corner (Half Size)		
Section Corner (Half Size)		
Southeast Quarter Corner (Half Size)		

CONTOUR ITEMS

	EX	PR
Approx. Index Line		
Approx. Intermediate Line		
Index Contour		
Intermediate Contour		

DRAINAGE ITEMS

	EX	PR
Channel or Stream Line		
Culvert Line		
Grading & Shaping Ditches		
Drainage Boundary Line		
Paved Ditch		
Aggregate Ditch		
Pipe Underdrain		
Storm Sewer		
Flowline		
Ditch Check		
Headwall		
Inlet		
Manhole		
Summit		
Roadway Ditch Flow		
Swale		
Catch Basin		
Culvert End Section		
Water Surface Indicator		
Riprap		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

STANDARD 000001–06

EROSION & SEDIMENT CONTROL ITEMS

	EX	PR
Cleaning & Grading Limits		
Dike		
Erosion Control Fence		
Perimeter Erosion Barrier		
Temporary Fence		
Ditch Check Temporary		
Ditch Check Permanent		
Inlet & Pipe Protection		
Sediment Basin		
Erosion Control Blanket		
Fabric Formed Concrete Revetment Mat		
Turf Reinforcement Mat		
Mulch Temporary		
Mulch Method 1		
Mulch Method 2 Stabilized		
Mulch Method 3 Hydraulic		

NON–HIGHWAY IMPROVEMENT ITEMS

	EX	PR
Noise Attn./Levee		
Field Line		
Fence		
Base of Levee		
Mailbox		
Multiple Mailboxes		
Pay Telephone		
Advertising Sign		

LANDSCAPING ITEMS

	EX	PR
Contour Mounding Line		
Fence		
Fence Post		
Shrubs		
Mowline		
Perennial Plants		
Seeding Class 2		
Seeding Class 2A		
Seeding Class 4		
Seeding Class 4 & 5 Combined		

EXISTING LANDSCAPING ITEMS (contd.)

	EX	PR
Seeding Class 5		
Seeding Class 7		
Seedlings Type 1		
Seedlings Type 2		
Sodding		
Mowstake w/Sign		
Tree Trunk Protection		
Evergreen Tree	E	
Shade Tree	E	+

LIGHTING

	EX	PR
Duct		
Conduit		
Electrical Aerial Cable	A	A
Electrical Buried Cable	L	L
Controller		
Underpass Luminaire		
Power Pole		

Illinois Department of Transportation

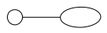
PASSED January 1. 2011
Michael Brand
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1. 2011
Scott Bedy
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

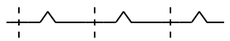
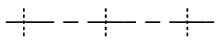
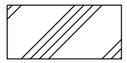
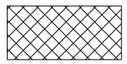
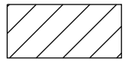
STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

STANDARD 000001–06

LIGHTING (contd.)

	EX	PR
Pull Point		
Handhole		
Heavy Duty Handhole		
Junction Box		
Light Unit Comb.		
Electrical Ground		
Traffic Flow Arrow		
High Mast Pole (Half Size)		
Light Unit-1		

PAVEMENT (MISC.)

	EX	PR
Keyed Long. Joint		
Keyed Long. Joint w/Tie Bars		
Sawed Long. Joint w/Tie Bars		
Bituminous Shoulder		
Bituminous Taper		
Stabilized Driveway		
Widening		

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Scott E. Stitt
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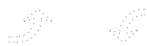
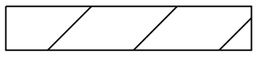
PAVEMENT MARKINGS

	EX	PR
Bike Lane Symbol		
Bike Lane Text		
Handicap Symbol		
RR Crossing		
Raised Marker Amber 1 Way		
Raised Marker Amber 2 Way		
Raised Marker Crystal 1 Way		
Two Way Turn Left		
Shoulder Diag. Pattern		
Skip-Dash White		
Skip-Dash Yellow		
Stop Line		
Solid Line		
Double Centerline		
Dotted Lines		
CL 2Ln 2Way RRPM 12.2 m (40') o.c.		
CL 2Ln 2Way RRPM 80' (24.4 m) o.c.		
CL Multilane Div. RRPM 40' (12.2 m) o.c.		
CL Multilane Div. RRPM 80' (24.4 m) o.c.		
CL Multilane Div. Dbl. RRPM 80' (24.4 m) o.c.		
CL Multilane Undiv.		
Two Way Turn Left Line		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

STANDARD 000001–06

PAVEMENT MARKINGS (contd.)

	EX	PR
Urban Combination Left		
Urban Combination Right		
Urban Left Turn Arrow		
Urban Right Turn Arrow		
Urban Left Turn Only		
Urban Right Turn Only		
Urban Thru Only		
Urban U-Turn		
Urban Combined U-Turn		
Rural Combination Left		
Rural Combination Right		
Rural Left Turn Arrow		
Rural Right Turn Arrow		
Rural Left Turn Only		
Rural Right Turn Only		
Rural Thru Only		

RAILROAD ITEMS

	EX	PR
Abandoned Railroad		
Railroad		
Railroad Point		
Control Box		
Crossing Gate		
Flashing Signal		
Railroad Cant. Mast Arm		
Crossbuck		

REMOVAL ITEMS

	EX	PR
Removal Tic		
Bituminous Removal		
Hatch Pattern		
Tree Removal Single		

RIGHT OF WAY ITEMS

	EX	PR
Future ROW Corner Monument		
ROW Marker		
ROW Line		
Easement		
Temporary Easement		

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STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

STANDARD 000001–06

RIGHT OF WAY ITEMS (contd.)

	EX	PR
Access Control Line	AC	AC
Access Control Line & ROW	AC	AC
Access Control Line & ROW with Fence	AR	AC
Excess ROW Line		XS

ROADWAY PLAN ITEMS

	EX	PR
Cable Barrier		
Concrete Barrier		
Edge of Pavement		
Bit Shoulders, Medians and C&G Line		
Aggregate Shoulder		
Sidewalks, Driveways		
Guardrail		
Guardrail Post		
Traffic Sign		
Corrugated Median		
Impact Attenuator		
North Arrow with District Office (Half Size)	N	
Match Line		STA. 45+00
Slope Limit Line		
Typical Cross-Section Line		

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ROADWAY PROFILES

	EX	PR
P.I. Indicator		
Point Indicator		
Earthworks Balance Point		
Begin Point		
Vert. Curve Data	VPI = ELEV= L = E =	VPI = ELEV= L = E =
Ditch Profile Left Side		
Ditch Profile Right Side		
Roadway Profile Line		
Storm Sewer Profile Left Side		
Storm Sewer Profile Right Side		

SIGNING ITEMS

	EX	PR
Cone, Drum or Barricade		
Barricade Type II		
Barricade Type III		
Barricade With Edge Line		
Flashing Light Sign		
Panels I		
Panels II		
Direction of Traffic		
Sign Flag (Half Size)		

SIGNING ITEMS (contd.)

	EX	PR
Reverse Left W1-4L (Half Size)		
Reverse Right W1-4R (Half Size)		
Two Way Traffic Sign W6-3 (Half Size)		
Detour Ahead W20-2(0) (Half Size)		DETOUR AHEAD
Left Lane Closed Ahead W20-5L(0) (Half Size)		LEFT LANE CLOSED AHEAD
Right Lane Closed Ahead W20-5R(0) (Half Size)		RIGHT LANE CLOSED AHEAD
Road Closed Ahead W20-3(0) (Half Size)		ROAD CLOSED AHEAD
Road Construction Ahead W20-1-(0) (Half Size)		ROAD CONSTRUCTION AHEAD
Single Lane Ahead (Half Size)		SINGLE LANE AHEAD
Transition Left W4-2L (Half Size)		
Transition Right W4-2R (Half Size)		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

STANDARD 000001–06

SIGNING ITEMS (contd.)

	EX	PR
One Way Arrow Lrg. W1-6-(0) (Half Size)		
Two Way Arrow Large W1-7-(0) (Half Size)		
Detour M4-10L-(0) (Half Size)		DETOUR
Detour M4-10R-(0) (Half Size)		DETOUR
One Way Left R6-1L (Half Size)		ONE WAY
One Way Right R6-1R (Half Size)		ONE WAY
Left Turn Lane R3-I100L (Half Size)		LEFT TURN LANE
Keep Left R4-7AL (Half Size)		KEEP LEFT
Keep Left R4-7BL (Half Size)		KEEP LEFT
Keep Right R4-7AR (Half Size)		KEEP RIGHT
Keep Right R4-7BR (Half Size)		KEEP RIGHT
Stop Here On Red R10-6-AL (Half Size)		STOP HERE ON RED
Stop Here On Red R10-6-AR (Half Size)		STOP HERE ON RED
No Left Turn R3-2 (Half Size)		
No Right Turn R3-1 (Half Size)		
Road Closed R11-2 (Half Size)		ROAD CLOSED
Road Closed Thru Traffic R11-2 (Half Size)		ROAD CLOSED TO THRU TRAFFIC

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STRUCTURES ITEMS

	EX	PR
Box Culvert Barrel		
Box Culvert Headwall		
Bridge Pier		
Bridge		
Retaining Wall		
Temporary Sheet Piling		

TRAFFIC SHEET ITEMS

	EX	PR
Cable Number		
Left Turn Green	G	G
Left Turn Yellow	Y	Y
Signal Backplate		
Signal Section 8" (200 mm)		
Signal Section 12" (300 mm)		
Walk/Don't Walk Letters	DW / W	DW / W
Walk/Don't Walk Symbols		

TRAFFIC SIGNAL ITEMS

	EX	PR
Galv. Steel Conduit		
Underground Cable		
Detector Loop Line		
Detector Loop Large		
Detector Loop Small		
Detector Loop Quadrapole		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

STANDARD 000001–06

TRAFFIC SIGNAL ITEMS (contd.)

	EX	PR
Detector Raceway	"E"	
Aluminum Mast Arm		
Steel Mast Arm		
Veh. Detector Magnetic		
Conduit Splice		
Controller		
Gulfbox Junction		
Wood Pole		
Temp. Signal Head		
Handhole		
Double Handhole		
Heavy Duty Handhole		
Junction Box		
Ped. Pushbutton Detector		
Ped. Signal Head		
Power Pole Service		
Priority Veh. Detector		
Signal Head		
Signal Head w/Backplate		
Signal Post		
Closed Circuit TV		
Video Detector System		

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UNDERGROUND UTILITY ITEMS

	EX	PR	ABANDONED
Cable TV	CTV	CTV	CTV
Electric Cable	E	E	E
Fiber Optic	FO	FO	FO
Gas Pipe	G	G	G
Oil Pipe	O	O	O
Sanitary Sewer			
Telephone Cable	T	T	T
Water Pipe	W	W	W

UTILITIES ITEMS

	EX	PR
Controller		
Double Handhole		
Fire Hydrant		
GuyWire or Deadman Anchor		
Handhole		
Heavy Duty Handhole		
Junction Box		
Light Pole		
Manhole		
Pipeline Warning Sign		
Power Pole		
Power Pole with Light		
Sanitary Sewer Cleanout		
Splice Box Above Ground		
Telephone Splice Box Above Ground		
Telephone Pole		

UTILITY ITEMS (contd.)

	EX	PR
Traffic Signal		
Traffic Signal Control Box	TS	
Water Meter		
Water Meter Valve Box		
Profile Line		
Aerial Power Line	A	A

VEGETATION ITEMS

	EX	PR
Deciduous Tree		
Bush or Shrub		
Evergreen Tree		
Stump		
Orchard/Nursery Line		
Vegetation Line		
Woods & Bush Line		

WATER FEATURE ITEMS

	EX	PR
Stream or Drainage Ditch		
Waters Edge		
Water Surface Indicator		
Water Point		
Disappearing Ditch		
Marsh		
Marsh/Swamp Boundary		

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 8 of 8)

STANDARD 000001–06

REINFORCEMENT BARS - ENGLISH (METRIC)

Bar Size English (metric)	Dia. in. mm	Cross-Sectional Area sq. in. (sq. mm)	Weight lbs./ft. kg/m	SPACING, in. (mm)													
				4 (100)	4½ (115)	5 (125)	5½ (140)	6 (150)	6½ (165)	7 (175)	7½ (190)	8 (200)	8½ (215)	9 (225)	10 (250)	11 (275)	12 (300)
				AREA OF STEEL PER FOOT (METER), sq. in. (sq. mm)													
3 (10)	0.375 (9.5)	0.110 (71)	0.376 (0.560)	0.330 (710)	0.293 (617)	0.264 (568)	0.240 (507)	0.220 (473)	0.203 (430)	0.189 (406)	0.176 (374)	0.165 (355)	0.155 (330)	0.147 (316)	0.132 (284)	0.120 (258)	0.110 (237)
4 (13)	0.500 (12.7)	0.196 (129)	0.668 (0.944)	0.588 (1290)	0.523 (1122)	0.470 (1032)	0.428 (921)	0.392 (860)	0.362 (782)	0.336 (737)	0.314 (679)	0.294 (645)	0.277 (600)	0.261 (573)	0.235 (516)	0.214 (469)	0.196 (430)
5 (16)	0.625 (15.9)	0.307 (199)	1.043 (1.552)	0.921 (1990)	0.819 (1730)	0.737 (1592)	0.670 (1421)	0.614 (1327)	0.567 (1206)	0.526 (1137)	0.491 (1047)	0.461 (995)	0.433 (926)	0.409 (884)	0.368 (796)	0.335 (724)	0.307 (663)
6 (19)	0.750 (19.1)	0.442 (284)	1.502 (2.235)	1.326 (2840)	1.179 (2470)	1.061 (2272)	0.964 (2029)	0.884 (1893)	0.816 (1721)	0.758 (1623)	0.707 (1495)	0.663 (1420)	0.624 (1321)	0.589 (1262)	0.530 (1136)	0.482 (1033)	0.442 (947)
7 (22)	0.875 (22.2)	0.601 (387)	2.044 (3.042)	1.803 (3870)	1.603 (3365)	1.442 (3096)	1.311 (2764)	1.202 (2580)	1.110 (2345)	1.030 (2211)	0.962 (2037)	0.902 (1935)	0.848 (1800)	0.801 (1720)	0.721 (1548)	0.656 (1407)	0.601 (1290)
8 (25)	1.000 (25.4)	0.785 (510)	2.670 (3.973)	2.355 (5100)	2.093 (4435)	1.884 (4080)	1.713 (3543)	1.570 (3400)	1.449 (3091)	1.346 (2914)	1.256 (2684)	1.178 (2550)	1.108 (2372)	1.047 (2267)	0.942 (2040)	0.856 (1855)	0.785 (1700)
9 (29)	1.128 (28.7)	1.000 (645)	3.400 (5.060)	3.000 (6450)	2.667 (5609)	2.400 (5160)	2.182 (4607)	2.000 (4300)	1.846 (3909)	1.714 (3686)	1.600 (3395)	1.500 (3225)	1.412 (3000)	1.333 (2867)	1.200 (2580)	1.091 (2345)	1.000 (2150)
10 (32)	1.270 (32.3)	1.267 (819)	4.303 (6.404)	3.801 (8190)	3.379 (7122)	3.041 (6552)	2.764 (5850)	2.534 (5460)	2.339 (4964)	2.172 (4680)	2.027 (4311)	1.901 (4095)	1.789 (3809)	1.689 (3640)	1.520 (3276)	1.382 (2978)	1.267 (2730)
11 (36)	1.410 (35.8)	1.561 (1006)	5.313 (7.907)	4.683 (10060)	4.163 (8748)	3.746 (8048)	3.406 (7186)	3.122 (6707)	2.882 (6097)	2.676 (5749)	2.498 (5295)	2.342 (5030)	2.204 (4679)	2.081 (4471)	1.873 (4024)	1.703 (3658)	1.561 (3353)

Illinois Department of Transportation

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ENGINEER OF POLICY AND PROCEDURES

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DATE	REVISIONS
1-1-09	Switched units to
	English (metric).
1-1-07	Deleted metric table.
	Soft converted English
	table.

AREAS OF REINFORCEMENT BARS

STANDARD 001001–02

DECIMAL OF AN INCH AND OF A FOOT

A	B	A	B	A	B	A	B	A	B	A	B
0.0052	1/16	11/64 0.171875	2 1/16	0.3385	4 1/16	0.5052	6 1/16	43/64 0.671875	8 1/16	0.8385	10 1/16
0.0104	1/8	0.1771	2 1/8	11/32 0.34375	4 1/8	0.5104	6 1/8	0.6771	8 1/8	27/32 0.84375	10 1/8
1/64 0.015625	3/16	0.1823	2 3/16	0.3490	4 3/16	33/64 0.515625	6 3/16	0.6823	8 3/16	0.8490	10 3/16
0.0208	1/4	3/16 0.1875	2 1/4	0.3542	4 1/4	0.5208	6 1/4	11/16 0.6875	8 1/4	0.8542	10 1/4
0.0260	5/16	0.1927	2 5/16	23/64 0.359375	4 5/16	0.5260	6 5/16	0.6927	8 5/16	55/64 0.859375	10 5/16
1/32 0.03125	3/8	0.1979	2 3/8	0.3646	4 3/8	17/32 0.53125	6 3/8	0.6979	8 3/8	0.8646	10 3/8
0.0365	7/16	13/64 0.203125	2 7/16	0.3698	4 7/16	0.5365	6 7/16	45/64 0.703125	8 7/16	0.8698	10 7/16
0.0417	1/2	0.2083	2 1/2	3/8 0.3750	4 1/2	0.5417	6 1/2	0.7083	8 1/2	7/8 0.8750	10 1/2
3/64 0.046875	9/16	0.2135	2 9/16	0.3802	4 9/16	35/64 0.546875	6 9/16	0.7135	8 9/16	0.8802	10 9/16
0.0521	5/8	7/32 0.21875	2 5/8	0.3854	4 5/8	0.5521	6 5/8	23/32 0.71875	8 5/8	0.8854	10 5/8
0.0573	11/16	0.2240	2 11/16	25/64 0.390625	4 11/16	0.5573	6 11/16	0.7240	8 11/16	57/64 0.890625	10 11/16
1/16 0.0625	3/4	0.2292	2 3/4	0.3958	4 3/4	9/16 0.5625	6 3/4	0.7292	8 3/4	0.8958	10 3/4
0.0677	13/16	15/64 0.234375	2 13/16	0.4010	4 13/16	0.5677	6 13/16	47/64 0.734375	8 13/16	0.9010	10 13/16
0.0729	7/8	0.2396	2 7/8	13/32 0.40625	4 7/8	0.5729	6 7/8	0.7396	8 7/8	29/32 0.90625	10 7/8
5/64 0.078125	15/16	0.2448	2 15/16	0.4115	4 15/16	37/64 0.578125	6 15/16	0.7448	8 15/16	0.9115	10 15/16
0.0833	1	1/4 0.2500	3	0.4167	5	0.5833	7	3/4 0.7500	9	0.9167	11
0.0885	1 1/16	0.2552	3 1/16	27/64 0.421875	5 1/16	0.5885	7 1/16	0.7552	9 1/16	59/64 0.921875	11 1/16
3/32 0.09375	1 1/8	0.2604	3 1/8	0.4271	5 1/8	19/32 0.59375	7 1/8	0.7604	9 1/8	0.9271	11 1/8
0.0990	1 3/16	17/64 0.265625	3 3/16	0.4323	5 3/16	0.5990	7 3/16	49/64 0.765625	9 3/16	0.9323	11 3/16
0.1042	1 1/4	0.2708	3 1/4	7/16 0.4375	5 1/4	0.6042	7 1/4	0.7708	9 1/4	15/16 0.9375	11 1/4
7/64 0.109375	1 5/16	0.2760	3 5/16	0.4427	5 5/16	39/64 0.609375	7 5/16	0.7760	9 5/16	0.9427	11 5/16
0.1146	1 3/8	9/32 0.28125	3 3/8	0.4479	5 3/8	0.6146	7 3/8	25/32 0.78125	9 3/8	0.9479	11 3/8
0.1198	1 7/16	0.2865	3 7/16	29/64 0.453125	5 7/16	0.6198	7 7/16	0.7865	9 7/16	61/64 0.953125	11 7/16
1/8 0.1250	1 1/2	0.2917	3 1/2	0.4583	5 1/2	5/8 0.6250	7 1/2	0.7917	9 1/2	0.9583	11 1/2
0.1302	1 9/16	19/64 0.296875	3 9/16	0.4635	5 9/16	0.6302	7 9/16	51/64 0.796875	9 9/16	0.9635	11 9/16
0.1354	1 5/8	0.3021	3 5/8	15/32 0.46875	5 5/8	0.6354	7 5/8	0.8021	9 5/8	31/32 0.96875	11 5/8
9/64 0.140625	1 11/16	0.3073	3 11/16	0.4740	5 11/16	4/64 0.640625	7 11/16	0.8073	9 11/16	0.9740	11 11/16
0.1458	1 3/4	5/16 0.3125	3 3/4	0.4792	5 3/4	0.6458	7 3/4	13/16 0.8125	9 3/4	0.9792	11 3/4
0.1510	1 13/16	0.3177	3 13/16	31/64 0.484375	5 13/16	0.6510	7 13/16	0.8177	9 13/16	63/64 0.984375	11 13/16
5/32 0.15625	1 7/8	0.3229	3 7/8	0.4896	5 7/8	21/32 0.65625	7 7/8	0.8229	9 7/8	0.9896	11 7/8
0.1615	1 15/16	21/64 0.328125	3 15/16	0.4948	5 15/16	0.6615	7 15/16	53/64 0.828125	9 15/16	0.9948	11 15/16
0.1667	2	0.3333	4	1/2 0.5000	6	0.6667	8	0.8333	10	1 1.0000	12

A = Fractions of Inch or Foot

B = Inch Equivalents to Foot Fractions

Illinois Department of Transportation

PASSED January 1, 1997
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 1997
ENGINEER OF DESIGN AND ENVIRONMENT

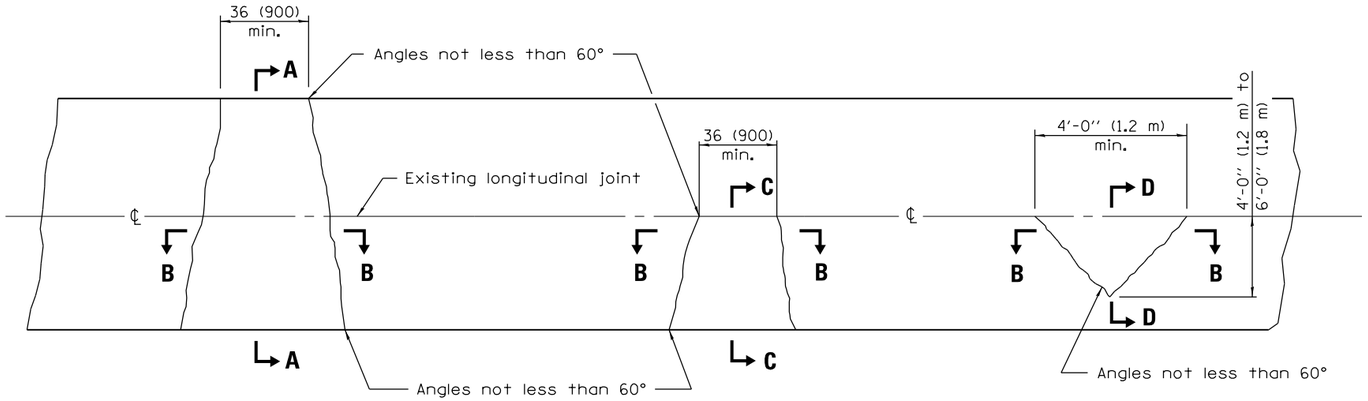
ISSUED 1-1-97

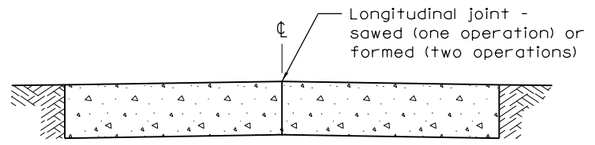
DATE	REVISIONS
1-1-97	New Standard.

DECIMAL OF AN INCH AND OF A FOOT

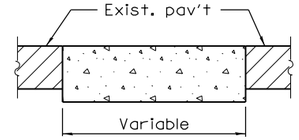
STANDARD 001006

CLASS C

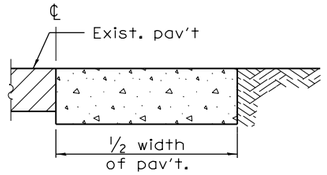




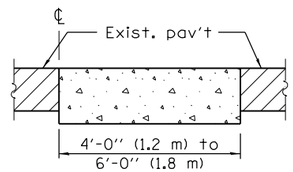
SECTION A–A



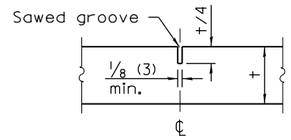
SECTION B–B



SECTION C–C



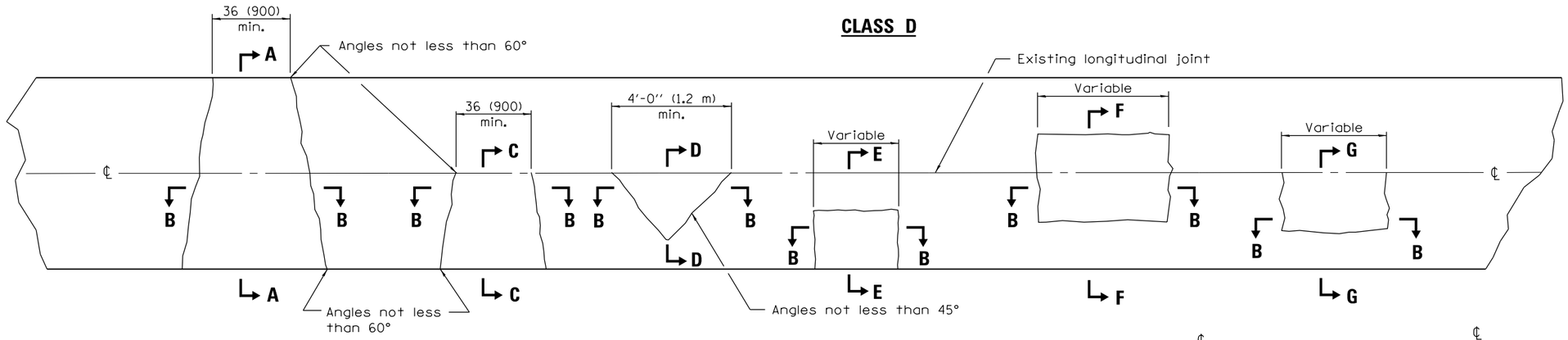
SECTION D–D

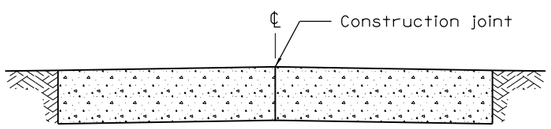


DETAIL OF SAWED CONTRACTION JOINT

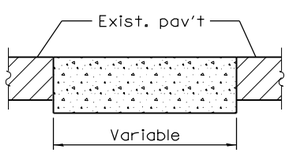
Note:
Longitudinal joints shall be as detailed on Standard 420001, except tie bars are not required for patches 20'-0'' (6.0 m) or less in length.

CLASS D

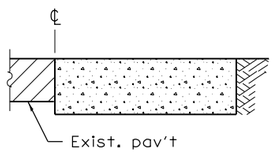




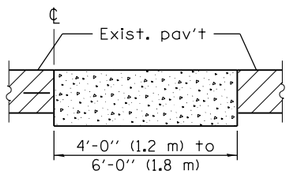
SECTION A–A
(Built in two operations)



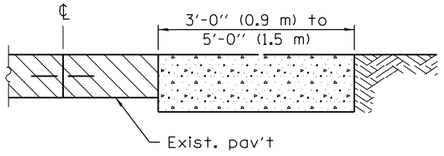
SECTION B–B



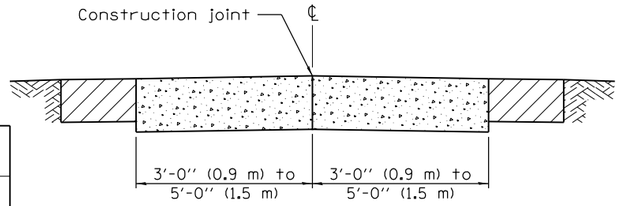
SECTION C–C



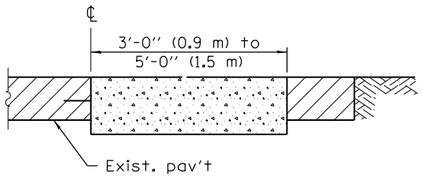
SECTION D–D



SECTION E–E



SECTION F–F
(Built in two operations)



SECTION G–G

GENERAL NOTES

Existing tie bars shall be either cut or removed. Marginal bars shall be cut.

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

Illinois Department of Transportation

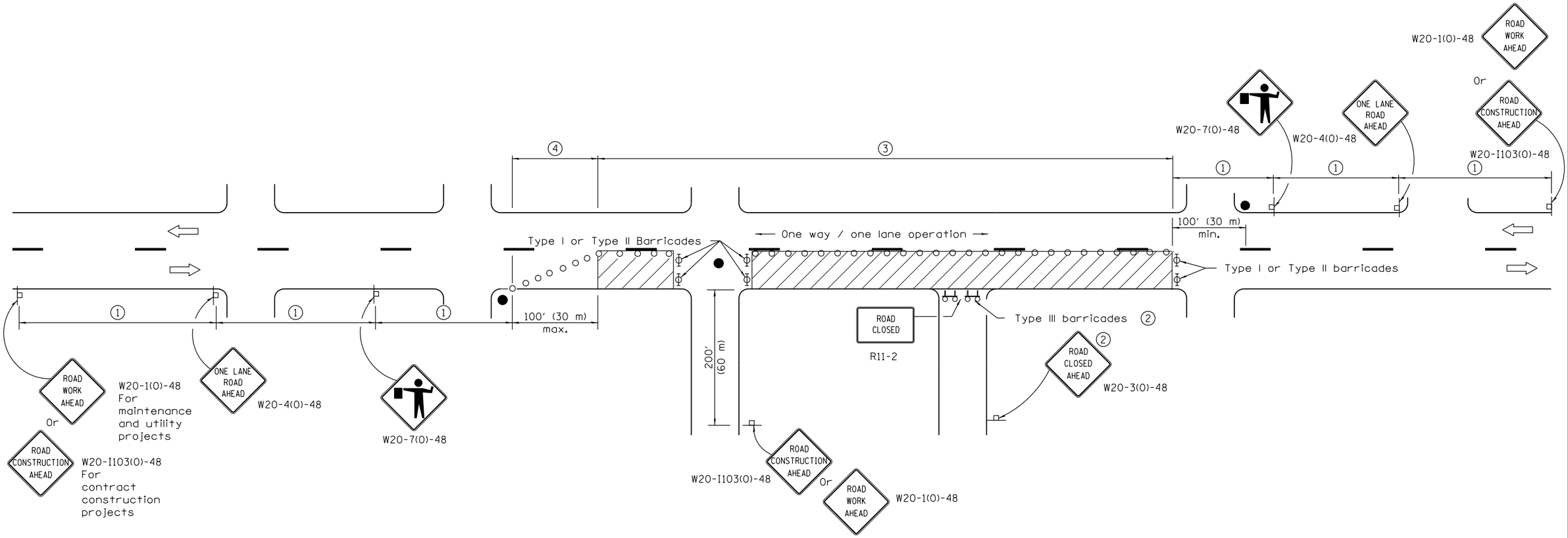
PASSED January 1, 2008
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2008
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS
1-1-08	Switched units to
	English (metric).
1-1-07	Revised Note for
	Class C patches.

CLASS C and D PATCHES

STANDARD 442201–03



SIGN SPACING	
Posted Speed	Sign Spacing
55	500′ (150 m)
50-45	350′ (100 m)
<45	200′ (60 m)

SYMBOLS

- Work area
- Cone, drum or barricade (not required for moving operations)
- Sign on portable or permanent support
- Flagger with traffic control sign
- Barricade or drum with flashing light
- Type III barricade with flashing lights

1. Refer to SIGN SPACING TABLE for distances.
2. For approved sideroad closures.
3. Cones at 25′ (8 m) centers for 250′ (75 m). Additional cones may be placed at 50′ (15 m) centers. When drums or Type I or Type II barricades are used. the interval between devices may be doubled.
4. Cones, drums or barricades at 20′ (6 m) centers.

GENERAL NOTES

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an urban area.

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

Illinois Department of Transportation

APPROVED January 1, 2011
ENGINEER OF SAFETY ENGINEERING
APPROVED January 1, 2011
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS
1-1-11	Revised flagger sign.
1-1-09	Switched units to
	English (metric).
	Corrected sign No.'s.

URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED

STANDARD 701501–06

FABRICATION GENERAL NOTES

MATERIALS:

1. EPOXY COATED DOWEL BARS USED SHALL COMPLY WITH ASTM A615 GRADE 60.

2. ALL EMBEDDED LIFTING HARDWARE USED SHALL BE GALVANIZED.

   A. FOR LIFTING INSERTS, INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION INCLUDING MINIMUM EDGE DISTANCE AND SPACING REQUIREMENTS. UNLESS THE CONTRACTOR AND FABRICATOR WILL BE USING A LIFTING BEAM OR ROLLING SHEAVE TO ENSURE THAT EACH OF THE FOUR INSERTS WILL SHARE THE LOAD EQUALLY, TWO OF THE FOUR INSERTS MUST BE CAPABLE OF CARRYING THE TOTAL LOAD WITH A 4:1 SAFETY FACTOR WHILE ADJUSTING FOR THE ANGLE OF THE CABLES AND THE STRENGTH OF THE CONCRETE OVER TIME. THE INSERT SHOULD BE RECESSED A MINIMUM OF 1½" UNLESS THE SLAB IS TO BE OVERLAID IMMEDIATELY AFTER PLACEMENT. THE INSERT SHALL LEAVE A MAXIMUM OF ONE 1¼" DIAMETER THREADED HOLE TO BE GROUTED AFTER SLAB INSTALLATION. IF THE INSERT IS INSTALLED WITH A FULL SLAB PENETRATION, THE LIFTING INSERT CAN BE USED AS A BEDDING GROUT PORT AT THE CONTRACTOR'S DISCRETION.

   B. FOR LIFTING PLATES, INSTALLATION MUST BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND HAVE A STANDARD 5:1 SAFETY FACTOR FOR LIFTING HARDWARE. UNLESS A LIFTING BEAM IS USED TO SPACE THE FOUR PICK POINTS DIRECTLY ABOVE THE INSERTS, THE LIFTING HARDWARE MUST BE RATED FOR USE WITH CABLES AT AN ANGLE AND TWO OF THE FOUR DEVICES MUST BE CAPABLE OF LIFTING THE FULL LOAD AS WITH THE INSERTS REFERENCED IN THE PREVIOUS NOTE.

3. REINFORCEMENT USED SHALL BE EPOXY COATED, IN ACCORDANCE WITH ASTM A706 GRADE 60 AND IN COMPLIANCE WITH ARTICLE 1006.10 OF THE STANDARD SPECIFICATIONS.

4. CONCRETE COVER OVER REINFORCEMENT TO BE MAINTAINED USING WIRE OR THERMOPLASTIC CHAIRS OR SPACERS OR AN APPROVED EQUIVALENT.

5. CONCRETE USED SHALL MEET THE FOLLOWING REQUIREMENTS:

   A. CONCRETE USED SHALL BE CLASS PC (f'C = 4,500 PSI @ 28 DAYS) IN ACCORDANCE WITH SECTION 1020 OF THE STANDARD SPECIFICATIONS.
   B. MINIMUM STRIPPING STRENGTH OF CONCRETE SHALL BE 3,000 PSI.
   C. CONCRETE MIX DESIGN TO BE SUBMITTED AND APPROVED PRIOR TO FABRICATION.
   D. CURING OF CONCRETE SLABS TO BE IN ACCORDANCE WITH THE SPECIFIED METHODS OF SECTION 1020 OF THE STANDARD SPECIFICATIONS. THE CURING PROCEDURE TO BE USED SHALL BE SUBMITTED AND APPROVED PRIOR TO FABRICATION.

SLAB DESIGN:

6. FOR STANDARD SLABS:

   A. USE SLAB DIMENSIONS SHOWN ON THE ILLINOIS TOLLWAY STANDARD DRAWINGS FOR DESIGN SLAB THICKNESS, WIDTH, AND LENGTH. ACTUAL WIDTH TO BE MODIFIED WITH ON-SITE SAW CUTS TO FIT THE OPENING.

   B. USE ONE LAYER OF REINFORCEMENT WITH A MINIMUM STEEL AREA RATIO OF 0.2%.

   C. SIZE ANY PREFORMED SLOTS THAT ARE DESIGNED FOR CONSECUTIVE STANDARD SLABS CONSISTENT WITH THE THICKNESS OF THE SLAB SUCH THAT THE BOTTOM OF THE OPENING IS AT LEAST 2½" (±¼") WIDE AND AT LEAST ½" OF GROUT COVER IS PROVIDED UNDER THE DOWEL.

   D. FOR STANDARD SLABS WITH WIDE OPEN SLOTS AND/OR EMBEDDED DOWEL BARS, IT SHALL BE THE CONTRACTOR'S OPTION TO EITHER PRE-INSTALL/EMBED THE DOWEL BARS INTO THE SLABS AT THE PRECAST PLANT AND PARTIALLY RETROFIT THE EMBEDDED DOWELS INTO ADJACENT PAVEMENT SLABS IN THE FIELD, OR TO FULLY RETROFIT THE DOWEL BARS INTO BOTH THE INSTALLED PRECAST SLAB AND ANY ADJACENT SLAB IN THE FIELD DURING PLACEMENT IN ACCORDANCE WITH CONTRACT SPECIFICATIONS AND THE GENERAL NOTES FOR INSTALLATION. THE LOCATIONS AND SPACING OF THE DOWEL BARS IN THE STANDARD SLABS SHALL BE SHOWN ON THE ILLINOIS TOLLWAY STANDARD DRAWINGS AND WITHIN THE SPECIFIED TOLERANCES FOR ALIGNMENT. FOR DOWEL BAR RETROFITTING WITH STANDARD SLAB INSTALLATION, A STANDARD TEMPLATE SHALL BE USED TO LOCATE THE CUTS AND POSITION THE DOWEL SLOTS CONSISTENTLY.

   E. FOR STANDARD ISOLATED SLABS WITH NARROW ELONGATED PREFORMED DOWEL SLOTS, THE CENTERPOINT BETWEEN THE WHEEL PATH SLOTS SHALL BE MARKED.

7. FOR CUSTOM SLABS:

   A. USE SLAB DIMENSIONS SHOWN ON THE ILLINOIS TOLLWAY STANDARD DRAWINGS FOR DESIGN SLAB THICKNESS. LENGTHS AND WIDTHS OF EACH CUSTOM SLAB SHALL BE ACCURATE DIMENSIONS BASED ON FIELD SURVEY DATA COLLECTED BY THE CONTRACTOR TO DEVELOP WORKING DRAWINGS FOR THE SLAB. MINIMUM AND MAXIMUM DIMENSIONS FOR LENGTHS AND WIDTHS ARE NOTED ON THE ILLINOIS TOLLWAY STANDARD DRAWINGS.

   B. ANY CUSTOM SLABS > 6 FT IN LENGTH THAT WILL BE OPENED TO TRAFFIC BEFORE ANY HARDWARE AND UNDERSLAB GROUTING OR FILLING OCCURS SHALL REQUIRE TWO (2) LAYERS OF STEEL REINFORCEMENT AS NOTED ON SHEET 5.

   C. FOR ANY CUSTOM SLAB FABRICATED TO REPLACE EXISTING WARPED PAVEMENT AT AN ISOLATED LOCATION, THE CUSTOM SLAB SHALL BE FABRICATED ON A SINGLE PLANE. THE SLAB THICKNESS OR BEDDING MATERIAL SHALL BE ADJUSTED TO ALLOW FOR THE ELEVATION OF ALL FOUR (4) CORNERS OF THE CUSTOM SLAB TO BE FLUSH OR HIGHER THAN THE EXISTING OR ADJOINING PAVEMENT WHEN INSTALLED. THE SURFACE OF ALL CUSTOM SLABS REPLACING WARPED PAVEMENT SHALL RECEIVE A COMPLETE PROFILE DIAMOND GRIND AFTER INSTALLATION AND GROUTING TO PROVIDE A SMOOTH SURFACE AND LEAVE ALL EDGES FLUSH WITH THE ADJOINING PAVEMENTS. THE PROFILE GRINDING OPERATION FOR CUSTOM SLABS REPLACING ANY WARPED PAVEMENTS, ON CURVED RAMPS OR SUPERELEVATED MAINLINE SECTIONS, SHALL BE IN ACCORDANCE WITH CONTRACT SPECIAL PROVISIONS FOR PROFILE DIAMOND GRINDING AND PAID FOR SEPARATELY. FOR CONSECUTIVELY PLACED CUSTOM SLABS FABRICATED TO REPLACE EXISTING WARPED PAVEMENT, FULL SURVEYS FOR X, Y, AND Z DIMENSIONS SHALL BE TAKEN BY THE CONTRACTOR BEFORE FABRICATION IN ORDER TO MATCH EXISTING GRADES AT ALL CORNERS DURING INSTALLATION.

   D. FOR ALL CUSTOM SLABS WITH WIDE OPEN SLOTS, THE DOWEL BARS SHALL BE FULLY RETROFITTED INTO ADJACENT PAVEMENT SLABS DURING FIELD INSTALLATION OF THE PRECAST SLAB IN ACCORDANCE WITH CONTRACT SPECIFICATIONS AND GENERAL NOTES FOR INSTALLATION.

   E. FOR ALL CUSTOMS SLABS WITH NARROW ELONGATED PREFORMED DOWEL SLOTS, THE DOWEL BARS SHALL BE SLID INTO PREDRILLED HOLES IN THE ADAJECENT PAVEMENT SLABS DURING FIELD INSTALLATION OF THE PRECAST SLAB IN ACCORDANCE WITH CONTRACT SPECIFICATIONS AND GENERAL NOTES FOR INSTALLATION.

8. ALL FABRICATED SLABS:

   A. THE MAXIMUM ALLOWABLE JOINT WIDTH CAN NO BE LESS THAN THE TOTAL OF THE ALLOWABLE SLAB FABRICATION TOLERANCES.

   B. BEDDING GROUT PORT HOLES SHALL BE LOCATED ON TRANSVERSE LINES ACROSS THE SLAB THAT ARE PARALLEL WITH EXISTING TRANSVERSE JOINTS. EACH PORT HOLE SHALL BE EVENLY DISTRIBUTED ON EACH LINE. THE DISTANCE BETWEEN BEDDING GROUT PORT HOLES SHALL NO EXCEED 4'-0", WITH THE PORT HOLES AT THE END OF THE TRANSVERSE LINES TO BE NO LESS THAN 1'-8" AND NO MORE THAN 3'-0" OFF A LONGITUDINAL JOINT. THE TRANSVERSE LINES FOR PORT HOLES SHALL BE NO MORE THAN 4'-0" APART, AND NO LESS THAN 1'-8" AND NO MORE THAN 2'-6" OFF OF A TRANSVERSE JOINT.

   C. RECESS LIFTING DEVICES 1" MINIMUM BELOW THE SURFACE OF THE SLAB TO ALLOW FOR A MINIMUM GROUT COVER OF 1" ON SLABS THAT WILL NOT BE OVERLAID.

FABRICATION:

9. PREPARE WORKING DRAWINGS THAT SHALL INCLUDE THE FOLLOWING INFORMATION:

   A. SLAB LAYOUT DRAWING FOR TYPICAL STANDARD SLABS AND FOR EACH CUSTOM SLAB TO BE FABRICATED, WITH ACCURATE DIMENSIONS CITED.

   B. REINFORCEMENT SIZES, SPACING, NUMBER OF MATS, AND METHOD OF MAINTAINING CONCRETE COVER.

   C. SIZES AND LOCATIONS FOR EMBEDDED DOWELS, OF DOWEL BARS TO BE RETROFITTED AFTER PLACEMENT OF THE SLAB, AND OF PREFORMED SLOTS AT THE FEMALE END OF STANDARD SLABS FOR CONSECUTIVE PLACEMENT.

