THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

2700 OGDEN AVENUE • DOWNERS GROVE • ILLINOIS • 60515

BASE SHEETS

ESC (200), RDY (400), BRG (500), DRN (600), MOT (700), OHS (720)

VOLUME 2 of 2

MARCH 2024

INDEX OF BASE SHEETS
SECTION M

EROSION AND SEDIMENT CONTROL (ESC) – SERIES 200

DRAWING NUMBER	DESCRIPTION
M-ESC-200	TEMPORARY PIPE SLOPE DRAIN
M-ESC-201	STONE OUTLET STRUCTURE SEDIMENT TRAP
M-ESC-202	DEWATERING BASIN
M-ESC-203	TEMPORARY SWALE
M-ESC-204	DIVERSION DIKE
M-ESC-205	SEDIMENT BASIN DEWATERING DEVICE
M-ESC-206	SEDIMENT BASIN AGGREGATE BERM
M-ESC-207	SEDIMENT FILTER BAG

ROADWAY (RDY) – SERIES 400

DRAWING NUMBER	DESCRIPTION
M-RDY-400	ROADWAY TYPICAL SECTIONS GROUP A
M-RDY-401	ROADWAY TYPICAL SECTIONS GROUP B
M-RDY-402	RESERVED
M-RDY-403	ROADWAY TYPICAL SECTIONS GROUP D
M-RDY-404	ROADWAY TYPICAL SECTIONS GROUP E
M-RDY-405	ROADWAY TYPICAL SECTIONS GROUP F
M-RDY-406	ROADWAY TYPICAL SECTIONS GROUP G
M-RDY-407	EARTHWORK SCHEDULE GUARDRAIL SCHEDULE
M-RDY-408	APPROACH SLAB, MAINLINE
M-RDY-409	APPROACH SLAB, RAMP
M-RDY-410	PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB
M-RDY-411	EMERGENCY TURNAROUND MEDIAN WIDTH ≥ 35 FT. EMERGENCY TURNAROUND MEDIAN WIDTH < 35 FT.
M-RDY-412	ROADWAY SUBGRADE SLOPES-MEDIAN BARRIER
M-RDY-413	DIAMOND GRINDING OF PLAZA
M-RDY-414	ROADWAY PROFILE & SUPERELEVATION
M-RDY-415	LONGITUDINAL JOINT SEALANT
M-RDY-416	ENVIRONMENTAL SOIL CLASSIFICATION
M-RDY-417	MAINLINE TOLL PLAZA PAVEMENT DETAILS
M-RDY-418	RAMP TOLL PLAZA PAVEMENT DETAILS

BRIDGE (BRG) – SERIES 500

DRAWING NUMBER	DESCRIPTION
M-BRG-500	EXPANSION JOINT FRAME RAIL AND SEAL ALTERNATIVE A
M-BRG-501	EXPANSION JOINT FRAME RAIL AND SEAL ALTERNATIVE B
M-BRG-502	EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM
M-BRG-503	BRIDGE (CONCRETE) MOUNTED SIGN SUPPORT
M-BRG-504	BRIDGE (STEEL) MOUNTED SIGN SUPPORT
M-BRG-505	RESERVED
M-BRG-506	RESERVED
M-BRG-507	CRASH WALL MODIFICATIONS MEDIAN PIERS
M-BRG-508	CRASH WALL MODIFICATIONS SHOULDER PIERS
M-BRG-509	RESERVED
M-BRG-510	RESERVED
M-BRG-511	RESERVED
M-BRG-512	RESERVED
M-BRG-513	RESERVED
M-BRG-514	RESERVED
M-BRG-515	RESERVED
M-BRG-516	RESERVED
M-BRG-517	PPC BEAM DETAILS
M-BRG-518	RESERVED
M-BRG-519	RESERVED
M-BRG-520	RESERVED
M-BRG-521	RAILROAD BRIDGE FENCE
M-BRG-522	PPC U-BEAM PRETENSIONED
M-BRG-523	72IN. AND 84IN. PPC U-BEAM POST-TENSIONED
M-BRG-524	PPC U-BEAM MISCELLANEOUS DETAILS
M-BRG-525	SLOPEWALL DETAILS
M-BRG-526	DEMOLITION PLAN
M-BRG-527	ERECTION PLAN - CONCRETE
M-BRG-528	ERECTION PLAN - STEEL
M-BRG-529	STRUCTURE MOUNTED NOISE ABATEMENT WALL COVER SHEET AND SCHEDULES
M-BRG-530	STRUCTURE MOUNTED NOISE ABATEMENT WALL EXPANSION DETAILS
M-BRG-531	CENTRAL TRI-STATE STRUCTURE MOUNTED NOISE ABATEMENT WALL COVER SHEETS AND SCHEDULES
M-BRG-532	GROUND MOUNTED NOISE ABATEMENT WALL COVER SHEET, SCHEDULE AND DETAILS

DRAINAGE (DRN) – SERIES 600

DRAWING NUMBER	DESCRIPTION
M-DRN-600	OUTLET CONTROL STRUCTURE CHECK DAM DETAILS
M-DRN-601	SLOPE DRAIN
M-DRN-602	BIOSWALE
M-DRN-603	ARTICULATED CONCRETE BLOCK REVETMENT SYSTEM
M-DRN-604	CATCH BASIN TYPE G (SPECIAL) WITH RESTRICTOR
M-DRN-605	BUMP OUT FOR STORMWATER TREATMENT SYSTEM
M-DRN-606	EXPOSED MOMENT SLAB WITH DRAINAGE STRUCTURE
M-DRN-607	NOISE ABATEMENT WALL DRAINAGE DETAILS (ROADWAY SIDE)
M-DRN-608	NOISE ABATEMENT WALL DRAINAGE DETAILS (RESIDENTIAL SIDE)

MAINTENANCE OF TRAFFIC (MOT) – SERIES 700

DRAWING NUMBER	DESCRIPTION
M-MOT-701	TCB CONNECTION TO SINGLE FACE CONCRETE BARRIER

OVERHEAD SIGN (OHS) – SERIES 720

DRAWING NUMBER	DESCRIPTION
M-OHS-720	OVERHEAD SIGN STRUCTURE SPAN TYPE SUMMARY AND BILL OF MATERIAL
M-OHS-721	OVERHEAD SIGN STRUCTURE CANTILEVER TYPE SUMMARY AND TOTAL BILL OF MATERIAL
M-OHS-722	OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND BILL OF MATERIAL
M-OHS-723	OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND TOTAL BILL OF MATERIAL
M-OHS-724	OVERHEAD SIGN STRUCTURE BUTTERFLY TYPE (STEEL) SUMMARY AND TOTAL BILL OF MATERIAL
M-OHS-725	OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF MATERIAL
M-OHS-726	OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF MATERIAL
M-OHS-727	OVERHEAD SIGN STRUCTURE MONOTUBE TYPE (STEEL) CASH-IPO RAMP SUMMARY AND TOTAL BILL OF MATERIAL
M-OHS-728	OVERHEAD SIGN STRUCTURE SPAN TYPE (STEEL) SUMMARY AND TOTAL BILL OF MATERIAL
M-OHS-729	OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS
M-OHS-730	OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS
M-OHS-731	MOUNTING DETAILS FOR RETROFITTING NEW EXIT SIGN PANELS
M-OHS-732	SIGN STRUCTURE SPAN SITE GROUNDING PLAN
M-OHS-733	SIGN STRUCTURE CANTILEVER AND BUTTERFLY SITE GROUNDING PLANS

Illinois Tollway

VOLUME II
INDEX OF
BASE SHEETS

MARCH 2024

BASE SHEETS

SERIES 200 (ESC)

EROSION AND SEDIMENT CONTROL

MARCH 2024

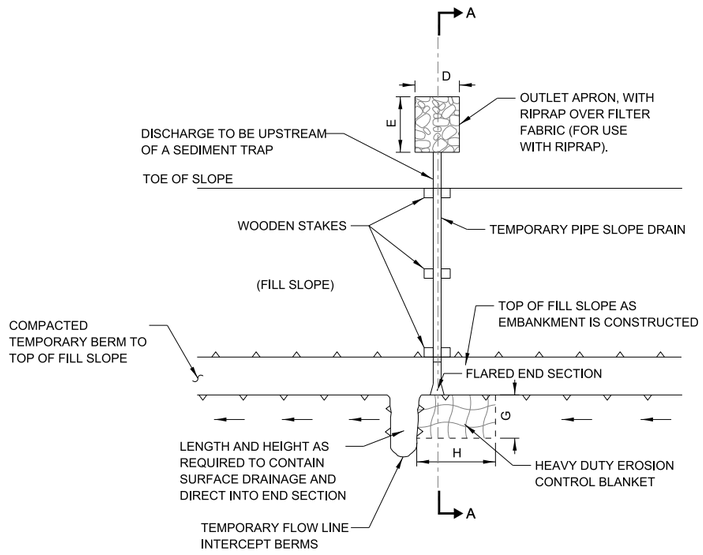
Illinois Tollway Base Sheet Revisions

Section M	Base Sheet Drawings	
	Drawing	**Modification Summary** **Effective: 03-01-2024**
	Erosion and Sediment Control (ESC) - Series 200	
	M-ESC-200	**TEMPORARY PIPE SLOPE DRAIN**
		Added wooden stakes to plan view and Section A-A, reworded C dimension note, added "compacted" to berm callout, changed blanket dimensions in Typical Cross Section to 6".
	M-ESC-202	**DEWATERING BASIN**
		Added "compacted" to earth dike callout.
	M-ESC-204	**DIVERSION DIKE**
		Replaced "clay" with "soil" in berm callout, added "soil" to Note 1.
	M-ESC-205	**SEDIMENT BASIN DEWATERING DEVICE**
		Removed anti seep collar from section view.
	M-ESC-206	**SEDIMENT BASIN AGGREGATE BERM**
		Added "MAX." to slope callouts.

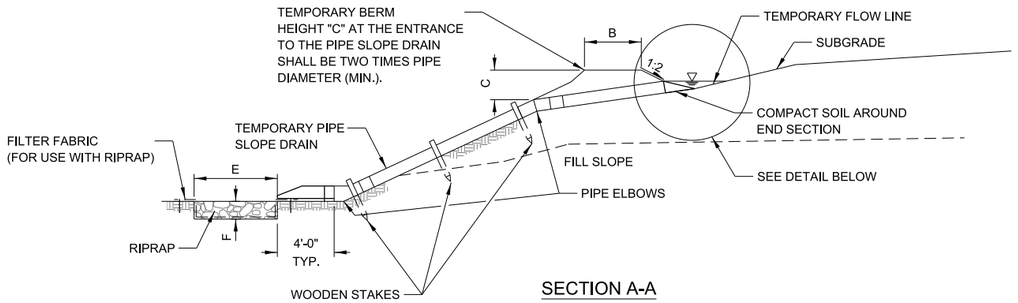
New Sheet

Retired Standard

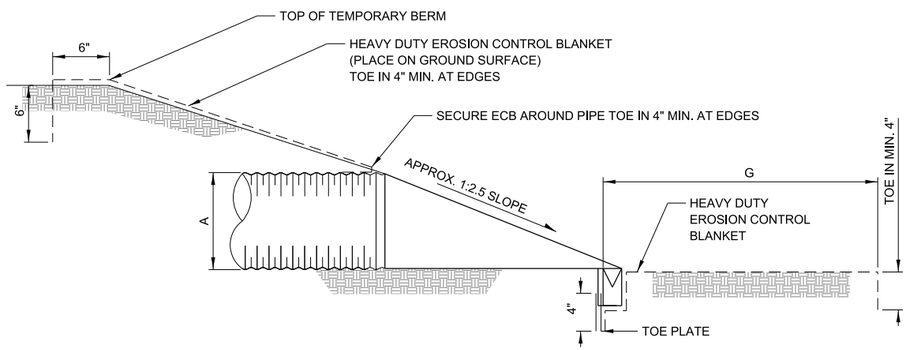
TEMPORARY PIPE SLOPE DRAIN



PLAN



SECTION A-A
FOR FILL SLOPES



TYPICAL CROSS SECTION
FLARED END SECTION

NOTES:

1. ALL TEMPORARY PIPE SLOPE DRAINS TO DISCHARGE INTO THE BACK OF SEDIMENT TRAPS, INTO SEDIMENT BASINS OR DITCHES DISCHARGING INTO TRAPS OR BASINS.
2. HEAVY DUTY EROSION CONTROL BLANKET SHALL BE PLACED AROUND THE FLARED END SECTION, AND SHALL EXTEND ALONG THE TEMPORARY FLOW LINE.
3. TEMPORARY PIPE SLOPE DRAINS WILL BE SIZED AND SPACED ALONG THE FILL TO ADEQUATELY HANDLE THE RUNOFF FROM THE CONTRIBUTING AREA. A MINIMUM TWO TEMPORARY PIPE SLOPE DRAINS WILL BE PLACED IN EVERY SAG.
4. THE PIPE SHALL BE INSTALLED WITH WATER-TIGHT CONNECTING BANDS AND SHALL BE SECURELY ANCHORED BY HOLD DOWN STAKES AND CABLES.
5. STAPLES SHALL BE USED TO ANCHOR HEAVY DUTY EROSION CONTROL BLANKET IN CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
6. THE OUTLET RIPRAP APRON PROTECTION SHALL BE BASED ON THE PIPE DIAMETER AND DISCHARGE VELOCITY OF STORM WATER FLOWS.
7. REFERENCE DESIGN CRITERIA:
   ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
8. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

DESIGN ELEMENTS	UNITS	VALUES
DRAINAGE AREA/SLOPE DRAIN	X (ACRES)	
PIPE SLOPE DRAIN DIAMETER	A (INCHES)	
PIPE SLOPE DRAIN SPACING	S (FEET)	
BERM AT INLET TOP WIDTH	B (FEET)	
BERM AT INLET HEIGHT	C (FEET)	
OUTLET APRON LENGTH	D (FEET)	
OUTLET APRON WIDTH	E (FEET)	
OUTLET APRON DEPTH	F (FEET)	
OUTLET APRON RIPRAP	GRADATION	
EROSION CONTROL BLANKET WIDTH	G (FEET)	
EROSION CONTROL BLANKET LENGTH	H (FEET)	

NOTE TO DESIGNER

THE DESIGNER SHALL DESIGN THE TEMPORARY EROSION AND SEDIMENT CONTROL STRUCTURE SHOWN ON THIS SHEET. DESIGN VALUES SHALL BE INSERTED INTO THE TABLE.

NOTE TO DESIGNER

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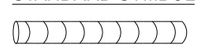
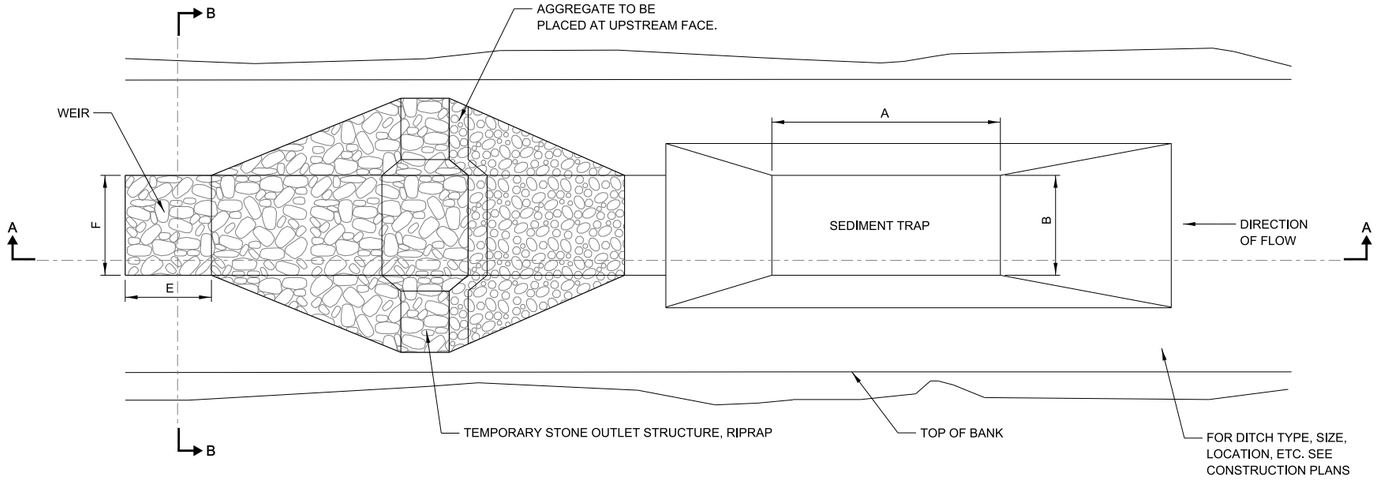
STANDARD SYMBOL



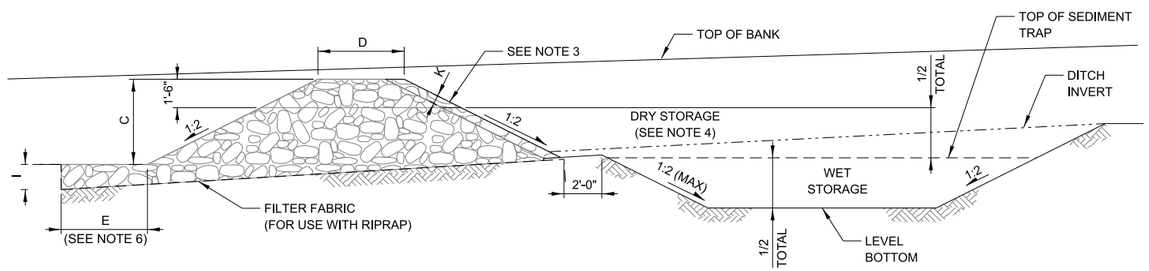
Illinois Tollway

TEMPORARY PIPE SLOPE DRAIN

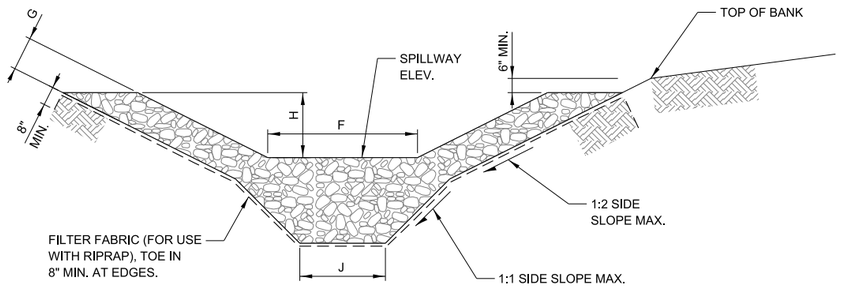
VERSION:	STANDARD:	SHEET:
2024-03	M-ESC-200	1 OF 1



PLAN



SECTION A-A



SECTION B-B

NOTES:

1. STONE OUTLET STRUCTURES TO BE USED IN EXISTING, PROPOSED AND TEMPORARY DITCHES OF ALL TYPES.
2. THE STONE OUTLET STRUCTURES SHALL BE REPLACED DUE TO WASHOUT, CONSTRUCTION TRAFFIC DAMAGE OR SILT ACCUMULATION. THE SILT SHALL BE CLEANED OUT WHEN WET STORAGE PORTION OF TRAP IS 50% FULL.
3. A LAYER OF AGGREGATE SHALL BE PLACED AGAINST THE UPSTREAM FACE OF THE TEMPORARY STONE OUTLET STRUCTURE.
4. THE DETENTION STORAGE SHALL BE COMPOSED OF EQUAL VOLUMES OF "WET" AND "DRY" STORAGE AREAS. HALF THE DETENTION STORAGE SHALL BE BELOW THE PERMEABLE FILL.
5. THE MINIMUM LENGTH TO WIDTH RATIO OF SEDIMENT TRAP SHALL BE 2:1.
6. THE SPILLWAY WEIR SHALL BE DETERMINED BY THE DRAINAGE RUNOFF FROM THE CONTRIBUTING AREA.
7. REFERENCE DESIGN CRITERIA:
   ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
8. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

DESIGN ELEMENTS	UNITS	VALUES
DRAINAGE AREA	X (ACRES)	
SEDIMENT TRAP: STORAGE CAPACITY	V (CU. YD.)	
WET DETENTION STORAGE	1/2 V (CU. YD)	
DRY DETENTION STORAGE	1/2 V (CU. YD)	
SEDIMENT TRAP LENGTH	A (FEET)	
SEDIMENT TRAP WIDTH	B (FEET)	
STONE OUTLET STRUCTURE HEIGHT	C (FEET)	
STONE OUTLET STRUCTURE TOP WIDTH	D (FEET)	
WEIR LENGTH	E (FEET)	
WEIR TOP WIDTH	F (FEET)	
WEIR SIDE SLOPE THICKNESS	G (FEET)	
WEIR SIDE SLOPE HEIGHT	H (FEET)	
WEIR DEPTH	I (FEET)	
WEIR BASE WIDTH	J (FEET)	
RIPRAP	GRADATION	
AGGREGATE	GRADATION	
STONE OUTLET AGGREGATE THICKNESS	K (FEET)	

NOTE TO DESIGNER

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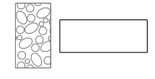
STANDARD SYMBOL



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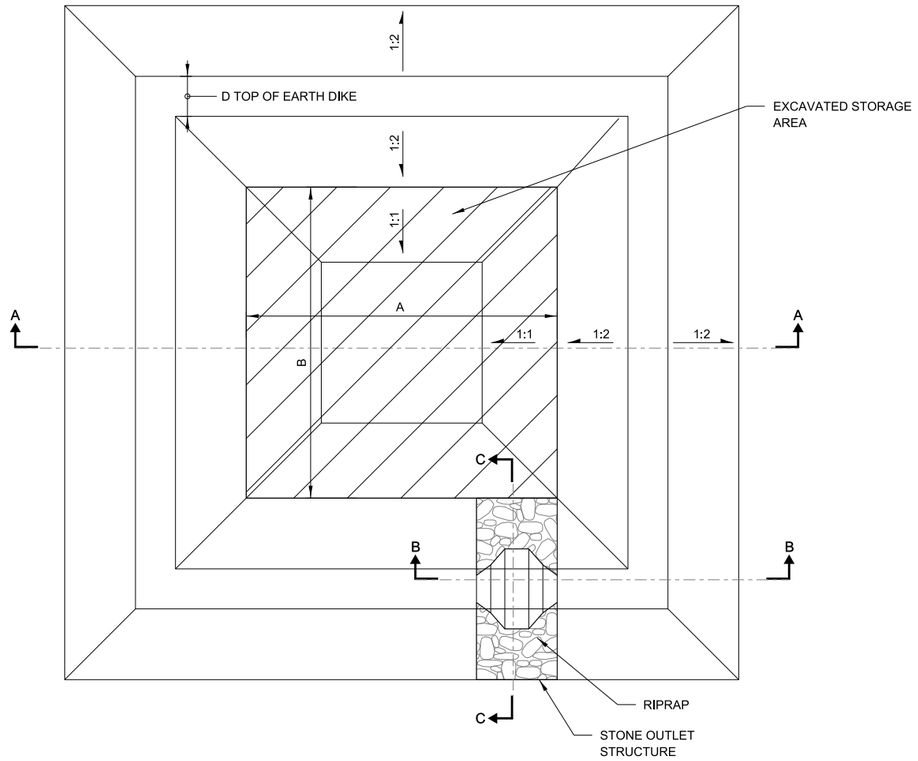
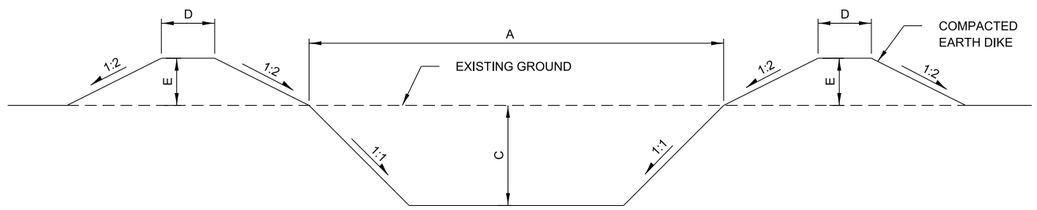
Illinois Tollway

STONE OUTLET STRUCTURE SEDIMENT TRAP

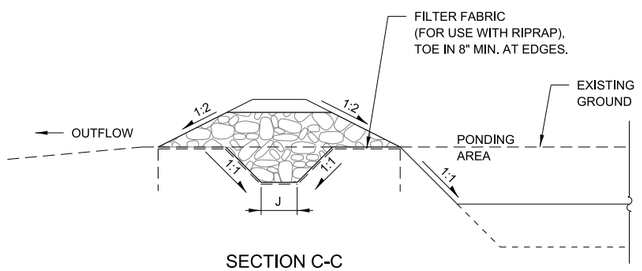
VERSION:	STANDARD:	SHEET:
2023-03	M-ESC-201	1 OF 1



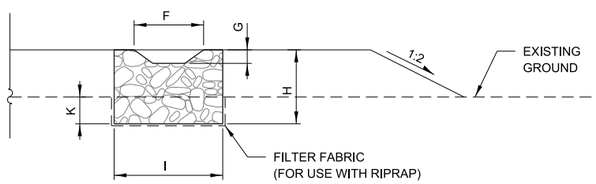
PLAN VIEW



SECTION A-A



SECTION C-C



SECTION B-B

NOTES:

1. ANY DEWATERING OF THE CONSTRUCTION AREA SHALL BE FILTERED THROUGH A DEWATERING BASIN PRIOR TO ENTERING RECEIVING WATERS.
2. PUMPING INTO THESE BASINS SHALL CEASE WHEN THE EFFLUENT FROM THE BASIN BECOMES SEDIMENT LADEN. SURFACE FLOWS SHALL BE DIVERTED AROUND THIS DEVICE.
3. ONCE THE DEWATERING BASIN BECOMES FILLED TO ½ OF THE EXCAVATED DEPTH, ACCUMULATED SEDIMENT SHALL BE REMOVED.
4. THE OUTFALL FROM THE BASIN(S) SHALL HAVE A STABILIZED CONVEYANCE TO RECEIVING WATERS.
5. REFERENCE DESIGN CRITERIA:
   ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
6. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

DESIGN ELEMENTS	UNITS	VALUE
STORAGE CAPACITY	V (CU. YD.)	
BASIN TOP WIDTH	A (FEET)	
BASIN TOP LENGTH	B (FEET)	
BASIN DEPTH	C (FEET)	
EARTH DIKE TOP WIDTH	D (FEET)	
EARTH DIKE HEIGHT	E (FEET)	
STONE OUTLET STRUCTURE RIPRAP	GRADATION	
STONE OUTLET SPILLWAY TOP WIDTH	F (FEET)	
STONE OUTLET SPILLWAY DEPTH	G (FEET)	
STONE OUTLET STRUCTURE HEIGHT	H (FEET)	
STONE OUTLET BASE WIDTH	I (FEET)	
STONE OUTLET BASE LENGTH	J (FEET)	
STONE OUTLET BASE DEPTH	K (FEET)	

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NOTE TO DESIGNER

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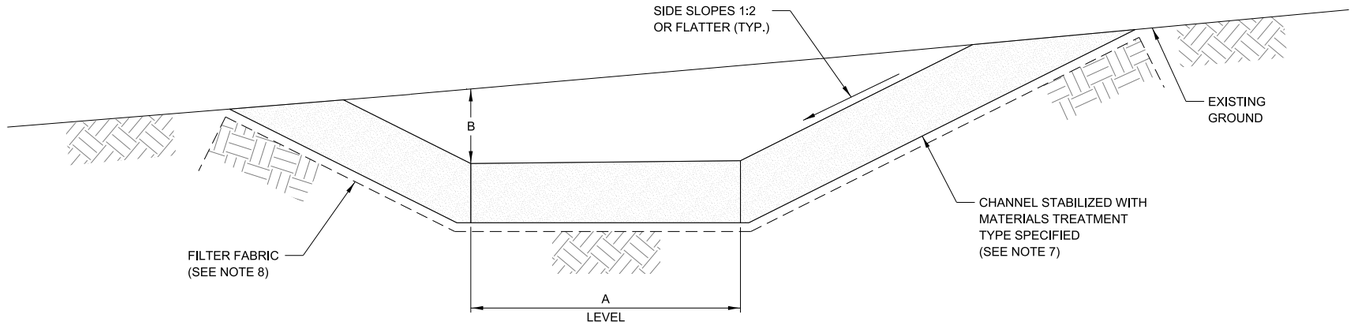
STANDARD SYMBOL

DB

Illinois Tollway

DEWATERING BASIN

VERSION:	STANDARD:	SHEET:
2024-03	M-ESC-202	1 OF 1



CROSS-SECTION

NOTES:

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE. THIS WORK SHALL BE INCIDENTAL TO THE COST OF THE TEMPORARY SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS-SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE, SHALL BE STABILIZED.
7. CHANNEL STABILIZATION TYPE TO BE DETERMINED BY CHANNEL GRADE (%) AND DRAINAGE AREA INTO THE TEMPORARY SWALE.
8. FILTER FABRIC TO BE USED ONLY WITH TREATMENT TYPES II AND III.
9. WIDTH OF FLOW CHANNEL TO BE SIZED FOR DRAINAGE AREA INTO THE TEMPORARY SWALE.
10. REFERENCE DESIGN CRITERIA:
ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
11. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

NOTE TO DESIGNER

THE DESIGNER SHALL DESIGN THE TEMPORARY EROSION AND SEDIMENT CONTROL STRUCTURE SHOWN ON THIS SHEET. DESIGN VALUES SHALL BE INSERTED INTO THE TABLE.

DESIGN ELEMENTS	DATA	VALUES
DRAINAGE AREA	X (ACRES)	
FLOW CHANNEL WIDTH	A (FEET)	
FLOW CHANNEL DEPTH	B (FEET)	
CHANNEL GRADE	%	
CHANNEL STABILIZATION	TREATMENT TYPE	

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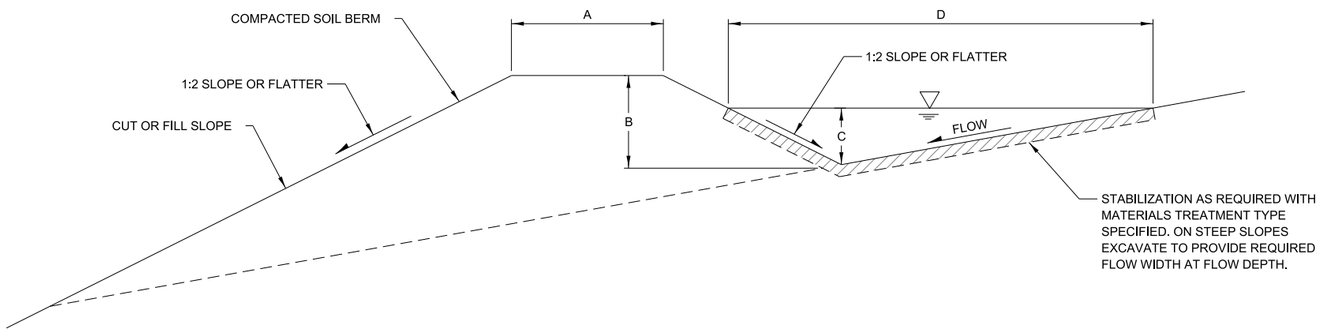
STANDARD SYMBOL

TS

Illinois Tollway

TEMPORARY SWALE

VERSION:	STANDARD:	SHEET:
2023-03	M-ESC-203	1 OF 1



CROSS -SECTION

NOTES:

1. ALL DIKES SHALL BE COMPACTED SOIL.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
7. STABILIZATION OF FLOW AREA ALONG DIVERSION DIKE TO BE DETERMINED BY CHANNEL GRADE (%) AND DRAINAGE AREA INTO DIVERSION DIKE.
8. DIVERSION DIKE AND EMBANKMENT FLOW STABILIZATION DIMENSION TO BE SIZED FOR DRAINAGE AREA INTO DIVERSION DIKE.
9. REFERENCE DESIGN CRITERIA:
   ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
10. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

DESIGN ELEMENTS	DATA	VALUES
DRAINAGE AREA	X (ACRES)	
WIDTH OF DIKE	A (FEET)	
HEIGHT OF DIKE	B (FEET)	
CHANNEL FLOW HEIGHT	C (FEET)	
CHANNEL FLOW WIDTH	D (FEET)	
CHANNEL GRADE	%	
CHANNEL STABILIZATION	TREATMENT TYPE	

NOTE TO DESIGNER

THE DESIGNER SHALL DESIGN THE TEMPORARY EROSION AND SEDIMENT CONTROL STRUCTURE SHOWN ON THIS SHEET. DESIGN VALUES SHALL BE INSERTED INTO THE TABLE.

NOTE TO DESIGNER

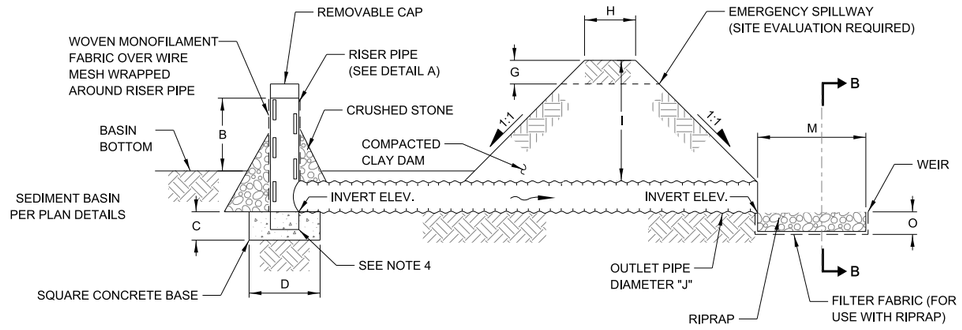
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

STANDARD SYMBOL

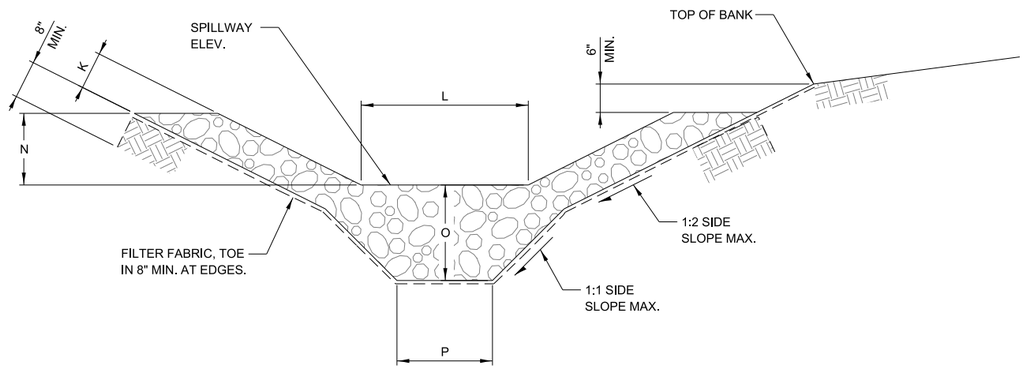
Illinois Tollway

DIVERSION DIKE

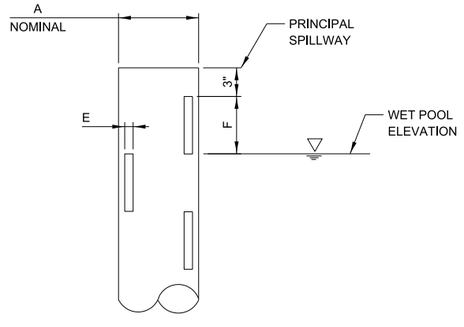
VERSION:	STANDARD:	SHEET:
2024-03	M-ESC-204	1 OF 1



SECTION ON CENTERLINE



SECTION B-B



DETAIL A
RISER PIPE-SLOTTED INLET

NOTES:

1. OUTLET PIPE AND SLOTTED RISER SHALL BE FABRICATED FROM CORRUGATED METAL, SMOOTH STEEL OR PVC.
2. SLOTS SHALL BE CUT CLEANLY AND DEBURRED. ENDS OF SLOTS MAY BE ROUND OR SQUARE.
3. ROWS OF VERTICAL SLOTS TO BE CENTERED AND PLACED BASED ON RISER DIAMETER.
4. FABRICATED OR STANDARD ELBOW; FABRICATED OR STANDARD TEE WITH THE PIPE OR PLUG IN UPSTREAM END; OR STANDARD TEE WITH ONE END EMBEDDED IN CONCRETE.
5. THE RISER PIPE AND DRAIN PIPE TO BE SIZED TO CARRY THE PEAK IN FLOW PER DESIGN STORM CRITERIA.
6. HOLES MAY BE SUBSTITUTED FOR SLOTS IN RISER PIPE. PROVIDE THE REQUIRED NUMBER OF HOLES PER FOOT OF RISER FOR THE SPECIFIED DIAMETER OF RISER PIPE.
7. AN ALTERNATE TO THE PERFORATED RISER PIPE IS A SKIMMER DEVICE.
8. SEDIMENT TO BE REMOVED WHEN BASIN IS 50% FULL.
9. WOVEN MONOFILAMENT FABRIC OVER WIRE MESH SHALL BE WRAPPED AROUND THE RISER STAND PIPE.
10. REFERENCE DESIGN CRITERIA:
ILLINOIS URBAN MANUAL AND IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL.
11. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

NOTE TO DESIGNER

THE DESIGNER SHALL DESIGN THE TEMPORARY EROSION AND SEDIMENT CONTROL STRUCTURE SHOWN ON THIS SHEET. DESIGN VALUES SHALL BE INSERTED INTO THE TABLE.

DESIGN ELEMENTS	DATA	VALUES
STORAGE VOLUME	V (CU. YD.)	
CLAY DAM TOP WIDTH	H (FEET)	
CLAY DAM HEIGHT	I (FEET)	
INLET CAPACITY OF RISER PIPE	Q (CU. FT./SEC.)	
VERTICAL RISER PIPE DIAMETER	A (INCHES)	
VERTICAL RISER PIPE HEIGHT	B (FEET)	
RISER CONCRETE BASE DEPTH	C (FEET)	
RISER CONCRETE WIDTH/LENGTH	D (FEET)	
SLOTTED INLETS	X (NUMBER)	
SLOTTED INLET WIDTH	E (INCHES)	
SLOTTED INLET LENGTH	F (INCHES)	
HORIZONTAL OUTLET PIPE DIAMETER	J (INCHES)	
ANTI SEEP COLLAR PIPE DIAMETER	R (INCHES)	
FREEBOARD HEIGHT	G (FEET)	
CRUSHED STONE	GRADATION	
WEIR LENGTH	M (FEET)	
WEIR TOP WIDTH	L (FEET)	
WEIR SIDE SLOPE THICKNESS	K (FEET)	
WEIR SIDE SLOPE HEIGHT	N (FEET)	
WEIR DEPTH	O (FEET)	
WEIR BASE WIDTH	P (FEET)	
RIPRAP	GRADATION	

NOTE TO DESIGNER

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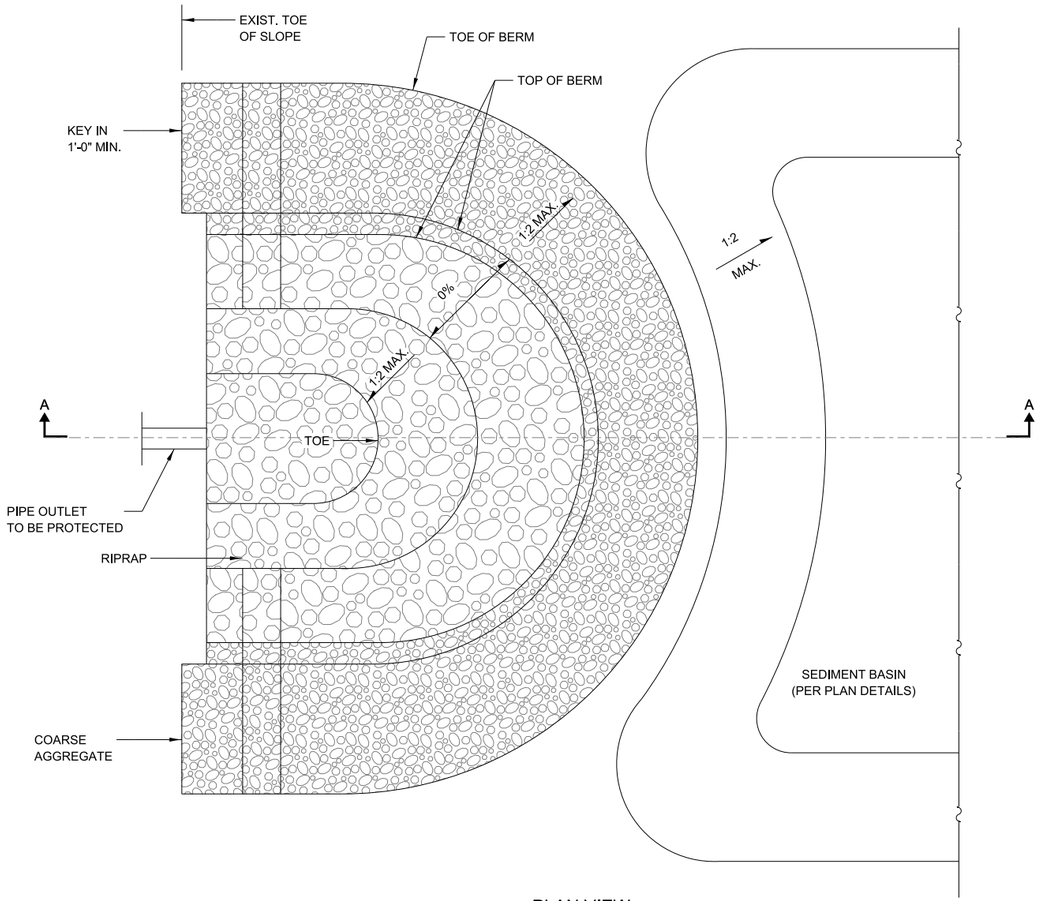
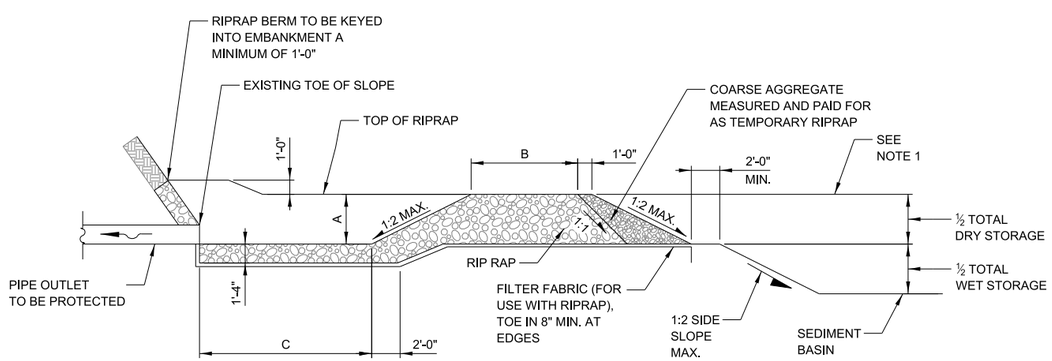
Illinois Tollway

SEDIMENT BASIN DEWATERING DEVICE

VERSION:	STANDARD:	SHEET:
2024-03	M-ESC-205	1 OF 1



PLAN VIEW



SECTION A-A

NOTES:

1. WHEN SEDIMENT BASIN AGGREGATE BERM IS USED FOR OUTLET CONTROL, THE DETENTION STORAGE SHALL BE COMPOSED OF EQUAL VOLUMES OF "WET" AND "DRY" STORAGE AREAS. HALF THE DETENTION STORAGE SHALL BE BELOW THE PERMEABLE FILL. DRAINAGE AREA INCLUDES BOTH ON -SITE AND OFF-SITE TRIBUTARY AREAS.
2. TO MINIMIZE EXCAVATION, THE BOTTOM OF THE WET STORAGE BASIN MAY BE DESIGNED AT THE PIPE OUTLET INVERT ELEVATION. PROVIDE COMPACTED CLAY DAM BELOW AGGREGATE BERM.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED. THE AGGREGATE BERM SHALL BE REPLACED IF WASHED OUT, DAMAGED BY CONSTRUCTION OR SILT ACCUMULATION. THE SILT SHALL BE CLEANED OUT WHEN THE WET STORAGE POOL PORTION OF BASIN IS 50% FULL.
4. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
5. SEDIMENT BASIN AGGREGATE BERM SHALL BE USED WHEN EXISTING OR PROPOSED DETENTION BASIN OR INFIELD AREA IS USED FOR A SEDIMENT BASIN.

NOTE TO DESIGNER

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DESIGN ELEMENTS	DATA	VALUES
DRAINAGE AREA	X (ACRES)	
SEDIMENT BASIN STORAGE CAPACITY	V (CU. YD.)	
WET DETENTION STORAGE	½ V (CU. YD.)	
DRY DETENTION STORAGE	½ V (CU. YD.)	
AGGREGATE BERM HEIGHT	A (FEET)	
AGGREGATE BERM TOP WIDTH	B (FEET)	
OUTLET WEIR LENGTH	C (FEET)	
RIPRAP	GRADATION	
COARSE AGGREGATE	GRADATION	

STANDARD SYMBOL

AB

NOTE TO DESIGNER

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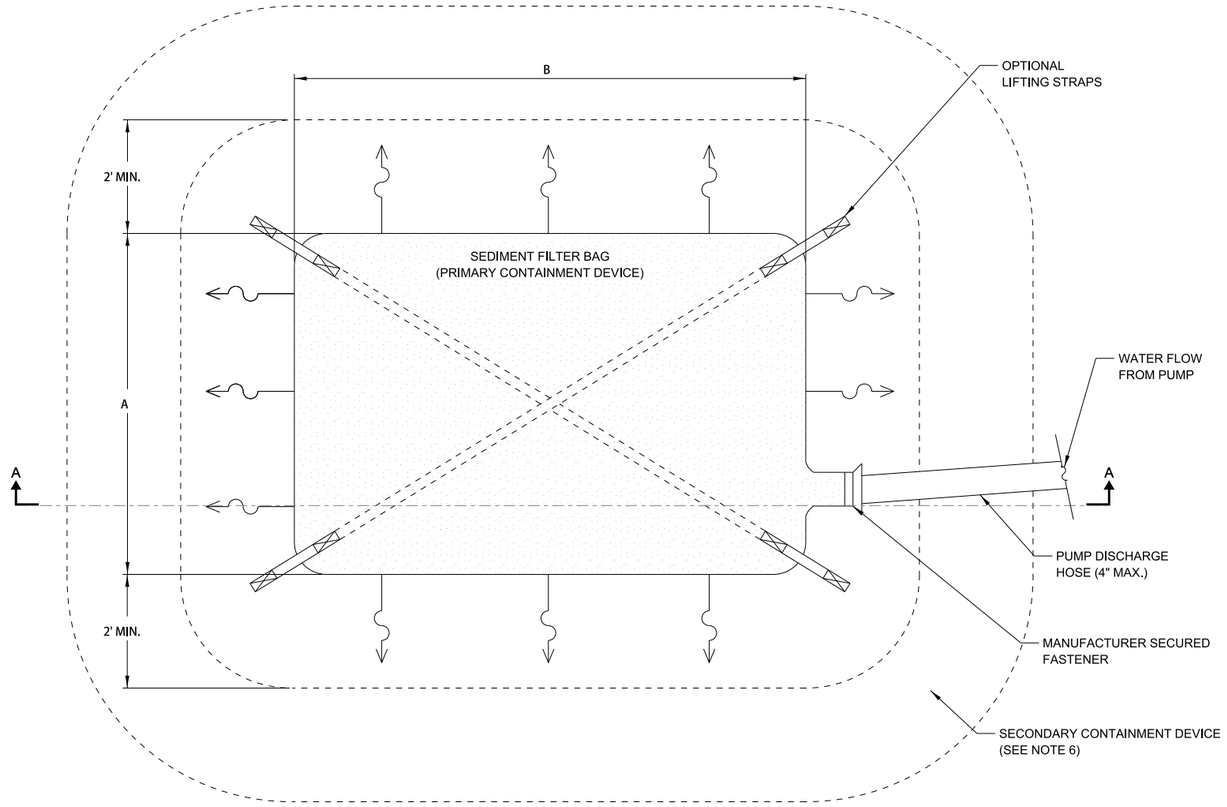
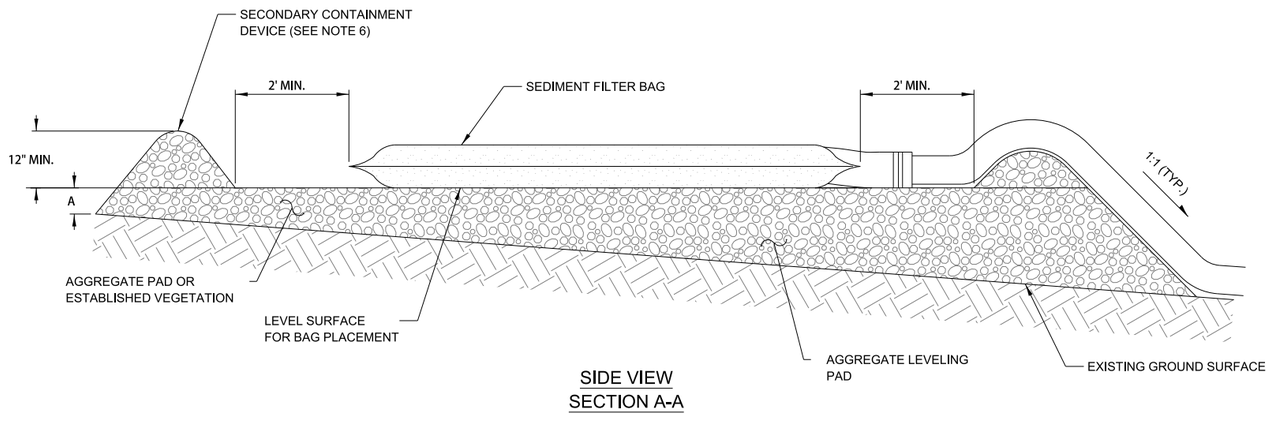
Illinois Tollway

SEDIMENT BASIN AGGREGATE BERM

VERSION:	STANDARD:	SHEET:
2024-03	M-ESC-206	1 OF 1



TOP VIEW



SIDE VIEW
SECTION A-A

NOTES:

1. SEDIMENT FILTER BAGS TO BE CONSIDERED AN ALTERNATE FOR SITES WHERE SEDIMENT BASIN INSTALLATION IS PROBLEMATIC.
2. SEDIMENT FILTER BAGS TO BE SIZED BASED ON VOLUME OF WATER BEING PUMPED, QUANTITY AND TYPE OF SEDIMENT AND THE PERMITTIVITY OF THE SPECIFIC BAG SIZE. THE MINIMUM BAG SIZE SHALL BE 10 FEET BY 15 FEET WITH A USABLE SURFACE AREA OF 300 SQUARE FEET.
3. MULTIPLE DISCHARGES INTO A SINGLE BAG ARE NOT PERMITTED.
4. SEDIMENT FILTER BAG SHALL BE ORIENTED TO DIRECT FLOW AWAY FROM CONSTRUCTION AREA AND DISCHARGE FILTERED WATER INTO APPROVED RECEIVING AREA OR CONTAINMENT SYSTEM.
5. SEDIMENT FILTER BAG SHALL BE REPLACED WHEN IT BECOMES ½ FULL OF SEDIMENT OR WHEN THE SEDIMENT HAS REDUCED DISCHARGE FLOW RATE BELOW DESIGN REQUIREMENTS.
6. SECONDARY CONTAINMENT DEVICE SHALL BE COMPRISED OF AGGREGATE MATERIAL, TEMPORARY DITCH CHECK OR EQUIVALENT.
7. PLACE STRAPS, CROSS CHAINS, PALLETS OR OTHER LIFTING DEVICE UNDER THE SEDIMENT FILTER BAG WHEN REPLACEMENT IS ANTICIPATED.

NOTE TO DESIGNER

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DESIGN ELEMENTS	DATA	VALUES
AGGREGATE PAD AND SECONDARY CONTAINMENT DEVICE	GRADATION	
AGGREGATE PAD DEPTH (MIN.)	A (INCH)	

NOTE TO DESIGNER

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Illinois Tollway

SEDIMENT FILTER BAG

VERSION:	STANDARD:	SHEET:
2023-03	M-ESC-207	1 OF 1

BASE SHEETS

SERIES 400 (RDY)

ROADWAY

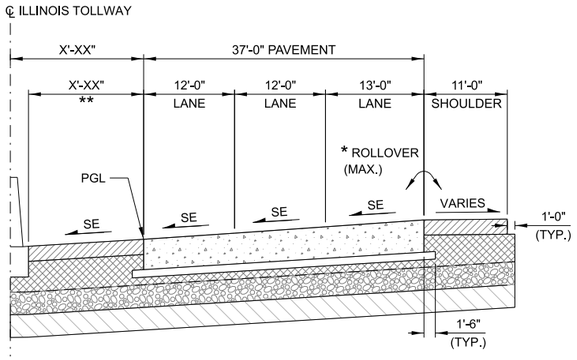
MARCH 2024

Illinois Tollway Base Sheet Revisions

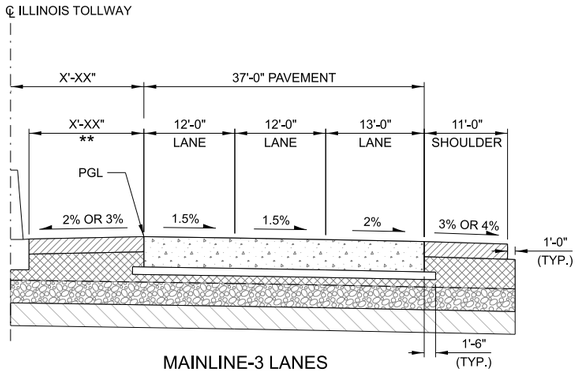
Section M	Base Sheet Drawings	
	Drawing	**Modification Summary** **Effective: 03-01-2024**
	Roadway (RDY)-Series 400	
	M-RDY-407	**EARTHWORK AND GUARDRAIL SCHEDULE, SHEETS 1 and 2**
	Sheet 1	Clarified note 7 in 'NOTES TO DESIGNER' and note 8 in 'NOTES' sections.
	Sheet 1 & 2	Added pay item JT202007 for "Allowance for Testing Unclassified Soil".
	Sheet 1 & 2	Deleted pay item JT202006 and revised 'Testing of Unclassified soil' to 'Unclassified soil'.
	Sheet 2	Added contract allowance JT202007 footnote for 'Bill of Material summary table'.
	M-RDY-410	**PRECAST APPROACH SLAB W/CIP TRANSITION SLAB, SHEETS 3 and 4**
	Sheet 3	Changed the note 8 to require fanned bars if skew angle is greater than 25º instead of 45º
	Sheet 4	Changed the callout for forms to require 2" thick foam sheet instead of 1/4" backer rod (detail H)
		Specified the 6" extension of forms beyond the UHPC joint (detail H)
	M-RDY-415	**LONGITUDINAL JOINT SEALANT**
		Added a new figure and 'NOTE TO DESIGNER' for 'TYPICAL LJS PLACEMENT - UNEQUAL SURFACE THICKNESSES'
	M-RDY-416	**ENVIRONMENTAL SOIL CLASSIFICATION**
		Added new note in 'NOTE' section regarding soil types.
	M-RDY-417	**MAINLINE TOLL PLAZA PAVEMENT DETAILS**
	Sheet 1	Added a call-out and 'NOTE TO DESIGNER' for PCC Sidewalk.
	Sheet 2	Clarified concrete barrier call out in Section A-A.
	M-RDY-418	**RAMP TOLL PLAZA PAVEMENT DETAILS**
	Sheet 2	Added a call-out and a note in 'NOTE TO DESIGNER' regarding material fill type and depth when adjacent to existing pavement.
		Clarified concrete barrier call out in Section A-A.