   D. SIZE AND LOCATION OF GROUT PORTS, LIFTING ANCHORS, AND GROUT SEAL GASKETS.

   E. COMPRESSIVE STRENGTH AND AIR CONTENT OF CONCRETE.

   F. CONCRETE CURING METHOD TO BE USED.

   G. MARKING LEGEND FOR EACH SLAB TO INDICATE PRECAST MANUFACTURER, AND DATE OF PRODUCTION; AND FOR EACH CUSTOM SLAB TO INCLUDE CONTRACT NUMBER AND MARK NUMBER OF THE SLAB.

   H. WEIGHT OF EACH SLAB.

   I. THE SIZE AND LOCATION OF ANY EMBEDDED HARDWARE (TREADLE FRAMES, CONDUITS, ETC.) REQUIRED FOR CUSTOM PLAZA SLABS.

10. PERFORM A PRE-POUR INSPECTION OF THE FORMS TO CONFIRM THAT THEY ARE ASSEMBLED IN ACCORDANCE WITH THE FOLLOWING TOLERANCES:

LENGTH AND WIDTH:	±⅛"
DIAGONALS:	±⅜"
DOWEL VARIANCE FROM LEVEL, SQUARENESS TO EDGE OF SLAB, AND LOCATION:	±⅛"
EDGE SQUARENESS:	⅛" IN 10" (IN RELATION TO TOP AND BOTTOM SURFACES).

11. INCLUDE A 1 INCH CHAMFER ALONG ALL BOTTOM EDGES OF SLABS AND A STONED EDGE TO ALL TOP EDGES OF THE SLAB.

12. THE EXPOSED SURFACES OF ALL PREFORMED SLOTS FOR DOWEL BARS SHALL BE SANDBLASTED.

13. ACCURATELY SCREED TOP OF SLAB TO MEET SURFACE AND THICKNESS TOLERANCES.

14. APPLY EITHER AN ASTRO TURF DRAG FINISH TO TOP OF SLAB IN ACCORDANCE WITH ARTICLE 420.09(e)(2) OF THE STANDARD SPECIFICATIONS, OR A TINED FINISH IN ACCORDANCE WITH ARTICLE 420.09(e)(1) OF THE STANDARD SPECIFICATIONS AS INDICATED IN THE SLAB DESIGN SCHEDULE ON CONTRACT DRAWINGS.

15. AFTER REMOVAL OF FORMS AND ANY BLOCKOUTS, NO SPALLS OF THE FINISHED SURFACE WILL BE ALLOWED.

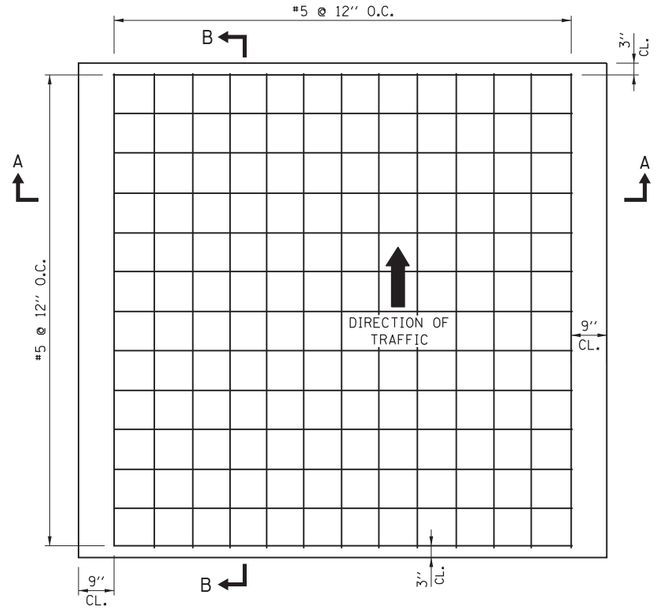
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

Illinois Tollway

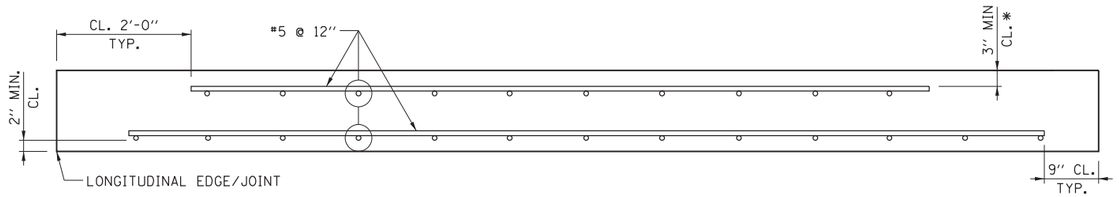
DATE	REVISIONS
02-07-12	SEE A18-01 FOR REVISIONS PER THIS DATE
11-01-12	REVISED NOTES
3-31-2016	REVISED NOTES; UPDATED CALLOUTS

PRECAST PAVEMENT SLABS

STANDARD A18-03



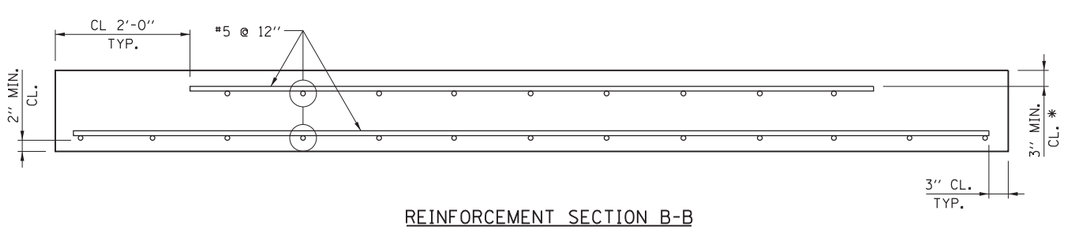
TYPICAL REINFORCEMENT DETAIL FOR STANDARD SLABS



REINFORCEMENT SECTION A-A

TWO MATS OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC BEFORE GROUTING IS COMPLETED

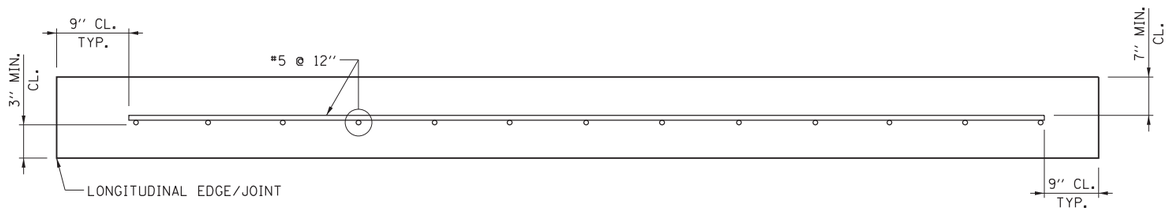
ALL BARS ARE TRIMMED TO FIT #5 BAR
SAW CUTS OFF LONGITUDINAL EDGES SHALL BE NO MORE THAN 6'' OFF THE EDGES



REINFORCEMENT SECTION B-B

TWO MATS OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC BEFORE GROUTING IS COMPLETED

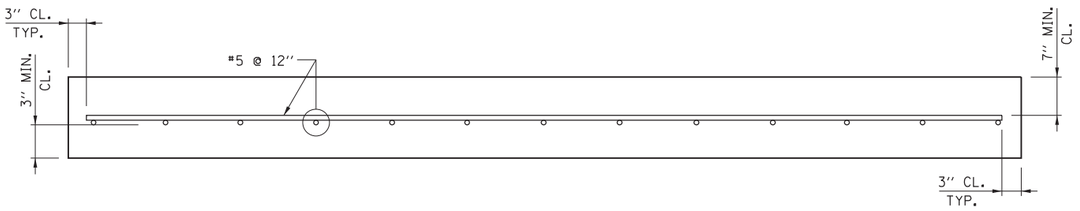
ALL BARS ARE TRIMMED TO FIT #5 BAR



REINFORCEMENT SECTION A-A

ONE MAT OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL STANDARD SLABS AND FOR ANY CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC ONLY AFTER GROUTING IS COMPLETED.

ALL BARS ARE TRIMMED TO FIT #5 BAR
SAW CUTS OFF LONGITUDINAL EDGES SHALL BE NO MORE THAN 6'' OFF THE EDGES



REINFORCEMENT SECTION B-B

ONE MAT OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL STANDARD SLABS AND FOR ANY CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC ONLY AFTER GROUTING IS COMPLETED.

ALL BARS ARE TRIMMED TO FIT #5 BAR

NOTE:

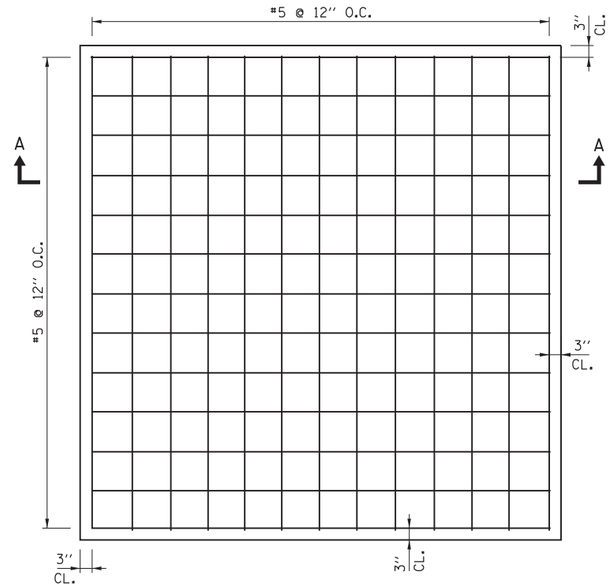
* MIN. CLEARANCE FOR TOP REINFORCEMENT SHALL BE ADJUSTED FOR PLAZA SLAB TO FIT TREADLE FRAMES OR INSERTED HARDWARE.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

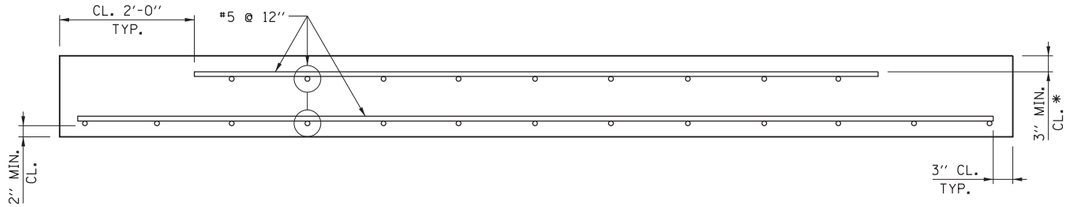
Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-03



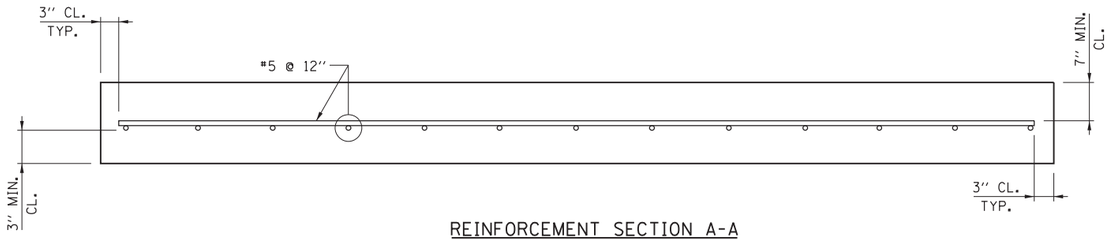
TYPICAL REINFORCEMENT DETAIL FOR CUSTOM SLABS



REINFORCEMENT SECTION A-A

TWO MATS OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC BEFORE GROUTING IS COMPLETED

ALL BARS ARE TRIMMED TO FIT #5 BAR



REINFORCEMENT SECTION A-A

ONE MAT OF REINFORCEMENT SHALL BE FOR APPLICATION TO ALL STANDARD SLABS AND FOR ANY CUSTOM SLABS GREATER THAN 6 FT. LONGITUDINAL LENGTH TO BE OPENED TO TRAFFIC ONLY AFTER GROUTING IS COMPLETED.

ALL BARS ARE TRIMMED TO FIT #5 BAR

NOTE:

FOR ALL CUSTOM SLABS OF TRAPEZOID SHAPES, REINFORCEMENT SHALL BE LAID OUT IN A PERPENDICULAR GRID PATTERN, NOT SKEWED.

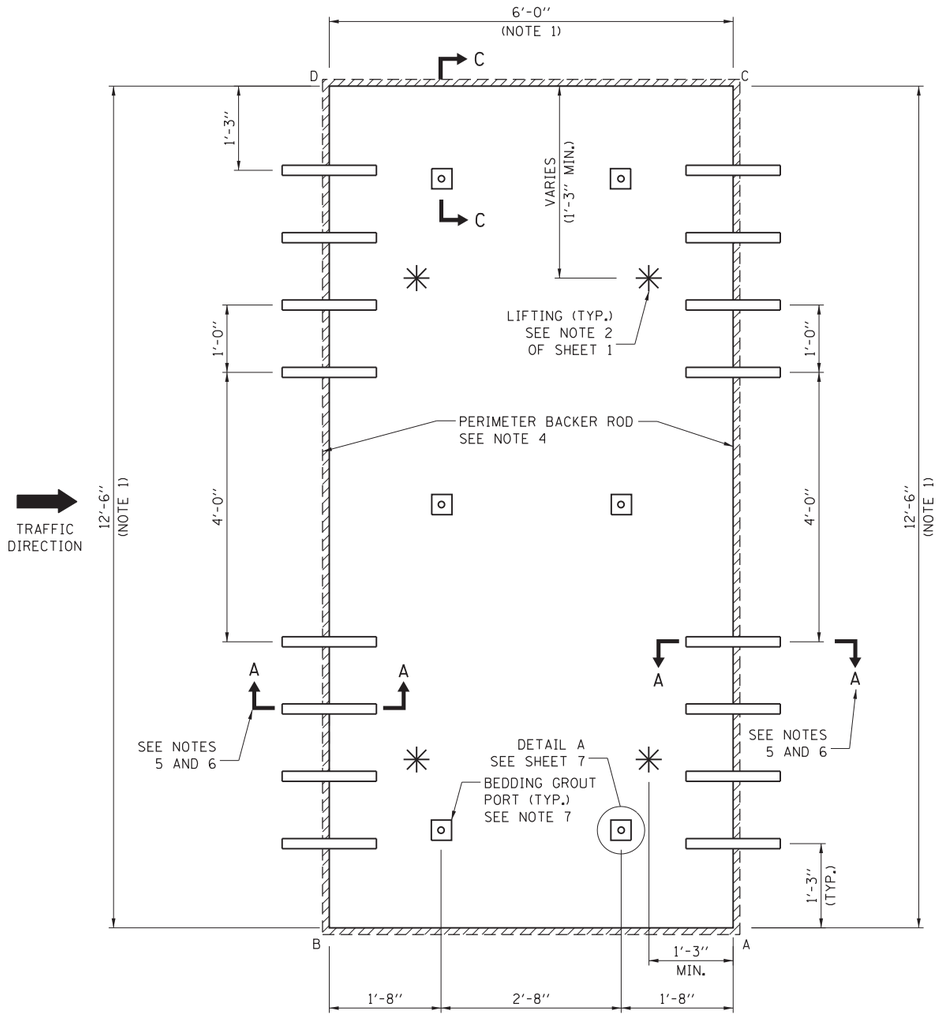
* MIN. CLEARANCE FOR TOP REINFORCEMENT SHALL BE ADJUSTED FOR PLAZA SLAB TO FIT TREADLE FRAMES OR INSERTED HARDWARE.

APPROVED Paul Kovacs CHIEF ENGINEER DATE 5-1-2009

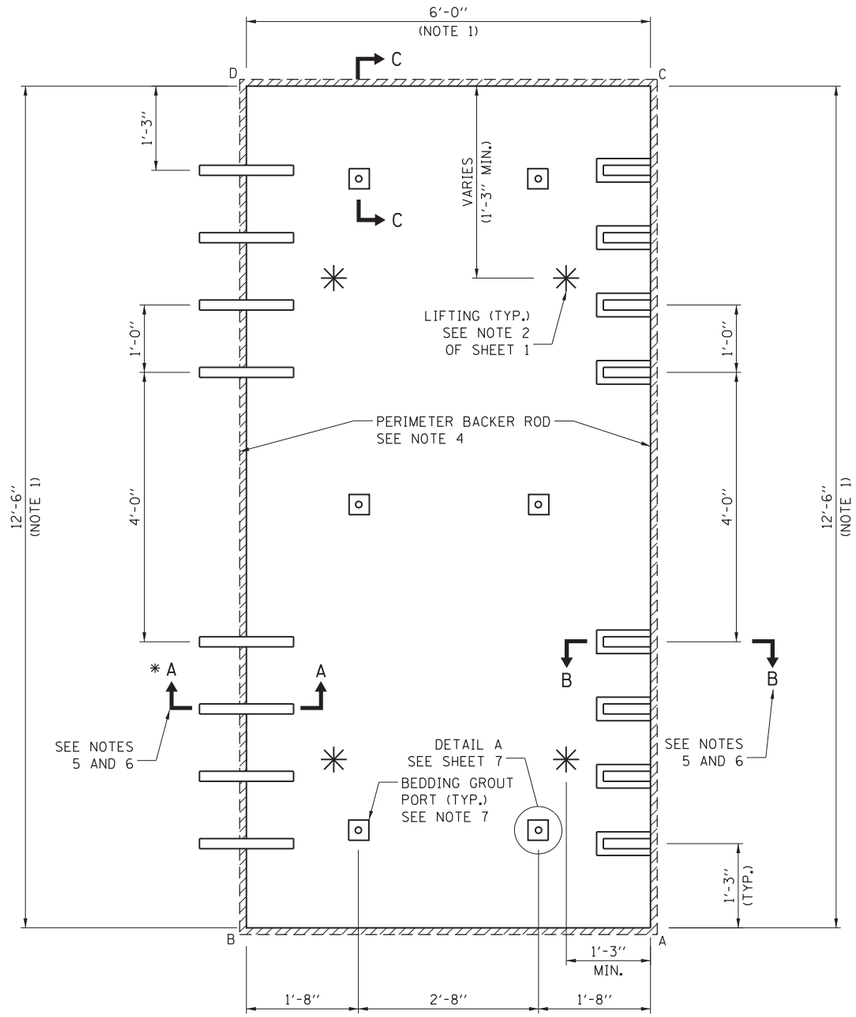
Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-03



STANDARD 12'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH EMBEDDED DOWELS FOR PRECUT WIDE MOUTH SLOTS IN ADJACENT PAVEMENT



STANDARD 12'-6" WIDE PANEL LAYOUT FOR CONSECUTIVE PLACEMENT

* FOR INTERNAL CONSECUTIVE SLABS, PREFORMED SLOTS IN ACCORDANCE WITH SECTION B-B OF SHEET 4 MAY BE USED IN PLACE OF EMBEDDED DOWELS OR OF FIELD RETROFITTED DOWEL BARS WITH SAWCUT SLOTS. ALL PREFORMED SLOTS MUST BE FILLED BEFORE BEING OPENED TO TRAFFIC.

NOTES:

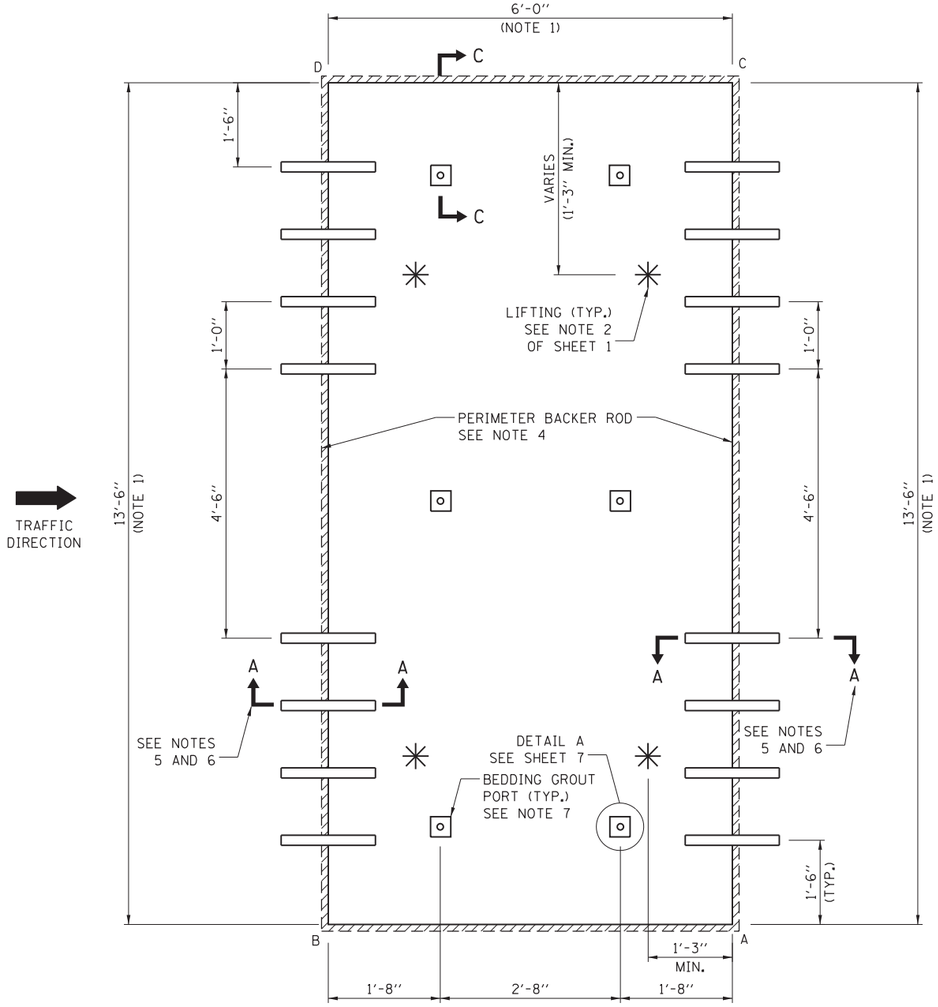
1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS ±⅛".
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 11'-6" IN WIDTH, THE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE SLAB PATCH LOCATION MUST BE PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
3. SLAB THICKNESS SHALL BE 11½" ± ⅛".
4. A FOAM BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE PERIMETER OF THE SLAB AT THE BOTTOM OF THE JOINTS BEFORE THE SLAB HAS BEEN SET AND BEFORE BEDDING GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH FLOWABLE FILL.
5. SEE SHEET 7 FOR SECTION DETAILS.
6. IT SHALL BE THE CONTRACTOR'S OPTION TO REPLACE ANY EMBEDDED DOWEL BARS OR PREFORMED SLOTS AS SHOWN ON THESE DRAWINGS WITH FULLY RETROFITTED DOWEL BARS FIELD INSTALLED IN ACCORDANCE WITH "DETAIL C" OF SHEET 13. THE CONTRACTOR SHALL USE AN APPROVED TEMPLATE TO LOCATE THE SAW CUTS REQUIRED FOR PROPER SPACING AND RETROFITTING OF THE DOWEL BARS IN ACCORDANCE WITH THESE DRAWINGS. DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE SAW CUTS PERPENDICULAR TO THE TRANSVERSE (NONSKEWED) JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.
7. SEE NOTE 8 ON SHEET 1 FOR LOCATING BEDDING GROUT PORTS.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

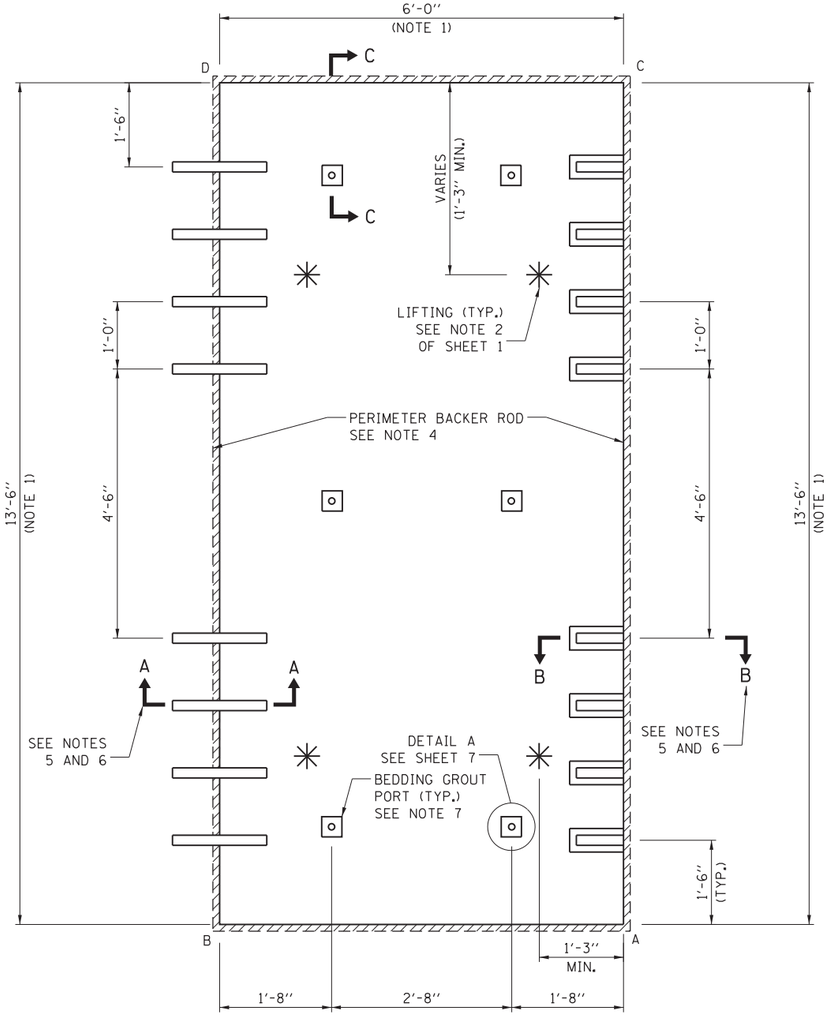
Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-03



STANDARD 13'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH EMBEDDED DOWELS FOR PRECUT WIDE MOUTH SLOTS IN ADJACENT PAVEMENT.



STANDARD 13'-6" WIDE PANEL LAYOUT FOR CONSECUTIVE PLACEMENT

* FOR INTERNAL CONSECUTIVE SLABS, PREFORMED SLOTS IN ACCORDANCE WITH SECTION B-B OF SHEET 4 MAY BE USED IN PLACE OF EMBEDDED DOWELS OR OF FIELD RETROFITTED DOWEL BARS WITH SAWCUT SLOTS. ALL PREFORMED SLOTS MUST BE FILLED BEFORE BEING OPENED TO TRAFFIC.

NOTES:

1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS $\pm 1/8$".
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 13'-6" IN WIDTH AND GREATER THAN 12'-6" IN WIDTH, THE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE SLAB PATCH LOCATION MUST BE PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
3. SLAB THICKNESS SHALL BE $11\frac{1}{2}$" $\pm$ $1/8$".
4. A FOAM BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE PERIMETER OF THE SLAB AT THE BOTTOM OF THE JOINTS BEFORE THE SLAB HAS BEEN SET AND BEFORE BEDDING GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH FLOWABLE FILL.
5. SEE SHEET 7 FOR SECTION DETAILS.
6. IT SHALL BE THE CONTRACTOR'S OPTION TO REPLACE ANY EMBEDDED DOWEL BARS OR PREFORMED SLOTS AS SHOWN ON THESE DRAWINGS WITH FULLY RETROFITTED DOWEL BARS FIELD INSTALLED IN ACCORDANCE WITH "DETAIL C" OF SHEET 13. THE CONTRACTOR SHALL USE AN APPROVED TEMPLATE TO LOCATE THE SAW CUTS REQUIRED FOR PROPER SPACING AND RETROFITTING OF THE DOWEL BARS IN ACCORDANCE WITH THESE DRAWINGS. DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE SAW CUTS PERPENDICULAR TO THE TRANSVERSE (NONSKEWED) JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.
7. SEE NOTE 8 ON SHEET 1 FOR LOCATING BEDDING GROUT PORTS.

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Illinois Tollway

PRECAST PAVEMENT SLABS

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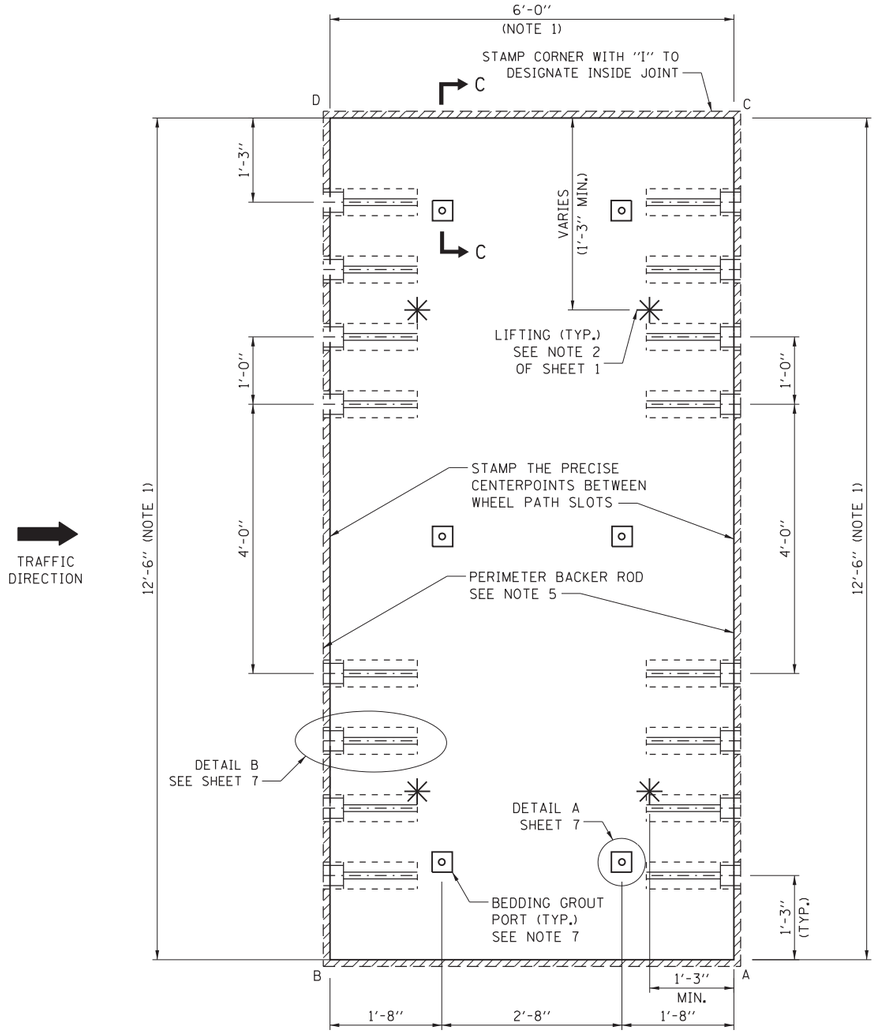
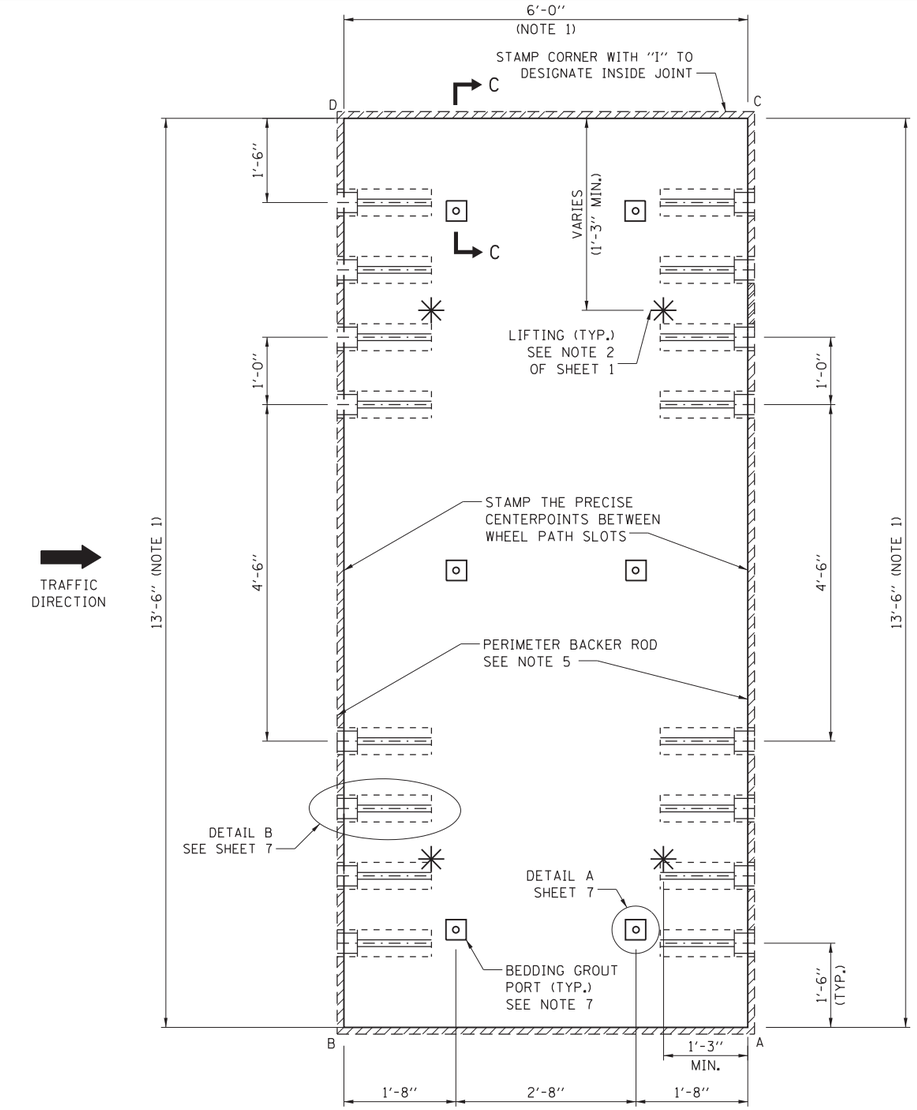


STANDARD 12'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH NARROW MOUTH PREFORMED DOWEL SLOTS TO ALIGN WITH PREDRILLED HOLES IN ADJACENT PAVEMENT.



STANDARD 13'-6" WIDE PANEL LAYOUT FOR ISOLATED PLACEMENT WITH NARROW MOUTH PREFORMED DOWEL SLOTS TO ALIGN WITH PREDRILLED HOLES IN ADJACENT PAVEMENT.

NOTES:

1. THE WIDTH AND LENGTH OF PRODUCED SLABS SHALL BE THE INDICATED DIMENSIONS ± 1/8".
2. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 12'-6" IN WIDTH AND GREATER THAN 11'-6" IN WIDTH, THE 12'-6" WIDE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE SLAB PATCH LOCATION MUST BE PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
3. FOR MIDDLE LANE SLAB OPENINGS/PATCHES LESS THAN 13'-6" IN WIDTH AND GREATER THAN 12'-6" IN WIDTH, THE 13'-6" WIDE STANDARD PRECAST SLAB CAN BE SAW CUT ON-SITE TO FIT THE OPENING AND TO MAINTAIN ALIGNMENT WITH EXISTING LONGITUDINAL JOINTS. OTHERWISE, THE SLAB PATCH LOCATION MUST BE PRESURVEYED BY THE CONTRACTOR AND THE SLAB FABRICATED AS A CUSTOM SLAB.
4. SLAB THICKNESS SHALL BE 11 1/2" ±1/8".
5. A FOAM BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE PERIMETER OF THE SLAB AT THE BOTTOM OF THE JOINTS BEFORE THE SLAB HAS BEEN SET AND BEFORE BEDDING GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH FLOWABLE FILL.
6. SEE SHEET 7 FOR SECTION DETAILS.
7. SEE NOTE 8 ON SHEET 1 FOR LOCATING BEDDING GROUT PORTS.

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PRECAST PAVEMENT SLABS

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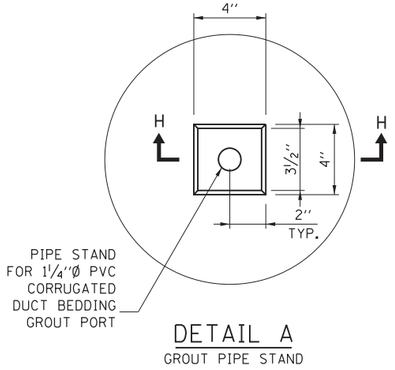
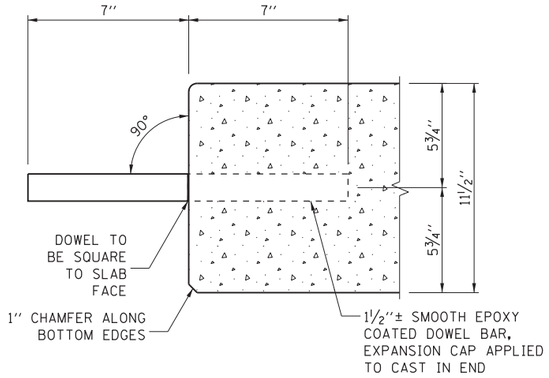
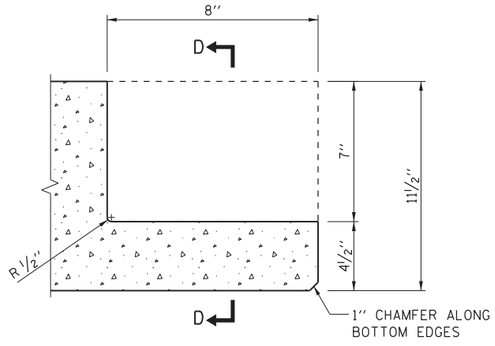


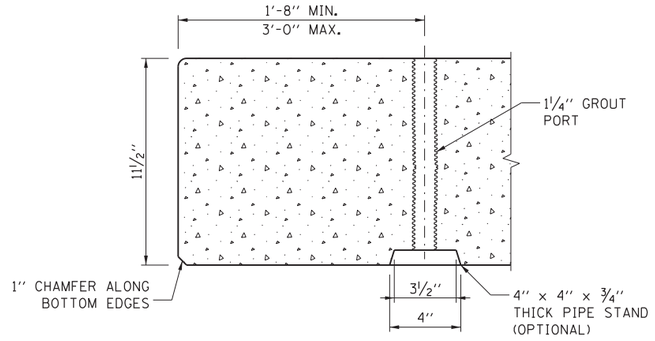
DETAIL A
GROUT PIPE STAND



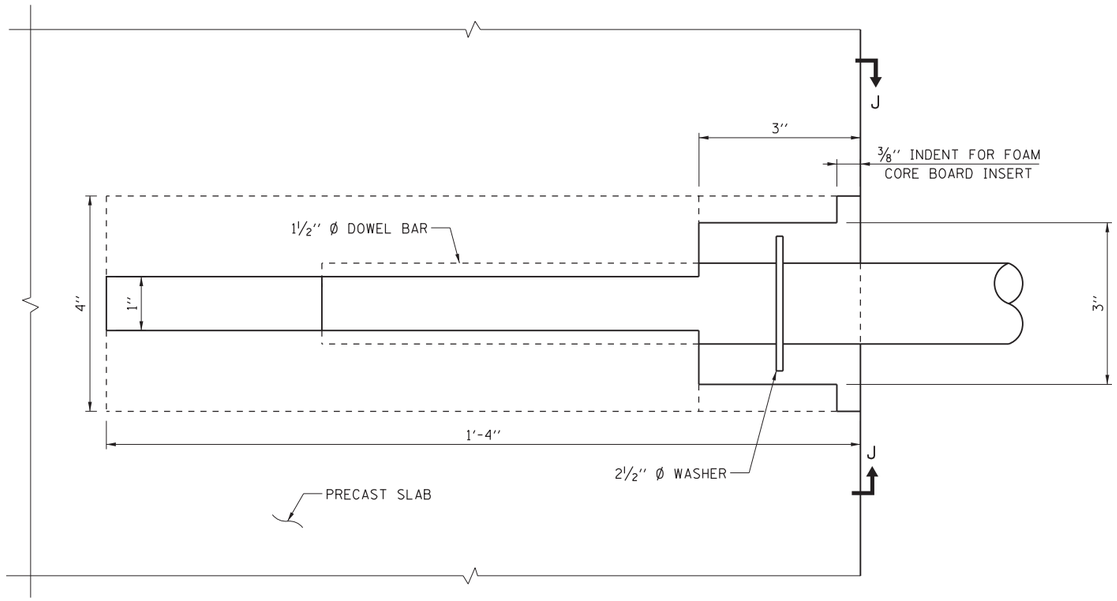
SECTION A-A
TRANSVERSE JOINT DOWEL BAR (EMBEDDED INTO STANDARD PRECAST PAVEMENT SLAB FOR BOTH ISOLATED AND CONSECUTIVE PLACEMENT TYP.



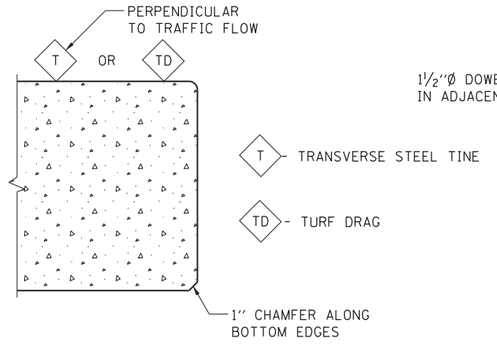
SECTION B-B
TRANSVERSE WIDE MOUTH OPEN SLOT DETAIL FOR CONSECUTIVE STANDARD SLABS



SECTION C-C
GROUT CHANNEL & PORT LOCATION



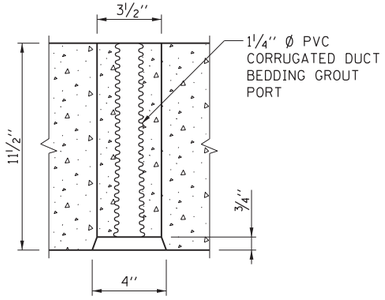
DETAIL B
TRANSVERSE NARROW MOUTH SLOT DETAIL FOR ISOLATED SLABS



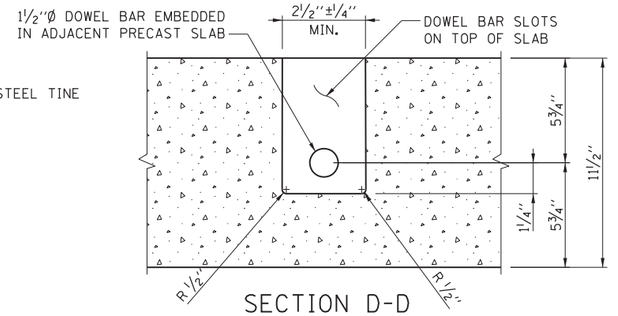
T - TRANSVERSE STEEL TINE

TD - TURF DRAG

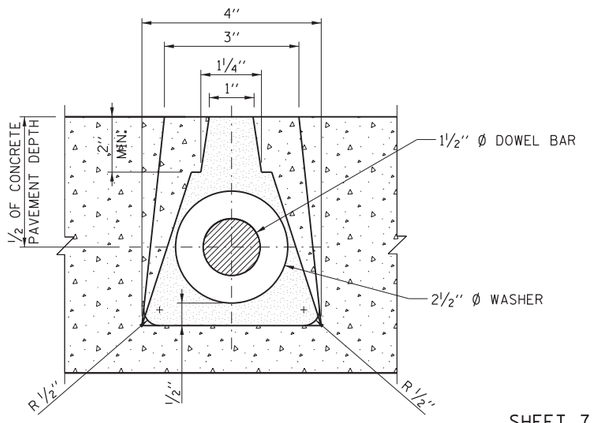
FINISH SCHEDULE



SECTION H-H
PIPE STAND ELEVATION



SECTION D-D
DOWEL BAR SECTION FOR WIDE MOUTH OPEN SLOTS



SECTION J-J
3'' TAPER TO 4''x16'' LONG DOWEL SLOT

SHEET 7 OF 19

Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-03

FABRICATION DETAILS

Paul Kovacs
APPROVED ..... CHIEF ENGINEER

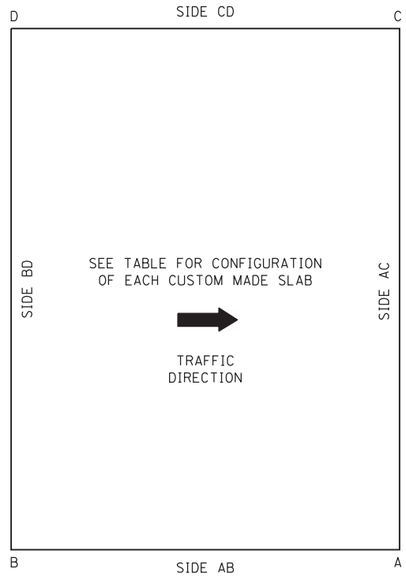
DATE 5-1-2009

FOR NON-STANDARD SLABS, UPON COMPLETION BY THE CONTRACTOR A SLAB LAYOUT WILL BE ADDED WITH SLAB DIMENSIONS TO INCLUDE BUT NOT BE LIMITED TO THE TABLE SHOWN BELOW.