New Sheet

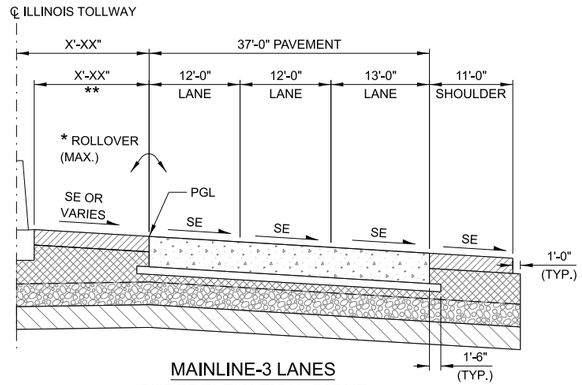
Retired Standard



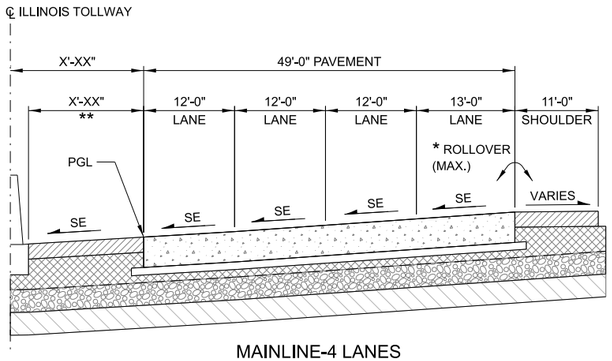
MAINLINE-3 LANES
SUPERELEVATION, LEFT



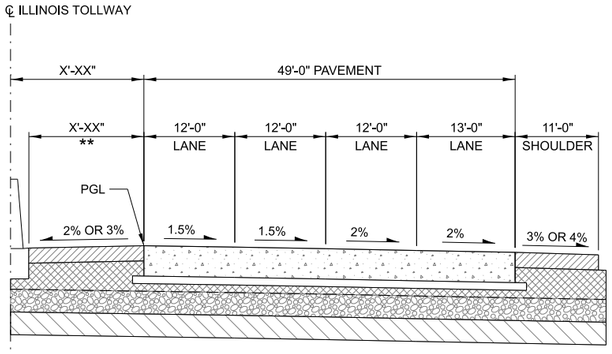
MAINLINE-3 LANES
NORMAL CROWN



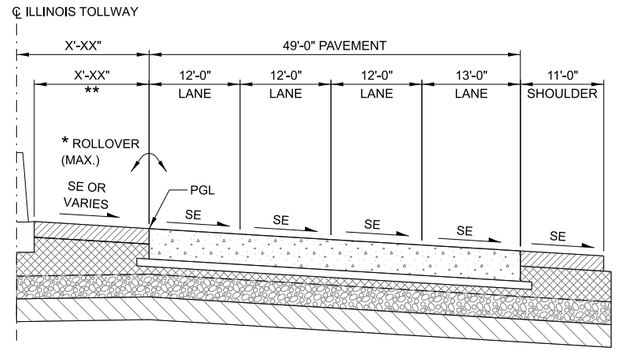
MAINLINE-3 LANES
SUPERELEVATION, RIGHT



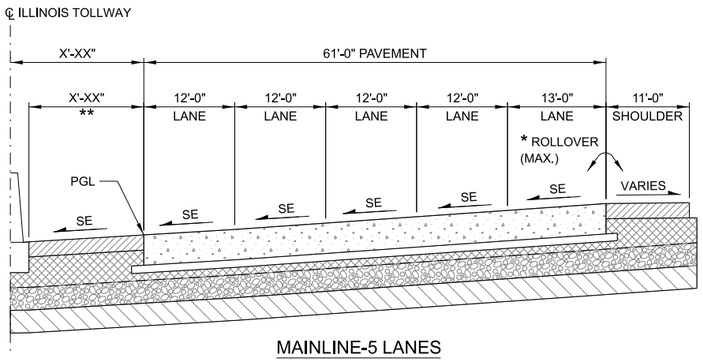
MAINLINE-4 LANES
SUPERELEVATION, LEFT



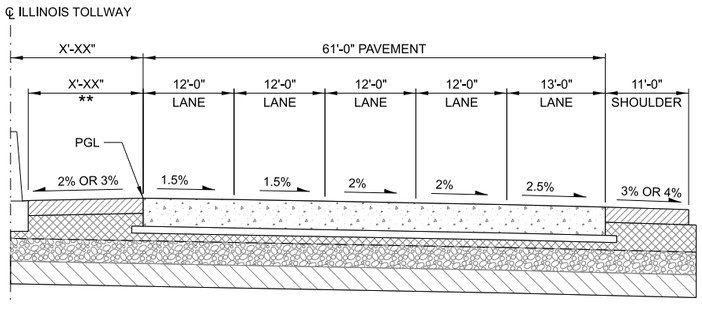
MAINLINE-4 LANES
NORMAL CROWN



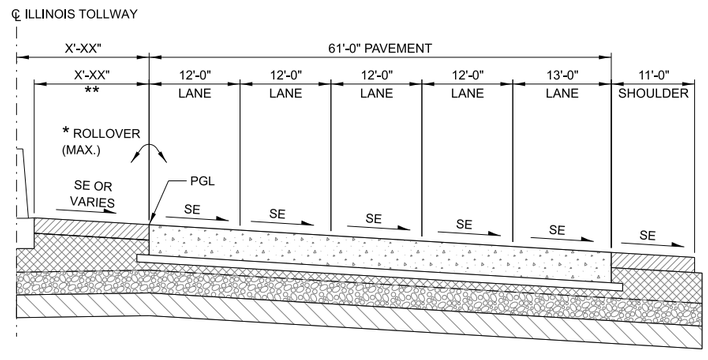
MAINLINE-4 LANES
SUPERELEVATION, RIGHT



MAINLINE-5 LANES
SUPERELEVATION, LEFT



MAINLINE-5 LANES
NORMAL CROWN



MAINLINE-5 LANES
SUPERELEVATION, RIGHT

NOTE TO DESIGNER

REFERENCE ILLINOIS TOLLWAY STANDARD DRAWING B24, PIPE UNDERDRAIN, FOR PLACEMENT LOCATION.
REFERENCE ILLINOIS TOLLWAY BASE SHEET M-RDY-412, FOR BOTTOM OF SUBGRADE SLOPES.
REFERENCE ILLINOIS TOLLWAY BASE SHEET M-RDY-415, LONGITUDINAL JOINT SEALANT, FOR PLACEMENT.
* REFER TO ROADWAY DESIGN CRITERIA ARTICLE 2.4.9 FOR MAX ROLLOVER VALUES.
** REFER TO ROADWAY DESIGN CRITERIA ARTICLES 2.6.3 AND 2.6.4 FOR SHOULDER WIDTH AND CROSS SLOPE DETAILS.

NOTE TO DESIGNER

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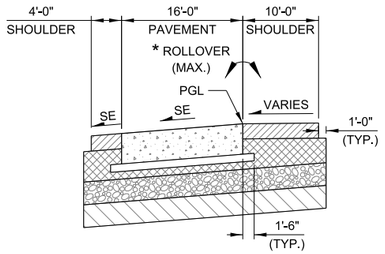
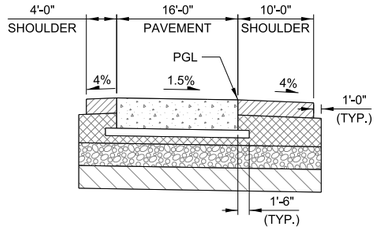
Illinois Tollway

ROADWAY TYPICAL SECTIONS - GROUP A

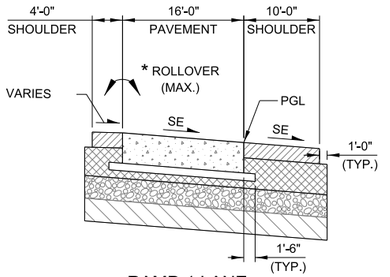
VERSION:	STANDARD:	SHEET:
2023-03	M-RDY-400	1 OF 1



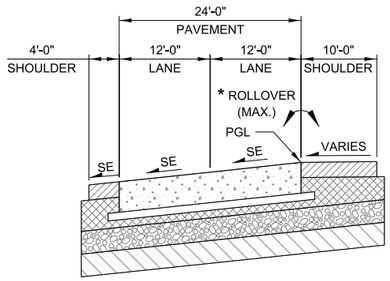
RAMP-1 LANE
SUPERELEVATION LEFT



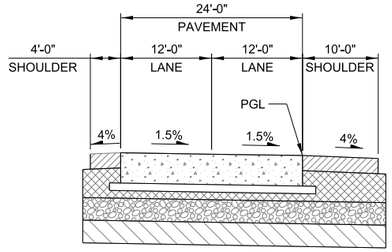
RAMP-1 LANE
NORMAL CROWN



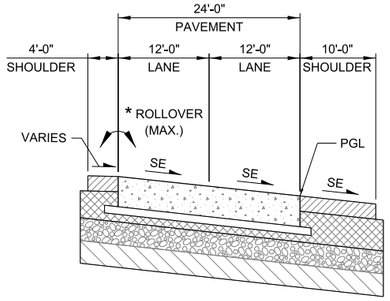
RAMP-1 LANE
SUPERELEVATION RIGHT



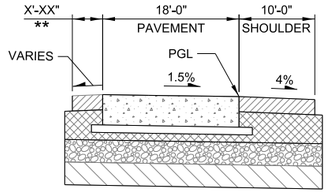
RAMP-2 LANES
SUPERELEVATION LEFT



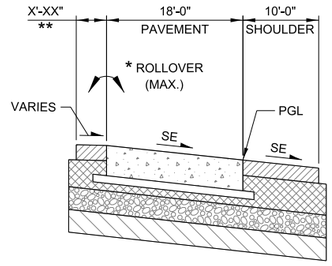
RAMP-2 LANES
NORMAL CROWN



RAMP-2 LANES
SUPERELEVATION RIGHT



LOOP RAMP
NORMAL CROWN



LOOP RAMP
SUPERELEVATION RIGHT

NOTE TO DESIGNER

REFERENCE ILLINOIS TOLLWAY STANDARD DRAWING B24, PIPE UNDERDRAIN, FOR PLACEMENT LOCATION.
REFERENCE ILLINOIS TOLLWAY BASE SHEET M-RDY-415, LONGITUDINAL JOINT SEALANT, FOR PLACEMENT.
* REFER TO ROADWAY DESIGN CRITERIA ARTICLE 2.4.9 FOR MAX ROLLOVER VALUES.
** REFER TO ROADWAY DESIGN CRITERIA ARTICLES 2.6.3 AND 2.6.4 FOR SHOULDER WIDTH AND CROSS SLOPE DETAILS.

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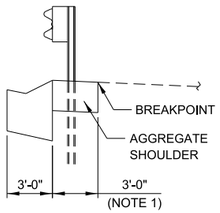
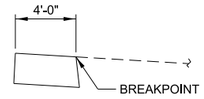
Illinois Tollway

ROADWAY TYPICAL SECTIONS - GROUP B

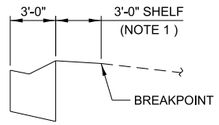
VERSION:	STANDARD:	SHEET:
2023-03	M-RDY-401	1 OF 1



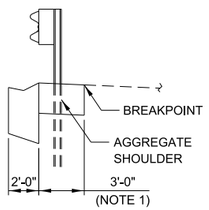
GUTTER, TYPE G-3
WITH GUARDRAIL



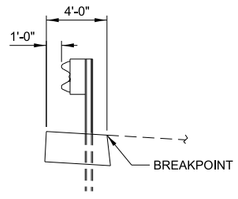
AGGREGATE
SHOULDER
(NOTE 2)



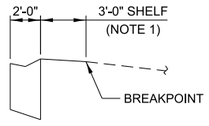
GUTTER, TYPE G-3



GUTTER, TYPE G-2
WITH GUARDRAIL



AGGREGATE SHOULDER
WITH GUARDRAIL
(NOTE 2)



GUTTER, TYPE G-2

NOTES:

1. SLOPE TOWARD GUTTER AT 6% WHEN IN CUT SECTION AND SLOPE AWAY FROM GUTTER AT 6% WHEN IN FILL SECTION.

2. AGGREGATE SHOULDER SLOPE SHALL NOT BE FLATTER THAN ADJACENT PAVED SHOULDER.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

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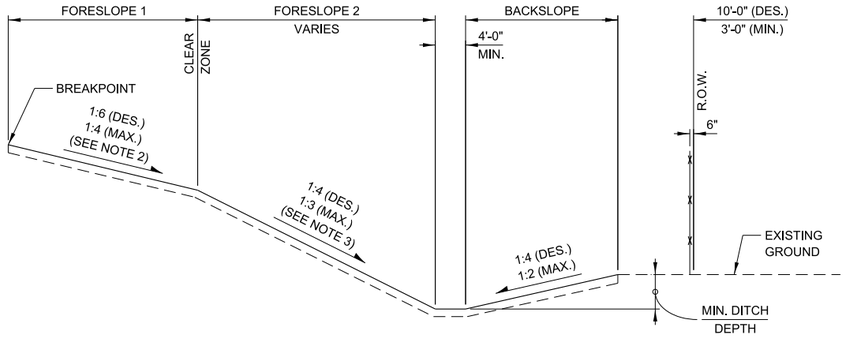
ROADWAY TYPICAL SECTIONS - GROUP D

VERSION:	STANDARD:	SHEET:
2020-03	M-RDY-403	1 OF 1

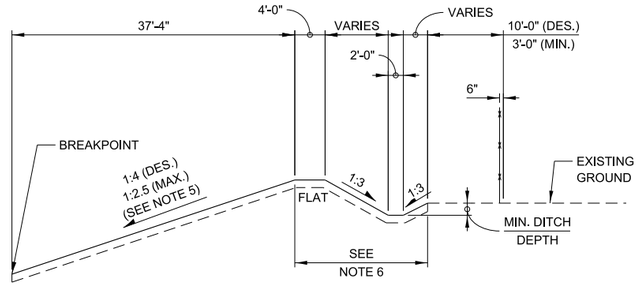


DESIRABLE FILL SECTION

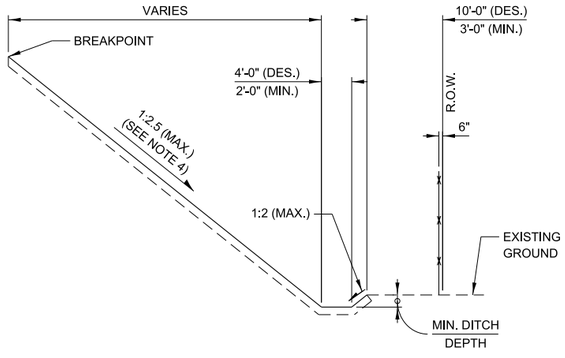
SIDESLOPES HIERARCHY
(IN ORDER OF PREFERENCE FOR FILL SECTION)

FORESLOPE ***		DITCH (MIN.)	BACKSLOPE
1	2		
1:6 OR FLATTER	-	4'	1:4 OR FLATTER
1:6	1:4	4'	1:4
1:6	1:4	4'	1:3
1:6	1:3	4'	1:3
1:4	-	4'	1:3
1:4	-	4'	1:2
1:4	1:3	4'	1:3
1:6	1:3	4'	1:2
1:4	1:3	4'	1:2
1:6	1: 2.5 **	4'	1:2
1:2.5 *	-	4'	1:3
1:2.5 *	-	4'	1:2
1:2.5 *	-	2' **	1:2

REFER TO RDC ARTICLE 2.6.8 * ** ***
FOR DESIGN REQUIREMENTS



ACCEPTABLE CUT SECTION



ACCEPTABLE FILL SECTION
FILL ≥ 9"
(CLEAR ZONE UNDEFINED)

NOTES:

1. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENTS TO UNITS OF HORIZONTAL DISPLACEMENTS (V:H).
2. SLOPE SHALL BE 1:6 OR FLATTER BEHIND GUTTER WITHOUT GUARDRAIL; IN ALL OTHER CASES THE MAXIMUM SLOPE SHALL BE 1:4. IF 1:4 SLOPE IS USED, INCREASE WIDTH BASED ON CLEAR ZONE REQUIREMENTS.
3. FORESLOPE 2 (SEE THE SIDESLOPES HIERARCHY TABLE) STEEPER THAN 1:3 USED FOR THE LOWER SLOPE ON A BARN-ROOF SECTION REQUIRES A DESIGN DEVIATION.
4. FORESLOPES STEEPER THAN 1:4 USED WHEN BARN-ROOF SECTION IS NOT USED AND WHEN FILL HEIGHT IS LESS THAN 9' REQUIRE A DESIGN DEVIATION.
5. BACKSLOPES STEEPER THAN 1:2.5 FROM THE SHOULDER POINT IN A CUT SECTION REQUIRE A DESIGN DEVIATION.
6. CAN BE OMITTED WHEN EXISTING GROUND SLOPES AWAY FROM R.O.W. LINE.
7. MINIMUM DITCH DEPTH SHALL FOLLOW DRAINAGE DESIGN MANUAL. DESIGNER SHALL MEET CRITERIA FOR DESIGN WATER SURFACE ON TABLE 6.1 AND ADEQUATELY DRAIN SUBBASE.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

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ROADWAY TYPICAL SECTIONS - GROUP E

VERSION:	STANDARD:	SHEET:
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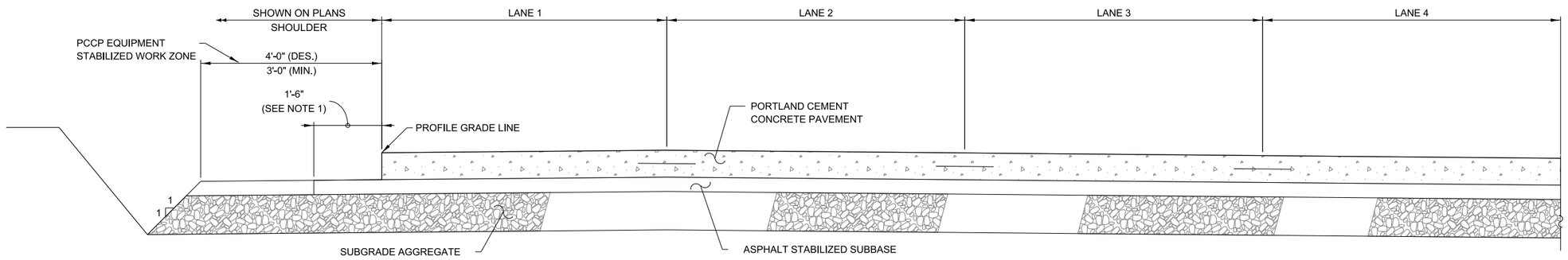

PAVEMENT CROSS - SECTION REQUIREMENTS
FOR PAVING OPERATIONS

GENERAL NOTES:

1. THE 1'-6" WIDE ASPHALT STABILIZED SUBBASE MAY BE REDUCED TO 1'-0" WHEN PAVING EQUIPMENT UTILIZED FOR CONSTRUCTION OF THE PCCP PAVEMENT WILL ALLOW.

2. THE STABILIZED WORK ZONE SHOULD ACCOUNT FOR THE PAVER TRACK AND SHOULD BE NOTED IN THE PLANS IF MINIMUMS ARE NOT MET.

3. STABILIZED WORK ZONE MAY OR MAY NOT BE CONTINUOUS TO THE ASPHALT STABILIZED BASE. ALTERNATIVES SHOULD BE INVESTIGATED TO DETERMINE THE BEST LOCATION.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

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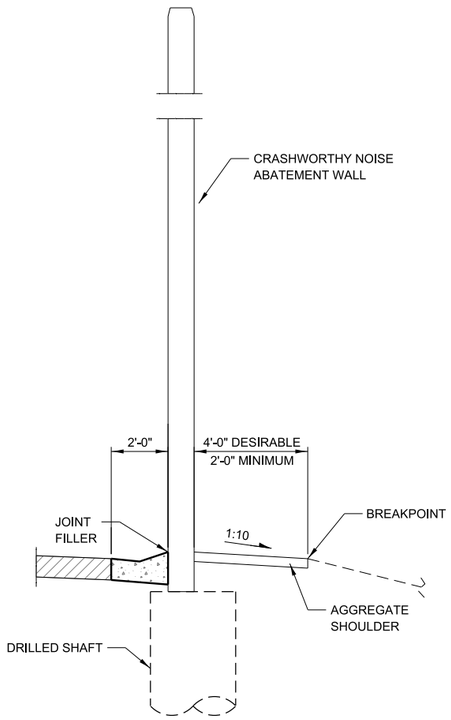
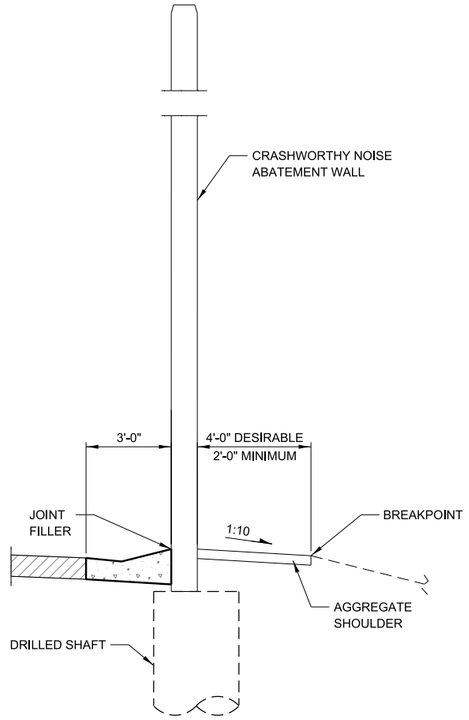
ROADWAY TYPICAL
SECTIONS - GROUP F

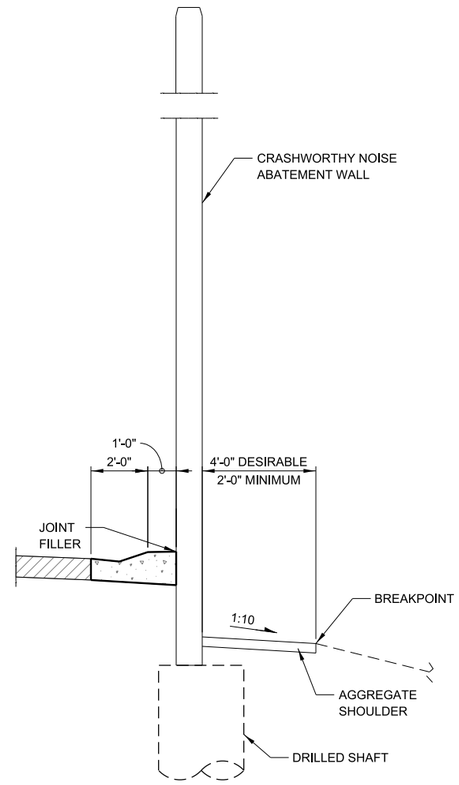
VERSION:	STANDARD:	SHEET:
2020-03	M-RDY-405	1 OF 1



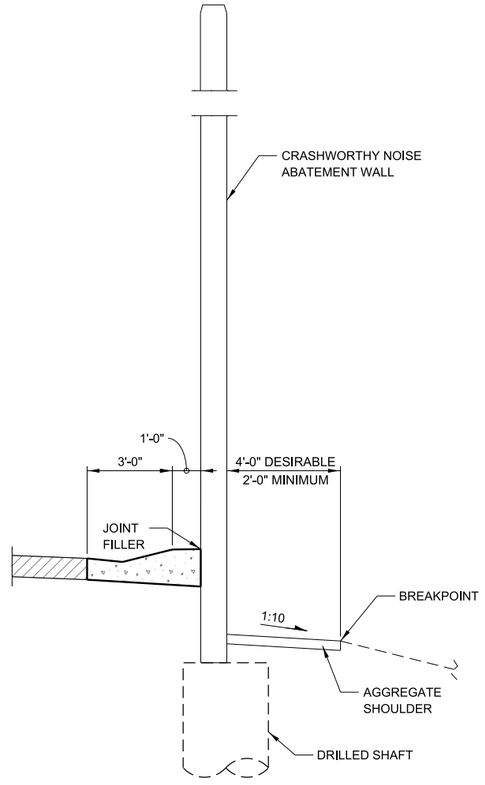
GUTTER, TYPE G-2
(BALANCED SOIL LOAD)



GUTTER, TYPE G-3
(BALANCED SOIL LOAD)



GUTTER, TYPE G-2N
(UNBALANCED SOIL LOAD)



GUTTER, TYPE G-3N
(UNBALANCED SOIL LOAD)

CRASHWORTHY GROUND-MOUNTED NOISE ABATEMENT WALL ADJACENT TO PAVED SHOULDER

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTE TO DESIGNER

1. THE DETAILS SHOWN ABOVE REPRESENT SAMPLE USAGE OF GUTTER. THE SELECTION OF GUTTER TYPE IS DEPENDENT ON THE PRESENCE OF DRAINAGE STRUCTURE(S) AND NOISE ABATEMENT WALL PANEL EMBEDMENT DEPTH. REFER TO ROADWAY DESIGN CRITERIA MANUAL, ARTICLE 2.6.6, FOR GUTTER DESIGN REQUIREMENTS.
2. FOR GUTTER DETAILS, REFER TO ILLINOIS TOLLWAY STANDARD DRAWING B1.
3. FOR DRAINAGE STRUCTURE DETAILS ON THE ROADWAY SIDE, REFER TO ILLINOIS TOLLWAY STANDARD DRAWING B1 AND ILLINOIS TOLLWAY BASE SHEET M-DRN-607.
4. FOR DRAINAGE STRUCTURE DETAILS ON THE RESIDENTIAL SIDE, REFER TO ILLINOIS TOLLWAY BASE SHEET M-DRN-608.
5. FOR NOISE ABATEMENT WALL DETAILS, REFER TO ILLINOIS TOLLWAY STANDARD DRAWING G16 AND ILLINOIS TOLLWAY BASE SHEET M-BRG-532.

NOTE:

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

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ROADWAY TYPICAL SECTIONS - GROUP G

VERSION:	STANDARD:	SHEET:
2023-03	M-RDY-406	1 OF 1

EARTHWORK SCHEDULE OF QUANTITIES								
EARTHWORK VOLUMES (CUYD)								
LOCATION	A	B	C	D	E	F (SEE NOTE 3)	G	H (SEE NOTE 3)
	EARTH EXCAVATION	ROCK EXCAVATION	UNSUITABLE MATERIAL	STRUCTURE EXCAVATION	UNSUITABLE MATERIAL FOR STRUCTURES	SUITABLE EXCAVATION (adjusted for shrinkage %)	EMBANKMENT	EARTHWORK BALANCE EXCESS (+) or SHORTAGE (-)
	20200100	20200200	20201200	50200100	50200450			
STAGE 1								
400+00 to 500+00								
500+00 to 600+00								
RAMP A								
RAMP C								
STAGE 1 TOTAL								
STAGE 2								
400+00 to 500+00								
500+00 to 600+00								
RAMP A								
RAMP C								
STAGE 2 TOTAL								
TOTAL								

EARTHWORK SCHEDULE OF QUANTITIES														
ENVIRONMENTAL CLASSIFICATION (CUYD)														
LOCATION	I1	J1	K1	L1	M1	N1	O1	P1	Q1	R1	S1	T1	U1	EE1
	C: SOILS APPROVED FOR REUSE				B: SOILS APPROVED WITH RESTRICTIONS				A: SOILS NOT APPROVED FOR REUSE				HAZARDOUS WASTE	UNCLASSIFIED SOIL
	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 1	TYPE 2	TYPE 3	TYPE 4	JT669020	
STAGE 1														
400+00 to 500+00														
500+00 to 600+00														
RAMP A														
RAMP C														
STAGE 1 TOTAL														
STAGE 2														
400+00 to 500+00														
500+00 to 600+00														
RAMP A														
RAMP C														
STAGE 2 TOTAL														
TOTAL														

SHRINKAGE

1. SS IS THE SOIL SHRINKAGE MULTIPLIER, WHICH IS DETERMINED TO BE XX.

IEPA APPROVED GROUNDWATER ORDINANCE

2. "SOILS APPROVED WITH RESTRICTION" CAN BE REUSED IN THE FOLLOWING MUNICIPALITIES WITH IEPA APPROVED GROUNDWATER ORDINANCES (DSE TO LIST MUNICIPALITIES).

CALCULATIONS

3. SUITABLE EXCAVATION, F, REPRESENTS SUITABLE EXCAVATED MATERIAL VOLUMES ADJUSTED FOR SHRINKAGE AND ONLY INCLUDES EARTHWORK VOLUMES ASSOCIATED WITH EARTH EXCAVATION, A; ROCK EXCAVATION, B; AND STRUCTURE EXCAVATION, D.

F=(A+D-(Q1+R1+S1+T1))*SS+B WITH IEPA APPROVED GROUNDWATER ORDINANCE; F=(A+D-(Q1+R1+S1+T1)-(M1+N1+O1+P1))*SS + B WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE

W=V-(Q2+R2+S2+T2) WITH IEPA APPROVED GROUNDWATER ORDINANCE; W=V-(Q2+R2+S2+T2)-(M2+N2+O2+P2) WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE

H=F-G

4. INCIDENTAL EXCAVATION IS OUTLINED IN A SEPARATE TABLE WHICH IDENTIFIES ENVIRONMENTAL SOIL CLASSIFICATION AND IS NOT CONSIDERED IN THE CALCULATION FOR SUITABLE EXCAVATION. THIS IS FOR INFORMATION ONLY EXCEPT FOR QUANTITIES OF TYPE 1 SOIL DISPOSAL. PERFORMANCE BASED RETAINING WALLS EXCAVATION IS INCLUDED AS INCIDENTAL TO THE RETAINING WALL AND ASSUMED AS MSE WALLS UNLESS OTHERWISE STATED BY THE DESIGNER. QUANTITIES MAY BE ADJUSTED BASED ON WALL DESIGN.

DISPOSAL

5. "SOILS NOT APPROVED" SHALL NOT BE REUSED ON THE ILLINOIS TOLLWAY ROW AND SHALL BE DISPOSED OF AS NON-SPECIAL WASTE, DISPOSAL TYPE 1 (TYPE 1) OR AS ASSOCIATED WORK PAY ITEM (TYPES 2 THROUGH TYPE 4) OR INCLUDED IN THE COST OF THE ASSOCIATED WORK PAY ITEM.

6. "SOILS APPROVED WITH RESTRICTION" THAT CANNOT BE REUSED WITHIN THE PROJECT MUST BE REMOVED AS EITHER NON-SPECIAL WASTE DISPOSAL, TYPE 1, OR EXCAVATION PAY ITEM (TYPES 2 THROUGH TYPE 4) OR INCLUDED IN THE COST OF THE ASSOCIATED WORK PAY ITEM.

7. WHEN THERE IS EXCESS SOIL APPROVED FOR REUSE OR APPROVED FOR REUSE WITH RESTRICTION, THE CONTRACTOR SHALL FIRST REUSE ENVIRONMENTAL SOILS TYPE 1 TO MINIMIZE THE VOLUME OF MATERIAL DISPOSED AT A NON-SPECIAL WASTE DISPOSAL FACILITY.

8. SOIL QUANTIFIED AS UNCLASSIFIED SOIL SHALL BE MANAGED AS TYPE 1A AND HAS BEEN INCLUDED IN THE QUANTITY FOR TYPE 1A. A SEPARATE QUANTITY OF ONLY UNCLASSIFIED SOIL IS ALSO PROVIDED. IF THE CONTRACTOR CHOOSES TO TEST THIS MATERIAL, CONTRACT ALLOWANCE JT202007 WILL BE USED PER TOLLWAY SP FOR "ALLOWANCE FOR TESTING UNCLASSIFIED SOIL".

9. WHEN STOCKPILING SOIL, ANY PLACEMENT OF MULTIPLE REUSE OR DISPOSAL TYPES WITHIN THE SAME STOCKPILE SHALL THEREAFTER BE MANAGED AS THE MOST RESTRICTIVE DISPOSAL AND REUSE TYPE INCLUDED IN THE STOCKPILE.

SUBGRADE AGGREGATE

10. SUBGRADE AGGREGATE SHALL BE MANAGED AS TYPE 4C.

NOTES TO DESIGNER

GENERAL

1. DSE TO COMPLETE NOTES 1 & 2.

SHRINKAGE FACTOR

2. SHRINKAGE FACTOR (SF) SHALL BE DETERMINED BY THE DESIGNER THROUGH GEOTECHNICAL INVESTIGATION. TOPSOIL SHRINKAGE FACTOR IS 0%.

3. SS IS THE SHRINKAGE MULTIPLIER FOR SOIL, SS=(1-SF)

CLASSIFICATION

4. ENVIRONMENTAL SOIL TYPES COLUMNS IDENTIFICATION
a. COLUMN U IS HAZARDOUS WASTE
b. COLUMNS I THROUGH L – TYPE 1 THROUGH TYPE 4 APPROVED
c. COLUMNS M THROUGH P – TYPE 1 THROUGH TYPE 4 APPROVED WITH RESTRICTIONS
d. COLUMNS Q THROUGH T – TYPE 1 THROUGH TYPE 4 NOT APPROVED
e. COLUMN EE IS UNCLASSIFIED SOIL

FOR COLUMN IDENTIFICATION FOR ENVIRONMENTAL TYPES USE SUFFIX 1 FOR EARTHWORK SCHEDULE TABLE (I1 THROUGH U1), SUFFIX 2 FOR TOPSOIL TABLE (I2 THROUGH U2), SUFFIX 3 FOR INCIDENTAL TABLE (I3 THROUGH U3) AND SO ON.

5. FOR SOILS "NOT APPROVED" TYPE 2, TYPE 3, TYPE 4 AND "APPROVED WITH RESTRICTION" TYPE 2, TYPE 3, AND TYPE 4 THAT ARE IDENTIFIED ON YOUR CONTRACT, THEY SHOULD REMAIN IN THE SCHEDULE PROVIDED. THESE SOIL COLUMNS CAN BE OMITTED IF NOT IDENTIFIED ON THE PROJECT.

6. KEEP ALL EARTHWORK VOLUME COLUMNS (A THROUGH H) ON BASE SHEET FOR CONTRACT PLANS. REMOVE ENVIRONMENTAL CLASSIFICATION COLUMNS ON BASE SHEET IF THERE IS NONE PRESENT OF THAT TYPE ON THE CONTRACT.

7. UNCLASSIFIED SOIL WILL BE QUANTIFIED WITH THE TYPE 1A SOIL. HOWEVER, A SEPARATE QUANTITY OF UNCLASSIFIED SOIL IS ALSO SHOWN IN COLUMN EE. IF THE CONTRACTOR CHOOSES TO TEST THIS MATERIAL, CONTRACT ALLOWANCE JT202007 WILL BE USED PER TOLLWAY SP FOR "ALLOWANCE FOR TESTING UNCLASSIFIED SOIL".

CALCULATIONS

8. PLEASE NOTE THAT THE CALCULATIONS GUIDANCE PROVIDED IN THIS SECTION AND THE NON SPECIAL WASTE TABLES MAY NEED TO BE MODIFIED BASED ON VARICUS TYPES OF EXCAVATION THAT MAY BE ENCOUNTERED ON YOUR CONTRACT (SUCH AS EXCAVATION OF EXISTING RETAINING WALLS, BENCHING, BALLAST, SUBBALLAST.....).

9. I1 THROUGH T1 SHOULD EQUAL TO A+C+D+E; COLUMNS I2 THROUGH T2 SHOULD EQUAL TO V; COLUMNS I3 THROUGH T3 SHOULD EQUAL TO Z+AA+BB+CC; AND COLUMNS I4 THROUGH T4 SHOULD EQUAL TO DD.

10. WITHIN EARTHWORK SCHEDULE OF QUANTITY, ALL SOILS NOT APPROVED SHALL BE SUBTRACTED FROM THE CALCULATION OF SUITABLE EXCAVATION (F). WITHIN THE TOPSOIL SCHEDULE OF QUANTITY ALL SOILS NOT APPROVED SHALL BE SUBTRACTED FROM TOPSOIL STRIPPING (V).

11. MATERIAL APPROVED WITH RESTRICTIONS CAN ONLY BE USED IN MUNICIPALITIES WITH IEPA APPROVED GROUNDWATER ORDINANCE. IN MUNICIPALITIES WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE, WITHIN EARTHWORK SCHEDULE OF QUANTITIES ALL SOILS APPROVED WITH RESTRICTIONS SHALL BE SUBTRACTED FROM THE CALCULATION OF SUITABLE EXCAVATION (F). IN MUNICIPALITIES WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE, WITHIN THE TOPSOIL SCHEDULE OF QUANTITY ALL SOILS APPROVED WITH RESTRICTIONS SHALL BE SUBTRACTED FROM THE TOPSOIL STRIPPING (V).

12. F=(A+D-(Q1+R1+S1+T1))*SS+B WITH IEPA APPROVED GROUNDWATER ORDINANCE;
F=(A+D-(Q1+R1+S1+T1)-(M1+N1+O1+P1))*SS + B WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE

W=V-(Q2+R2+S2+T2) WITH IEPA APPROVED GROUNDWATER ORDINANCE;
W=V-(Q2+R2+S2+T2)-(M2+N2+O2+P2) WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE

13. NON-SPECIAL WASTE DISPOSAL, TYPE 1 CALCULATION MAY BE MODIFIED TO INCLUDE TYPE 1 SOIL APPROVED FOR REUSE DEPENDING ON CONTRACT STAGING. SEE NSW CALCULATIONS IN TABULAR FORM.

DISPOSAL

14. SOILS CLASSIFIED AS TYPE 1 THAT ARE NOT REUSED WITHIN THE PROJECT ARE DISPOSED OF AND PAID FOR AS NON-SPECIAL WASTE, TYPE 1. SOILS CLASSIFIED AS TYPE 2 THROUGH TYPE 4 THAT ARE NOT REUSED WITHIN THE PROJECT ARE DISPOSED OF AND PAID FOR AS EARTH EXCAVATION, UNSUITABLE MATERIAL, STRUCTURE EXCAVATION OR INCLUDED IN THE ASSOCIATED WORK ITEM.

15. ANY UNSUITABLE (GEOTECHNICALLY) TYPE 1 MATERIAL IS DISPOSED OF AS NON-SPECIAL WASTE, TYPE 1.

PAY ITEMS

16. KEEP ALL THE COLUMNS AND ROWS WITH PAY ITEMS. REPLACE ANY PAY ITEM NUMBERS SHOWN IN TABLES "NOT USED" IF THE PAY ITEM IS NOT INCLUDED IN THE CONTRACT. THE LOCATION WHERE THIS INSTANCE COULD OCCUR IS 1) COLUMN TITLES AND 2) BILL OF MATERIAL SUMMARY TABLE ROWS (I.E. ROCK EXCAVATION).

17. IF YOUR CONTRACT HAS MATERIAL SHOWN ON THE EARTHWORK SCHEDULE OF INCIDENTAL QUANTITIES TO BE USED FOR EMBANKMENT, THE VOLUME OF MATERIAL USED SHALL BE PAID AS FURNISHED EXCAVATION (20400800) OR FURNISHED EXCAVATION, SPECIAL (JI204005). THIS SHOULD BE EVALUATED ON A PROJECT SPECIFIC BASIS.

NOTES TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

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EARTHWORK SCHEDULE

VERSION:	STANDARD:	SHEET:
2024-03	M-RDY-407	1 OF 4

EARTHWORK SCHEDULE OF TOPSOIL QUANTITIES

LOCATION	EARTHWORK VOLUMES (CUYD)				ENVIRONMENTAL CLASSIFICATION (CUYD)													
	V	W (SEE NOTE 3, SHEET 1)	X	Y	I2	J2	K2	L2	M2	N2	O2	P2	Q2	R2	S2	T2	U2	EE2
	TOPSOIL STRIPPING	SUITABLE TOPSOIL	TOPSOIL PLACEMENT	TOPSOIL BALANCE Excess (+) or Shortage (-)	C: SOILS APPROVED FOR REUSE				B: SOILS APPROVED WITH RESTRICTIONS				A: SOILS NOT APPROVED FOR REUSE				HAZARDOUS WASTE	UNCLASSIFIED SOIL
					TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 1	TYPE 2	TYPE 3	TYPE 4	JT669020	
STAGE 1																		
400+00 to 500+00																		
500+00 to 600+00																		
RAMP A																		
RAMP C																		
STAGE 1 TOTAL																		
STAGE 2																		
400+00 to 500+00																		
500+00 to 600+00																		
RAMP A																		
RAMP C																		
STAGE 2 TOTAL																		
TOTAL																		

EARTHWORK SCHEDULE OF INCIDENTAL QUANTITIES

LOCATION	EARTHWORK VOLUMES (CUYD)				ENVIRONMENTAL CLASSIFICATION (CUYD)													
	Z	AA	BB	CC	I3	J3	K3	L3	M3	N3	O3	P3	Q3	R3	S3	T3	U3	EE3
	STORM SEWER TRENCH	ITS EXCAVATION	INCIDENTAL EXCAVATION (FILL IN TYPE)	INCIDENTAL EXCAVATION (FILL IN TYPE)	C: SOILS APPROVED FOR REUSE				B: SOILS APPROVED WITH RESTRICTIONS				A: SOILS NOT APPROVED FOR REUSE				HAZARDOUS WASTE	UNCLASSIFIED SOIL
					TYPE 1	TYPE 2*	TYPE 3*	TYPE 4*	TYPE 1	TYPE 2*	TYPE 3*	TYPE 4*	TYPE 1	TYPE 2*	TYPE 3*	TYPE 4*	JT669020	
STAGE 1																		
400+00 to 500+00																		
500+00 to 600+00																		
RAMP A																		
RAMP C																		
STAGE 1 TOTAL																		
STAGE 2																		
400+00 to 500+00																		
500+00 to 600+00																		
RAMP A																		
RAMP C																		
STAGE 2 TOTAL																		
TOTAL																		

*THIS EXCAVATION AND DISPOSAL IS NOT PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF THE ASSOCIATED WORK ITEM.

EARTHWORK SCHEDULE OF PERFORMANCE BASED RETAINING WALLS QUANTITIES

LOCATION	EARTHWORK VOLUMES (CUYD)	ENVIRONMENTAL CLASSIFICATION (CUYD)													
	DD	I4	J4	K4	L4	M4	N4	O4	P4	Q4	R4	S4	T4	U4	EE4
	RETAINING WALL EXCAVATION*	C: SOILS APPROVED FOR REUSE				B: SOILS APPROVED WITH RESTRICTIONS				A: SOILS NOT APPROVED FOR REUSE				HAZARDOUS WASTE	UNCLASSIFIED SOIL
		TYPE 1**	TYPE 2	TYPE 3	TYPE 4	TYPE 1**	TYPE 2	TYPE 3	TYPE 4	TYPE 1**	TYPE 2	TYPE 3	TYPE 4	JT669020	
STAGE 1															
400+00 to 500+00															
500+00 to 600+00															
RAMP A															
RAMP C															
STAGE 1 TOTAL															
STAGE 2															
400+00 to 500+00															
500+00 to 600+00															
RAMP A															
RAMP C															
STAGE 2 TOTAL															
TOTAL															

*EXCAVATION FOR PERFORMANCE BASED RETAINING WALL IS NOT PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF THE WALL. (SEE STRUCTURAL EX FOR OTHER WALLS UNLESS OTHERWISE SPECIFIED)

**SOIL FOR PERFORMANCE BASED RETAINING WALLS THAT CANNOT BE REUSED AND CLASSIFIED AS TYPE 1 SHALL BE PAID AS NON-SPECIAL WASTE DISPOSAL, TYPE 1.

BILL OF MATERIAL SUMMARY TABLE

PAY ITEM NO.	DESIGNATION	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	TOTAL	UNITS	NOTES
20200100	EARTH EXCAVATION							CUYD	COLUMN A TOTAL, SEE SHEET 1
20200200	ROCK EXCAVATION							CUYD	COLUMN B TOTAL, SEE SHEET 1
20400800	FURNISHED EXCAVATION							CUYD	WHEN H<0 THEN H, ELSE 0
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL							CUYD	COLUMN C TOTAL, SEE SHEET 1
50200100	STRUCTURE EXCAVATION							CUYD	COLUMN D TOTAL, SEE SHEET 1
JI211110	TOPSOIL EXCAVATION AND PLACEMENT							CUYD	WHEN X<W, THEN X OR WHEN X>W, THEN W
JI211112	TOPSOIL EXCAVATION AND DISPOSAL							CUYD	W-X
JI211126	TOPSOIL FURNISH AND PLACE, 6"							SQYD	WHEN X>W, THEN (X-W)/THICKNESS IN YARDS
JT202009	NON-SPECIAL WASTE DISPOSAL, TYPE 1							CUYD	COLUMN 11 TOTAL, SEE NSW DISPOSAL, TYPE 1 SHEET
JT669020	HAZARDOUS WASTE DISPOSAL							CUYD	U1+U2+U3+U4
*	UNCLASSIFIED SOIL							CUYD	EE1+EE2+EE3+EE4

* QUANTITY IS PROVIDED FOR REFERENCE ONLY. IF THE CONTRACTOR CHOOSES TO TEST THIS MATERIAL, A CONTRACT ALLOWANCE JT202007 WILL BE USED PER TOLLWAY SP FOR "ALLOWANCE FOR TESTING UNCLASSIFIED SCIL".

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EARTHWORK SCHEDULE

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NON SPECIAL WASTE (NSW) DISPOSAL, TYPE 1											
LOCATION	EARTHWORK + INCIDENTAL (STEP 1)				TOPSOIL (STEP 2)				STEP 3 (STEP 1 + STEP 2)		
	WITH IEPA APPROVED GROUNDWATER ORDINANCE		WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE		WITH IEPA APPROVED GROUNDWATER ORDINANCE		WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE		WITH IEPA APPROVED GROUNDWATER ORDINACE	WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE	TOTAL NSW DISPOSAL, TYPE 1 (JT202009)
	1	2	3	4	5	6	7	8	9	10	11
STAGE 1											
400+00 to 500+00											
500+00 to 600+00											
RAMP A											
RAMP C											
STAGE 1 TOTAL											
STAGE 2											
400+00 to 500+00											
500+00 to 600+00											
RAMP A											
RAMP C											
STAGE 2 TOTAL											
TOTAL											

NOTES:

THESE NOTES TO DESIGNER AS SHOWN BELOW ARE TO CLARIFY THE CALCULATIONS OF JT202009 NON-SPECIAL WASTE DISPOSAL, TYPE 1.
EVALUATE IEPA APPROVED GROUNDWATER ORDINANCE IN THE MUNICIPALITIES WITHIN THE PROJECT LIMITS. UTILIZE THE EQUATIONS BELOW BASED ON THE IEPA APPROVED GROUNDWATER ORDINANCE AS APPLICABLE.
ADD RETAINING WALL QUANTITIES WHEN APPLICABLE TO THE FOLLOWING EQUATIONS.

STEP 1 – EARTHWORK AND INCIDENTAL NON-SPECIAL WASTE DISPOSAL, TYPE 1 CALCULATIONS

With IEPA Approved groundwater ordinance
If the sum of Type 1 approved (I1) and approved with restriction (M1) adjusted for shrinkage is:

Greater than embankment (G) quantity, then
Non Special Waste Disposal, Type 1 = [{(I1+M1)*SS-G)}/SS] + Q1+I3+Q3+M3 (Column 1)

Less than embankment (G) quantity, then
Non Special Waste Disposal, Type 1 = Q1+I3+Q3+M3 (Column 2)

Without IEPA Approved groundwater ordinance
If Type 1 approved (I1) adjusted for shrinkage is:

Greater than embankment (G) quantity, then
Non Special Waste Disposal, Type 1 = [{(I1)*SS-G)}/SS] + Q1+M1+I3+Q3+M3 (Column 3)

Less than embankment (G) quantity, then
Non Special Waste Disposal, Type 1 = Q1+M1+ I3+Q3+M3 (Column 4)

STEP 2 – TOPSOIL NON-SPECIAL WASTE DISPOSAL, TYPE 1 CALCULATIONS

With IEPA Approved groundwater ordinance
If the sum of Type 1 approved (I2) and approved with restriction (M2) is:

Greater than Topsoil Placement (X) quantity, then
Non Special Waste Disposal, Type 1 = (I2+M2)-X) + Q2 (column 5)

Less than Topsoil Placement (X) quantity, then
Non Special Waste Disposal, Type 1 = Q2 (Column 6)

Without IEPA Approved Groundwater Ordinance
If Type 1 approved (I2) is:

Greater than Topsoil Placement (X) quantity, then
Non Special Waste Disposal, Type 1 = (I2)-X + Q2+M2 (Column 7)

Less than Topsoil Placement (X) quantity, then
Non Special Waste Disposal, Type 1 = Q2+M2 (Column 8)

STEP 3 – SUM OF ALL NON-SPECIAL WASTE DISPOSAL, TYPE 1 QUANTITIES

With IEPA Approved Groundwater Ordinance
NON-SPECIAL WASTE DISPOSAL, TYPE 1 = EARTHWORK AND INCIDENTAL WITH IEPA APPROVED GROUNDWATER ORDINANCE + TOPSOIL WITH IEPA APPROVED GROUNDWATER ORDINANCE (Column 9)

Without IEPA Approved Groundwater Ordinance
NON-SPECIAL WASTE DISPOSAL, TYPE 1 = EARTHWORK AND INCIDENTAL WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE + TOPSOIL WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE (Column 10)

Total NSW Disposal, Type 1 = NON-SPECIAL WASTE DISPOSAL, TYPE 1 = Column 9 + Column 10

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EARTHWORK SCHEDULE

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GUARDRAIL SCHEDULE																	
STATION FROM	STATION TO	OFFSET	APPROACH TERMINAL			GUARDRAIL TYPE						DEPARTURE TERMINAL			REFLECTORS/MARKERS	
			TRAFFIC BARRIER TERMINAL TYPE T1 (SPECIAL) TANGENT	TRAFFIC BARRIER TERMINAL TYPE T1-A (SPECIAL)	TRAFFIC BARRIER TERMINAL TYPE T10	GALVANIZED STEEL PLATE BEAM GUARDRAIL TYPE A, 6 FOOT POSTS	GALVANIZED STEEL PLATE BEAM GUARDRAIL TYPE A, 9 FOOT POSTS	GALVANIZED STEEL PLATE BEAM GUARDRAIL TYPE B, 6 FOOT POSTS	GALVANIZED STEEL PLATE BEAM GUARDRAIL TYPE B, 9 FOOT POSTS	GALVANIZED STEEL PLATE BEAM GUARDRAIL TYPE C, 6 FOOT POSTS	GALVANIZED STEEL PLATE BEAM GUARDRAIL TYPE C, 9 FOOT POSTS	TRAFFIC BARRIER TERMINAL TYPE T2	TRAFFIC BARRIER TERMINAL TYPE T6	TRAFFIC BARRIER TERMINAL TYPE T6B	GUARDRAIL BARRIER REFLECTORS, TYPE B	TERMINAL MARKER - DIRECT APPLIED
			JI631110	JI631112	JS631140	JS630002	JS630004	JS630007	JS630009	JS630012	JS630014	JS631120	JS631130	JS631135	JS782014	JS725000
			EACH	EACH	EACH	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH
1000+00.00	1002+00.00	RT	1			200.0						1				
1005+00.00	1008+37.50	RT	1			300.0		12.5		25.0			1			
1010+00.00	1011+50.00	RT		1			150.0						1			
1012+00.00	1017+00.00	RT			1	350.0		62.5		87.5			1			
1020+00.00	1022+87.50	RT		1			187.5		75.0		25.0			1		
TOTAL			2	2	1	850	337.5	75	75	112.5	25	1	3	1	0	0

NOTES TO DESIGNER

NO DRAINAGE STRUCTURES SHALL BE INSTALLED WITHIN THE GUARDRAIL TERMINAL LIMITS. THIS INCLUDES CATCH BASINS, SLOPE DRAIN INLETS, CONCRETE FLUMES AND CURB/GUTTER OUTLETS.

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GUARDRAIL SCHEDULE

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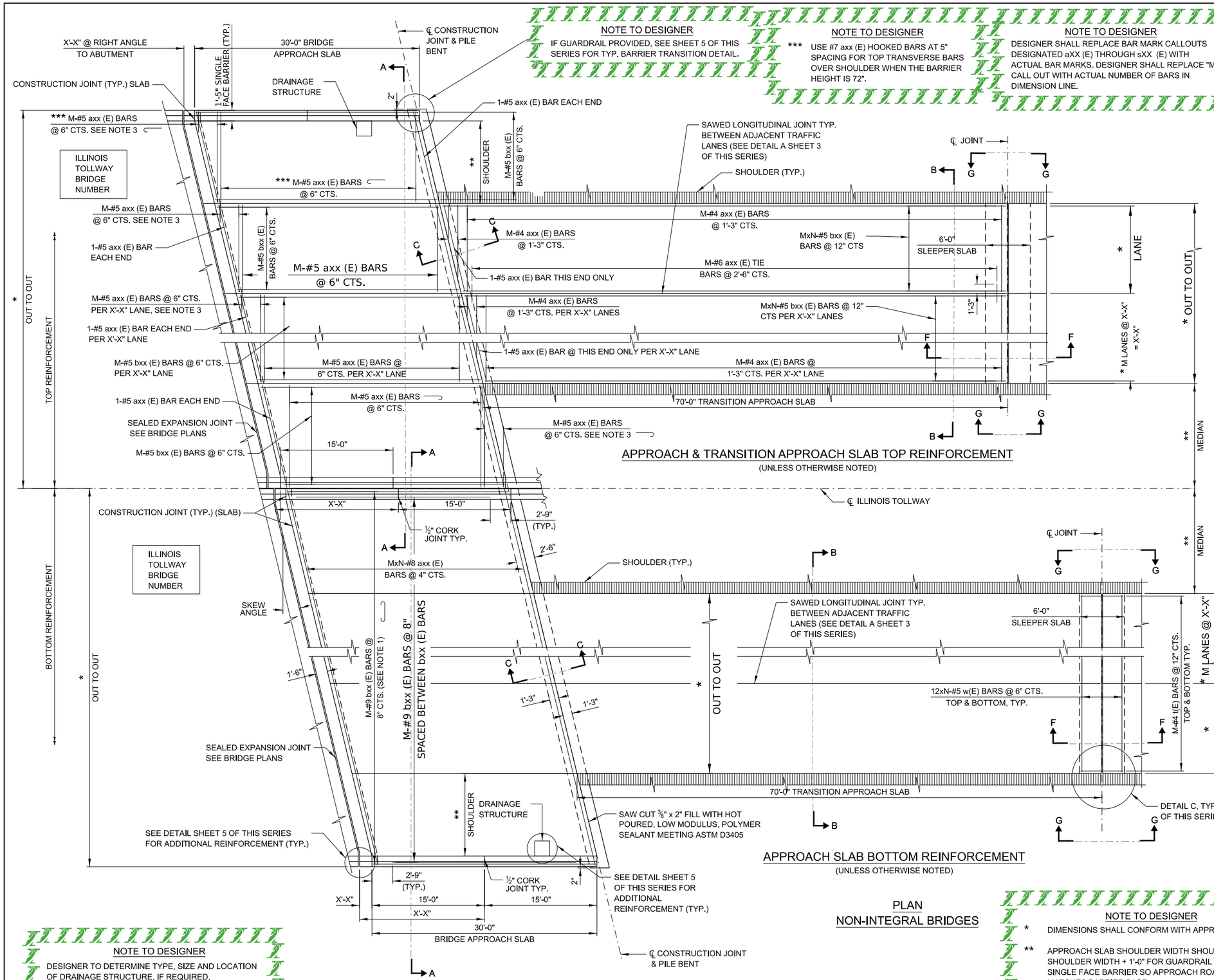

APPROACH & TRANSITION APPROACH SLAB TOP REINFORCEMENT
(UNLESS OTHERWISE NOTED)

APPROACH SLAB BOTTOM REINFORCEMENT
(UNLESS OTHERWISE NOTED)

PLAN
NON-INTEGRAL BRIDGES

NOTE TO DESIGNER

IF GUARDRAIL PROVIDED, SEE SHEET 5 OF THIS SERIES FOR TYP. BARRIER TRANSITION DETAIL.

NOTE TO DESIGNER

*** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED aXX (E) THROUGH sXX (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTES:

1. TILT HOOK OF #9 BARS FOR MINIMUM 2¼" CLEARANCE.
2. USE 2'-8" MIN. LAP FOR #4 BARS. USE 4-0" MIN. LAP FOR #5 BARS. USE 5'-6" MIN. LAP FOR #6 BARS. USE 7'-10" MIN. FOR #8 BARS.
3. CUT REINFORCEMENT IN THE FIELD TO FIT THE SKEW AND USE REMAINDER IN OPPOSITE END. PAINT EXPOSED ENDS WITH EPOXY PAINT.
4. FOR SECTIONS A-A AND B-B SEE SHEET 3 OF THIS SERIES; FOR SECTIONS C-C, D-D, E-E, F-F AND VIEWS E'-E' AND G-G SEE SHEET 4 OF THIS SERIES; AND FOR SECTIONS H-H AND M-M SEE SHEET 5 OF THIS SERIES.
5. PROTECTIVE COAT SHALL BE APPLIED TO TOP AND TRAFFIC FACES OF BARRIERS.
6. TOOL EDGES OF EXPANSION JOINTS TO ¼" RADIUS.
7. EXPOSED CONCRETE EDGES SHALL HAVE ¾" x 45° CHAMFERS. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW GROUND LEVEL.
8. CONCRETE BARRIERS SHALL BE CONSTRUCTED & PAID FOR IN ACCORDANCE WITH SECTIONS 503 AND 508 OF THE IDOT STANDARD SPECIFICATIONS.
9. IN THE CORNERS OF THE BENT WHEN APPROACH GUARDRAIL IS PROVIDED. THE BENT CORNER SHALL BE BLOCKED OUT AND THE REINFORCEMENT STEEL SHALL BE RESPACED (OR CUT) FOR GUARDRAIL POSTS, DRAINAGE STRUCTURES, NOISE ABATEMENT WALLS, ETC. AS NECESSARY AND AS APPROVED BY THE ENGINEER.
10. IN REFERENCE TO LONGITUDINAL CONSTRUCTION JOINTS ON SHEET 3 OF THIS SERIES; THESE BARS SHALL BE CUT TO FIT FROM LENGTHS SHOWN IN THE REINFORCEMENT BAR SCHEDULE FOR THE CONSTRUCTION JOINT. THESE BARS MAY BE REPLACED BY ALTERNATIVE BARS AND LENGTHS AS SHOWN IN THE DESIGN PLANS. PAINT EXPOSED ENDS WITH EPOXY PAINT.
11. EXPANSION ANCHORS AND DRILLED AND GROUTED DOWELS SHALL CONFORM TO SECTION 1006 OF THE IDOT STANDARD SPECIFICATIONS.
12. AS APPROVED BY THE ENGINEER, THE CONTRACTOR MAY ELECT TO REDUCE THE WIDTHS OF THE POUR BY USE OF THE OPTIONAL LONGITUDINAL CONSTRUCTION JOINT SHOWN. JOINTS SHALL BE LOCATED AT THE EDGE OF A TRAFFIC LANE.

NOTE TO DESIGNER

TRANSITION APPROACH SLAB SHALL REQUIRE SPECIAL DESIGN IF ADJACENT ROADWAY PAVEMENT IS CONTINUOUSLY REINFORCED CONCRETE (CRC.)

NOTE TO DESIGNER

DESIGNER TO DETERMINE TYPE, SIZE AND LOCATION OF DRAINAGE STRUCTURE, IF REQUIRED.

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH + 1'-0" FOR GUARDRAIL OR + 2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

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APPROACH SLAB, MAINLINE

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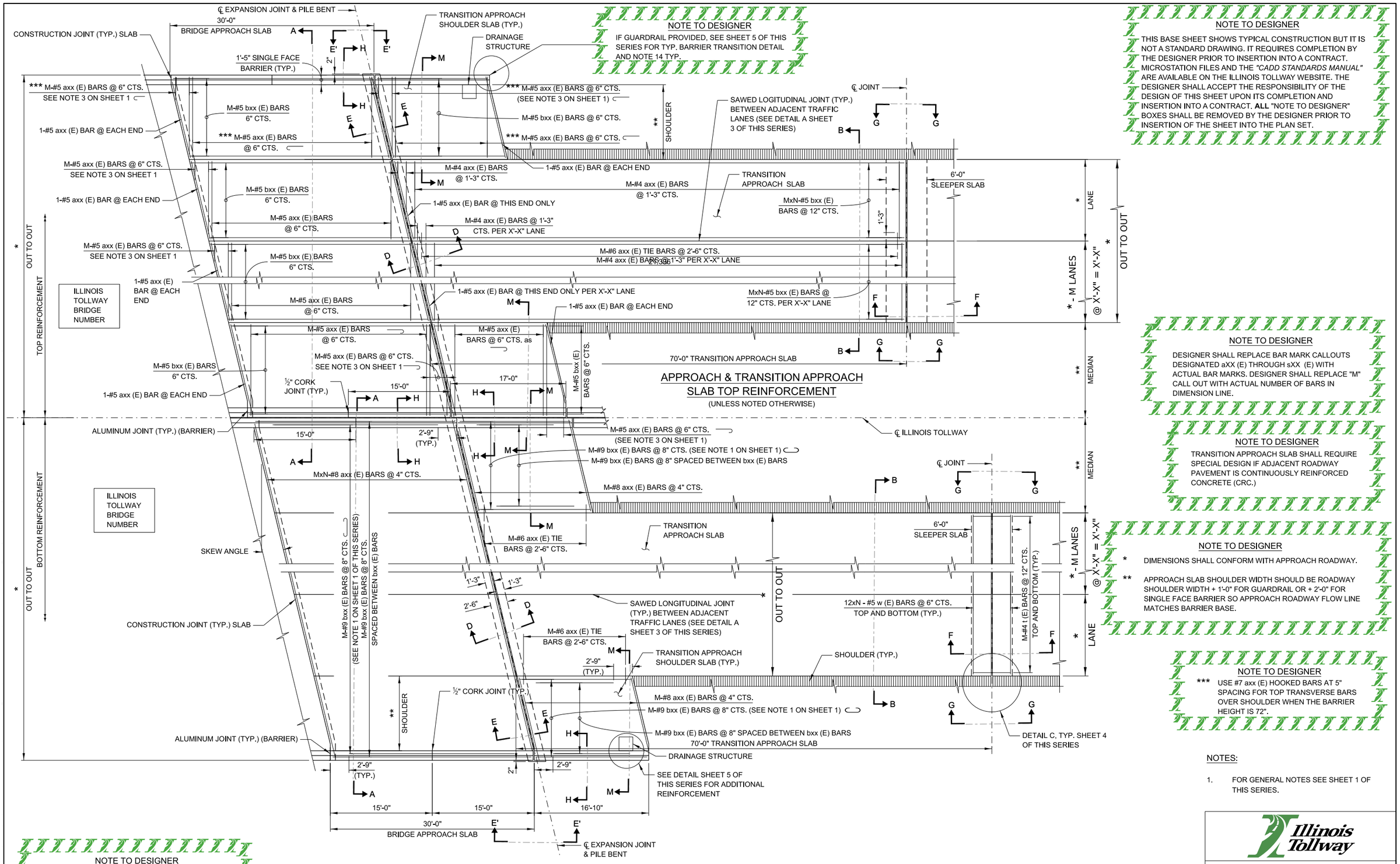

APPROACH & TRANSITION APPROACH SLAB TOP REINFORCEMENT

(UNLESS NOTED OTHERWISE)

APPROACH SLAB BOTTOM REINFORCEMENT

(UNLESS NOTED OTHERWISE)

PLAN (INTEGRAL OR SEMI-INTEGRAL ABUTMENTS)

NOTE TO DESIGNER

IF GUARDRAIL PROVIDED, SEE SHEET 5 OF THIS SERIES FOR TYP. BARRIER TRANSITION DETAIL AND NOTE 14 TYP.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED aXX (E) THROUGH sXX (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

NOTE TO DESIGNER

TRANSITION APPROACH SLAB SHALL REQUIRE SPECIAL DESIGN IF ADJACENT ROADWAY PAVEMENT IS CONTINUOUSLY REINFORCED CONCRETE (CRC.)