	CORRIDOR	STATION NUMBER	MAINLINE LANE NO.	RAMP ID.	RAMP LANE NO.	PLAZA NO.	PLAZA LANE NO.	MARK NO.	LANE TYP.	VARIABLES (FT.) AB (FT.)	AC (FT.)	BD (FT.)	CD (FT.)	AB* SIDE	BD* SIDE	CD* SIDE	AC* SIDE	AREA (SQ.FT.)	VOLUME (CU. FT.)	WEIGHT (TONS)	DIAGONALS (FT.) AD	BC
EXAMPLE																							

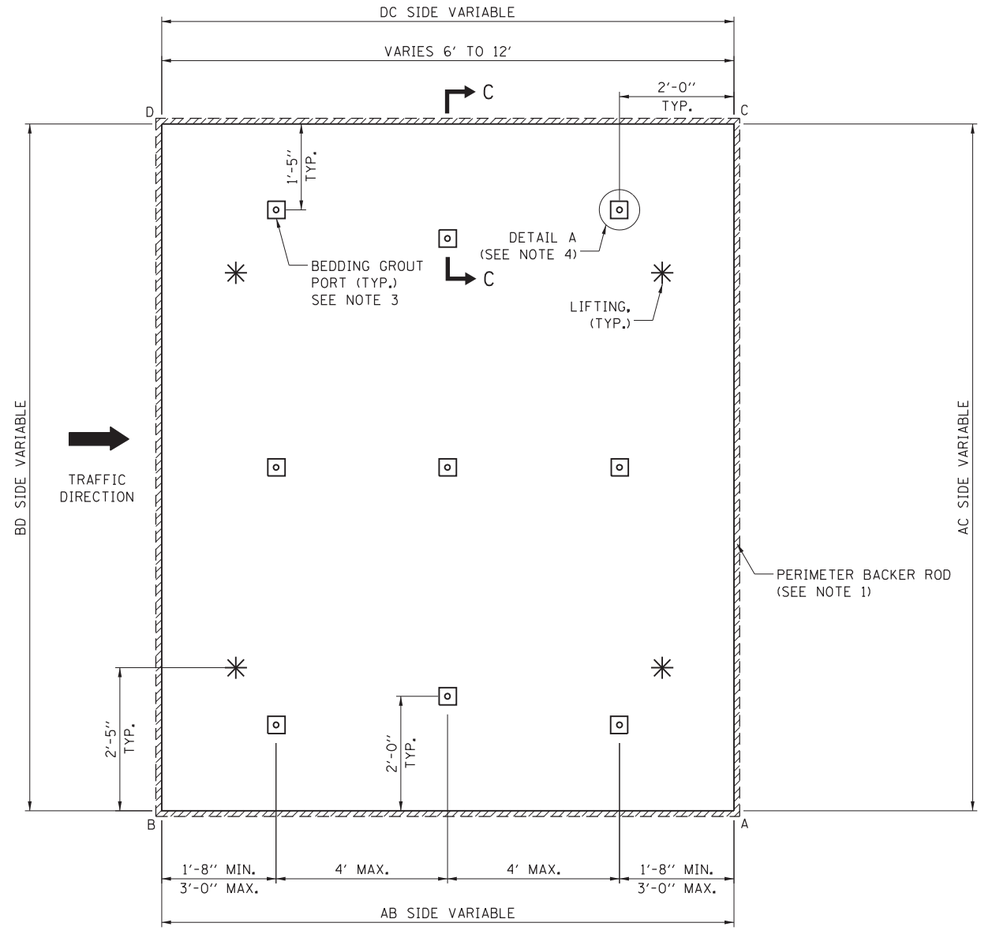
MAINLINE LANE NO.: LANE NO 1 IS ADJACENT TO MEDIAN SHOULDER.
RAMP LANE NO.: LANE NO 1 IS ADAJACENT TO THE BUILDING
PLAZA LANE NO.: LANE NO 1 IS ADAJACENT TO THE BUILDING
MARK NO.: EACH PANEL SHALL BE INDIVIDUALLY MARKED FOR CORRECT PLACEMENT.
LANE TYP.: "OUT" IN THIS COLUMN INDICATES OUTSIDE LANE.
"MID" IN THIS COLUMN INDICATES MIDDLE LANE.
"IN" IN THIS COLUMN INDICATES INSIDE LANE
"PLAZA" IN THIS COLUMN INDICATES PLAZA LANE.

*LEGEND
DB= DOWEL BAR EMBEDDED
DS= DOWEL SLOT
ST= SLOT OR HOLE FOR STITCHED TIE BAR
RD= FIELD RETROFITTED DOWEL BARS



LAYOUT FOR CUSTOM SLABS

LAYOUT KEY



LAYOUT DETAIL FOR CUSTOM SLABS 6'-12' IN LENGTH (VARIED WIDTH**)

**FOR TRAPEZOID SLABS MINIMUM WIDTH IS 2 FT. WITH MAXIMUM WIDTH OF 16 FT.

NOTES:

1. A FOAM BACKER ROD SHALL BE PLACED AROUND THE OUTSIDE PERIMETER OF THE SLAB AT THE BOTTOM OF THE JOINTS BEFORE THE SLAB HAS BEEN SET AND BEFORE BEDDING GROUT OR POLYURETHANE LEVELING FILL IS APPLIED. THE BACKER ROD SHALL NOT BE REQUIRED WHEN ANY SLAB IS LEVELED WITH A FLOWABLE FILL.
2. EITHER SINGLE DIAMOND BLADED SAWS OR DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE THE SAW CUTS PERPENDICULAR TO THE TRANSVERSE (NONSKEWED) JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE SPECIFIED TOLERANCES.
3. SEE NOTE 8 ON SHEET 1 FOR LOCATING BEDDING GROUT PORTS.
4. SEE SHEET 7 FOR SECTION DETAILS.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-03

INSTALLATION GENERAL NOTES

ALIGNMENT:

1. WHEN THE TRANSVERSE JOINTS OF ANY PRECAST SLAB CAN NOT BE ALIGNED WITH TRANSVERSE JOINTS IN ADJACENT LANES, A MINIMUM 2'-0" OFFSET BETWEEN JOINTS SHALL BE PROVIDED.

2. THE LONGITUDINAL JOINT OF ANY ISOLATED OR CONSECUTIVE STANDARD PRECAST SLAB MUST BE ALIGNED TO BE PARALLEL WITH EXISTING LONGITUDINAL JOINTS. NO LONGITUDINAL OFFSETS SHALL BE ALLOWED. THE WIDTH OF ANY OF THE STANDARD PRECAST SLABS SHALL BE SAW CUT ON-SITE TO BE ALIGNED WITH THE EXISTING LONGITUDINAL JOINTS IN ADJACENT LANES OF EXISTING CONCRETE PAVEMENTS. THE WIDTH OF THE PRECAST SLAB SHALL BE NO MORE THAN ½ INCH LESS THAN THE WIDTH OF THE EXISTING SLAB BEING REPLACED. IF A STANDARD SLAB DOES NOT COMPLY WITH TOLERANCES FOR MAXIMUM AND MINIMUM WIDTHS FOR A DESIGNATED LOCATION, THEN A CUSTOM SLAB SHALL BE REQUIRED TO BE PRODUCED AND PLACED.

3. THE TRANSVERSE JOINT OF ANY PRECAST SLAB SHALL BE NO LESS THAN 4'-0" DISTANCE FROM AN EXISTING TRANSVERSE JOINT THAT REMAINS, OR NO LESS THAN 2'-0" DISTANCE PAST ANY EXISTING TRANSVERSE JOINT THAT IS REMOVED AND REPLACED WITH A PRECAST SLAB.

4. PRIOR TO THE PLACEMENT OF AN ISOLATED STANDARD PRECAST SLAB IN A MIDDLE LANE, THE WIDTH BETWEEN EXISTING LONGITUDINAL CONCRETE PAVEMENTJOINTS SHALL BE MEASURED BY THE CONTRACTOR UNDER MAINTENANCE OF TRAFFIC PROVIDED BY THE CONTRACTOR. ONLY APPROXIMATE WIDTHS SHALL BE MEASURED BY AND PROVIDED BY THE DESIGNER FOR BIDDING PURPOSES. THE CONTRACTOR'S WIDTH MEASUREMENTS SHALL BE USED TO DETERMINE THE NEED FOR ANY ON-SITE SAWCUTS OF THE LONGITUDINAL EDGES TO FIT THE OPENING AND TO ALIGN THE SAW CUT EDGE(S) WITH ANY EXISTING LONGITUDINAL JOINTS. THE LONGITUDINAL EDGES OF OF ANY STANDARD SLAB SHALL NOT BE SAW CUT MORE THAN 6 INCHES OFF THE ORIGINAL EDGE. NO NEW LONGITUDINAL JOINT SHALL BE ALLOWED INSIDE THE EXISTING JOINT BY MORE THAN ⅜ INCH. IF THESE TOLERANCES CAN NOT BE MET, THEN A CUSTOM SLAB SHALL BE REQUIRED. FOR ISOLATED STANDARDS SLABS PLACED IN THE OUTSIDE OR INSIDE LANES, THE NEW CONCRETE LONGITUDINAL JOINT SHALL MATCH THE EXISTING JOINT. THE STANDARD PRECAST SLAB MAY EXTEND INTO THE EXISTING BITUMINUS SHOULDERS NO MORE THAN 6 INCHES TO ALLOW FOR PROPER ALIGNMENT OF THE CONCRETE JOINTS. THE ONLY ALTERNATIVE TO ON-SITE SAW CUTTING OF ISOLATED STANDARD SIZES PRE-FABRICATED SLABS IS TO DESIGN AND FABRICATE EACH SLAB, TAKING WIDTH MEASUREMENTS AT THE BEGINNING OF A PROJECT AND THEN FABRICATING THE SLAB TO FIT THE SPECIFIC OPENING DIMENSIONS.

5. FOR STANDARD SLAB PLACEMENTS, A TEMPLATE SUPPLIED BY THE PRECAST FABRICATOR SHALL BE USED TO LOCATE THE PERIMETER SAW CUTS FOR THE SLAB. THE TEMPLATE MAY BE USED TO MARK LONGITUDINAL EDGE SAW CUT LOCATIONS ON A PRECAST SLAB TO FIT THE SAME PATCH OPENING THAT THE TEMPLATE WAS USED FOR TO LOCATE A PERIMETER SAW CUT. IF THE SLAB DOWEL BAR IS RETROFITTED OR FABRICATED FOR INSERTED DOWELS, THE TEMPLATE MAY ALSO BE USED FOR THE EMBEDDED /SLOTTED DOWEL BAR LOCATIONS TO BE RETROFITTED OR INSERTED INTO EXISTING PAVEMENT.

LOAD TRANSFER:

6. ACROSS STANDARD SLABS

   A. THE EMBEDDED DOWEL BARS OF ISOLATED STANDARD PRECAST SLABS SHALL BE RETROFITTED INTO EXISTING CONCRETE PAVEMENT IN ACCORDANCE WITH DETAIL D (SEE SHEET 14).

   B. THE EMBEDDED DOWEL BARS OF CONSECUTIVE STANDARD SLABS SHALL BE:
      (i) RETROFITTED INTO THE EXISTING CONCRETE PAVEMENT AT THE LOCATION OF THE FIRST SLAB PLACEMENT IN ACCORDANCE WITH DETAIL D (SEE SHEET 14).
      (ii) RETROFITTED INTO THE PREFORMED SLOTS OF ADJACENT PRECAST SLABS IN ACCORDANCE WITH DETAIL E (SEE SHEET 15).
      (iii) EITHER FULLY RETROFITTED INTO THE PREFORMED SLOT OF THE LAST INSTALLED CONSECUTIVE PRECAST SLAB AND THE ADJACENT CONCRETE PAVEMENT IN ACCORDANCE WITH DETAIL F (SEE SHEET 16), OR PARTIALLY RETROFIT AN EMBEDDED DOWEL BAR OF A STANDARD ISOLATED SLAB INTO ADJACENT PAVEMENT AS THE LAST INSTALLED CONSECUTIVE PRECAST SLAB IN ACCORDANCE WITH DETAIL D (SEE SHEET 14).

   C. FOR PRECAST STANDARD SLABS WITHOUT EMBEDDED DOWEL BARS AND WITHOUT NARROW MOUTH PREFORMED SLOTS FOR DOWEL INSERTIONS, THE DOWEL BARS SHALL BE FULLY RETROFITTED ACROSS ALL TRANSVERSE JOINTS IN THE FIELD IN ACCORDANCE WITH DETAIL C (SEE SHEET 13). THE LOCATIONS AND SPACING OF ALL FIELD RETROFITTED DOWEL BARS SHALL COMPLY WITH THE SPECIFIED TOLERANCES AS SHOWN ON SHEETS 4 AND 5.

   D. FOR PRECAST STANDARD SLABS WITH LONG AND NARROW MOUTH PREFORMED SLOTS AS SHOWN ON SHEET 6, THE LOCATIONS FOR PREDRILLED HOLES FOR DOWEL BAR INSERTIONS SHALL BE ALIGNED WITH THE PREFORMED SLOTS IN THE SPECIFIC PANEL BEING PLACED. ONLY GANG DRILLS WILL BE USED TO DRILL THE HOLES. THE HOLES SHALL BE PARALLEL TO THE GRADE AND CENTERLINE OF THE PAVEMENT WITH A TOLERANCE OF ⅛ INCH IN 12 INCHES. THE DRILLING OPERATION SHALL NOT CRACK OR SPALL THE PAVEMENT. BEFORE SLAB PLACEMENT, THE DOWEL BARS SHALL BE PLACED WITHIN THE ELONGATED SLOTS AND THE PREDRILLED HOLES THOROUGHLY CLEANED OF DRILLING DEBRIS. AFTER SLAB PLACEMENT, THE DOWEL BARS WILL BE SLID INTO THE PREDRILLED HOLES AND EPOXIED IN ACCORDANCE WITH ARTICLE 442.06(a)(2) OF THE STANDARD SPECIFICATIONS WITH RETENTION DISKS OR WASHERS PLACED AGAINST THE FACE OF THE SLAB. SEE DETAIL G OF SHEET 17. IMMEDIATELY PRIOR TO FILLING THE PREFORMED SLOT WITH BACKFILL GROUT, THE EXPOSED ENDS OF THE DOWEL BARS SHALL BE CLEANED AND LIGHTLY OILED IN SUCH A MANNER AS TO NOT CONTAMINATE THE SURFACE OF ANY CLEANED SLOT AND THE FOAM CORE BOARD SHALL BE INSERTED AT THE FACE OF THE ADJACENT SLAB.

7. ACROSS CUSTOM MADE SLABS

   A. THE DOWEL BARS OF CUSTOM DESIGNED PRECAST SLABS PLACED CONSECUTIVELY, PLACED ON WARPED GRADES, OR PLACED ON RAMPS SHALL BE FULLY RETROFITTED ACROSS THE JOINT IN THE FIELD IN ACCORDANCE WITH DETAIL C (SEE SHEET 13). FOR ALL SUCH CUSTOM SLABS, THE DOWELS BETWEEN ANY EXISTING CONCRETE PAVEMENT AND ANY ADJACENT PRECAST SLABS, AND BETWEEN CONSECUTIVELY PLACED CUSTOM PRECAST SLABS SHALL BE 1'-0" ON CENTER ACROSS THE ENTIRE JOINT.

   B. THE DOWEL BARS OF CUSTOM DESIGNED ISOLATED PRECAST SLABS PLACED ON TANGENT MAINLINE PAVEMENT FOR MID SLAB CRACK REPAIR OR FOR JOINT REPLACEMENT CAN BE EITHER RETROFITTED ACROSS THE JOINT IN ACCORDANCE WITH DETAIL C (SEE SHEET 13), OR FULLY INSERTED INTO THE ADJACENT PAVEMENT IN ACCORDANCE WITH DETAIL G (SEE SHEET 17). THE LOCATIONS AND SPACING OF ALL FIELD RETROFITTED OR FIELD INSERTED DOWEL BARS SHALL COMPLY WITH THE SPECIFIED TOLERANCES AS SHOWN ON SHEETS 4 AND 5. FIELD INSERTION OF DOWEL BARS SHALL BE IN ACCORDANCE WITH NOTE 6(D) ABOVE.

   C. NO END DOWEL BARS SHALL BE RETROFITTED OR INSERTED WITHIN 8" OR NO MORE THAN 1'-7" FROM THE CORNER OF THE PRECAST SLAB OR ADJOINING CONCRETE PAVEMENT SLAB THAT EXISTS.

LONGITUDINAL TIE BAR STITCHING:

8. THE LOCATIONS OF LONGITUDINAL TIE BARS SHALL BE DETERMINED BASED ON THE CRITERIA THAT LONGITUDINAL TIES SHALL BE REQUIRED FOR ANY CLASS B FULL DEPTH REPAIR AND PRECAST REPAIR GREATER THAN 20 FT IN LENGTH OR WITH ANY PRECAST REPAIR THAT REQUIRES MORE THAN 3 CONSECUTIVE PRECAST SLABS.

9. THE SPACING BETWEEN TIE BARS SHALL BE NO LESS THAN 24 INCHES. TIE BAR INSERTIONS SHALL BE NO LESS THAN 24 INCHES FROM ANY EXISTING TRANSVERSE JOINT OR FROM THE LOAD TRANSFER JOINTS OF ANY PLACED PRECAST SLAB OR CAST-IN-PLACE CONCRETE PATCH IN EITHER LANE ADJACENT TO THE LONGITUDINAL JOINT. THE PROCEDURE AND LOCATIONS FOR TIE BAR STITCHING SHALL BE IN ACCORDANCE WITH DETAIL H (SEE SHEET 19).

MATERIALS:

10. FOR GRADE SUPPORTED PRECAST SLABS, THE BEDDING AND UNDERSEALING MATERIAL FOR LEVELING AND SUPPORT SHALL CONSIST OF:

    A. LEVELING SAND SHALL BE 100% CRUSHED FINE AGGREGATE OF AN FA-6, FA-20, OR FA-21 GRADATION AS SPECIFIED IN SECTION 1003 OF THE STANDARD SPECIFICATIONS. THE FINE AGGREGATE SHALL BE REASONABLY FREE FROM AN EXCESS OF SOFT AND UNSOUND PARTICLES AND OTHER OBJECTIONABLE MATTER. THE TYPICAL THICKNESS OF THE LEVELING SAND LAYER SHALL BE APPROXIMATELY ¼ INCH WITH A MAXIMUM THICKNESS OF 1 INCH.

    B. FOR GRADE SUPPORTED SLABS, UNDERSEALING GROUT SHALL BE USED AFTER SLAB INSTALLATION TO FILL ALL VOIDS BENEATH THE PRECAST PANELS. THE MIXTURE USED FOR UNDERSEALING GROUT SHALL CONSIST OF PORTLAND CEMENT, FLY ASH, GROUND GRANULATED BLAST FURNACE SLAG (OPTIONAL), A SUPERPLASTICIZER, AND WATER ALL IN ACCORDANCE WITH DIVISION 1000 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT THE PROPOSED MIX DESIGN FOR UNDERSEALING GROUT TO THE ENGINEER FOR ILLINOIS TOLLWAY APPROVAL PRIOR TO PLACEMENT. THE UNDERSEALING GROUT PRODUCED SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
       (i) THE UNDERSEALING GROUT SHALL REMAIN FLUID AND NOT EXHIBIT A RESISTANCE TO FLOW FOR A MINIMUM OF ONE HOUR. THE GROUT MIXTURE SHALL HAVE A FLOW RATE OF 15 TO 25 SECONDS AS MEASURED BY ASTM C 939 TO ENSURE FLUIDITY.
       (ii) THE UNDERSEALING GROUT SHALL ACHIEVE AN INITIAL SET IN LESS THAN 4 HOURS AND A COMPRESSIVE STRENGTH AS MEASURED BY ASTM C 942 OF 300 PSI BEFORE OPENING THE SLAB TO TRAFFIC AND A COMPRESSIVE STRENGTH OF 500 PSI IN 12 HOURS.

11. FOR PRECAST SLABS SUPPORTED AND LEVELED BY FLOWABLE FILL PLACED BEFORE SLAB INSTALLATION, THE FLOWABLE FILL SHALL CONSIST OF PORTLAND CEMENT, FLY ASH, COARSE AND/OR FINE AGGREGATES, WATER, AND AIR ENTRAINING ADMIXTURE (OPTIONAL). THE CONTRACTOR SHALL SUBMIT THE PROPOSED MIX DESIGN FOR FLOWABLE FILL TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT. THE FLOWABLE FILL PRODUCED SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
    i) PORTLAND CEMENT SHALL BE TYPE 1 CEMENT IN ACCORDANCE WITH SECTION 1001 OF THE STANDARD SPECIFICATIONS.
    ii) FLY ASH SHALL BE IN ACCORDANCE WITH SECTION 1010 OF THE STANDARD SPECIFICATIONS.
    iii) FINE AGGREGATE SHALL BE IN ACCORDANCE WITH SECTION 1003 OF THE STANDARD SPECIFICATIONS.
    iv) COARSE AGGREGATE, IF USED, SHALL BE IN ACCORDANCE WITH SECTION 1004 OF THE STANDARD SPECIFICATIONS WITH A MAXIMUM AGGREGATE SIZE OF 12.5 MM.
    v) IF AN AIR ENTRAINMENT ADMIXTURE IS USED, THE AIR CONTENT OF THE FLOWABLE FILL SHALL NOT EXCEED 35% OF THE FLOWABLE FILL VOLUME.
    vi) THE COMPRESSIVE STRENGTH OF THE FLOWABLE FILL MIXTURE SHALL NOT BE LESS THAN 50 PSI AT 3 DAYS, NOR LESS THAN 75 PSI OR GREATER THAN 150 PSI AT 28 DAYS.
    vii) THE FINAL SET TIME SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C403 ON A TRIAL BATCH SPECIMEN.
    viii) THE MAXIMUM THICKNESS OF THE LEVELING FILL SHALL BE 1 INCH.

12. FOR PRECAST SLABS SUPPORTED AND LEVELED BY HIGH-DENSITY FOAM PLACED AFTER SLAB INSTALLATION, THE HIGH-DENSITY FOAM SHALL BE EXPANDING POLYURETHANE FOAM HAVING A WATER INSOLUBLE DILUENT AND SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

i) DENSITY (LBS./CU. FT)-AIR RISE	6.0 MIN.
TENSILE STRENGTH (PSI) ASTM D 1623	100 MIN.
ELONGATION (%)	5.1
COMPRESSIVE STRENGTH (PSI) ASTM D 1621 (AT YIELD	100 MIN.
VOLUME CHANGE (% OF ORGINAL)	0

THE MANUFACTURER SHALL PROVIDE DOCUMENTATION THAT THE LOT(S) OF FOAM MEETS THE SPECIFIED PROPERTIES. MANUFACTURER'S CERTIFICATION SHALL LIST LOT NUMBER(S) AND DOCUMENTATION OF COMPLIANCE WITH THE SPECIFICATION.
ii) THE MAXIMUM THICKNESS OF THE HIGH DENSITY FOAM SHALL BE 1 INCH.

13. HARDWARE GROUT/ADHESIVES

    A. FOR DOWEL BAR RETROFITS OR INSERTIONS, FOR THE FILLING OF ANY GROUT PORT HOLES USED FOR HIGH DENSITY FOAM INJECTIONS, FOR THE FILLING OF DOWEL SLOTS AND FOR THE FILLING OF RECESSED LIFTING DEVICES, THE BACKFILL MATERIAL SHALL BE:
       1) FIVE STAR HIGHWAY PATCH AS MANUFACTURED BY FIVE STAR PRODUCTS INC. FAIRFIELD, CONNECTICUT.
       2) HIGHWAY DB RETROFIT MORTAR AS MANUFACTURED BY DAYTON SUPERIOR, MIAMISBURG, OHIO.
       3) AN ILLINOIS TOLLWAY APPROVED EQUIVALENT THAT HAS BEEN TESTED AS A RAPID SET CONCRETE PATCHING MATERIAL PER THE AASHTO NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM (NTPEP), WHICH CONFORMS TO ASTM C 928. THE GROUT MATERIAL IS REQUIRED TO PROVIDE A COMPRESSIVE STRENGTH OF 4,000 PSI IN 24 HOURS (OPENING TO TRAFFIC AFTER 3,000 PSI) PER ASTM C 39, EXHIBITS EXPANSION OF LESS THAN 0.10 PERCENT PER ASTM C 531, AND HAS A CALCULATED DURABILITY FACTOR OF 90.0 PERCENT MINIMUM AT THE END OF 300 FREEZE-THAW CYCLES PER ASTM C 666. THE PROPOSED MATERIAL SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ANY PLACEMENT.

    B. FOR TIE BAR STITCHING AN APPROVED CHEMICAL ADHESIVE IN ACCORDANCE WITH ARTICLE 1027.01 OF THE STANDARD SPECIFICATIONS SHALL BE USED AS THE ANCHORING MATERIAL FOR STITCHED TIE BARS.

    C. FOR DOWEL BAR INSERTIONS, AN APPROVED CHEMICAL ADHESIVE OR EPOXY IN ACCORDANCE WITH ARTICLE 1027.01 OF THE STANDARD SPECIFICATIONS SHALL BE USED WITH PLACEMENT IN ACCORDANCE WITH ARTICLE 442.06 (a)(2) OF THE STANDARD SPECIFICATIONS WITH RETENTION DISCS OR WASHERS PLACED AGAINST THE FACE OF THE SLAB.

14. EPOXY COATED DOWEL BARS SHALL COMPLY WITH THE REQUIREMENTS OF ARTICLE 1006.06 (b) OF THE STANDARD SPECIFICATIONS. ANY ADDITIONAL MATERIAL REQUIRED FOR DOWEL BAR RETROFITTING SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SPECIAL PROVISION FOR "DOWEL BAR RETROFIT".

15. EPOXY COATED TIE BARS FOR STITCHING SHALL COMPLY WITH THE REQUIREMENTS OF ARTICLE 1006.10 OF THE STANDARD SPECIFICATIONS.

16. THE BACKER ROD USED AS A SEAL RESERVOIR GASKET AROUND THE PERIMETER OF A SLAB, NEAR THE TOP OF THE JOINTS, SHALL BE A CLOSED-CELL, PLASTIC FOAM ROD COMPATIBLE WITH THE SEALANT AND THE ELEVATED TEMPERATURES OF FINAL JOINT SEALANT APPLICATION. A CLOSED CELL PLASTIC FOAM BACKER ROD OF ⅜" DIAMETER SHALL BE PINNED OR NAILED TO THE FINISHED BASE AROUND THE PERIMETER OF EACH OPENING BEFORE THE PANELS ARE SET.

EQUIPMENT:

17. FOR BASE PREPARATION, A MECHANICALLY-CONTROLLED SCREEDING DEVICE OR STRAIGHTEDGE DEVICE CAPABLE OF GRADING FULLY COMPACTED FINE AGGREGATE USED AS THE LEVELING SAND TO A TOLERANCE OF ⅛ INCH PER 6 FT. LENGTHS OF PLACEMENT.

18. CHIPPING HAMMERS SHALL BE HAND HELD AND HAVE A MAXIMUM WEIGHT OF 30 LBS. PRIOR TO ANY HANDLE MODIFICATION WHERE APPLICABLE.

19. WITH ANY FIELD RETROFITTING OF DOWEL BARS, A TEMPLATE SHALL BE ROUTINELY USED FOR ALL STANDARD SLABS IN ORDER TO LOCATE AND ALIGN THE SAWCUTS CONSISTENTLY. EITHER SINGLE DIAMOND BLADED SAWS OR DIAMOND BLADED GANG SAWS SHALL BE USED TO MAKE SAW CUTS PERPENDICULAR TO THE TRANSVERSE (NONSKEWED) JOINT LINE TO ALLOW FOR DOWEL BAR PLACEMENTS WITHIN THE FOLLOWING TOLERANCES:
    ± ½" OF THE MIDDLE OF THE CONCRETE SLAB DEPTH.
    ± ½" OF BEING CENTERED OVER THE TRANSVERSE JOINT
    ± ¼" FROM PARALLEL TO THE CENTERLINE OVER 12 INCHES OF THE BAR
    ± ¼" FROM PARALLEL TO THE ROADWAY SURFACE OVER 12 INCHES OF THE BAR
SAWCUTS SAWED ACROSS SKEWED JOINTS SHOULD ALLOW EQUAL LENGTH OF THE DOWEL BAR TO BE PLACED ACROSS THE TRANSVERSE JOINT. THE ALIGNMENT OF SAWCUTS MUST BE PARALLEL TO THE ROADWAY CENTERLINE, REGARDLESS OF TRANSVERSE JOINT SKEW.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-03

INSTALLATION GENERAL NOTES

20. WITH ANY FIELD INSERTIONS OF DOWEL BARS INTO PREDRILLED HOLES, THE DRILLING MACHINE SHALL BE IN ACCORDANCE WITH ARTICLE 442.03(g) OF THE STANDARD SPECIFICATIONS. HAND HELD DRILLING TOOLS WILL NOT BE ALLOWED.

21. THE COMPRESSOR FOR AIR BLASTING SHALL HAVE A MINIMUM CAPACITY OF 120 CFM. THE COMPRESSED AIR SHALL BE FREE FROM OIL AND OTHER CONTAMINANTS.

22. CONSOLIDATION EQUIPMENT USED TO CONSOLIDATE THE CONCRETE REPAIR MATERIAL IN THE RETROFITTED DOWEL BAR SLOTS SHALL BE INTERNAL VIBRATORS WITH A MAXIMUM DIAMETER OF 1 INCH AND SHALL HAVE A RESILIENT COVERING THAT WILL NOT DAMAGE THE EPOXY COATED REINFORCEMENT DURING USE. ANY VIBRATORS OR RODS USED FOR CONSOLIDATION OF THE REPAIR MATERIAL FOR NARROW MOUTH SLOTS SHALL HAVE A DIAMETER OF LESS THAN 1 INCH.

23. BATCHING EQUIPMENT FOR FLOWABLE FILL SHALL HAVE DEVICES DESIGNED TO MEASURE THE SPECIFIED QUANTITIES OF EACH COMPONENT MATERIAL, AND MIXING SHALL BE OF SUFFICIENT DURATION TO INSURE UNIFORM CONSISTENCY OF THE MIXTURE. NO WATER WILL BE ADDED TO THE FLOWABLE FILL MIXTURE AFTER BATCHING. WATER CONTENT SHALL BE MAINTAINED SUCH THAT COMPRESSIVE STRENGTHS ARE ACHIEVED AND A UNIFORM, FLOWABLE MIXTURE IS DEVELOPED THAT IS ESSENTIALLY SELF-LEVELING WHEN PLACED.

24. EQUIPMENT FOR HIGH-DENSITY FOAM INJECTION SHALL INCLUDE A TRUCK MOUNTED PUMPING UNIT CAPABLE OF INJECTING THE POLYURETHANE BETWEEN THE CONCRETE AND THE SLAB SUBBASE. THE PUMP SHALL BE CAPABLE OF CONTROLLING THE RATE OF RISE OF THE PAVEMENT SLAB. A LEVELING UNIT SHALL BE PROVIDED TO ENSURE THE SLABS ARE RAISED TO AN EVEN PLANE, WITH VERTICAL ELEVATION DIFFERENCE ACROSS ANY CORNER NOT TO EXCEED 1/4 INCH.

25. EQUIPMENT FOR MIXING AND PUMPING ANY GROUT/ADHESIVE MATERIALS FOR BEDDING THE SLABS, RETROFITTING DOWEL BARS, OR CROSS STITCHING TIE BARS SHALL BE IN ACCORDANCE WITH THE MATERIAL MANUFACTURER'S INSTRUCTIONS AND THE SPECIFICATIONS.

REMOVAL/INSTALLATION:

26. PERIMETER SAWCUTTING OF THE REMOVAL AREA AND SAWCUTTING OF THE DOWEL BAR SLOTS SHALL NOT BE CARRIED OUT MORE THAN (1) WEEK IN ADVANCE OF THE EXPECTED DATE OF REPAIR. THE CONTRACTOR SHALL USE A TEMPLATE TO PRECISELY DELINEATE THE LIMITS OF THE AREAS TO BE REPAIRED AS DEFINED ON THE CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS. WITHIN A TOLERANCE OF 1/2 INCH. REPAIRS SHALL BE NO LESS THAN THE FULL WIDTH OF A LANE AND THE FULL DEPTH OF CONCRETE.

27. REMOVAL OF EXISTING PAVEMENT SHALL BE IN ACCORDANCE WITH SECTION 440 OF THE STANDARD SPECIFICATIONS EXCEPT AS FOLLOWS:

    A. THE OUTER LIMITS OF THE REPAIR AREA WILL BE SAWCUT FULL DEPTH AND SHALL NOT EXTEND (OVERCUT) BY MORE THAN 10 INCHES INTO THE ADJACENT CONCRETE THAT IS TO REMAIN IN PLACE. OVERCUTS SHALL BE FILLED WITH A PRODUCT ACCEPTABLE TO THE ILLINOIS TOLLWAY. THE OUTER LIMITS FOR REPAIR SHALL BE MARKED OUT BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO ANY SAWCUTTING.

    B. REMOVAL OF CONCRETE WITHIN THE PERIMETER SAWCUTS SHALL BE BY THE LIFTOUT METHOD, AND CONCRETE BETWEEN SAWCUTS FOR DOWEL BAR RETROFITS SHALL BE REMOVED USING JACKHAMMER AND HAND TOOLS. THE CONTRACTOR SHALL ENSURE THAT REMOVALS ARE CARRIED OUT WITHOUT DAMAGING THE ADJACENT CONCRETE PAVEMENT OR ASPHALT SHOULDER OR DISTURBING THE UNDERLYING BASE. HEAVY BREAKING EQUIPMENT SUCH AS HOE RAMS SHALL NOT BE USED IN THE REMOVAL OPERATION. THE CONCRETE PAVEMENT SHALL NOT BE BROKEN IN PLACE.

    C. IF DURING THE REMOVAL PROCESS THE ADJACENT CONCRETE IN THE SAME LANE OR IN AN ADJACENT LANE THAT CAN ONLY BE REPAIRED DURING NIGHT TIME LANE CLOSURES, IS DAMAGED OR CRACKED DUE TO THE CONTRACTOR'S REMOVAL PROCEDURE, THE DAMAGED AREA SHALL BE CUT BACK FULL DEPTH TO SOUND CONCRETE AND REPLACED WITH PRECAST SLABS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY. IF CONCRETE IN THE ADJOINING LANE IS DAMAGED DURING THE REMOVAL PROCESS AND WEEKEND REPAIRS ARE POSSIBLE, THE DAMAGED CONCRETE SHALL BE REPAIRED IN ACCORDANCE SECTION 442 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY. ASPHALT SHOULDER DAMAGED DURING THE REMOVAL PROCESS SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY. THE CONTRACTOR SHALL PROVIDE A PROPOSAL FOR REPAIRS TO THE ILLINOIS TOLLWAY FOR APPROVAL.

    D. DISPOSAL OF EXCAVATED MATERIALS FROM THE REMOVAL OF CONCRETE AND FROM ANY BASE COURSE RESTORATION SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

    E. ALL SLURRY FROM SAW CUTTING OPERATIONS SHALL BE THOROUGHLY SCRAPED AND REMOVED FROM THE PAVEMENT SURFACE BEFORE THE PAVEMENT IS OPENED TO TRAFFIC. DISPOSAL OF SLURRY SHALL BE IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

28. IF THE ENGINEER DETERMINES THAT THE EXISTING GRANULAR SUBBASE IS UNSUITABLE FOR THE INTENDED PURPOSE, THE CONTRACTOR SHALL REMOVE THE UNSUITABLE MATERIAL IN THE PAVEMENT REMOVAL AREAS TO THE DEPTH SPECIFIED BY THE ENGINEER AND NO LESS THAN 2 INCHES. THE MATERIAL REMOVED SHALL BE REPLACED WITH AN EQUAL THICKNESS OF NEW MATERIAL PLACED AND COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ILLINOIS TOLLWAY SPECIAL PROVISION FOR "AGGREGATE FOR BASE COURSE RESTORATION, SPECIAL".

29. LEVELING MATERIAL PLACED BEFORE SLAB INSTALLATION SHALL BE EITHER A FLOWABLE FILL OR A FINE AGGREGATE MEETING THE REQUIREMENTS OF THIS CONTRACT DOCUMENT. FLOWABLE FILL SHALL BE USED AS A LEVELING MATERIAL ONLY ON TANGENT PAVEMENT SECTIONS. GRADE CONTROL SHALL BE ESTABLISHED FOR ALL LEVELING MATERIAL USING STRINGLINES, LASER GUIDANCE, OR OTHER APPROVED METHODS. THE TEMPERATURE OF THE FLOWABLE FILL MIXTURE AS MANUFACTURED AND DELIVERED SHALL BE AT LEAST 50° F. NONFLOWABLE FILL WILL BE ALLOWED IF THE ANTICIPATED AIR TEMPERATURE WILL BE 36° F OR LESS WITHIN 24 HOURS OF SLAB PLACEMENT. THE FLOWABLE FILL MUST OBTAIN FINAL SET BEFORE THE PAVEMENT MAY BE OPENED TO TRAFFIC.

30. WHEN FLOWABLE FILL IS USED AS THE LEVELING MATERIAL WITH SLAB INSTALLATION. A PERIMETER BACKER ROD WILL NOT BE REQUIRED AROUND THE PERIMETER OF THE SLAB.

31. LEVELING MATERIAL PLACED IMMEDIATELY AFTER SLAB INSTALLATION SHALL ONLY BE A HIGH-DENSITY POLYURETHANE FOAM MEETING THE REQUIREMENTS OF THIS CONTRACT DOCUMENT. PLACEMENT OF POLYURETHANE FOAM SHALL FILL ALL VOIDS BENEATH THE PRECAST PANELS THAT MAY BE PRESENT AFTER PLACING THE PANELS OVER THE PREPARED SUBBASE AND LEVELING AGGREGATE. PLACEMENT OF THE POLYURETHANE SHALL UTILIZE THE UNDERSLAB GROUT PORT HOLES AS SHOWN ON THE PLANS. THE PORT HOLES ARE TO BE FILLED WITH THE DOWEL BAR BACKFILLING MATERIAL.

32. FOLLOWING PROPER REMOVAL OF EXISTING PAVEMENTS AND ACCEPTABLE BASE PREPARATION/LEVELING, THE CONTRACTOR SHALL HAVE ALL EQUIPMENT REQUIRED FOR PANEL INSTALLATION ON-SITE PRIOR TO BEGINNING PANEL INSTALLATION. LIFTING AND TRANSPORTING EQUIPMENT SHALL NOT DAMAGE THE PREPARED SUBBASE/LEVELING MATERIALS PRIOR TO OR DURING PANEL INSTALLATION. PRIOR TO SLAB INSTALLATION, ALL VERTICAL SURFACES OF SURROUNDING PAVEMENT SHALL BE COATED WITH A BOND BREAKER SUCH AS FORM OIL OR A CURING COMPOUND.

33. PANELS SHALL BE INSTALLED ONE AT A TIME, AND SHALL BE INSTALLED IN SUCH A MANNER THAT THE SUBBASE/LEVELING MATERIAL OR ANY REMAINING PAVEMENT IS NOT DAMAGED DURING INSTALLATION. DURING PLACEMENT OF THE SLABS, USE TIE OFF ROPES TO AVOID CHIPPING OR SPALLING EDGES OF THE PRECAST UNITS. USE WOOD SHIMS OR WEDGES TO GUIDE THE SLAB INTO THE CORRECT POSITION. THE USE OF STEEL PRY BARS THAT CHIP EDGES SHOULD BE AVOIDED.

34. IMMEDIATELY AFTER THE SLAB HAS BEEN SET AND LEVELED, SURVEY THE VERTICAL ELEVATION ACROSS ALL CORNERS TO VERIFY THAT THE VERTICAL DIFFERENCE BETWEEN ADJACENT SLABS ACROSS ANY CORNER DOES NOT EXCEED 1/4 INCH. IF THE DIFFERENCE EXCEEDS 1/4 INCH, THEN THE SLAB SHALL BE REMOVED AND RESET OR THE SURFACE SHALL RECEIVE A CORRECTIVE DIAMOND GRIND AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY AFTER ANY REQUIRED BEDDING GROUT OR LEVELING MATERIAL HAS BEEN PLACED UNLESS COMPLETE PROFILE DIAMOND GRINDING OF THE ENTIRE PAVEMENT IS INCLUDED IN THE CONTRACT.

35. NO CUSTOM SLAB GREATER THAN 6 FT. IN LONGITUDINAL LENGTH SHALL BE SET AND OPENED TO TRAFFIC BEFORE GROUTING IS COMPLETE UNLESS THE SLAB WAS FABRICATED WITH TWO MATS OF STEEL REINFORCEMENT IN ACCORDANCE WITH THE DESIGN REQUIREMENTS SHOWN ON SHEETS 2 AND 3. IF THE SET PRECAST SLAB IS OPENED TO TRAFFIC BEFORE THE SLAB IS DOWEL RETROFITTED, TIE BAR STITCHED, OR UNDERSLAB GROUTED, PLACE INCOMPRESSIBLE SHIMS APPROVED BY THE ENGINEER DURING INSTALLATION IN EACH TRANSVERSE AND LONGITUDINAL JOINT TO CORRECT AND MAINTAIN HORIZONTAL ALIGNMENT OF THE SLABS. THE TOTAL THICKNESS OF SHIMS USED IN ANY JOINT SHALL BE NO MORE THAN 3/8 INCH. BACKFILL MATERIAL MUST BE PLACED WITHIN THREE DAYS OF EACH SLAB'S PLACEMENT. BEFORE OPENING A NON-GROUTED SLAB TO TRAFFIC, BACKFILL THE ASPHALT SHOULDERS TO MAINTAIN HORIZONTAL ALIGNMENT. ANY WIDE MOUTH DOWEL SLOTS LEFT OPEN BEFORE THE SLAB IS OPENED TO TRAFFIC SHALL BE TEMPORARILY FILLED WITH A COMPRESSION SEAL APPROVED BY THE ENGINEER TO WITHIN 1 INCH OF THE PAVEMENT SURFACE. ANY NARROW MOUTH DOWEL SLOTS MAY BE LEFT OPEN AFTER THE SLAB IS OPENED TO TRAFFIC.