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH + 1'-0" FOR GUARDRAIL OR + 2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

NOTE TO DESIGNER

*** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".

NOTE TO DESIGNER

DESIGNER TO DETERMINE TYPE, SIZE AND LOCATION OF DRAINAGE STRUCTURE, IF REQUIRED.

NOTES:

1. FOR GENERAL NOTES SEE SHEET 1 OF THIS SERIES.

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APPROACH SLAB, MAINLINE

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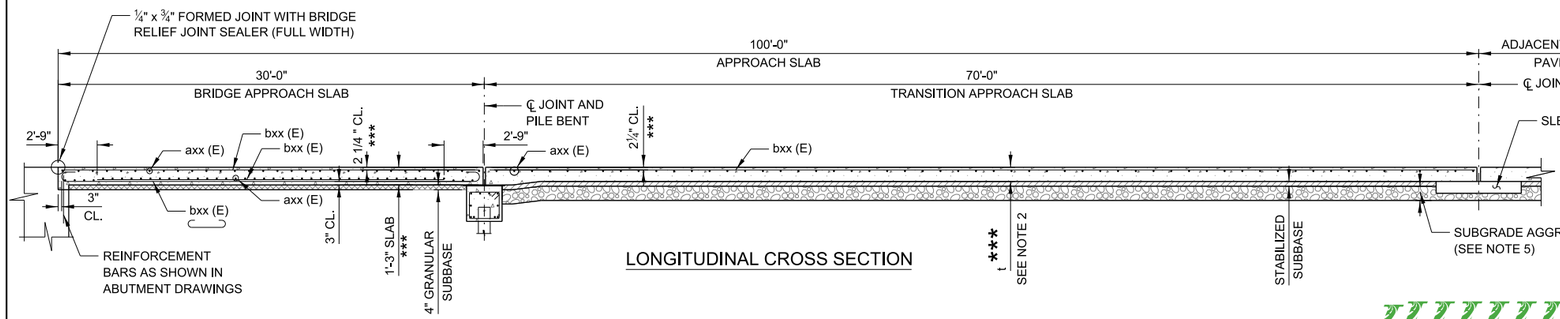


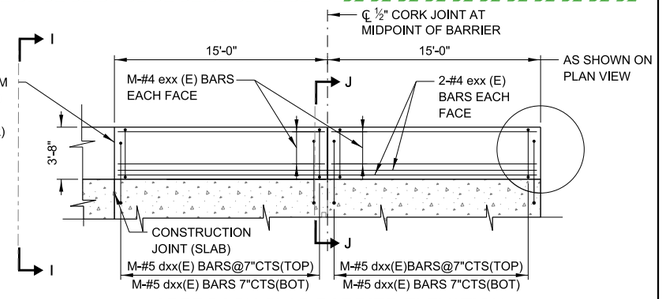
LONGITUDINAL CROSS SECTION

NOTE TO DESIGNER

REPLACE BARRIER REINFORCEMENT AND DETAILS IF THE BARRIER TYPE IS DIFFERENT. TYP. OTHER SHEETS.

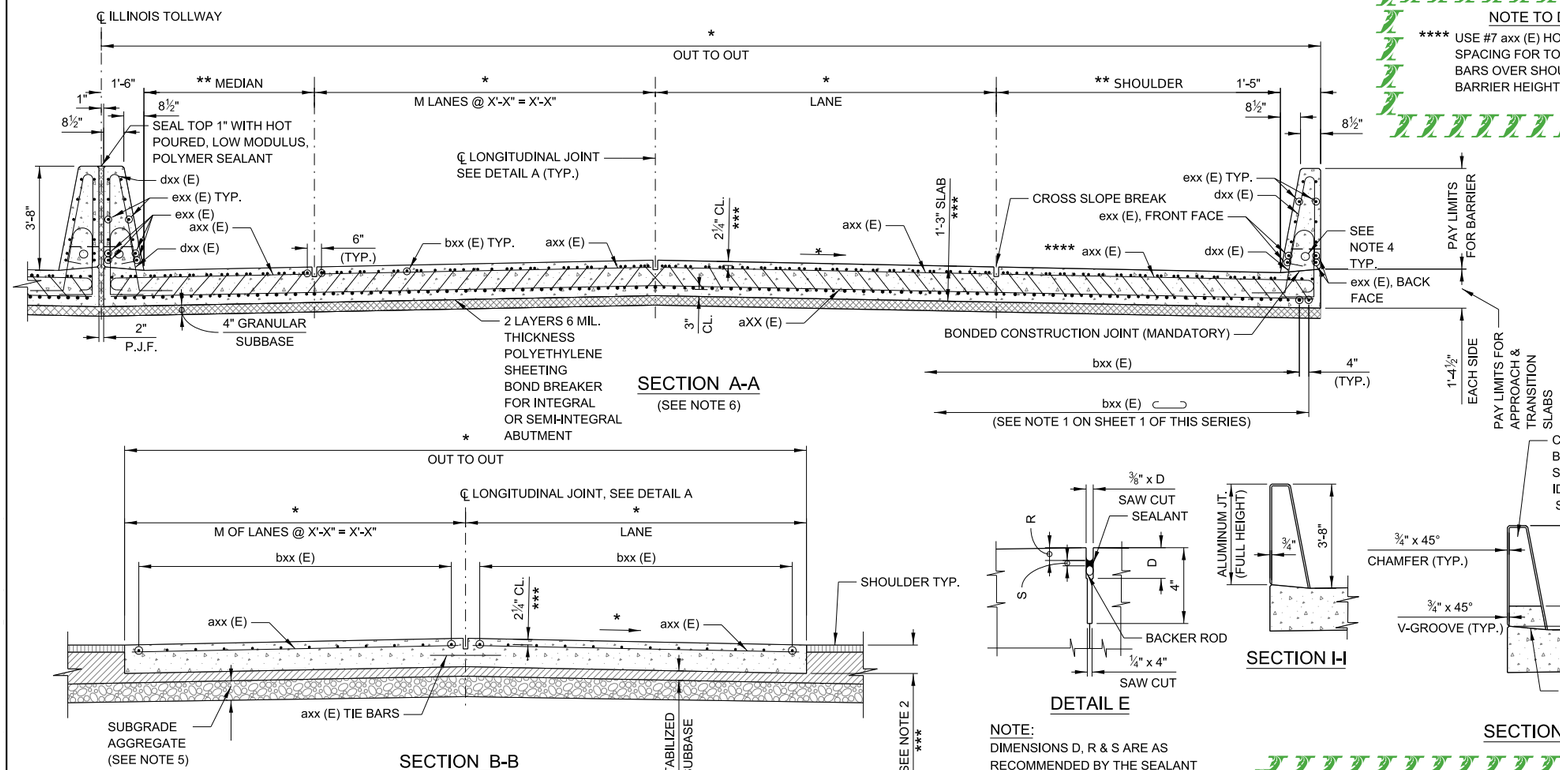
NOTE TO DESIGNER

IF GUARDRAIL PROVIDED, SEE SHEET 5 OF THIS SERIES FOR TYPICAL BARRIER TRANSITION DETAIL



APPROACH SLAB BARRIER ELEVATION

(INTEGRAL OR SEMI-INTEGRAL)

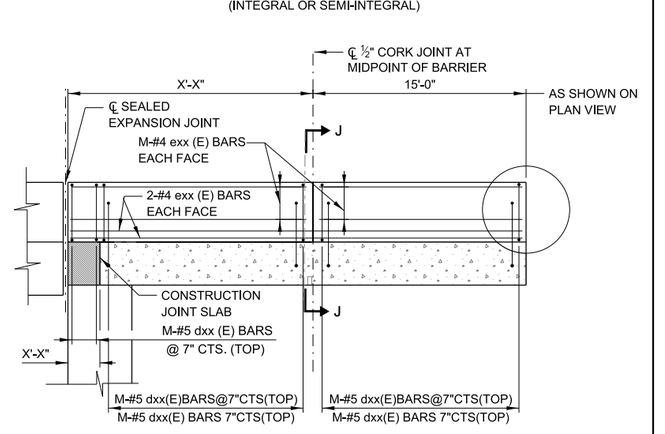


SECTION A-A

(SEE NOTE 6)

NOTE TO DESIGNER

**** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".



APPROACH SLAB BARRIER ELEVATION

(NON-INTEGRAL)

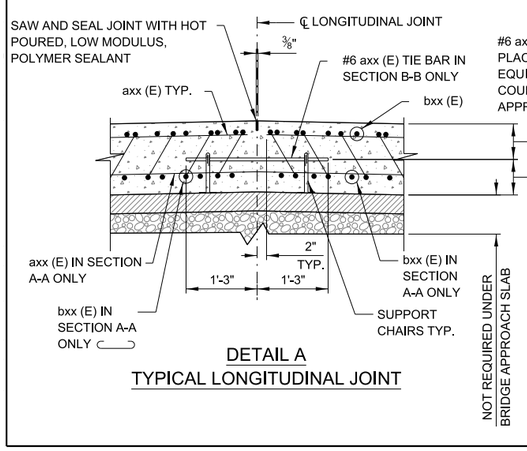
SECTION B-B

DETAIL E

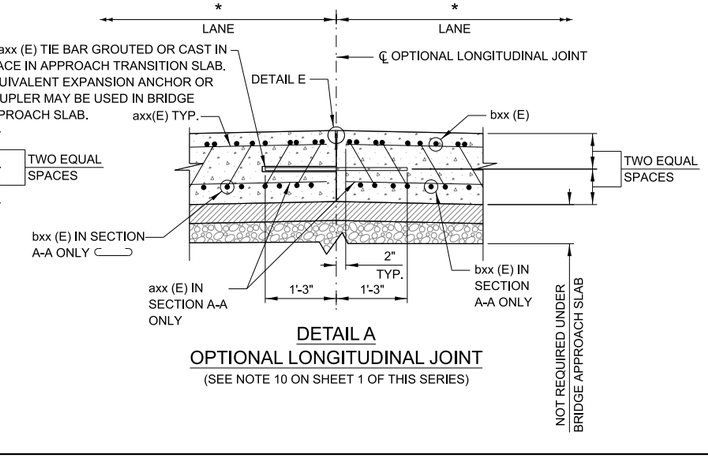
NOTE:
DIMENSIONS D, R & S ARE AS RECOMMENDED BY THE SEALANT MANUFACTURER.

SECTION I-I

SECTION J-J



DETAIL A
TYPICAL LONGITUDINAL JOINT



DETAIL A
OPTIONAL LONGITUDINAL JOINT

(SEE NOTE 10 ON SHEET 1 OF THIS SERIES)

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH +1'-0" FOR GUARDRAIL OR +2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

*** INCREASE BY ¼" FOR SMOOTHNESS GRINDING

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "*CADD STANDARDS MANUAL*" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

DESIGNER SHALL REPLACE BAR CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER IN DIMENSION LINE.

NOTES:

1. SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES.
2. THE DIMENSION t IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
3. INTEGRAL ABUTMENT JOINT SHOWN NON-INTERGRAL ABUTMENT JOINT SIMILAR. SEE SHEET 4 OF THIS SERIES.
4. COORDINATE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.
5. THE THICKNESS OF THE STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT SECTIONS.
6. IF THE CONTRACTOR ELECTS TO SLIPFORM THE PARAPET THEN THE PARAPET CROSS-SECTIONAL AREA, PARAPET REINFORCEMENT BARS CLEARANCES AND THE APPROACH SLAB REINFORCEMENT BARS SHALL BE REVISED ACCORDINGLY TO ACCOUNT FOR THE ADDITIONAL SLAB WIDTH TO ALLOW SLIPFORM.
7. THE ⅛" ALUMINUM SHEET SHALL BE ASTM B 209 ALLOY 3003-H14 AND COATED TO MINIMIZE REACTION WITH WET CONCRETE.

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APPROACH SLAB, MAINLINE

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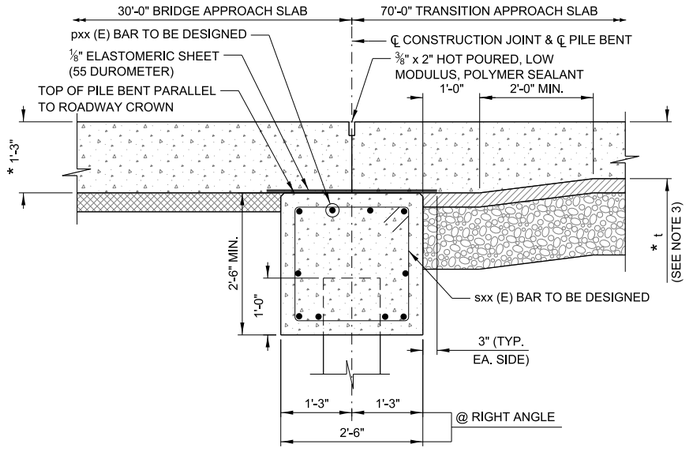
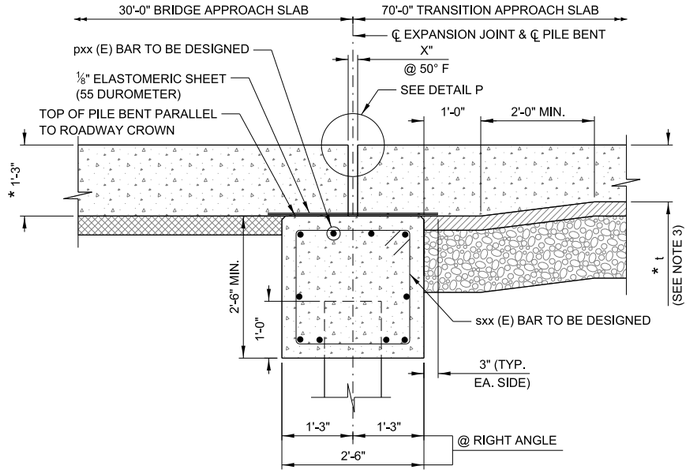
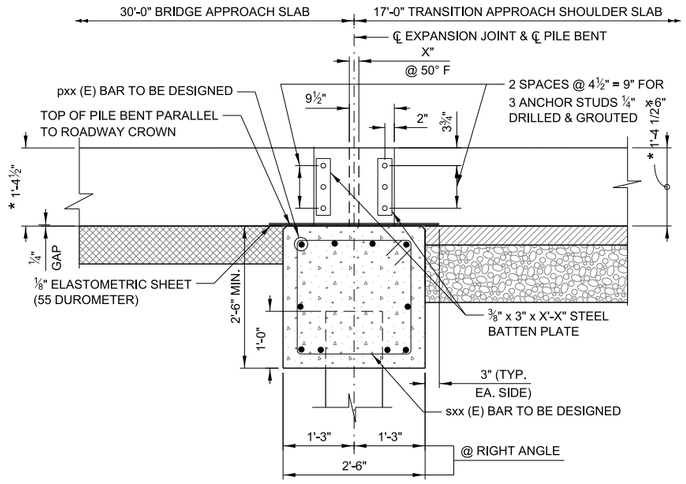


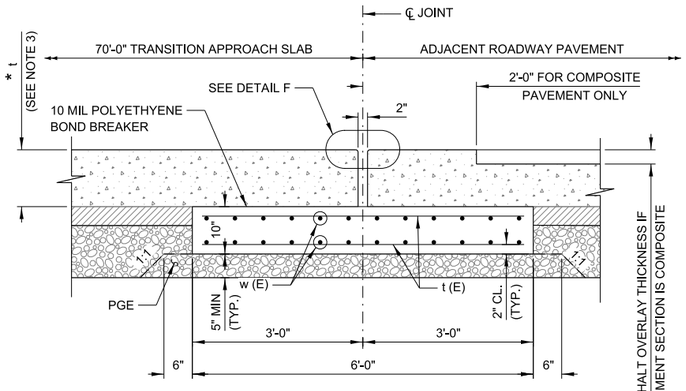
SECTION C-C
FOR NON-INTEGRAL ABUTMENT



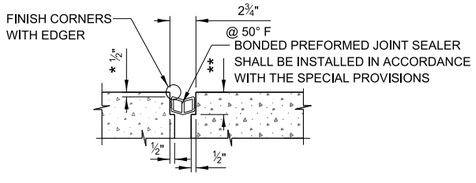
SECTION D-D
FOR INTEGRAL & SEMI-INTEGRAL ABUTMENT



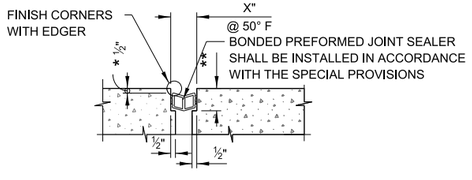
SECTION E'-E'
END ELEVATION OF EXPANSION JOINT



SECTION F-F



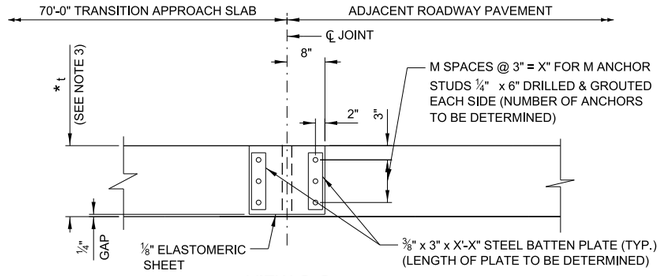
DETAIL F
TRANSITION JOINT
** PER MANUFACTURER'S RECOMMENDATIONS



DETAIL P
APPROACH & TRANSITION JOINT

NOTE TO DESIGNER

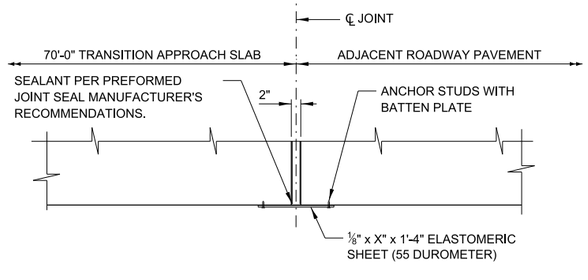
DESIGNER SHALL PROVIDE JOINT SIZE AND OPENING CONSISTENT WITH BRIDGE AND APPROACH CONTRIBUTING LENGTH. DESIGNER TO DETERMINE NUMBER OF ANCHORS AND SIZE OF BATTEN PLATE



VIEW G-G
END ELEVATION OF JOINT

NOTE TO DESIGNER

* INCREASE BY ¼" FOR SMOOTHNESS GRINDING



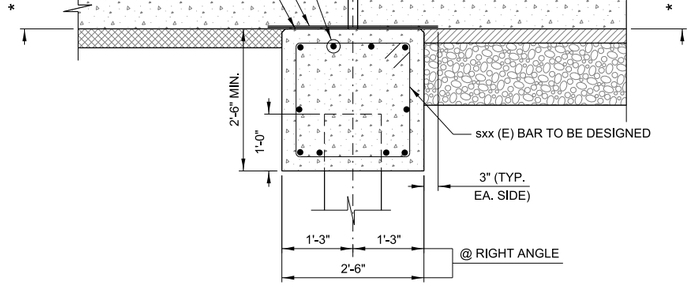
DETAIL C
END PLAN OF JOINT

LEGEND

- CONCRETE
- STABILIZED SUBBASE
- SUBGRADE AGGREGATE
- GRANULAR SUBBASE
- COMPACTED EARTH

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED aXX (E) THROUGH sXX (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.



SECTION E-E

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTES:

1. IN SECTION E'-E' AND VIEW G-G, ANCHOR STUDS SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 1006.09 OF THE STANDARD SPECIFICATIONS. STEEL PLATES, ANCHOR STUDS, NUTS AND WASHERS SHALL BE GALVANIZED.
2. THE THICKNESSES OF STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT SECTIONS.
3. THE DIMENSION t IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
4. FOR PILE BENT DETAILS AND QUANTITIES SEE SHEET XX.
5. FOR GENERAL NOTES SEE SHEET 1 OF THIS SERIES.

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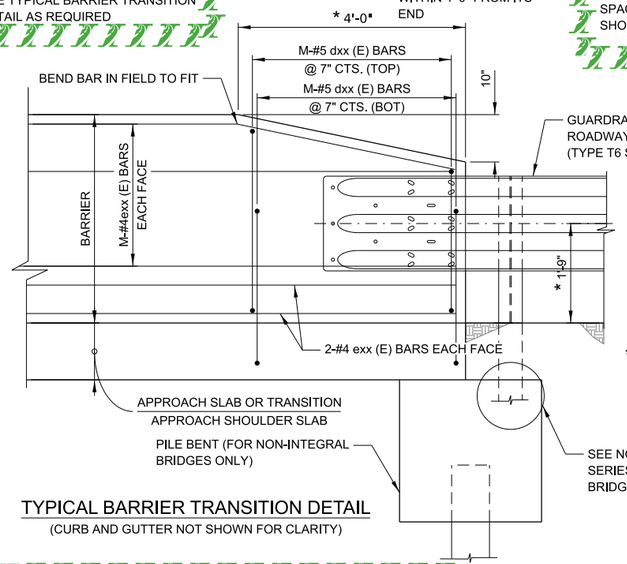
NOTE TO DESIGNER

USE TYPICAL BARRIER TRANSITION DETAIL AS REQUIRED

* NO ATTACHMENTS ARE ALLOWED ON THE BACK SIDE OF BARRIER WITHIN 4'-0" FROM ITS END



TYPICAL BARRIER TRANSITION DETAIL

(CURB AND GUTTER NOT SHOWN FOR CLARITY)

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH + 1'-0" FOR GUARDRAIL OR + 2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED aXX (E) THROUGH sXX (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

NOTE TO DESIGNER

QUANTITIES FOR BRIDGE DECK GROOVING SHALL INCLUDE BOTH TRANSITION AND APPROACH SLABS. LIMITS ARE TRAVEL LANES ONLY.

NOTE TO DESIGNER

QUANTITIES FOR DIAMOND GRINDING, IF APPLICABLE, INCLUDE TRANSITION, TRANSITION APPROACH SHOULDER, AND APPROACH SLAB. LIMITS ARE THE FULL WIDTH LESS 2FT AT EACH PARAPET.

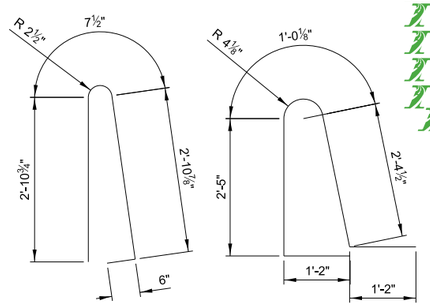
NOTE TO DESIGNER

*** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".

NOTE TO DESIGNER

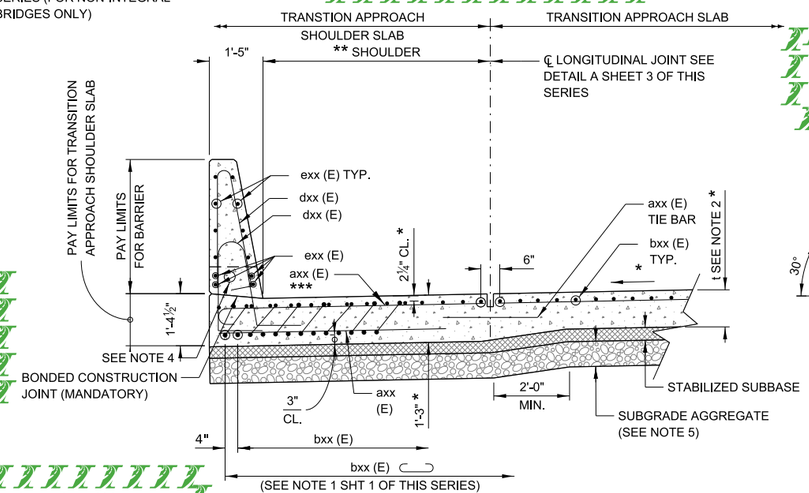
BARS dxx (E) SHOWN IN THIS SHEET ARE APPLICABLE FOR 44" BARRIERS ONLY. UPDATE BASED ON BARRIER TYPE.

** MEASURED AT A POINT 1'-0" FROM FACE OF RAIL, OR FROM EDGE OF SHOULDER/EDGE OF GUTTER WHEN EDGE IS MORE THAN 1'-0" TO FACE OF RAIL



NOTE TO DESIGNER

* INCREASE BY ¼" FOR SMOOTHNESS GRINDING

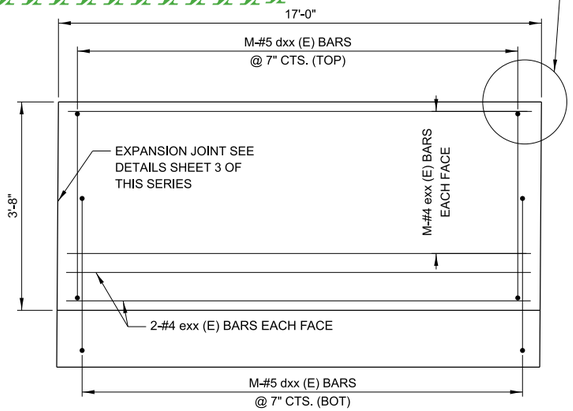


SECTION M-M

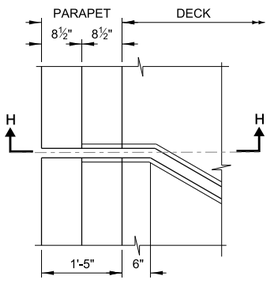
(SEE NOTE 6)

NOTE TO DESIGNER

IF GUARDRAIL PROVIDED, SEE TYP. BARRIER TRANSITION DETAIL

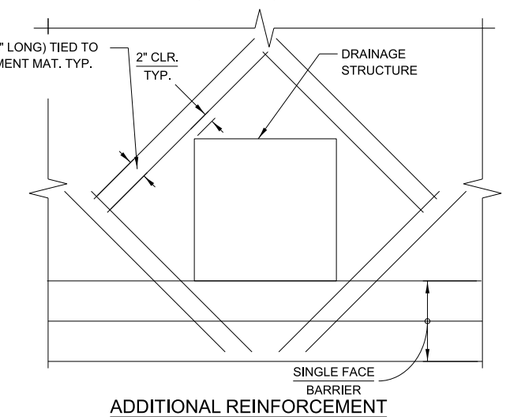


TRANSITION APPROACH SHOULDER SLAB BARRIER ELEVATION



PLAN OF JOINT AT BARRIER

(FOR SKEWS GREATER THAN OR EQUAL TO 10 DEGREES)

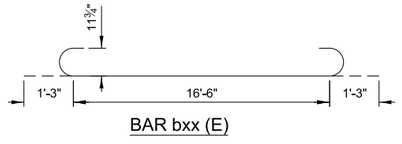


ADDITIONAL REINFORCEMENT AT DRAINAGE STRUCTURES

CUT TRANSVERSE axx (E) BARS AND LONGITUDINAL bxx (E) BARS IN SLAB TO CLEAR DRAINAGE STRUCTURE. RESPACE dxx (E) BARS TO MISS DRAINAGE STRUCTURE.

NOTE TO DESIGNER

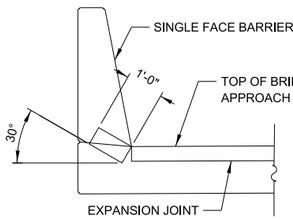
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.



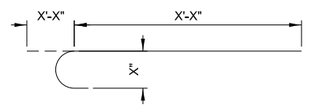
NOTE TO DESIGNER

**** ADD PAY ITEM FOR OTHER JOINT SIZES AS APPLICABLE

***** SELECT APPLICABLE PAY ITEM TO MATCH THE BRIDGE



SECTION H-H



NOTE:

1. THE AREA OF EACH BRIDGE APPROACH SLAB, TRANSITION APPROACH SLAB AND TRANSITION APPROACH SHOULDER SLAB WILL BE MEASURED IN PLACE AND COMPUTED IN SQUARE YARDS. SEE SPECIAL PROVISIONS FOR OTHER WORK THAT IS INCLUDED IN THE COST OF THIS ITEM.
2. THE DIMENSION t IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
3. FOR GENERAL NOTES SEE SHEET 1 OF THIS SERIES.
4. COORDINATE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.
5. THE THICKNESS OF THE STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT SECTIONS.
6. IF THE CONTRACTOR ELECTS TO SLIPFORM THE PARAPET THEN THE PARAPET CROSS-SECTIONAL AREA, PARAPET REINFORCEMENT BARS CLEARANCES AND THE APPROACH SLAB REINFORCEMENT BARS SHALL BE REVISED ACCORDINGLY TO ACCOUNT FOR THE ADDITIONAL SLAB WIDTH TO ALLOW SLIPFORM.

BILL OF MATERIAL FOR APPROACH AND TRANSITION SLABS

BAR	NO.	SIZE	LENGTH	SHAPE
axx (E)				
axx (E)				
bxx (E)		#9	32'-0"	
bxx (E)		#9	19'-0"	
bxx (E)		#9		
dxx (E)		#5	8'-2"	
t(E)		#4	5'-8"	
w(E)		#5		

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
50300260	BRIDGE DECK GROOVING	SQ. YD.	
50300300	PROTECTIVE COAT	SQ. YD.	
JI420040	BRIDGE APPROACH SLAB	SQ. YD.	
JI420041	TRANSITION APPROACH SLAB	SQ. YD.	
JI420046	TRANSITION APPROACH SHOULDER SLAB	SQ. YD.	
JS503160	DIAMOND GRINDING AND SURFACE SMOOTHNESS FOR BRIDGE SECTIONS	SQ. YD.	
JT421510	SLEEPER SLAB	SQ. YD.	
JT525130 ****	BONDED PREFORMED JOINT SEAL, 3 IN.	FT.	
X5030250 *****	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ. YD.	
*	REINFORCEMENT BARS, EPOXY COATED	LBS.	

* FOR INFORMATION ONLY

BILL OF MATERIAL FOR BARRIERS

BAR	NO.	SIZE	LENGTH	SHAPE
dxx (E)		#5	7'-0"	
exx (E)				

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	
50300300	PROTECTIVE COAT	SQ. YD.	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	

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NOTE TO DESIGNER

IF GUARDRAIL PROVIDED, SEE SHEET 5 OF THIS SERIES FOR TYP. BARRIER TRANSITION DETAIL AND NOTE 14 TYP.

NOTES:

1. TILT HOOK OF #9 BARS FOR MINIMUM 2¼" CLEARANCE.
2. USE 2'-8" MIN. LAP FOR #4 BARS, USE 4'-0" MIN. LAP FOR #5 BARS, USE 5'-6" MIN. LAP FOR #6 BARS, USE 7'-10" MIN. FOR #8 BARS.
3. CUT REINFORCEMENT IN THE FIELD TO FIT THE SKEW AND USE REMAINDER IN OPPOSITE END. PAINT EXPOSED ENDS WITH EPOXY PAINT.
4. FOR SECTIONS A-A AND B-B SEE SHEET 3 OF 5; FOR SECTIONS C-C, D-D, E-E, F-F AND VIEWS E'-E' AND G-G SEE SHEET 4; AND FOR SECTIONS H-H AND M-M SEE SHEET 5.
5. PROTECTIVE COAT SHALL BE APPLIED TO THE TOP OF APPROACH SLAB, TRANSITION SLAB, TRANSITION SHOULDER SLAB, AND TOP AND TRAFFIC FACES OF BARRIERS.
6. TOOL EDGES OF EXPANSION JOINTS TO ¼" RADIUS.
7. EXPOSED CONCRETE EDGES SHALL HAVE ¾" x 45° CHAMFERS. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW GROUND LEVEL.
8. CONCRETE BARRIERS SHALL BE CONSTRUCTED & PAID FOR IN ACCORDANCE WITH SECTIONS 503 AND 508 OF THE STANDARD SPECIFICATIONS.
9. IN THE CORNERS OF THE APPROACH SLAB BENT WHEN APPROACH GUARDRAIL IS PROVIDED, THE BENT CORNER SHALL BE BLOCKED OUT AND THE REINFORCEMENT STEEL SHALL BE RESPACED (OR CUT) FOR GUARDRAIL POSTS, DRAINAGE STRUCTURES, NOISE ABATEMENT WALLS, ETC. AS NECESSARY AND AS APPROVED BY THE ENGINEER.
10. IN REFERENCE TO LONGITUDINAL CONSTRUCTION JOINTS ON SHEET 3 OF THIS SERIES; THESE BARS SHALL BE CUT TO FIT FROM LENGTHS SHOWN IN THE REINFORCEMENT BAR SCHEDULE FOR THE CONSTRUCTION JOINT. THESE BARS MAY BE REPLACED BY ALTERNATIVE BARS AND LENGTHS AS SHOWN IN THE DESIGN PLANS. PAINT EXPOSED ENDS WITH EPOXY PAINT.
11. EXPANSION ANCHORS AND DRILLED AND GROUTED DOWELS SHALL CONFORM TO SECTION 1006 OF THE STANDARD SPECIFICATIONS.
12. AS APPROVED BY THE ENGINEER, THE CONTRACTOR MAY ELECT TO REDUCE THE WIDTHS OF THE POUR BY USE OF THE OPTIONAL LONGITUDINAL CONSTRUCTION JOINT SHOWN. JOINTS SHALL BE LOCATED AT THE EDGE OF A TRAFFIC LANE.
13. JOINT SEAL MATERIAL SHALL EXTEND TO OUTER FACE OF ALL FORM WORK, TO PREVENT CONCRETE FROM LEAKING BEYOND FORMWORK OR JOINT SEAL, SUCH THAT COMPLETED JOINT WILL NOT HAVE CONCRETE INHIBIT JOINT MOVEMENT.

M x N - #8 axx (E) BARS @ 4" CTS. BOTTOM
℄ CONSTRUCTION JOINT & PILE BENT
SEE DETAIL SHEET 5 OF THIS SERIES FOR ADDITIONAL REINFORCEMENT (TYP.)
CONSTRUCTION JOINT (TYP.) (SLAB)
1'-5" SINGLE FACE BARRIER (TYP.)
M-#5 bxx (E) BARS @ 6" CTS. TOP
2'-9" (TYP.)
2"
DRAINAGE STRUCTURE
M-#5 axx (E) BARS @ 6" CTS. TOP
1 - #5 axx (E) BAR @ EACH END
M-#5 axx (E) BARS @ 6" CTS. TOP, SEE NOTE 3
** SHOULDER
SHOULDER (TYP.)
M-#5 axx (E) BARS @ 6" CTS. TOP
M-#4 axx (E) BARS @ 1'-3" CTS. TOP
M-#5 axx (E) BARS @ 6" CTS. TOP, SEE NOTE 3
SEALED EXPANSION JOINT SEE BRIDGE PLANS
M-#5 bxx (E) BARS @ 6" CTS. TOP
M-#4 axx (E) BARS @ 1'-3" CTS. TOP
1 - #5 axx (E) BAR @ EACH END TOP
1 - #5 axx (E) BAR THIS END TOP ONLY
M-#6 axx (E) TIE BARS @ 2'-6" CTS.
M-#5 axx (E) BARS @ 6" CTS. TOP, SEE NOTE 3
M-#5 bxx (E) BARS @ 6" CTS. TOP
M-#9 bxx (E) BARS @ 8" CTS. BOTTOM
M-#9 bxx (E) BARS @ 8" CTS. BOTTOM SPACED BETWEEN bXX (E) BARS
M-#4 axx (E) BARS @ 1'-3" CTS. TOP
M-#4 axx (E) BARS @ 1'-3" CTS. TOP
OUT TO OUT *
SKEW ANGLE
ILLINOIS TOLLWAY BRIDGE NUMBER
1 - #5 axx (E) BAR @ EACH END TOP
1 - #5 axx (E) BAR THIS END TOP ONLY
M-#5 axx (E) BARS @ 6" CTS. TOP
CONSTRUCTION JOINT (TYP.) (SLAB)
M-#5 axx (E) BARS @ 6" CTS. TOP
1'-6"
1 - #5 aXX (E) BAR @ EACH END TOP
M-#5 bxx (E) BARS @ 6" CTS. TOP
1'-3"
1'-3"
2'-6"
** SHOULDER
70'-0" TRANSITION APPROACH SLAB
SAW CUT ⅜" X 2", FILL WITH HOT POURED, LOW MODULUS, POLYMER SEALANT MEETING ASTM D3405
½" CORK JOINT (TYP.)
DRAINAGE STRUCTURE
2"
M-#5 axx (E) BARS @ 6" CTS. SEE NOTE 3, TOP
℄ CONSTRUCTION JOINT & PILE BENT
X'-X" @ RIGHT ANGLE TO ABUTMENT
15'-0"
15'-0"
X'-X"
30'-0"
BRIDGE APPROACH SLAB
MxN - #5 bxx (E) BARS @ 12" CTS. TOP
6'-0" SLEEPER SLAB
12 - #5 w (E) BARS @ 6" CTS. TOP & BOTTOM
SAWED LONGITUDINAL JOINT (TYP.) (SEE DETAIL A SHEET 3 OF THIS SERIES)
MxN - #5 bxx (E) BARS @ 12" CTS. TOP
2 LANE RAMP
1 LANE RAMP
1'-3"
M-#4 1 (E) BARS @ 12" CTS. TOP AND BOTTOM
DETAIL C (TYP.) SEE SHEET 4 OF THIS SERIES
℄ JOINT

PLAN NON-INTEGRAL BRIDGES

NOTE TO DESIGNER

TRANSITION APPROACH SLAB SHALL REQUIRE SPECIAL DESIGN IF ADJACENT ROADWAY PAVEMENT IS CONTINUOUSLY REINFORCED CONCRETE (CRC.)

NOTE TO DESIGNER

DESIGNER TO DETERMINE TYPE, SIZE AND LOCATION OF DRAINAGE STRUCTURE, IF REQUIRED.

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED aXX (E) THROUGH sXX (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH + 1'-0" FOR GUARDRAIL OR + 2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

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APPROACH SLAB, RAMP

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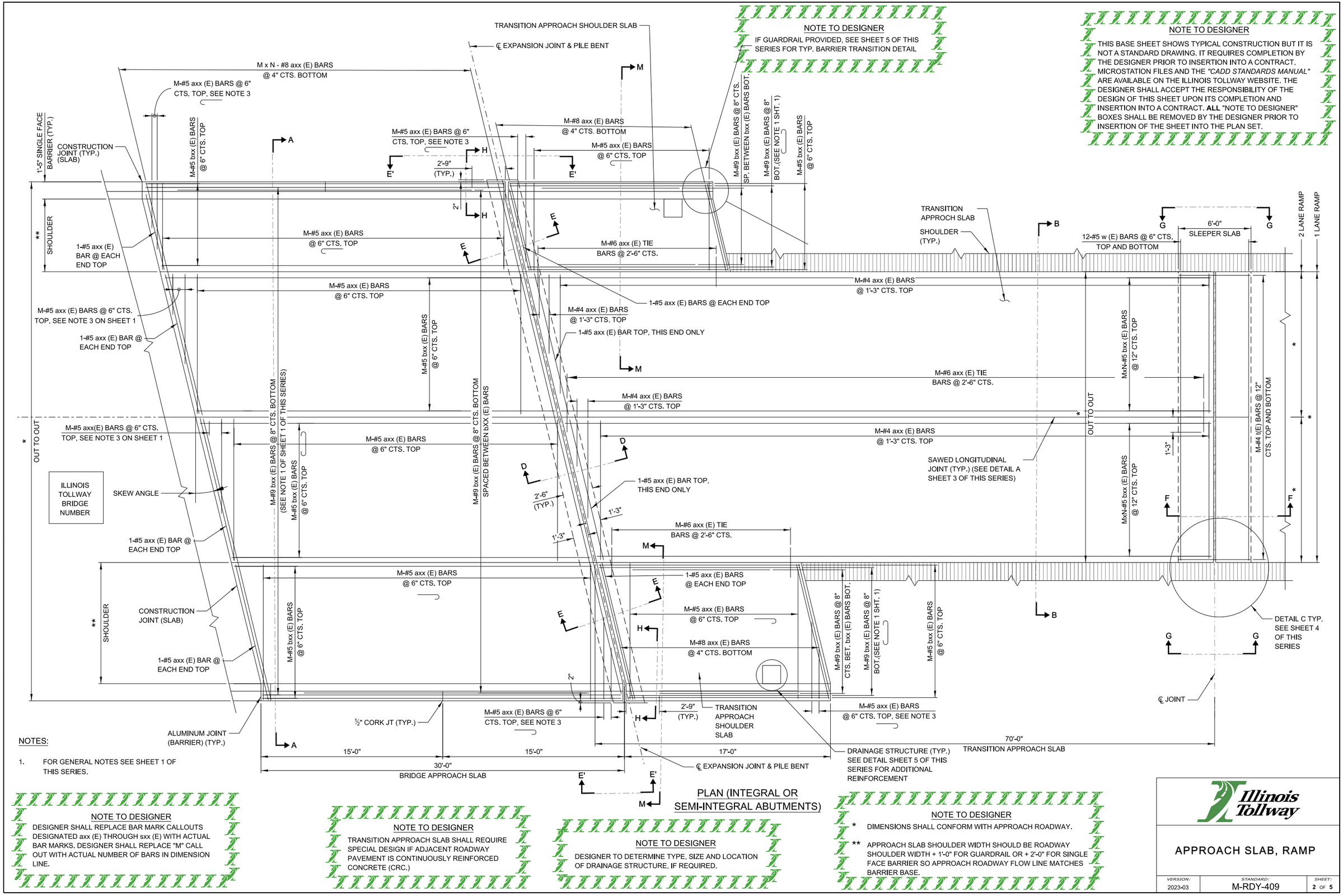

NOTES:

1. FOR GENERAL NOTES SEE SHEET 1 OF THIS SERIES.

PLAN (INTEGRAL OR SEMI-INTEGRAL ABUTMENTS)

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

NOTE TO DESIGNER

TRANSITION APPROACH SLAB SHALL REQUIRE SPECIAL DESIGN IF ADJACENT ROADWAY PAVEMENT IS CONTINUOUSLY REINFORCED CONCRETE (CRC.)

NOTE TO DESIGNER

DESIGNER TO DETERMINE TYPE, SIZE AND LOCATION OF DRAINAGE STRUCTURE, IF REQUIRED.

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH + 1'-0" FOR GUARDRAIL OR + 2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

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APPROACH SLAB, RAMP

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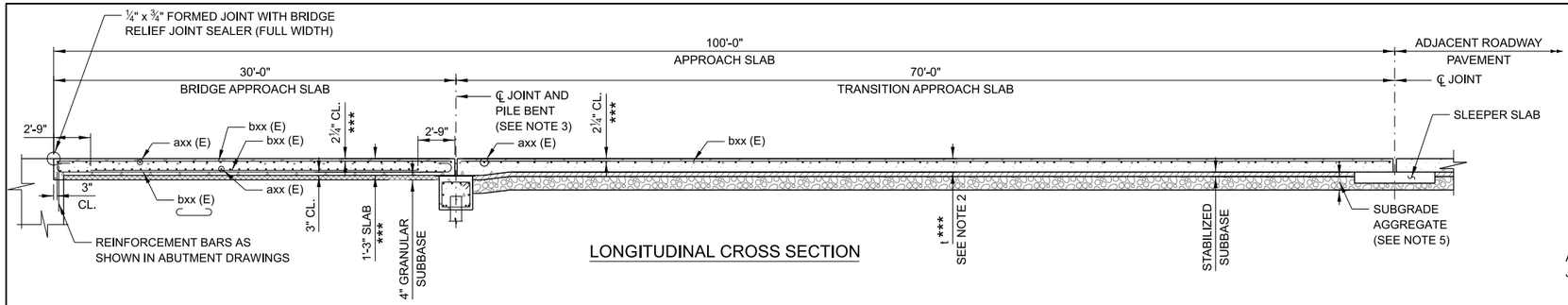
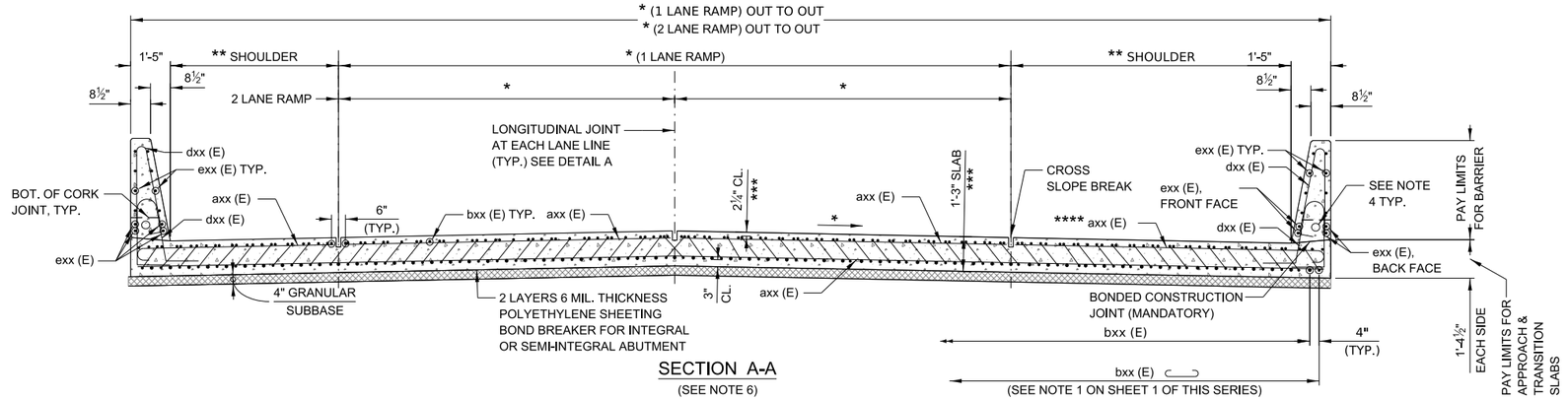
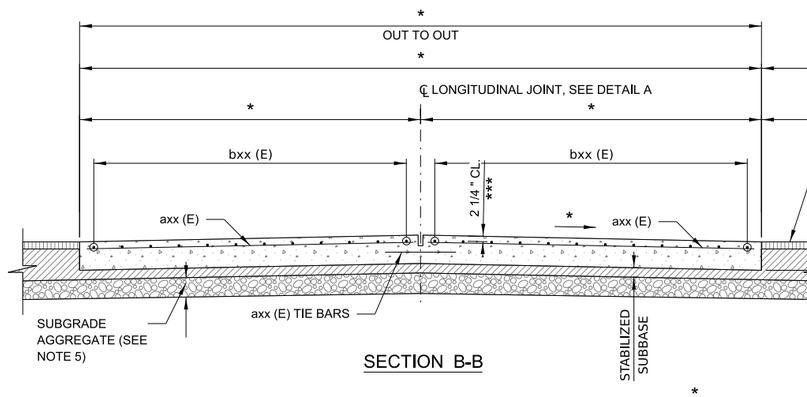


LONGITUDINAL CROSS SECTION

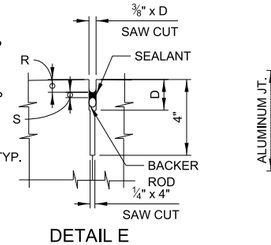


SECTION A-A

(SEE NOTE 6)

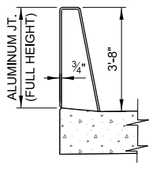


SECTION B-B

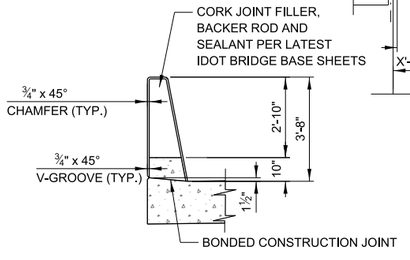


DETAIL E

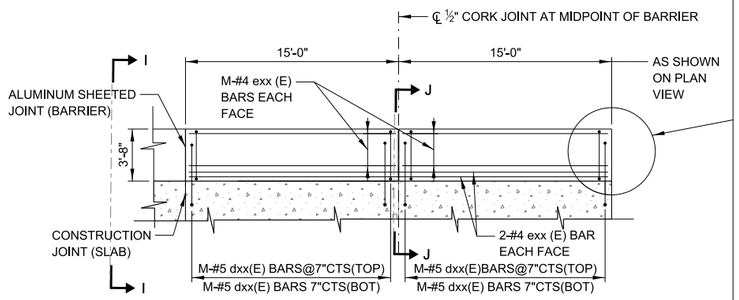
NOTE:
DIMENSIONS D, R & S ARE AS RECOMMENDED BY THE SEALANT MANUFACTURER.



SECTION I-I

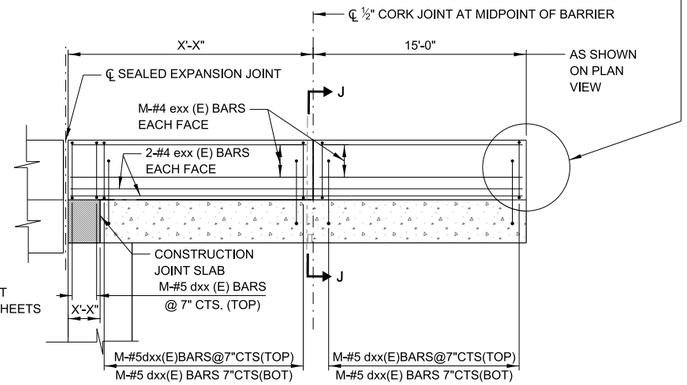


SECTION J-J



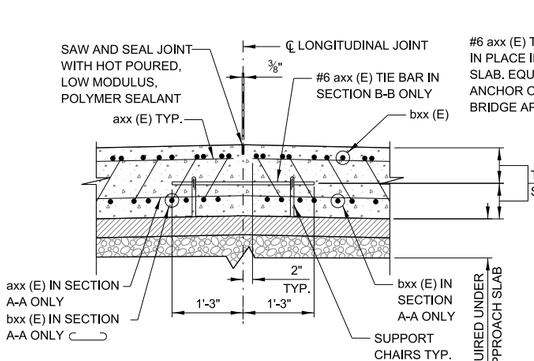
APPROACH SLAB BARRIER ELEVATION

(INTEGRAL OR SEMI-INTEGRAL)

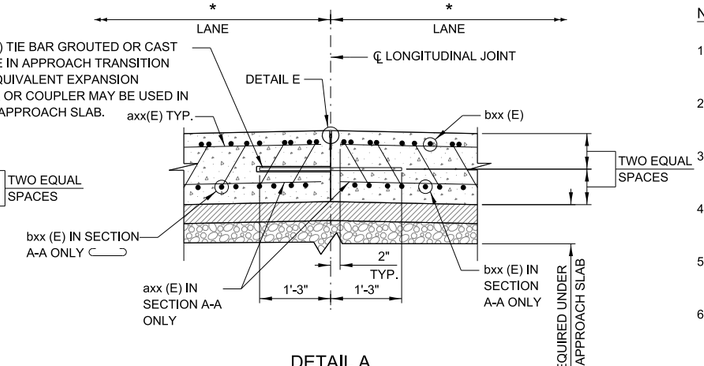


APPROACH SLAB BARRIER ELEVATION

(NON-INTEGRAL)



DETAIL A
TYPICAL LONGITUDINAL JOINT



DETAIL A
OPTIONAL LONGITUDINAL JOINT

(SEE NOTE 10 ON SHEET 1 OF THIS SERIES)

NOTES:

1. SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES.
2. THE DIMENSION t IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
3. INTEGRAL ABUTMENT JOINT SHOWN NON-INTERGRAL ABUTMENT JOINT SIMILAR. SEE SHEET 4 OF THIS SERIES.
4. COORDINATE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.
5. THE THICKNESS OF THE STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT SECTIONS.
6. IF THE CONTRACTOR ELECTS TO SLIPFORM THE PARAPET THEN THE PARAPET CROSS-SECTIONAL AREA, PARAPET REINFORCEMENT BARS CLEARANCES AND THE APPROACH SLAB REINFORCEMENT BARS SHALL BE REVISED ACCORDINGLY TO ACCOUNT FOR THE ADDITIONAL SLAB WIDTH TO ALLOW SLIPFORM.
7. THE ⅛" ALUMINUM SHEET SHALL BE ASTM B 209 ALLOY 3003-H14 AND COATED TO MINIMIZE REACTION WITH WET CONCRETE.

NOTE TO DESIGNER

**** USE #7 axx(E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72"

NOTE TO DESIGNER

IF GUARDRAIL PROVIDED, SEE SHEET 5 OF THIS SERIES FOR TYPICAL BARRIER TRANSITION DETAIL

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH +1'-0" FOR GUARDRAIL OR +2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

*** INCREASE BY ¼" FOR SMOOTHNESS GRINDING

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "*CADD STANDARDS MANUAL*" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

APPROACH SLAB, RAMP

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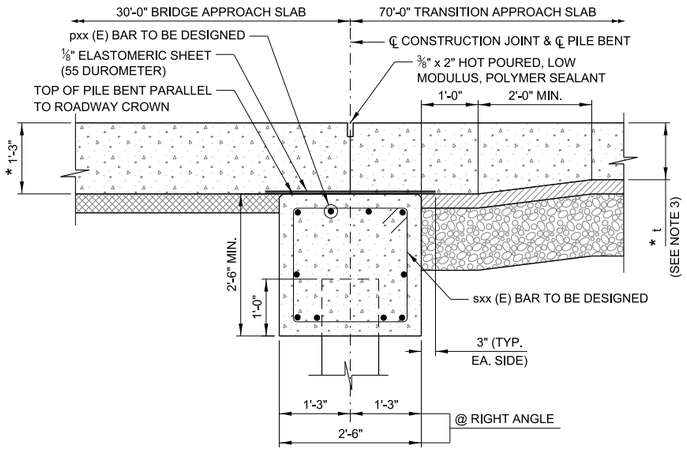
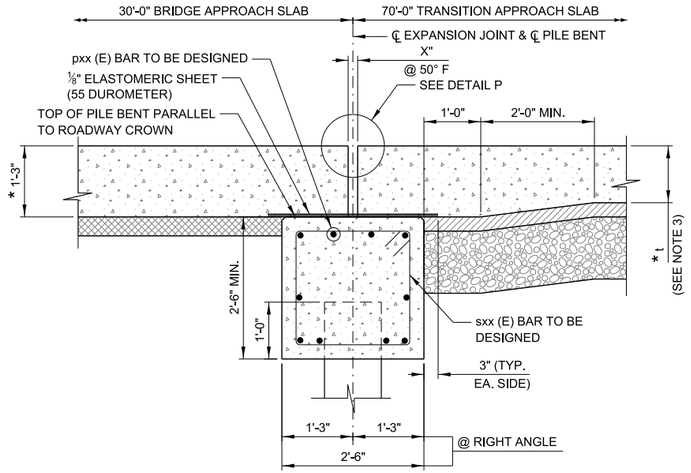
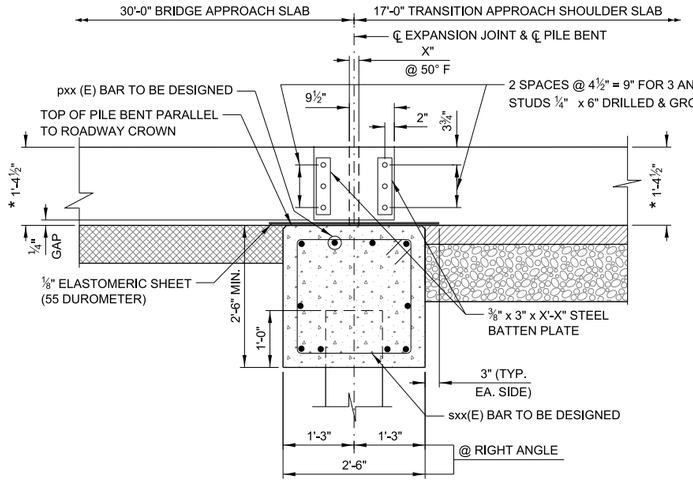


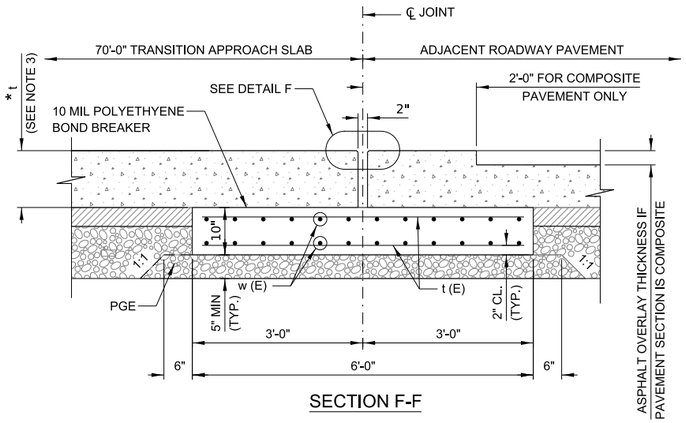
SECTION C-C
FOR NON-INTEGRAL ABUTMENT



SECTION D-D
FOR INTEGRAL & SEMI-INTEGRAL ABUTMENT



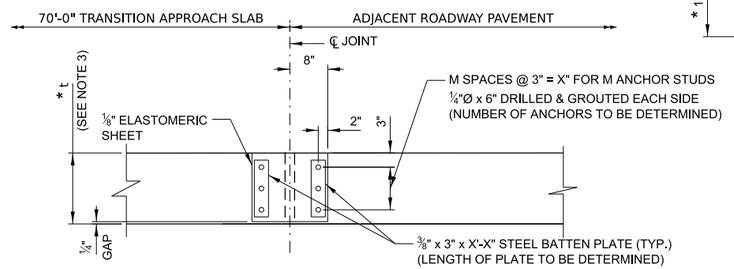
SECTION E'-E'
END ELEVATION OF EXPANSION JOINT



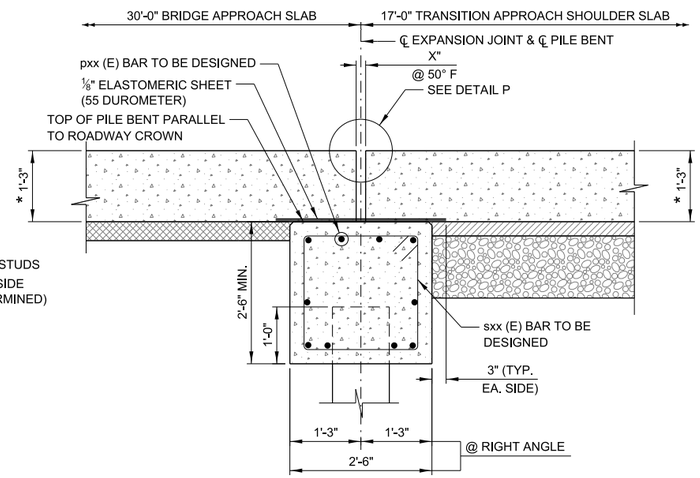
SECTION F-F

NOTE TO DESIGNER

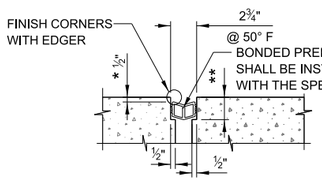
DESIGNER SHALL PROVIDE JOINT SIZE AND OPENING CONSISTENT WITH BRIDGE AND APPROACH CONTRIBUTING LENGTH, DESIGNER TO DETERMINE NUMBER OF ANCHORS AND SIZE OF BATTEN PLATE



VIEW G-G
END ELEVATION OF JOINT



SECTION E-E

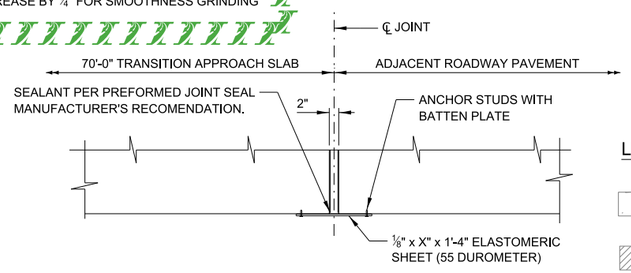


DETAIL F
TRANSITION JOINT

** PER MANUFACTURER RECOMMENDATIONS

NOTE TO DESIGNER

* INCREASE BY ¼" FOR SMOOTHNESS GRINDING



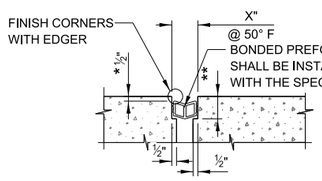
DETAIL C
END PLAN OF JOINT

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.