36. PRIOR TO DOWEL BAR PLACEMENT, THE TRANSVERSE JOINT SHALL BE CAULKED WITH A SILICONE SEALANT AT THE BOTTOM AND SIDES OF THE SLOT. THE CAULKING FILLER SHOULD NOT BE PLACED ANY FARTHER THAN 1/2 INCH OUTSIDE EITHER SIDE OF THE JOINT, AND APPLIED SUFFICIENTLY TO PREVENT ANY PATCHING MATERIAL FROM ENTERING THE JOINT AT THE BOTTOM OR SIDES OF THE SLOT. EXCESSIVE SEALANT AROUND THE SLOT DOES NOT ALLOW THE CONCRETE PATCHING MATERIAL TO BOND TO THE SIDES OF THE SLOT. BEFORE PLACEMENT, THE DOWEL BARS SHOULD BE LIGHTLY COATED WITH PARTING COMPOUND AND FULLY RETROFITTED DOWEL BARS PLACED ON A CHAIR THAT WILL PROVIDE A MINIMUM 1/2 INCH CLEARANCE BETWEEN THE BOTTOM OF THE DOWEL AND THE BOTTOM OF THE SLOT. FOR ANY DOWEL BARS INSERTED INTO PREDRILLED EPOXIED HOLES, AN APPARATUS CAPABLE OF MAINTAINING VERTICAL ALIGNMENT OF THE DOWEL AND TO PROVIDE A MINIMUM 1/2 INCH CLEARANCE BETWEEN THE BOTTOM OF THE DOWEL AND THE BOTTOM OF THE SLOT SHALL BE PROVIDED BY THE CONTRACTOR. A 3/8 INCH THICK FOAM INSERT SHOULD BE PLACED AT THE MIDDLE OF THE DOWEL TO MAINTAIN THE TRANSVERSE JOINT. THE FOAM INSERT SHOULD FIT TIGHTLY AROUND THE DOWEL, THE BOTTOM, AND THE EDGES OF THE SLOT, AND BE UP TO THE SURFACE OF THE EXISTING CONCRETE SURFACE. THE FOAM INSERT SHOULD BE CAPABLE OF REMAINING IN A VERTICAL POSITION AND HELD TIGHTLY TO ALL EDGES DURING PLACEMENT OF THE PATCH. IF FOR ANY REASON THE FOAM INSERT SHIFT DURING PLACEMENT OF THE CONCRETE PATCHING MATERIAL, THE WORK SHALL BE REJECTED AND REDONE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

37. PLACEMENT OF HARDWARE GROUT/ADHESIVES

    A. DOWEL BARS - THE PLACEMENT OF ANY APPROVED BACKFILL MATERIAL FOR DOWEL BAR RETROFITTING OR FOR DOWEL BAR INSERTIONS SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SPECIAL PROVISION FOR "DOWEL BAR RETROFIT". THE PAVEMENT WILL NOT BE OPENED TO TRAFFIC UNTIL THE BACKFILL MATERIAL AROUND THE PAVEMENT HARDWARE OBTAINS 3,000 PSI COMPRESSIVE STRENGTH. ALL CONCRETE SURFACES WITHIN THE SLOT SHALL BE SOLID, FREE FROM LOOSE OR UNSOUND FRAGMENTS. BEFORE GROUTING, SANDBLAST ALL EXPOSED SURFACES IN THE DOWEL BAR SLOT FOLLOWED BY AIR BLASTING TO REMOVE ANY DUST, RESIDUE OR DEBRIS LEFT IN THE SLOT. UPON COMPLETION OF THE RETROFITTING WORK, THE GROUT OR CONCRETE PATCH MATERIAL SHALL FILL ALL SLOTS TO THE SURFACE OF THE EXISTING PAVEMENTS. ANY SLOTS INSUFFICIENTLY FILLED BELOW EXISTING PAVEMENT SURFACES SHALL BE REDONE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

    B. TIE BARS - A FOAM BOARD GASKET SHALL BE INSERTED INTO THE LONGITUDINAL JOINT AT THE STITCHING LOCATION AND THE TIEBAR HOLE PREDRILLED THROUGHT THE GASKET. AFTER PREDRILLED HOLES ARE AIR BLASTED, PRESSURE INJECT THE APPROVED ADHESIVE INTO THE PREDRILLED HOLES, LEAVING SOME VOLUME FOR THE BAR TO OCCUPY THE HOLE. INSERT THE TIEBAR INTO THE HOLE, LEAVING ABOUT 1 INCH FROM THE TOP OF THE TIE BAR TO THE PAVEMENT SURFACE. REMOVE EXCESS ADHESIVE AND FINISH FLUSH WITH THE PAVEMENT SURFACE.

    C. FILL LIFTING INSERT HOLES AND GROUT PORTS WITH THE APPROVED GROUT USED FOR DOWEL BAR RETROFITTING.

38. PLACEMENT OF UNDERSEALING GROUT SHALL FILL ALL VOIDS BENEATH THE PRECAST PANELS AND GROUT PORT HOLES THAT MAY BE PRESENT AFTER PLACING THE PANELS OVER THE PREPARED SUBBASE AND LEVELING AGGREGATE. PLACEMENT OF THE UNDERSEALING GROUT SHALL UTILIZE THE UNDERSLAB GROUT PORT HOLES AS SHOWN ON THE PLANS. PLACEMENT OF UNDERSEALING GROUT SHALL NOT OCCUR UNTIL AFTER ALL HARDWARE DEVICES ARE PLACED AND GROUTED. IF UNDERSEALING GROUT FILLS ANY LONGITUDINAL JOINT TO WITHIN 9'' OF THE SLAB SURFACE, A 9'' SAW CUT OF THE JOINT SHALL BE REQUIRED DURING INSTALLATION. IF UNDERSEALING GROUT FILLS ANY TRANSVERSE JOINT TO WITHIN 9'' OF THE SLAB SURFACE, THEN A 9'' SAW CUT OF THE JOINT SHALL BE REQUIRED FOLLOWED BY REMOVAL AND FULL RETROFITTING OF ALL SEVERED DOWEL BARS ACROSS THE JOINT.

39. AFTER INSTALLATION AND GROUTING IS COMPLETED ALL LONGITUDINAL AND TRANSVERSE JOINTS SHALL BE SEALED IN ACCORDANCE WITH ARTICLE 420.12 OF THE STANDARD SPECIFICATIONS. REFER TO ILLINOIS TOLLWAY STANDARD DRAWING A1, DETAIL A.

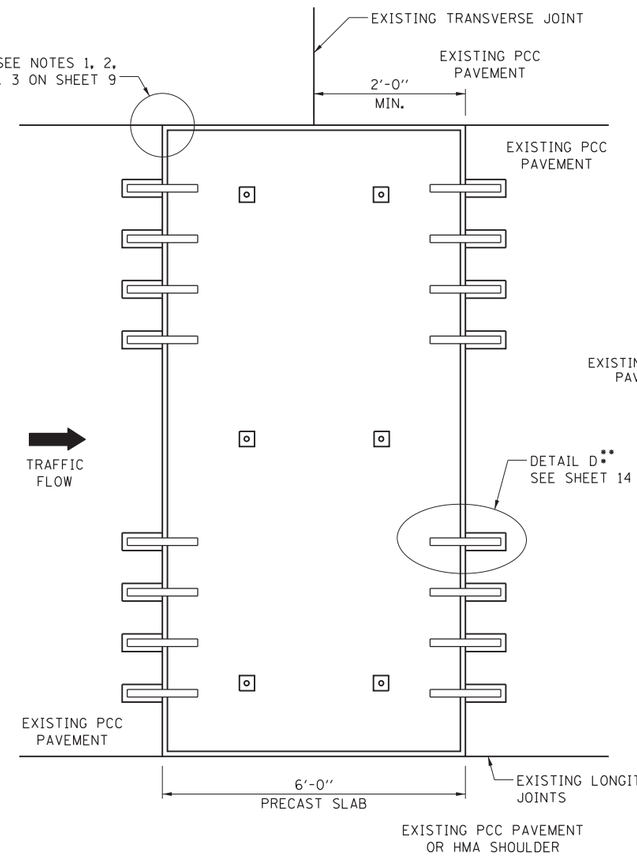
APPROVED Paul Kovacs CHIEF ENGINEER DATE 5-1-2009

Illinois Tollway

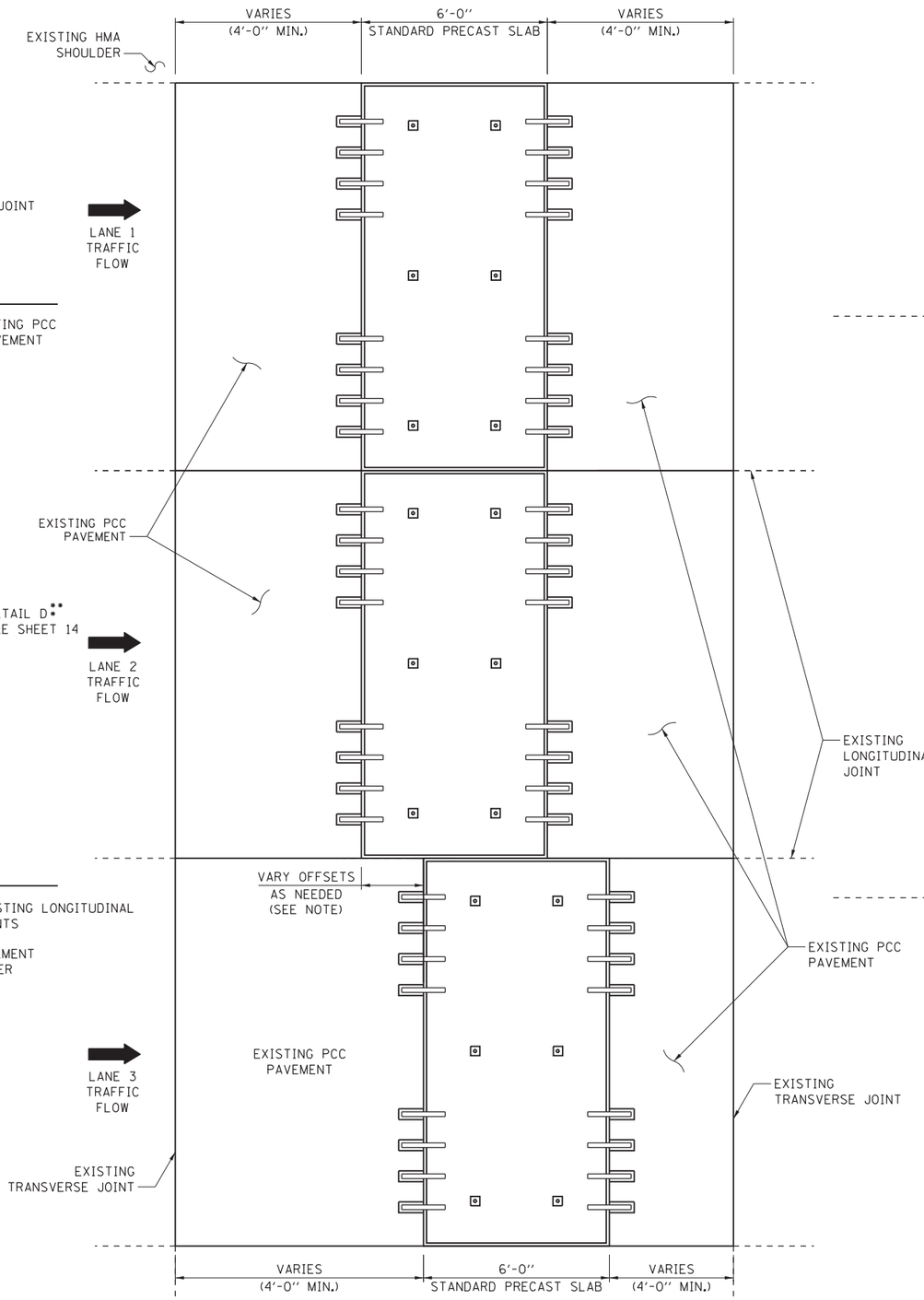
PRECAST PAVEMENT SLABS

STANDARD A18-03

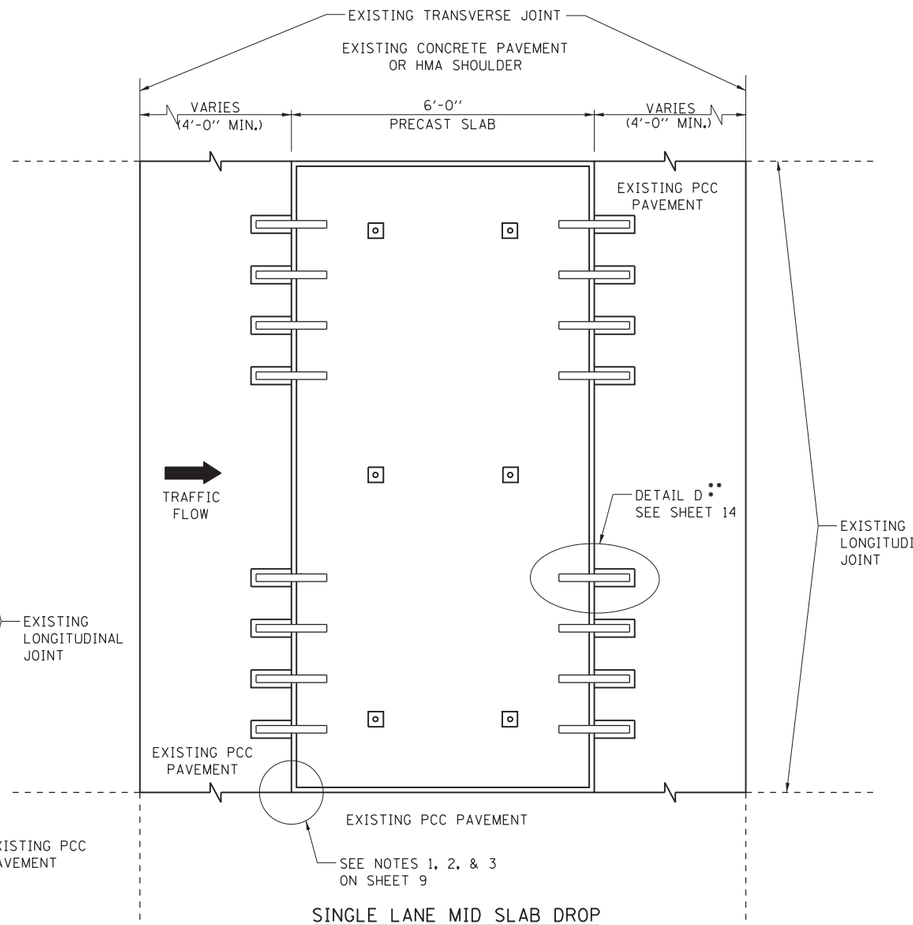
INSTALLATION OF ISOLATED STANDARD PRECAST SLABS



SINGLE LANE JOINT REPLACEMENT DROP IN PANEL FOR STANDARD PRECAST SLABS



MULTIPLE LANE MID SLAB DROP IN PANEL FOR STANDARD PRECAST PANELS



SINGLE LANE MID SLAB DROP IN PANEL FOR STANDARD PRECAST PANELS

NOTE:

WHEN THE TRANSVERSE JOINTS OF ANY PRECAST SLAB CANNOT BE ALIGNED WITH TRANSVERSE JOINTS IN ADJACENT LANES, A MINIMUM 2'-0" OFFSET BETWEEN JOINTS SHALL BE PROVIDED.

• FOR DOWEL BARS FULLY RETROFITTED IN THE FIELD, REFER TO DETAIL C ON SHEET 11.

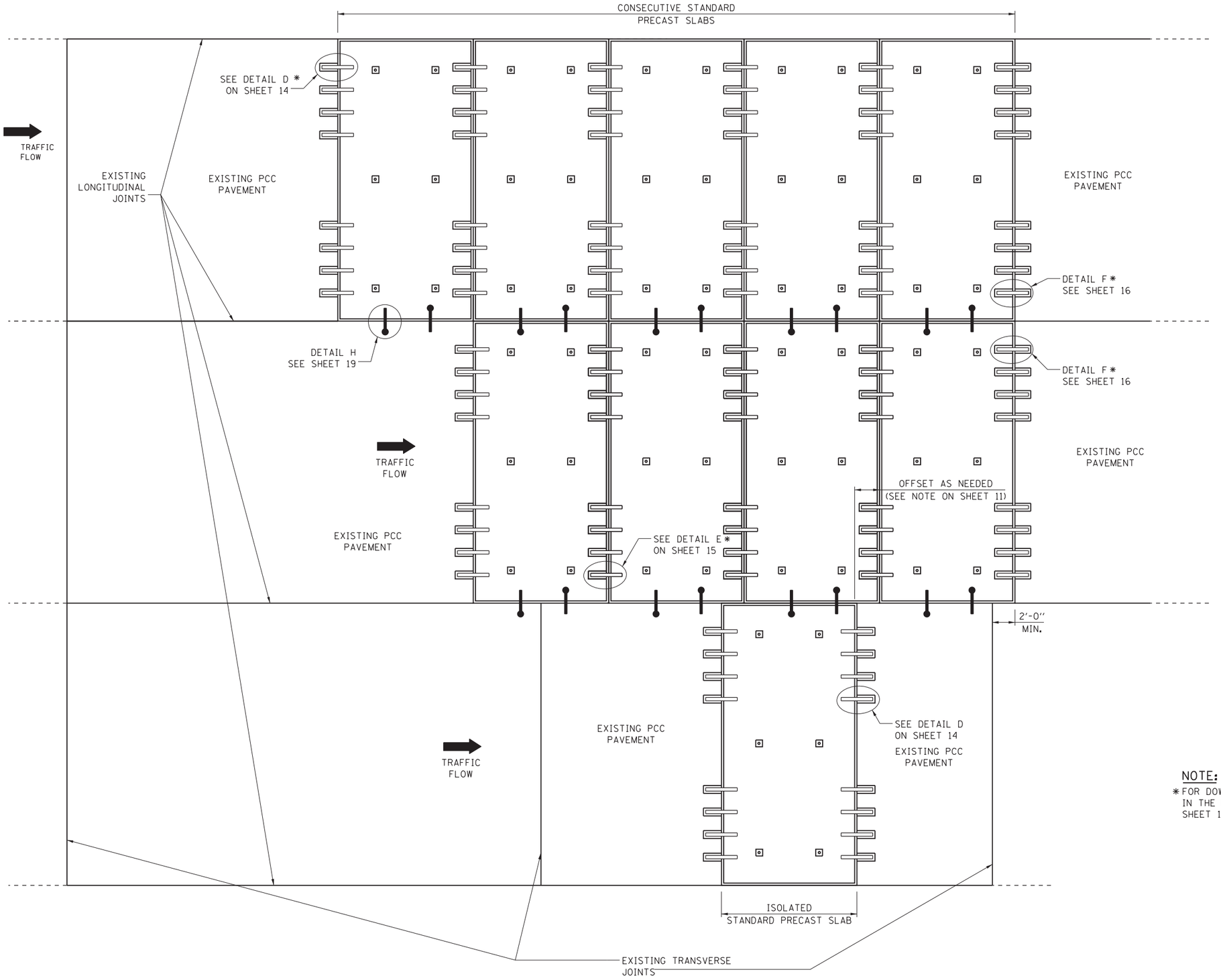
•• FOR DOWEL BARS TO BE SLID INTO PRE-DRILLED HOLES IN THE FIELD, REFER TO DETAIL G ON SHEET 17.

APPROVED Paul Kovacs CHIEF ENGINEER DATE 5-1-2009

Illinois Tollway

PRECAST PAVEMENT SLABS

STANDARD A18-03



NOTE:

* FOR DOWEL BARS FULLY RETROFITTED IN THE FIELD, REFER TO DETAIL C ON SHEET 13.

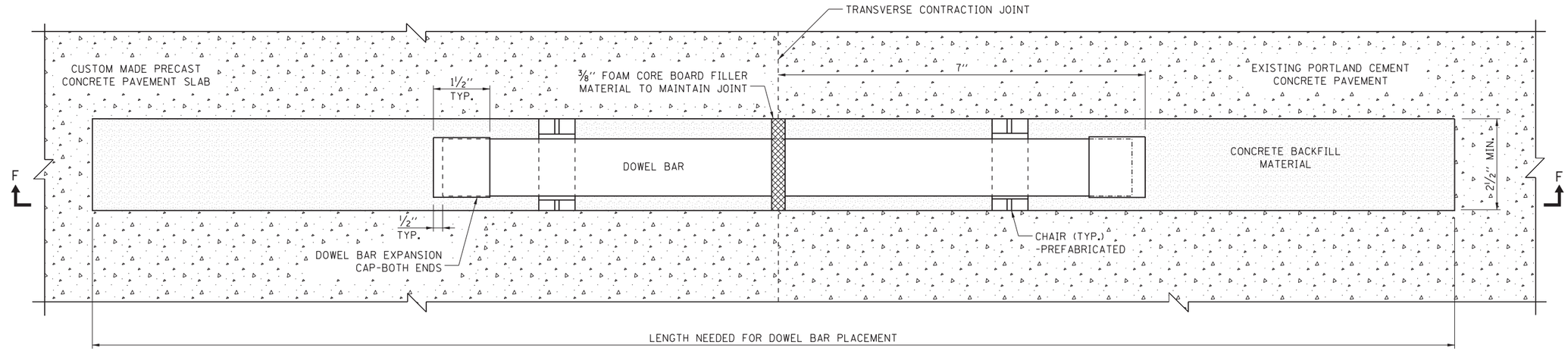
INSTALLATION OF CONSECUTIVE STANDARD PRECAST SLABS

Paul Kovacs
APPROVED ..... DATE 5-1-2009
CHIEF ENGINEER

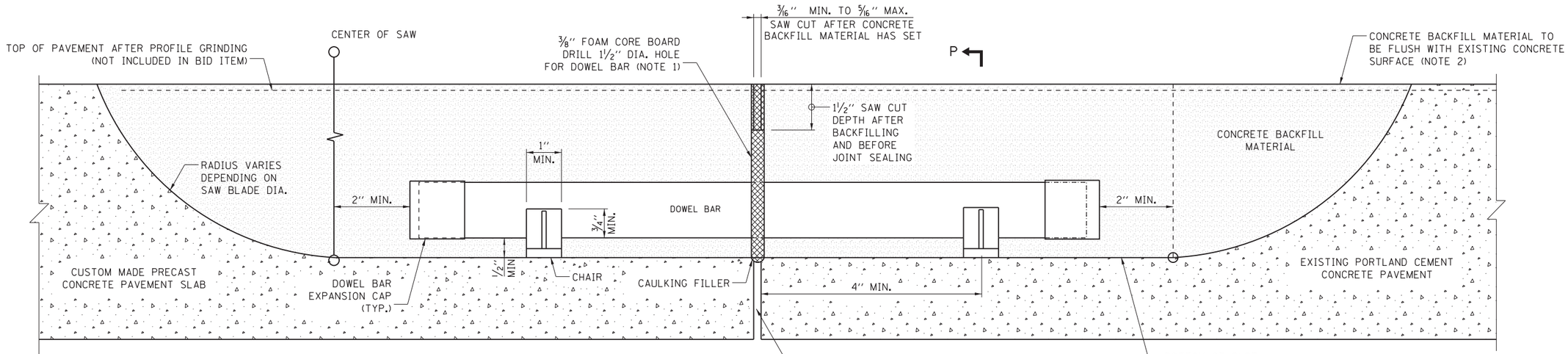
Illinois Tollway

PRECAST PAVEMENT SLABS

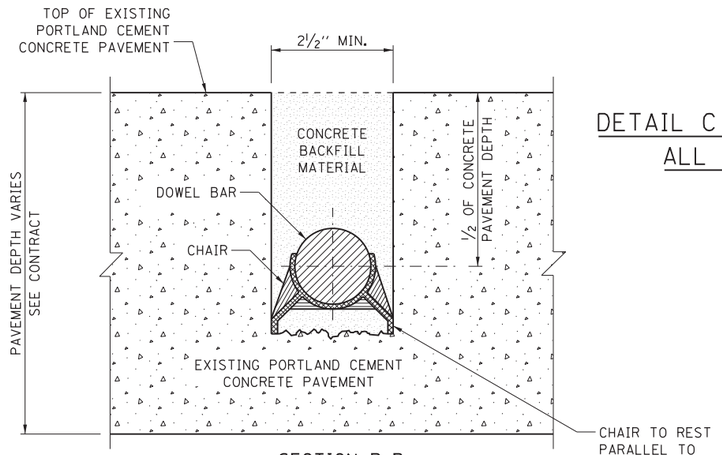
STANDARD A18-03



PLAN VIEW

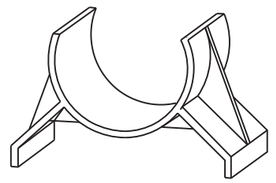


SECTION F-F



SECTION P-P

DETAIL C - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR ALL CUSTOM MADE PRECAST PANELS AND OPTIONAL FOR STANDARD SLABS



CHAIR DETAIL

NOTES:

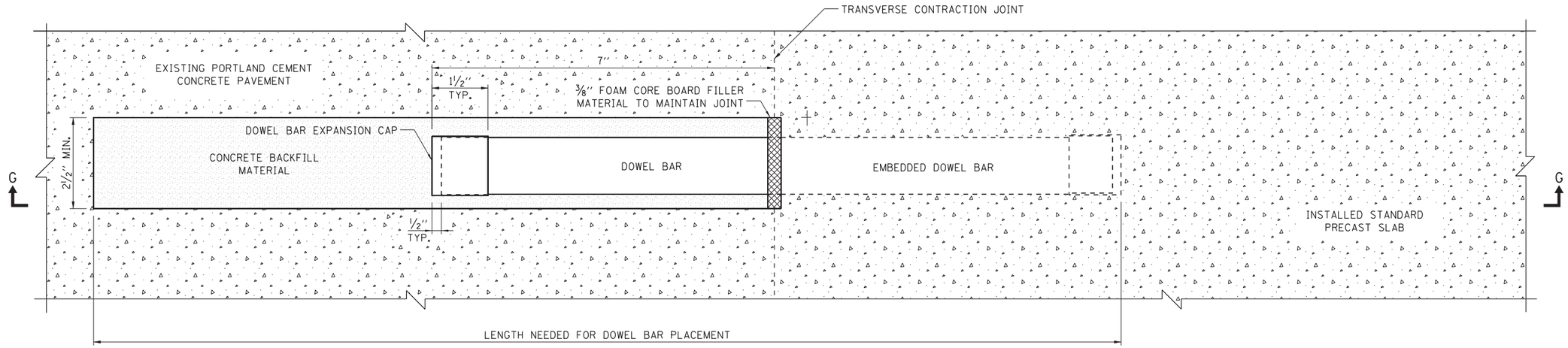
1. PLACE FOAM CORE BOARDS TO THE TOP OF PATCH.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

APPROVED Paul Kovacs CHIEF ENGINEER DATE 5-1-2009

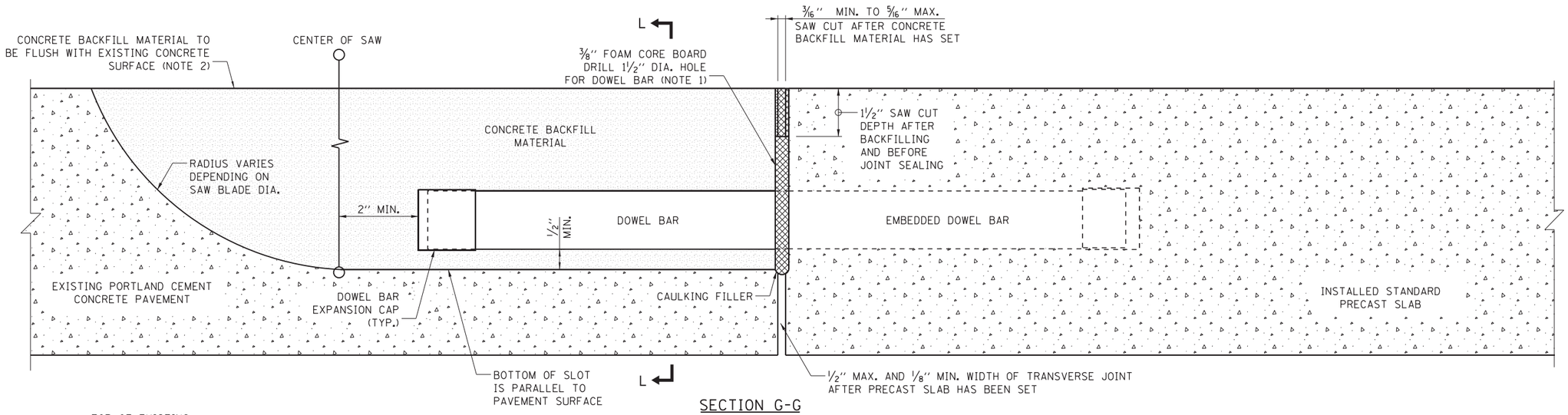
Illinois Tollway

PRECAST PAVEMENT SLABS

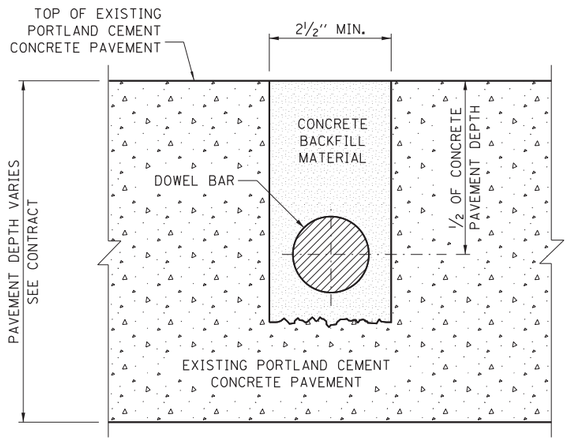
STANDARD A18-03



PLAN VIEW



SECTION G-G



SECTION L-L

DETAIL D - WIDE MOUTH DOWEL BAR PLACEMENT
DETAIL FOR STANDARD PRECAST PANELS

(FOR APPLICATION WITH ALL ISOLATED STANDARD SLABS AND WITH INITIAL PLACEMENT OF CONSECUTIVE STANDARD SLABS)

NOTES:

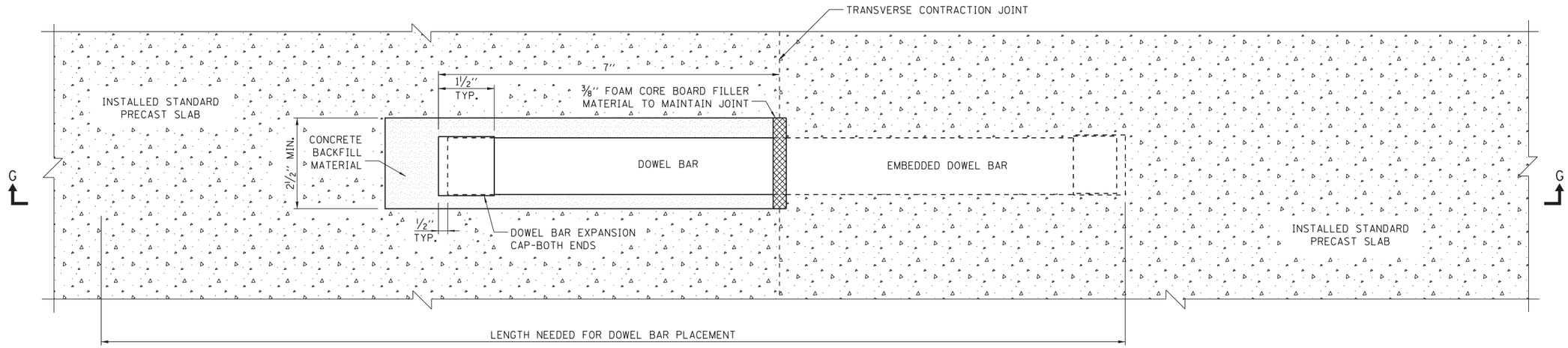
1. PLACE FOAM CORE BOARDS TO THE TOP OF PATCH.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

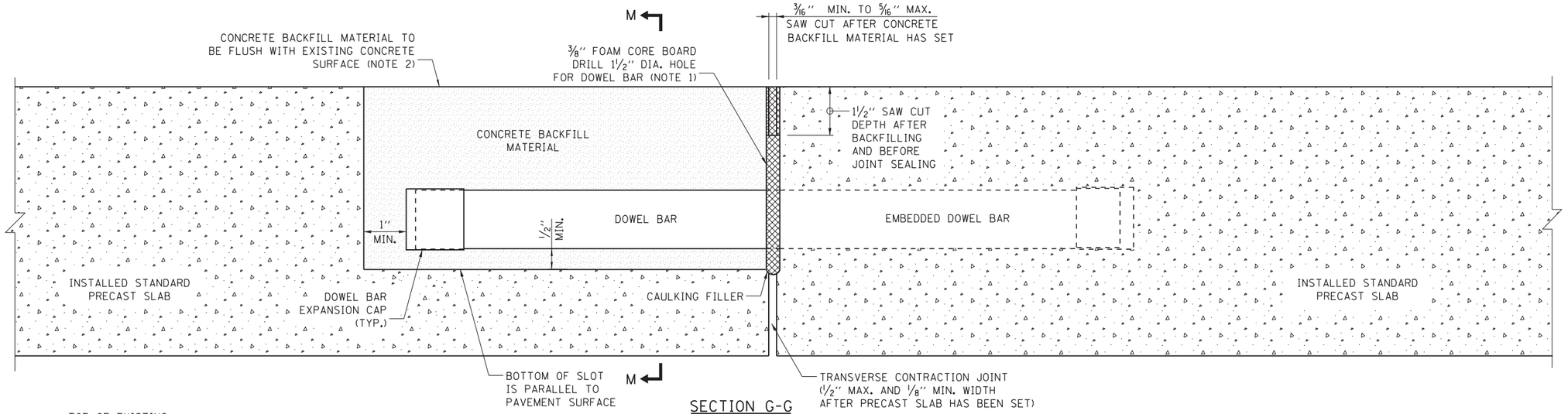
Illinois Tollway

PRECAST PAVEMENT SLABS

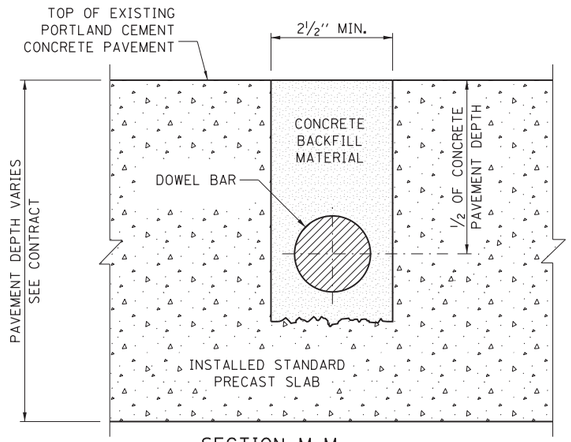
STANDARD A18-03



PLAN VIEW



SECTION G-G



SECTION M-M

DETAIL E - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR CONSECUTIVE STANDARD PRECAST PANELS

NOTES:

1. PLACE FOAM CORE BOARDS TO THE TOP OF PATCH.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

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APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

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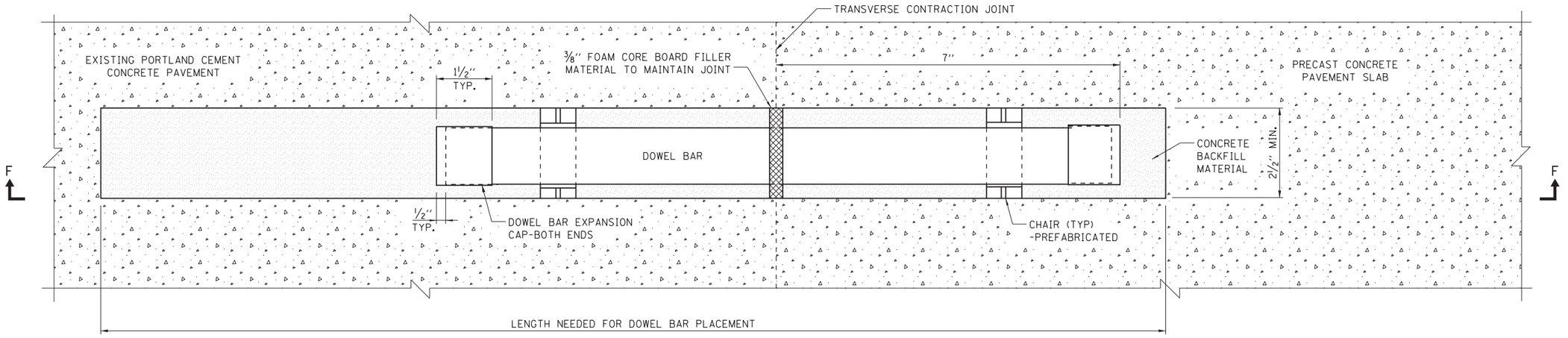
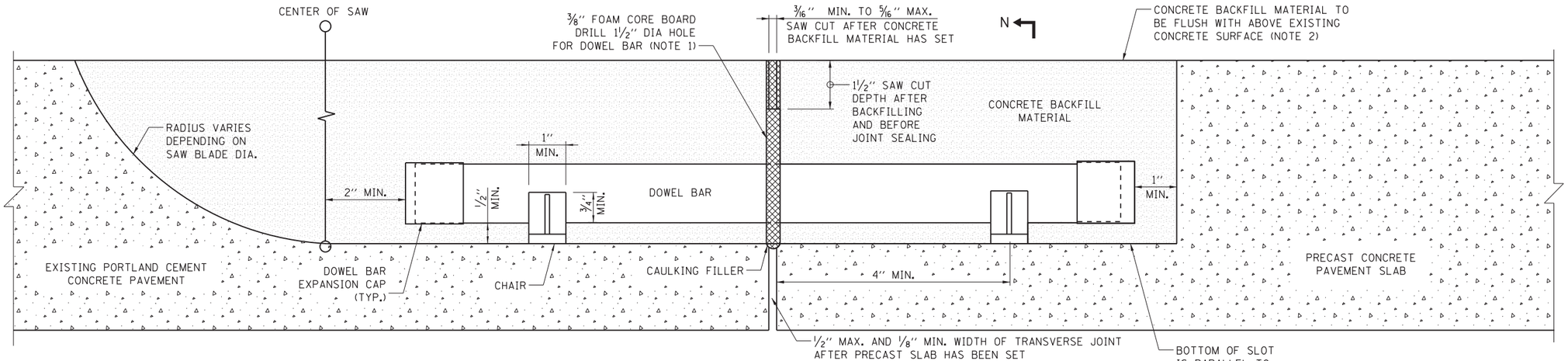
PRECAST PAVEMENT SLABS

STANDARD A18-03

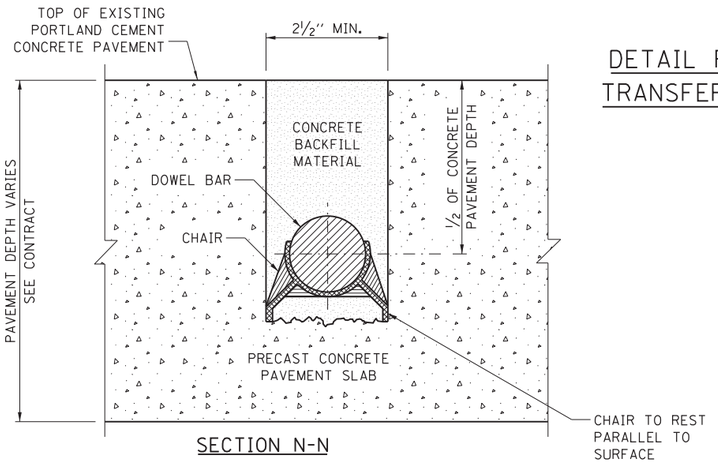


PLAN VIEW



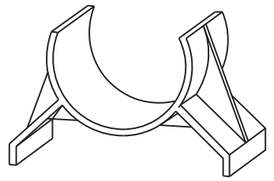
SECTION F-F

N



SECTION N-N

DETAIL F - WIDE MOUTH DOWEL BAR PLACEMENT DETAIL FOR THE LAST TRANSFER JOINT OF CONSECUTIVELY PLACED STANDARD PRECAST PANELS



CHAIR DETAIL

NOTES:

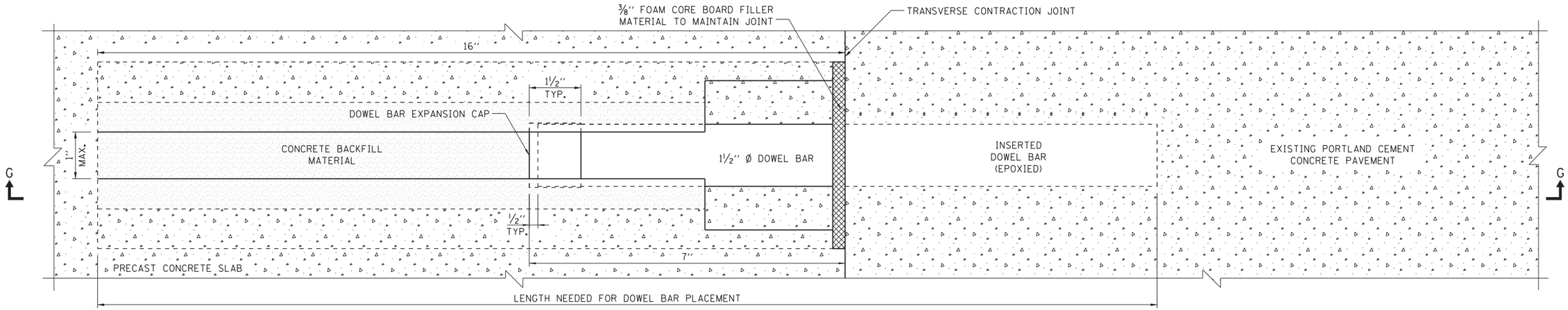
1. PLACE FOAM CORE BOARDS TO THE TOP OF PATCH.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.

Paul Kovacs
APPROVED CHIEF ENGINEER DATE 5-1-2009

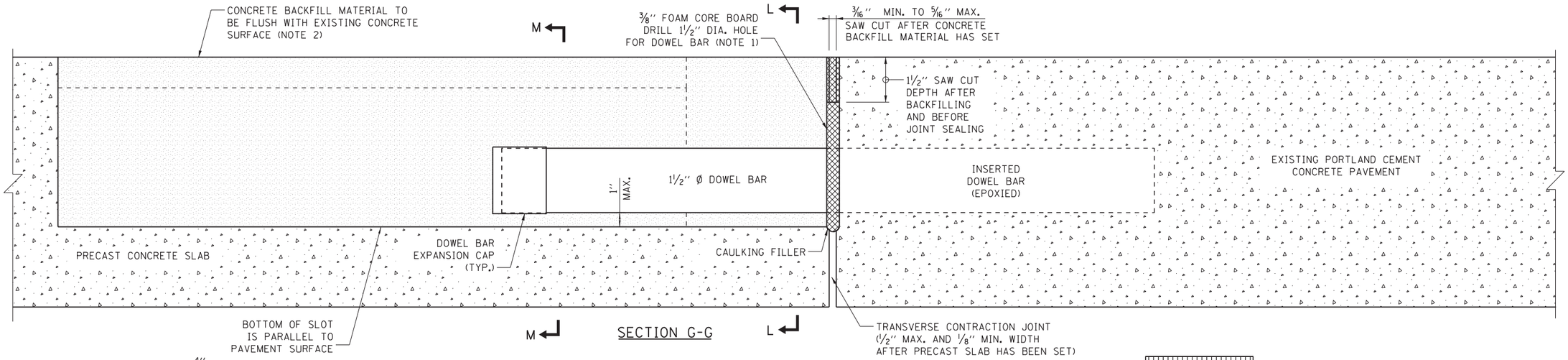
Illinois Tollway

PRECAST PAVEMENT SLABS

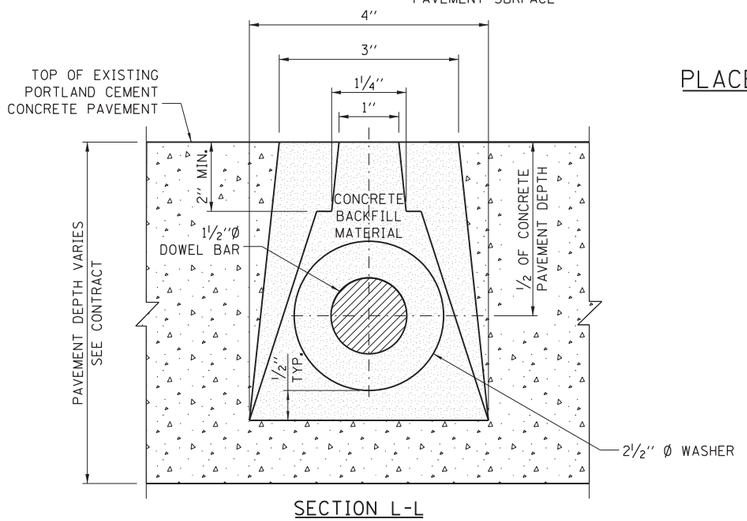
STANDARD A18-03



PLAN VIEW



SECTION G-G



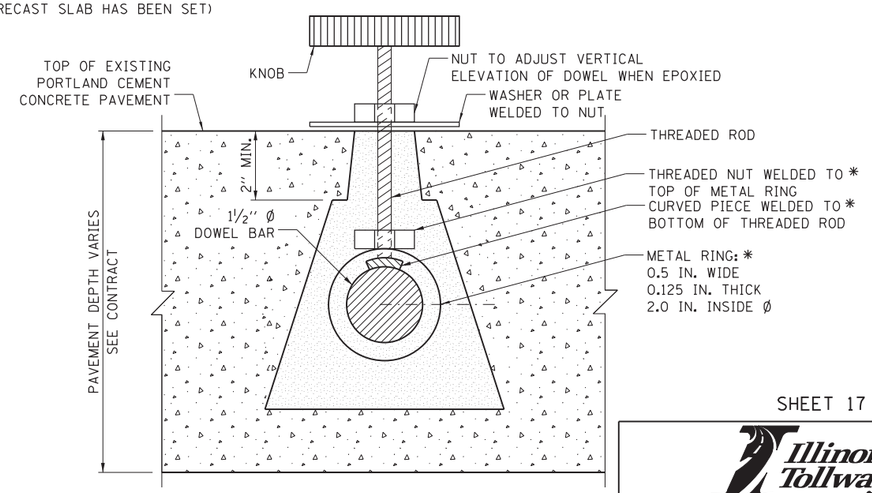
SECTION L-L

DETAIL G - NARROW MOUTH DOWEL BAR PLACEMENT DETAIL FOR ISOLATED PRECAST PANELS

(FOR OPTIONAL APPLICATION WITH ALL ISOLATED SLABS IN PLACE OF FULL RETROFITS)

NOTES:

1. PLACE FOAM CORE BOARDS TO THE TOP OF PATCH.
2. UPON COMPLETION, THE FINISHED SURFACE OF THE CONCRETE BACKFILL MATERIAL SHALL NOT BE BELOW EXISTING CONCRETE SURFACE.