DETAIL P
APPROACH & TRANSITION JOINT

LEGEND

- CONCRETE
- STABILIZED SUBBASE
- SUBGRADE AGGREGATE
- GRANULAR SUBBASE
- COMPACTED EARTH

NOTES:

1. IN SECTION E'-E' AND VIEW G-G, ANCHOR STUDS SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 1006.09 OF THE STANDARD SPECIFICATIONS. STEEL PLATES, ANCHOR STUDS, NUTS AND WASHERS SHALL BE GALVANIZED.
2. THE THICKNESSES OF STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT SECTIONS.
3. THE DIMENSION t IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
4. FOR PILE BENT DETAILS AND QUANTITIES SEE SHEET XX.
5. FOR GENERAL NOTES SEE SHEET 1 OF THIS SERIES.

Illinois Tollway

APPROACH SLAB, RAMP

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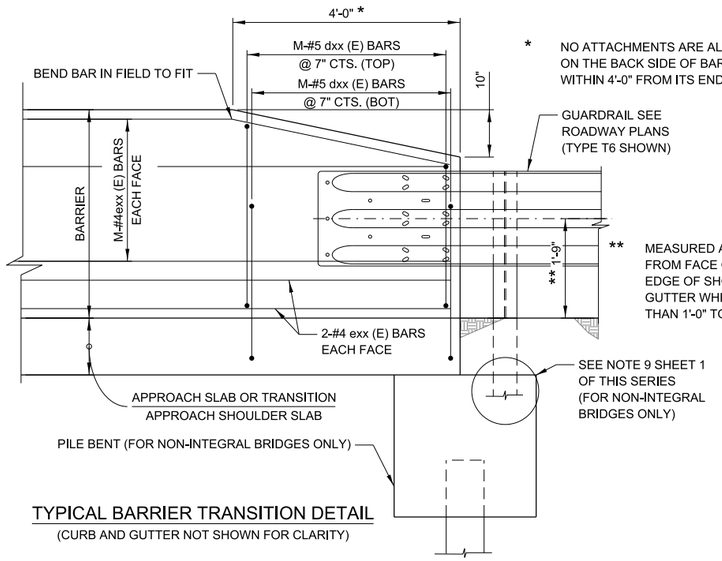
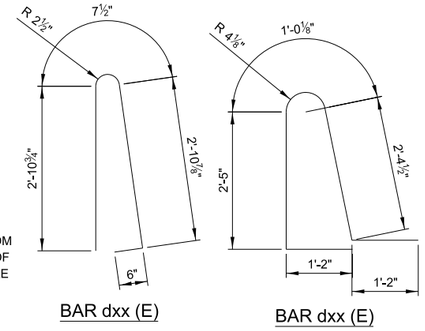


* NO ATTACHMENTS ARE ALLOWED ON THE BACK SIDE OF BARRIER WITHIN 4'-0" FROM ITS END.

** MEASURED AT A POINT 1'-0" FROM FACE OF RAIL, OR FROM EDGE OF SHOULDER/EDGE OF GUTTER WHEN EDGE IS MORE THAN 1'-0" TO FACE OF RAIL

TYPICAL BARRIER TRANSITION DETAIL

(CURB AND GUTTER NOT SHOWN FOR CLARITY)



BAR dxx (E)

BAR dxx (E)

NOTE TO DESIGNER

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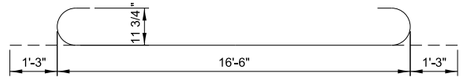
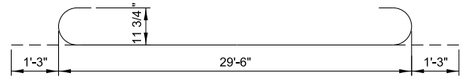


BAR bxx (E)



BAR bxx (E)

NOTE TO DESIGNER

QUANTITIES FOR DIAMOND GRINDING, IF APPLICABLE, INCLUDE TRANSITION, TRANSITION APPROACH SHOULDER, AND APPROACH SLAB. LIMITS ARE THE FULL WIDTH LESS 2FT AT EACH PARAPET.

BILL OF MATERIAL FOR APPROACH AND TRANSITION SLABS

BAR	NO.	SIZE	LENGTH	SHAPE
axx (E)				
axx (E)				
bxx (E)		#9	32'-0"	
bxx (E)		#9	19'-0"	
bxx (E)				
dxx (E)		#5	8'-2"	
t(E)		#4	5'-8"	
w(E)		#5		

	PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
*****	50300260	BRIDGE DECK GROOVING	SQ. YD.	
	50300300	PROTECTIVE COAT	SQ. YD.	
	JI420040	BRIDGE APPROACH SLAB	SQ. YD.	
	JI420041	TRANSITION APPROACH SLAB	SQ. YD.	
	JI420046	TRANSITION APPROACH SHOULDER SLAB	SQ. YD.	
	JS503160	DIAMOND GRINDING AND SURFACE SMOOTHNESS FOR BRIDGE SECTIONS	SQ. YD.	
	JT421510	SLEEPER SLAB	SQ. YD.	
****	JT525130	BONDED PREFORMED JOINT SEAL, 3 IN.	FT.	
*****	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ. YD.	
*		REINFORCEMENT BARS, EPOXY COATED	LBS.	

* FOR INFORMATION ONLY

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH + 1'-0" FOR GUARDRAIL OR + 2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

*** INCREASE BY ¼" FOR SMOOTHNESS GRINDING

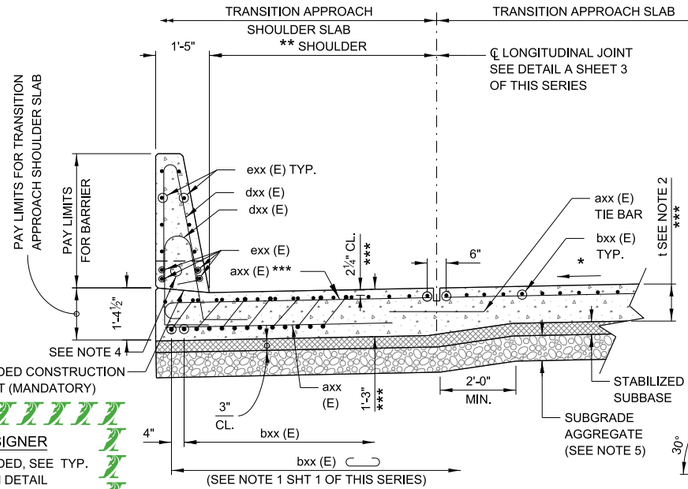
**** ADD PAY ITEM FOR OTHER JOINT SIZES AS APPLICABLE

***** SELECT APPLICABLE PAY ITEM TO MATCH THE BRIDGE

NOTE TO DESIGNER

USE TYPICAL BARRIER TRANSITION DETAIL AS REQUIRED

*** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".

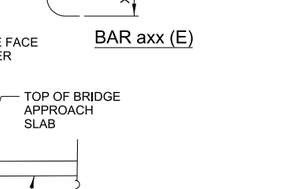


SECTION M-M

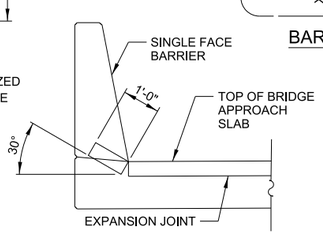
(SEE NOTE 6)

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.



BAR axx (E)



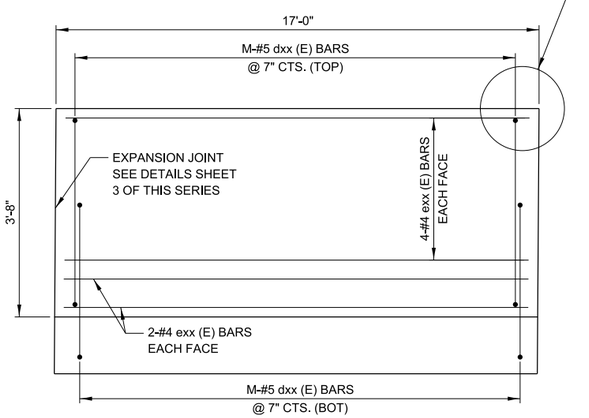
SECTION H-H

NOTE TO DESIGNER

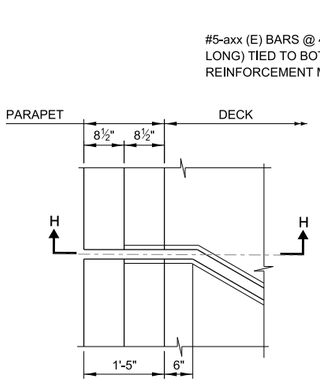
QUANTITIES FOR BRIDGE DECK GROOVING SHALL INCLUDE BOTH TRANSITION AND APPROACH SLABS. LIMITS ARE TRAVEL LANES ONLY.

NOTE TO DESIGNER

IF GUARDRAIL PROVIDED, SEE TYP. BARRIER TRANSITION DETAIL

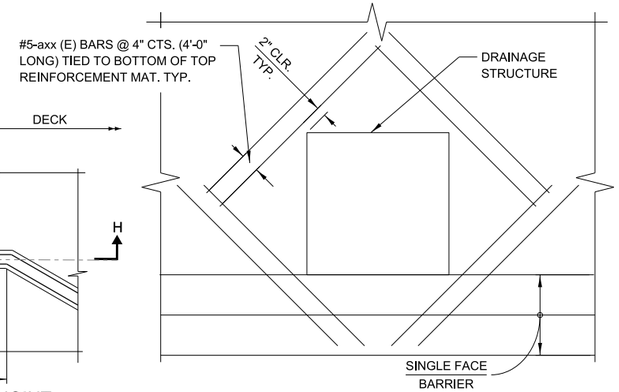


TRANSITION APROACH SHOULDER SLAB BARRIER ELEVATION



PLAN OF JOINT AT BARRIER

(FOR SKEWS GREATER THAN OR EQUAL TO 10 DEGREES)



ADDITIONAL REINFORCEMENT AT DRAINAGE STRUCTURES

CUT TRANSVERSE axx (E) BARS AND LONGITUDINAL bxx (E) BARS IN SLAB TO CLEAR DRAINAGE STRUCTURE. RESPACE dxx (E) BARS TO MISS DRAINAGE STRUCTURE.

NOTE:

1. THE AREA OF EACH BRIDGE APPROACH SLAB, TRANSITION APPROACH SLAB AND TRANSITION APPROACH SHOULDER SLAB WILL BE MEASURED IN PLACE AND COMPUTED IN SQUARE YARDS. SEE SPECIAL PROVISIONS FOR OTHER WORK THAT IS INCLUDED IN THE COST OF THIS ITEM.
2. THE DIMENSION t IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
3. FOR GENERAL NOTES SEE SHEET 1 OF THIS SERIES.
4. COORDINATE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.
5. THE THICKNESS OF THE STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT SECTIONS.
6. IF THE CONTRACTOR ELECTS TO SLIPFORM THE PARAPET THEN THE PARAPET CROSS-SECTIONAL AREA, PARAPET REINFORCEMENT BARS CLEARANCES AND THE APPROACH SLAB REINFORCEMENT BARS SHALL BE REVISED ACCORDINGLY TO ACCOUNT FOR THE ADDITIONAL SLAB WIDTH TO ALLOW SLIPFORM.

BILL OF MATERIAL FOR BARRIERS

BAR	NO.	SIZE	LENGTH	SHAPE
dxx (E)		#5	6'-10"	
exx (E)				

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	
50300300	PROTECTIVE COAT	SQ. YD.	
50800205	REINFORCEMENT BARS, EPOXY COATED	LBS.	

Illinois Tollway

APPROACH SLAB, RAMP

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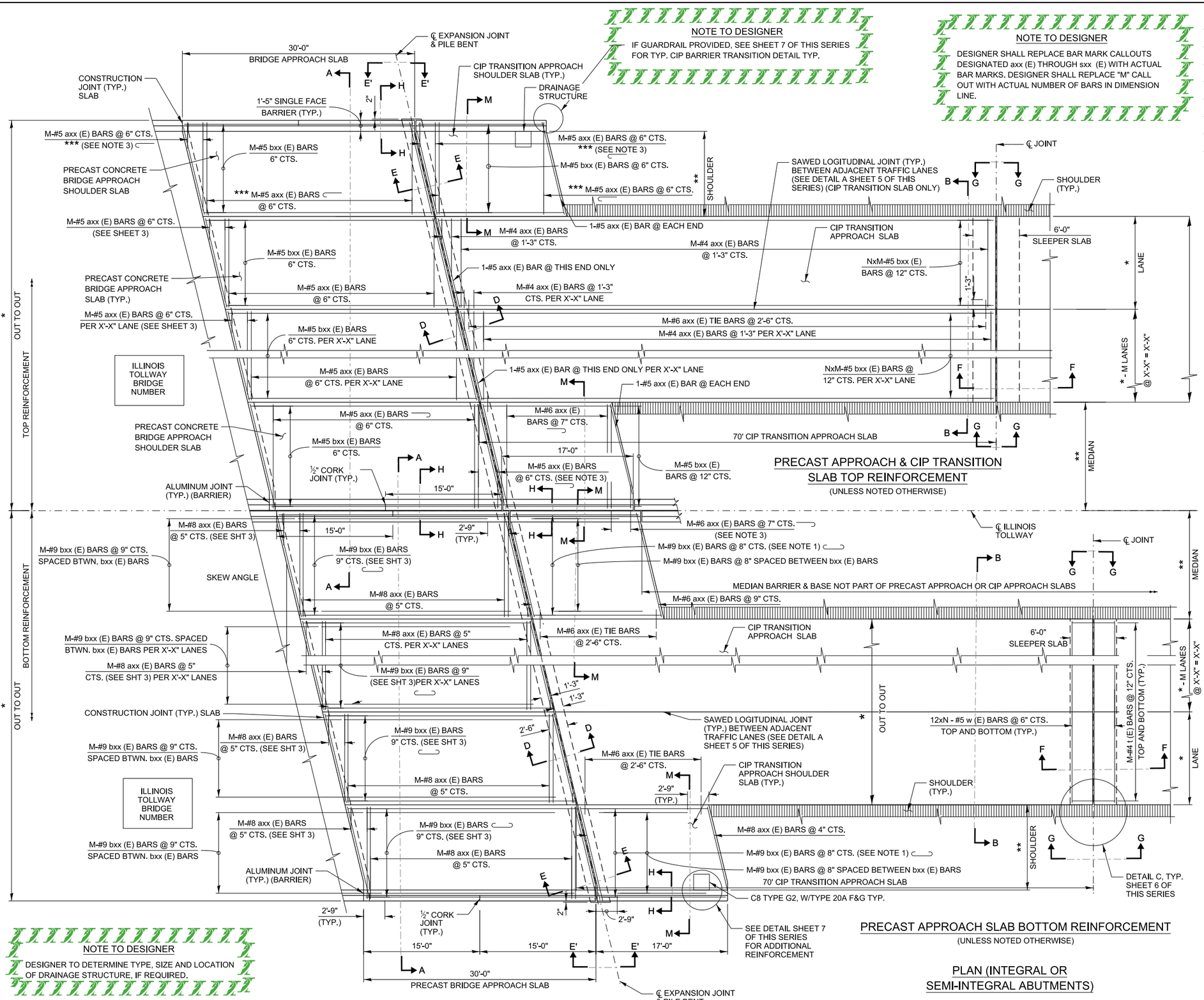

NOTE TO DESIGNER

IF GUARDRAIL PROVIDED, SEE SHEET 7 OF THIS SERIES FOR TYP. CIP BARRIER TRANSITION DETAIL TYP.

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

NOTE TO DESIGNER

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NOTES:

1. TILT HOOK OF #9 BARS FOR MINIMUM 2¼" CLEARANCE.
2. USE 2'-6" MIN. LAP FOR #4 BARS. USE 3-1" MIN. LAP FOR #5 BARS. USE 3'-8" MIN. LAP FOR #6 BARS.
3. CUT REINFORCEMENT TO FIT THE SKEW AND USE REMAINDER IN OPPOSITE END. PAINT EXPOSED ENDS WITH EPOXY PAINT.
4. FOR PRECAST SLAB DETAILS SEE SHEET 2 THRU 4 OF THIS SERIES. FOR CIP DETAILS SEE SHEET 5 THRU 7 OF THIS SERIES.
5. PROTECTIVE COAT SHALL BE APPLIED TO TOP AND TRAFFIC FACES OF BARRIERS.
6. TOOL EDGES OF EXPANSION JOINTS TO ¼" RADIUS.
7. EXPOSED CONCRETE EDGES SHALL HAVE ¾" x 45° CHAMFERS. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW GROUND LEVEL.
8. CONCRETE BARRIERS SHALL BE CONSTRUCTED & PAID FOR IN ACCORDANCE WITH SECTIONS 503 AND 508 OF THE IDOT STANDARD SPECIFICATIONS.
9. EXPANSION ANCHORS AND DRILLED AND GROUTED DOWELS SHALL CONFORM TO THE STANDARD SPECIFICATIONS.
10. SEE SPECIAL PROVISIONS, PRECAST CONCRETE BRIDGE APPROACH SLABS, TRANSITION APPROACH SLAB AND BONDED PREFORMED JOINT SEAL.
11. FOR PRECAST APPROACH SLAB FABRICATION NOTES, SEE SHEET 2.

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH + 1'-0" FOR GUARDRAIL OR + 2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

*** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".

NOTE TO DESIGNER

DESIGNER TO DETERMINE TYPE, SIZE AND LOCATION OF DRAINAGE STRUCTURE, IF REQUIRED.

PRECAST APPROACH & CIP TRANSITION SLAB TOP REINFORCEMENT

(UNLESS NOTED OTHERWISE)

PRECAST APPROACH SLAB BOTTOM REINFORCEMENT

(UNLESS NOTED OTHERWISE)

PLAN (INTEGRAL OR SEMI-INTEGRAL ABUTMENTS)

Illinois Tollway

PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB

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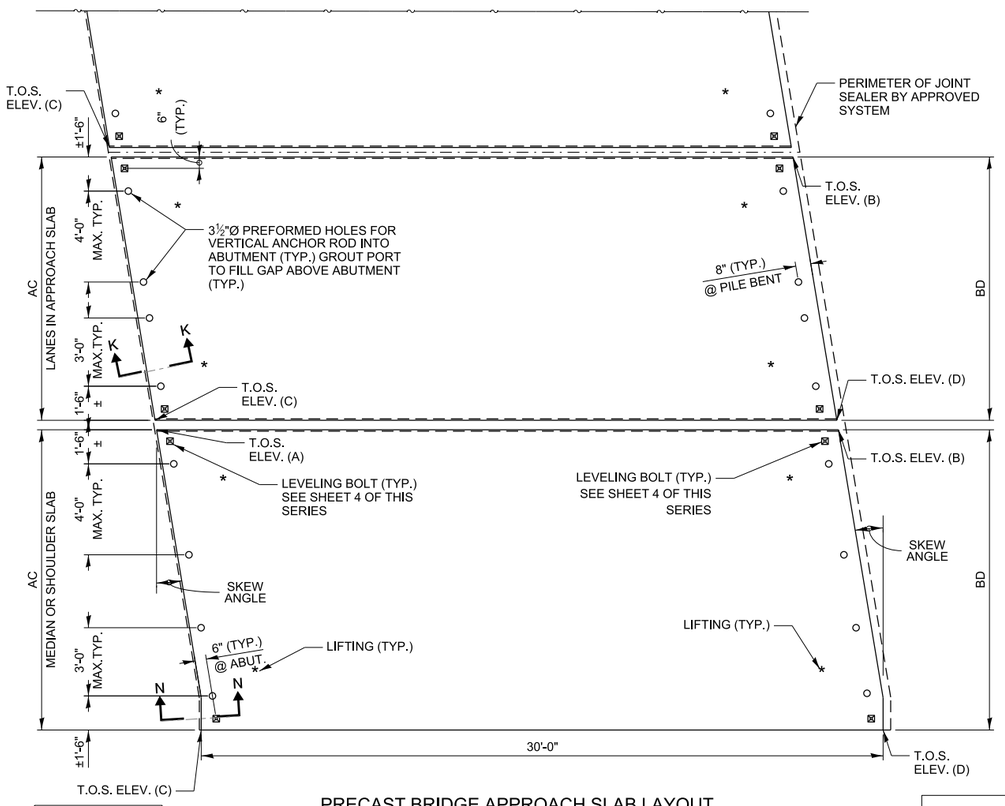
PRECAST SLAB DATA													
LANE TYPE	VARIABLES			AC (FT.)	BD (FT.)	T.O.S. ELEV. A	T.O.S. ELEV. B	T.O.S. ELEV. C	T.O.S. ELEV. D	AREA (S.F.)	VOLUME (C.F.)	WEIGHT (TONS)	NO.
	SKEW ANGLE (DEG)	M (NO.)	N (NO.)										
MEDIAN													
LANE													
LANE													
SHOULDER													



PRECAST BRIDGE APPROACH SLAB LAYOUT

NOTE TO DESIGNER

FILL IN TABLE FOR SLABS IN PRECAST APPROACH SLAB. IF DIMENSION IS NOT REQUIRED ENTER "N/A".

NOTE TO DESIGNER

PRECAST PANEL WIDTH SHALL SATISFY THE FOLLOWING:

1. PANELS FOR LANES SHALL BE FULL WIDTH.
2. ADDITIONAL LONGITUDINAL CONSTRUCTION JOINT SHALL NOT BE IN THE WHEEL PATH FOR THE FLEX LANE OR SHOULDER. MINIMUM PANEL WIDTH SHALL BE 6 FEET IN THE SHOULDER AREA.
3. PANEL CLOSEST TO THE BARRIER SHALL BE THE LARGER PANEL.
4. DESIGNER SHALL VERIFY MAXIMUM PRECAST PANEL WIDTH FOR TRANSPORTATION AND AN ADDITIONAL JOINT SHALL BE SHOWN ON PLANS FOR THE SHOULDER AREA MEETING THE ABOVE REQUIREMENTS.

NOTE TO DESIGNER

THE DESIGNER IS TO INDICATE IF THE SLAB IS PLANAR OR NON-PLANAR, CURVED OR STRAIGHT. IF CURVED SHOW RADII.

NOTE TO DESIGNER

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FABRICATION GENERAL NOTES:

MATERIALS:

1. EPOXY COATED DOWEL BARS USED SHALL COMPLY WITH ASTM A 615 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 SHALL 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 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 SHALL 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 SHALL 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 IDOT STANDARD SPECIFICATIONS.
4. CONCRETE COVER OVER REINFORCEMENT TO BE MAINTAINED USING WIRE OR THERMOPLASTIC CHAIRS OR SPACERS OR AN APPROVED EQUIVALENT.
5. ULTRA HIGH PERFORMANCE CONCRETE (UHPC) USED FOR LONGITUDINAL /TRANSVERSE JOINT, CLOSURE POUR, UNDERSLAB GAP AND LIFTING LOOP HOLES SHALL MEET THE SPECIAL PROVISIONS FOR ULTRA HIGH-PERFORMANCE CONCRETE (ILLINOIS TOLLWAY)
6. PRECAST ELEMENTS: HIGH PERFORMANCE CONCRETE SHALL CONFORM TO TOLLWAY SPECIAL PROVISION OF "PRECAST CONCRETE BRIDGE APPROACH SLABS (ILLINOIS TOLLWAY)" AND AS REQUIRED IN THE PLANS. SITE CASTING SHALL CONFORM TO THE SITE CASTING PROVISIONS LISTED IN THE PLANS AND MATERIALS MUST BE APPROVED BY THE ILLINOIS TOLLWAY MATERIAL ENGINEER PRIOR TO ANY CONCRETE CASTING. COMPRESSIVE STRENGTH OF PRECAST CONCRETE, f'c SHALL BE 5,000 PSI. COMPRESSIVE STRENGTH OF PRECAST CONCRETE DURING INITIAL LIFTING, f'ci SHALL BE 4,500 PSI.
7. POLYETHYLENE SHEET BOND BREAKER MATERIAL: PROVIDE LOW DENSITY POLYETHYLENE SHEET MEETING THE REQUIREMENTS OF ASTM D4635 THAT WILL ALLOW FOR SLIDING OF THE STRUCTURAL CONCRETE AFTER PLACEMENT. SUPPLY SHEETS THAT ARE A MINIMUM OF 6 MIL THICK UNLESS SHOWN OTHERWISE.

SLAB DESIGN:

8. GENERAL DESIGN REQUIREMENTS:
   A. USE SLAB DIMENSIONS SHOWN ON THESE DRAWINGS FOR DESIGN THICKNESS. LENGTHS AND WIDTHS OF EACH CUSTOM SLAB SHALL BE OF ACCURATE DIMENSIONS TO COMPLY WITH THE DESIGN AND PROFILE OF THE BRIDGE STRUCTURE, WHICH THE APPROACH SLAB IS DESIGNED FOR.
   B. FOR NON-PLANAR APPROACH SLABS, THE ELEVATIONS SHALL BE OBTAINED BY EITHER CASTING THE SLAB IN A NON-PLANAR FORM; OR BY CASTING THE SLAB PLANAR TO ALLOW FOR TOP SURFACE ELEVATIONS TO BE OBTAINED BY DIAMOND GRINDING AFTER PLACEMENT WHILE MINIMUM TOTAL SLAB THICKNESS AND MINIMUM CONCRETE COVER OVER REINFORCEMENT ARE SATISFIED. OVERCASTING AND GRINDING OF NON-PLANAR SLABS ARE NOT PAID SEPARATELY AND ARE INCLUDED IN THE COST OF PRECAST APPROACH SLABS. IF SURFACE GRINDING IS INCLUDED AS A PAY ITEM, THEN SURFACE GRINDING OF THE APPROACH SLABS IS INCLUDED IN THAT PAY ITEM., UNLESS NOTED OTHERWISE.
9. MISCELLANEOUS DETAIL REQUIREMENTS:
   A. GROUT PORT HOLES SHALL BE LOCATED ON TRANSVERSE LINES ACROSS THE SLAB ABOVE THE ABUTMENT AND PILE CAP 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 NOT EXCEED 4'-0", WITH THE PORT HOLES AT THE END OF THE TRANSVERSE LINES TO BE NO LESS THAN 1'-6" 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 MORE THAN 6" OFF OF A TRANSVERSE JOINT.
   B. RECESS LIFTING DEVICES 1¼" MINIMUM BELOW THE SURFACE OF THE SLAB TO ALLOW FOR A MINIMUM GROUT COVER OF 1" COVER AFTER MAXIMUM ¼" DIAMOND GRINDING ON SLABS THAT WILL NOT BE OVERLAID.

FABRICATION:

8. PREPARE WORKING DRAWINGS THAT SHALL INCLUDE THE FOLLOWING INFORMATION:
   A. SLAB LAYOUT DRAWING FOR TYPICAL SLABS TO BE FABRICATED, WITH ACCURATE DIMENSIONS CITED.
   B. REINFORCEMENT SIZES, SPACING, NUMBER OF MATS. AND METHOD OF MAINTAINING CONCRETE COVER.
   C. SIZE AND LOCATION OF GROUT PORTS, LIFTING ANCHORS, AND GROUT SEAL GASKETS.
   D. COMPRESSIVE STRENGTH AT 28 DAYS AND AIR CONTENT OF CONCRETE.
   E. CONCRETE CURING METHOD TO BE USED.
   F. 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.
   G. WEIGHT OF EACH SLAB.
9. PERFORM A PRE-POUR INSPECTION OF THE FORMS TO CONFIRM THAT THEY ARE ASSEMBLED IN ACCORDANCE WITH THE FOLLOWING TOLERANCES:

LENGTH AND WIDTH	±	1/8"
DIAGONALS	±	3/16"
DOWEL VARIANCE FROM, LEVEL, SQUARENESS TO EDGE OF SLAB, & LOCATION.	±	1/8"

   EDGE SQUARENESS ⅛" IN 10" (IN RELATION TO TOP AND BOTTOM SURFACES)
10. INCLUDE A 1 INCH CHAMFER ALONG ALL BOTTOM EDGES OF SLABS AND A STONED EDGE TO ALL TOP EDGES OF THE SLAB.
11. THE EXPOSED SURFACES OF ALL PREFORMED SLOTS FOR DOWEL BARS SHALL BE SANDBLASTED. PLASTIC SLEEVES FOR ANCHOR BOLTS, GROUT PORTS SHALL BE CAST ¼" LOWER THAN THE FINISHED TOP OF SLAB TO AVOID EXPOSURE AFTER DIAMOND GRINDING OR AN APPROVED METHOD OF CASTING SLEEVE INSTALLATION RESULTING IN THEIR REMOVAL AFTER SLAB IS CAST CAN BE USED.
12. AFTER REMOVAL OF FORMS AND ANY BLOCKOUTS, NO SPALLS OF THE FINISHED SURFACE WILL BE ALLOWED.
13. SHOP DRAWINGS SHALL BE REQUIRED FOR ALL SLABS.

SITE CASTING AND DEMONSTRATION PANEL FIT:

THE PRECAST FABRICATOR SHALL INITIALLY FABRICATE ONE FULL SET OF APPROACH PANELS AND ASSEMBLE THESE PANELS AT THE FABRICATION PLANT TO DEMONSTRATE THE FIT OF THE PANELS TO MATCH THE PROFILE GRADE AND CROSS SLOPES , SKEW OR CURVE AS PER VERIFIED FIELD SURVEYED MEASUREMENT TO THE SATISFACTION OF THE ENGINEER. THE PANELS SHALL BE ASSEMBLED OVER A LEVEL SURFACE THAT WILL NOT CAUSE DAMAGE TO THE PANELS DURING OR AFTER ASSEMBLY. JOINTS BETWEEN PANELS SHOULD BE WITH VERTICAL SIDES AND SHOULD NOT BE SPACED MORE THAN THE SPECIFIED GAP WHEN ASSEMBLED.
PANEL JOINT ALIGNMENT FOR THE OUTER SLABS UNDER THE PARAPET SHOULD BE VERIFIED TO MATCH PARAPET WALL ABOVE AS SHOWN ON THE CONSTRUCTION PLANS. ANY PROBLEMS WITH FITTING THE PANELS CAUSED BY IMPERFECTIONS IN THE PANELS SHALL BE CORRECTED PRIOR TO PROCEEDING WITH PANEL FABRICATION. PANEL FABRICATION MAY COMMENCE FOLLOWING THE TRIAL ASSEMBLY ONLY UPON APPROVAL FROM THE ENGINEEER.

TRANSPORTATION

PANELS SHALL BE TRANSPORTED IN SUCH A MANNER THAT THE PANEL WILL NOT BE DAMAGED DURING TRANSPORTATION AS PER ARTICLE 106.07 OF THE IDOT STANDARD SPECIFICTIONS. PLASTIC CORNER PIECES OR SHOCK-ABSORBING CUSHIONING MATERIAL SHALL BE USED AT ALL BEARING POINTS AND ALL EXPOSED CORNERS DURING TRANSPORTATION OF THE PRECAST ELEMENTS. PANELS SHALL BE PROPERLY SUPPORTED DURING TRANSPOTATION SUCH THAT CRACKING OR DEFORMATION (SAGGING) DOES NOT OCCUR. IF MORE THAN ONE PANEL IS TRANSPORTED PER VEHICLE, PROPER SUPPORT AND SEPARATION MUST BE PROVIDED BETWEEN THE INDIVIDUAL PANELS. PANELS SHALL BE LYING HORIZONTALLY DURING TRANSPORTATION, UNLESS OTHERWISE APPROVED.

PRECAST ELEMENTS DAMAGED DURING HANDLING AND STORAGE SHALL BE REPAIRED OR REPLACED AT NO COST TO THE ILLINOIS TOLLWAY.

A PRECAST ELEMENT SHALL NOT BE TRANSPORTED FROM THE CASTING YARD UNTIL THE MINMUM 28 DAY COMPRESSIVE STRENGTH SPECIFIED ON PROJECT PLANS HAS BEEN ATTAINED AS SHOWN BY TEST CYLINDER CURED IN ACCORDANCE WITH AASHTO T 23.

MATERIAL, QUALITY AND CONDITION AFTER SHIPMENT WILL BE INSPECTED AFTER DELIVERY TO THE CONSTRUCTION SITE, WITH THIS AND ANY PREVIOUS INSPECTIONS CONSTITUTING ONLY PARTIAL ACCEPTANCE.

REPAIRS:

REPAIRS OF DAMAGE CAUSED TO THE PANELS DURING FABRICATION, LIFTING AND HANDLING, OR TRANSPORTATION SHALL BE ADDRESSED ON A CASE-BY-CASE BASIS. DAMAGE WITHIN ACCEPTABLE LIMITS CAUSED TO THE TOP OF THE SURFACE (DRIVING SURFACE) OR TO KEYED EDGES OF THE PANELS SHALL BE REPAIRED USING AN APPROVED REPAIR METHOD AT THE FABRICATION PLANT AT THE EXPENSE OF THE CONTRACTOR. REPETITIVE DAMAGE TO PANELS SHALL BE CAUSE FOR STOPPAGE OF FABRICATION OPERATIONS UNTIL CAUSE OF DAMAGE CAN BE REMEDIED.

INSTALLATION:

1. THE FABRICATION AND INSTALLATION OF A NON-GENERIC TOLLWAY APPROVED PRECAST SYSTEM SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE FABRICATION AND INSTALLATION OF GENERIC ILLINOIS TOLLWAY SYSTEM PRECAST APPROACH SLABS SHALL BE IN ACCORDANCE WITH THE GENERAL NOTES ON ILLINOIS TOLLWAY STANDARD DRAWINGS A1, IN ADDITION TO WHAT IS SPECIFIED OR NOTED IN THE PLANS FOR THE SPECIFIC CONTRACT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL 2 AND 3 DIMENSIONAL SURVEYS OF EXISTING PAVEMENTS AND STRUCTURES AS REQUIRED BY THE APPROVED PRECAST SYSTEM MANUFACTURER OR BY TOLLWAY STANDARDS TO PROPERLY FABRICATE AND INSTALL THE SLABS TO OBTAIN THE FINISHED SURFACE ELEVATIONS AND MINIMUM THICKNESSES AS REQUIRED BY THE SPECIFIC CONTRACT.
3. ALL PRECAST SLABS INSTALLED MUST BE SECURED IN PLACE USING NON-COMPRESSIBLE TAPERED SHIMS AS SPECIFIED BEFORE BEING OPENED TO TRAFFIC AND UNTIL THE SLABS ARE PERMANENTLY CONNECTED AND GROUTED TO ADJACENT PAVEMENT.
4. FOR PRECAST SLABS SUPPORTED AND LEVELED BY LEVELING BOLTS OVER THE PILE CAP AND ABUTMENT, THE SPECIFIED SUPPORT BEDDING GROUT SHALL BE USED AFTER FULL SLAB INSTALLATION TO FILL ALL VOIDS BETWEEN THE PRECAST SLAB OVER UNDERLYING PILE CAP AND ABUTMENT, BEFORE THE SLABS ARE OPENED TO TRAFFIC.
5. ANY TIE BARS REQUIRED IN LONGITUDINAL JOINTS BETWEEN PRECAST SLABS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARDS OF THE APPROVED SYSTEM USED.
6. TOP OF SLAB (T.O.S.) ELEVATIONS ARE TO BE BASED ON THE DESIGNED PROFILE FOR THE BRIDGE, WHICH THE APPROACH SLAB IS DESIGNED FOR. NON-PLANAR PANELS FOR SUPER ELEVATED STRUCTURES MAY OBTAIN T.O.S. ELEVATIONS (PROFILE AND CROSS SLOPE) BY EITHER CASTING THE PANELS IN NON-PLANAR FORMS OR BY DIAMOND GRINDING IN ACCORDANCE WITH THIS NOTE. DIAMOND GRINDING OF THE PRECAST APPROACH SLAB, TO OBTAIN DESIRED ELEVATIONS, SHALL NOT BE ALLOWED IF MINIMUM TOTAL THICKNESS OR CLEAR COVER OVER TOP REINFORCEMENT CAN NOT BE SATISFIED.
7. PERFORM SLAB GROOVING AFTER DIAMOND GRINDING IS COMPLETE.

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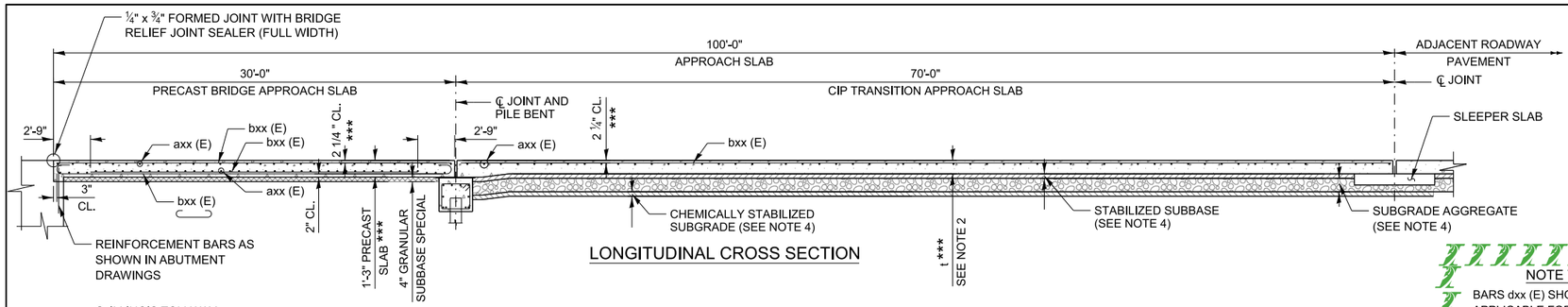
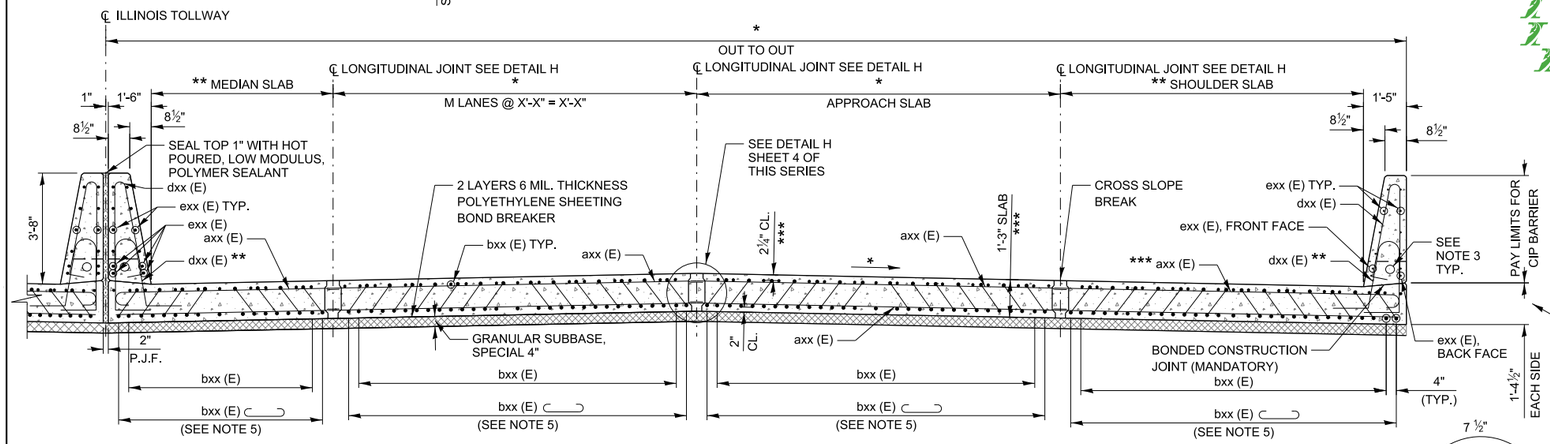
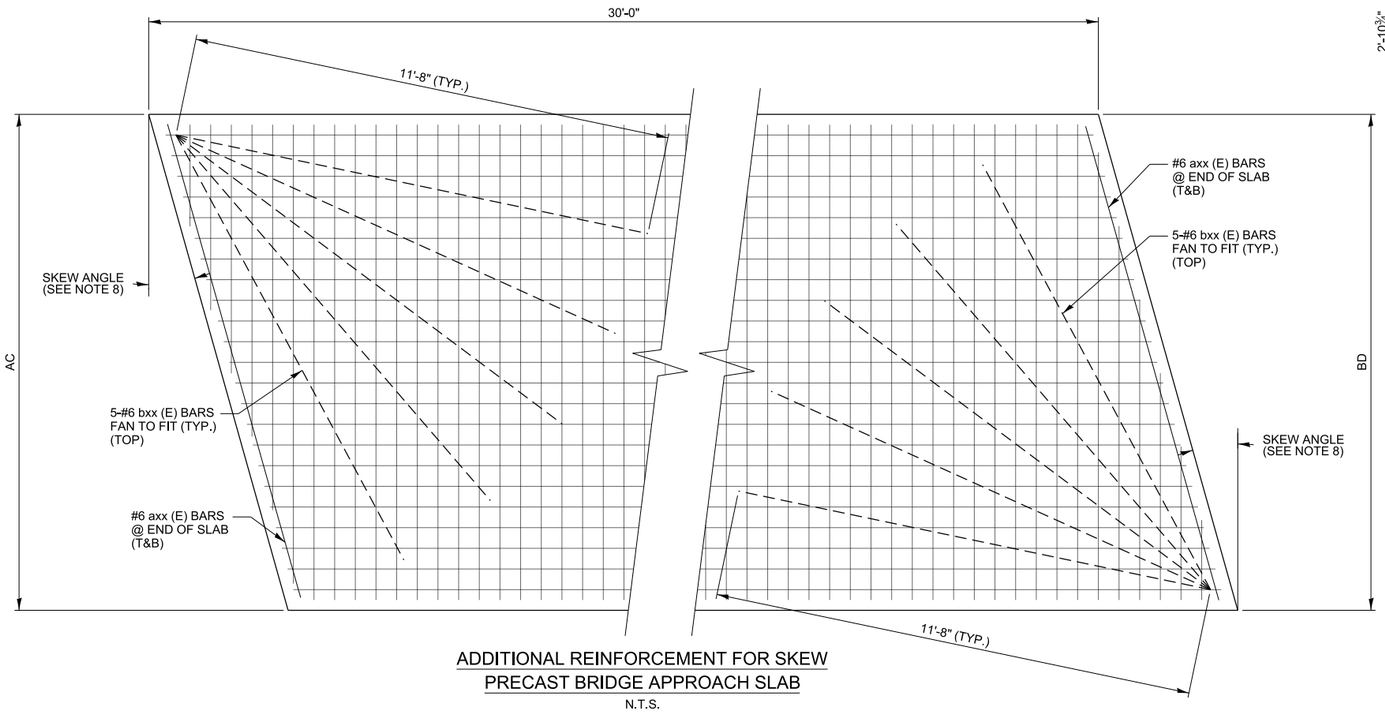


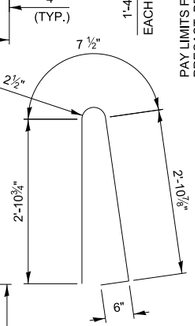
LONGITUDINAL CROSS SECTION



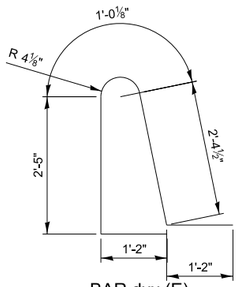
SECTION A-A
PRECAST BRIDGE APPROACH SLAB



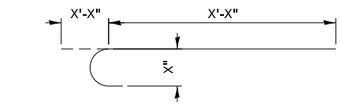
ADDITIONAL REINFORCEMENT FOR SKEW
PRECAST BRIDGE APPROACH SLAB
N.T.S.



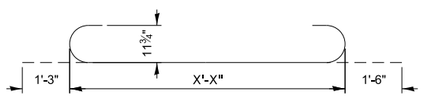
BAR dxx (E)



BAR dxx (E)



BAR axx (E)



BAR bxx (E)

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH +1'-0" FOR GUARDRAIL OR +2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

*** INCREASE BY ¼" FOR SMOOTHNESS GRINDING

NOTE TO DESIGNER

BARS dxx (E) SHOWN IN THIS SHEET ARE APPLICABLE FOR 44" BARRIERS ONLY. UPDATE BASED ON BARRIER TYPE.

NOTE TO DESIGNER

*** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".

** BAR dxx (E) IS CAST IN PRECAST APPROACH SLAB BRIDGE PARAPET SHALL BE CAST IN PLACE AFTER PRECAST SLABS ARE SET.

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER IN DIMENSION LINE.

DETAILS PRESENTED IN THESE SHEETS SHALL NOT BE USED FOR SKEW GREATER THAN 45°.

NOTES:

1. SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES. SEE SHEET 2 OF THIS SERIES FOR FABRICATION NOTES.
2. THE DIMENSION t IS THE FINAL THICKNESS OF THE CIP TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
3. COORDINATE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.
4. THE THICKNESSES OF STABILIZED SUBBASE, SUBGRADE AGGREGATE AND CHEMICALLY STABILIZED SUBGRADE SHALL MATCH THE ADJACENT ROADWAY PAVEMENT SECTIONS.
5. TILT HOOK OF #9 BARS FOR MINIMUM 2¼" CLEARANCE.
6. USE 2'-0" MIN. LAP FOR #4 BARS. USE 2-6" MIN. LAP FOR #5 BARS. USE 3'-0" MIN. LAP FOR # 6 BAR.
7. FOR ALL SLABS OF SKEWED SHAPE, REINFORCEMENT SHALL BE LAID OUT IN A PERPENDICULAR GRID PATTERN, NOT SKEWED, EXCEPT FOR EDGE BARS AS SHOWN.
8. FOR PRECAST SLAB CORNERS WITH SKEW ANGLE GREATER THAN 25 DEGREE, PROVIDE 5 #6 BARS, 11'-8" LONG DIRECTLY UNDER THE TOP LAYER OF BARS IN A FANNED ARRANGEMENT.

PRECAST APPROACH SLAB
BAR LIST FOR INFO ONLY

BAR		SIZE	LENGTH	SHAPE
axx (E)		#5		
axx (E)		#5		
axx (E)		#6		
axx (E)		#8		
bxx (E)		#5	29'-8"	
bxx (E)		#6		
bxx (E)		#9	24'-6"	
bxx (E)		#9	32'-2"	
dxx (E)		#5	8'-2"	

NOTE TO DESIGNER

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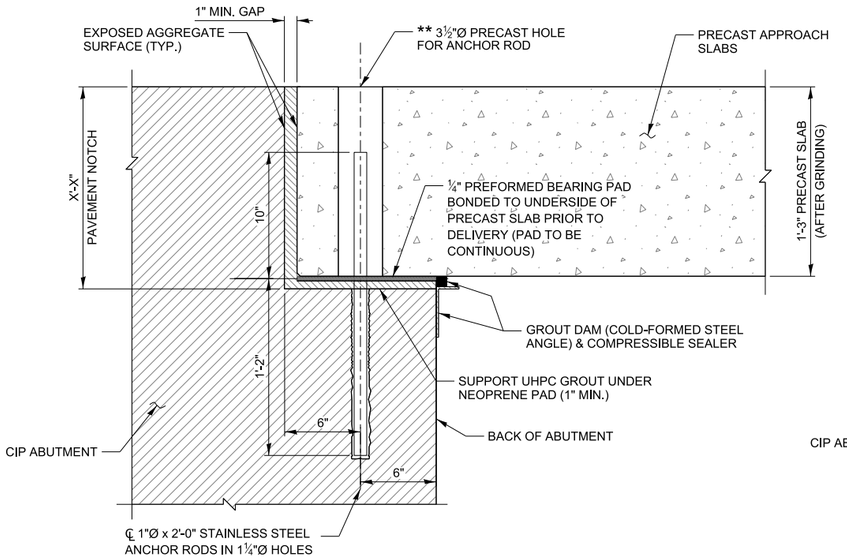
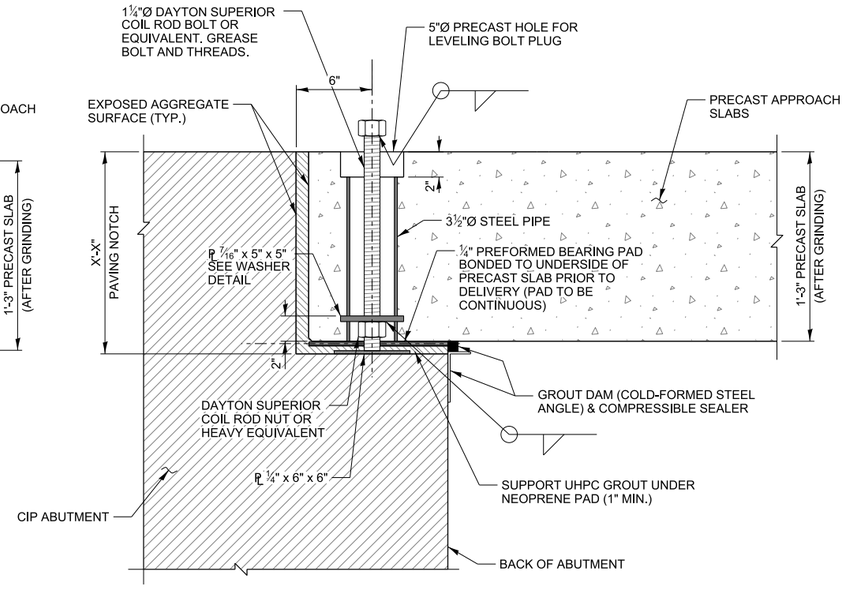
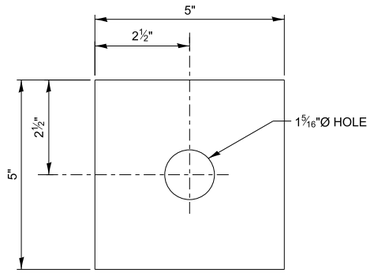
** HOLES SHALL BE FILLED WITH UHPC AFTER SLAB IS LEVELED. UHPC COST IS INCLUDED IN THE COST OF PRECAST CONCRETE BRIDGE APPROACH SLABS.



SECTION K-K
ABUTMENT ANCHOR ROD DETAIL
PRECAST BRIDGE APPROACH SLAB



SECTION N-N
ABUTMENT LEVELING BOLT DETAIL
PRECAST BRIDGE APPROACH SLAB



WASHER DETAIL

NOTE TO DESIGNER

**** SELECT APPLICABLE PAY ITEM TO MATCH THE BRIDGE

NOTE TO DESIGNER

DESIGNER SHALL REPLACE THE PAY ITEM NUMBER AND DESCRIPTION FOR BONDED PREFORMED JOINT SEAL PER DESIGN REQUIREMENTS

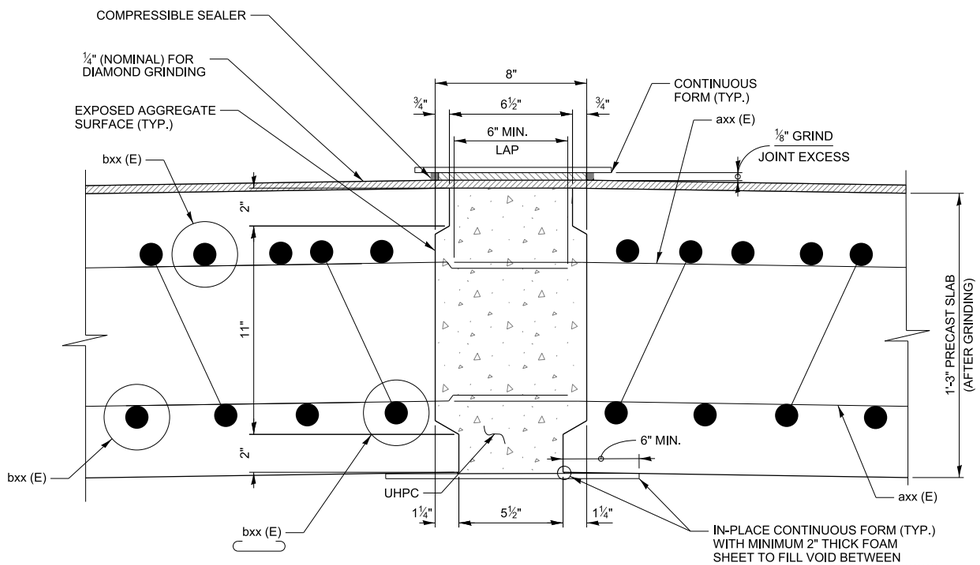
BILL OF MATERIAL FOR PRECAST BRIDGE APPROACH SLABS

	PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
****	50300260	BRIDGE DECK GROOVING	SQ. YD.	
	50300300	PROTECTIVE COAT	SQ. YD.	
	52000110	PREFORMED JOINT STRIP SEAL	FT.	
	JS503160	DIAMOND GRINDING AND SURFACE SMOOTHNESS FOR BRIDGE SECTIONS	SQ. YD.	
	JT301010	GRANULAR SUBBASE, SPECIAL	CU. YD.	
	JT421510	SLEEPER SLAB	SQ. YD.	
	JT504118	UHPC JOINT HEADERS	CU. FT.	
	JI420070	PRECAST CONCRETE BRIDGE APPROACH SLABS	SQ. FT.	
****	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ. YD.	
	*	REINFORCEMENT BARS, EPOXY COATED	LBS.	
	*	UHPC CONCRETE	CU. YD.	

* FOR INFORMATION ONLY

NOTES FOR ANCHOR RODS:

1. DRILL HOLES THAT ARE ORIENTED AT 90° ± 5° ANGLE TO THE PAVEMENT SURFACE. TYPICAL HOLE DIAMETER SHALL BE 1¼".
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.
4. DRILL HOLES AT SPACING SHOWN ON PLAN.
5. AIR BLOW THE HOLES TO REMOVE DUST AND DEBRIS AFTER DRILLING.
6. INJECT EPOXY GROUT INTO THE HOLE, LEAVING SOME VOLUME FOR THE BAR TO OCCUPY THE HOLE. (POURING THE ADHESIVE IS ACCEPTABLE FOR SMALL QUANTITIES.)
7. INSERT THE 1-IN. DIA. ROD INTO THE HOLE TO THE DEPTH PER PLAN AND FINISH EPOXY GROUT AND PLACE NON-SHRINK GROUT FROM TOP OF BAR TO FINISH SURFACE.
8. ANCHOR ROD SHALL BE DOWELED INTO THE ABUTMENT BEFORE SLAB INSTALLATION. ANCHOR RODS SHALL EXTEND THROUGH PREFORMED HOLES IN THE PRECAST SLABS. IF HOLES ARE NOT ALIGNED WITH EMBEDDED RODS, NEW HOLES OF 2" MAXIMUM DIAMETER SHALL BE DRILLED BY THE CONTRACTOR INTO THE PRECAST SLABS.
9. SEE SPECIAL PROVISIONS "PRECAST CONCRETE BRIDGE APPROACH SLABS" FOR INSTALLATION OF BRIDGE APPROACH SLAB ANCHOR RODS.



DETAIL H
LONGITUDINAL JOINT DETAIL FOR PRECAST TO PRECAST SLABS

NOTE TO DESIGNER

BRIDGE DECK GROOVING LIMITS ARE TRAVEL LANES ONLY.

NOTE TO DESIGNER

DIAMOND GRINDING, IF APPLICABLE, LIMITS ARE THE FULL WIDTH LESS 2FT AT EACH PARAPET.

NOTE TO DESIGNER

DETERMINE FINAL HEIGHT OF PAVING NOTCH TO ACCOUNT FOR PROFILE, X-SLOPE, THICKNESS OF NEOPRENE BEARING PAD, GROUT AND PRECAST SLAB.