SECTION M-M

CLAMP DETAIL FOR SLIDING DOWEL BAR SLOTS

* METAL RING MAY BE REPLACED WITH A STRONG MAGNET WELDED TO THE THREADED ROD. AT LEAST ONE CLAMP WILL BE NEEDED FOR EACH INSERTED DOWEL BAR TO MAINTAIN ALIGNMENT.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

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PRECAST PAVEMENT SLABS

STANDARD A18-03

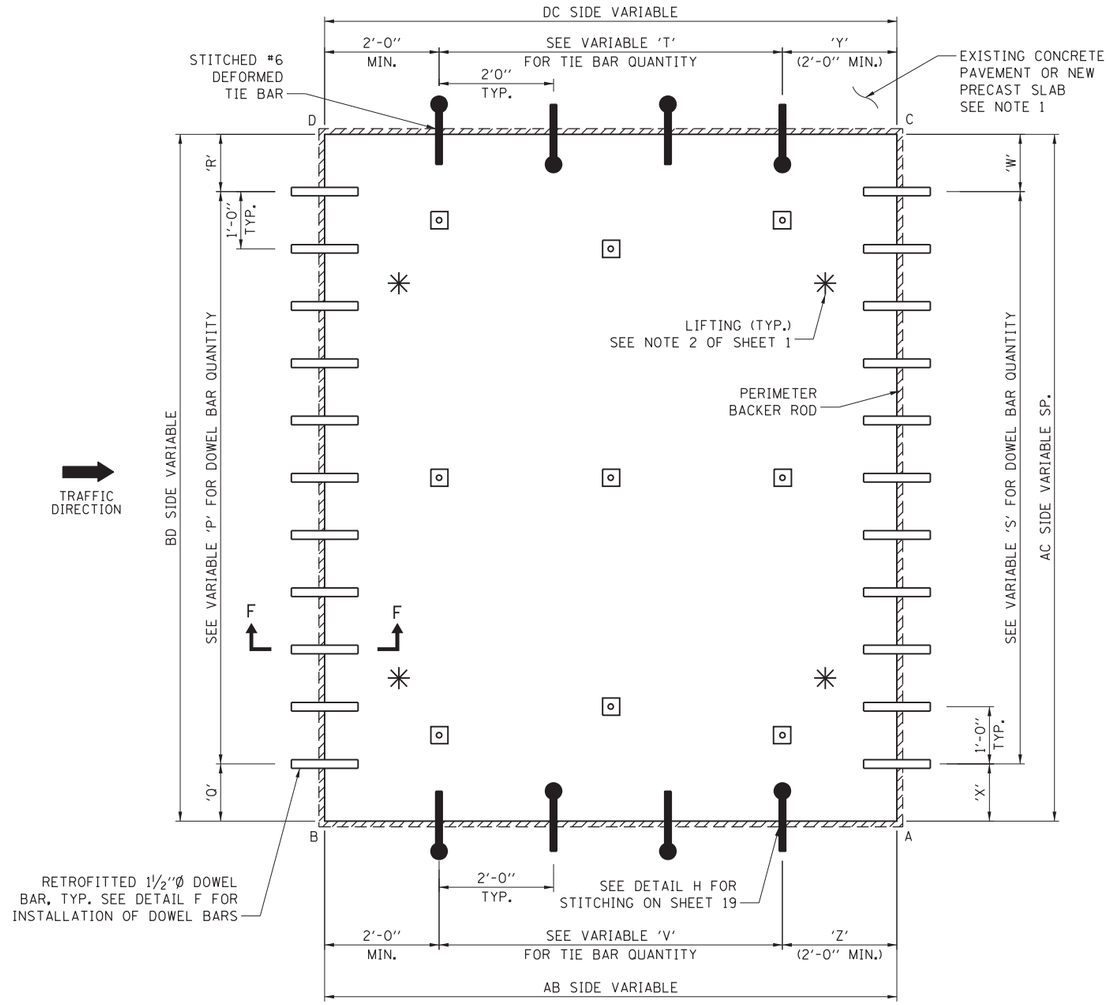
FOR NON-STANDARD SLABS, UPON COMPLETION BY THE CONTRACTOR A SLAB LAYOUT WILL BE ADDED WITH SLAB DIMENSIONS TO INCLUDE BUT NOT BE LIMITED TO THE TABLE SHOWN BELOW.

	CORRIDOR	STATION NUMBER	MAINLINE LANE NO.	RAMP ID.	RAMP LANE NO.	PLAZA NO.	PLAZA LANE NO.	MARK NO.	LANE TYP.	VARIABLES														AB* SIDE	BD* SIDE	CD* SIDE	AC* SIDE	AREA (SQ.FT.)	VOLUME (CU. FT.)	WEIGHT (TONS)	DIAGONALS (FT.)	
										AB (FT.)	AC (FT.)	BD (FT.)	CD (FT.)	P (NO.)	Q (FT.)	R (FT.)	S (NO.)	T (NO.)	V (NO.)	W (FT.)	X (FT.)	Y (FT.)	Z (FT.)								AD	BC
EXAMPLE																															

MAINLINE LANE NO.: LANE NO. 1 IS ADJACENT TO MEDIAN SHOULDER.
RAMP LANE NO.: LANE NO. 1 IS ADAJACENT TO THE BUILDING
PLAZA LANE NO.: LANE NO. 1 IS ADAJACENT TO THE BUILDING
MARK NO.: EACH PANEL SHALL BE INDIVIDUALLY MARKED FOR CORRECT PLACEMENT.
LANE TYP.: "OUT" IN THIS COLUMN INDICATES OUTSIDE LANE.
"MID" IN THIS COLUMN INDICATES MIDDLE LANE.
"IN" IN THIS COLUMN INDICATES INSIDE LANE
"PLAZA" IN THIS COLUMN INDICATES PLAZA LANE.

*LEGEND

DB= DOWEL BAR EMBEDDED
DS= DOWEL SLOT
ST= SLOT OR HOLE FOR STITCHED TIE BAR
RD= FIELD RETROFITTED DOWEL BARS



INSTALLATION DETAIL FOR CUSTOM SLABS

NOTES:

1. NO STITCHING OF DEFORMED TIE BARS IS REQUIRED WHEN PRECAST SLAB IS PLACED ADJACENT TO HMA SHOULDER OR PLAZA ISLAND.
2. TIE BAR STITCHING SHALL BE REQUIRED WHEN THE REPAIR AREA LENGTH EXCEEDS 20 FT. OR WHEN MORE THAN 3 PRECAST SLABS ARE PLACED IN SEQUENCE.
3. SHOP DRAWINGS SHALL BE REQUIRED FOR ALL CUSTOM PLAZA SLABS.

APPROVED Paul Kovacs CHIEF ENGINEER DATE 5-1-2009

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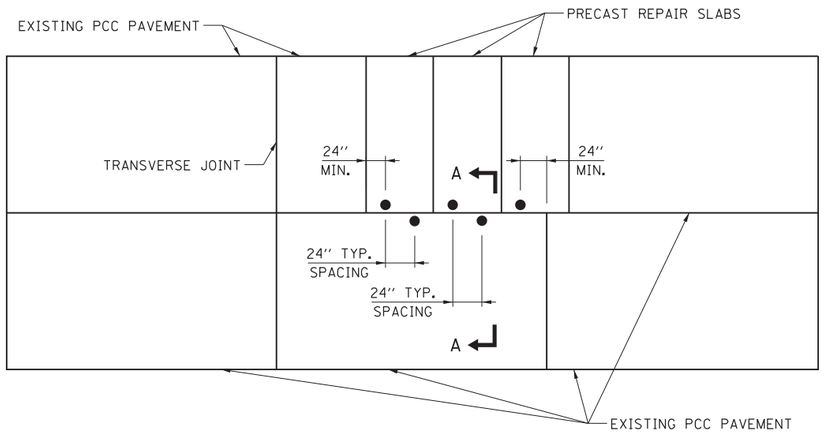
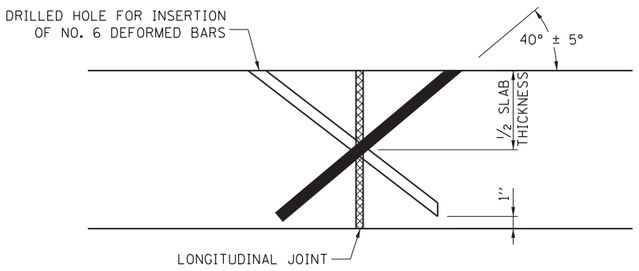
PRECAST PAVEMENT SLABS

STANDARD A18-03



DETAIL H - LONGITUDINAL TIE BAR STITCHING FOR PRECAST PANELS



SECTION A-A

NOTES FOR TIE BAR STITCHING:

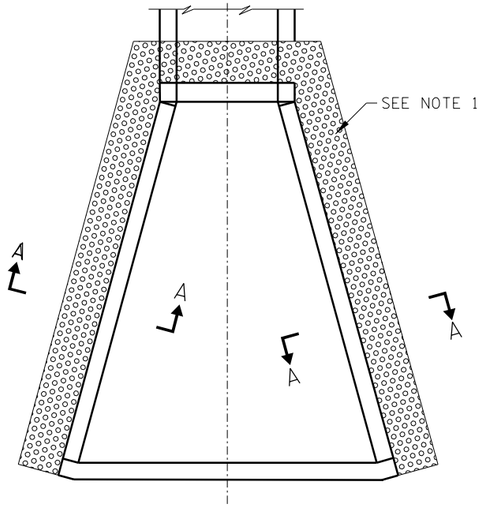
1. DRILL HOLES THAT ARE ORIENTED AT 40° ± 5° ANGLE TO THE PAVEMENT SURFACE SO THAT THEY INTERSECT THE LONGITUDINAL CRACK OR JOINT AT ABOUT MID-DEPTH. (IT IS IMPORTANT TO START DRILLING THE HOLE AT A CONSISTENT DISTANCE FROM THE JOINT, IN ORDER TO CONSISTENTLY CROSS AT THE MID-DEPTH OF THE SLAB.)
2. HOLE CENTERLINES ARE PERPENDICULAR TO THE JOINT (IN PLAN VIEW) AT EACH LOCATION BEING DRILLED.
3. SELECT A DRILL THAT MINIMIZES DAMAGE TO THE CONCRETE SURFACE, SUCH AS A HYDRAULIC POWERED DRILL. SELECT A DRILL DIAMETER NO MORE THAN 0.375 IN. LARGER THAN THE TIE BAR DIAMETER. CHOOSE A GANG-MOUNTED DRILL IF A HIGHER PRODUCTIVITY IS NEEDED.
4. DRILL HOLES WITH NO LESS THAN A 24 INCH BAR SPACING. ADJACENT HOLES ARE DRILLED IN OPPOSITE DIRECTIONS ACROSS THE JOINT. THE HOLES AND INSERTED TIE BAR SHALL BE NO LESS THAN 24 INCHES FROM ANY EXISTING TRANSVERSE JOINT OR ANY PRECAST OR REPAIR TRANSFER JOINT.
5. HOLE BOTTOMS ARE NO MORE THAN 1 INCH FROM THE SLAB BOTTOM.
6. AIR BLOW THE HOLES TO REMOVE DUST AND DEBRIS AFTER DRILLING.
7. INJECT ADHESIVE INTO THE HOLE, LEAVING SOME VOLUME FOR THE BAR TO OCCUPY THE HOLE. (POURING THE ADHESIVE IS ACCEPTABLE FOR SMALL QUANTITIES.)
8. INSERT THE NO. 6 EPOXY COATED DEFORMED TIE BAR INTO THE HOLE, LEAVING ABOUT 1 IN. FROM THE TOP OF BAR TO THE PAVEMENT SURFACE. DEFORMED TIE BARS SHALL BE EPOXY COATED.
9. REMOVE EXCESS ADHESIVE AND FINISH FLUSH WITH THE PAVEMENT SURFACE.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

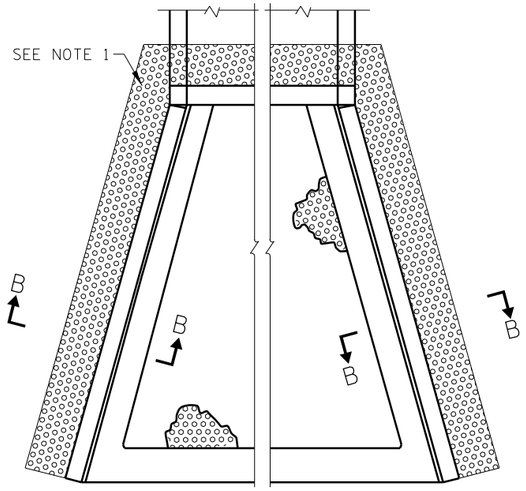
Illinois Tollway

PRECAST PAVEMENT SLABS

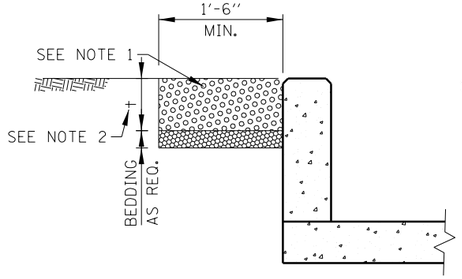
STANDARD A18-03



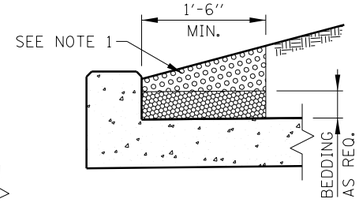
PLAN-0° SKEW, H ≤ 4'



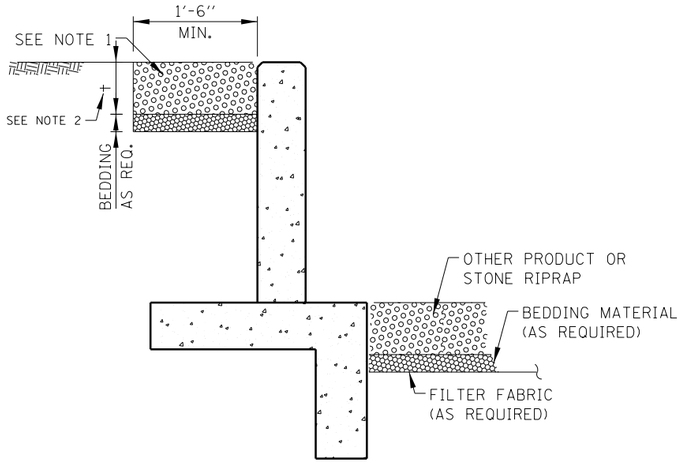
PLAN-0° SKEW, H ≤ 8'



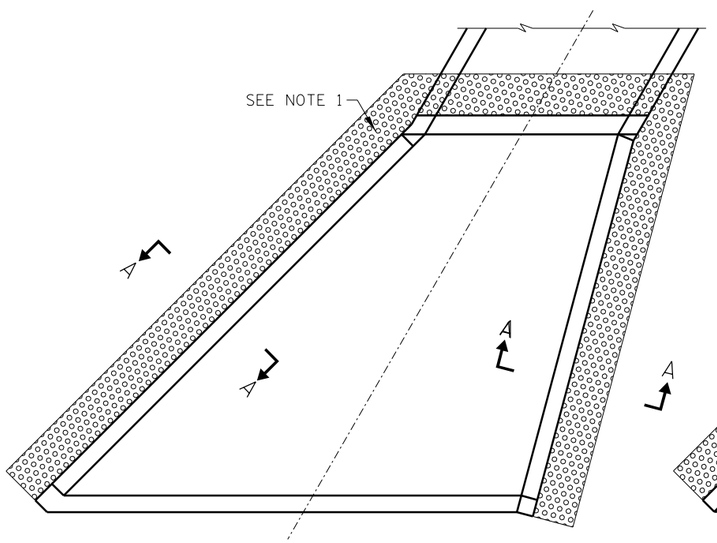
SECTION A-A



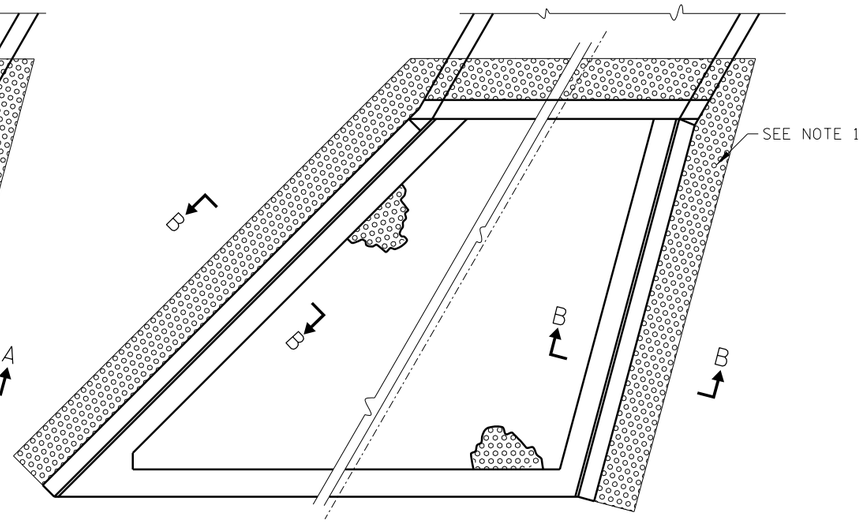
SECTION AT HEADWALL



SECTION B-B



PLAN-SKEW, H ≤ 4'



PLAN-SKEW, H ≤ 8'

NOTES:

1. THE PREFERRED METHOD FOR ACHIEVING EROSION PROTECTION AT END SECTIONS SHOULD BE THROUGH THE USE OF PRODUCTS THAT PROMOTE REVEGETATION WITHIN THE AREA OF CONCERN.
2. THICKNESS "t" WILL BE DETERMINED BY THE MANUFACTURER'S RECOMMENDATION FOR THE PRODUCT USED.
3. EROSION PROTECTION PLACEMENT SHALL BE INSTALLED FLUSH WITH ADJACENT GRADE.
4. FOR USE WITH STANDARDS B10 TO B18.
5. STONE RIPRAP SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND DRAINAGE DESIGN MANUAL.

Paul Kovacs
APPROVED ..... DATE 3-1-2010
CHIEF ENGINEER

Illinois Tollway

DATE	REVISIONS
3-01-2010	REVISED EROSION
	PROTECTION AND NOTES
3-11-2015	REVISED NOTES

EROSION PROTECTION

STANDARD B19-02

SURVEY AND ROADWAY ITEMS

EXISTING	PROPOSED	
		CONSTRUCTION JOINT W/DOWEL BARS
		BENCHMARK
		CANTILEVER SIGN STRUCTURE
		BUTTERFLY SIGN STRUCTURE
		DOUBLE COLUMN GROUND MOUNTED SIGN
		SINGLE COLUMN GROUND MOUNTED SIGN
		SPAN TYPE SIGN STRUCTURE
		TRIPLE COLUMN GROUND MOUNTED SIGN
		RUMBLE STRIP

DRAINAGE AND UTILITY ITEMS; ROADWAY LIGHTING AND SIGNS

EXISTING	PROPOSED	
		BOX CULVERT WITH HEADWALL
		CABLE IN DUCT W/O GROUND
		LOW POINT
P		OVERHEAD ELECTRICAL
T		OVERHEAD TELEPHONE
		PIPE CULVERT
		LAKE OR POND
		QUARRY
		STREAM
		SWAMP
	A	CABLE OR CONDUIT TAG
E	E	ELECTRICAL MANHOLE
LD	LD	LIGHT-DUTY BOX
		ROADWAY LUMINAIRE
		STEEL TOWER
T	T	TELEPHONE MANHOLE
		UNDERPASS LUMINAIRE
		WATER POINT
W	W	WATERMAIN VALVE VAULT
W	W	WATER WELL
		WOOD POLE

EROSION & SEDIMENT CONTROL, LANDSCAPING ITEMS

EXISTING	PROPOSED	
		CLEARING & GRADING LIMITS (LIMITS OF CONSTRUCTION)
		DIVERSION DIKE
		DRAINAGE DIVIDE
		DRAINAGE PATH
		SEDIMENT BASIN AGGREGATE BERM
	CIP	CULVERT INLET PROTECTION-STONE
		CULVERT INLET PROTECTION-FENCE
	DB	DEWATERING BASIN
	FIPB	FILTER FABRIC INLET PROTECTION, BASKET TYPE
	FIPC	FILTER FABRIC INLET PROTECTION, COVER TYPE
	FB FB	FLOTATION BOOM
	IC	INITIAL CONSTRUCTION ITEM
	RIP	RECTANGULAR INLET PROTECTION
		TEMPORARY ROCK CHECK DAM
	T	TEMPORARY DITCH CHECK
		SEDIMENT BASIN
		SILT FENCE
	SSF	SUPER SILT FENCE
		STABILIZED CONSTRUCTION ENTRANCE
		STONE OUTLET STRUCTURE SEDIMENT TRAP
		STREAM DIVERSION
		TEMPORARY PIPE SLOPE DRAIN
		TEMPORARY RIPRAP
	TS	TEMPORARY SWALE
		TREES AND STUMP
	TP	TREE PROTECTION
		TEMPORARY STREAM CROSSING

EXISTING	PROPOSED	
		EROSION CONTROL BLANKET
		OVER SEEDING CLASS B1
		OVER SEEDING CLASS B2
		SEEDING CLASS A1
		SEEDING CLASS A2
		SEEDING CLASS A3
		SEEDING CLASS A4
		SEEDING CLASS A5
		SEEDING CLASS A6
		SEEDING CLASS D1
		SODDING (SALT TOLERANT)
		TEMPORARY GROUND COVER
		TURF REINFORCEMENT MAT

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 7-1-2009

Illinois Tollway

DATE	REVISIONS
7-01-2009	REVISED SYMBOL & PATTERNS
11-01-2012	ADDED NEW SYMBOLS
3-11-2015	ADDED NEW SYMBOL
3-31-2016	UPDATED DITCH CHECK SYMBOL

SYMBOLS AND PATTERNS

STANDARD D2-04

ELECTRICAL AND MECHANICAL ITEMS

HOME RUN TO PANEL AS NOTED

INDICATES CIRCUIT TURNING DOWN

INDICATES CIRCUIT TURNING UP

GROUND ROD

GROUNDING TRIAD

--KVA
--/--Y/--V
--•, --W
TRANSFORMER

MOTOR

ATS
---A
-P,-W
AUTOMATIC TRANSFER SWITCH (ATS)

JB OR (J) JUNCTION BOX

--A DISCONNECT SWITCH

--A CIRCUIT BREAKER

--A
--, SW.
MANUAL TRANSFER SWITCH

(WH) SELF CONTAINED UTILITY METERING

(G) STANDBY GENERATOR

--A
-P
PANEL CIRCUIT BREAKER

(C) MECHANICALLY HELD LIGHTING COIL

(CR) CONTROL RELAY COIL

$ SINGLE-POLE SWITCH

DUPLEX RECEPTACLE

C
4P, 4W, WEATHERPROOF RECEPTACLE
WITH SPRING DOOR, BACK BOX, &
ANGLE ADAPTER

B
4P, 4W, WEATHERPROOF RECEPTACLE
WITH SPRING DOOR & BACK BOX

GFI
DUPLEX RECEPTACLE WITH
GROUND FAULT PROTECTION

A
CONTROL BUILDING LIGHTING
1' X 4' INDUSTRIAL FLUORESCENT FIXTURE, PORCELAIN
REFLECTOR, ELECTRONIC BALLAST.

B
COMPACT WALL-MOUNTED LOW WATTAGE HPS FIXTURE
WITH WIRE GUARD & SINGLE FACTORY INSTALLED FUSE

C
EMERGENCY LIGHT UNIT WITH 2-6 VOLT,
12 WATT SEALED BEAM HALOGEN LAMPS
WITH WALL MOUNTING BRACKET

D
LANE LIGHTING - HEAVY DUTY ALUMINUM HOUSING WITH
ENCLOSED REFLECTOR & TEMPERED GLASS LENS W/AUTO
REGULATOR BALLAST. ASYMMETRIC PATTERN

-- - WIRE

-- - CONDUIT

	EXISTING	PROPOSED	
A	A	**A**	COMPRESSED AIR (A)
AR	AR	**AR**	ACID RESISTANT WASTE OR DRAIN
ARV	ARV	**ARV**	ACID RESISTANT VENT
DS	DS	**DS**	STORM SEWER (DOWNSPOUT)
G	G	**G**	GAS LINE
HG	HG	**HG**	HOT GAS BYPASS LINE (HG)
HHWR	HHWR	**HHWR**	HEATING HOT WATER RETURN (HHWR)
HHWS	HHWS	**HHWS**	HEATING HOT WATER SUPPLY (HHWS)
IA	IA	**IA**	DRY COMPRESSED AIR (IA-INSTRUMENT AIR)
P	P	**P**	PROCESS WATER ("P" WATER) LINE
PW	PW	**PW**	PROTECTED WATER OR PLANT WATER (PW)
RD	RD	**RD**	REFRIGERANT DISCHARGE LINE (RD)
RS	RS	**RS**	REFRIGERANT SUCTION LINE (RS)
V	V	**V**	VENT LINE (V)

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 7-1-2009

NOTE:

ALL SYMBOLS AND PATTERNS ON THIS DRAWING ARE PROPOSED UNLESS OTHERWISE NOTED.

Illinois Tollway

SYMBOLS AND PATTERNS

STANDARD D2-04

ELECTRICAL AND MECHANICAL ITEMS

CFM OR CFM — QUANTITY AND DIRECTION OF THE AIR FLOW

X OR X — DUCT SIZE (FIRST FIGURE SIZE OF SHOWN, SECOND FIGURE SIZE OF SIDE NOT SHOWN.)

SUPPLY DUCT SECTION

OR — RETURN OR EXHAUST DUCT SECTION

D OR D — DUCT DROPS IN THE DIRECTION OF FLOW

R OR R — DUCT RISES IN THE DIRECTION OF FLOW

OR — TURNING VANES

CFM OR CFM — 8" THROAT DIAMETER CEILING DIFFUSER; AIR FLOW -- 100 CFM

OR — BALANCING OR VOLUME DAMPER

M OR M — MOTOR OPERATED DAMPER

FLEXIBLE DUCT

FIRE DAMPER

A — SOUND ATTENUATOR

ZONE DAMPER

FLEXIBLE CONNECTION AT FAN OR EQUIPMENT

EXTRACTOR

OR — SPLITTER DAMPER

B — PLUG VALVE WITH MEMORY STOP (BALANCING)

PLUG VALVE

S — SOLENOID VALVE

TEMPERATURE CONTROL VALVE

THREE-WAY TEMPERATURE CONTROL VALVE DIAPHRAGM

THREE-WAY TEMPERATURE CONTROL VALVE TOP VIEW

PRESSURE REDUCING VALVE (NOS = INITIAL AND FINAL PRESSURE - PSIG)

PRV — AIR PRESSURE REDUCING STATION (NO. CORRESPONDS WITH AIR PRESSURE REDUCER SCHEDULE)

SAFETY VALVE (NOS. = PRESSURE SETTING - PSIG)

FLOAT OPERATED VALVE

QC — QUICK COUPLING (QC)

UH — HORIZONTAL UNIT HEATER (NO. CORRESPONDS WITH UNIT HEATER SCHEDULE)

UH — VERTICAL UNIT HEATER (NO. CORRESPONDS WITH UNIT HEATER SCHEDULE)

UH — CABINET TYPE UNIT HEATER (NO. CORRESPONDS WITH UNIT HEATER SCHEDULE)

T — THERMOSTAT OR ROOM TEMPERATURE SENSOR

GATE VALVE

FLOW SWITCH

GPM — VENTURI FLOW METER AND FLOW TO BE INDICATED

CONNECTION BETWEEN NEW AND EXISTING

GLOBE VALVE

BUTTERFLY VALVE

CHECK VALVE

ANGLE GATE VALVE

CONCENTRIC REDUCER

ECCENTRIC REDUCER

ORIFICE FLANGE

CROSSOVER

PIPE GUIDE

EXPANSION JOINT (SLIP TYPE)

EXPANSION JOINT (BELLOWS TYPE)

AIR ELIMINATOR (AIR VENT)

PIPE CAP

STRAIGHT CROSS

90° ELBOW

90° ELBOW TURNED DOWN

90° ELBOW TURNED UP

SIDE OUTLET ELBOW TURNED DOWN

SIDE OUTLET ELBOW TURNED UP

LATERAL

TEE

TEE OUTLET UP

TEE OUTLET DOWN

UNION

STRAINER

X — PIPE ANCHOR

THERMOMETER (NOS. = RANGE IN DEGREES FAHRENHEIT)

PRESSURE, VACUUM OR COMPOUND GAUGE

NOTE:

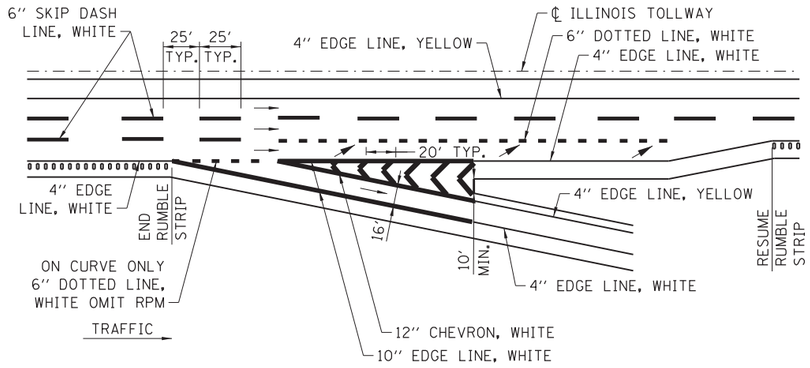
ALL SYMBOLS AND PATTERNS ON THIS DRAWING ARE PROPOSED UNLESS OTHERWISE NOTED.

Paul Kovacs
APPROVED . . . . . CHIEF ENGINEER
DATE 7-1-2009

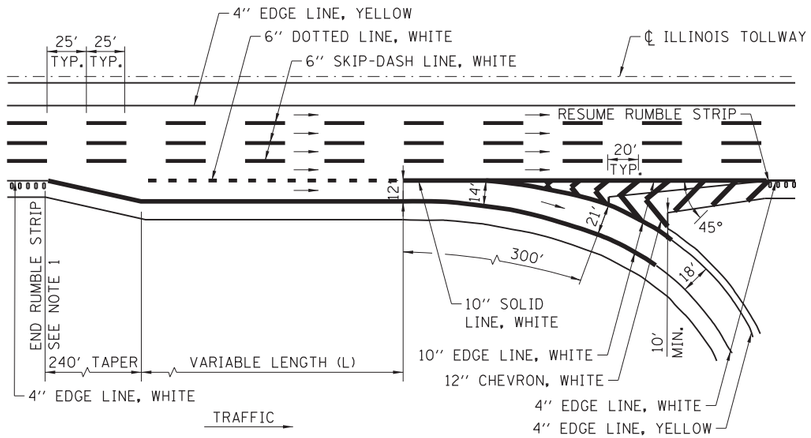
Illinois Tollway

SYMBOLS AND PATTERNS

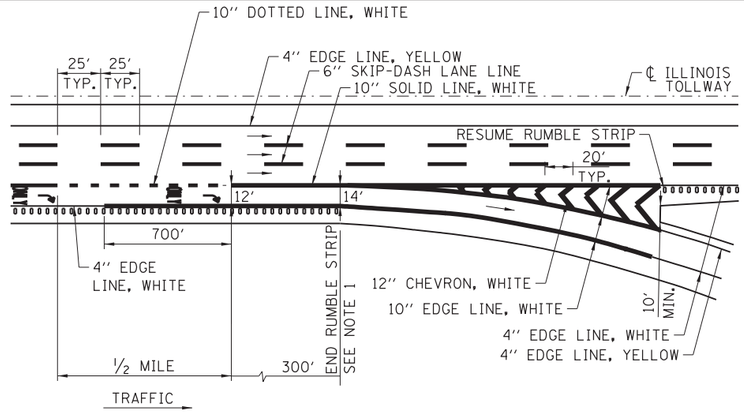
STANDARD D2-04



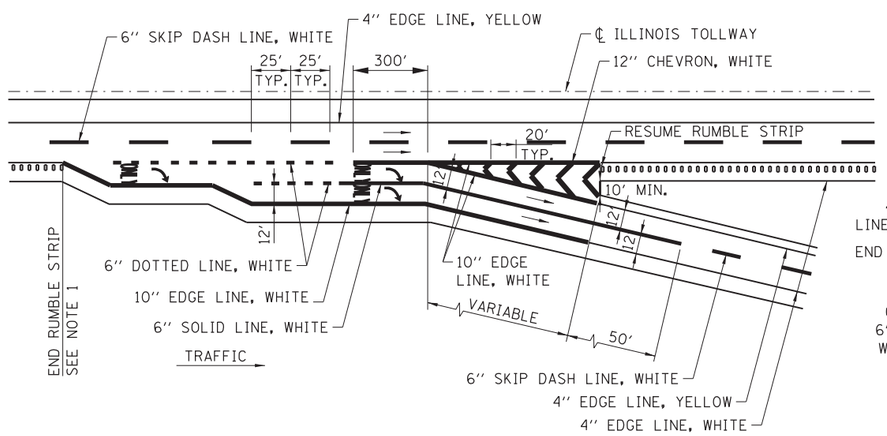
EXIT - SINGLE LANE RAMP
LANE THREE TERMINATION



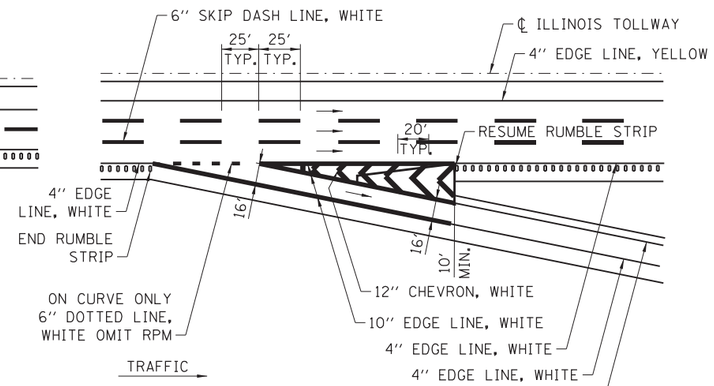
EXIT - SINGLE LANE LOOP RAMP - PARALLEL TYPE



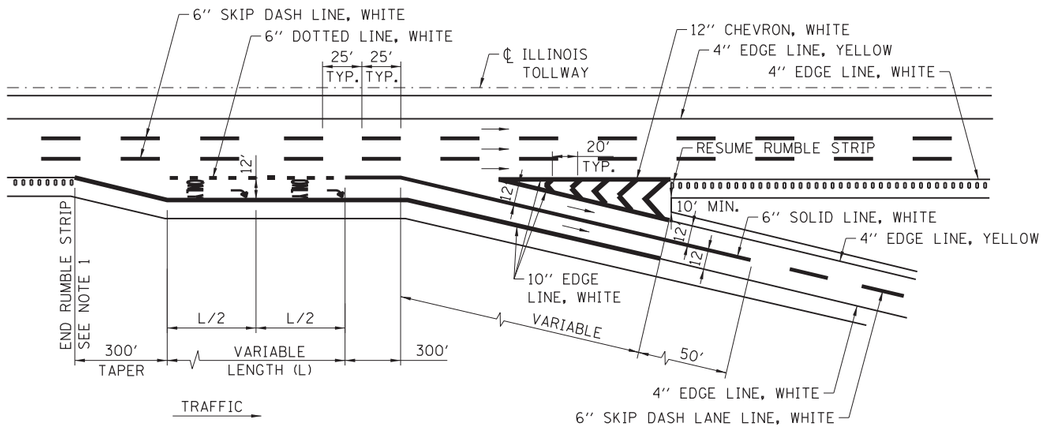
EXIT - SINGLE LANE RAMP - LANE DROP



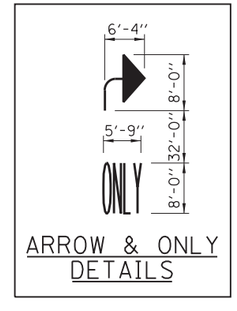
EXIT - TWO LANE PARALLEL RAMP



EXIT - SINGLE LANE RAMP - TAPER TYPE



EXIT - TWO LANE RAMP



ARROW & ONLY
DETAILS

NOTE:

PAVEMENT MARKING LETTERS AND SYMBOLS-ONLY AND ARROW ARE TO BE TYPICALLY PLACED AT ½ MILE EXIT ONLY GUIDE SIGN, AT GORE EXIT GUIDE SIGN AND APPROXIMATELY HALFWAY BETWEEN THE TWO.

GENERAL NOTES:

1. RUMBLE STRIPS SHALL BE INSTALLED BETWEEN THE THEORETICAL GORE AND TAPER WHEN LENGTHS (L) OF AUXILIARY LANES, ACCELERATION LANES OR DECELERATION LANES, ARE GREATER THAN 1000'.
2. ROADWAY MARKING MATERIALS TO BE USED ON FINISHED CONCRETE SURFACE AND ASPHALT SURFACE SHALL BE AS SHOWN ON THE PLANS.
3. ALL LANE LINES AND EDGE LINES SHALL BE GROOVED.
4. GORE STRIPING (CHEVRON) SHALL BE SURFACE APPLIED.
5. LETTERS AND SYMBOL MARKING SHALL BE SURFACE APPLIED.
6. DOTTED LINES SHALL CONSIST OF 3' LINE AND 9' GAPS.

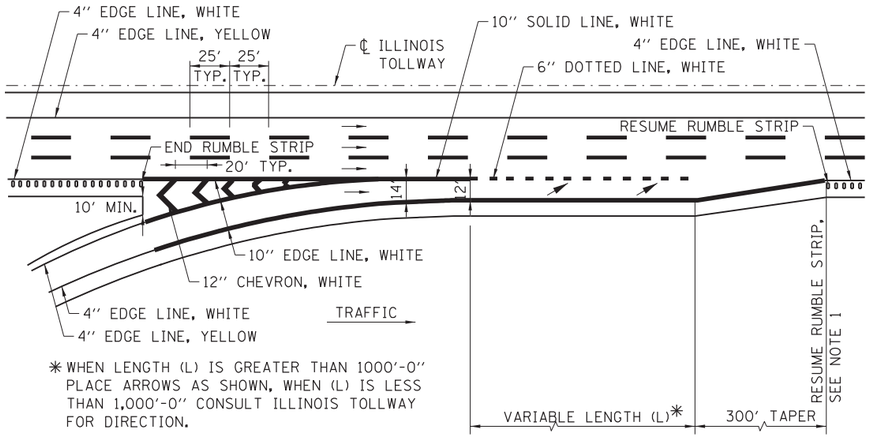
Paul Kovacs
APPROVED ..... DATE 7-1-2009
CHIEF ENGINEER

DATE	REVISIONS
11-01-12	REVISED NOTES AND ADDED DOTTED LINE
03-01-13	REVISED SINGLE LANE LOOP RAMP DETAILS
03-31-14	ADDED LANE REDUCTION MARKINGS
3-11-2015	REVISED DETAILS, ADDED LANE-REDUCTION ARROWS AND SHEET 3
3-31-2016	REVISED NOTES, ADDED IPO PAVEMENT MARKING DETAIL.
3-31-2017	REVISED NOTES

Illinois Tollway

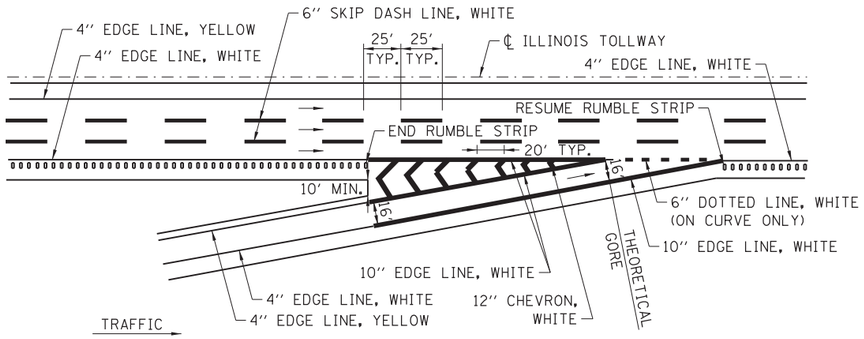
PAVEMENT MARKING
AND SHOULDER
RUMBLE STRIP DETAILS

STANDARD D6-07

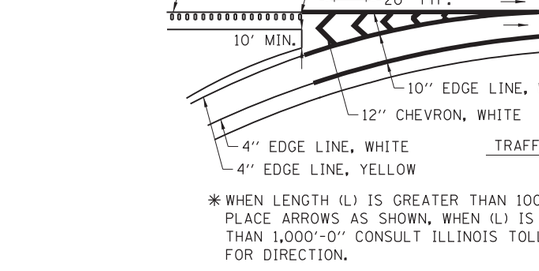


* WHEN LENGTH (L) IS GREATER THAN 1000'-0" PLACE ARROWS AS SHOWN, WHEN (L) IS LESS THAN 1,000'-0" CONSULT ILLINOIS TOLLWAY FOR DIRECTION.

ENTRANCE - SINGLE LANE RAMP - PARALLEL TYPE

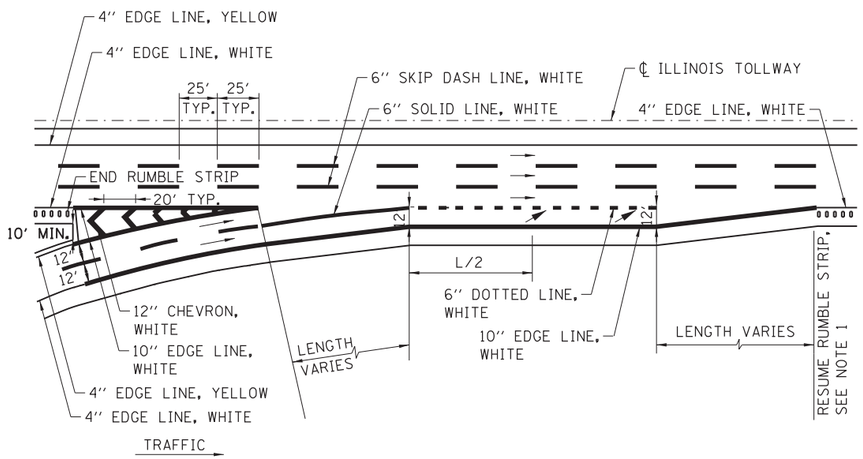


ENTRANCE - SINGLE LANE RAMP - TAPER TYPE

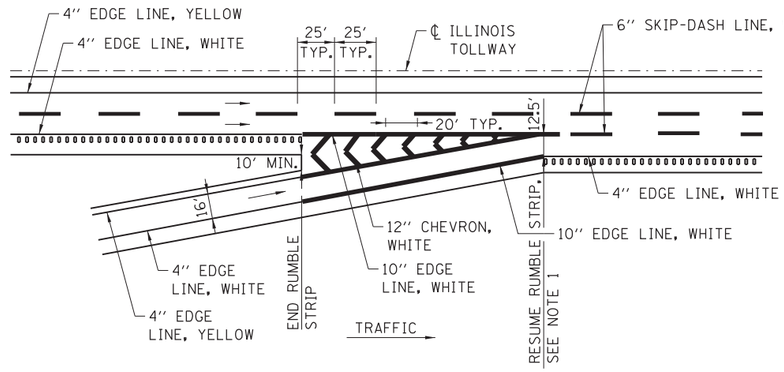


LANE-REDUCTION ARROW

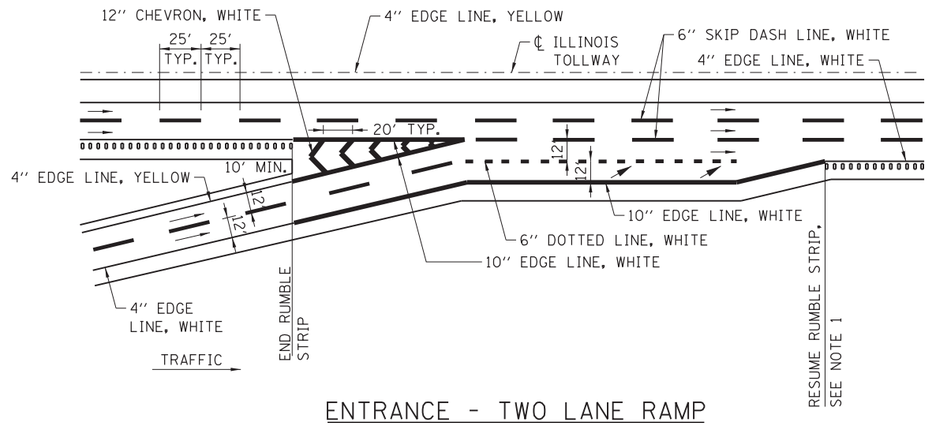
RIGHT LANE-REDUCTION ARROW SHOWN.
USE MIRROR IMAGE FOR LEFT LANE.



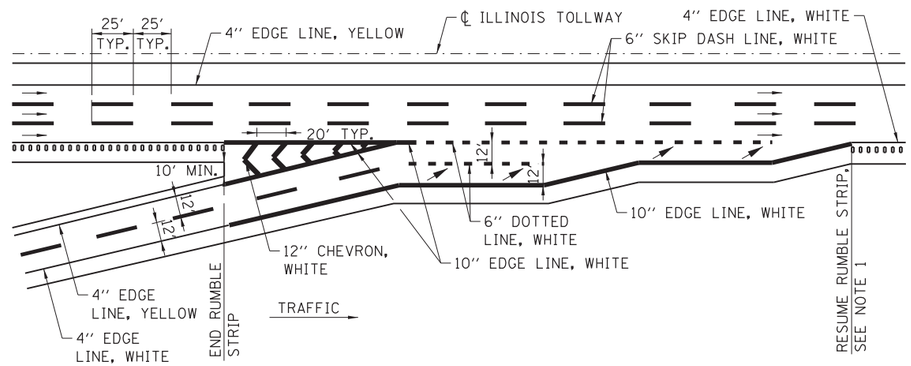
ENTRANCE - TWO LANE RAMP



ENTRANCE - SINGLE LANE RAMP WITH ADDED MAINLINE LANE



ENTRANCE - TWO LANE RAMP WITH ADDED MAINLINE LANE



ENTRANCE - TWO LANE PARALLEL RAMP

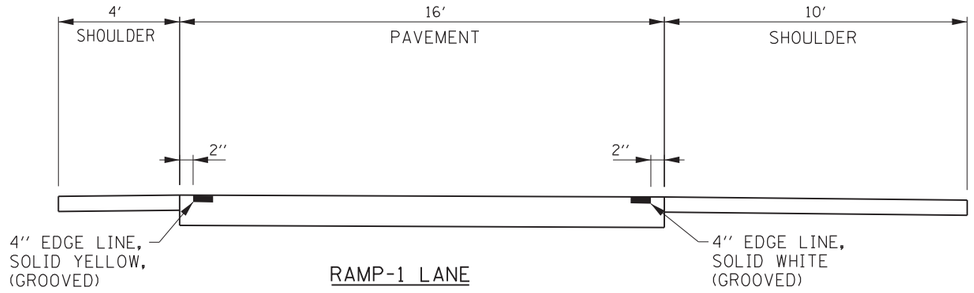
APPROVED Paul Kovacs CHIEF ENGINEER DATE 7-1-2009

SEE SHEET 1 IN THIS SERIES FOR GENERAL NOTES.

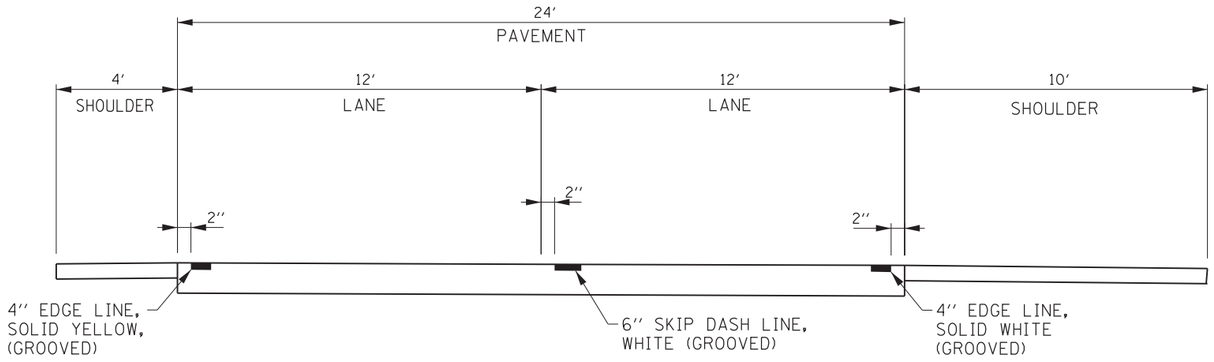
Illinois Tollway

PAVEMENT MARKING AND SHOULDER RUMBLE STRIP DETAILS

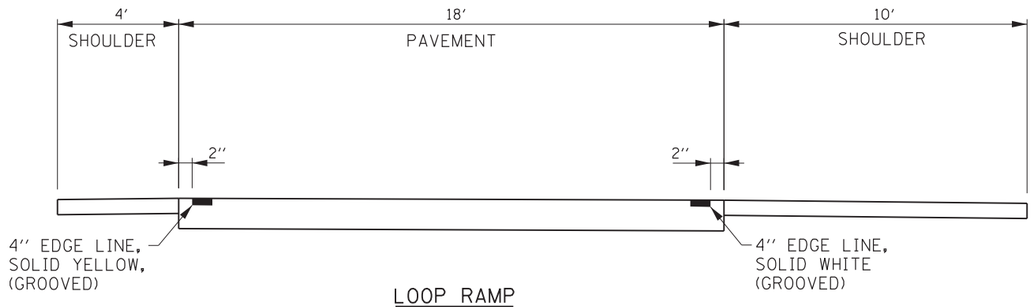
STANDARD D6-07



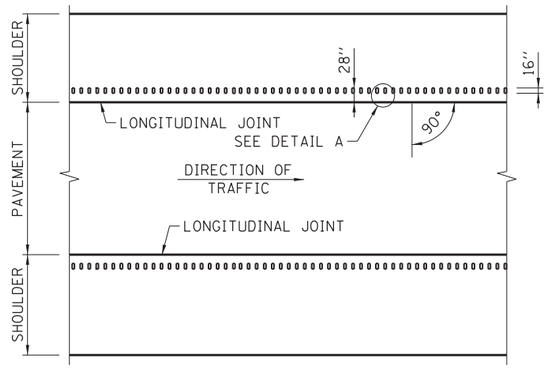
RAMP-1 LANE



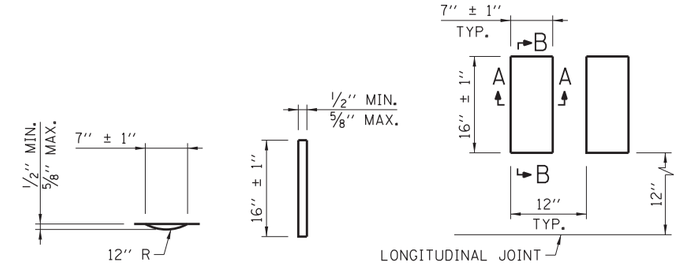
RAMP-2 LANES



LOOP RAMP

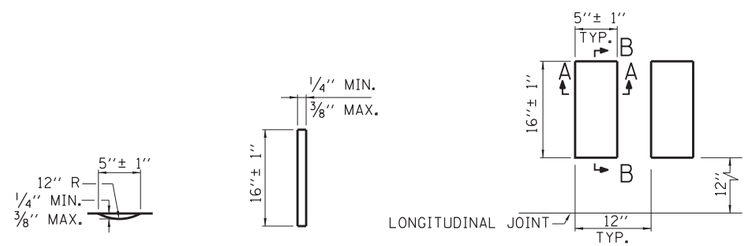


TYPICAL PLAN VIEW
MAINLINE



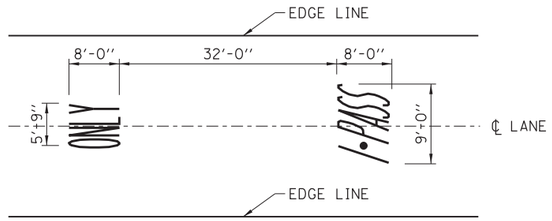
SECTION A-A SECTION B-B PLAN DETAIL A

ASPHALT SHOULDER
RUMBLE STRIP DETAILS



SECTION A-A SECTION B-B PLAN DETAIL A

CONCRETE SHOULDER
RUMBLE STRIP DETAILS



IPO LANE PAVEMENT MARKING

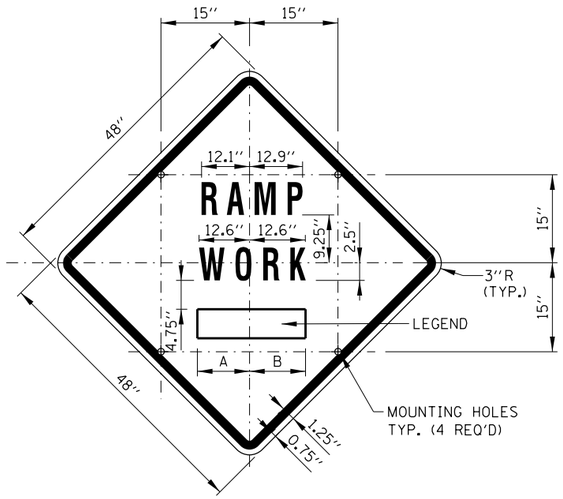
SEE SHEET 1 IN
THIS SERIES FOR
GENERAL NOTES.

APPROVED Paul Kovacs CHIEF ENGINEER DATE 7-1-2009

Illinois Tollway

PAVEMENT MARKING
AND SHOULDER
RUMBLE STRIP DETAILS

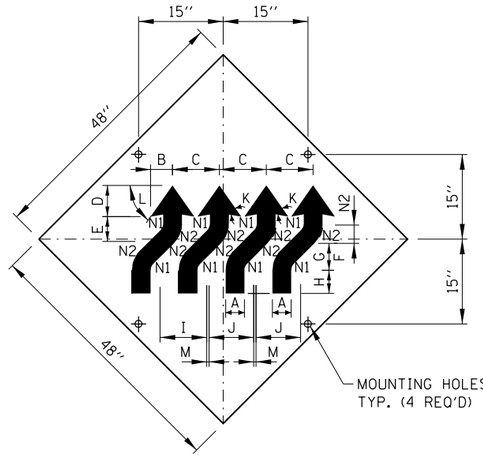
STANDARD D6-07



SIGN NO.	LEGEND	A	B
TS-2A	AHEAD	15.50''	15.50''
TS-2B	500 FT	14.25''	15.13''
TS-2C	1000 FT	14.88'' ∠2	15.75'' ∠2
TS-2D	1500 FT	14.88'' ∠2	15.75'' ∠2
TS-2E	1/2 MILE	15.75'' ∠3	15.75'' ∠3
TS-2F	1 MILE	13.06''	13.06''

SIGN TS-2 (O)

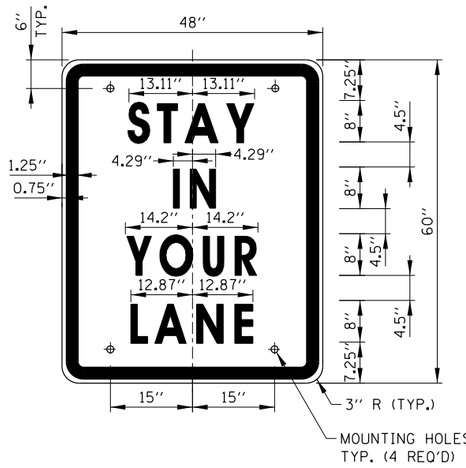
COLOR: BACKGROUND - FLUORESCENT ORANGE (O)
BORDER AND SYMBOL - BLACK
SIZE: 48''x48''
LETTERING: 7'' FEDERAL SERIES D
MOUNTING HOLES: 7/16'' DIA., 4 HOLES SPACED AS SHOWN



A	4 1/2''
B	5 3/4''
C	12 1/2''
D	7 3/4''
E	6 1/2''
F	4 1/2''
G	6 1/2''
H	6''
I	12 3/4''
J	12''
K	45°
L	55°
M	3/4''
N1	2''
N2	6 1/2''

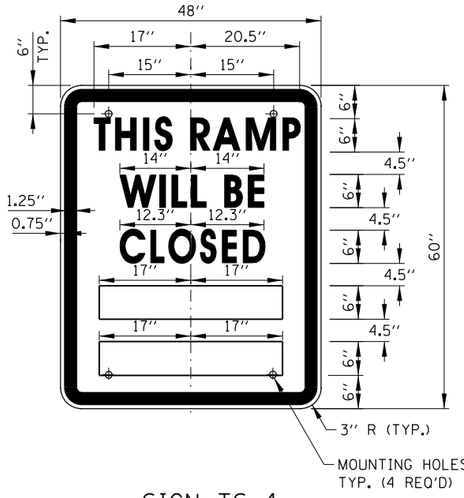
SIGN W1-4dR (O)

COLOR: BACKGROUND-FLUORESCENT ORANGE (O)
TYPE A REFLECTIVE
SHEETING PER STANDARD
SPECIFICATIONS (* A)
BORDER AND LETTERS-BLACK
SIZE: 48''x48''
MOUNTING HOLES: 7/16'' DIA., 4 HOLES SPACED AS SHOWN.



SIGN TS-3

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (*A)
BORDER AND LETTERS - BLACK
SIZE: 48''x60''
LETTERING: LEGEND - 8'' FEDERAL SERIES D
MOUNTING HOLES: 7/16'' DIA., 4 HOLES, SPACED AS SHOWN

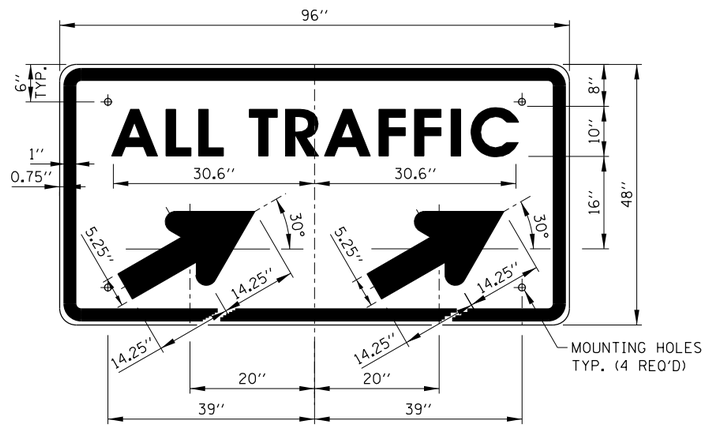


SIGN TS-4

COLOR: BACKGROUND - WHITE (REFLECTORIZED)(*A)
BORDER AND LETTERS - BLACK
SIZE: 48''x60''
LETTERING: LEGEND - 6'' FEDERAL SERIES C
MOUNTING HOLES: 7/16'' DIA., 4 HOLES, SPACED AS SHOWN

RAMP CLOSURE ADVANCE INFORMATION SIGN

THE VARIABLE MESSAGE WITH DATES FOR THE BOTTOM TWO LINES SHALL BE DETERMINED BY THE ENGINEER AND GIVEN TO THE CONTRACTOR BEFORE THE REQUIRED FIELD ERECTION DATE.



SIGN TS-5a & TS-5b

COLOR: BACKGROUND - WHITE (REFLECTORIZED)(*A)
BORDER AND LETTERS - BLACK
ARROW - BLACK
SIZE: 96''x48''
LETTERING: 10'' FEDERAL SERIES D
MOUNTING HOLES: 7/16'' DIA., 4 HOLES, SPACED AS SHOWN
NOTE: SIGN TS-5a IS SHOWN, SUBSTITUTE
LEGEND "↙" FOR "↙↙" FOR SIGN TS-5b

NOTES:

1. ALL LETTERING IS DESIGNATED BY SIZE AND SERIES IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION. LETTERING SPACING SHALL BE IN ACCORDANCE WITH THIS GUIDE EXCEPT WHERE NOTED.

2. SYMBOLS AND ARROWS SHALL CONFORM TO THE DETAILS SHOWN IN THE LATEST EDITION OF "STANDARD HIGHWAY SIGNS" AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION.

3. SEE THE CONTRACT REQUIREMENTS FOR ADDITIONAL NOTES AND SPECIFICATIONS.
   (O) FLUORESCENT ORANGE REFLECTIVE SHEETING PER THE STANDARD SPECIFICATIONS.
   (*A) - REFLECTIVE SHEETING PER THE STANDARD SPECIFICATIONS.

4. DIMENSIONS INDICATED THUS ∠ ARE BASED ON A REDUCTION IN STANDARD LETTERING SPACING AS SHOWN BELOW:
   ∠1 SPACING REDUCED BY 25%
   ∠2 SPACING REDUCED BY 40%
   ∠3 SPACING REDUCED BY 50%

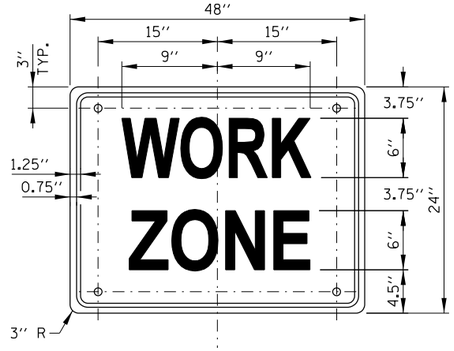
APPROVED Paul Kovacs CHIEF ENGINEER DATE 5-1-2009

DATE	REVISIONS
05-01-09	DELETED FLASHING ARROW BOARDS
01-01-11	ADDED SIGN COLOR DESIGNATION
11-01-12	DELETED SIGN TS-1
03-31-14	REVISED FINE SIGN NUMBER AND
	ADDED LED SPEED LIMIT DISPLAY
3-11-2015	REVISED NOTES
3-31-2017	REVISED END WZSL SIGN COLOR

Illinois Tollway

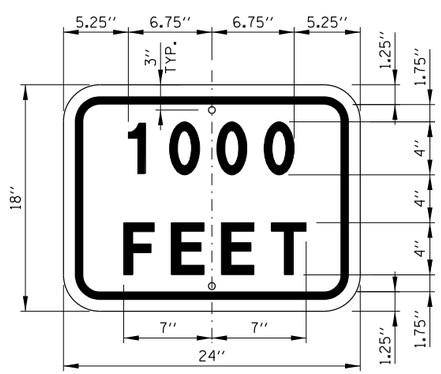
CONSTRUCTION SIGNS

STANDARD E1-06



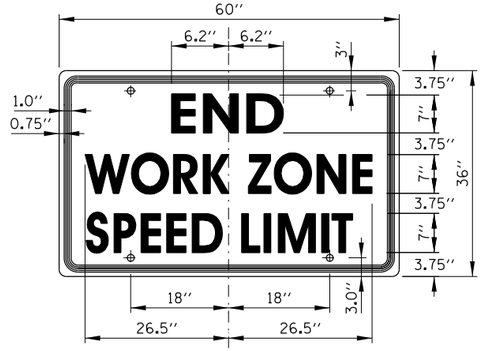
SIGN G20-I102 (O)

COLOR: BACKGROUND - FLUORESCENT ORANGE (O)
BORDER AND LETTERS - BLACK
SIZE: 48''x24''
LETTERING: 6'' FEDERAL SERIES C
MOUNTING HOLES: 7/16'' DIA., 4 HOLES SPACED AS SHOWN



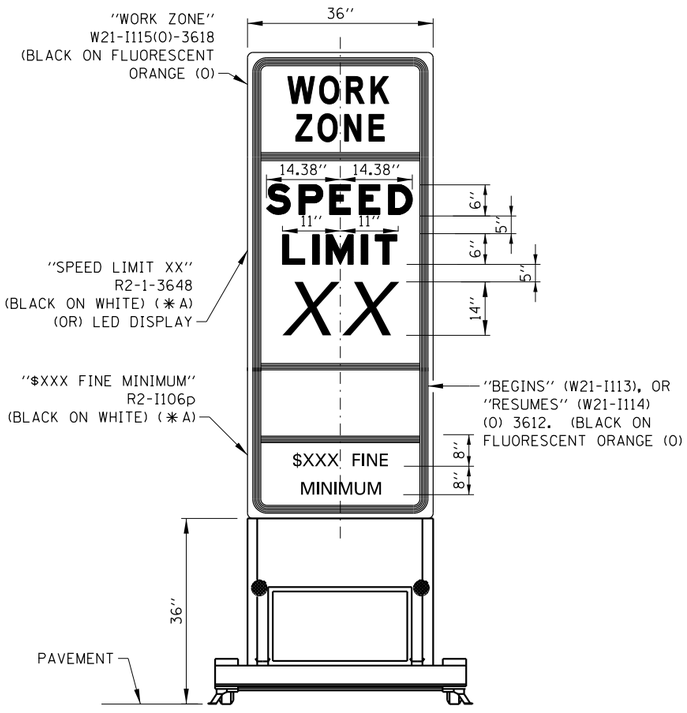
SUPPLEMENTAL PLATE (O)

COLOR: BACKGROUND - FLUORESCENT ORANGE (O)
BORDER AND LETTTERS - BLACK
SIZE: 24''x18''
LETTERING: 4'' FEDERAL SERIES D
MOUNTING HOLES: 7/16'' DIA., 2 HOLES SPACED AS SHOWN

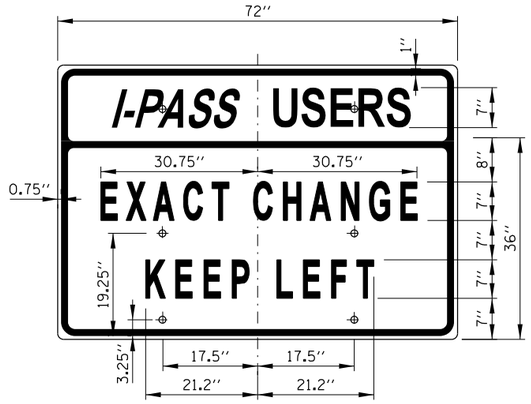


SIGN G20-I103

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (* A)
BORDER AND LETTERS - BLACK
SIZE: 60''x36''
LETTERING: 6'' FEDERAL SERIES C
MOUNTING HOLES: 7/16'' DIA., 4 HOLES SPACED AS SHOWN

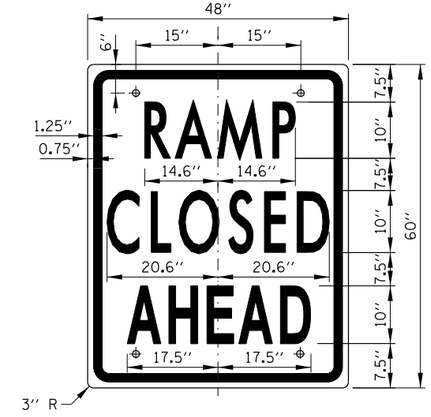


WORK ZONE SPEED LIMIT
SIGN ASSEMBLY



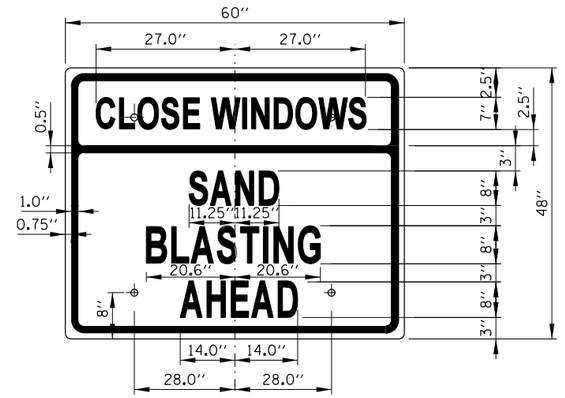
SIGN TS-7

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (* A)
BORDER AND LETTTERS - BLACK
SIZE: 72''x36''
LETTERING: 7'' FEDERAL SERIES C
MOUNTING HOLES: 7/16'' DIA., 4 HOLES SPACED AS SHOWN



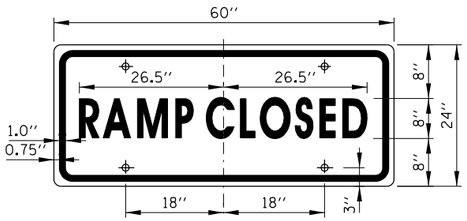
SIGN TS-9

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (* A)
BORDER AND LETTTERS - BLACK
SIZE: 48''x60''
LETTERING: 10'' FEDERAL SERIES C
MOUNTING HOLES: 7/16'' DIA., 4 HOLES SPACED AS SHOWN



SIGN TS-10 (O)

COLOR: BACKGROUND - FLUORESCENT ORANGE (O)
BORDER AND LETTTERS - BLACK
SIZE: 60''x48''
LETTERING: 8'' FEDERAL SERIES C, 7'' FEDERAL SERIES B
MOUNTING HOLES: 7/16'' DIA., 4 HOLES SPACED AS SHOWN



SIGN TS-6

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (* A)
BORDER AND LETTTERS - BLACK
SIZE: 60''x24''
LETTERING: 8'' FEDERAL SERIES C
MOUNTING HOLES: 7/16'' DIA., 4 HOLES SPACED AS SHOWN

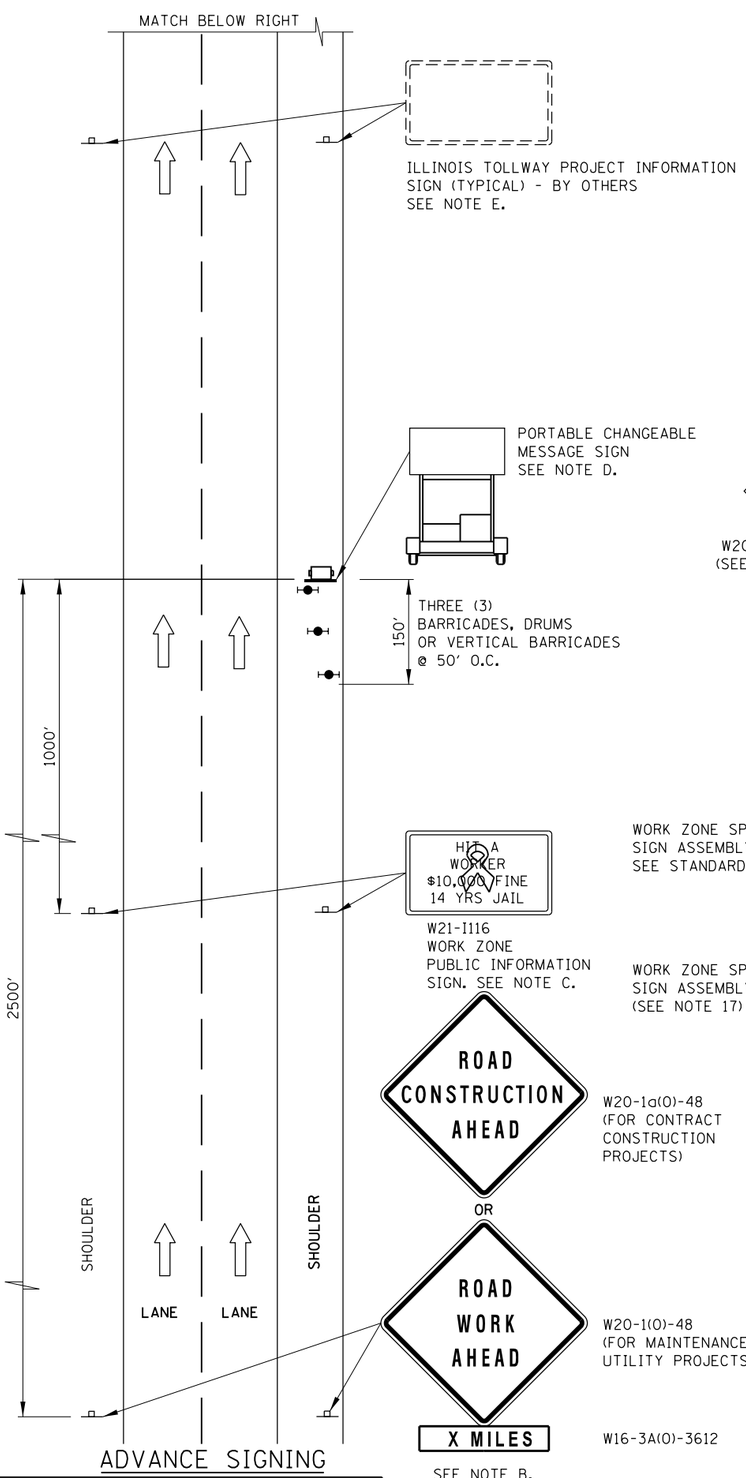
Paul Kovacs
APPROVED ..... CHIEF ENGINEER DATE 5-1-2009

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

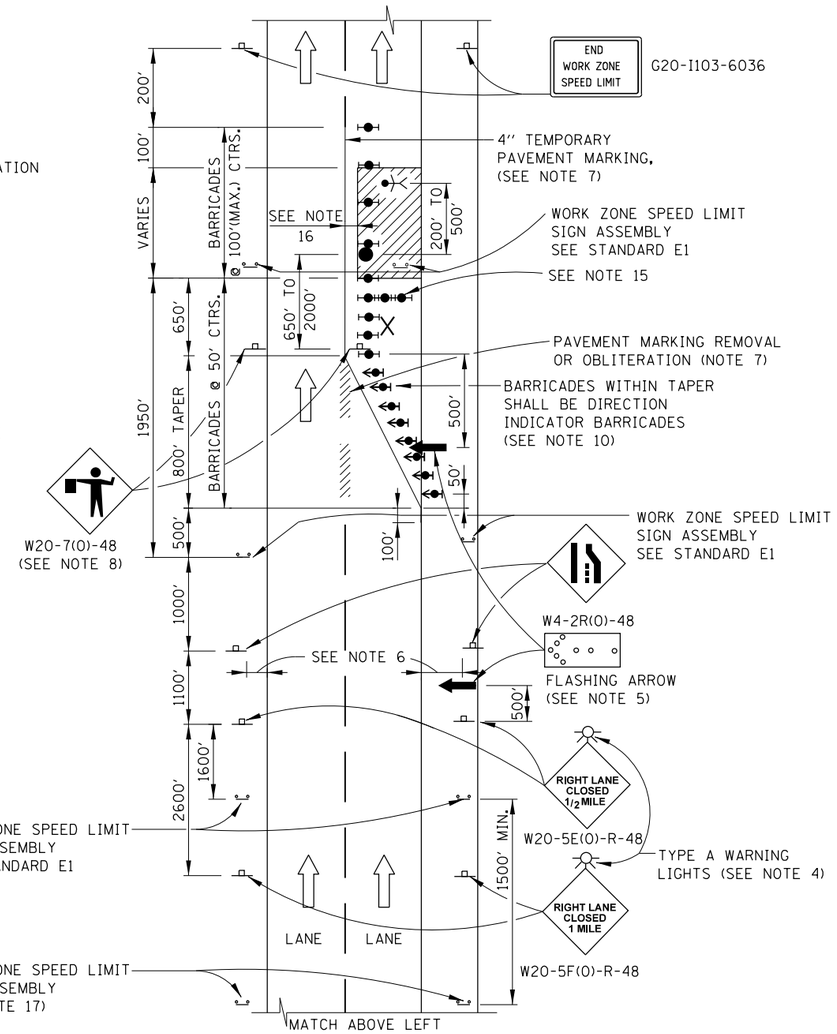
Illinois Tollway

CONSTRUCTION SIGNS

STANDARD E1-06



ADVANCE SIGNING



ONE-LANE CLOSURE WITH BARRICADE

LANE CLOSURE NOTES:

1. IF CLOSURES ARE EXPECTED TO PRODUCE TRAFFIC BACKUPS EXTENDING BEYOND THE FIRST WARNING SIGN SHOWN ON THE DETAILS, ADDITIONAL UPSTREAM SIGNS SHALL BE PLACED SO THAT THE TRAFFIC CONTROL ZONE ENCOMPASSES THE ANTICIPATED BACKUP ZONE.
2. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
3. THESE DETAILS ALSO APPLY TO OPPOSITE HAND LANE CLOSURES BY CHANGING SIGN LEGENDS AND ARROW DIRECTIONS TO INDICATE THE APPROPRIATE CLOSURE.
4. FOR NIGHT TIME CLOSURES, ONE TYPE A WARNING LIGHT SHALL BE INSTALLED ABOVE EACH OF THE 1 MILE AND ½ MILE ADVANCE WARNING SIGNS. FOR DAYLIGHT-ONLY CLOSURES, THE LIGHTS MAY BE OMITTED.
5. FOR ANY LANE CLOSURE, FLASHING ARROW BOARDS SHALL BE REQUIRED AND IN OPERATION AT ALL TIMES. THE FLASHING ARROW BOARD IN ADVANCE OF THE TAPER SHALL BE PROTECTED WITH THREE TYPE II BARRICADES AT 50' O.C.
6. CONSTRUCTION SIGNS SHALL GENERALLY BE POST-MOUNTED OR ATTACHED TO PORTABLE SUPPORTS AND SHALL BE INSTALLED 8' TO 12' FROM ADJACENT TRAVEL LANE WHEREVER POSSIBLE. IN NO CASE SHALL SIGNS BE LOCATED TO PROVIDE LESS THAN 2' CLEARANCE BETWEEN EDGE OF SIGN AND ADJACENT TRAVEL LANE.
7. PAVEMENT MARKING TAPE AND REMOVAL OR OBLITERATION OF EXISTING MARKINGS SHALL BE REQUIRED WHEN THE CLOSURE TIME EXCEEDS FOUR DAYS. THIS WORK SHALL BE MEASURED AND PAID FOR SEPARATELY.
8. WHEN A FLAGGER IS NOT ON STATION, THE FLAGGER SIGN SHALL BE PROMPTLY REMOVED, COVERED OR TURNED TO FACE AWAY FROM TRAFFIC. FLAGGER SIGNS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED SPACING BETWEEN THE SIGNS AND THE WORKERS IN EACH SEPARATE WORK ACTIVITY, PER THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
9. WORK ZONE SPEED LIMIT SIGN ASSEMBLIES, SHALL BE PLACED ADJACENT TO THE OPEN TRAFFIC LANE(S). WORK ZONE SPEED SIGNS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED SPACING BETWEEN SIGNS AND THE WORKERS IN EACH SEPARATE WORK ACTIVITY PER THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
10. DIRECTION INDICATOR BARRICADES SHALL BE USED IN LANE TAPERS.
11. FOR CLOSURES OTHER THAN SHORT TERM (SUNRISE TO ONE HOUR BEFORE SUNSET), THE MINIMUM HEIGHT OF THE SIGN FROM SHOULDER ELEVATION SHALL BE 7'-0".
12. CONES MAY BE USED IN LIEU OF BARRICADES IN THE BUFFER AND WORK AREAS, WHEN THE CLOSURE IS FOR MAINTENANCE OPERATIONS.
13. BARRICADES ARE TO BE LOCATED AT JOINT LINE WHEN WORK AREA EXTENDS UP TO JOINT UNLESS OTHERWISE SHOWN ON THE PLANS.
14. SEE MAINTENANCE OF TRAFFIC DRAWINGS FOR ADDITIONAL SIGNING IN THIS AREA.
15. CHECK BARRICADES SHALL BE PLACED IN THE MIDDLE OF THE CLOSED LANE AND AT THE SHOULDER AT 1000 FOOT CENTERS.
16. A 1'-0" MINIMUM/2'-0" DESIRABLE SHY DISTANCE SHALL BE PROVIDED, MEASURED BETWEEN EDGE OF PAVEMENT LANE MARKING TO THE EDGE OF THE TRAFFIC CONTROL DEVICE.
17. ADDITIONAL WORK ZONE SPEED LIMIT SIGNS SHALL BE PLACED WHEN DIFFERENCE BETWEEN POSTED TO WORK ZONE SPEED LIMIT IS > 20 M.P.H.

ADVANCE SIGNING NOTES:

A. THE ADVANCE SIGNING SHOWN ON THIS STANDARD SHALL APPLY ANY TIME THE CONTRACTOR CLOSES ONE OR MORE LANES, OR IS REQUIRED TO SHIFT THE LANE ALIGNMENT. THE "ROAD WORK AHEAD" OR "ROAD CONSTRUCTION AHEAD" SIGNS, WORK ZONE PUBLIC INFORMATION SIGNS AND PORTABLE CHANGEABLE MESSAGE ARE STATIONARY.

B. THE ROAD CONSTRUCTION AHEAD SIGN (W20-1A, WITH W16-3a SUPPLEMENTAL PLATE) OR ROAD WORK AHEAD SIGN (W20-1, WITH W16-3A SUPPLEMENTAL PLATE) SHALL BE LOCATED UP TO 5 MILES IN ADVANCE OF THE PROJECT LIMITS, WITH THE LOCATION BEING DETERMINED BY THE ENGINEER.

C. THE WORK ZONE PUBLIC INFORMATION SIGN IS 60" WIDE BY 48" HIGH. THE CONTRACTOR SHALL OBTAIN THE CAMERA-READY ARTWORK REQUIRED FOR THE SIGN MESSAGE BY CONTACTING IDOT'S CENTRAL BUREAU OF OPERATIONS.

D. THE PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE USED TO DISPLAY THE STATUS OF LANE WITHIN THE CONTRACT LIMITS. THE PRIMARY MESSAGES SHALL BE: "RIGHT LANE(S) CLOSED" / "x MILES AHEAD", "LEFT LANE(S) CLOSED" / "x MILES AHEAD", "LANE(S) SHIFT" / "x MILES AHEAD", "ALL LANES OPEN". THE PORTABLE CHANGEABLE MESSAGE SIGN MAY BE MOVED TO THE MEDIAN SHOULDER WHEN THE LANE CLOSURES ARE ON THE LEFT, PROVIDED THE EXISTING SHOULDER WIDTH IS ADEQUATE.

E. THE ILLINOIS TOLLWAY WILL FURNISH AND INSTALL STATIC PROJECT INFORMATION SIGNS IN ADVANCE, THROUGH AND AT THE END OF THE WORK ZONE. THESE SIGNS WILL BE INSTALLED ALONG THE OUTSIDE SHOULDER WITH THE ADVANCE SIGNS LOCATED BEYOND THE PORTABLE CHANGEABLE MESSAGE SIGN. THE ENGINEER AND CONTRACTOR SHALL COORDINATE WITH THE ILLINOIS TOLLWAY REGARDING THE LOCATION OF THESE SIGNS AND NOTIFY THE ILLINOIS TOLLWAY OF ANY DAMAGE TO THE SIGNS OR SUPPORTS.