NOTE TO DESIGNER

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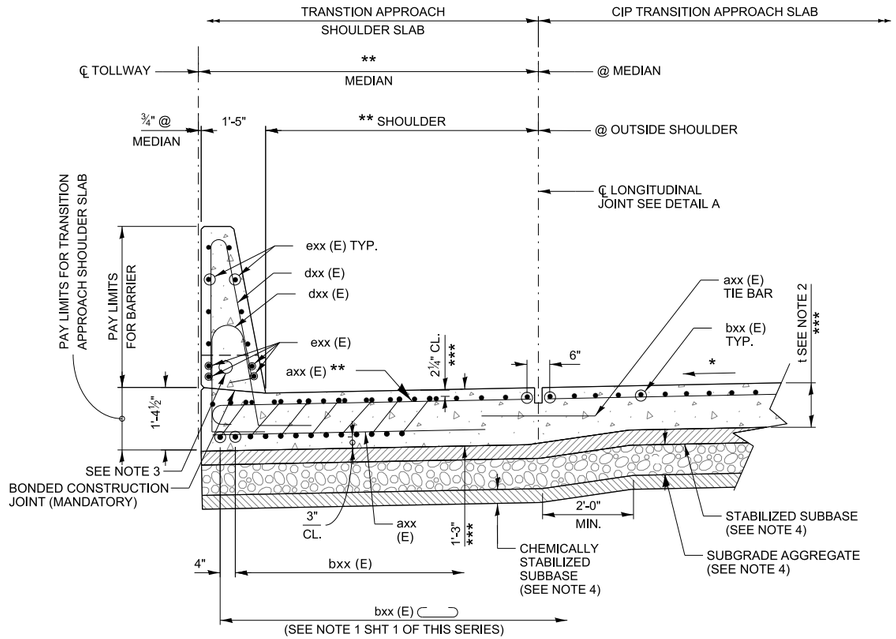
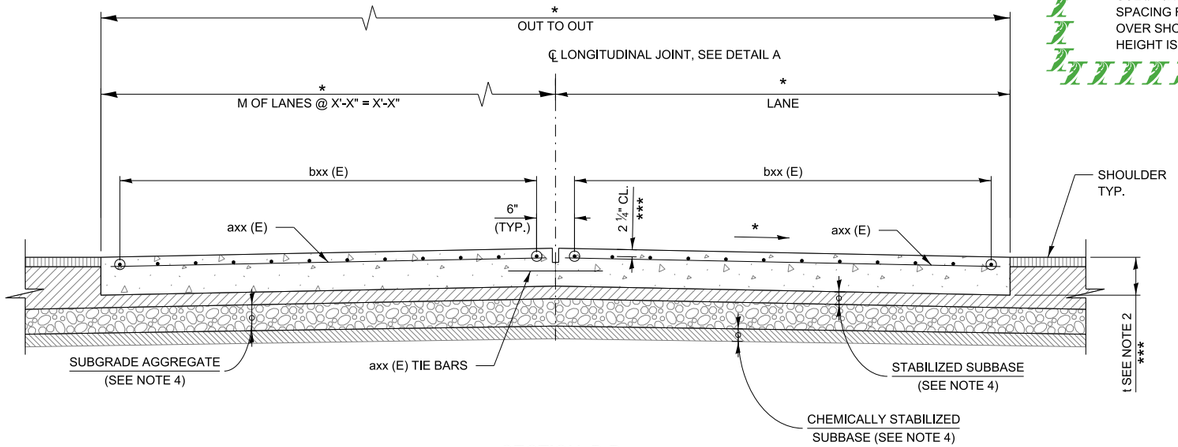


SECTION M-M
CIP TRANSITION APPROACH SHOULDER SLAB



SECTION B-B
CIP TRANSITION APPROACH SLAB

NOTE TO DESIGNER

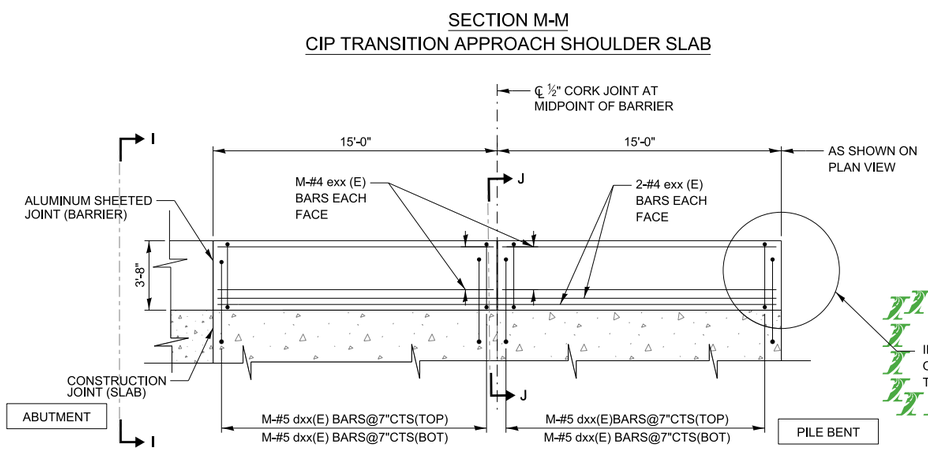
** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".

NOTE TO DESIGNER

* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH +1'-0" FOR GUARDRAIL OR +2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.

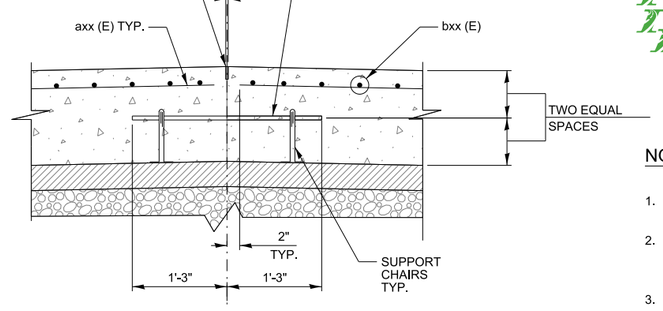
*** INCREASE BY ¼" FOR SMOOTHNESS GRINDING



CIP BARRIER ELEVATION

NOTE TO DESIGNER

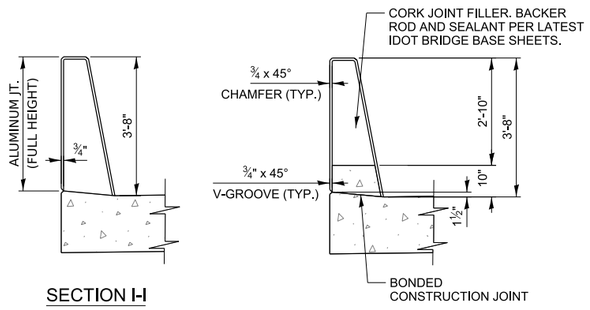
IF GUARDRAIL PROVIDED, SEE SHEET 7 OF THIS SERIES FOR TYPICAL BARRIER TRANSITION DETAIL



DETAIL A
TYPICAL LONGITUDINAL JOINT
(IN CIP TRANSITION SLAB ONLY)

NOTES:

1. SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES.
2. THE DIMENSION t IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
3. COORDINATE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.
4. THE THICKNESS OF THE STABILIZED SUBBASE, SUBGRADE AGGREGATE AND CHEMICALLY STABILIZED SUBGRADE SHALL MATCH THE ADJACENT ROADWAY PAVEMENT SECTIONS.
5. IF THE CONTRACTOR ELECTS TO SLIPFORM THE PARAPET THEN THE PARAPET CROSS-SECTIONAL AREA, PARAPET REINFORCEMENT BARS CLEARANCES AND THE APPROACH SLAB REINFORCEMENT BARS SHALL BE REVISED ACCORDINGLY TO ACCOUNT FOR THE ADDITIONAL SLAB WIDTH TO ALLOW SLIPFORM.
6. THE ⅛" ALUMINUM SHEET SHALL BE ASTM B 209 ALLOY 3003-H14 AND COATED TO MINIMIZE REACTION WITH WET CONCRETE.



PARAPET JOINT DETAIL

NOTE TO DESIGNER

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Illinois Tollway

PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB

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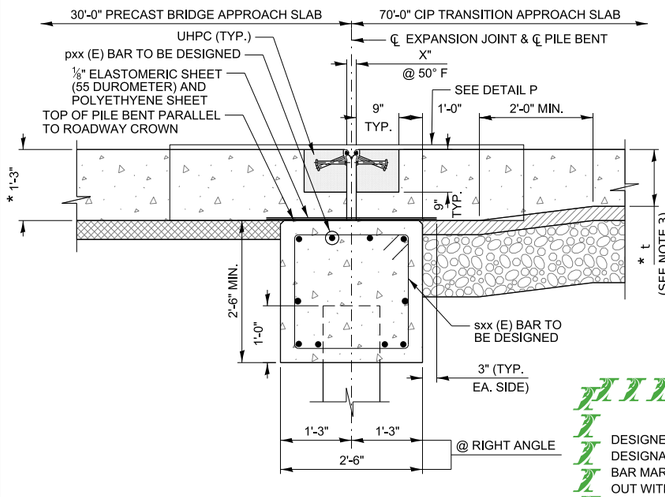
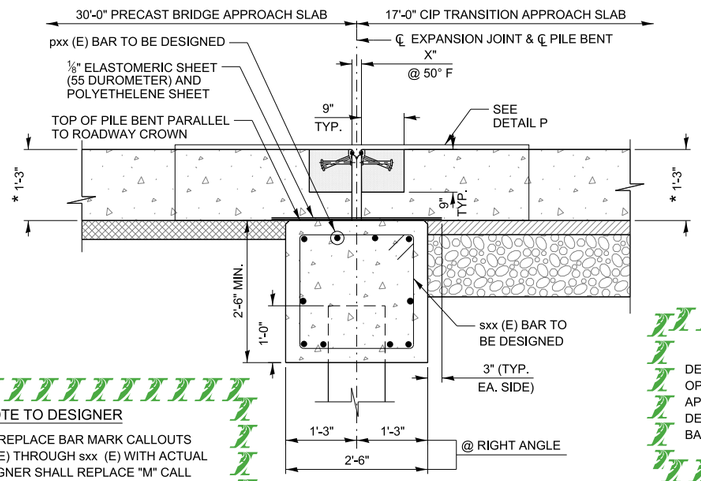


SECTION D-D



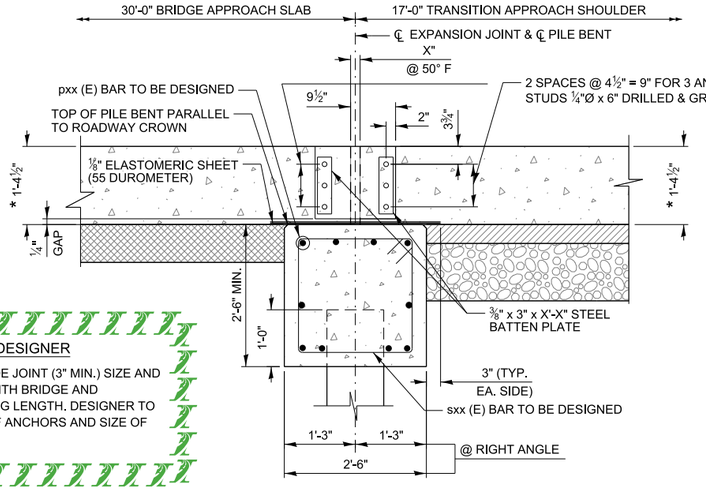
SECTION E-E

NOTE TO DESIGNER

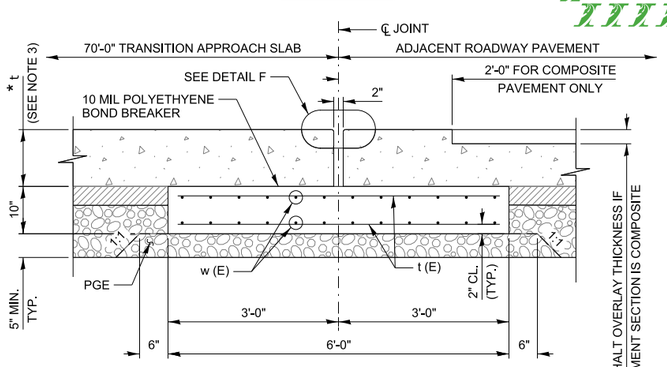
DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

NOTE TO DESIGNER

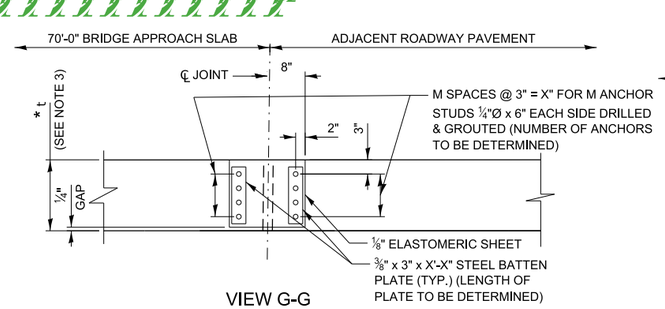
DESIGNER SHALL PROVIDE JOINT (3" MIN.) SIZE AND OPENING CONSISTENT WITH BRIDGE AND APPROACH CONTRIBUTING LENGTH. DESIGNER TO DETEREMINE NUMBER OF ANCHORS AND SIZE OF BATTEN PLATE.



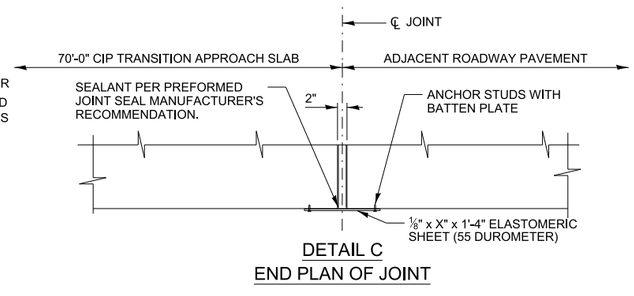
SECTION E'-E'
END ELEVATION OF EXPANSION JOINT



SECTION F-F



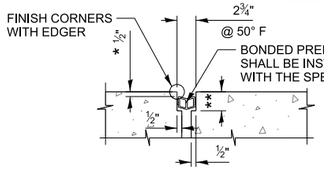
VIEW G-G
END ELEVATION OF JOINT



DETAIL C
END PLAN OF JOINT

NOTES:

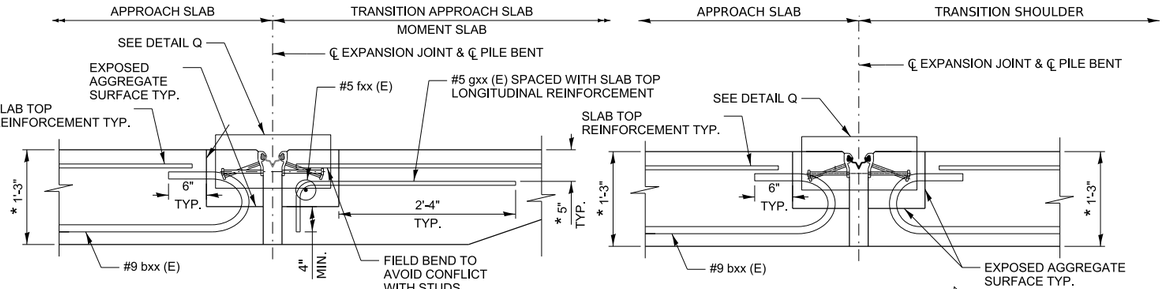
1. IN VIEW E'-E' AND VIEW G-G, ANCHOR STUDS SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 1006.09 OF THE IDOT STANDARD SPECIFICATIONS. STEEL PLATES, ANCHOR STUDS, NUTS AND WASHERS SHALL BE GALVANIZED.
2. THE THICKNESSES OF STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT SECTIONS.
3. THE DIMENSION t IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
4. FOR PILE BENT DETAILS AND QUANTITIES SEE SHEET XX.
5. FOR GENERAL NOTES SEE SHEET 2 OF THIS SERIES.



DETAIL F
TRANSITION JOINT
** PER MANUFACTURERES RECOMMENDATION

NOTE TO DESIGNER

INCORPORATE #5 fxx (E) AND #5 gxx (E) IN MOMENT SLAB FOR THE JOINT HEADER BETWEEN APPROACH SLAB AND MOMENT SLAB.



JOINT HEADER REINFORCEMENT DETAIL

NOTE TO DESIGNER

* INCREASE BY ¼" FOR SMOOTHNESS GRINDING

NOTE TO DESIGNER

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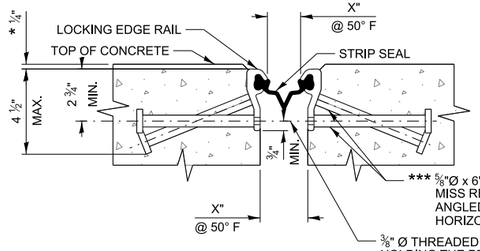
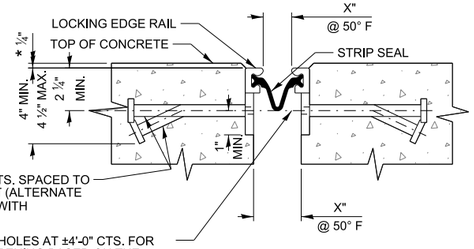


SHOWING ROLLED RAIL JOINT



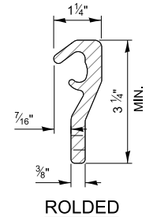
SHOWING WELDED RAIL JOINT

DETAIL P

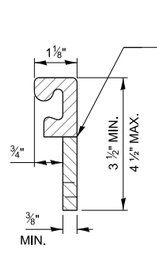
*** GRANULAR OR SOLID FLUX FILLED HEADED STUDS CONFORMING TO ARTICLE 1006.32 OF THE STD. SPECS., AUTOMATICALLY END WELDED.

LEGEND

- CONCRETE
- STABILIZED SUBBASE
- SUBGRADE AGGREGATE
- GRANULAR SUBBASE
- GRANULAR SUBBASE



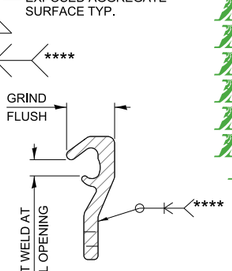
ROLDED (EXTRUDED) RAIL



WELDED RAIL

LOCKING EDGE RAIL

**** BACK GOUGE NOT REQUIRED IF COMPLETE JOINT PENETRATION IS VERIFED BY MOCK-UP.



LOCKING EDGE RAIL SPLICE

THE INSIDE OF THE LOCKING EDGE RAIL GROOVE SHALL BE FREE OF WELD RESIDUE. ROLLED RAIL SHOWN, WELDED RAIL SIMILAR.

Illinois Tollway

PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB

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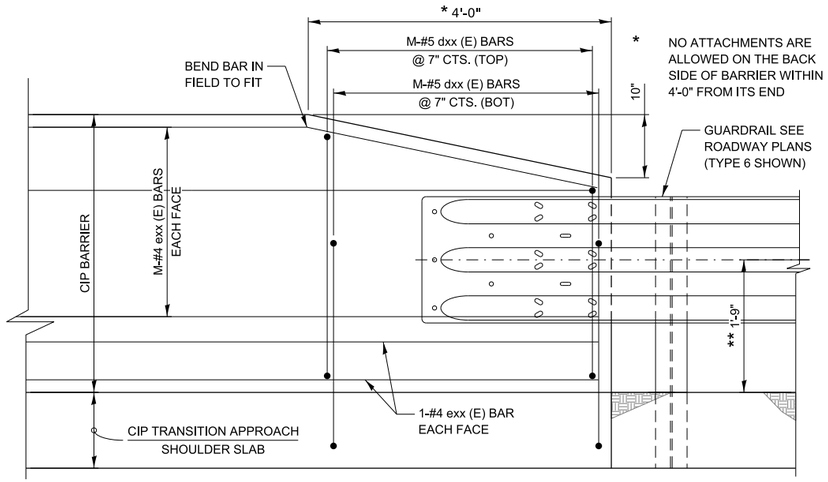


** MEASURED AT A POINT 1'-0" FROM FACE OF RAIL, OR FROM EDGE OF SHOULDER/EDGE OF GUTTER WHEN EDGE IS MORE THAN 1'-0" TO FACE OF RAIL

TYPICAL CIP BARRIER TRANSITION DETAIL

(CURB AND GUTTER NOT SHOWN FOR CLARITY)

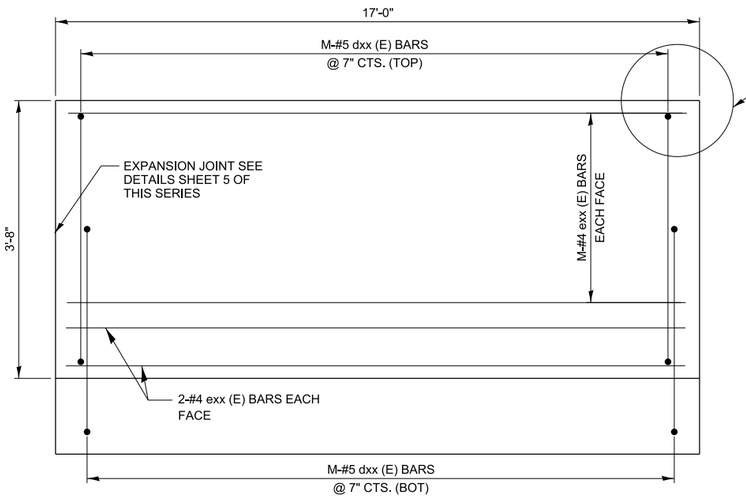
NOTE TO DESIGNER

USE TYPICAL BARRIER TRANSITION DETAILS AS REQUIRED

NOTE TO DESIGNER

*** ADD PAY ITEM FOR OTHER JOINT SIZES AS APPLICABLE.

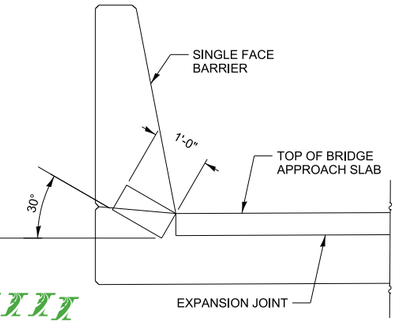
**** SELECT APPLICABLE PAY ITEM TO MATCH THE ADJACENT BRIDGE.



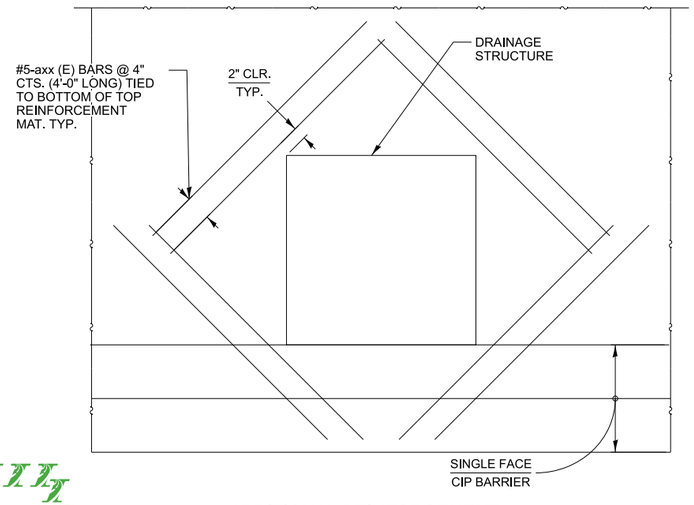
CIP TRANSITION APPROACH SHOULDER SLAB BARRIER ELEVATION

NOTE TO DESIGNER

IF GUARDRAIL PROVIDED, SEE TYP. BARRIER TRANSITION DETAIL



SECTION H-H



ADDITIONAL REINFORCEMENT AT DRAINAGE STRUCTURES

CUT TRANSVERSE axx (E) BARS AND LONGITUDINAL bxx (E) BARS IN SLAB TO CLEAR DRAINAGE STRUCTURE. RESPACE dxx (E) BARS TO MISS DRAINAGE STRUCTURE.

NOTE TO DESIGNER

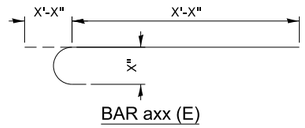
BRIDGE DECK GROOVING LIMITS ARE TRAVEL LANES ONLY.

NOTE TO DESIGNER

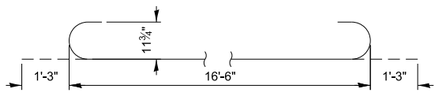
QUANTITIES FOR DIAMOND GRINDING, IF APPLICABLE, INCLUDE TRANSITION AND TRANSITION APPROACH SHOULDER. LIMITS ARE THE FULL WIDTH LESS 2FT AT EACH PARAPET.

NOTE TO DESIGNER

DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.



BAR axx (E)



BAR bxx (E)

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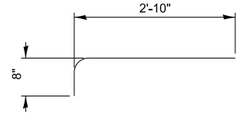
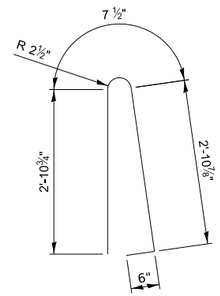
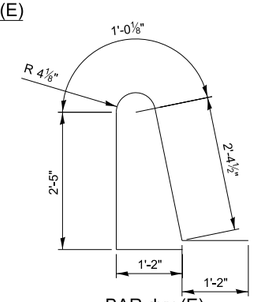


BAR gxx (E)



BAR dxx (E)



BAR dxx (E)

NOTE TO DESIGNER

BARS dxx (E) SHOWN IN THIS SHEET ARE APPLICABLE FOR 44" BARRIERS ONLY. UPDATE BASED ON BARRIER TYPE.

BILL OF MATERIAL FOR CIP TRANSITION APPROACH SHOULDER AND CIP TRANSITION APPROACH SLAB

BAR	NO.	SIZE	LENGTH	SHAPE
axx (E)				
axx (E)				
bxx (E)		#9	19'-0"	
bxx (E)				
dxx (E)		#5	8'-2"	
fxx (E)		#5		
gxx (E)		#5	3'-6"	
t(E)		#4	5'-8"	
w(E)		#5		

	PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
****	50300260	BRIDGE DECK GROOVING	SQ. YD.	
	50300300	PROTECTIVE COAT	SQ. YD.	
	JI420041	TRANSITION APPROACH SLAB	SQ. YD.	
	JI420046	TRANSITION APPROACH SHOULDER SLAB	SQ. YD.	
	JS503160	DIAMOND GRINDING AND SURFACE SMOOTHNESS FOR BRIDGE SECTIONS	SQ. YD.	
	JT421510	SLEEPER SLAB	SQ. YD.	
***	JT525130	BONDED PREFORMED JOINT SEAL, 3 IN.	FT.	
****	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ. YD.	
*		REINFORCEMENT BARS, EPOXY COATED	LBS.	

* FOR INFORMATION ONLY

BILL OF MATERIAL FOR CIP BARRIERS

BAR	NO.	SIZE	LENGTH	SHAPE
dxx (E)		#5	7'-0"	
exx (E)		#4		

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	
50300300	PROTECTIVE COAT	SQ. YD.	
50800205	REINFORCEMENT BARS, EPOXY COATED	LBS.	

NOTES:

1. THE AREA OF EACH TRANSITION APPROACH SLAB AND TRANSITION APPROACH SHOULDER SLAB WILL BE MEASURED IN PLACE AND COMPUTED IN SQUARE YARDS. SEE SPECIAL PROVISIONS FOR OTHER WORK THAT IS INCLUDED IN THE COST OF THIS ITEM.
2. THE DIMENSION t IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
3. FOR GENERAL NOTES SEE SHEET 1 OF THIS SERIES.
4. COORDINATE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.

Illinois Tollway

PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB

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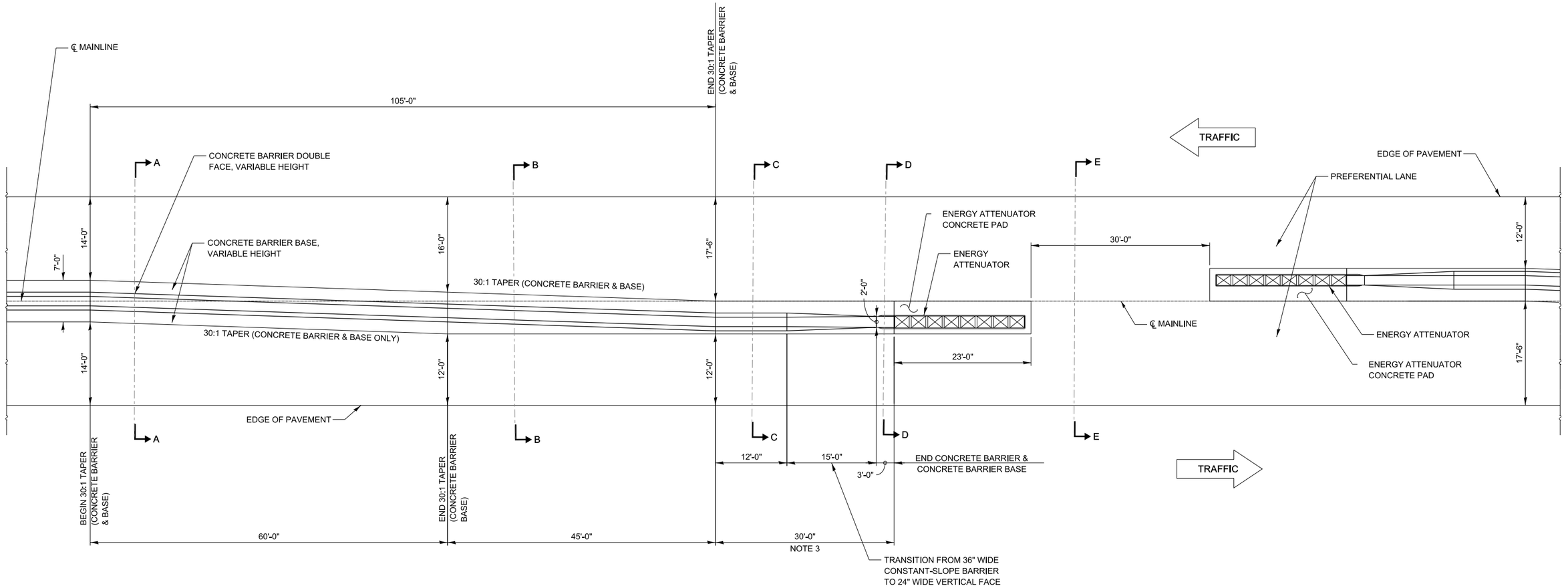

NOTES:

1. SEE SHEET 2 OF THIS SERIES FOR SECTIONS A-A THROUGH E-E.
2. THE TAPER SHOWN FOR THE CONCRETE BARRIER AND CONCRETE BARRIER BASE IS DUPLICATED FOR THE OPPOSING TRAFFIC DIRECTION.
3. CONCRETE BARRIER SHALL BE PINNED TO BARRIER BASE BY PAIRS OF 12" TIE BARS AT 30" CENTERS IN THE LAST 30' OF THE CONCRETE BARRIER.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

EMERGENCY TURNAROUND MEDIAN WIDTH ≥ 35 FT

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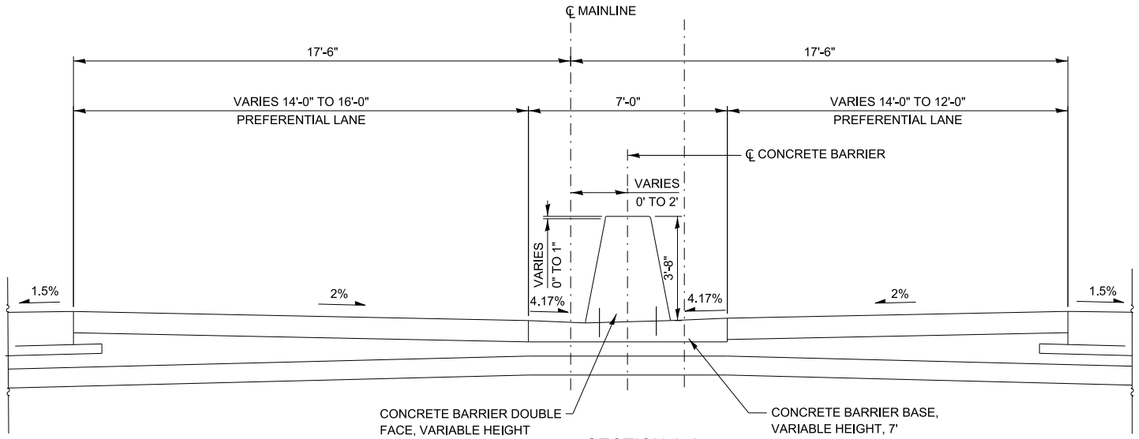
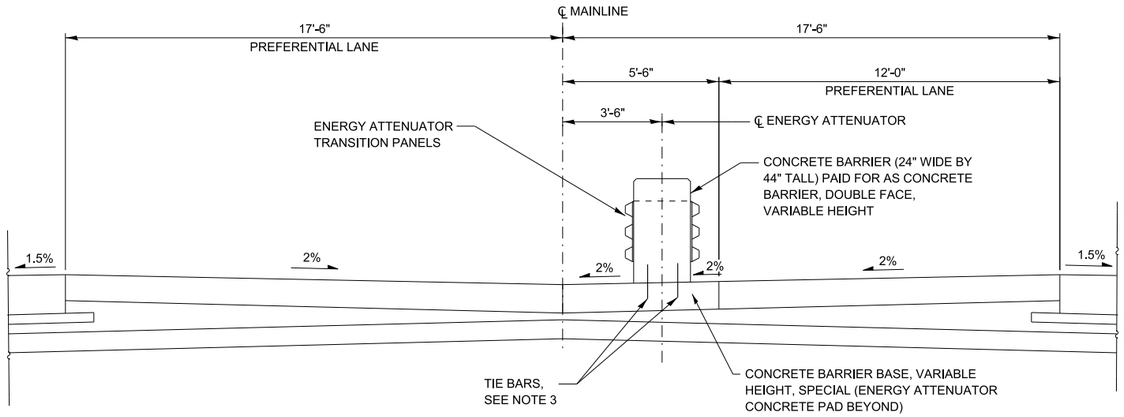


SECTION A-A



SECTION D-D

SECTION B-B

SECTION E-E

SECTION C-C

NOTE TO DESIGNER

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Illinois Tollway

EMERGENCY TURNAROUND MEDIAN WIDTH ≥ 35 FT

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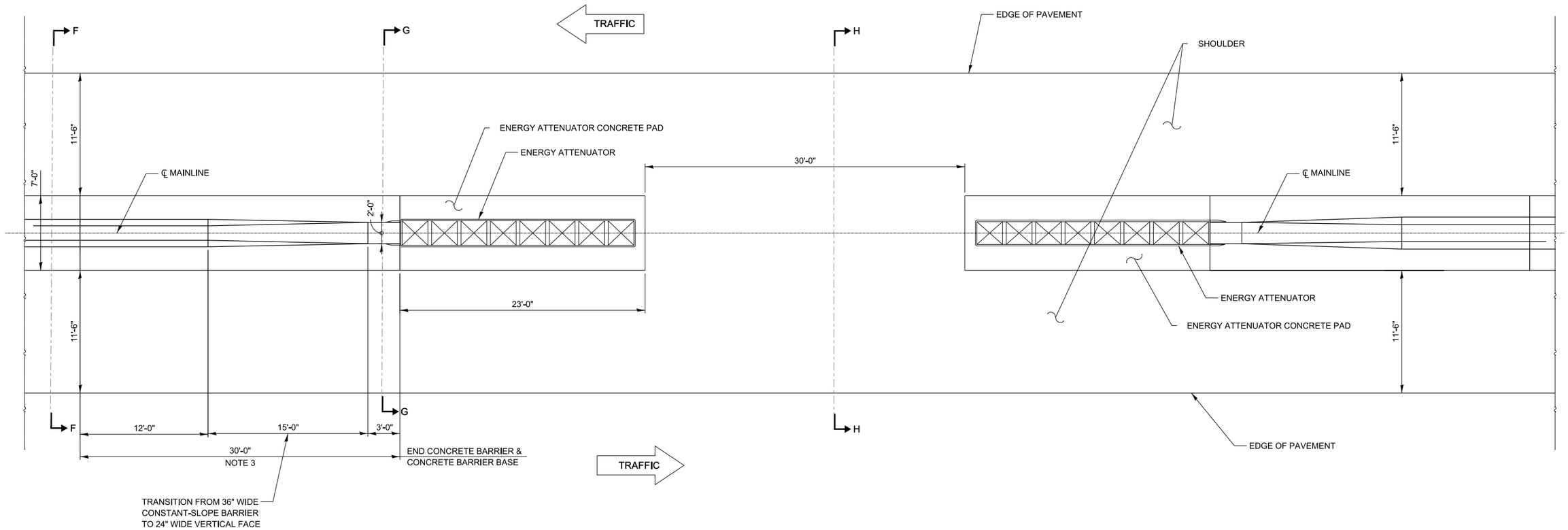

NOTES:

1. SEE SHEET 4 OF THIS SERIES FOR SECTIONS F-F THROUGH H-H.
2. THE TAPER SHOWN FOR THE CONCRETE BARRIER AND CONCRETE BARRIER BASE IS DUPLICATED FOR THE OPPOSING TRAFFIC DIRECTION.
3. CONCRETE BARRIER SHALL BE PINNED TO BARRIER BASE BY PAIRS OF 12" TIE BARS AT 30" CENTERS IN THE LAST 30' OF THE CONCRETE BARRIER.

NOTE TO DESIGNER

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Illinois Tollway

EMERGENCY TURNAROUND MEDIAN WIDTH ‹ 35 FT

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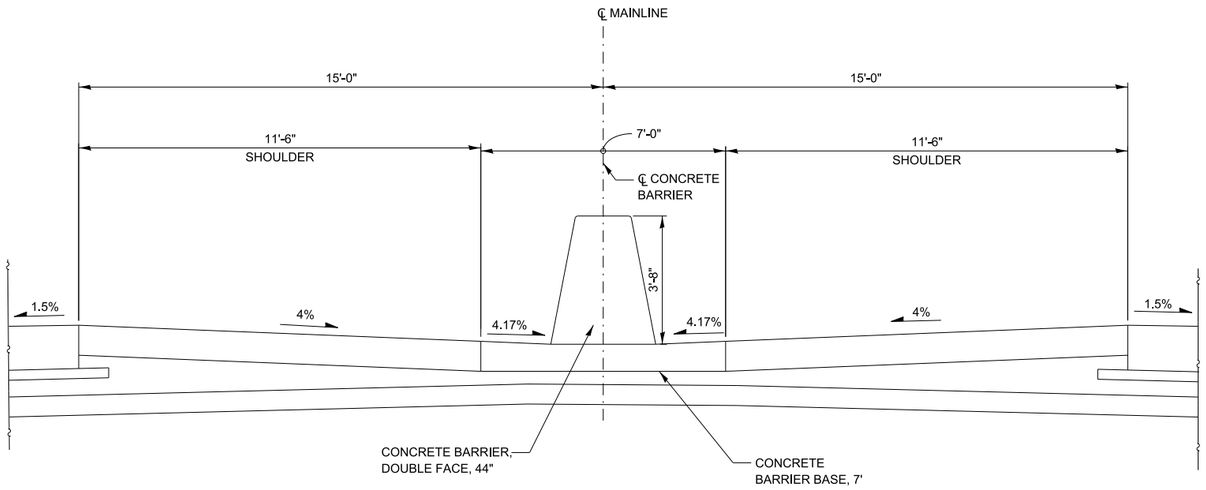
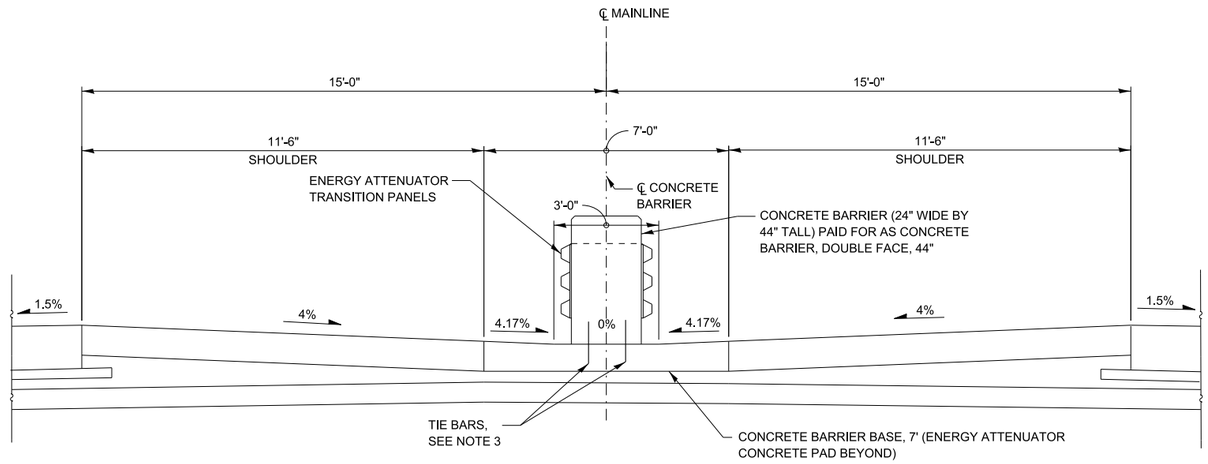
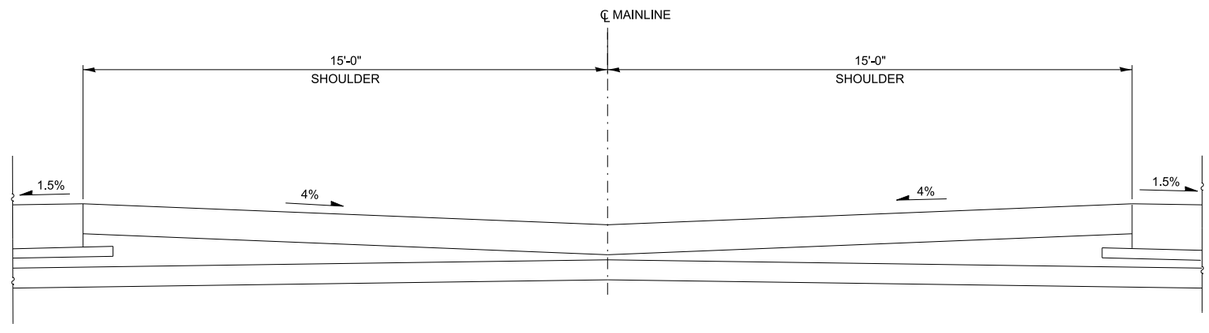


SECTION F-F



SECTION G-G



SECTION H-H

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

EMERGENCY TURNAROUND MEDIAN WIDTH ‹ 35 FT

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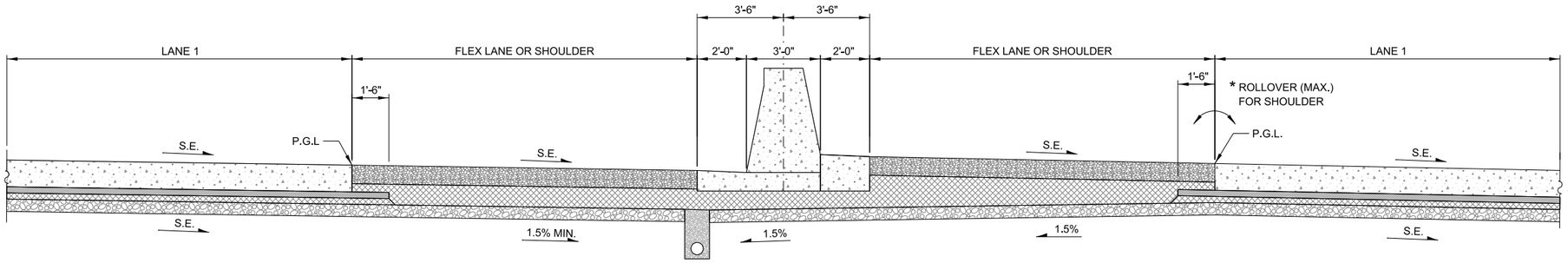
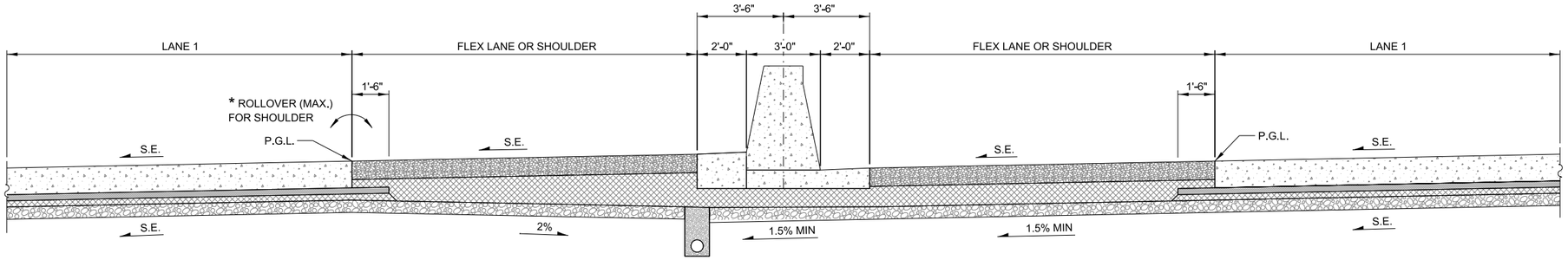
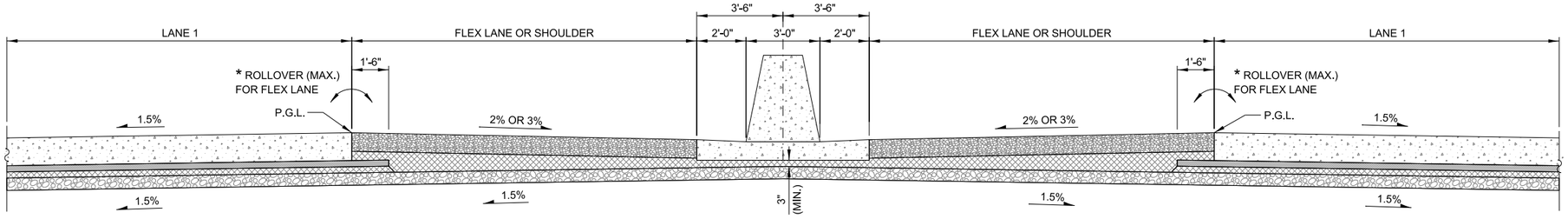
2022-03	M-RDY-411	4 OF 4



SUBGRADE SLOPES AND PIPE UNDERDRAIN LOCATION
(SUPERELEVATED SECTION, CURVE TO THE RIGHT)



SUBGRADE SLOPES AND PIPE UNDERDRAIN LOCATION
(SUPERELEVATED SECTION, CURVE TO THE LEFT)



SUBGRADE SLOPES
(NORMAL CROWN SECTION)

NOTE TO DESIGNER

THE UNDERDRAIN CAN BE LOCATED ON EITHER SIDE OF THE MEDIAN. DESIGNER TO DETERMINE WHICH SIDE BASED ON CONSTRUCTION STAGING AND PROJECT SPECIFIC NEEDS.

NOTE TO DESIGNER

IN CASES WHERE 1.5% SUBGRADE CROSS SLOPE AND 3" MIN SUBGRADE CANNOT BE MET, AN UNDERDRAIN OR ALTERNATIVE DESIGN NEEDS TO BE EVALUATED.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

* REFER TO ROADWAY DESIGN CRITERIA SECTION 2.4.9 FOR MAX ROLLOVER VALUES.

Illinois Tollway

ROADWAY SUBGRADE SLOPES - MEDIAN BARRIER

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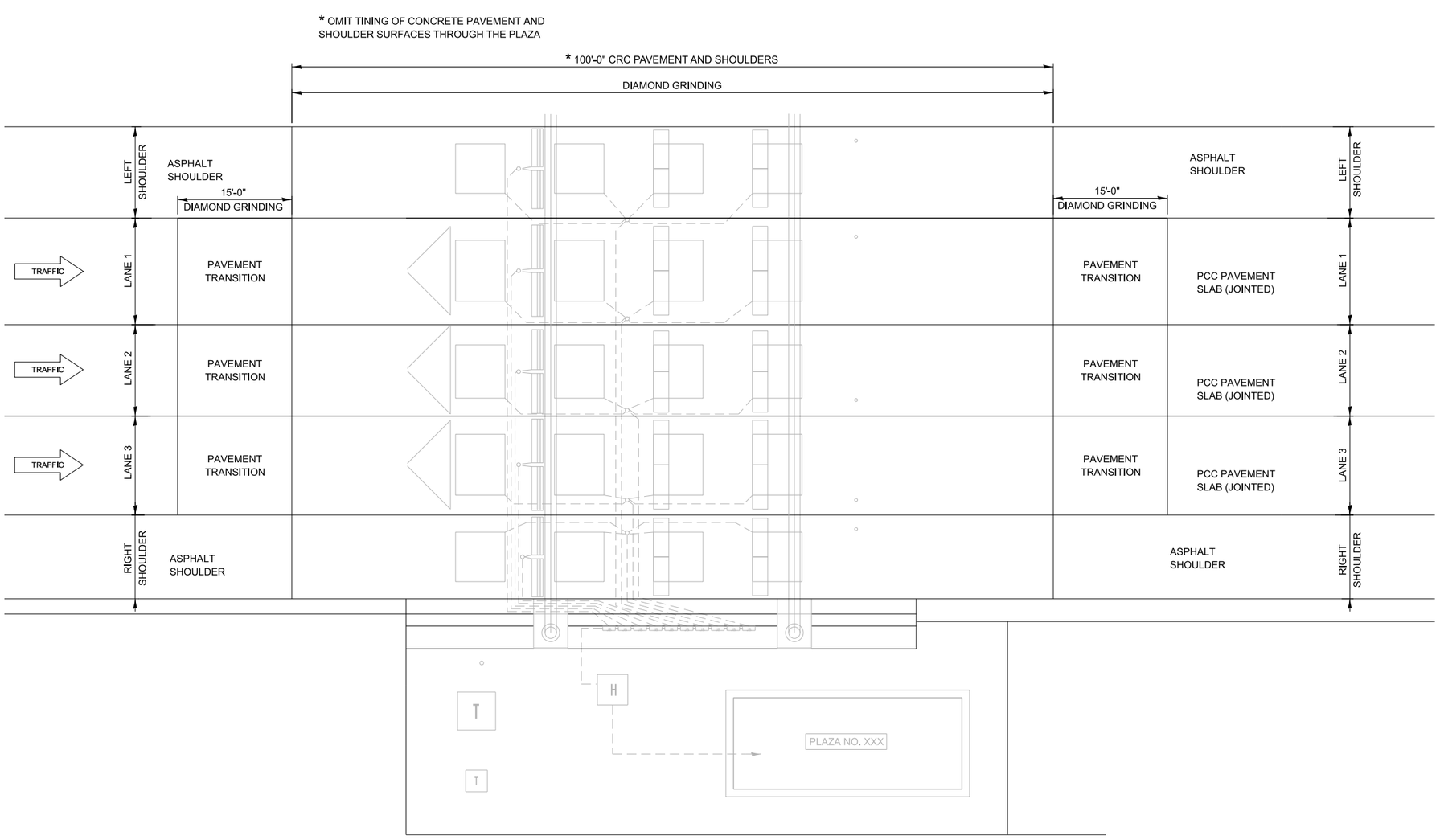
2023-03	M-RDY-412	1 OF 1



NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL LONGITUDINAL GROOVING AT THE TOLL PLAZA PAVEMENT, BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER WITH APPROPRIATE GEOMETRY (LANE CONFIGURATION AND WIDTHS, SHOULDER WIDTHS, ETC.) AND PAVEMENT DESIGN PRIOR TO INSERTION INTO A CONTRACT.
THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

DIAMOND GRINDING OF PLAZA

VERSION:	STANDARD:	SHEET:
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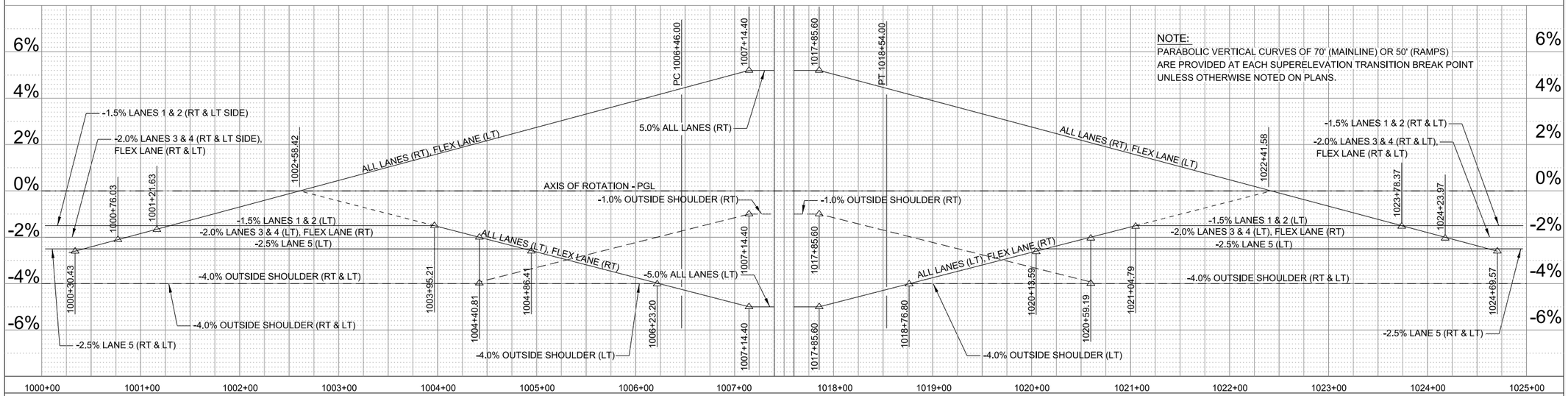
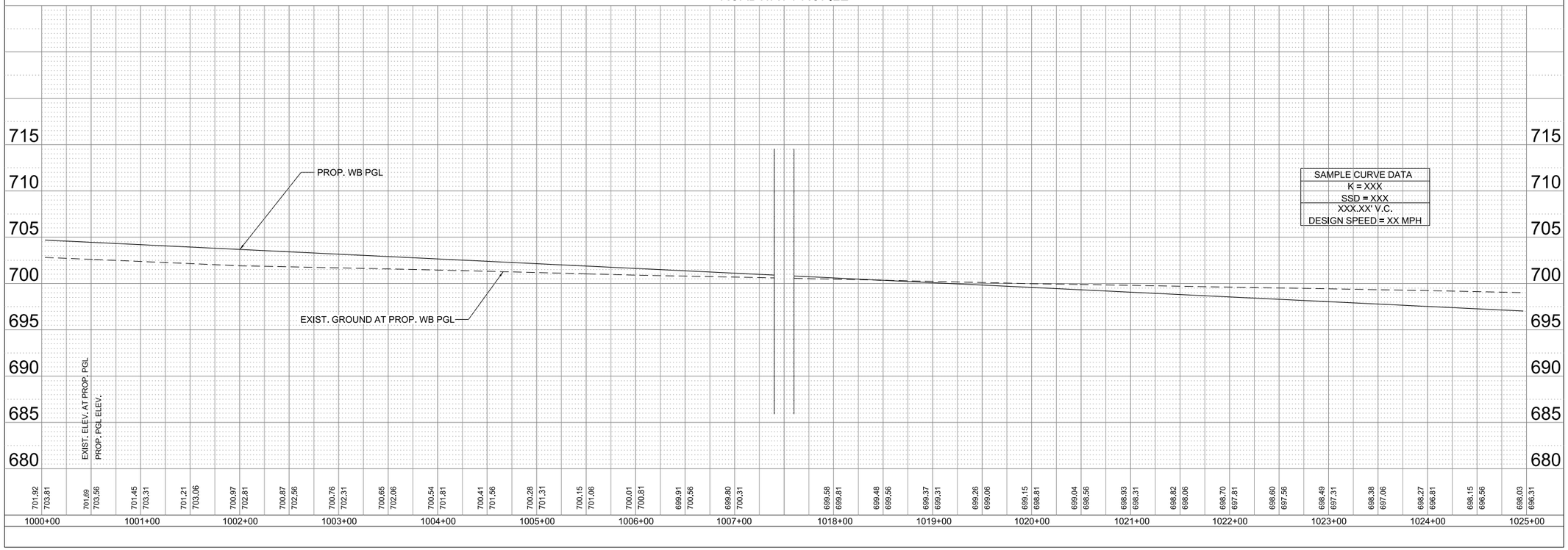
SUPERELEVATION DIAGRAM



ROADWAY PROFILE



NOTE TO DESIGNER

REFER TO ROADWAY DESIGN CRITERIA FOR PARABOLIC VERTICAL CURVE REQUIREMENTS AT THE SE TRANSITION POINTS TO MEET PAVEMENT SMOOTHNESS CRITERIA.

NOTE TO DESIGNER

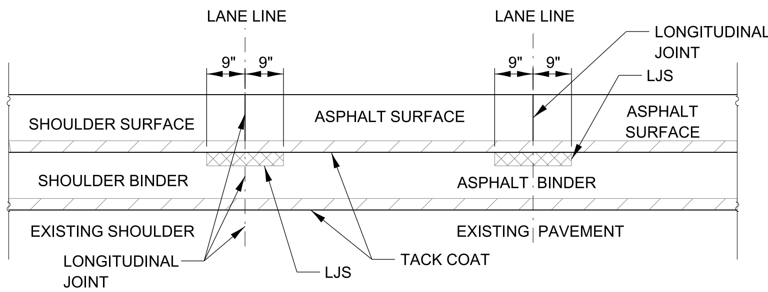
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

ROADWAY PROFILE AND SUPERELEVATION

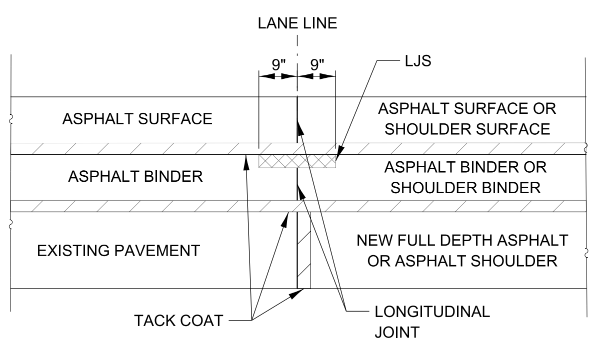
VERSION:	STANDARD:	SHEET:
2020-03	M-RDY-414	1 OF 1

TYPICAL LJS
(FIGURES 1 & 2)



THE LJS APPLICATION SHALL BE CENTERED UNDER THE ASPHALT SURFACE JOINT, LOCATION OF BINDER JOINT MAY VARY.

FIGURE 1
TYPICAL LJS PLACEMENT



WHERE ASPHALT IS PLACED ACROSS AN EXISTING JOINT OR ACROSS A WIDENING JOINT (TYPICALLY FULL DEPTH ASPHALT OR SHOULDER WIDENING ADJACENT TO EXISTING OR NEWLY CONSTRUCTED PCC), THE LJS SHALL BE CENTERED ACROSS THE EXISTING OR WIDENING JOINT.