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- FLAGGER WITH TRAFFIC CONTROL SIGN
- WORKER
- LANE CLOSED

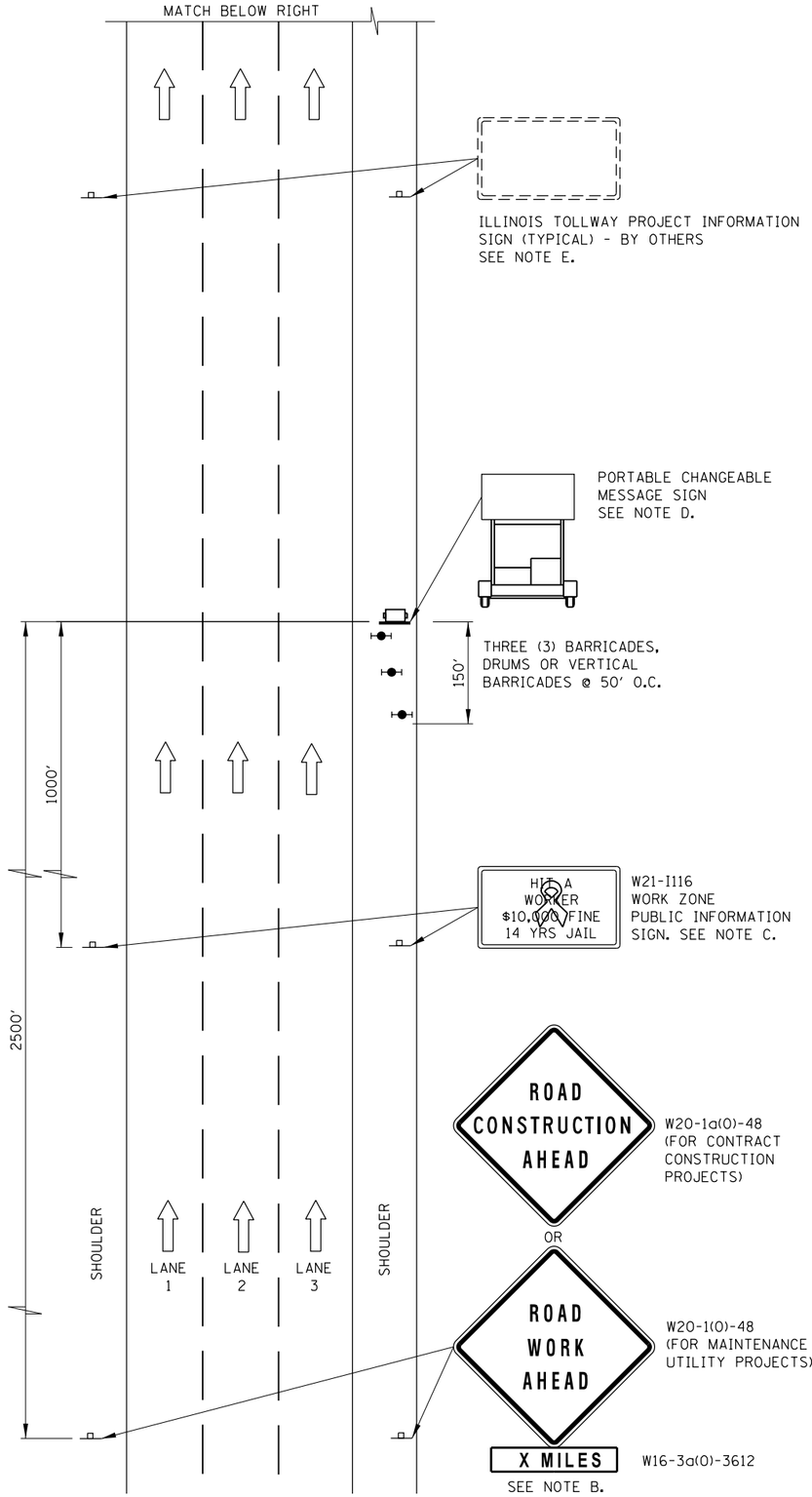
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

DATE	REVISIONS
11-01-12	ADDED THREE LANE CLOSURE
03-31-14	REVISED BUFFER SPACE, TAPER DIMENSIONS AND REVISED NOTES.
3-11-2015	REVISED NOTES.
3-31-2016	ADDED LANE CLOSURE WITH BARRIER AND ADDED SEQUENTIAL FLASHING WARNING LIGHT.
3-31-2017	ADDED TAPER RATE TABLE

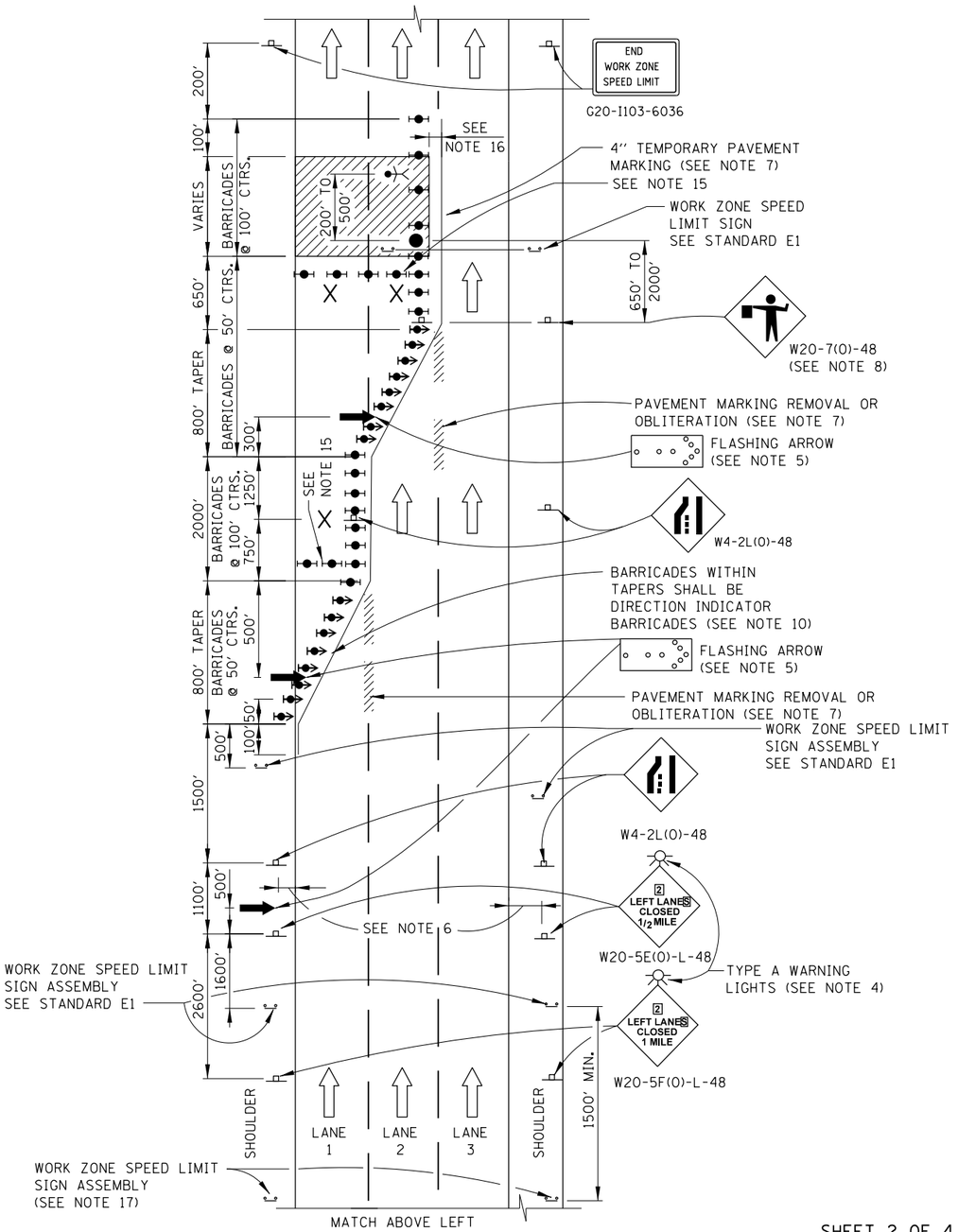
Illinois Tollway

LANE CLOSURE DETAILS

STANDARD E2-07



ADVANCE SIGNING



TWO-LANE CLOSURE WITH BARRICADE

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- FLAGGER WITH TRAFFIC CONTROL SIGN
- WORKER
- LANE CLOSED

APPROVED Paul Kovacs CHIEF ENGINEER DATE 5-1-2009

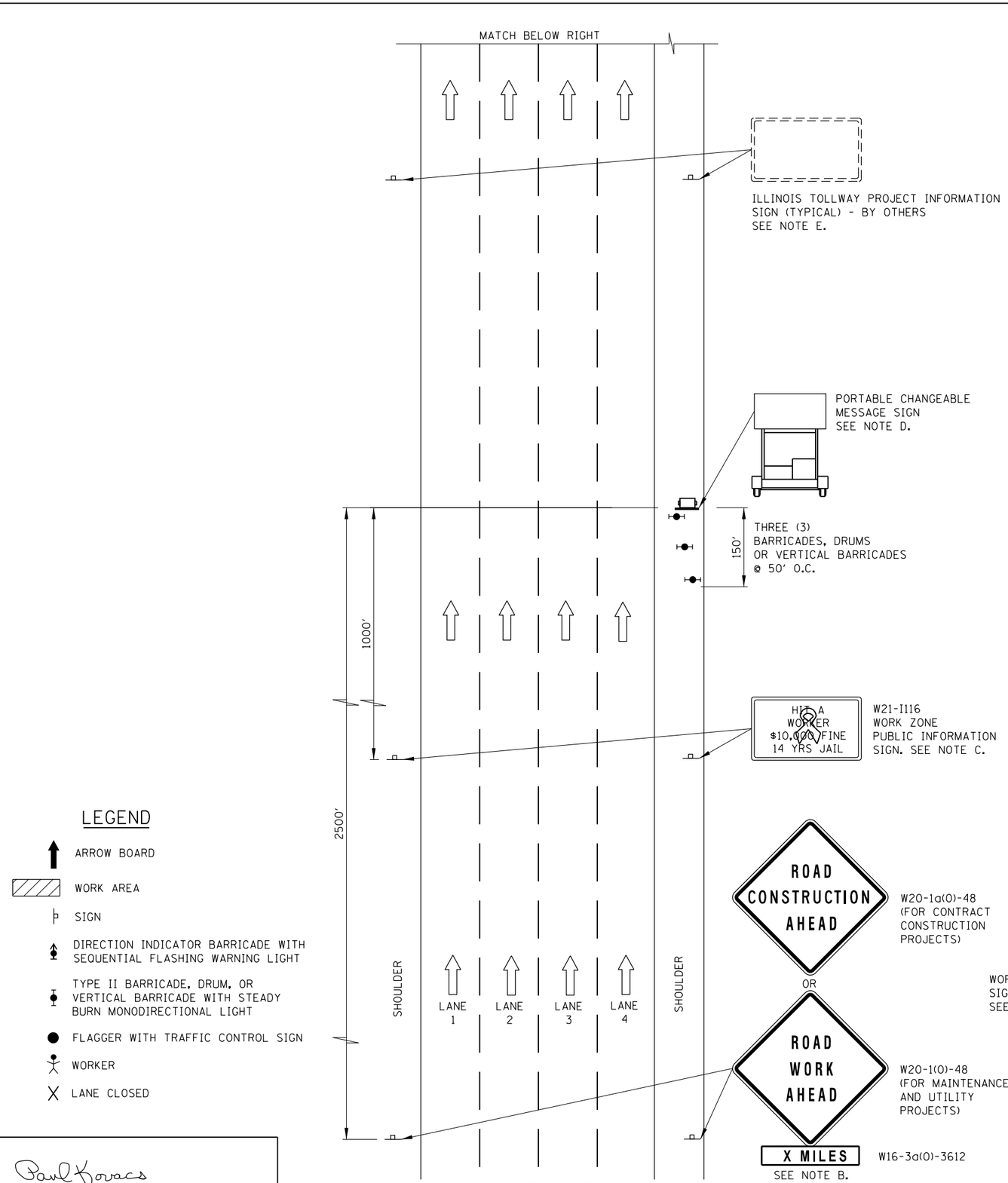
SEE SHEET 1 IN THIS SERIES FOR NOTES

SHEET 2 OF 4

Illinois Tollway

LANE CLOSURE DETAILS

STANDARD E2-07

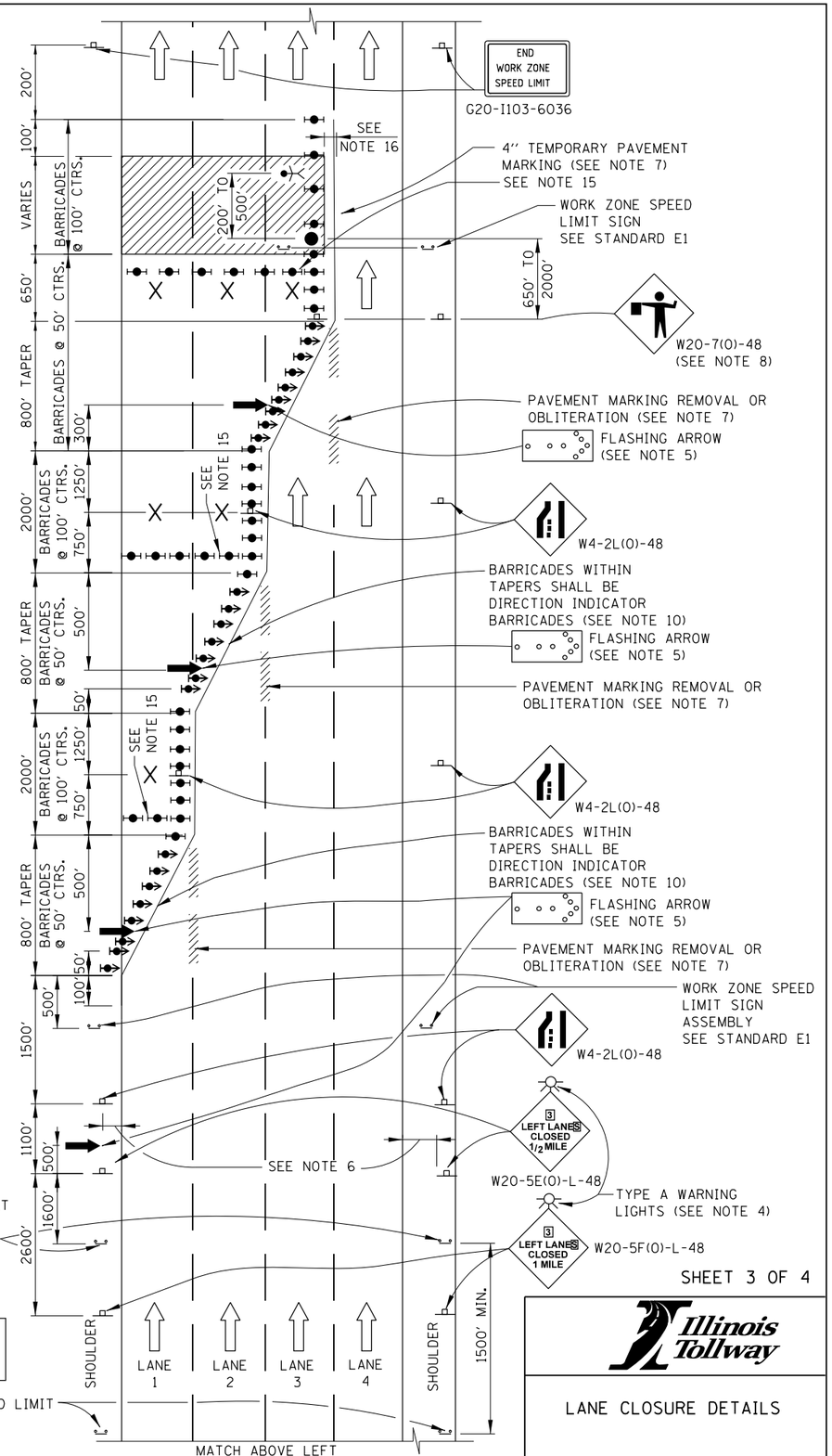


LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- FLAGGER WITH TRAFFIC CONTROL SIGN
- WORKER
- LANE CLOSED

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

ADVANCE SIGNING



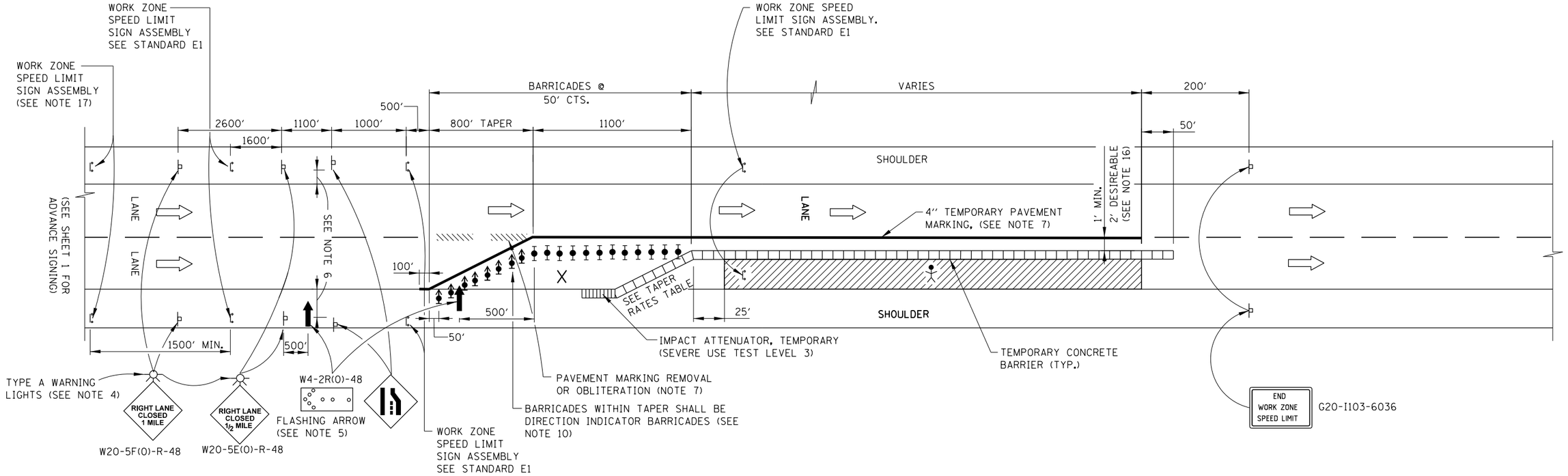
THREE-LANE CLOSURE WITH BARRICADE

SHEET 3 OF 4

Illinois Tollway

LANE CLOSURE DETAILS

STANDARD E2-07



ONE-LANE CLOSURE WITH BARRIER

TAPER RATES

WORK ZONE SPEED (mph)	SHY LINE (ft.)	BARRIER INSIDE SHY LINE	BARRIER AT OR BEYOND SHY LINE
65	8.5	28:1	19:1
60	8	26:1	18:1
55	7	24:1	16:1
50	6.5	21:1	14:1
45	6	18:1	12:1
40	5	16:1	10:1
35	4.5	15:1	9:1
30	4	13:1	8:1

LEGEND

- ARROW BOARD
- WORK AREA
- SIGN
- PORTABLE CHANGEABLE MESSAGE SIGN
- DIRECTION INDICATOR BARRICADE WITH SEQUENTIAL FLASHING WARNING LIGHT
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- WORKER
- X LANE CLOSED

NOTE:

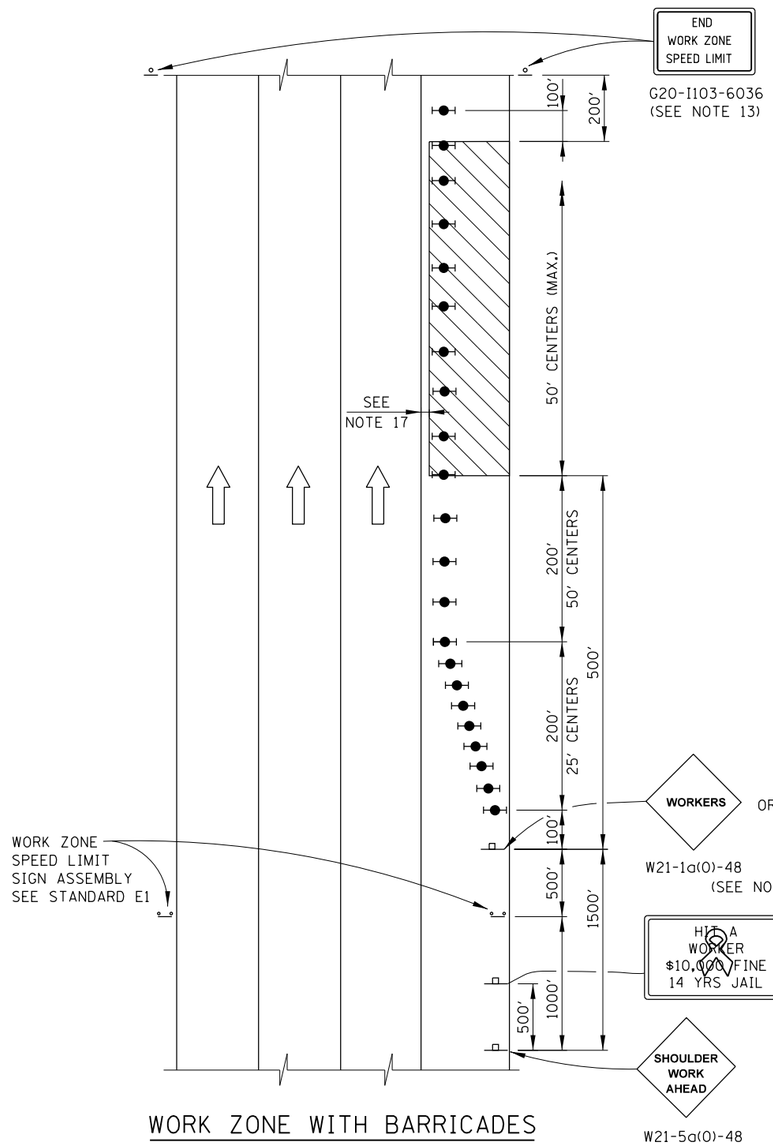
SEE SHEET 1 OF THIS SERIES FOR NOTES.

Paul Kovacs
APPROVED . . . . . DATE 3-31-2016
CHIEF ENGINEER

Illinois Tollway

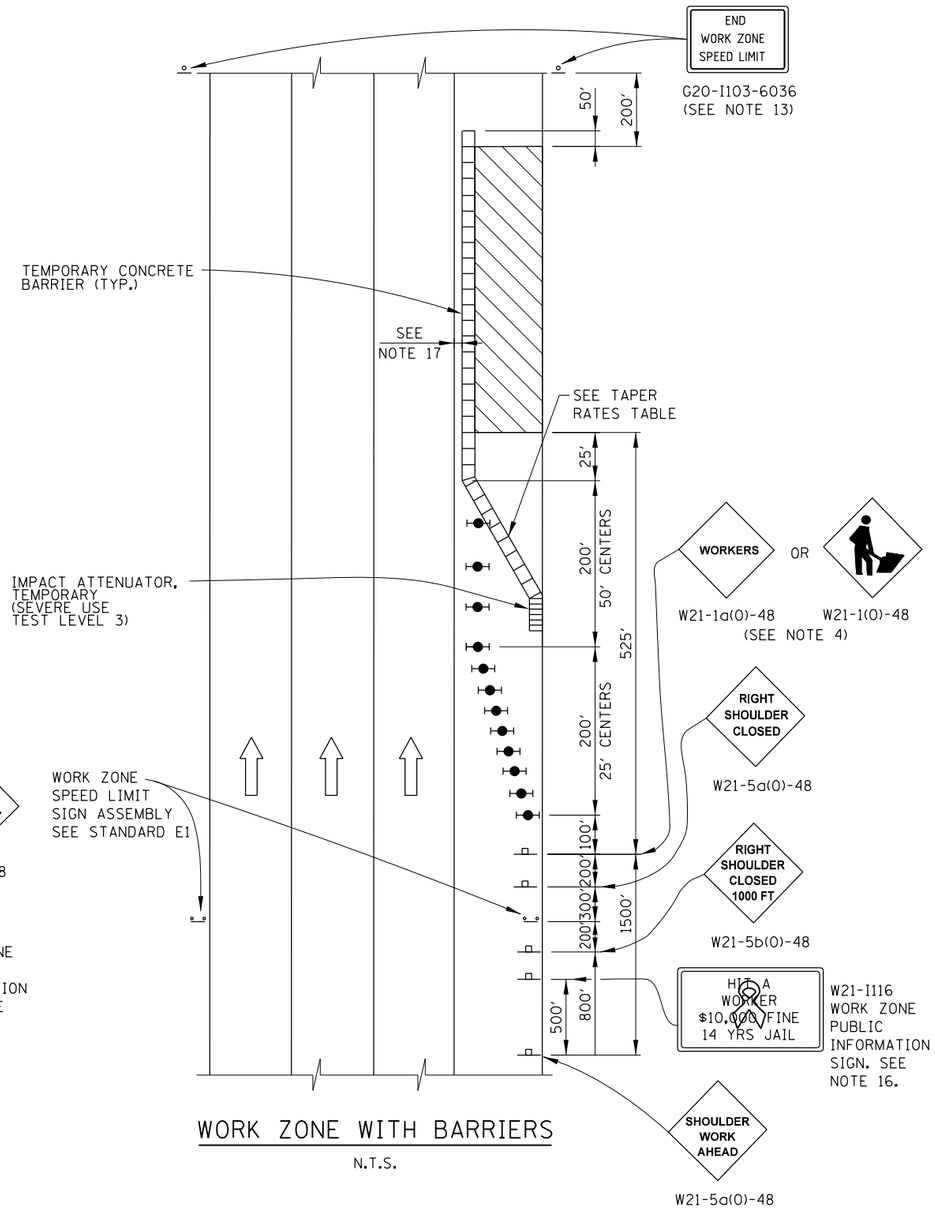
LANE CLOSURE DETAILS

STANDARD E2-07



WORK ZONE WITH BARRICADES

N.T.S.



WORK ZONE WITH BARRIERS

N.T.S.

TAPER RATES

WORK ZONE SPEED (mph)	SHY LINE (ft.)	BARRIER INSIDE SHY LINE	BARRIER AT OR BEYOND SHY LINE
65	8.5	28:1	19:1
60	8	26:1	18:1
55	7	24:1	16:1
50	6.5	21:1	14:1
45	6	18:1	12:1
40	5	16:1	10:1
35	4.5	15:1	9:1
30	4	13:1	8:1

LEGEND

- WORK AREA
- SIGN
- TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT

GENERAL NOTES:

1. THE SHOULDER SHALL BE CLOSED WHEN A WORK ACTIVITY REQUIRING 15 OR MORE MINUTES IS PERFORMED AT A DISTANCE WHICH IS LESS THAN 15 FEET BUT NO CLOSER THAN 2 FEET FROM THE EDGE OF PAVEMENT.
2. THE ADJACENT EXTERIOR LANE SHALL BE CLOSED WHEN WORK IS PERFORMED WITHIN 2 FEET FROM THE EDGE OF PAVEMENT.
3. THE CHANNELIZING DEVICES WHICH SEPARATE THE WORK SPACE FROM THE ADJACENT TRAVEL LANE SHALL BE SPACED AT 25' FOR (200 FEET) AND AT A MAXIMUM OF 50' FOR ALL ADDITIONAL DEVICES.
4. WHEN THE WORKSITE IS UNATTENDED, SUBSTITUTE - ''SHOULDER WORK AHEAD'' SIGN.
5. WORKER SIGNS OR SHOULDER WORK SIGNS AND CHANNELIZATION DEVICES ARE PLACED ONLY ON THE SIDE OF THE ROADWAY ON WHICH THE ACTIVITY IS PERFORMED.
6. FOR SHOULDER CLOSURE EXTENDING OVERNIGHT, BARRICADE TYPE II WITH STEADY BURNING LIGHT, TYPE C SHALL BE USED.
7. FOR SHORT TERM CLOSURE (SUNRISE TO ONE HOUR BEFORE SUNSET) NOT EXTENDING INTO DARKNESS, CONES MAY BE USED.
8. ONE WORK ZONE SPEED LIMIT SIGN ASSEMBLY SHALL BE PLACED AT A DISTANCE OF 500' TO 2,500' MAXIMUM IN ADVANCE OF WORKERS THROUGHOUT THE SHOULDER CLOSURE. MOVING OPERATIONS MAY REQUIRE CONTINUOUS ADJUSTMENT OF THE SIGN ASSEMBLY LOCATION TO MAINTAIN THE ABOVE INTERVAL.
9. AN ADDITIONAL SIGN ASSEMBLY SHALL BE PLACED 500' BEYOND THE LAST ENTRANCE RAMP FOR EACH INTERCHANGE THAT FALLS WITHIN THE 2,500'.
10. THE SIGN ASSEMBLY SHALL BE PLACED NO CLOSER THAN 500' TO ANY OTHER SIGN.
11. THE WORK ZONE SPEED LIMIT SIGNS AND SIGN ASSEMBLY SHALL BE PROMPTLY REMOVED OR COVERED WHEN SHOULDER CLOSURE IS NOT IN USE.
12. ALL CONFLICTING SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED.
13. ''END WORK ZONE SPEED LIMIT'' SIGNS SHALL BE IN PLACE ONLY WHEN THE EXISTING POSTED SPEED > 55MPH.
14. FOR SHOULDER REPAIRS OR REPLACEMENT THE CHANNELIZING DEVICES SHALL BE PLACED AT THE EDGE OF PAVEMENT WHENEVER THE WORK ACTIVITIES RESULT IN A DROPOFF AT THE EDGE OF PAVEMENT.
15. ANY UNATTENDED OBSTACLE OR EXCAVATION LEFT ON THE SHOULDER OVERNIGHT SHALL BE IN COMPLIANCE WITH THE ROADWAY TRAFFIC CONTROL AND COMMUNICATIONS MANUAL.
16. THE WORK ZONE PUBLIC INFORMATION SIGN IS 60'' WIDE BY 48'' HIGH. THE CONTRACTOR SHALL OBTAIN THE CAMERA-READY ARTWORK REQUIRED FOR THE SIGN MESSAGE BY CONTACTING IDOT'S CENTRAL BUREAU OF OPERATIONS.
17. A 1'-0'' MINIMUM/2'-0'' DESIRABLE SHY DISTANCE SHALL BE PROVIDED, MEASURED BETWEEN EDGE OF PAVEMENT LANE MARKING TO THE EDGE OF THE TRAFFIC CONTROL DEVICE.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 5-1-2009

DATE	REVISIONS
1-01-11	CHANGED SYMBOL DESIGNATION
	REVISED NOTES
3-31-14	REVISED WORKER SIGN NUMBERS PER
	''MUTCD'' AND REVISED NOTES.
3-11-2015	REVISED NOTES
3-31-2016	ADD WORK ZONE WITH BARRIERS.
3-31-2017	ADDED TAPER RATE TABLE.

Illinois Tollway

SHOULDER CLOSURE DETAILS

STANDARD E3-06

GENERAL NOTES - EROSION AND SEDIMENT CONTROLS

1. THE WORK DESCRIBED ON THESE DRAWINGS IS AN INTEGRAL PART OF THE STORM WATER POLLUTION PREVENTION PLAN USED TO OBTAIN A NPDES PERMIT FROM IEPA FOR THE CONSTRUCTION OF THIS PROJECT.

2. THE PURPOSE OF THE EROSION AND SEDIMENT CONTROL MEASURES INCLUDED FOR THIS PROJECT IS TO LIMIT THE SEDIMENT POLLUTION IMPACT OF ANY STORM WATER DISCHARGES THAT ORIGINATE ON THIS SITE OR OFF-SITE FLOWS THAT FLOW OVER THE DISTURBED AREAS.

3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SEDIMENT TRANSPORT OFF THE SITE IS REDUCED BY A COMBINATION OF MINIMIZATION OF EROSION AT THE SOURCE AND INSTALLATION OF SPECIFIC MEASURES TO CONTROL OR REDUCE THE TRANSPORT OF SEDIMENT. A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN, NOI, SWPPP, AND INSPECTION LOG BEING IMPLEMENTED BY THE CONTRACTOR SHALL BE ON THE CONSTRUCTION SITE AT ALL TIMES.

4. TO THE MAXIMUM EXTENT POSSIBLE EROSION SHALL BE MINIMIZED AT THE SOURCE. ALL FLOWS ORIGINATING OFF THE CONSTRUCTION SITE SHALL BE DIVERTED AROUND DISTURBED AREAS OR SHALL BE CONVEYED THROUGH THE SITE IN A MANNER THAT UNTREATED ON-SITE RUNOFF, SHALL BE MINIMIZED AND DOES NOT MIX WITH THE OFF-SITE RUNOFF.

5. ALL RUNOFF ORIGINATING ON DISTURBED AREAS ASSOCIATED WITH THIS PROJECT WILL PASS THROUGH ONE OR MORE MEASURES THAT WILL MINIMIZE THE OFF-SITE SEDIMENT IMPACTS OF THE CONSTRUCTION ACTIVITY.

6. ALL PERMANENT SEDIMENT BASINS, PERMANENT STORM WATER CONTROL MEASURES, AND RUNOFF CONTROL MEASURES REQUIRED TO KEEP OFF-SITE RUNOFF FROM FLOWING OVER THE CONSTRUCTION AREA WILL BE INSTALLED BEFORE CLEARING AND STRIPPING OF THE SITE PROCEEDS. PRIOR TO PROCEEDING WITH EARTHWORK ON A PROJECT THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A PROPOSED EARTHWORK AND STABILIZATION SCHEDULE FOR REVIEW AND APPROVAL.

7. A MAXIMUM OF 10 ACRES IS ALLOWED TO BE IN SOME STAGE OF GRADING AT A SINGLE TIME. ADDITIONAL AREAS (UP TO 10 ACRES) MAY BE CLEARED BUT SHALL NOT BE STRIPPED OF VEGETATION UNTIL THE GRADED AREAS HAVE BEEN PROTECTED FROM EROSION THROUGH INSTALLATION OF EITHER TEMPORARY OR PERMANENT MEASURES. WHENEVER POSSIBLE, THE GRADING SHALL BE COMPLETED TO THE DESIGN GRADE AND THE PERMANENT VEGETATION PLAN IMPLEMENTED PRIOR TO STARTING GRADING ACTIVITIES ON THE NEXT SITE.

   A. WHEN BALANCING EARTHWORK (BORROW FROM A CUT USED AS FILL AT A LOCATION DISTANT FROM THE CUT) THE CHIEF ENGINEER WILL CONSIDER ALLOWING MORE THAN 10 ACRES OF CONSTRUCTION WORK AREAS AND STORAGE AREAS.

   B. WHERE NEW INTERCHANGES ARE BEING CONSTRUCTED THE ALLOWABLE AREA BEING GRADED MAY BE LARGER THAN 10 ACRES WHEN THE CONTRACT DRAWINGS AND SWPPP DEFINE SUCH INCREASES.

   C. VARIATIONS TO THE ABOVE MAY BE CONSIDERED BY THE CHIEF ENGINEER UNDER ALL THE FOLLOWING CONDITIONS:

      - IF THE CONTRACTOR FALLS BEHIND SCHEDULE THROUGH NO FAULT OF HIS OWN.
      - THE CONTRACTOR MUST PRESENT A SCHEDULE DEMONSTRATING THE NEED FOR SUCH VARIATION IN ORDER TO COMPLETE THE WORK ON TIME.
      - THE CONTRACTOR MUST COMPLY WITH ALL OTHER CONTRACT AND PERMIT REQUIREMENTS.

8. DISTURBED AREAS ARE TO BE PROTECTED FROM EROSION IN A TIMELY MANNER. UPON COMPLETION OF GRADING OR CONSTRUCTION, THE AREA SHALL BE STABILIZED (USING PERMANENT MEASURES WHEN POSSIBLE) WITHIN 7 CALENDAR DAYS. TEMPORARY STABILIZATION THROUGH USE OF GROUND COVER, MULCHING, OR OTHER APPROVED MEASURES WILL BE INSTALLED WHENEVER SITE DEVELOPMENT WORK, GRADING OR OTHER EARTH DISTURBING ACTIVITIES CEASE TO BE CONTINUOUS FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE 7/14 DAY REQUIREMENT IS TAKEN TO MEAN THAT THE STABILIZATION OPERATION IS COMPLETE OR NEARING COMPLETION IN THE DEFINED TIME.

9. STABILIZATION OF CUT OR FILL SLOPES WITH TEMPORARY OR PERMANENT EROSION CONTROL MEASURES IS REQUIRED WHENEVER THE CUT OR FILL ACTIVITY REACHES 15 FEET VERTICALLY OR THE FINISHED SLOPE EQUALS 50 FEET, WHICHEVER IS MORE RESTRICTIVE. ONCE THE STABILIZATION MEASURES ARE INSTALLED, THE PLACEMENT OF FILL OR EXCAVATION ACTIVITIES ARE ALLOWED TO PROCEED.

10. THE CONTRACTOR SHALL DESIGNATE ONE OF HIS EMPLOYEES AS EROSION AND SEDIMENT CONTROL MANAGER. THIS PERSON WILL BE RESPONSIBLE FOR IMPLEMENTATION OF THE EROSION AND SEDIMENT CONTROL PLAN ON ALL DISTURBED AREAS. THIS PERSON SHALL POSSESS THE NECESSARY TRAINING AND CERTIFICATION ON EROSION AND SEDIMENT CONTROL MEASURES FOR ACCEPTANCE BY THE ILLINOIS TOLLWAY. THIS EMPLOYEE IS TO HAVE THE AUTHORITY TO CARRY OUT THE IMPLEMENTATION OF ANY INSTRUCTIONS CONCERNING THE EROSION AND SEDIMENT CONTROL PLAN GIVEN BY THE ENGINEER. ALL MEASURES WILL BE INSPECTED BY THIS INDIVIDUAL AND THE ENGINEER ON A REGULAR BASIS (AT LEAST ONCE EVERY 7 DAYS) AND AFTER ANY RAINFALL EVENT GREATER THAN 0.5 INCHES, OR EQUIVALENT SNOWFALL (I.E. + 5").

11. SEDIMENT TRAPS, SEDIMENT BASINS, DITCHES, SILT FENCES, FENCES, STONE OUTLET STRUCTURES, EARTH BERMS, ETC. SHALL BE MAINTAINED DURING THE CONSTRUCTION SEASON AS WELL AS THE WINTER MONTHS AND OTHER TIMES WHEN THE PROJECT IS CLOSED DOWN. TRAPS WILL BE CLEANED WHEN THEY ARE 50% FILLED. SILT FENCE AND STONE OUTLET STRUCTURES SHALL HAVE SEDIMENT REMOVED WHEN IT REACHES 50% THE HEIGHT OF THE CONTROL DEVICE. THESE SPOILS WILL BE REMOVED TO AN APPROVED SITE.

12. SALVAGED TOPSOIL SHALL BE PLACED ON WELL DRAINED LAND AWAY FROM INTERMITTENT AND LIVE STREAMS OR WETLANDS WITH THE APPROPRIATE RUNOFF CONTROL AND SEDIMENT CONTROL MEASURES INSTALLED AROUND THE STORAGE SITE. SALVAGED TOPSOIL SHALL BE STABILIZED WITH STRAW MULCH IMMEDIATELY AFTER SHAPING OF THE PILE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS. SILT FENCE SHALL BE PROVIDED AT THE PERIMETER OF THE STOCKPILE.

13. MATERIALS EXCAVATED FOR THE CONSTRUCTION OR CLEAN OUT OF SEDIMENT TRAPS SHALL NOT BE STOCKPILED IN THE VICINITY OF THE TRAP. IT SHALL BE PLACED IN AN EMBANKMENT OR WASTED AS DIRECTED BY THE ENGINEER.

14. EXCAVATION TO BE USED FOR EMBANKMENTS SHALL NOT BE STOCKPILED UNLESS PERIMETER CONTROLS ARE UTILIZED. WHEN THIS MATERIAL IS STOCKPILED FOR THE CONVENIENCE OF THE CONTRACTOR THE COST OF PROVIDING THE CONTROLS ARE THE RESPONSIBILITY OF THE CONTRACTOR. IF THE MATERIAL IS STOCKPILED AT THE DIRECTION OF THE ENGINEER THE ILLINOIS TOLLWAY WILL ASSUME THE COSTS OF THE CONTROLS.

15. SEDIMENT LADEN DEWATERING DISCHARGE MUST BE DIRECTED TO AN APPROVED SEDIMENT TRAPPING MEASURE PRIOR TO RELEASE FROM THE SITE.

16. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSIDERED TEMPORARY. THESE MEASURES WILL BE REMOVED BY THE CONTRACTOR AS DESIGNATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. DISTURBED AREAS ARE TO BE RESTORED UPON REMOVAL.

17. WHEN THE CONTRACTOR REQUESTS A CHANGE TO POSTPONE COMPLETION OF THE EXCAVATION OF A SPECIFIC AREA AS A CONTINUOUS OPERATION AND PLACING THE TOPSOIL AS DEFINED IN THE STANDARD SPECIFICATIONS, THE ENGINEER MAY ALLOW THE CONTRACTOR TO STABILIZE THE AREA USING TEMPORARY STABILIZATION WITH STRAW MULCH PROVIDING THE FOLLOWING CONDITIONS ARE MET:

   A. ALL AREAS BEING STABILIZED ARE 1:3 (V:H) SLOPES OR FLATTER.

   B. THE COST OF PREPARING THE SEED BED AND STABILIZING THE AREA WITH TEMPORARY STABILIZATION WITH STRAW MULCH IS THE RESPONSIBILITY OF THE CONTRACTOR.

   C. ALL REQUIRED SEDIMENT CONTROL MEASURES FOR THE SECTION OF ROAD IN QUESTION HAVE BEEN INSTALLED AND ARE BEING MAINTAINED.

18. THE CONTRACTOR SHALL PREPARE A SKETCH SHOWING DIMENSIONS FROM TWO ADJACENT OBJECTS TO ALL DRAINAGE STRUCTURES THAT HAVE BEEN PROTECTED. THIS IS TO LOCATE THE STRUCTURE IN CASE OF HEAVY RAINFALL AND THE STRUCTURE IS BLOCKED OR FLOODED. THE ENGINEER SHALL BE PROVIDED WITH A COPY OF THE SKETCH.

19. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN ACCORDANCE WITH THE STANDARD DRAWINGS AND SPECIAL PROVISION (S.P.) 111, STORM WATER POLLUTION PREVENTION PLAN INCLUDING CONTROLS AND SPILL PREVENTION-MATERIAL MANAGEMENT PRACTICES. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL SIGN THE CONTRACTOR'S CERTIFICATION STATEMENT. LIST THE MATERIALS OR SUBSTANCES EXPECTED TO BE PRESENT ON-SITE IN THE INVENTORY FOR POLLUTION PREVENTION PLAN AND SHALL NAME TWO ADDITIONAL INDIVIDUALS TO ASSIST IN SPILL PREVENTION AND CLEAN UP AT THE PRECONSTRUCTION CONFERENCE. SEE S.P. 111.

20. AT THE TIME OF THE PRECONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE PROPOSED CONCRETE TRUCK WASHOUT LOCATIONS AS REQUIRED IN SPECIAL PROVISION 111. RUNOFF FROM WASH AREAS SHALL BE CONTAINED IN DESIGNATED AREAS SO THAT RUNOFF DOES NOT REACH THE STORM SEWER OR DITCH SYSTEMS. WASHOUT WATER SHALL BE TAKEN TO AN APPROVED DISCHARGE LOCATION.

21. IF AN ALTERNATIVE SIZE DITCH CHECK IS PROPOSED BY THE CONTRACTOR FOR USE ON THE PROJECT, A CONTRACT DITCH CHECK SPACING WILL NEED TO BE RECALCULATED BY THE CONTRACTOR IN ACCORDANCE WITH THE ILLINOIS TOLLWAY EROSION AND SEDIMENT CONTROL, LANDSCAPE DESIGN CRITERIA MANUAL. ANY RESULTING QUANTITY CHANGES MUST BE APPROVED BY THE ENGINEER PRIOR TO START OF WORK.

22. ALL RUNOFF, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE LOCATED OUTSIDE THE CLEAR ZONE. THE CONTRACTOR SHALL REVIEW THE LOCATIONS OF ALL MEASURES AND PERFORM A BARRIER WARRANT ANALYSIS IF NECESSARY TO ENSURE ROADSIDE OBSTACLES ARE NOT CREATED.

23. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

Illinois Tollway

DATE	REVISIONS
3-31-2014	REVISED GENERAL NOTES.
3-11-2015	REVISED NOTES.
3-31-2016	REMOVED TEMPORARY DITCH CHECKS

TEMPORARY EROSION AND SEDIMENT CONTROLS

STANDARD K1-06

STANDARD SYMBOLS

CLEARING & GRADING LIMITS
(LIMITS OF CONSTRUCTION)

CULVERT INLET
PROTECTION-FENCE

CIP

CULVERT INLET
PROTECTION-STONE

DB

DEWATERING BASINS

DIVERSION DIKE

DRAINAGE DIVIDE

EXISTING DRAINAGE PATH

FIPC

FILTER FABRIC
INLET PROTECTION, COVER TYPE

FIPB

FILTER FABRIC
INLET PROTECTION, BASKET TYPE

FB FB

FLOTATION BOOM

IC

INITIAL CONSTRUCTION ITEM

PROPOSED DRAINAGE PATH

RIP

RECTANGULAR INLET
PROTECTION

SEDIMENT BASIN
AGGREGATE BERM

SEDIMENT BASIN

SILT FENCE

STABILIZED
CONSTRUCTION
ENTRANCE

STONE OUTLET STRUCTURE
SEDIMENT TRAP

STREAM DIVERSION

SSF

SUPER SILT FENCE

T

TEMPORARY DITCH CHECK

TEMPORARY PIPE SLOPE DRAIN

TEMPORARY RIPRAP

TEMPORARY ROCK CHECK DAM

TEMPORARY STREAM CROSSING

TS

TEMPORARY SWALE

TP

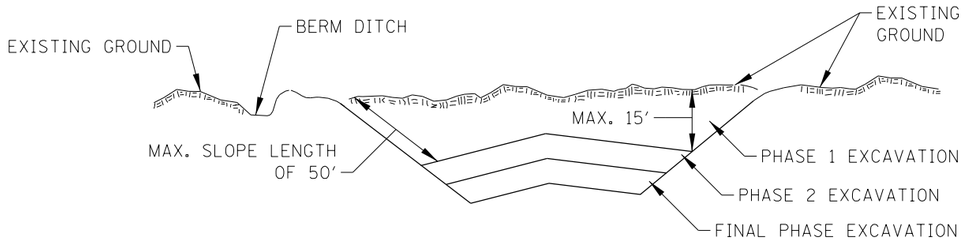
TREE PROTECTION

Paul Kovacs
APPROVED . . . . . DATE 2-7-2012
CHIEF ENGINEER

Illinois Tollway

TEMPORARY EROSION
AND SEDIMENT CONTROLS

STANDARD K1-06



NOTES:

1. ALL CUT SLOPES SHALL BE EXCAVATED AND STABILIZED (PLACE TOPSOIL, PREPARE SEEDBED, APPLY SEED, PROTECT SLOPE WITH MULCH OR EROSION BLANKET) AS THE WORK PROGRESSES.

2. CONSTRUCTION SEQUENCE:

   A) EXCAVATE AND STABILIZE BERM, SIDE AND OUTLET DITCHES, PROVIDE SEDIMENT TRAPS FOR DITCHES.

   B) PERFORM PHASE 1 EXCAVATION AND STABILIZE SLOPES WITH PERMANENT SEEDING.

   C) PERFORM PHASE 2 EXCAVATION AND STABILIZE SLOPES WITH PERMANENT SEEDING. OVER SEED PHASE 1 SLOPES, IF REQUIRED.

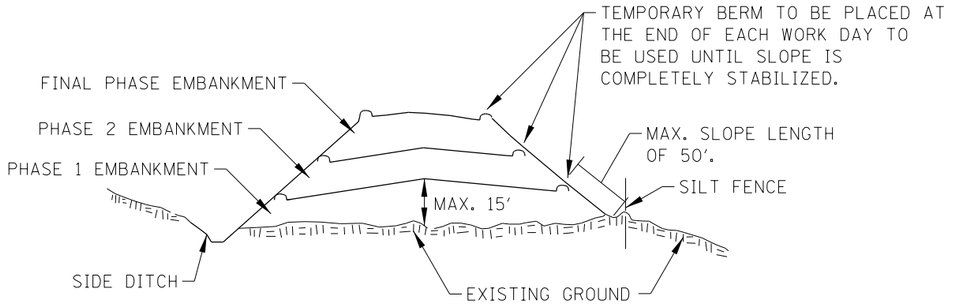
   D) PERFORM FINAL PHASE EXCAVATION, DRESS, SEED AND MULCH SLOPES WITH PERMANENT SEEDING. STABILIZE SURFACE DRAIN DITCHES. OVER SEED PHASE 1 & 2 SLOPES, IF REQUIRED, AS DETERMINED BY THE ENGINEER.