FIGURE 2
TYPICAL LJS PLACEMENT -
ASPHALT WIDENING

NOTE TO DESIGNER

THIS WORK SHALL CONSIST OF PROVIDING AND PLACING LONGITUDINAL JOINT SEALANT (LJS) ON ASPHALT LONGITUDINAL CONSTRUCTION JOINTS. THE LJS WILL BE PLACED AT PAVING LANE JOINTS BENEATH THE FINAL SURFACE COURSE AS IDENTIFIED IN THE PLANS.

LEGEND

TACK COAT

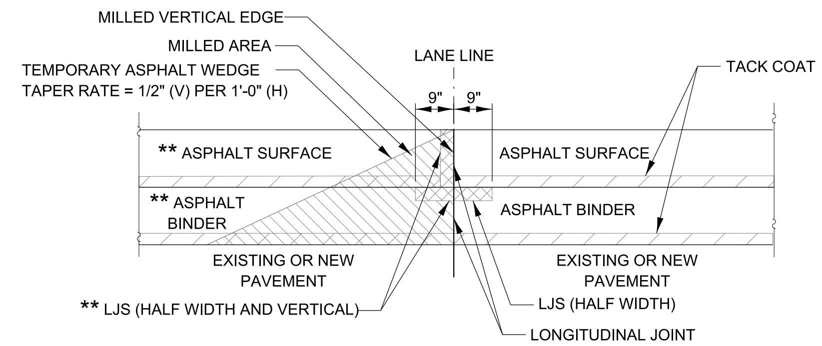
LONGITUDINAL JOINT SEALANT (LJS)

MILLED AREA

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

STAGING LJS
(FIGURES 3 & 4)

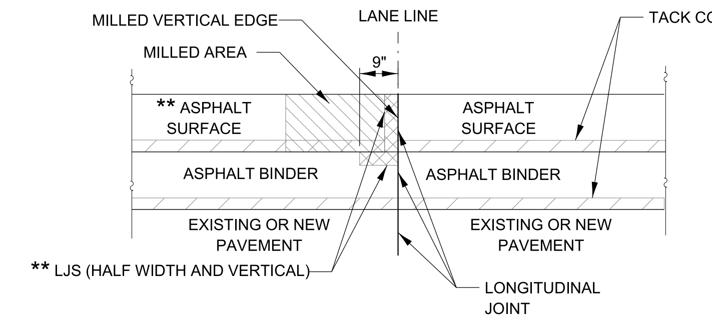


** PLACED DURING SUBSEQUENT STAGE

WHERE 2 LAYERS OF ASPHALT ARE SPECIFIED IN THE PLANS, AND THE LANE(S) ARE REQUIRED TO BE OPENED TO TRAFFIC BEFORE THE FINAL LAYER OF SURFACE IS COMPLETE, PRIOR TO SHIFTING TRAFFIC INTO THE LANE CONFIGURATION SHOWN ON THE PLANS WITH A 2" OR GREATER DROP OFF, A TEMPORARY ASPHALT WEDGE SHALL BE CONSTRUCTED.

WEDGE OPTION, AFTER THE WEDGE IS REMOVED, LJS SHALL BE PLACED AT HALF WIDTH UNDER THE MILLED AREA AT THE LONGITUDINAL JOINT AND ON THE MILLED VERTICAL EDGE.

FIGURE 3
MILLED WEDGE AREA



** PLACED DURING SUBSEQUENT STAGE

EXTENDED PAVING OPTION, WHERE ASPHALT SURFACE EXTENDS BEYOND THE UNDERLYING PAVEMENT JOINT. AFTER THE WIDENED SURFACE IS MILLED BACK TO THE JOINT, THE LJS SHALL BE PLACED AT HALF WIDTH UNDER THE MILLED AREA AT THE LONGITUDINAL JOINT AND ON THE MILLED VERTICAL EDGE.

FIGURE 4
MILLED SURFACE LAYER

LONGITUDINAL JOINT SEALANT SCHEDULE OF QUANTITIES					
LOCATION	NUMBER OF JOINTS		QUANTITY (FOOT)		
	FULL WIDTH	HALF WIDTH	LONGITUDINAL JOINT SEALANT, FULL WIDTH	LONGITUDINAL JOINT SEALANT, HALF WIDTH	LONGITUDINAL JOINT SEALANT, HALF WIDTH AND VERTICAL
			JI420906	JI420907	JI420908
XXX+XX TO XXX+XX					
TOTAL					

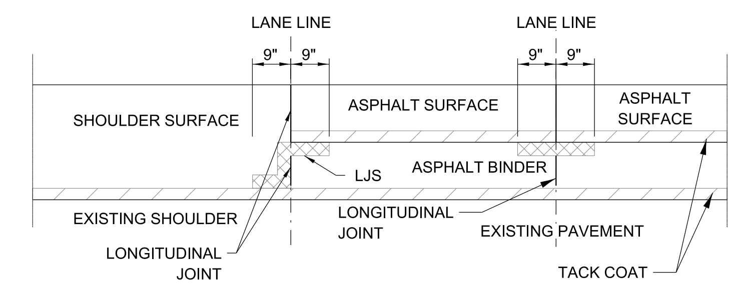


FIGURE 5
TYPICAL LJS PLACEMENT - UNEQUAL SURFACE THICKNESSES

NOTE TO DESIGNER

FIGURE 5 SHALL BE INCLUDED WHEN SHOULDER SURFACE AND ASPHALT SURFACE OF UNEQUAL THICKNESSES ARE TO BE CONSTRUCTED.

NOTE TO DESIGNER

THIS TABLE SHALL BE ADDED TO THE SCHEDULE OF QUANTITIES AND REMOVED FROM THIS SHEET.

Illinois Tollway

LONGITUDINAL JOINT SEALANT

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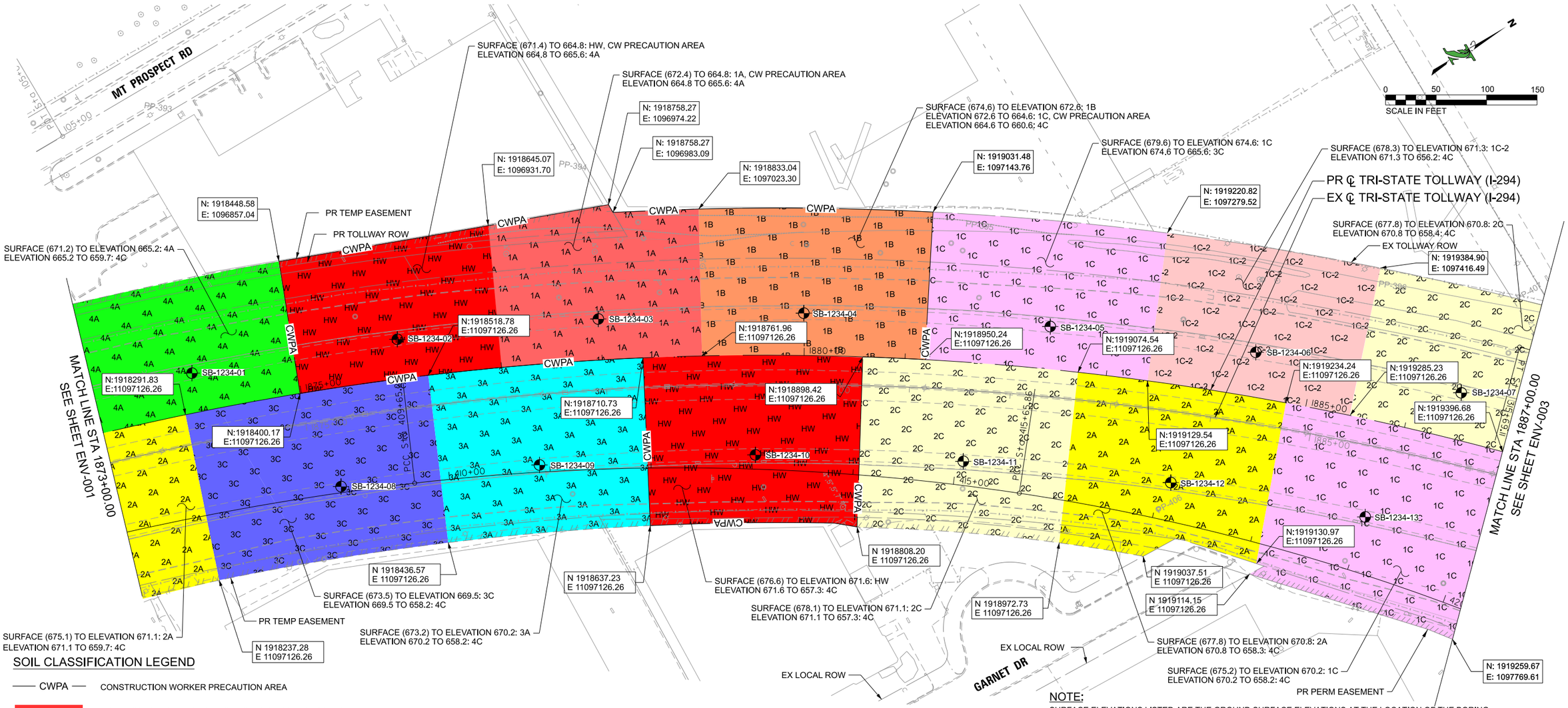

SOIL CLASSIFICATION LEGEND

CWPA	CONSTRUCTION WORKER PRECAUTION AREA
HW HW	HAZARDOUS WASTE, REUSE TYPE A SOILS NOT APPROVED
1A 1A	1A: DISPOSAL TYPE 1 NON-SPECIAL WASTE, REUSE TYPE A SOILS NOT APPROVED
1B 1B	1B: DISPOSAL TYPE 1 NON-SPECIAL WASTE, REUSE TYPE B SOILS APPROVED WITH RESTRICTIONS
1C 1C	1C: DISPOSAL TYPE 1 NON-SPECIAL WASTE, REUSE TYPE C SOILS APPROVED FOR REUSE
1C-2 1C-2	1C-2: DISPOSAL TYPE 1 NON-SPECIAL WASTE, SOILS APPROVED FOR REUSE ON TOLLWAY ROW BUT SOILS NOT APPROVED ON [INSERT NAME OF ROW OWNER] ROW
2A 2A	2A: DISPOSAL TYPE 2, REUSE TYPE A SOILS NOT APPROVED
2C 2C	2C: DISPOSAL TYPE 2, REUSE TYPE C SOILS APPROVED FOR REUSE
3A 3A	3A: DISPOSAL TYPE 3, REUSE TYPE A SOILS NOT APPROVED
3C 3C	3C: DISPOSAL TYPE 3, REUSE TYPE C SOILS APPROVED FOR REUSE
4A 4A	4A: DISPOSAL TYPE 4, REUSE TYPE A SOILS NOT APPROVED
4C 4C	4C: DISPOSAL TYPE 4, REUSE TYPE C SOILS APPROVED FOR REUSE
GWO GWO	IEPA APPROVED GROUNDWATER ORDINANCE
	UNCLASSIFIED SOIL

NOTE TO DESIGNER

UNCLASSIFIED SOIL

1. IDENTIFY ANY AREAS THAT WILL BE EXCAVATED AS PART OF THIS CONTRACT BUT WERE UNCLASSIFIED FOR SOIL REUSE AND DISPOSAL DURING DESIGN AS UNCLASSIFIED SOIL. FOR EXAMPLE LOCATIONS WHERE ACCESS WAS NOT GRANTED BY THE RIGHT-OF-WAY OWNER, THAT WERE INACCESSIBLE DURING DESIGN, OR THAT WERE ADDED LATE IN THE DESIGN PROCESS.

   IF, IN A SPECIFIC LOCATION, NONE OF THE EXCAVATION WAS CLASSIFIED (NO BORINGS PERFORMED IN THAT LOCATION AND THEREFORE THERE IS NO DATA IN ALL THREE DIMENSIONS), THEN SHOW THE UNCLASSIFIED SOIL AREA IN PLAN VIEW.

   IF, IN A SPECIFIC LOCATION, SOME OF THE EXCAVATION WAS CLASSIFIED BUT NOT FOR THE FULL EXTENT OF THE ELEVATIONS TO BE EXCAVATED (BORINGS WERE PERFORMED IN THAT LOCATION BUT EXCAVATION IS GOING DEEPER, OR FOR AREAS ON A SLOPE, HIGHER, THAN THE EXTENT CLASSIFIED), THEN PROVIDE THE DEPTH OF UNCLASSIFIED SOIL WHEN LISTING THE SOIL TYPES BY ELEVATION.

2. PROVIDE PHASE I ESA OR PESA IN THE ONLINE PLAN ROOM FOR THE CONTRACTOR.

3. ADD NOTE: UNCLASSIFIED SOIL SHALL BE MANAGED AS TYPE 1A.

IEPA APPROVED GROUNDWATER ORDINANCE

4. IF THERE IS TYPE B SOIL BUT NO IEPA APPROVED GROUNDWATER ORDINANCE, ADD NOTE: BECAUSE THERE IS NO LOCATION WHERE TYPE B SOILS CAN BE REUSED WITHIN THE CONTRACT LIMITS, THESE SOILS ARE NOT APPROVED FOR REUSE ON CONTRACT *XXX*.

NOTE:

SURFACE ELEVATIONS LISTED ARE THE GROUND SURFACE ELEVATIONS AT THE LOCATION OF THE BORING. ACTUAL SURFACE ELEVATIONS VARY. FOR UNPAVED AREAS, CLASSIFICATION APPLIES STARTING AT THE EXISTING GROUND SURFACE ELEVATION. FOR PAVED AREAS CLASSIFICATION APPLIES STARTING AT THE BOTTOM OF SUBGRADE AGGREGATE.
SOIL TYPES MAY VARY BY ELEVATION. THE SOIL TYPE SHOWN IN PLAN VIEW IS THE MOST RESTRICTIVE, NOT NECESSARILY THE SOIL TYPE AT THE SURFACE. SEE CALL OUTS FOR ALL SOIL TYPES AT VARIOUS DEPTHS.

NOTE TO DESIGNER

THIS BASE SHEET WAS CREATED USING OPENROADS DESIGNER VERSION 2022 RELEASE 3 (10.12.03.02) AND THE ILLINOIS TOLLWAY CADD STANDARDS RELEASED JUNE 2024.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

ENVIRONMENTAL SOIL CLASSIFICATION

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NOTE TO DESIGNER

FOR PLAZA BARRIER TRANSITION AND BARRIER FOUNDATION DETAILS, REFER TO ILLINOIS TOLLWAY STANDARD DRAWING F13.

NOTE TO DESIGNER

* WIDENING OF GUTTER IS ONLY APPLICABLE WHEN APPROACH SHOULDER WIDTH IS GREATER THAN 14'. OTHERWISE REFER TO ILLINOIS TOLLWAY STANDARD DRAWING F13.

** WIDTH SHOWN IS FOR PREFERENTIAL LANE. IF SHOULDER, THEN MININUM WIDTH SHALL BE AS REQUIRED PER BUSINESS SYSTEMS MANUAL, TABLE 4.1.1.

NOTE TO DESIGNER

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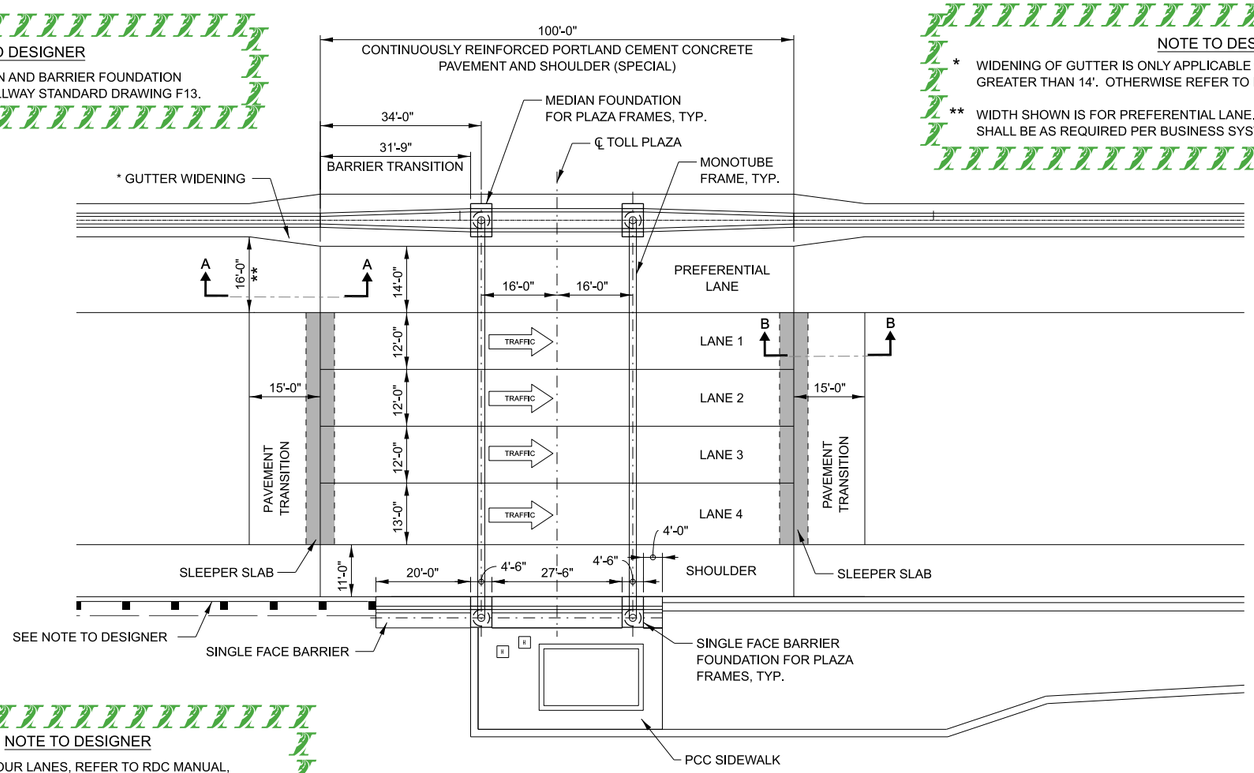


PLAN VIEW
N.T.S.

NOTE TO DESIGNER

FOR MORE THAN FOUR LANES, REFER TO RDC MANUAL, ARTICLES 2.6.1 AND 2.6.2.

BARRIER TYPE (GUARDRAIL OR CONCRETE BARRIER EXTENTION) TO BE DETERMINED BY BARRIER WARRANT ANALYSIS.

NOTE TO DESIGNER

CONTACT TOLLWAY BUSINESS SYSTEMS FOR SIDEWALK LIMITS.

LEGEND:

① CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT AND SHOULDER (SPECIAL) (14.25 IN) (JT421397)

② PAVEMENT REINFORCEMENT (14.25 IN.) (JT421976)

③ SUBGRADE AGGREGATE 12 IN. (JT211A11)
CAPPING AGGREGATE, 3" (THICKNESS VARIES UNDER SHOULDERS)
POROUS GRANULAR EMBANKMENT, 9"

④ SUBGRADE FILTER FABRIC (JI282010)

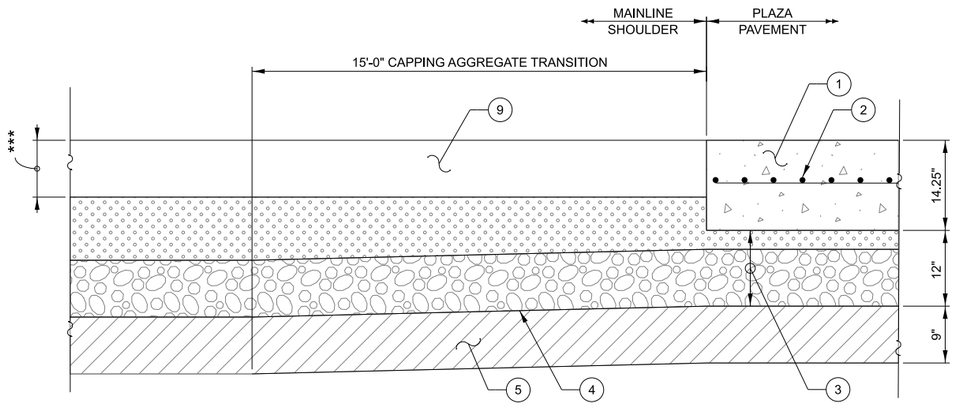
⑤ CHEMICALLY STABILIZED SUBGRADE, 9" (JT900580)

⑥ GRANULAR SUBBASE, SPECIAL (4" MIN.) (JT301010)

⑦ STABILIZED SUBBASE - WMA, 3" (JI312022)

⑧ PORTLAND CEMENT CONCRETE PAVEMENT X" (JOINTED) (JI4200XX)

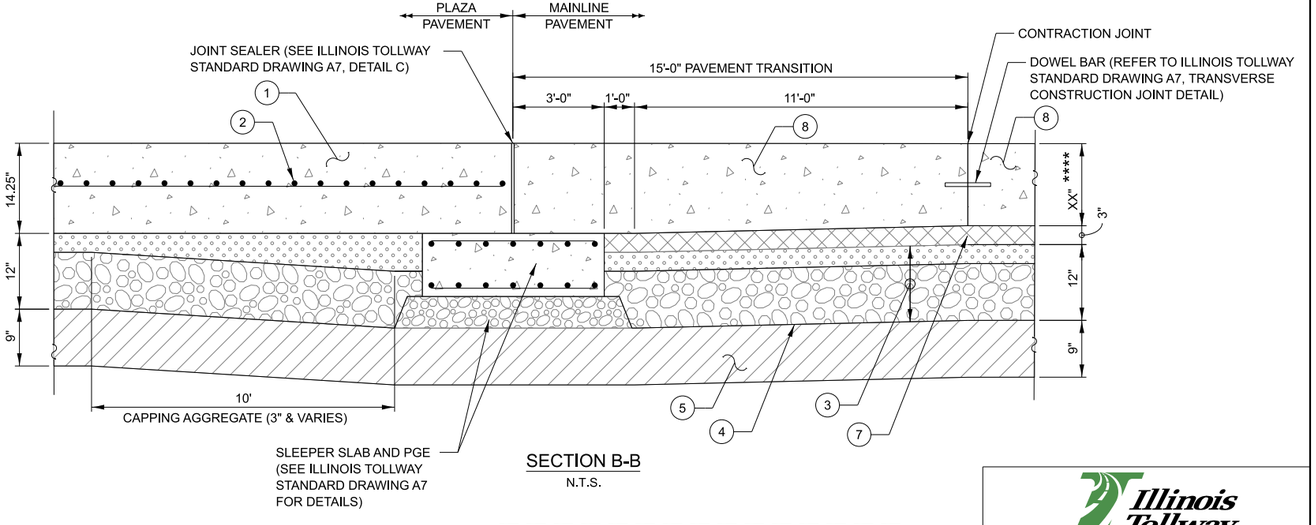
⑨ WARM-MIX ASPHALT SHOULDERS (X IN.) (JI4821XX)



SECTION A-A
N.T.S.

NOTE TO DESIGNER

*** CONTACT TOLLWAY MATERIALS FOR SHOULDER THICKNESS



SECTION B-B
N.T.S.

PAVEMENT TRANSITION DETAIL
N.T.S.

NOTE TO DESIGNER

**** CONTACT TOLLWAY MATERIALS FOR PAVEMENT DEPTH (13" DEPTH SHOWN IN DETAIL).

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MAINLINE TOLL PLAZA PAVEMENT DETAILS

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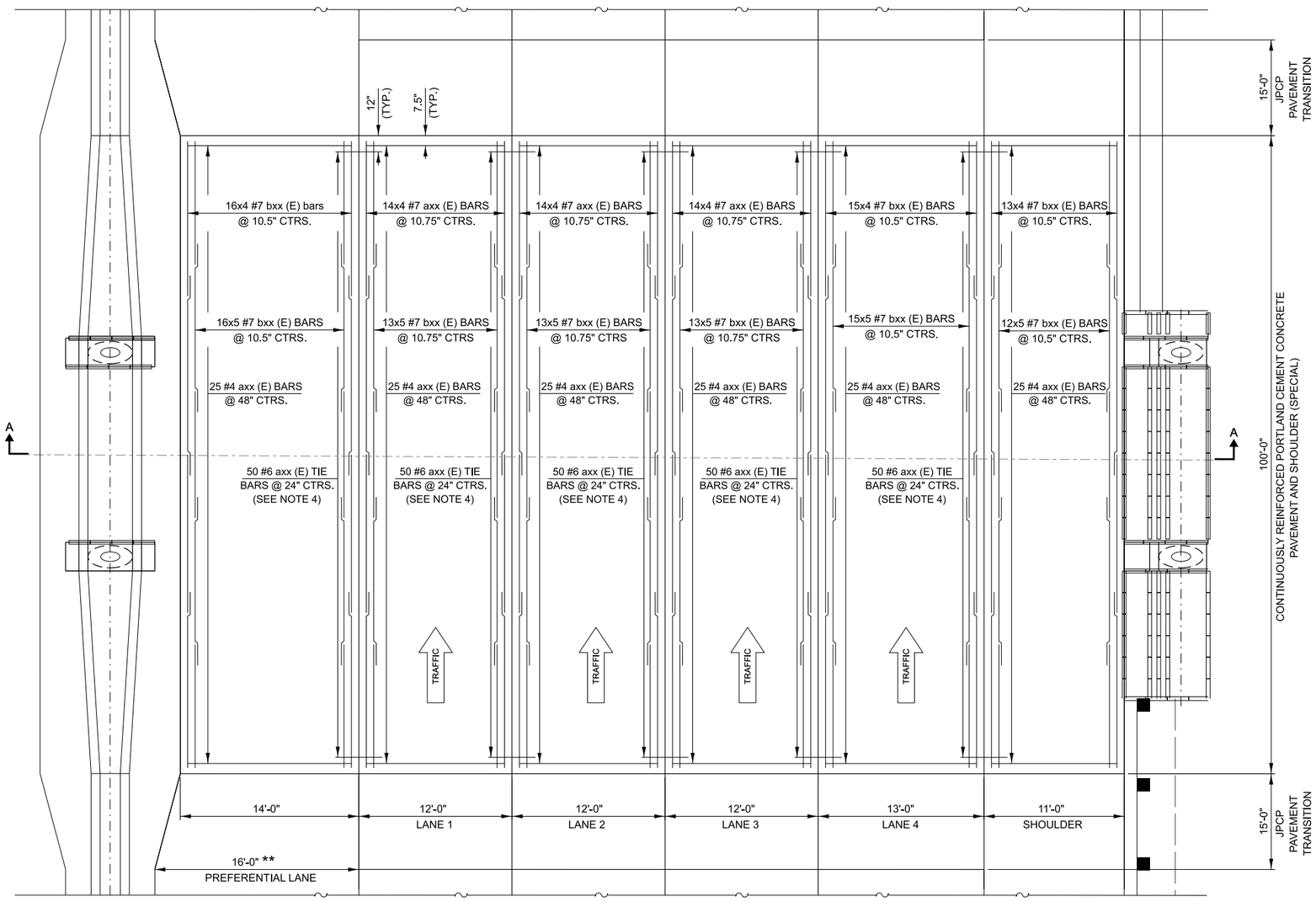
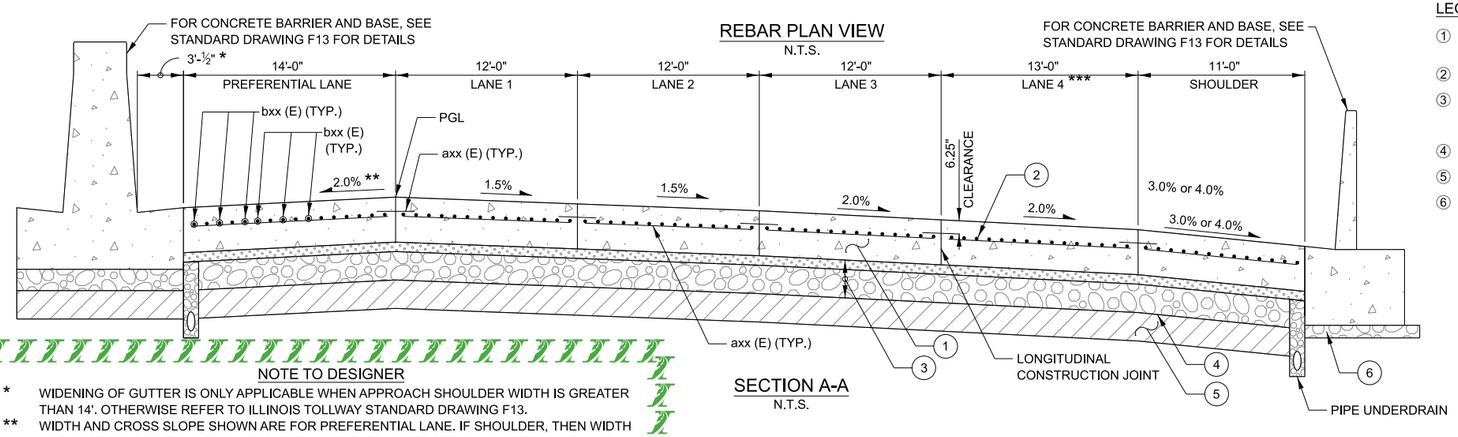


REBAR PLAN VIEW
N.T.S.



SECTION A-A
N.T.S.

NOTES:

1. REINFORCEMENT BARS DESIGNATED "E" SHALL BE EPOXY COATED.
2. REFER TO SPECIAL PROVISION FOR THE CLASS OF CONCRETE TO BE USED.
3. BARS INDICATED THUS MxN #7 ETC. INDICATES M LINES OF BARS WITH N LENGTHS PER LINE.
4. BARS AT LONGITUDINAL CONSTRUCTION JOINT BETWEEN ADJACENT LANES OR LANE AND SHOULDER.

REINFORCING BAR SCHEDULE

BAR	NO.	SIZE	LAP (MIN.)	LENGTH	SHAPE
bxx (E)	344	#7	4'-5"	28'-3"	———
bxx (E)	410	#7	4'-5"	23'-6"	———
axx (E)	250	#6		2'-6"	———
axx (E)	25	#4		13'-9"	———
axx (E)	75	#4		11'-9"	———
axx (E)	25	#4		12'-9"	———
axx (E)	25	#4		10'-9"	———
TOTAL REINFORCEMENT BARS, EPOXY COATED = XXXX LBS. (FOR INFORMATION ONLY)					

BILL OF MATERIALS

PAY ITEM	SIZE	UNIT	TOTAL
JT421397	CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT AND SHOULDER (SPECIAL) (14.25 IN.)	SQ. YD.	
	TIE BARS 3/4"	EACH	
42001300	PROTECTIVE COAT	SQ. YD.	
JT421976	PAVEMENT REINFORCEMENT (14.25 IN.)	SQ. YD.	

NOTE TO DESIGNER

DESIGN TABLE FOR MAINLINE CRC PAVEMENT REINFORCEMENT (#7 BAR SIZE)

LANE/SHOULDER WIDTH (FT.)	NO. OF BARS (EA.)	SPACING (IN.)
11	25	5 ¼
11.5	26	5 ¼
12	27	5 ⅜
13	30	5 ¼
14	32	5 ¼

NOTE:
IF DESIGN VARIES FROM SAMPLE SHOWN, USE THE DESIGN TABLE ON THIS SHEET. DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH bxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALLOUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

LEGEND:

① CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT AND SHOULDER (SPECIAL) (14.25 IN.) (JT421397)
② PAVEMENT REINFORCEMENT (14.25 IN.) (JT421976)
③ SUBGRADE AGGREGATE 12 IN. (JT211A11)
CAPPING AGGREGATE, 3" (THICKNESS VARIES UNDER SHOULDERS)
POROUS GRANULAR EMBANKMENT, 9"
④ SUBGRADE FILTER FABRIC (JI282010)
⑤ CHEMICALLY STABILIZED SUBGRADE, 9" (JT900580)
⑥ GRANULAR SUBBASE, SPECIAL (4" MIN.) (JT301010)

NOTE TO DESIGNER

* WIDENING OF GUTTER IS ONLY APPLICABLE WHEN APPROACH SHOULDER WIDTH IS GREATER THAN 14'. OTHERWISE REFER TO ILLINOIS TOLLWAY STANDARD DRAWING F13.
** WIDTH AND CROSS SLOPE SHOWN ARE FOR PREFERENTIAL LANE. IF SHOULDER, THEN WIDTH AND CROSS SLOPE SHALL BE AS REQUIRED PER BUSINESS SYSTEMS MANUAL, TABLE 4.1.1.
*** FOR MORE THAN FOUR LANES, REFER TO RDC MANUAL, ARTICLES 2.6.1 AND 2.6.2.

NOTE TO DESIGNER

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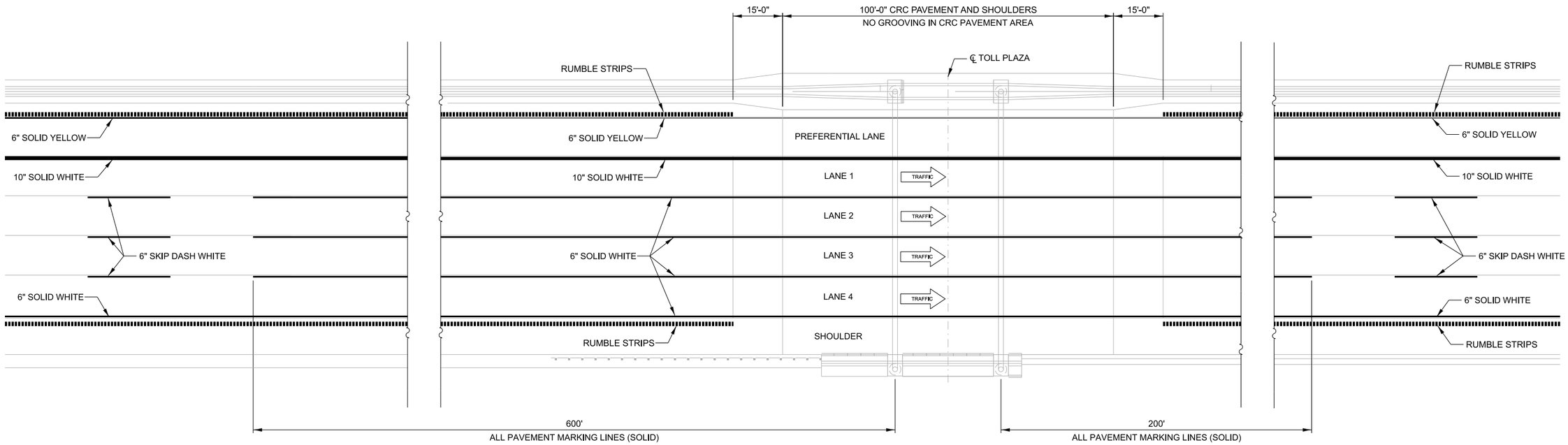
Illinois Tollway

MAINLINE TOLL PLAZA PAVEMENT DETAILS

VERSION:	STANDARD:	SHEET:
2024-03	M-RDY-417	2 OF 3



PAVEMENT MARKING DETAIL

N.T.S.

NOTE TO DESIGNER

FOR SPACING BETWEEN PAVEMENT MARKING AND EDGE OF PAVED LANE, REFER TO ILLINOIS TOLLWAY STANDARD DRAWING D5.

FOR THE INSIDE SHOULDER WHEN PREFERENTIAL LANE IS NOT PRESENT, REFER TO ILLINOIS TOLLWAY STANDARD DRAWING D5.

FOR MORE THAN FOUR LANES, REFER TO RDC MANUAL, ARTICLES 2.6.1 AND 2.6.2.

NOTE TO DESIGNER

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Illinois Tollway

MAINLINE TOLL PLAZA PAVEMENT MARKING DETAILS

VERSION:	STANDARD:	SHEET:
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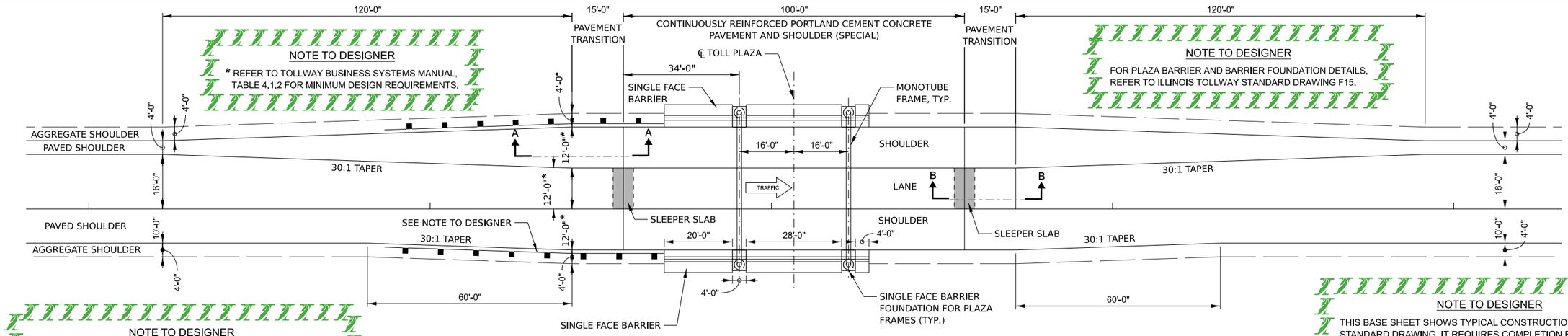

RAMP TOLL PLAZA ROADWAY DETAILS FOR NEW OR RECONSTRUCTION PROJECTS

N.T.S.

NOTE TO DESIGNER

BARRIER TYPE (GUARDRAIL OR CONCRETE BARRIER EXTENTION) TO BE DETERMINED BY BARRIER WARRANT ANALYSIS. BARRIER FACE TAPER SHALL MEET AASHTO ROADSIDE DESIGN GUIDE, TABLE 5-9.

NOTE TO DESIGNER

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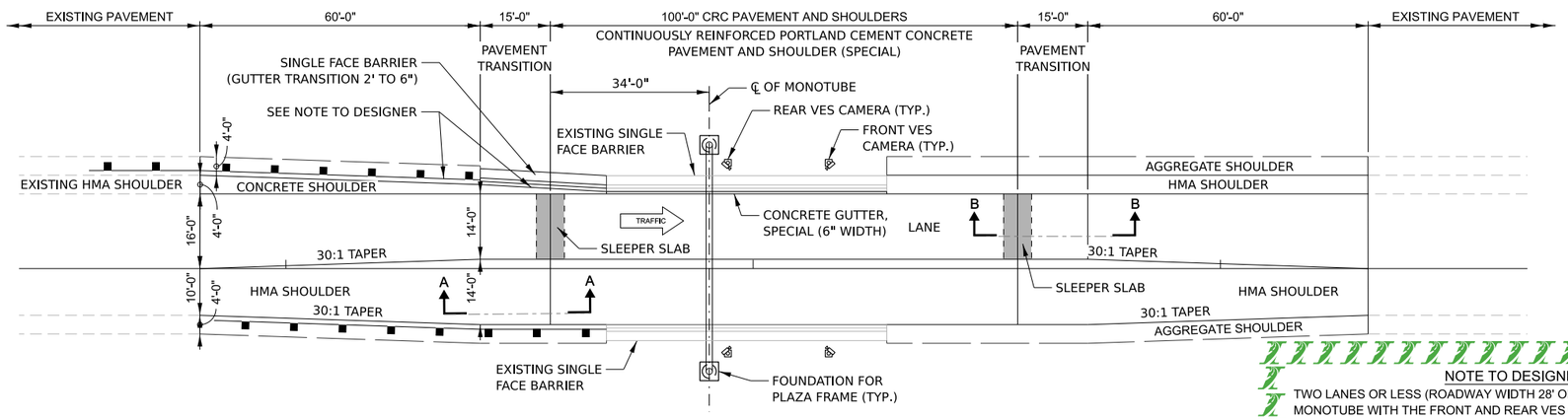
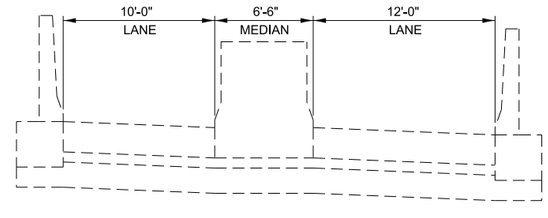


RAMP TOLL PLAZA ROADWAY DETAILS FOR REHABILITATION PROJECTS

N.T.S.



EXISTING TWO-LANE TYPICAL SECTION - THROUGH PLAZA
(FOR INFORMATION ONLY)

N.T.S.

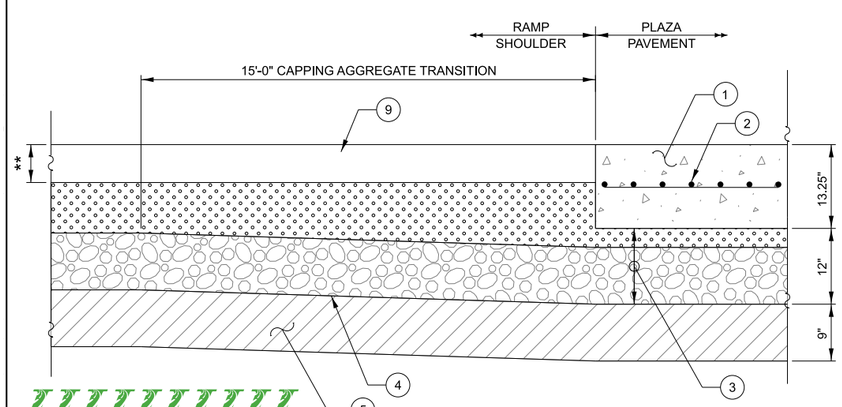
NOTE TO DESIGNER

TWO LANES OR LESS (ROADWAY WIDTH 28' OR LESS) SHALL REQUIRE ONE MONOTUBE WITH THE FRONT AND REAR VES CAMERAS BEING GROUND MOUNTED. CONTACT TOLLWAY BUSINESS SYSTEMS FOR CAMERA LOCATIONS.

THREE OR MORE LANES SHALL REQUIRE TWO MONOTUBES WITH MONOTUBE MOUNTED CAMERAS.

NOTE TO DESIGNER

THE SAMPLE RAMP TOLL PLAZA ROADWAY PLAN FOR REHABILITATION PROJECTS IS BASED ON AN EXISTING TWO-LANE TYPICAL SECTION WITH PLAZA ISLAND (SHOWN ABOVE). FOR OTHER EXISTING PLAZA ROADWAY LAYOUTS, CONTACT TOLLWAY BUSINESS SYSTEMS FOR PROPOSED LANE CONFIGURATION REQUIREMENTS.

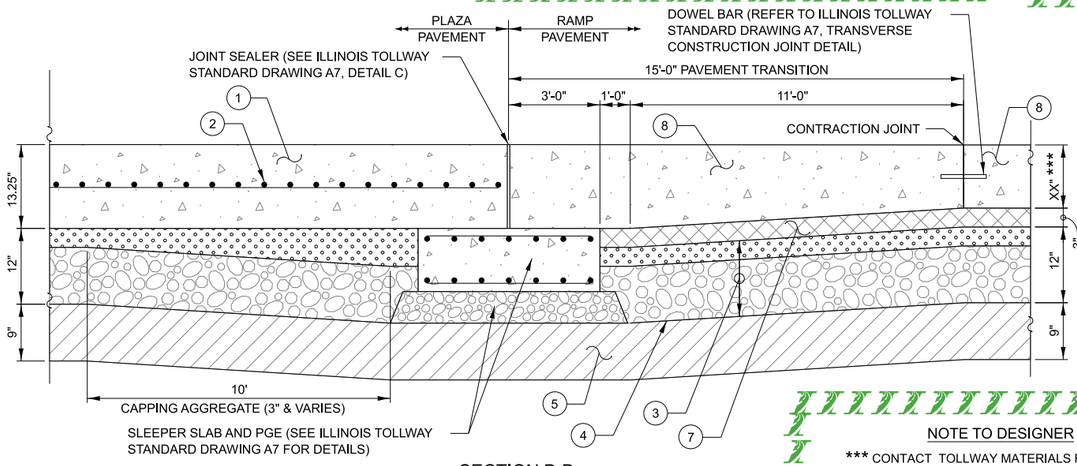


NOTE TO DESIGNER

** CONTACT TOLLWAY MATERIALS FOR SHOULDER THICKNESS

SECTION A-A

N.T.S.



PAVEMENT TRANSITION DETAIL

N.T.S.

SECTION B-B

N.T.S.

LEGEND:

① CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT AND SHOULDER (SPECIAL) (13.25") (JT421391)

② PAVEMENT REINFORCEMENT (13.25 IN.) (JT421971)

③ SUBGRADE AGGREGATE 12" (JT211A11)
CAPPING AGGREGATE, 3" (THICKNESS VARIES UNDER SHOULDERS)
POROUS GRANULAR EMBANKMENT, 9"

④ SUBGRADE FILTER FABRIC (JI282010)

⑤ CHEMICALLY STABILIZED SUBGRADE, 9" (JT900580)

⑥ GRANULAR SUBBASE, SPECIAL (4" MIN.) (JT301010)

⑦ STABILIZED SUBBASE - WMA, 3" (JI312022)

⑧ PORTLAND CEMENT CONCRETE PAVEMENT X" (JOINTED) (JI4200XX)

⑨ WARM-MIX ASPHALT SHOULDERS (X IN.) (JI4821XX)

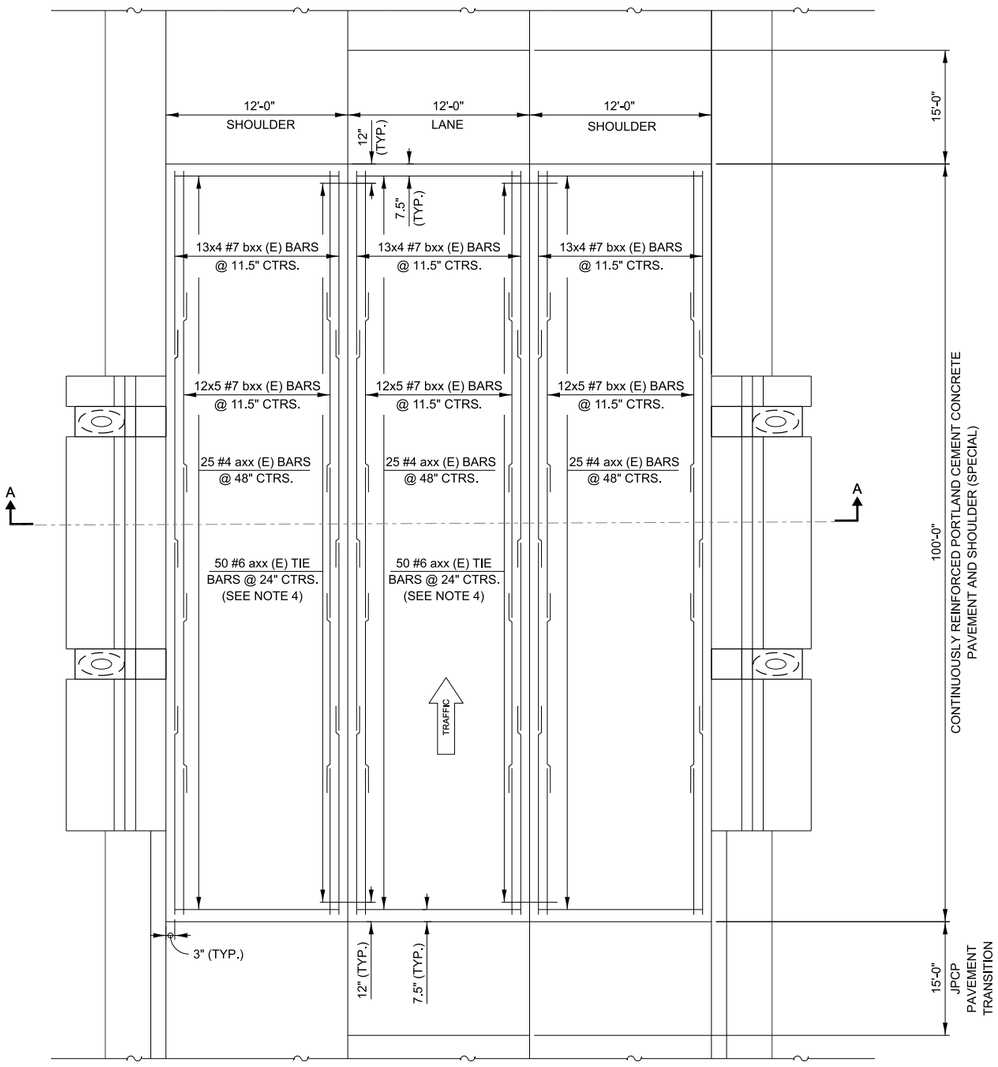
NOTE TO DESIGNER

*** CONTACT TOLLWAY MATERIALS FOR PAVEMENT DEPTH (10" DEPTH SHOWN IN DETAIL)

Illinois Tollway

RAMP TOLL PLAZA PAVEMENT DETAILS

VERSION:	STANDARD:	SHEET:
2024-03	M-RDY-418	1 OF 3



REINFORCING BAR SCHEDULE

BAR	NO.	SIZE	LAP (MIN.)	LENGTH	SHAPE
bxx (E)	156	#7	4'-5"	28'-3"	———
bxx (E)	180	#7	4'-5"	23'-6"	———
axx (E)	100	#6		2'-6"	———
axx (E)	75	#4		11'-9"	———
TOTAL REINFORCEMENT BARS, EPOXY COATED = XXXX LBS. (FOR INFORMATION ONLY)					

BILL OF MATERIALS

PAY ITEM	SIZE	UNIT	TOTAL
JT421391	CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT AND SHOULDER (SPECIAL)(13.25 IN.)	SQ. YD.	
	TIE BARS 3/4"	EACH	
42001300	PROTECTIVE COAT	SQ. YD.	
JT421971	PAVEMENT REINFORCEMENT (13.25 IN.)	SQ. YD.	

NOTES:

1. REINFORCING BARS DESIGNATED "E" SHALL BE EPOXY COATED.
2. REFER TO SPECIAL PROVISION FOR THE CLASS OF CONCRETE TO BE USED.
3. BARS INDICATED THUS MxN #7 ETC. INDICATES M LINES OF BARS WITH N LENGTHS PER LINE.
4. BARS AT LONGITUDINAL CONSTRUCTION JOINT BETWEEN ADJACENT LANES OR LANE AND SHOULDER.

NOTE TO DESIGNER

DESIGN TABLE FOR MAINLINE CRC PAVEMENT REINFORCEMENT (#7 BAR SIZE)

LANE/SHOULDER WIDTH (FT.)	NO. OF BARS (EA.)	SPACING (IN.)
6	13	5 ½
7	15	5 5/8
8	17	5 5/8
9	19	5 5/8
10	21	5 ¾
11	23	5 ¾
12	25	5 ¾
13	27	5 ¾
14	30	5 5/8

NOTE:
IF DESIGN VARIES FROM SAMPLE SHOWN, USE THE DESIGN TABLE ON THIS SHEET. DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH bxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALLOUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

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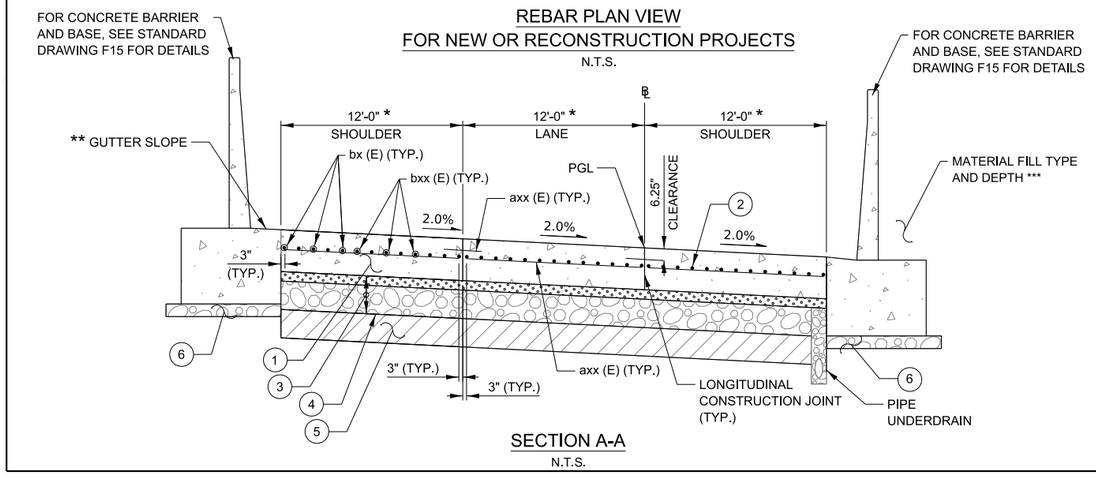
REBAR PLAN VIEW
FOR NEW OR RECONSTRUCTION PROJECTS
N.T.S.



SECTION A-A
N.T.S.

NOTE TO DESIGNER

* REFER TO TOLLWAY BUSINESS SYSTEMS MANUAL, TABLE 4.1.2 FOR MINIMUM DESIGN REQUIREMENTS.

** GUTTER SLOPE SHALL BE REVERSE PITCHED WHEN THE ADJACENT SHOULDER DRAINS AWAY FROM THE GUTTER.

*** CONTACT TOLLWAY MATERIALS FOR FILL TYPE AND DEPTH WHEN ADJACENT TO EXISTING PAVEMENT.

LEGEND:

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② PAVEMENT REINFORCEMENT (13.25 IN.) (JT421971)

③ SUBGRADE AGGREGATE 12" (JT211A11)
CAPPING AGGREGATE, 3" (THICKNESS VARIES UNDER SHOULDERS)
POROUS GRANULAR EMBANKMENT, 9"

④ SUBGRADE FILTER FABRIC (JI282010)

⑤ CHEMICALLY STABILIZED SUBGRADE, 9" (JT900580)

⑥ GRANULAR SUBBASE, SPECIAL (4" MIN.) (JT301010)

Illinois Tollway

RAMP TOLL PLAZA PAVEMENT DETAILS

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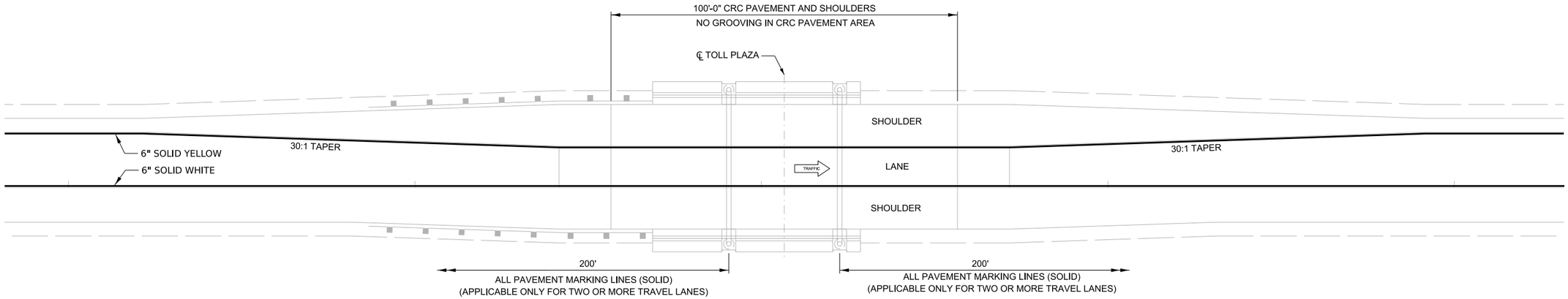
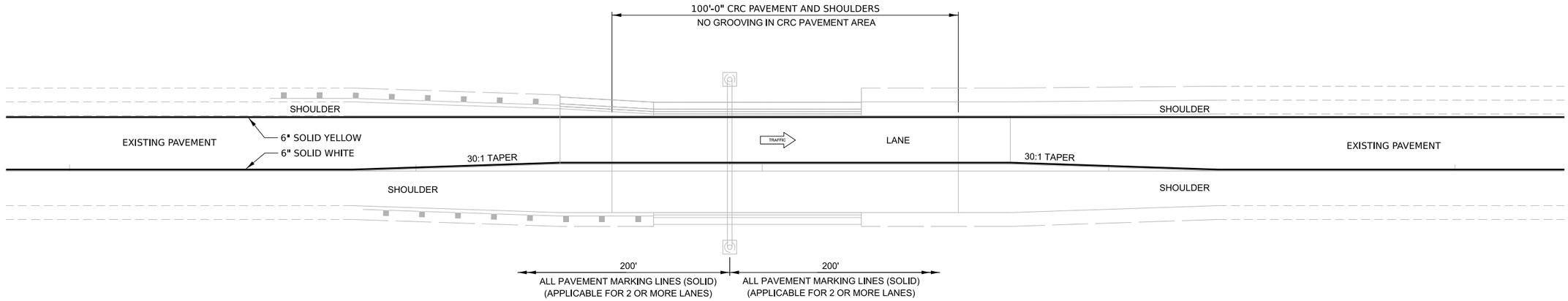


NOTE TO DESIGNER

FOR SPACING BETWEEN PAVEMENT MARKING AND EDGE OF PAVED LANE, REFER TO ILLINOIS TOLLWAY STANDARD DRAWING D6.

PAVEMENT MARKING DETAILS
FOR NEW OR RECONSTRUCTION PROJECTS
N.T.S.



PAVEMENT MARKING DETAILS
FOR REHABILITATION PROJECTS
N.T.S.

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Illinois Tollway

RAMP TOLL PLAZA PAVEMENT MARKING DETAILS

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BASE SHEETS

SERIES 500 (BRG)

BRIDGE

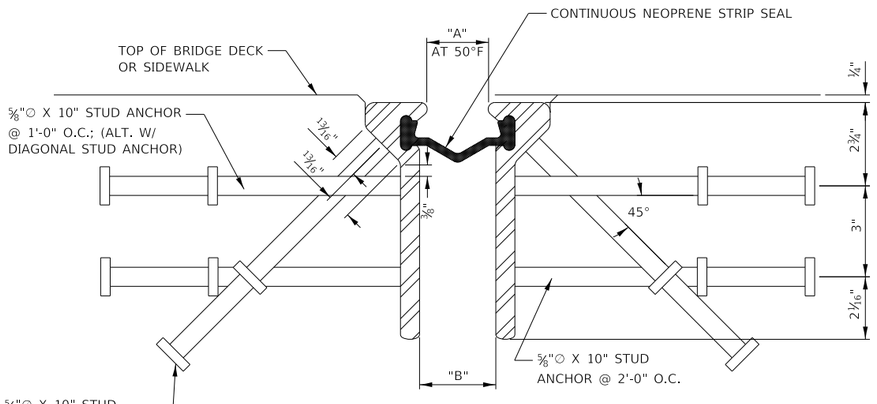
MARCH 2024

Illinois Tollway Base Sheet Revisions

Section M	Base Sheet Drawings	
	Drawing	**Modification Summary** **Effective: 03-01-2024**
	Bridge (BRG)-Series 500	
	M-BRG-525	**SLOPE WALL DETAILS**
		Moved the shoulder line to the end of the slope wall
	M-BRG-529	**STRUCTURE MOUNTED NOISE ABATEMENT WALL SCHEDULE**
	Sheet 2	Added "FOR EACH WIDTH" to specialty panel naming convention. Publication dates of applicable design standards and construction specifications are changed to 'xxxxxxxx'. Designers are required to update the applicable publication dates of design standards and construction specifications.
	M-BRG-531	**CENTRAL TRI-STATE STRUCTURE MOUNTED NOISE ABATEMENT WALL SCHEDULE**
	Sheet 3	Added "FOR EACH WIDTH" to specialty panel naming convention. Publication dates of applicable design standards and construction specifications are changed to 'xxxxxxxx'. Designers are required to update the applicable publication dates of design standards and construction specifications.
	M-BRG-532	**GROUND MOUNTED NOISE ABATEMENT WALL SCHEDULE**
	Sheet 2	Added "FOR EACH WIDTH" to specialty panel naming convention. Publication dates of applicable design standards and construction specifications are changed to 'xxxxxxxx'. Designers are required to update the applicable publication dates of design standards and construction specifications.