3. IF PERMANENT SEEDING CANNOT BE PLACED DUE TO CONTRACT REQUIREMENTS REGARDING PLANTING SEASONS, THE CUT SLOPE IS TO HAVE TOPSOIL PLACED AND SEEDING PREPARED PRIOR TO USING TEMPORARY STABILIZATION WITH STRAW MULCH OR TEMPORARY SEEDING WITH EROSION BLANKET.

4. THE CONTRACTOR HAS THE OPTION OF DELAYING TOPSOIL SEEDING BEYOND THE 15 FOOT LIMITATION. IF THIS OPTION IS CHOSEN, THE CUT SLOPE MUST BE "TEMPORARY STABILIZED" AT NO COST TO THE ILLINOIS TOLLWAY.

5. ONCE THE EXCAVATION WITHIN A SPECIFIC AREA HAS BEGUN, THE OPERATION SHALL BE CONTINUOUS FROM STRIPPING THROUGH THE COMPLETION OF THE GRADING AND PLACEMENT OF SLOPE STABILIZATION MEASURES. ANY INTERRUPTIONS IN THE OPERATION OF 14 DAYS OR MORE MUST BE APPROVED BY THE ENGINEER. ANY VIOLATION OF THIS REQUIREMENT WILL RESULT IN THE CONTRACTOR ASSUMING THE RESPONSIBILITY OF PLACING TEMPORARY STABILIZATION AT HIS OWN COST AND EXPENSE.

EXCAVATION PHASING PLAN - CUT SECTION



NOTES:

1. THE EMBANKMENT WILL BE MADE IN STAGES NOT TO EXCEED 15' IN HEIGHT OR 50' IN SLOPE LENGTH. THE EMBANKMENT SLOPES WILL BE STABILIZED USING TEMPORARY MEASURES BEFORE BEGINNING NEXT STAGE.

2. AT THE END OF EACH WORK DAY TEMPORARY BERMS (EARTH) AND TEMPORARY PIPE SLOPE DRAINS WILL BE CONSTRUCTED ALONG THE TOP EDGE(S) OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF.

3. CONSTRUCTION SEQUENCE:

   A) EXCAVATE AND STABILIZE SIDE DITCH AND/OR INSTALL PROPOSED PERIMETER CONTROLS AT THE TOE OF SLOPE.

   B) PLACE PHASE 1 EMBANKMENT AND STABILIZE WITH TEMPORARY SEEDING AND MULCH.

   C) PLACE PHASE 2 EMBANKMENT AND STABILIZE WITH TEMPORARY SEEDING AND MULCH.

   D) PLACE FINAL PHASE EMBANKMENT AND STABILIZE WITH PERMANENT VEGETATIVE PLAN ON THE ENTIRE SLOPE.

4. ONCE THE PLACEMENT OF FILL WITHIN A SPECIFIC AREA HAS BEGUN, THE OPERATION SHALL BE CONTINUOUS FROM STRIPPING THROUGH THE COMPLETION OF THE GRADING AND PLACEMENT OF PERMANENT VEGETATIVE PLAN. ANY INTERRUPTIONS IN THE OPERATION OF 14 DAYS OR MORE MUST BE APPROVED BY THE ENGINEER. ANY VIOLATION OF THIS REQUIREMENT WILL RESULT IN THE CONTRACTOR ASSUMING THE RESPONSIBILITY OF PLACING TEMPORARY STABILIZATION AT HIS OWN COST AND EXPENSE.

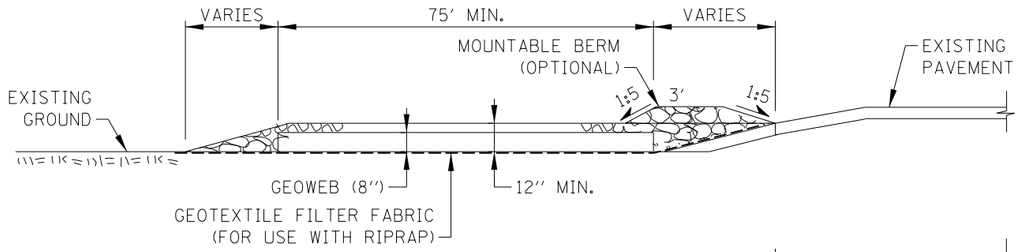
EMBANKMENT PHASING PLAN - FILL SECTION

Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

Illinois Tollway

TEMPORARY EROSION AND SEDIMENT CONTROLS

STANDARD K1-06



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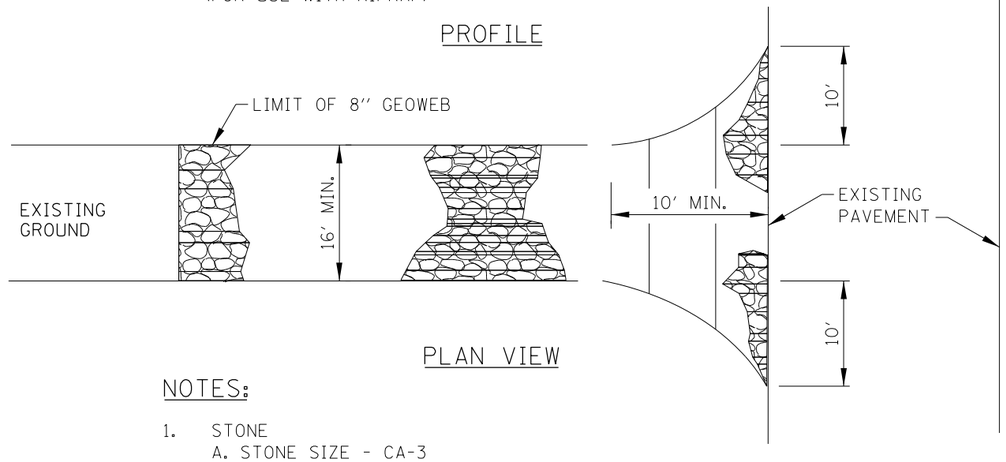


PLAN VIEW

NOTES:

1. STONE
   A. STONE SIZE - CA-3
   B. LENGTH - AS REQUIRED, BUT NOT LESS THAN 75'.
   C. THICKNESS - NOT LESS THAN 4" ABOVE TOP OF GEOWEB.

2. WIDTH - 16' MINIMUM FOR ONE WAY TRAFFIC; 24' MINIMUM FOR TWO-WAY TRAFFIC; BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

3. GEOWEB NOT LESS THAN 8" IN DEPTH WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

4. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 1:5 SLOPES WILL BE PERMITTED.

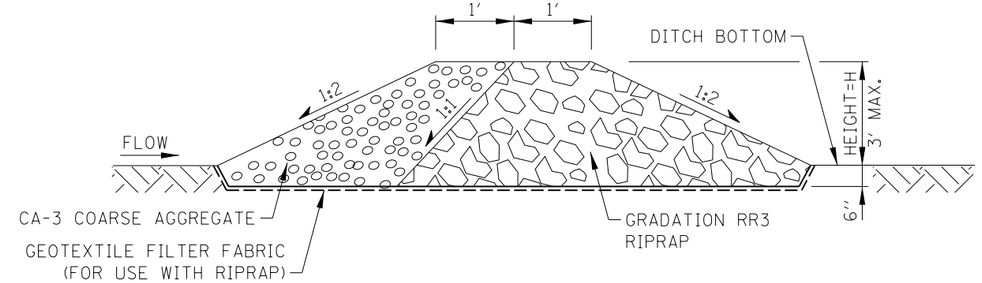
5. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.

6. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER HEAVY USE AND EACH RAINFALL EVENT.

7. TO BE USED TO REDUCE OR ELIMINATE TRACKING OF SEDIMENT ONTO PUBLIC STREETS. PLACE AT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS. DISTURBED AREAS TO BE RESTORED UPON REMOVAL.

STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL



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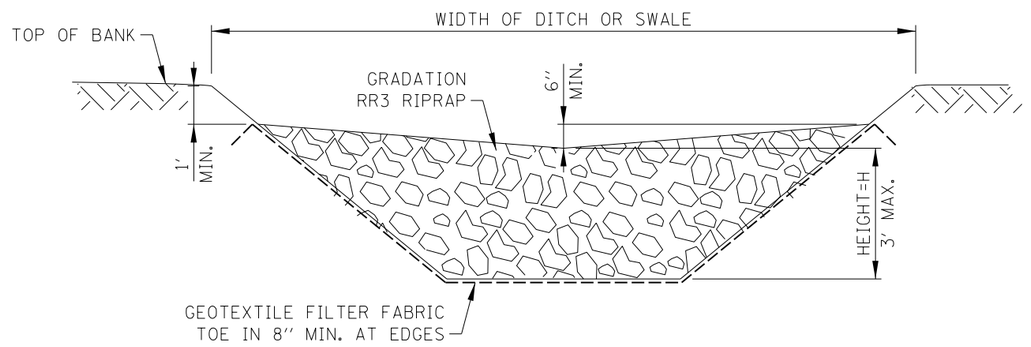


CROSS SECTION
CENTERLINE LOOKING DOWNSTREAM

NOTES:

1. FOR LOCATIONS AND HEIGHTS OF ROCK CHECK DAMS REFER TO CONSTRUCTION DRAWINGS.

2. TEMPORARY ROCK CHECK DAMS SHALL BE REPLACED WHEN THEY CEASE TO FUNCTION AS INTENDED DUE TO WASHOUT OR CONSTRUCTION TRAFFIC DAMAGE.

3. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 50% OF DAM HEIGHT. THIS PRACTICE IS NOT A SUBSTITUTE FOR MAJOR PERIMETER TRAPPING SUCH AS A TEMPORARY SEDIMENT TRAP OR BASIN.

4. SPACING BETWEEN DAMS SHALL BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS TOP OF RIPRAP AT THE CENTER OF THE DOWNSTREAM DAM.

5. WHEN A TEMPORARY ROCK CHECK DAM IS IN THE CLEAR ZONE, IT MUST BE MADE TRAVERSABLE TO AN ERRANT VEHICLE. THE MAXIMUM UNSHIELDED TRANSVERSE SLOPE ALLOWED TO FACE TRAFFIC SHALL BE 1:10 (V:H) AND THE MAXIMUM TRANSVERSE FACING AWAY FROM TRAFFIC SHALL BE 1:4 (V:H). AN UNSHIELDED TEMPORARY ROCK CHECK DAM SHALL HAVE AN ADDITIONAL LAYER OF CA-3 COURSE AGGREGATE (6" MIN.) PLACED ON THE DOWNSTREAM SIDE OF THE ROCK CHECK DAM. THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED ALONG THE ENTIRE BASE OF THE TEMPORARY ROCK CHECK DAM.

TEMPORARY ROCK CHECK DAM

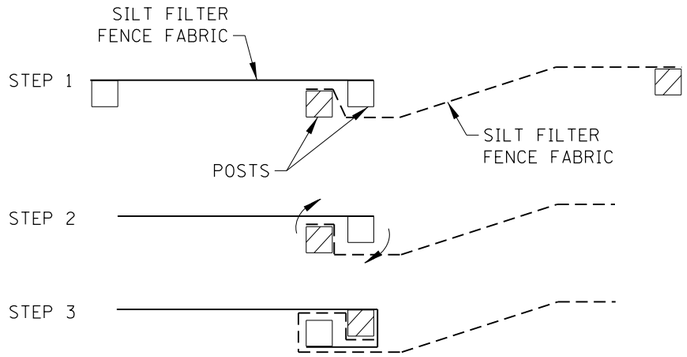
STANDARD SYMBOL

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

Illinois Tollway

TEMPORARY EROSION
AND SEDIMENT CONTROLS

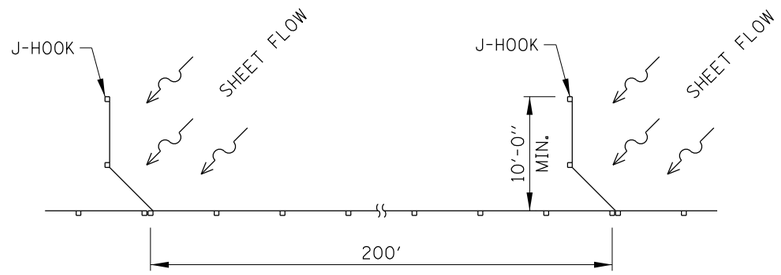
STANDARD K1-06



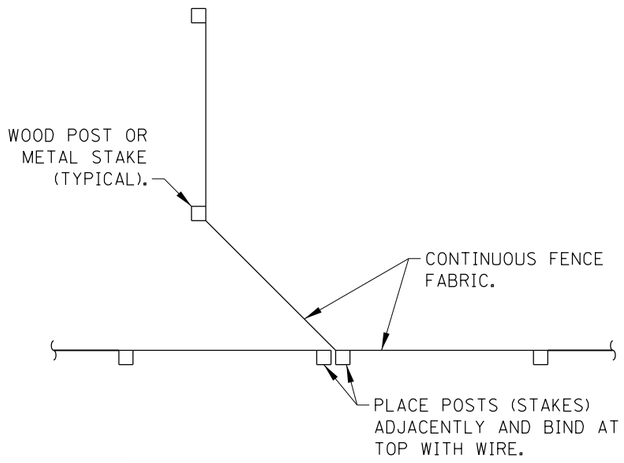
NOTES:

1. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
3. DRIVE BOTH POSTS A MINIMUM OF 24" INTO THE GROUND.

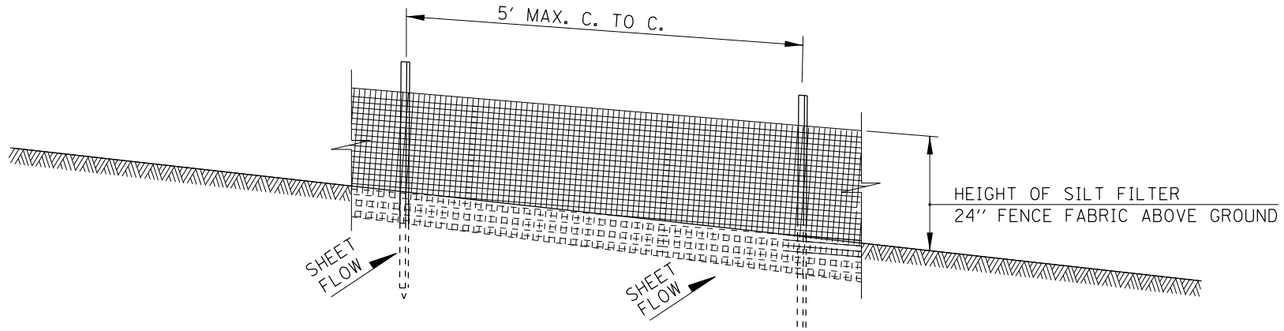
ATTACHING TWO SILT FENCES



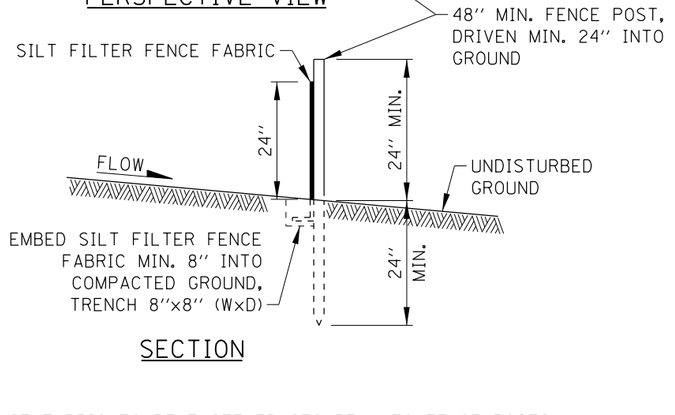
SILT FILTER J-HOOK PLACEMENT



J-HOOK



PERSPECTIVE VIEW



SECTION

NOTES:

1. SILT FILTER FENCE FABRIC TO BE FASTENED SECURELY TO FENCE POSTS.
2. WHEN TWO SECTIONS OF SILT FILTER FENCE FABRIC ADJOIN EACH OTHER THEY SHALL BE SECURELY FASTENED PER THE DETAIL ATTACHING TWO SILT FENCES.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED. SILT BUILD UP AGAINST FENCE SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.
4. FENCE POSTS: 2"x2" (NOMINAL) HARDWOOD OR SCHEDULE 40 METAL PIPE OR 1.33 LB/FT MIN. STANDARD T OR U SECTION STEEL POSTS.
5. THIS DEVICE IS TO CONTROL SHEET FLOW ONLY. DO NOT USE FOR CONCENTRATED FLOWS, DRAINAGE CHANNELS, ABOVE OR BELOW DRAINAGE PIPES.

SILT FENCE (SF)

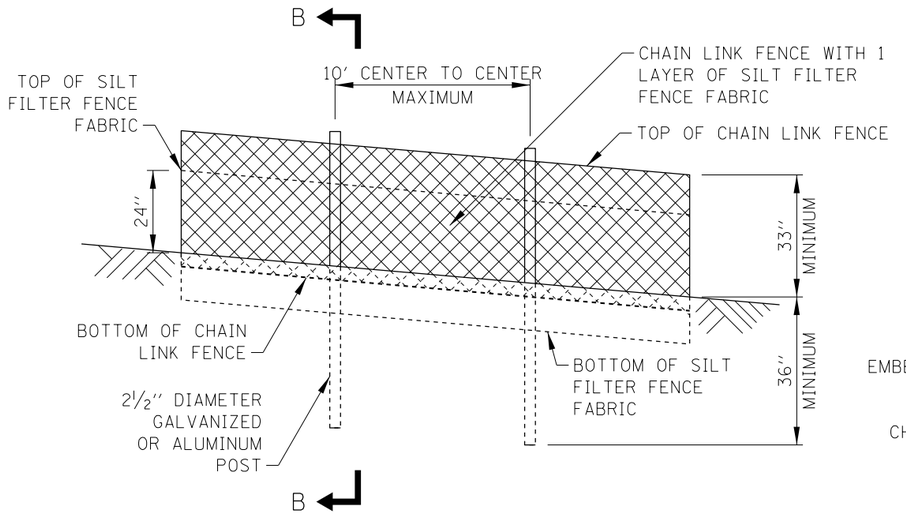
STANDARD SYMBOL

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

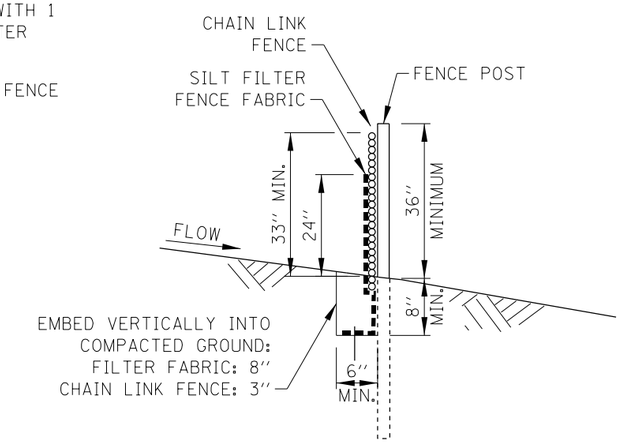
Illinois Tollway

TEMPORARY EROSION
AND SEDIMENT CONTROLS

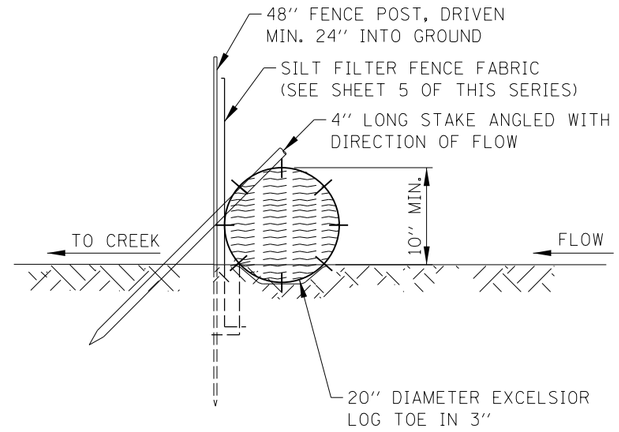
STANDARD K1-06



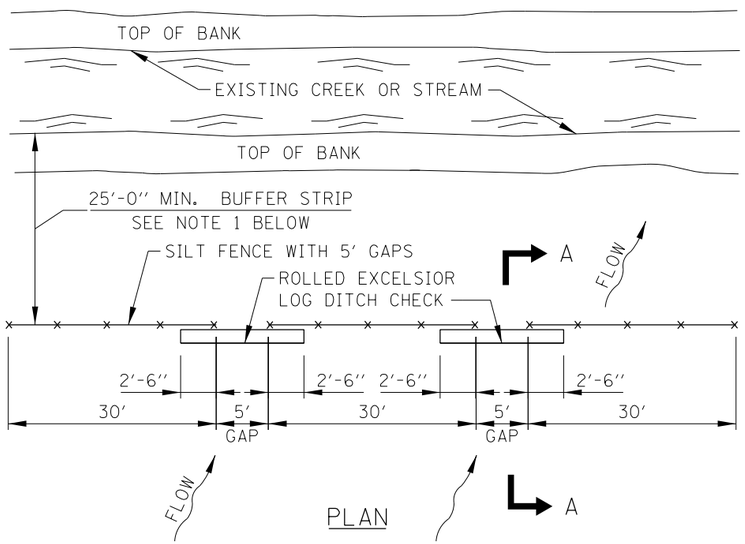
ELEVATION



SECTION B-B



SECTION A-A



PLAN

NOTES:

1. FENCING SHALL BE 36" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH ILLINOIS TOLLWAY STANDARD DRAWING D1, RIGHT-OF-WAY FENCE, TYPE 1. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 36" FABRIC AND 6' LENGTH POSTS.

2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED. PULL POSTS, CORNER POSTS, HORIZONTAL BRACING AND TIE RODS ARE NOT REQUIRED.

3. SILT FILTER FENCE FABRIC SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.

4. WHEN TWO SECTIONS OF SILT FILTER FENCE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED 2' HORIZONTALLY.

5. MAINTENANCE SHALL BE PERFORMED AS NEEDED. SILT BUILD-UP AGAINST FENCE SHALL BE REMOVED WHEN SILT REACHES 50% OF FENCE HEIGHT.

6. SUPER SILT FENCE IS TO BE USED TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS AND CONTROL SEDIMENT RUNOFF FROM CONSTRUCTION SITES WHEN ADDITIONAL REINFORCEMENT IS REQUIRED DUE TO SLOPE OF SITE OR VOLUME OF STORM WATER RUNOFF.

SUPER SILT FENCE (SSF)

STANDARD SYMBOL

SSF

NOTES:

1. A MINIMUM 25' WIDE VEGETATED BUFFER STRIP SHALL BE PRESERVED AND/OR RE-ESTABLISHED WHERE POSSIBLE ALONG EXISTING CHANNELS.

2. THE 5' GAPS IN THE SILT FENCE AND THE 20" DIAMETER TEMPORARY DITCH CHECKS ARE TO ALLOW FLOODWATER FLOW INTO THE CREEK FROM THE SITE WITHOUT DAMAGE TO THE SILT FENCE.

3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT SHALL BE REMOVED WHEN IT REACHES 50% OF ROLL HEIGHT. WHEN ROLLED EXCELSIOR LOG BECOMES LESS THAN 10" IT SHALL BE REPLACED.

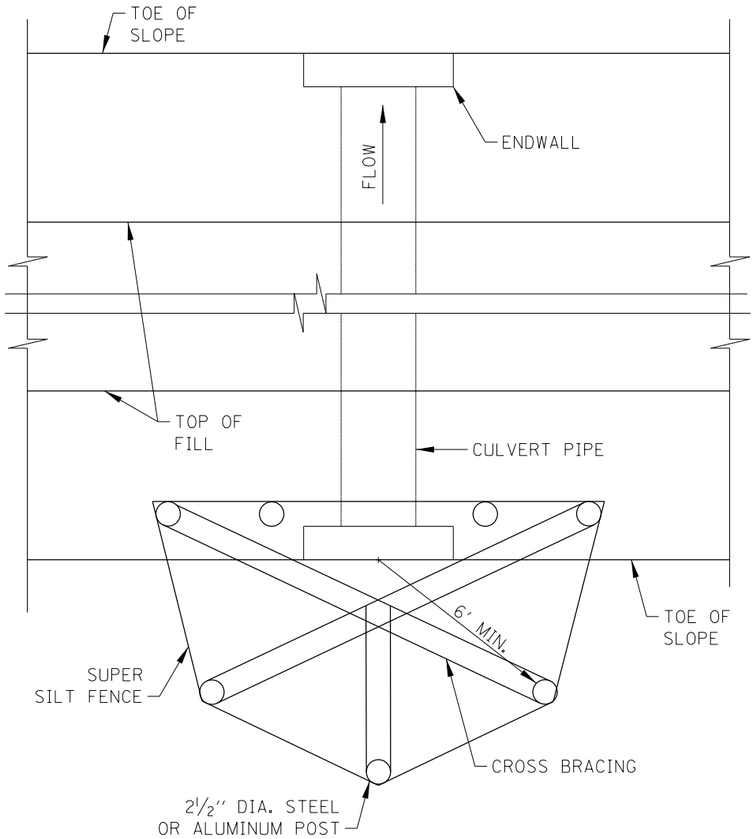
CREEK BUFFER STRIP AND SILT FENCE

APPROVED Paul Kovacs CHIEF ENGINEER DATE 2-7-2012

Illinois Tollway

TEMPORARY EROSION
AND SEDIMENT CONTROLS

STANDARD K1-06



PLAN VIEW

NOTES:

1. CONSTRUCT SUPER SILT FENCE PER SHEET 6 IN THIS SERIES, EXCEPT THE MAXIMUM POST SPACING SHALL BE 3 FEET AND THE TOPS OF POSTS SHALL BE CROSSED BRACED.

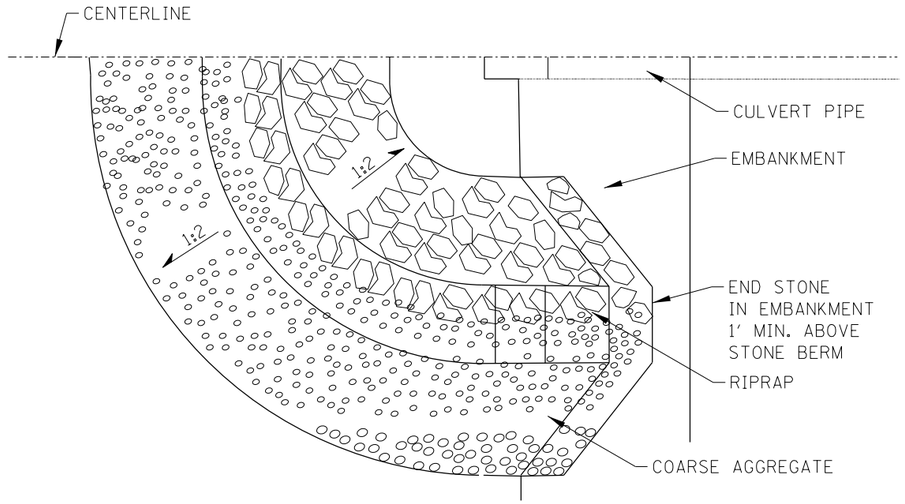
2. MAINTENANCE SHALL BE PERFORMED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 50% OF THE FENCE HEIGHT.

3. THE CULVERT INLET PROTECTION AND SEDIMENT SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE.

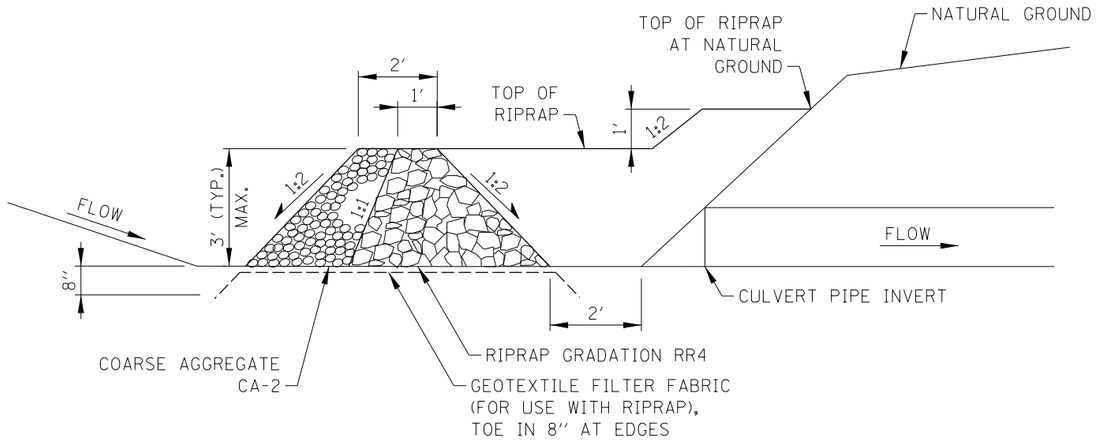
4. THE CULVERT INLET PROTECTION - FENCE TO BE MEASURED AND PAID FOR AS SUPER SILT FENCE.

CULVERT INLET PROTECTION - FENCE

STANDARD SYMBOL



HALF PLAN VIEW



CENTERLINE CROSS SECTION

NOTES:

1. MAINTENANCE SHALL BE PERFORMED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 50% OF THE STONE HEIGHT.

2. THE CULVERT INLET PROTECTION AND SEDIMENT SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE.

3. THE CULVERT INLET PROTECTION - STONE TO BE MEASURED AND PAID FOR AS TEMPORARY RIPRAP.

CULVERT INLET PROTECTION - STONE

STANDARD SYMBOL

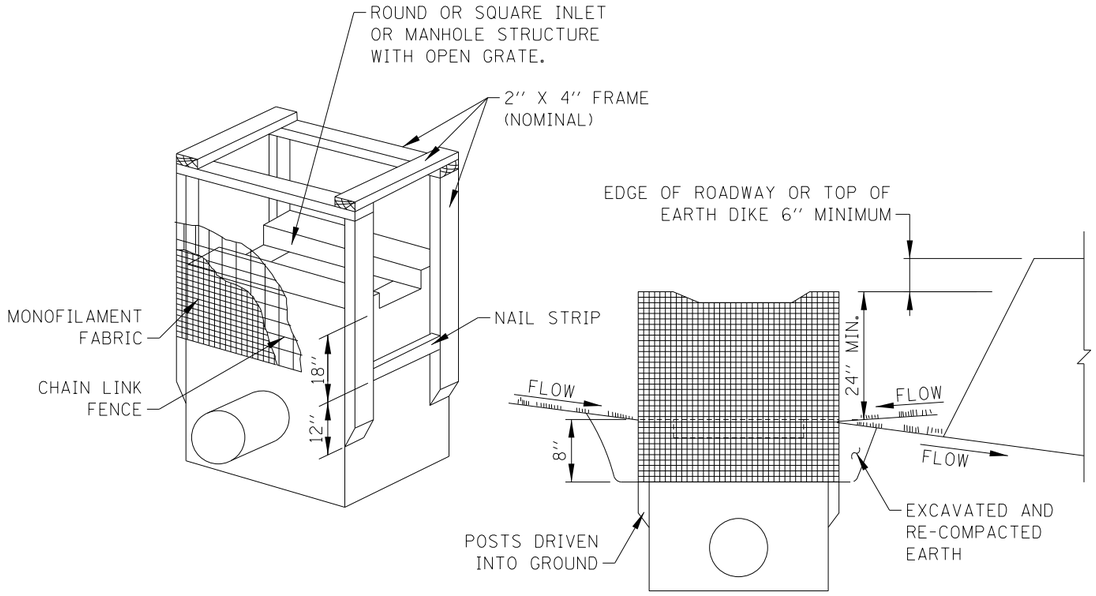
CIP

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

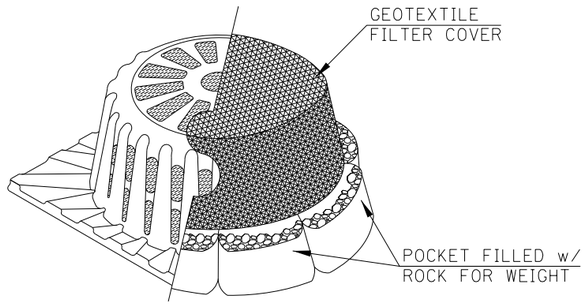
Illinois Tollway

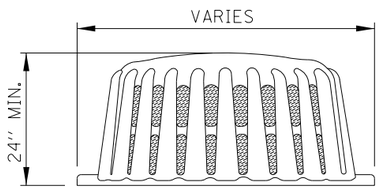
TEMPORARY EROSION AND SEDIMENT CONTROLS

STANDARD K1-06



WOOD FRAME





POLYETHYLENE FRAME

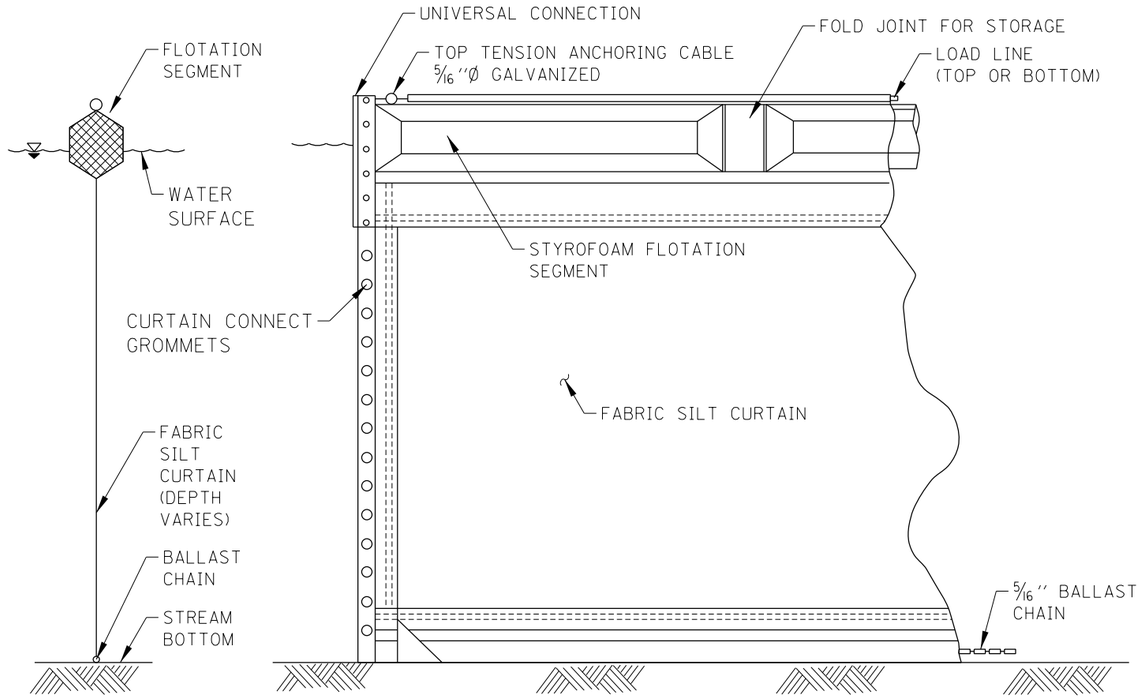
NOTES:

1. WOODEN FRAME IS TO BE CONSTRUCTED OF 2''x4'' CONSTRUCTION GRADE LUMBER. IF CONTRACTOR PREFERS, SUPER SILT FENCE CAN BE CONSTRUCTED AROUND THE INLET PER SHEET 6 IN THIS SERIES.
2. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT REMOVED WHEN IT REACHES 50% OF FENCE HEIGHT.
3. TO BE USED TO PROTECT EXISTING AND NEW INLETS, CATCH BASINS AND MANHOLES WITH OPEN LIDS IN NON-PAVED AREAS.

RECTANGULAR INLET PROTECTION

STANDARD SYMBOL

RIP



SECTION ELEVATION

NOTES:

1. FLOTATION BOOM FOR USE IN MOVING WATER SHALL BE ANCHORED TO PREVENT DRIFT SHOREWARD OR DOWNSTREAM. ANCHORAGES SHALL BE INSTALLED ON BOTH SHORE AND STREAM SIDE. BOOMS ARE NOT TO BE INSTALLED ACROSS FLOWING BODY OF WATER.
2. SHORE ANCHORS SHALL CONSIST OF A POST WITH DEADMAN OR APPROVED EQUAL. STREAM ANCHORS SHALL BE OF SUFFICIENT SIZE TO STABILIZE THE BARRIER WITH NUMBER AND SPACING DEPENDENT ON WATERWAY VELOCITIES.
3. FABRIC SECTIONS SHALL BE CONNECTED END TO END WITH MINIMUM 5/8'' DIAMETER POLYPROPYLENE ROPE.
4. DESIGN OF BOOM AND ANCHORAGE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. BOTTOM OF BOOM SHALL REACH BOTTOM OF WATERWAY USING ONE VERTICAL SECTION AS REQUIRED.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED. CONTRACTOR SHALL REMOVE THE BOOM AT COMPLETION OF WORK IN A MANNER THAT WILL PREVENT SILTATION OF THE WATERWAY.
6. CONSTRUCTION DEBRIS/MATERIALS SHALL BE REMOVED IMMEDIATELY TO PREVENT DAMAGE TO THE CURTAIN AND ENTRY INTO THE WATERWAY.
7. FLOTATION BOOMS TO BE USED TO CONTROL TURBIDITY WHEN WORKING IN WATERWAYS.

FLOTATION BOOM

STANDARD SYMBOL

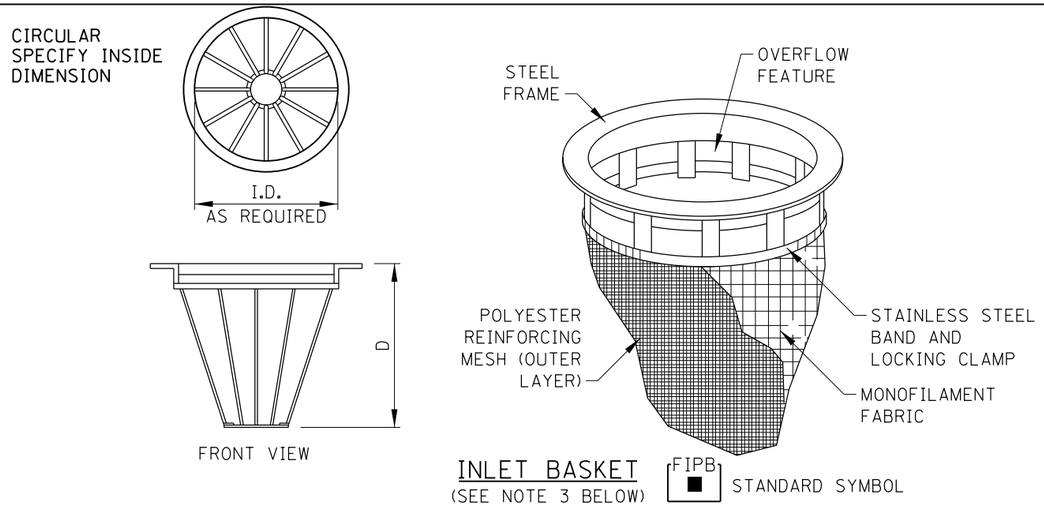
—FB——FB—

Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

Illinois Tollway

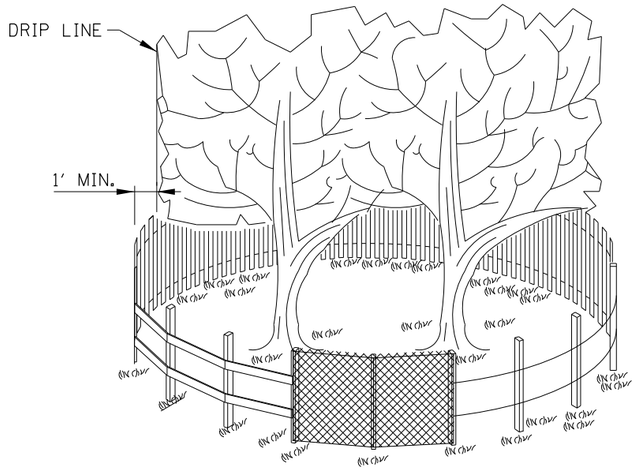
TEMPORARY EROSION
AND SEDIMENT CONTROLS

STANDARD K1-06

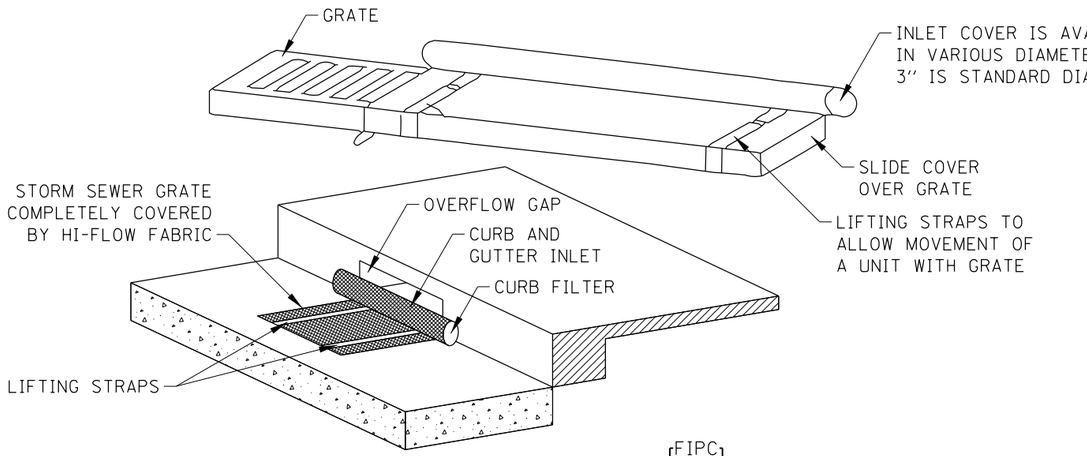


INLET BASKET
(SEE NOTE 3 BELOW)

FIPB ■ STANDARD SYMBOL

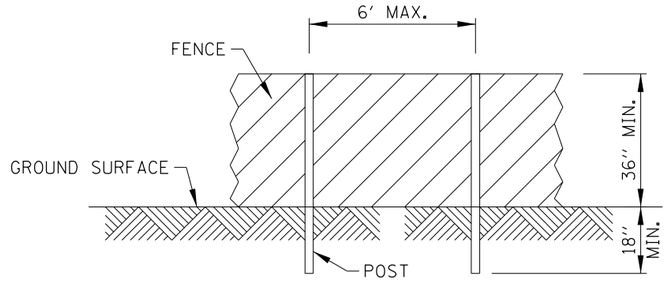


SIDE VIEW



INLET COVER

FIPC ■ STANDARD SYMBOL



POST AND FENCE DETAIL

NOTES:

1. MONOFILAMENT FABRIC INLET PROTECTION SHALL CONSIST OF INLET BASKET, FRAME AND FABRIC INSERT.
2. DEVICE SHALL BE EQUIPPED WITH AN OVERFLOW FEATURE SO DRAINAGE TO INLET IS NOT COMPLETELY BLOCKED IF DEVICE IS FULL OF SILT.
3. INLET BASKET IS AVAILABLE TO FIT ROUND, RECTANGULAR, BEEHIVE OR CURB INLET CASTINGS.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED. REMOVE SILT FROM FABRIC INSERT WHEN 50% OF CAPACITY IS REACHED. REMOVE SILT FROM INTERIOR AND EXTERIOR OF INLET COVER WHEN 50% OF COVER HEIGHT IS REACHED.

NOTES:

1. THE FENCE SHALL BE LOCATED 1 FOOT MINIMUM OUTSIDE THE DRIP LINE OF THE TREE TO BE SAVED AND IN NO CASE CLOSER THAN 5 FEET TO THE TRUNK OF ANY TREE.
2. THE FENCE SHALL BE HIGH VISIBILITY PLASTIC OR WOOD LATH SNOW FENCE TO CLEARLY DELINEATE THE PROTECTION AREA.
3. USED TO PROTECT TREES FROM DISTURBANCE AND FROM EQUIPMENT TRAVELING OVER THE ROOT ZONE.

TREE PROTECTION
STANDARD SYMBOL

TP

Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

FILTER FABRIC INLET PROTECTION

Illinois Tollway

TEMPORARY EROSION
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STANDARD K1-06