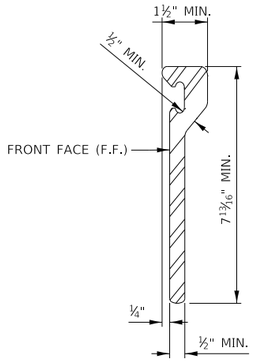
New Sheet

Retired Standard



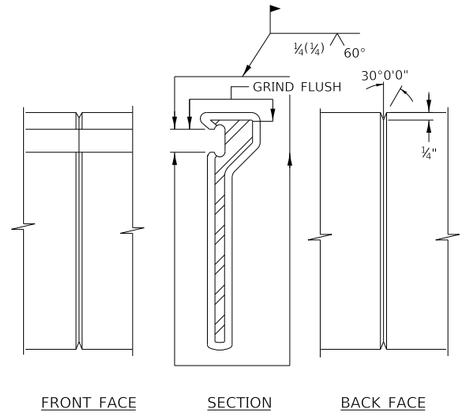
NOTE:
DIMENSIONS "A" AND "B" ARE PERPENDICULAR TO THE EXPANSION JOINT

SECTION THRU EXPANSION JOINT



NOTE:
10" STUDS SHALL BE MADE OF (1)-6 9/16" & (1)-4⅛" (LENGTH BEFORE WELDING) PIGGY-BACKED.

TYPICAL SECTION THRU FRAME RAIL

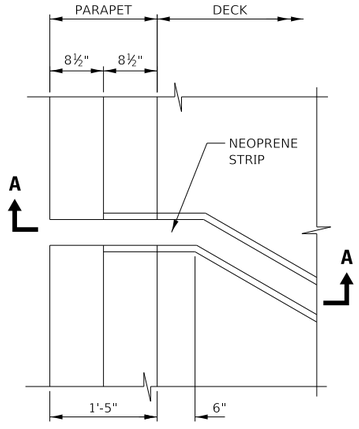


NOTE:
WELD ON FRONT SIDE OF FRAME MAY BE OMITTED AT STAGE CONSTRUCTION LINES.

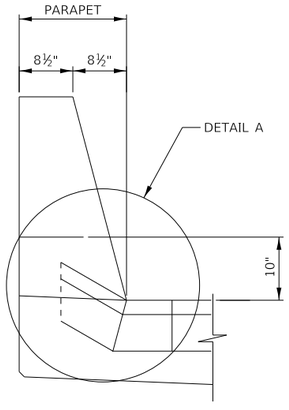
FRAME RAIL SPLICE DETAIL

NOTES:

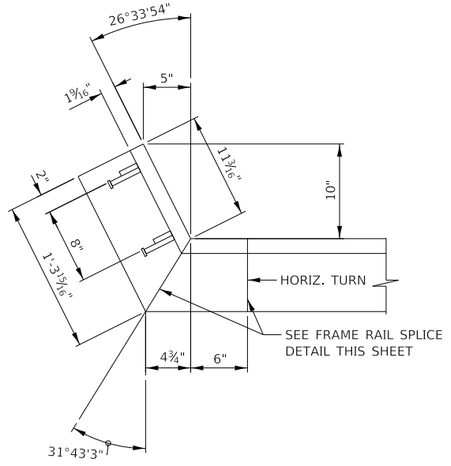
1. EXPANSION JOINT SHALL FOLLOW ROADWAY GRADE & CROSS SLOPE. EXPANSION JOINT TO BE SET TO GRADE BY ATTACHING FRAME RAILS TO BACKWALL AND BEAMS.
2. FRAME RAILS AND OTHER STEEL SHALL BE AASHTO M270 GRADE 36, (ASTM A36).
3. STUD ANCHORS SHALL BE AASHTO M169 (ASTM A108).
4. EXPANSION ANCHORS SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS, SECTION 1211.
5. FRAME RAIL ASSEMBLY SHALL BE FABRICATED IN 20 FT. MAXIMUM LENGTHS. SHOP AND FIELD SPLICES SHALL BE PLACED AT CROWN BREAKS, CONSTRUCTION STAGE LINES, AND TRANSVERSE BREAKS IN DECK.
6. AT SPLICES, A CONTINUOUS GROUND SMOOTH WELD SHALL BE PROVIDED EXCEPT ON SURFACES IN LOCKING CONTACT WITH SEAL WHICH SHALL HAVE NO BURRS.
7. ALL STUD ANCHORS TO BE ELECTRIC ARC END WELDED WITH COMPLETE FUSION.
8. AFTER FABRICATION IS COMPLETE FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M232 (ASTM A153).
9. CORRESPONDING SECTIONS SHALL BE TEMPORARILY SHOP ASSEMBLED, CHECKED FOR FIT, AND MATCH MARKED WITH STENCIL AND BLACK PAINT FOR SHIPMENT.
10. NEOPRENE SEAL SHALL BE CONTINUOUS. FACTORY VULCANIZED HORIZONTAL MITERS SHALL BE REQUIRED FOR ALL SKEWS.
11. NEOPRENE SEAL SHALL BE INSTALLED CONTINUOUS, SPLICING OF SEAL IN THE FIELD IS NOT PERMITTED.
12. NEOPRENE SEAL SHALL BE BONDED TO THE FRAME RAILS WITH AN ADHESIVE MEETING THE REQUIREMENTS OF ASTM D4070.
13. SUPPORT PLATES, NUTS AND WASHERS CONNECTED TO FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111 AND M232 (ASTM A123 AND A153).
14. SUPPORT PLATES ON STEEL GIRDERS SHALL BE WELDED IN ACCORDANCE WITH ARTICLES 505.04 (q) & 505.08 (n) OF THE IDOT STANDARD SPECIFICATIONS.
15. FURNISHING AND INSTALLING EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM SHALL BE INCLUDED IN THE COST OF BRIDGE EXPANSION JOINT SYSTEM.
16. JOINT OPENINGS SHALL BE ADJUSTED IN ACCORDANCE WITH THE FIELD ENGINEER'S INSTRUCTIONS.
17. UPON COMPLETION OF FIELD WELDING, THE CONTRACTOR SHALL CLEAN THE WELD AREA AND APPLY A COATING OF ORGANIC ZINC-RICH PAINT IN ACCORDANCE WITH SSPC-PS12.01.



PLAN



SECTION A-A



DETAIL A

UPTURN AT PARAPET

NOTE TO DESIGNER

FOR SKEWS > 30° DESIGNER SHALL REPLACE PARAPET DETAILS SHOWN WITH SLIDING PLATE DETAILS ON THE LATEST IDOT BASE SHEET EJ-SS

NOTE TO DESIGNER

WORK THIS DRAWING WITH THE BASE SHEET FOR EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM.

NOTE TO DESIGNER

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Illinois Tollway

EXPANSION JOINT FRAME RAIL AND SEAL ALTERNATE A

VERSION:	STANDARD:	SHEET:
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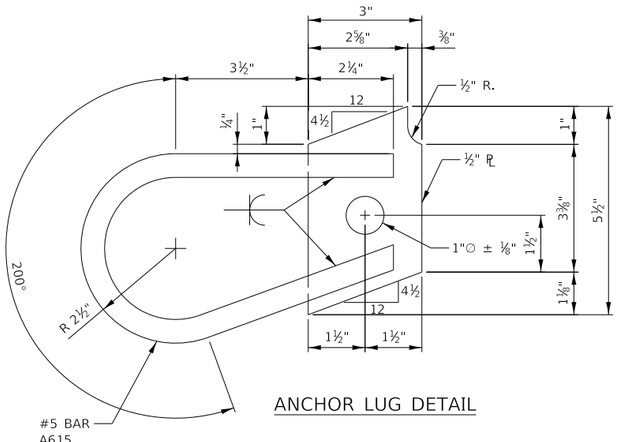
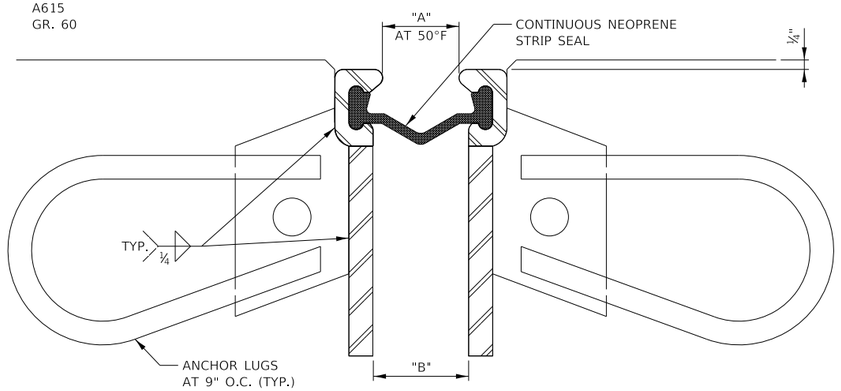


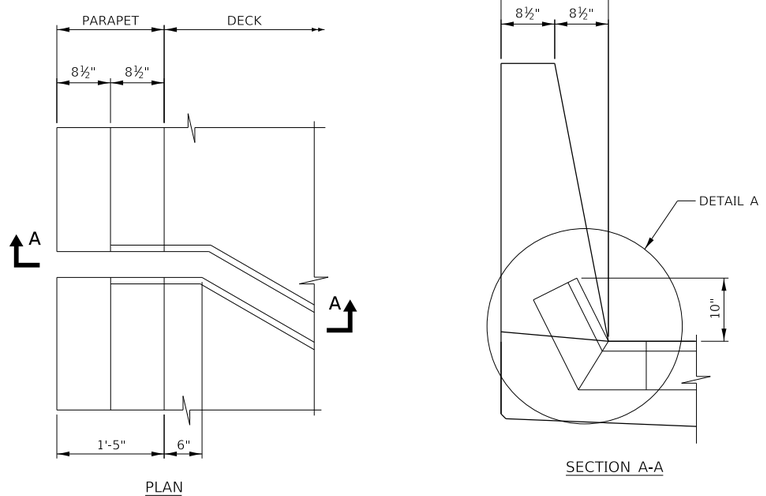
ANCHOR LUG DETAIL

#5 BAR
A615
GR. 60



SECTION THRU EXPANSION JOINT

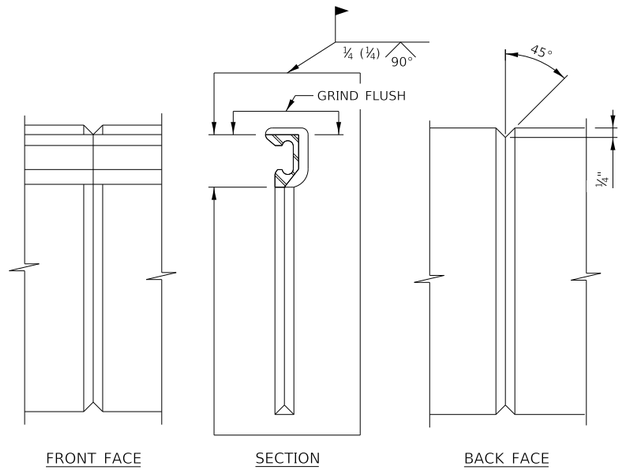
NOTE:
DIMENSIONS "A" AND "B" ARE PERPENDICULAR TO THE EXPANSION JOINT



PLAN

SECTION A-A

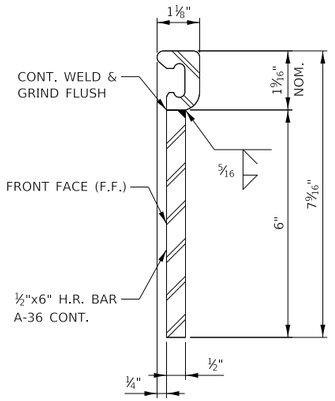
UPTURN AT PARAPET



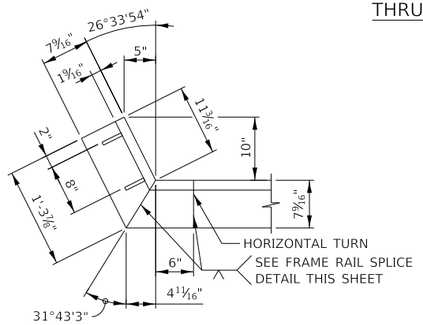
FRONT FACE SECTION BACK FACE

FRAME RAIL SPLICE DETAIL

NOTE:
WELD ON FRONT SIDE OF FRAME MAY BE OMITTED AT STAGE CONSTRUCTION LINES.



TYPICAL SECTION
THRU FRAME RAIL



DETAIL A

NOTES:

1. EXPANSION JOINT SHALL FOLLOW ROADWAY GRADE & CROSS SLOPE. EXPANSION JOINT TO BE SET TO GRADE BY ATTACHING FRAME RAILS TO BACK WALL AND BEAMS.
2. AT SPLICES, A CONTINUOUS GROUND SMOOTH WELD SHALL BE PROVIDED EXCEPT ON SURFACES IN LOCKING CONTACT WITH SEAL WHICH SHALL HAVE NO BURRS.
3. FRAME RAILS AND OTHER STEEL SHALL BE AASHTO M270 GRADE 36, (ASTM A36).
4. ANCHOR LUGS SHALL BE AASHTO M31 (ASTM A615).
5. EXPANSION ANCHORS SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION, 1211.
6. FRAME RAIL ASSEMBLY SHALL BE FABRICATED IN 20 FT. MAXIMUM LENGTHS. SHOP AND FIELD SPLICES SHALL BE PLACED AT CROWN BREAKS, CONSTRUCTION STAGE LINES, AND TRANSVERSE BREAKS IN DECK.
7. AFTER FABRICATION IS COMPLETE FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123).
8. CORRESPONDING SECTIONS SHALL BE TEMPORARILY SHOP ASSEMBLED, CHECKED FOR FIT, AND MATCH MARKED WITH STENCIL AND BLACK PAINT FOR SHIPMENT.
9. NEOPRENE SEAL SHALL BE CONTINUOUS. FACTORY VULCANIZED HORIZONTAL MITERS SHALL BE REQUIRED FOR ALL SKEWS.
10. NEOPRENE SEAL SHALL BE INSTALLED CONTINUOUS, SPLICING OF SEAL IN THE FIELD IS NOT PERMITTED.
11. NEOPRENE SEAL SHALL BE BONDED TO THE FRAME RAILS WITH AN ADHESIVE MEETING THE REQUIREMENTS OF ASTM D4070.
12. SUPPORT PLATES ON STEEL GIRDERS SHALL BE WELDED IN ACCORDANCE WITH ARTICLES 505.04 (q) & 505.08(n) OF THE IDOT STANDARD SPECIFICATIONS.
13. FURNISHING AND INSTALLING EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM SHALL BE INCLUDED IN THE COST OF BRIDGE EXPANSION JOINT SYSTEM.
14. JOINT OPENINGS SHALL BE ADJUSTED IN ACCORDANCE WITH THE FIELD ENGINEER'S INSTRUCTIONS.
15. SUPPORT PLATES, NUTS, AND WASHERS CONNECTED TO FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111 AND M232 (ASTM A123 AND A153).
16. UPON COMPLETION OF FIELD WELDING, THE CONTRACTOR SHALL CLEAN THE WELD AREA AND APPLY A COATING OF ORGANIC ZINC-RICH PAINT IN ACCORDANCE WITH SSPC-PS12.01.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTE TO DESIGNER

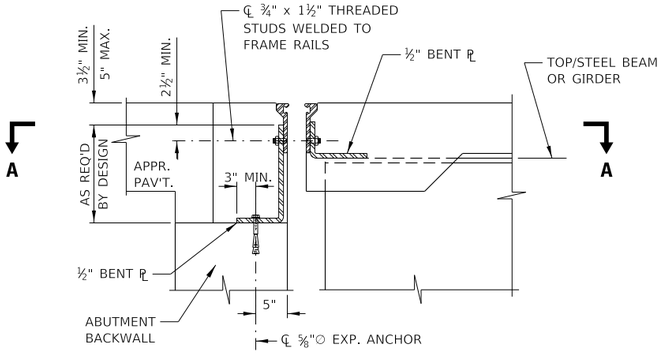
FOR SKEWS > 30°, DESIGNER SHALL REPLACE PARAPET DETAILS SHOWN WITH SLIDING PLATE DETAILS ON THE LATEST IDOT BASE SHEET EJ-SS

WORK THIS DRAWING WITH THE BASE SHEET FOR EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM.

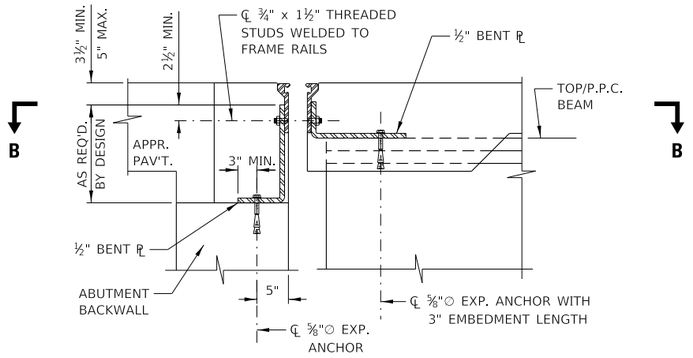
Illinois Tollway

EXPANSION JOINT FRAME RAIL AND SEAL ALTERNATE B

VERSION:	STANDARD:	SHEET:
2022-03	M-BRG-501	1 OF 1

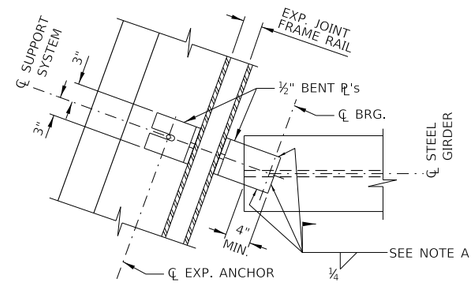


TYPICAL SECTION THRU EXP. JOINT AND SUPPORT SYSTEM AT STEEL GIRDERS



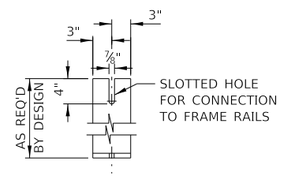
TYPICAL SECTION THRU EXP. JOINT AND SUPPORT SYSTEM AT P.P.C. BEAMS

NOTE:
DETAILS SHOWN ARE OPTIONAL. CONTRACTOR MAY SUBMIT AN ALTERNATIVE SUPPORT SYSTEM FOR APPROVAL.

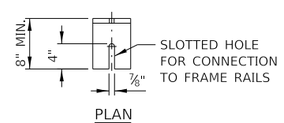


SECTION A-A

NOTE A:
FIELD WELD AFTER SUPPORT SYSTEM IS ADJUSTED FOR THE OPENING AND HEIGHT REQUIREMENTS AND THE BENT PLATE ON THE OPPOSITE SIDE IS SECURED IN PLACE WITH EXPANSION ANCHOR INTO THE CONCRETE.

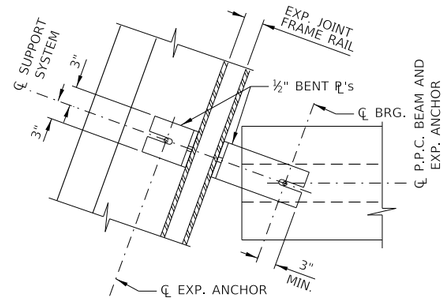


ELEVATION

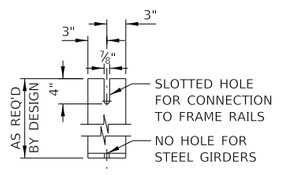


PLAN

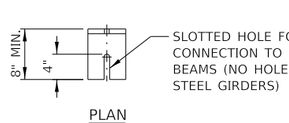
BENT SUPPORT PLATE AT ABUTMENT



SECTION B-B



ELEVATION



PLAN

BENT SUPPORT PLATE AT BRIDGE DECK

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

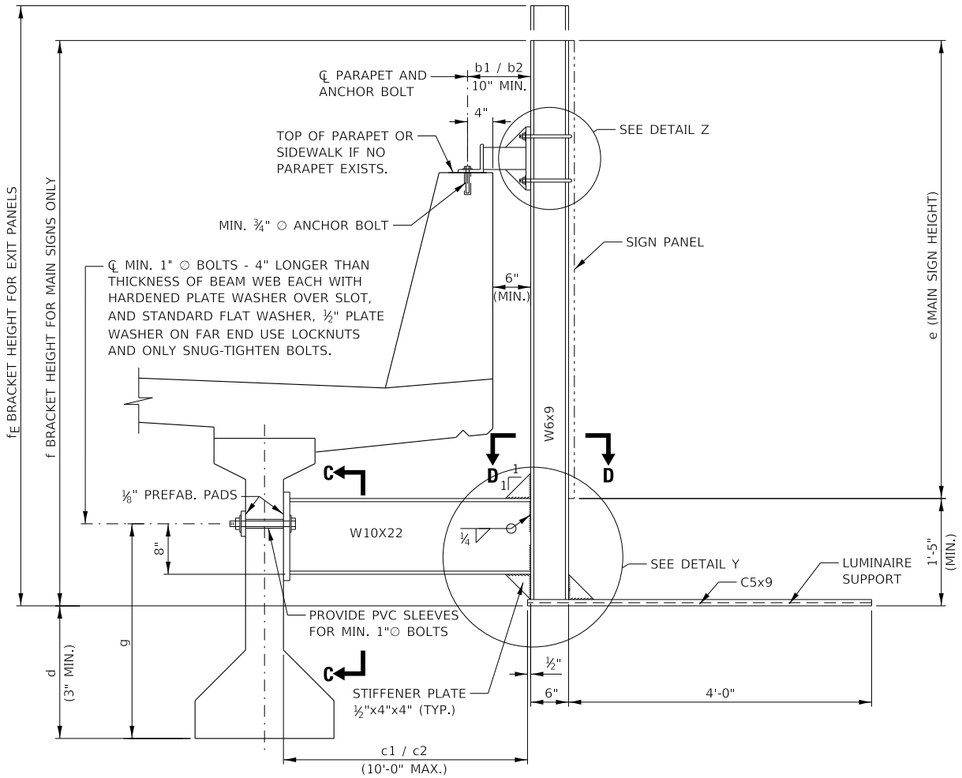
NOTE TO DESIGNER

WORK THIS DRAWING WITH THE BASE SHEETS M-BRG-500 AND M-BRG-501 FOR EITHER EXPANSION JOINT FRAME RAIL AND SEAL ALTERNATIVE A OR ALTERNATIVE B

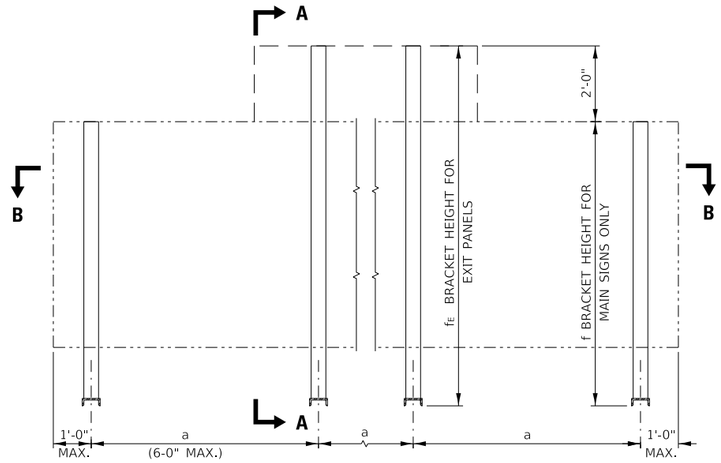
Illinois Tollway

EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM

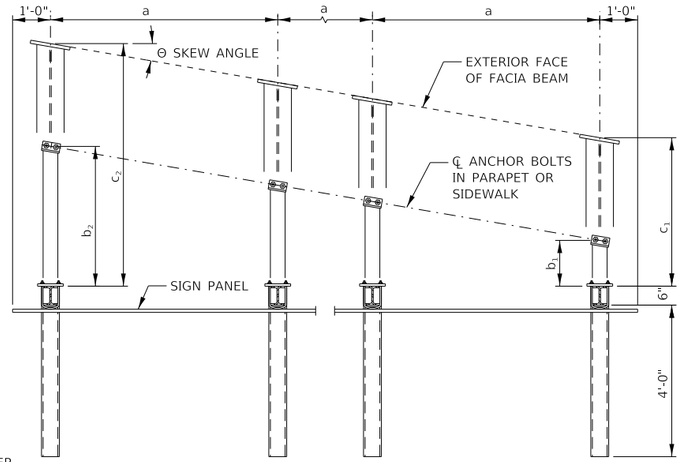
VERSION:	STANDARD:	SHEET:
2022-03	M-BRG-502	1 OF 1



SECTION A-A



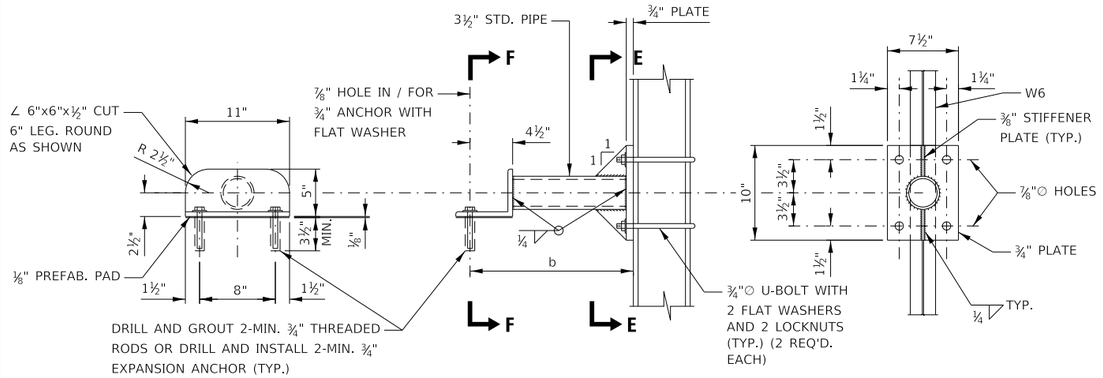
TYPICAL FRONT ELEVATION



SECTION B-B

NOTES:

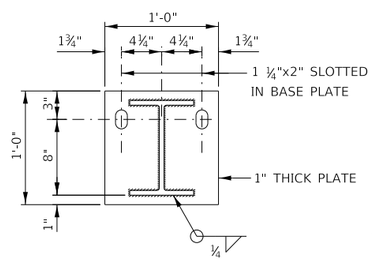
1. ALL STRUCTURE STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 (AASHTO M-270).
2. ALL STRUCTURAL STEEL PIPE SHALL BE ASTM A53 TYPE E OR S GRADE B WITH A MINIMUM YIELD OF 35,000 PSI. IF ASTM A500 GRADE B PIPE IS SUBSTITUTED FOR A53 THEN THE OUTSIDE DIAMETER SHALL BE AS DETAILED AND THE WALL THICKNESS GREATER THAN OR EQUAL TO ASTM A53.
3. ALL CAP SCREWS, BOLTS, U-BOLTS, WASHERS AND LOCKNUTS SHALL BE IN ACCORDANCE WITH ARTICLE 733.02 OF THE IDOT STANDARD SPECIFICATIONS AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 AASHTO M-232.
4. ALL-THREADED RODS SHALL CONFIRM TO ASTM F1554 GRADE 105, EACH WITH ONE PLATE WASHER AND LOCKNUT AND BE HOT DIP GALVANIZED PER ASTM A153 (AASHTO M232). THEY SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 1211 OF ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATION TO THE IDOT STANDARD SPECIFICATION.
5. ALL WELDS TO BE CONTINUOUS UNLESS OTHERWISE SHOWN. ALL WELDING TO BE DONE IN ACCORDANCE WITH THE CURRENT AWS D1.1 STRUCTURAL WELDING CODE (STEEL) AND THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
6. ALL FABRICATION SHALL BE COMPLETE AND READY FOR ASSEMBLY BEFORE GALVANIZING. NO PUNCHING, DRILLING, CUTTING, NOR WELDING SHALL BE PERMITTED AFTER GALVANIZING.
7. ALL STRUCTURAL STEEL PLATES, SHAPES AND PIPE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ASTM ASTM A123 AND ASTM A325 AASHTO M111. PAINTING IS NOT PERMITTED.
8. CONTRACTOR SHALL FIELD CHECK ALL BRIDGE DIMENSIONS SHOWN ON PLANS BEFORE SUBMITTING SHOP DRAWINGS. DRAWINGS SHALL BE PREPARED IN ACCORDANCE TO ARTICLE 505.03 OF STANDARD SPECIFICATIONS.
9. THE COST OF FURNISHING AND INSTALLING THE BEARING PADS AS HEREIN SPECIFIED SHALL BE INCLUDED WITH THE COST OF BRIDGE (CONCRETE) MOUNTED SIGN SUPPORT.
10. PRE-FAB BEARING PADS: NEOPRENE BEARING PADS SHALL HAVE A SHORE DUROMETER SURFACE HARDNESS OF 65.
11. METHOD OF MEASUREMENT SHALL BE IN ACCORDANCE WITH ARTICLE 733.10 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT IN ACCORDANCE WITH ARTICLE 733.11 FOR BRIDGE (CONCRETE) MOUNTED SIGN SUPPORT.
12. SIGN STRUCTURE WIRING SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS, SECTION 823.
13. CENTER LINE OF EXPANSION ANCHOR INTO PARAPET SHALL BE AT LEAST 12" TO CENTERLINE OF OPEN JOINT IN PARAPET. ENGINEER SHALL VERIFY THE MINIMUM DISTANCES BETWEEN EXPANSION ANCHORS AND PARAPET PRIOR TO ERECTION OF SIGN SUPPORT.



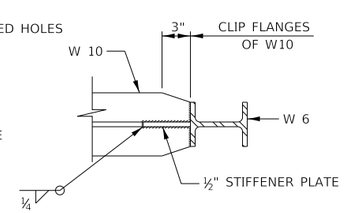
SECTION F-F

DETAIL Z

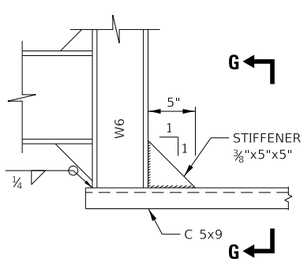
SECTION E-E



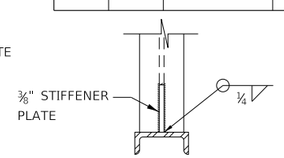
SECTION C-C



SECTION D-D



DETAIL Y



SECTION G-G

NOTE TO DESIGNER

FOR SKEWS (ANGLE BETWEEN THE CENTERLINE OF THE ROAD UNDER THE BRIDGE AND A LINE PERPENDICULAR TO THE FASCIA BEAM OF THE BRIDGE) UP TO 15 DEGREES, SIGNS MAY BE MOUNTED PARALLEL TO THE FASCIA BEAM.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

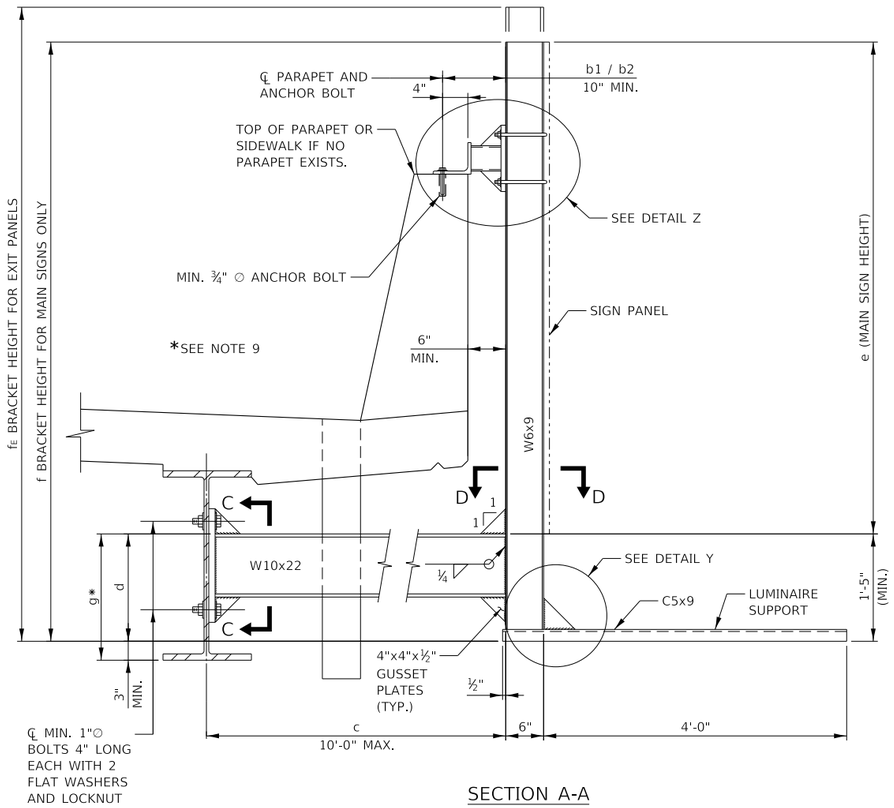
SIGN NO.	ROUTE	STATION	BRIDGE NAME	SIGN SKEW ANGLE (Θ)	NO. BR'K'TS f	NO. BR'K'TS f	a	b_1	b_2	c_1	c_2	d	e	f	f_E	g	MAIN SIGN SIZE	EXIT PANEL WIDTH

TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL

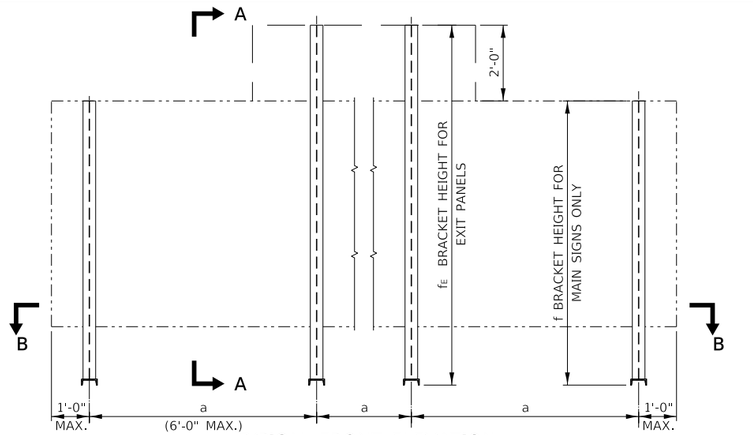
Illinois Tollway

BRIDGE (CONCRETE) MOUNTED SIGN SUPPORT

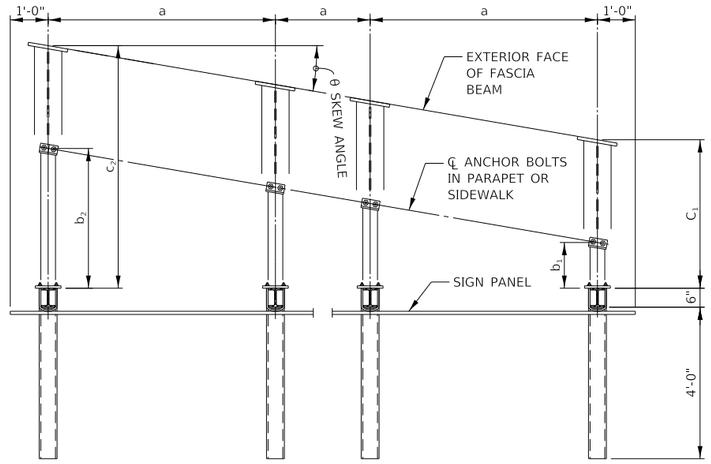
VERSION:	STANDARD:	SHEET:
2021-03	M-BRG-503	1 OF 1



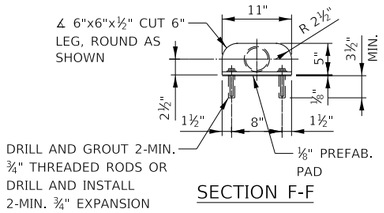
SECTION A-A



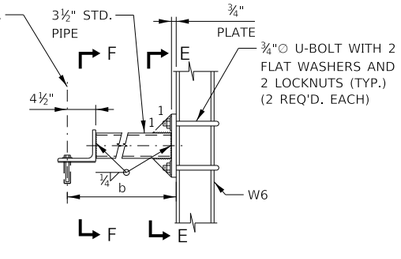
TYPICAL FRONT ELEVATION



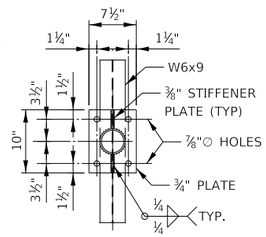
SECTION B-B



SECTION F-F



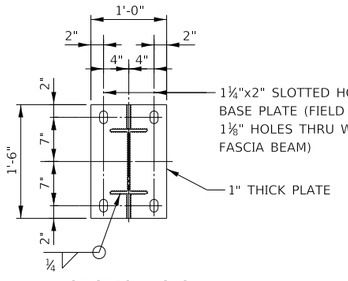
DETAIL Z



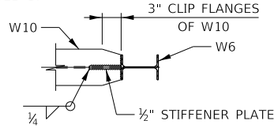
SECTION E-E

NOTE TO DESIGNER

FOR SKEWS (ANGLE BETWEEN THE CENTERLINE OF THE ROAD UNDER THE BRIDGE AND A LINE PERPENDICULAR TO THE FASCIA BEAM OF THE BRIDGE) UP TO 15 DEGREES, SIGNS MAY BE MOUNTED PARALLEL TO THE FASCIA BEAM.



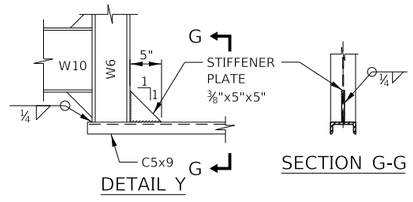
SECTION C-C



SECTION D-D

NOTE TO DESIGNER

DIMENSION "a" TO TAKE INTO ACCOUNT LOCATION OF SPLICE PLATES ALONG FASCIA BEAM TO AVOID CONFLICTS WITH HORIZONTAL SIGN BRACE.



DETAIL Y

SECTION G-G

NOTE TO DESIGNER

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NOTES:

1. ALL STRUCTURE STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 (AASHTO M-270).
2. ALL STRUCTURAL STEEL PIPE SHALL BE ASTM A53 TYPE E OR S GRADE B WITH A MINIMUM YIELD OF 35,000 PSI. IF ASTM A500 GRADE B PIPE IS SUBSTITUTED FOR A53 THEN THE OUTSIDE DIAMETER SHALL BE AS DETAILED AND THE WALL THICKNESS GREATER THAN OR EQUAL TO ASTM A53.
3. ALL CAP SCREWS, BOLTS, U-BOLTS, WASHERS AND LOCKNUTS SHALL BE IN ACCORDANCE WITH ARTICLE 733.02 OF THE IDOT STANDARD SPECIFICATIONS AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 AASHTO M-232.
4. ALL-THREADED RODS SHALL CONFIRM TO ASTM F1554 GRADE 105, EACH WITH ONE PLATE WASHER AND LOCKNUT AND BE HOT DIP GALVANIZED PER ASTM A153 (AASHTO M232). THEY SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 1211 OF ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATION TO THE IDOT STANDARD SPECIFICATION.
5. ALL WELDS TO BE CONTINUOUS UNLESS OTHERWISE SHOWN. ALL WELDING TO BE DONE IN ACCORDANCE WITH THE CURRENT AWS D1.1 STRUCTURAL WELDING CODE (STEEL) AND THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
6. ALL FABRICATION SHALL BE COMPLETE AND READY FOR ASSEMBLY BEFORE GALVANIZING. NO PUNCHING, DRILLING, CUTTING, NOR WELDING SHALL BE PERMITTED AFTER GALVANIZING.
7. ALL STRUCTURAL STEEL PLATES, SHAPES AND PIPE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ASTM A123 AND ASTM A325 AASHTO M111. PAINTING IS NOT PERMITTED.
8. CONTRACTOR SHALL FIELD CHECK ALL BRIDGE DIMENSIONS SHOWN ON PLANS BEFORE SUBMITTING SHOP DRAWINGS. DRAWINGS SHALL BE PREPARED IN ACCORDANCE TO ARTICLE 505.03 OF STANDARD SPECIFICATIONS.
9. ALL HOLES DRILLED IN BRIDGE BEAM OR PLATE GIRDER SHALL BE LOCATED IN THE MIDDLE HALF OF THE WEB. THERE SHALL NOT BE ANY HOLES DRILLED IN THE WEB OF BEAM OR PLATE GIRDER CLOSER TO THE FLANGE THAN THE DEPTH OF BEAM DIVIDED BY FOUR (4) OR ONE-FOURTH (¼) THE DEPTH OF THE BEAM. THE ENGINEER MAY ADJUST DIMENSION "g" TO MEET THE ABOVE CONDITION AND TO KEEP THE SIGN LEVEL.
10. THE COST OF FURNISHING AND INSTALLING THE BEARING PADS AS HEREIN SPECIFIED SHALL BE INCLUDED WITH THE COST OF BRIDGE (STEEL) MOUNTED SIGN SUPPORT.
11. PRE-FAB BEARING PADS: NEOPRENE BEARING PADS SHALL HAVE A SHORE DUROMETER SURFACE HARDNESS OF 65.
12. METHOD OF MEASUREMENT SHALL BE IN ACCORDANCE WITH ARTICLE 733.10 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT IN ACCORDANCE WITH ARTICLE 733.11 FOR BRIDGE (CONCRETE) MOUNTED SIGN SUPPORT.
13. SIGN STRUCTURE WIRING SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS, SECTION 823.
14. CENTER LINE OF EXPANSION ANCHOR INTO PARAPET SHALL BE AT LEAST 12" TO CENTER LINE OF OPEN JOINT IN PARAPET. ENGINEER SHALL VERIFY THE MINIMUM DISTANCES BETWEEN EXPANSION ANCHORS & PARAPET PRIOR TO ERECTION OF SIGN SUPPORT.

SIGN NO.	ROUTE	STATION	BRIDGE NAME	SIGN SKEW ANGLE (Θ)	NO. BR'K'TS f	NO. BR'K'TS fE	a	b1	b2	c1	c2	d	e	f	fE	g	MAIN SIGN SIZE	EXIT PANEL WIDTH

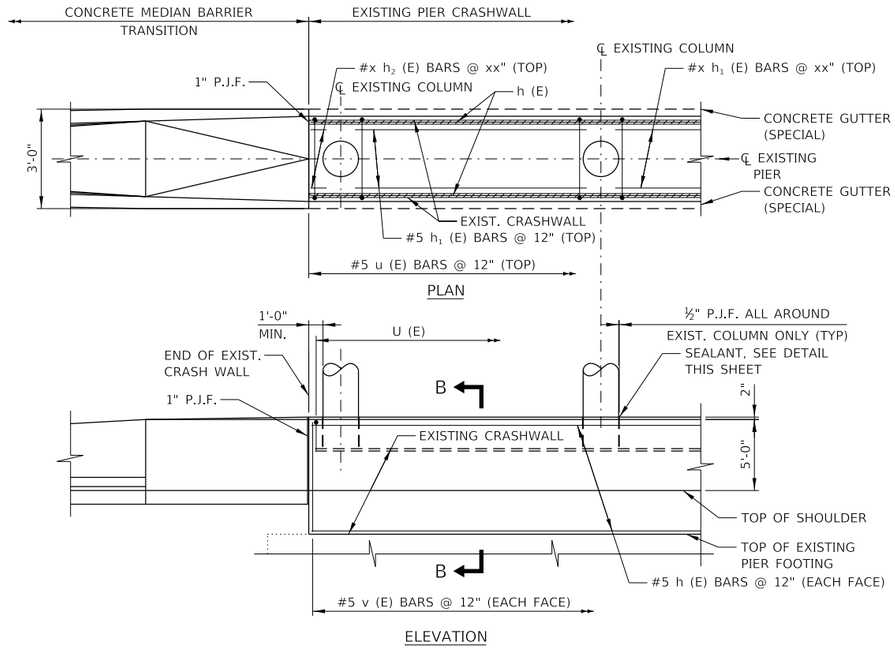
TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
XXX-XXXX			

Illinois Tollway

BRIDGE (STEEL) MOUNTED SIGN SUPPORT

VERSION:	STANDARD:	SHEET:
2022-03	M-BRG-504	1 OF 1

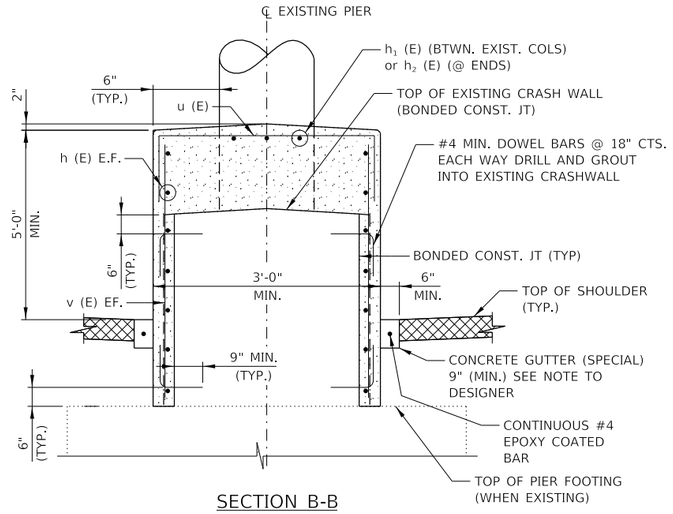


PROTECTION FOR EXISTING MEDIAN PIER WITH CRASH WALL

NOTE TO DESIGNER

TOP REINFORCEMENT SHALL MATCH EXISTING REINFORCEMENT

DOWEL SHALL BE ADEQUATELY DESIGNED FOR LOAD TRANSFER



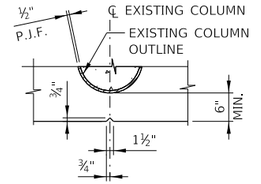
SECTION B-B

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

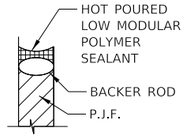
NOTE TO DESIGNER

WHEN THERE IS A MINIMUM DISTANCE OF 6" FROM THE FACE OF THE PIER CRASHWALL TO THE OUTER EDGE OF GUTTER OF THE CONCRETE MEDIAN BARRIER TRANSITION BASE, A CONCRETE GUTTER (SPECIAL) SHALL BE INSTALLED ALONG THE LENGTH OF PIER CRASHWALL. WHEN THERE IS LESS THAN 6" DISTANCE AN ASPHALT SHOULDER SHALL BE PLACED TO THE FACE OF THE CRASHWALL. THE WIDTH OF THE PIER CRASHWALL AND GUTTER SHALL BE EQUAL TO THE ADJACENT MEDIAN BARRIER BASE.

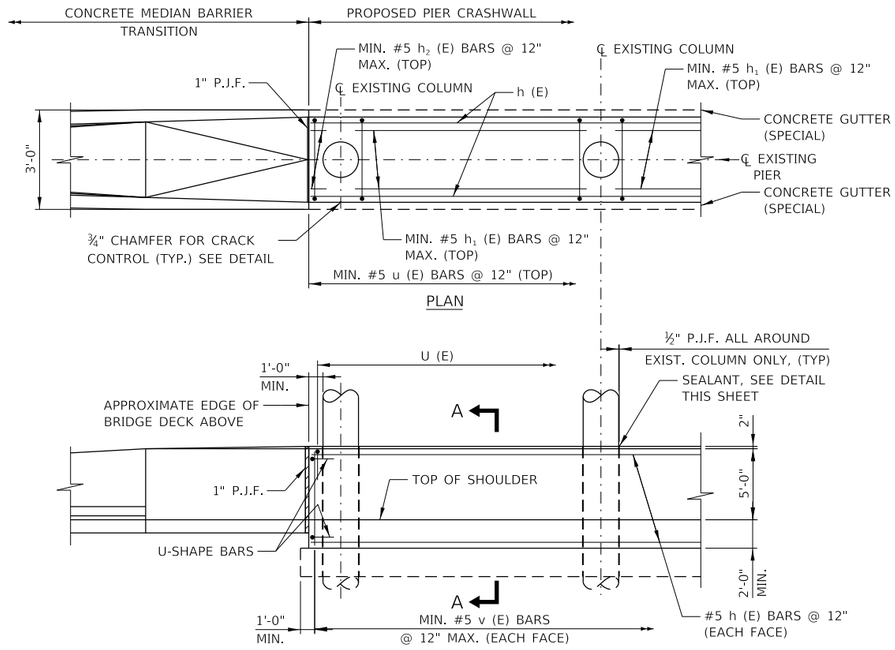


CRACK CONTROL DETAIL

REINFORCEMENT BARS OMITTED FOR CLARITY



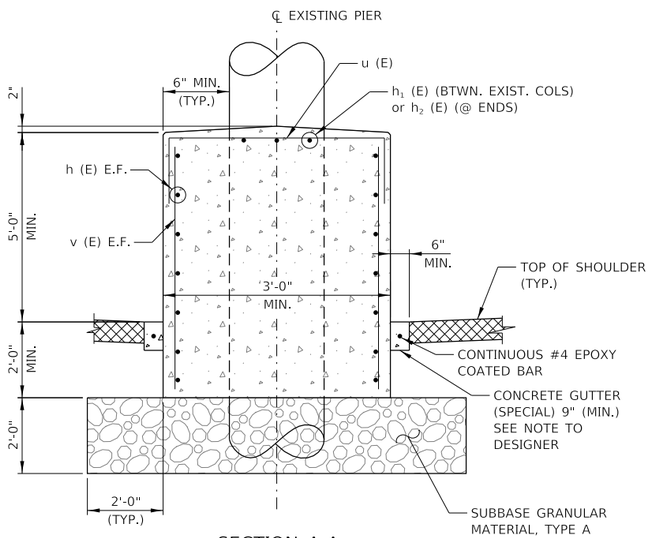
SEALANT DETAIL



PROTECTION FOR EXISTING MEDIAN PIER WITHOUT CRASH WALL

NOTE TO DESIGNER

LAP LENGTH OF h (E) AND v (E) BARS SHALL BE DESIGNED CONSIDERING THE VARIATION IN THE HEIGHT OF THE CRASHWALL



SECTION A-A

NOTES:

1. REMOVE EXISTING CONCRETE CRASHWALL BACK TO FACE OF COLUMNS PRIOR TO PLACING CONCRETE AROUND EXISTING CRASHWALL AND COLUMNS. SURFACES TO RECEIVE NEW CONCRETE SHALL BE BLAST CLEANED. COST OF CLEANING SHALL BE INCLUDED IN THE COST OF CONCRETE REMOVAL.
2. CONCRETE MEDIAN BARRIER TRANSITION TAPER LENGTHS, PAY LIMITS AND MEASUREMENT, AND BASIS OF PAYMENT ALL IN ACCORDANCE WITH THE ILLINOIS TOLLWAY STANDARD DRAWING C13, C14 AND THE SPECIAL PROVISIONS.
3. THE CLEAR COVER FOR REINFORCEMENT BARS TO THE SURFACE OF CONCRETE SHALL BE 2" UNLESS OTHERWISE SHOWN.
4. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
5. EXPOSED CONCRETE EDGES SHALL HAVE ¾"x45° CHAMFERS. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.
6. CONCRETE SEALANT SHALL BE APPLIED TO THE EXPOSED SURFACES OF ALL NEW AND/OR MODIFIED PIER CRASH WALLS.
7. E.F. DENOTES EACH FACE.

LEGEND:

P.J.F.

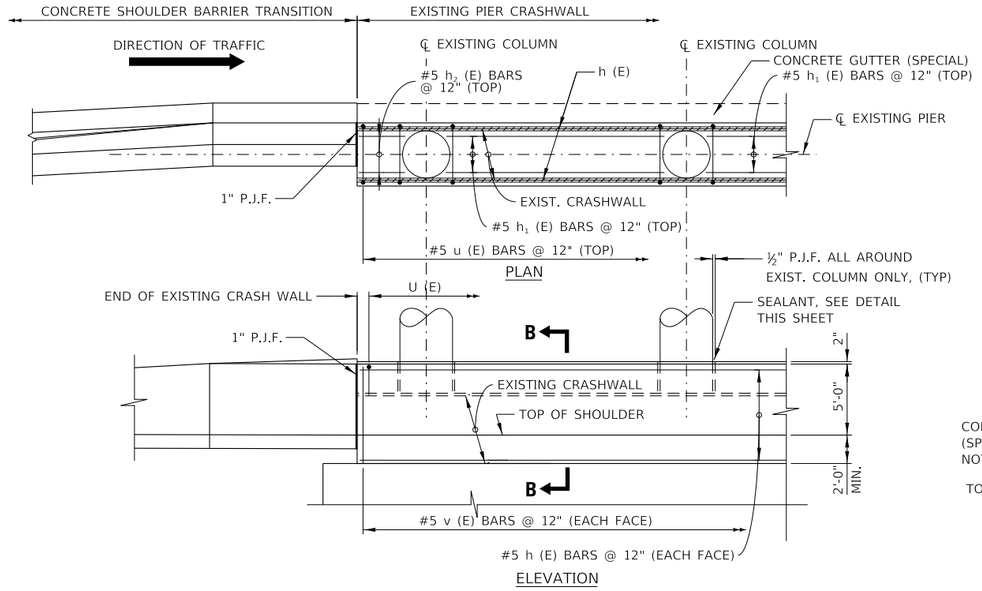
NEW CONCRETE

BITUMINOUS SHOULDER

Illinois Tollway

CRASH WALL MODIFICATIONS MEDIAN PIERS

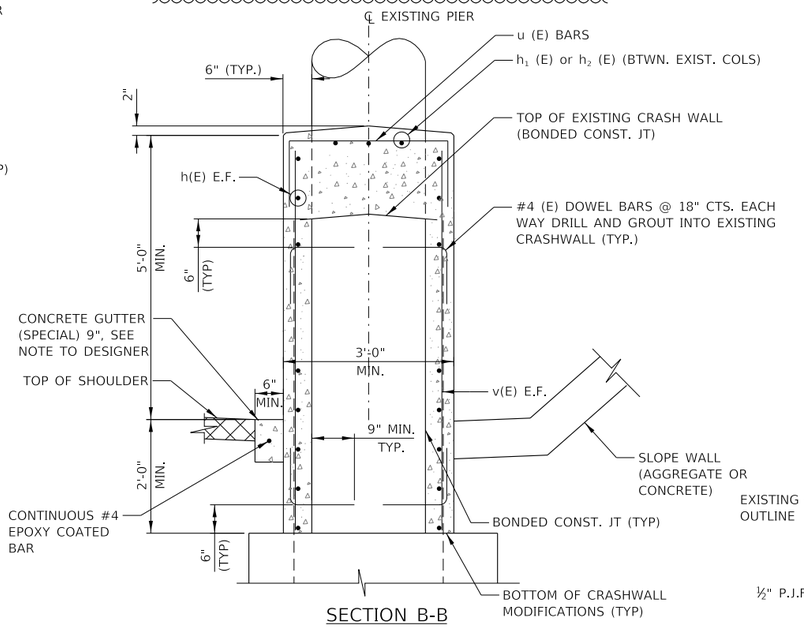
VERSION:	STANDARD:	SHEET:
2022-03	M-BRG-507	1 OF 1



PROTECTION FOR EXISTING SHOULDER PIER WITH CRASH WALL

NOTE TO DESIGNER

LAP LENGTH OF h (E) AND v (E) BARS SHALL BE DESIGNED CONSIDERING THE VARIATION IN THE HEIGHT OF THE CRASHWALL



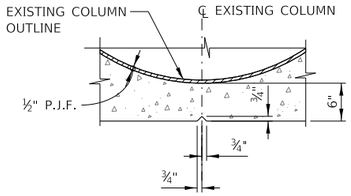
SECTION B-B

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

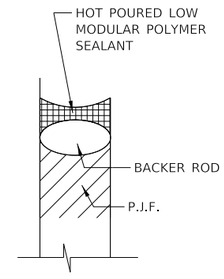
NOTE TO DESIGNER

WHEN THERE IS A MINIMUM DISTANCE OF 6" FROM THE FACE OF THE PIER CRASHWALL TO THE OUTER EDGE OF GUTTER OF THE CONCRETE MEDIAN BARRIER TRANSITION BASE, A CONCRETE GUTTER (SPECIAL) SHALL BE INSTALLED ALONG THE LENGTH OF PIER CRASHWALL. WHEN THERE IS LESS THAN 6" DISTANCE AN ASPHALT SHOULDER SHALL BE PLACED TO THE FACE OF THE CRASHWALL. THE WIDTH OF PIER CRASHWALL AND GUTTER SHALL BE EQUAL TO THE ADJACENT MEDIAN BARRIER BASE.

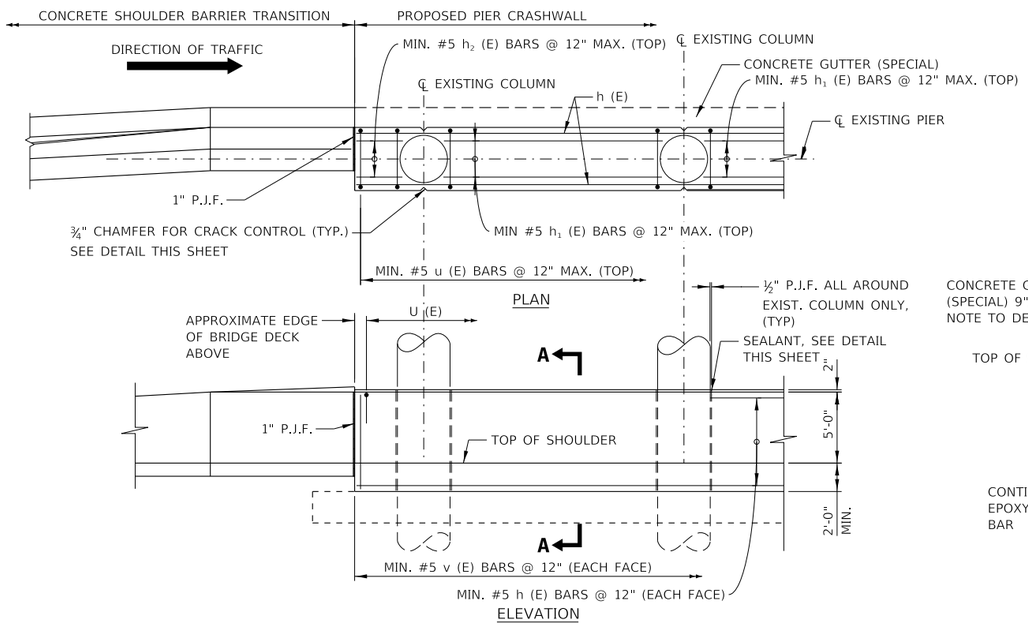


CRACK CONTROL DETAIL

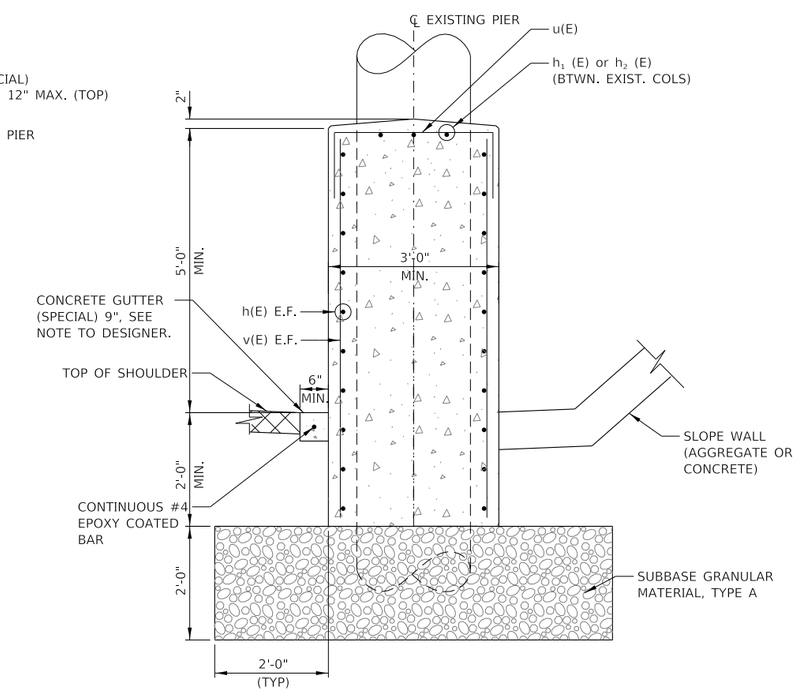
REINFORCEMENT BARS OMITTED FOR CLARITY



SEALANT DETAIL



PROTECTION FOR EXISTING SHOULDER PIER WITHOUT CRASH WALL



SECTION A-A

NOTES

1. REMOVE EXISTING CONCRETE CRASHWALL BACK TO FACE OF COLUMNS PRIOR TO PLACING CONCRETE AROUND EXISTING CRASHWALL AND COLUMNS. SURFACES TO RECEIVE NEW CONCRETE SHALL BE BLAST CLEANED. COST OF CLEANING SHALL BE INCLUDED IN THE COST OF CONCRETE REMOVAL.
2. CONCRETE SHOULDER BARRIER TRANSITION TAPER LENGTHS, PAY LIMITS AND MEASUREMENT, AND BASIS OF PAYMENT ALL IN ACCORDANCE WITH THE ILLINOIS TOLLWAY STANDARD DRAWING C7, C13, C14 AND THE SPECIAL PROVISIONS.
3. THE CLEAR COVER FOR REINFORCEMENT BARS TO THE SURFACE OF CONCRETE SHALL BE 2" UNLESS OTHERWISE SHOWN.
4. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
5. EXPOSED CONCRETE EDGES SHALL HAVE ¾"x45° CHAMFERS. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.
6. CONCRETE SEALANT SHALL BE APPLIED TO THE EXPOSED SURFACES OF ALL NEW AND/OR MODIFIED PIER CRASH WALLS.
7. E.F. DENOTES EACH FACE

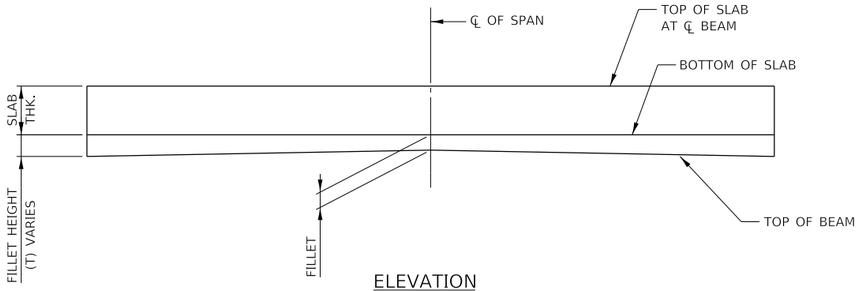
LEGEND:

- P.J.F.
- NEW CONCRETE
- BITUMINOUS SHOULDER

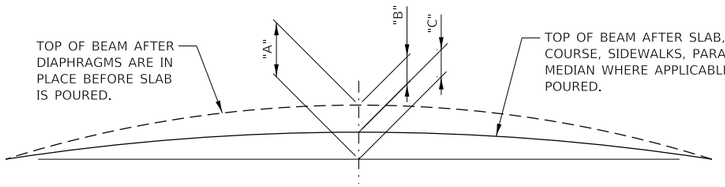
Illinois Tollway

CRASH WALL MODIFICATIONS SHOULDER PIERS

VERSION:	STANDARD:	SHEET:
2021-03	M-BRG-508	1 OF 1



ELEVATION



CAMBER & DEFLECTION DIAGRAM

- * "A" = PRESTRESS CAMBER
- * "B" = DEAD LOAD DEFLECTION
- * "C" = RESIDUAL CAMBER
- * ROUND OFF TO NEAREST 1/8"

CONTRACTOR SHALL TAKE ELEVATIONS AT TOP OF BEAMS AFTER ERECTION AND SHALL ALLOW FOR DEFLECTION SHOWN TO ENABLE BUILDING FORMS TO CORRECT GRADE AND SPECIFIED SLAB THICKNESS. PROVIDE COPY OF ELEVATIONS TO THE ENGINEER.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTE TO DESIGNER

1. PRESENT PRACTICE IS TO USE A MINIMUM "FILLET" (AT EDGE OF BEAM FLANGE) OF ½" FOR DESIGN CALCULATIONS. THE MINIMUM FILLET (AT EDGE OF BEAM FLANGE) ALLOWED IN CONSTRUCTION IS ½" AT MID- SPAN AND 2" AT CENTERLINE OF BEARING.

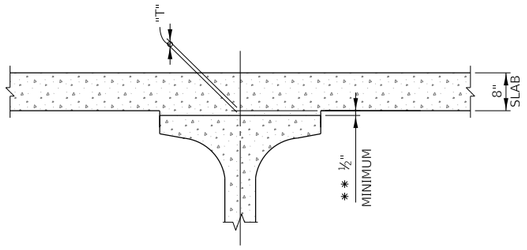
** 2. IF ½" MINIMUM FILLET HEIGHT AT EDGE OF BEAM AT MID-SPAN CANNOT BE MAINTAINED DURING CONSTRUCTION, THE GRADE LINE MAY BE RAISED BY UP TO ½" FROM THE PLAN PROFILE AT THE DISCRETION OF THE DESIGNER. 3" MINIMUM DECK EMBEDMENT OF THE TIE BAR SHALL BE MAINTAINED. THE PLAN SLAB THICKNESS SHALL BE HELD.

3. USE THE CALCULATED THEORETICAL AVERAGE "FILLET" AT CENTERLINE OF FLANGE FOR COMPUTING THE FILLET CONCRETE QUANTITY.

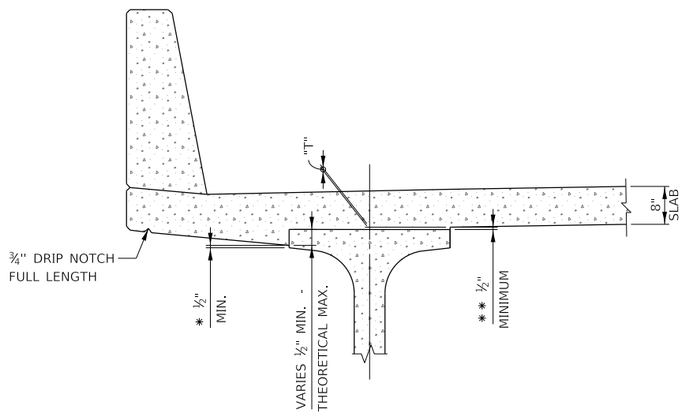
4. USE TOP OF DECK ELEVATIONS AND CALCULATED "FILLET" AT CENTERLINE OF BEAM FOR COMPUTING BEAM SEAT ELEVATIONS AT SUBSTRUCTURES.

5. FOR SKEWS < 10°, PLACE INTERMEDIATE DIAPHRAGMS IN A STRAIGHT LINE. REFER TO SHEETS M-BRG-518 PROVIDE OFFSET FOR SKEWS > 10°.

6. DIAPHRAGM SPACING: FOR SPANS < 80'-0", PLACE ONE DIAPHRAGM AT MID-LENGTH OF BEAM. FOR SPANS OVER 80'-0", PLACE AT ⅓ AND ⅔ POINTS.



ALL GIRDER SIZES
INTERIOR GIRDER DETAIL

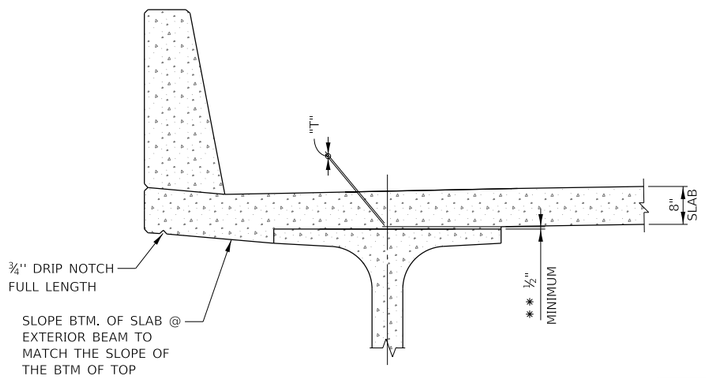


45" OR LESS PPC BULB-T EXTERIOR BEAMS
DECK HAUNCH DETAIL
* VARIABLE, NOT LESS THAN ½"

IF ½" MINIMUM FILLET HEIGHT AT THE EDGE OF BEAM CANNOT BE MAINTAINED, NOTIFY THE ENGINEER OF RECORD.

TO DETERMINE "T", ELEV. OF TOP OF BEAMS AT ℄ OF STRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF BEAM ELEVATION
+DEAD LOAD DEFLECTION
- SLAB THICKNESS
=FILLET HEIGHT "T"

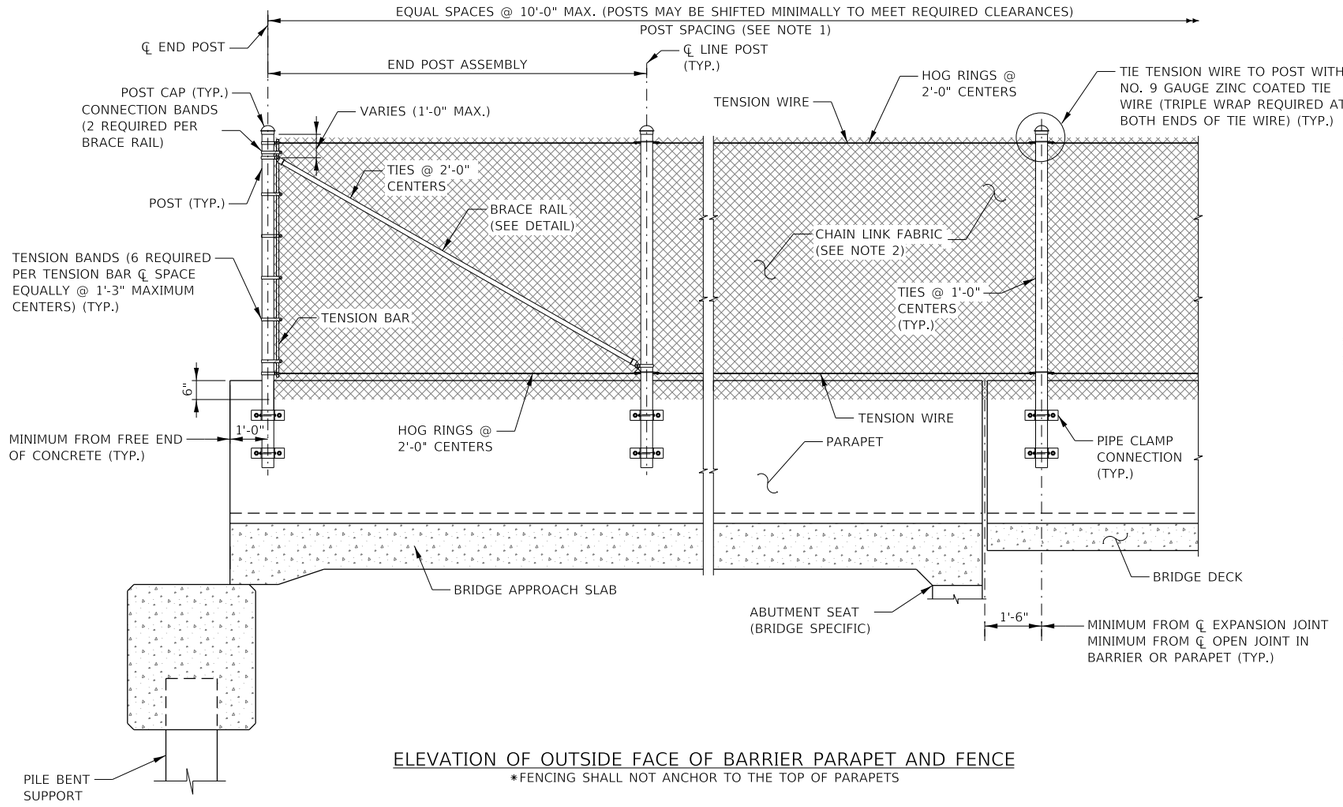


54" OR GREATER PPC BULB-T BEAMS
SLAB HAUNCH DETAIL

Illinois Tollway

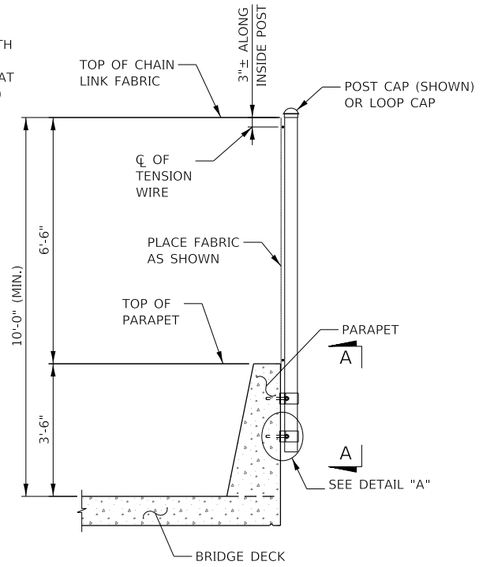
PPC BEAM DETAILS

VERSION:	STANDARD:	SHEET:
2022-03	M-BRG-517	1 OF 1



ELEVATION OF OUTSIDE FACE OF BARRIER PARAPET AND FENCE

*FENCING SHALL NOT ANCHOR TO THE TOP OF PARAPETS



TYPICAL SECTION ON PARAPET OR BARRIER

NOTE TO DESIGNER

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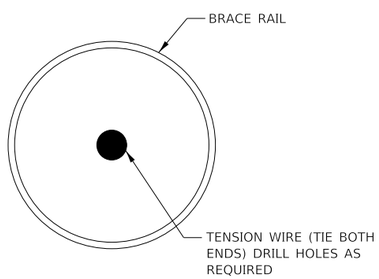
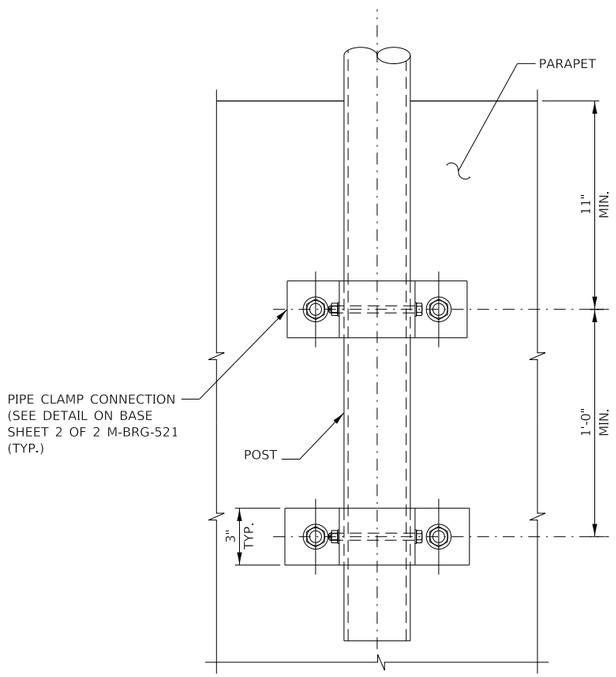
DESIGNER NOTES:

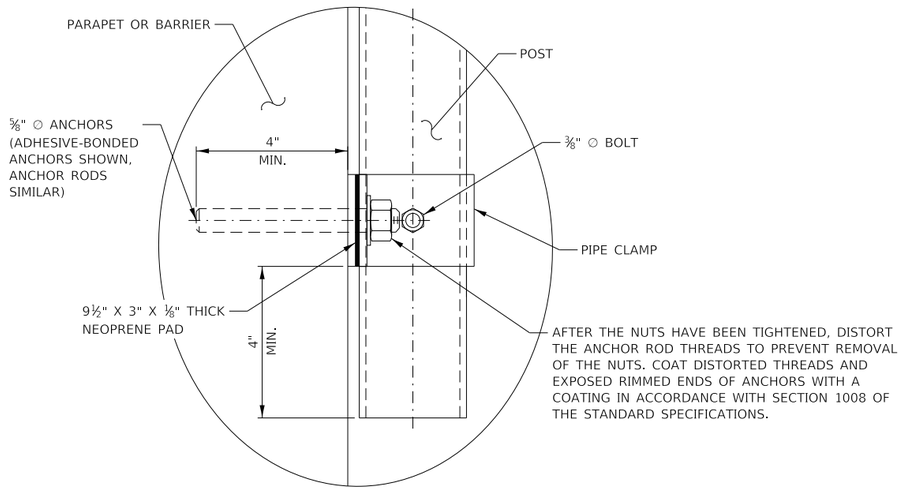
1. PULL POST ASSEMBLY IS REQUIRED AT MAXIMUM INTERVALS 0F 200'. SEE SHEET 2 OF THIS SERIES.
2. INSTALL POSTS PLUMB (WITHIN A TOLERANCE OF ± 1½". USE SHIM PLATES AS REQUIRED TO ACHIEVE PLUMB. INSTALL CHAIN LINK FENCE IN ACCORDANCE WITH ASTM F5678 AS APPLICABLE.
3. FABRIC SHALL NOT BE SPLICED BY PICKETS. FABRIC SPLICES IF REQUIRED SHALL ONLY OCCUR AT POSTS AT A MINIMUM OF 100 FT. BETWEEN SPLICES. (ADD THIS NOTE TO PLANS.)
4. RAILROAD BRIDGE FENCE SHALL BE DETAILED ON SUPERSTRUCTURE DRAWING.
5. COORDINATE LIMITS OF RAILROAD BRIDGE FENCE WITH SPECIFIC RAILROAD REQUIREMENTS.
6. VERIFY LIMITS OF THE FENCING REQUIREMENTS ON THE BRIDGE APPROACH PER THE ILLINOIS TOLLWAY STRUCTURAL DESIGN MANUAL ARTICLE 23.5.2.



BRACE RAIL DETAIL



VIEW A-A

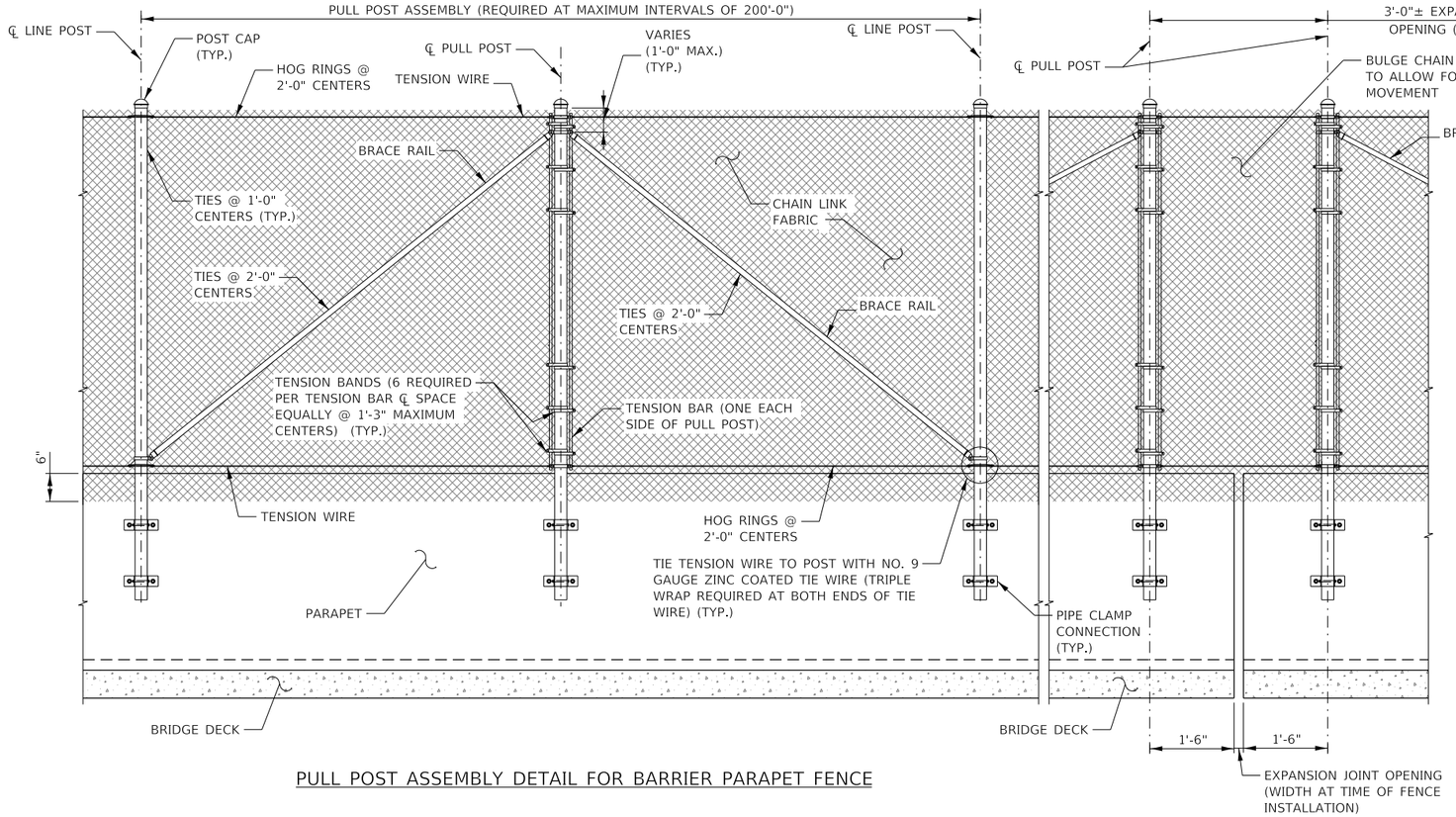


DETAIL A

Illinois Tollway

RAILROAD BRIDGE FENCE

VERSION:	STANDARD:	SHEET:
2019-03	M-BRG-521	1 OF 2



PULL POST ASSEMBLY DETAIL FOR BARRIER PARAPET FENCE

EXPANSION ASSEMBLY DETAIL
(REQUIRED ONLY AT EXPANSION JOINT LOCATIONS WHERE TOTAL MOVEMENT EXCEEDS 6")

NOTE TO DESIGNER

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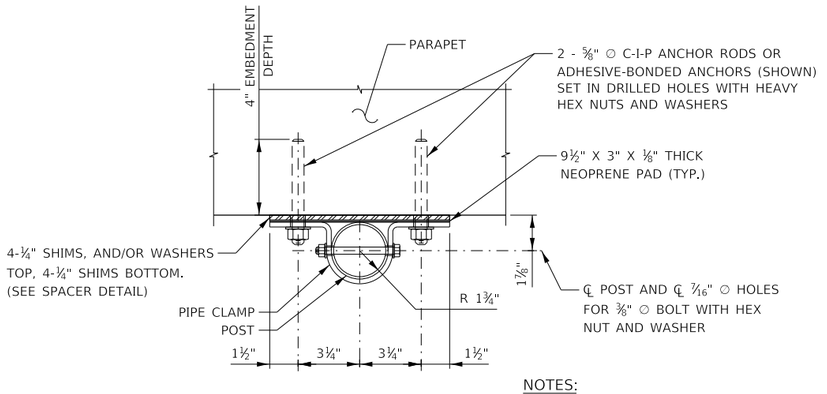
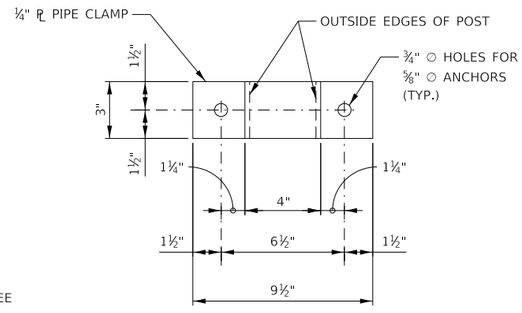


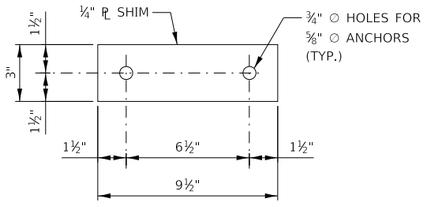
PIPE CLAMP CONNECTION DETAIL

NOTES:

1. FOR TREATMENT AT BRIDGE ENDS, SEE BASE SHEET 1 OF 2 M-BRG-521.
2. THE 3'-0" DIMENSION SHOWN IS FOR EXPANSION JOINT OPENINGS 9" OR LESS. IF THE EXPANSION JOINT OPENING EXCEEDS 9", INCREASE THIS DIMENSION BY THE DIFFERENCE BETWEEN THE EXPANSION JOINT OPENING AND 9".



PIPE CLAMP DETAIL

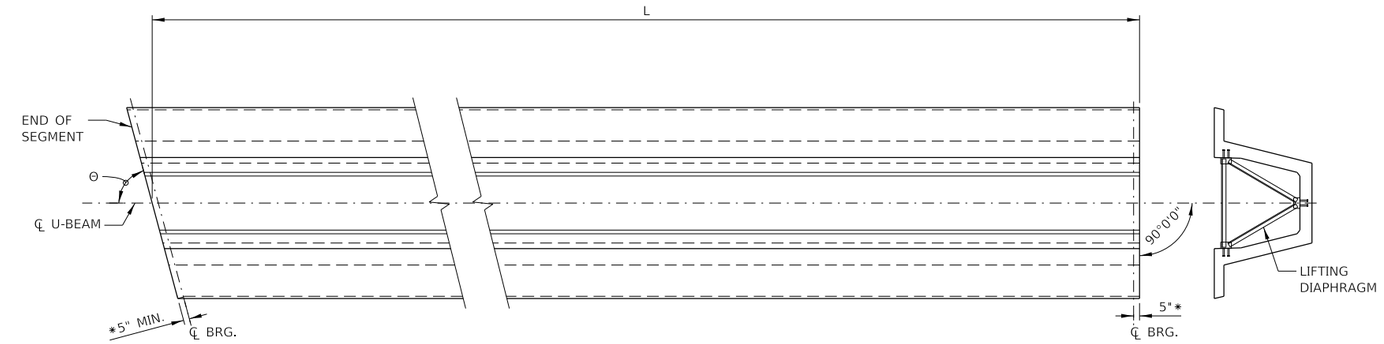


SPACER DETAIL
(MUST BE MANUFACTURED FROM AN INCOMPRESSIBLE MATERIAL (I.E., STEEL OR ALUMINUM))

Illinois Tollway

RAILROAD BRIDGE FENCE

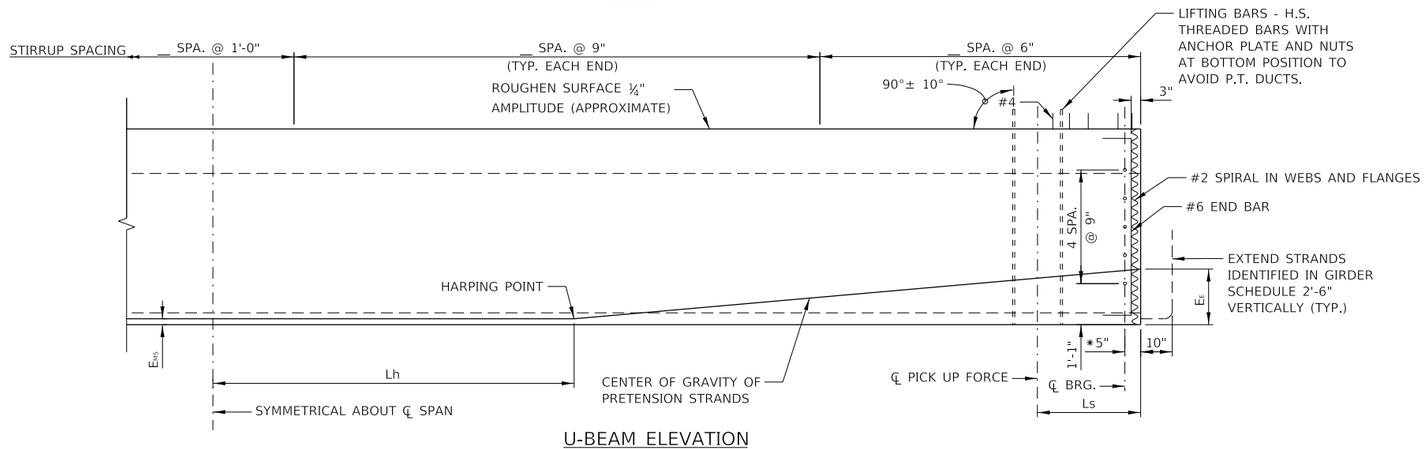
VERSION:	STANDARD:	SHEET:
2019-03	M-BRG-521	2 OF 2



SKEWED END

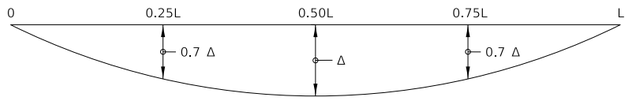
SQUARE END

PLAN



U-BEAM ELEVATION

SHIPPING & HANDLING DETAILS		
Ls	k_θ MIN. SHIPPING SUPPORT ROTATIONAL SPRING CONSTANT	wcc MIN. SHIPPING SUPPORT ℄ TO ℄ WHEEL SPACING



DEAD LOAD DEFLECTION DIAGRAM

U-BEAM SCHEDULE

SPAN NO.	GIRDER NO.	L (Ft)	Fw (In.)	D (In.)	θ (Deg.)	Tw (In.)	Tb (In.)	Lh (Ft)	A_{s^*} In.²	DEBOND STRANDS (PERCENT)	E_E (In.)	E_{ms} (In.)	F_i (kips)	F_f (kips)	CONCRETE STRENGTH f'_{ci} (psi) @ RELEASE	CONCRETE STRENGTH f'_c (psi) @ 28 DAYS	Δ (In.) @ 40 DAYS & @ 120 DAYS	PREDICTED CAMBER (in.)	STRANDS TO EXTEND END 1	STRANDS TO EXTEND END 2

NOTES:

TOP OF BEAM TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF BEAM, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE BEAM SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE BEAMS.

LIFTING EMBEDMENTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 504 OF STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION. CONTRACTOR TO DESIGN OTHER LIFTING MECHANISM IF THE GIRDER SECTION WEIGHT EXCEEDS 200 KIPS.

STRANDS SHALL BE FLUSH WITH END OF BEAM. FOR BEAM ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR BEAM ENDS THAT ARE FINALLY EXPOSED, COAT THE BEAM ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE BEAM ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL U-BEAMS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR CHOOSES TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, ONE OPTION IS AVAILABLE:

USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

PRESTRESSING STRANDS SHALL BE 0.6" DIA., 7-WIRE LOW, RELAXATION FOR ALL PATTERNS WITH AN ULTIMATE STRENGTH OF 270,000 psi. THE MAX NUMBER OF DRAPED 0.6"℄ STRANDS IS 8.

- A_s* = MINIMUM AREA OF THE PRESTRESSING STEEL.
- d_s = NOMINAL STRAND DIAMETER.
- f'_s = ULTIMATE STRENGTH OF THE PRESTRESSING STEEL.
- F_i = JACKING FORCE PER U-BEAM.
- F_f = FINAL FORCE PER U-BEAM AFTER ALL LOSSES.
- f'_{ci} = REQUIRED CONCRETE STRENGTH AT RELEASE OF PRESTRESS FORCE.
- f'_c = REQUIRED CONCRETE STRENGTH AT 28 DAYS OF AGE.
- L = LENGTH OF U-BEAM ALONG THE GRADE OF THE U-BEAM.
- Δ = DEFLECTION AT CENTERLINE OF SPAN DUE TO CAST-IN-PLACE SLAB, SIDEWALK AND PARAPETS.
- P = PROJECTION. 6" IN THE MIDDLE 1/3 OF THE MEMBER VARYING TO THE SPECIFIED HAUNCH AT THE BEARING PLUS 4".
- θ = BRIDGE SKEW ANGLE

PREDICTED CAMBER IS THE CAMBER FOR THE GIRDER ALONE AT ___ DAYS.

CAUTION SHALL BE EXERCISED IN HANDLING AND PLACING GIRDERS. ALL GIRDERS SHALL BE CHECKED BY CONTRACTOR TO INSURE THEY ARE BRACED ADEQUATELY TO PREVENT TIPPING AND TO CONTROL LATERAL BENDING DURING SHIPPING ONCE ERECTED. ALL GIRDERS SHALL BE BRACED LATERALLY TO PREVENT TIPPING UNTIL ALL DIAPHRAGMS ARE CAST AND CURED.

NOTE TO DESIGNER

SPECIFY CONCRETE STRENGTH AS REQUIRED BY DESIGN FROM A MINIMUM OF 6,000 PSI TO A MAX. OF 8,500 PSI.

REINFORCEMENT IN STANDARD END SECTION OF THE BEAM IS BASED ON THE STRAND PATTERNS LISTED ON SHEET 2 OF 2 M-BRG-522. USING DIFFERENT STRAND PATTERNS WILL REQUIRE A COMPLETE DESIGN OF THIS REINFORCEMENT. PRIOR APPROVAL FROM THE ILLINOIS TOLLWAY IS REQUIRED IF DESIGN OF THE END REINFORCEMENT IS REQUIRED.

THE DESIGN ENGINEER DETERMINES THE PROJECTION OF BAR G1 BASED ON 2" MIN. HAUNCH AT EDGE OF BEAM, X-SLOPE, PROFILE GRADE LINE AND CALCULATED RESIDUAL BEAM CAMBER, INCLUDING THE CAMBER MULTIPLIER OF 1.8 FOR I-BEAMS, 1.4 FOR TUB GIRDERS. THIS VALVE CAN VARY AND SHOULD BE GIVEN FOR EACH OF THE BEAM LENGTH. PROVIDE VALUES THAT MAINTAIN 3" MIN. DECK EMBEDMENT AND 2" CLEAR FROM TOP OF DECK WHILE ACCOUNTING FOR ±¾" VARIANCE IN ACTUAL CAMBER VERSUS THE CALCULATED RESIDUAL CAMBER.

DIMENSIONS NOTED WITH (*) ARE A FUNCTION OF THE DESIGN REQUIREMENTS AND MAY VARY. DIMENSION IN THE GIRDER SCHEDULE SHALL BE SHOWN TO THE NEAREST ⅛".

NOTE TO DESIGNER

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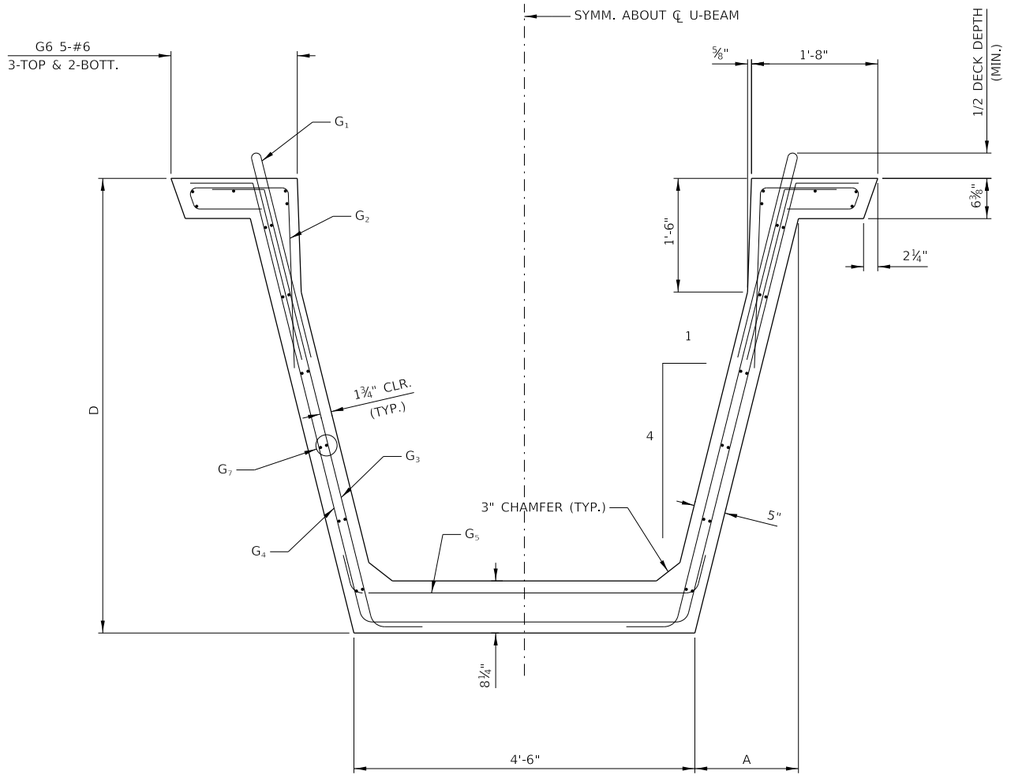
Illinois Tollway

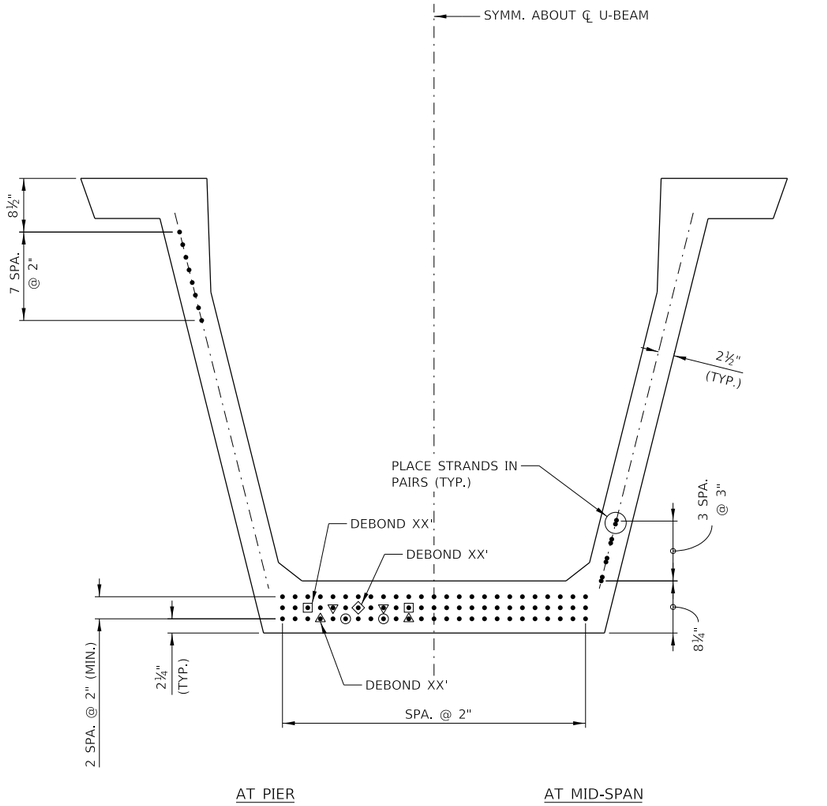
PPC U-BEAM PRETENSIONED

VERSION:	STANDARD:	SHEET:
2019-03	M-BRG-522	1 OF 2



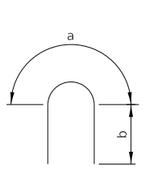
TYPICAL U-BEAM SECTION

(REINFORCEMENT SHOWN AT SPAN)

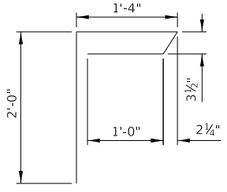


TYPICAL U-BEAM PRESTRESSING

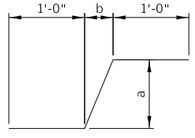
(PRETENSIONING)



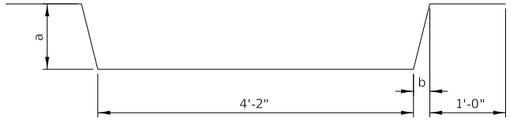
BAR G_1



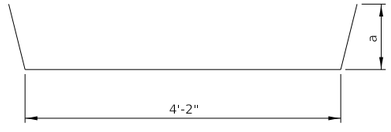
BAR G_2



BAR G_3



BAR G_4



BAR G_5

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BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
G_1	0	#4	X'-X"	
G_2				
G_3				
G_4				
G_5				
G_6	10	#6		
G_7				
G_{10}		#6		

VARIABLE DIMENSIONS

BAR	a	b
G_1		
G_2		
G_3		
G_4		
G_5		

BEAM TABLE

D	A
48"	10 3/8"
60"	1'-1 3/8"
72"	1'-4 3/8"

Illinois Tollway

PPC U-BEAM PRETENSIONED

VERSION:	STANDARD:	SHEET:
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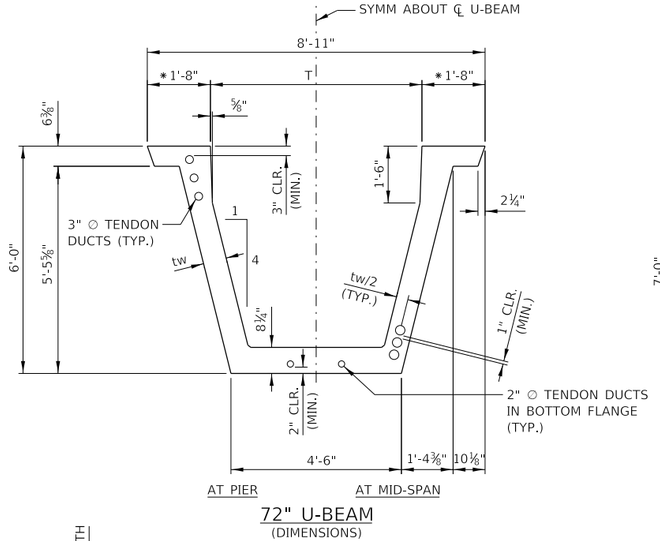
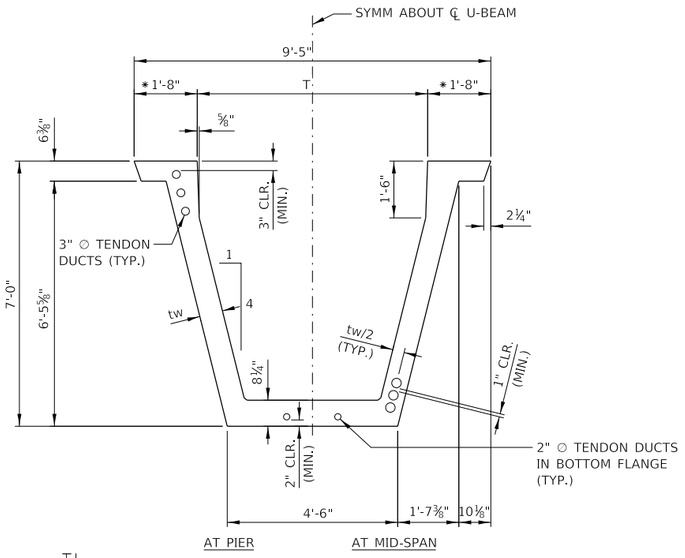
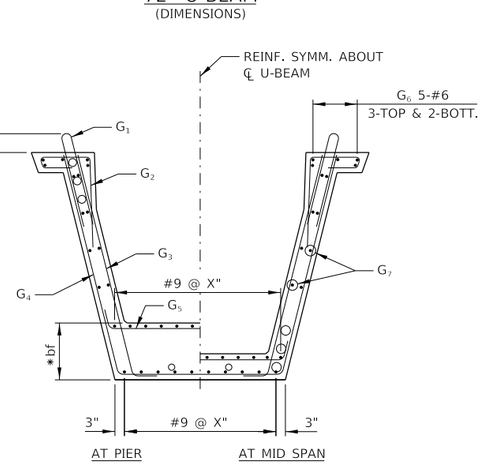


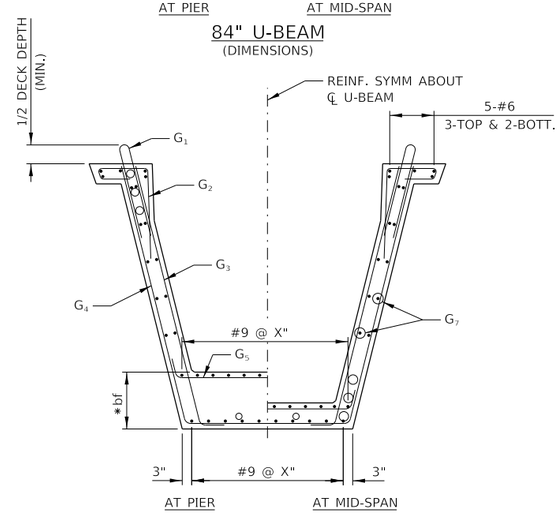
72" U-BEAM
(DIMENSIONS)



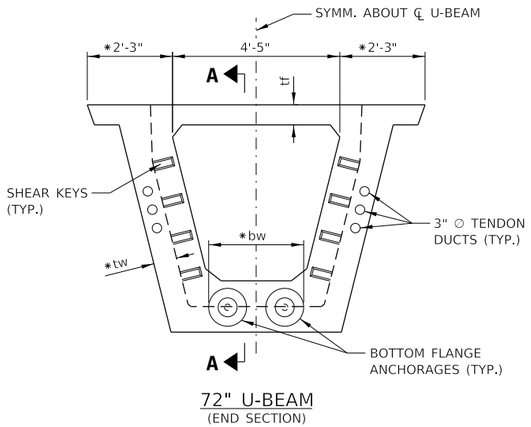
84" U-BEAM
(DIMENSIONS)



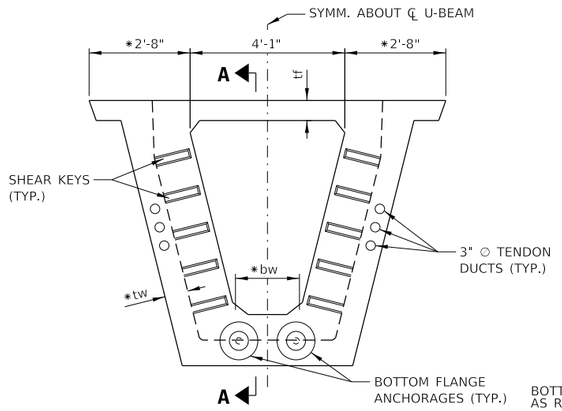
72" U-BEAM
(REINFORCEMENT)



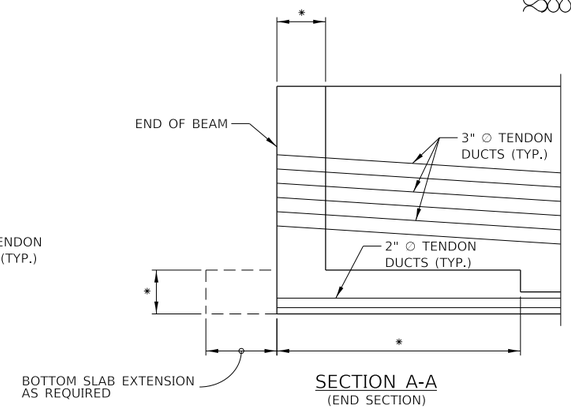
84" U-BEAM
(REINFORCEMENT)



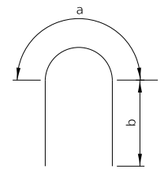
72" U-BEAM
(END SECTION)



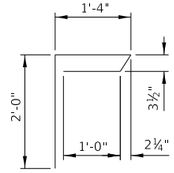
84" U-BEAM
(END SECTION)



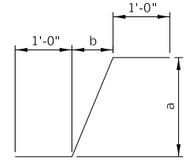
SECTION A-A
(END SECTION)



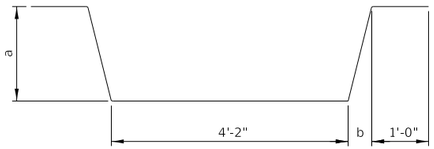
BAR G_1



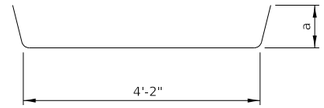
BAR G_2



BAR G_3



BAR G_4



BAR G_5

BAR	NO.	SIZE	LENGTH	SHAPE
G_1	0	#4	X'-X"	
G_2				
G_3				
G_4				
G_5				
G_6		#6		
G_7				

VARIABLE DIMENSIONS

BAR	a	b
G_1		
G_2		
G_3		
G_4		
G_5		

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NOTE TO DESIGNER

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Illinois Tollway

72IN. AND 84IN. PPC U-BEAM POST-TENSIONED

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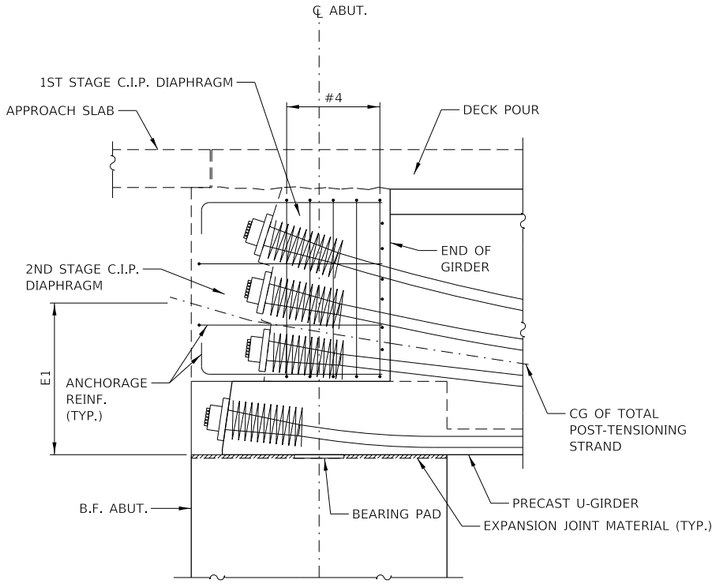
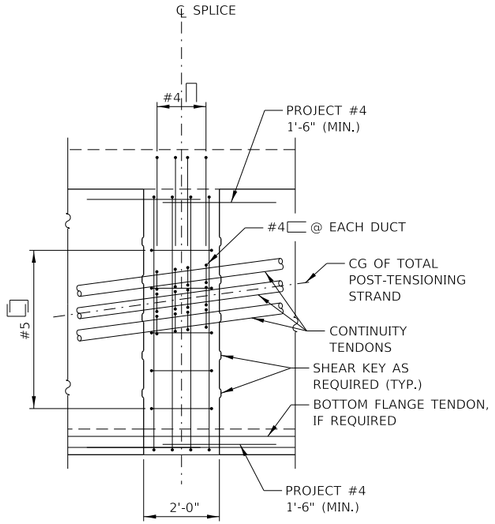
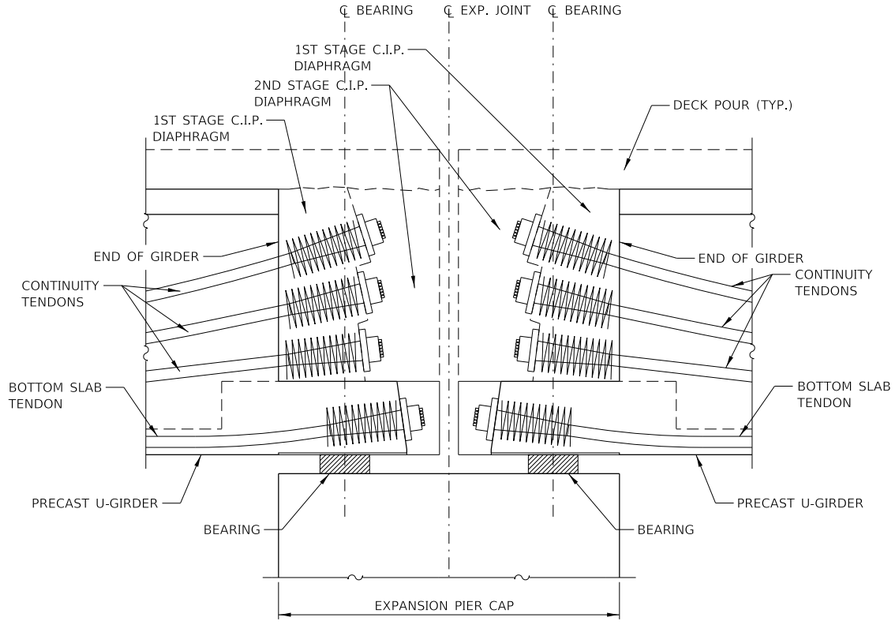


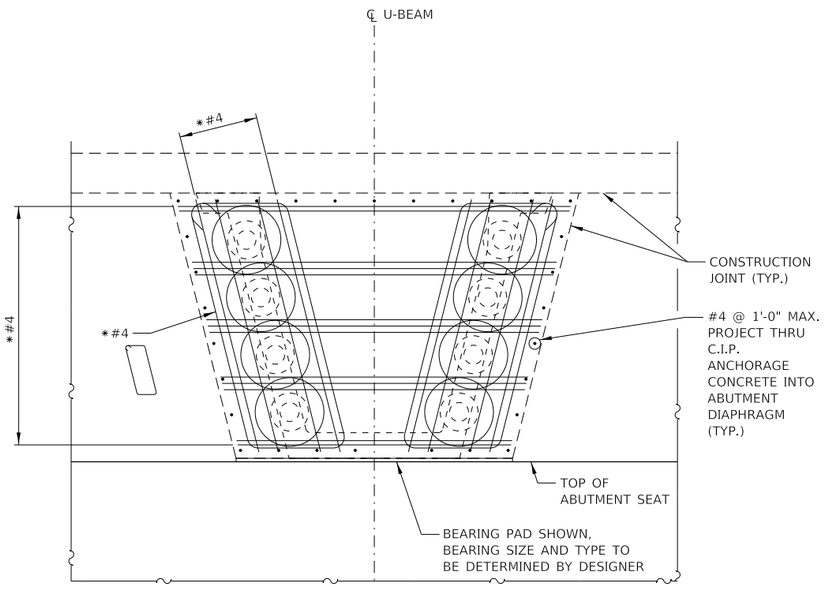
INTEGRAL ABUTMENT



SPLICE DETAIL



EXPANSION PIER



END VIEW
(INTEGRAL ABUTMENT)

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Illinois Tollway

72IN. AND 84IN. PPC U-BEAM POST-TENSIONED

VERSION:	STANDARD:	SHEET:
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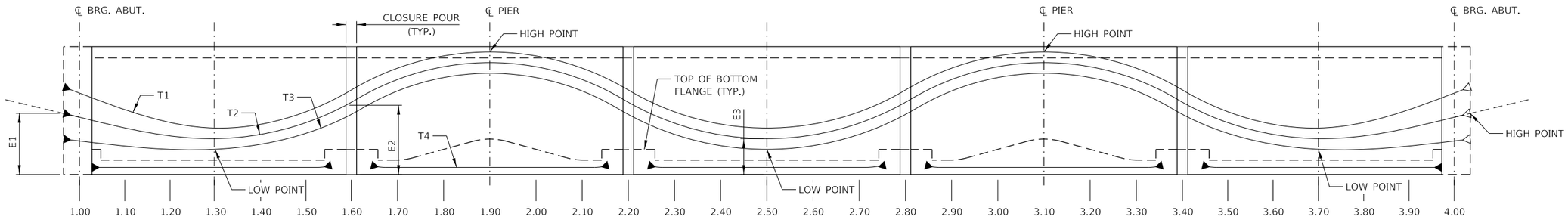


WEB ELEVATION

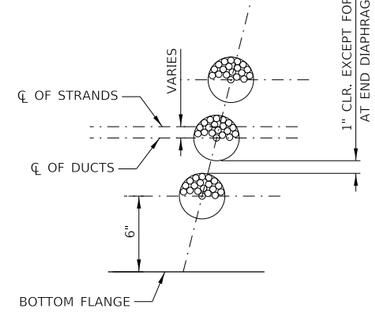
LEGEND

- DENOTES LIVE END
- DENOTES DEAD END

	LOCATION																														
TENDON	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	4.00
T1	X.XX'																														
T2	X.XX'																														
T3	X.XX'																														
T4	X.XX'																														

TENDON PROFILE

POST-TENSIONING TABLE											
SPAN NO.	GIRDER NO.	MIN. COMPRESSIVE STRENGTH (KSI)			NUMBER OF STRANDS	PRESTRESSING LOAD (KSI)		TOTAL PRESTRESSING LOSS (KSI)	E1 (in)	E2 (in)	E3 (in)
		SPAN NO.		GIRDER NO.		JACKING	AFTER SEATING				
		f'c	f'ci								



STRAND LOCATION DETAIL
(TENDON IN SAG CURVE)

NOTES:

REINFORCING THAT INTERFERES WITH THE PRESTRESSING TENDON ALIGNMENT SHALL BE ADJUSTED AS APPROVED BY THE ENGINEER.

WHERE DEAD END ANCHORAGE AND TENDONS ARE ACCESSIBLE, THE ANCHORAGE SYSTEM AND LENGTH OF PROJECTING PRESTRESSING STEEL SHALL PERMIT JACKING WITH THE SAME JACKING EQUIPMENT THAT WAS USED ON THE LIVE END.

DEVIATIONS FROM THE DUCT PATTERN, DUCT SIZE, AND STRAND SIZE ASSUMED IN THE DESIGN MUST BE APPROVED BY THE ENGINEER.

THE DEFLECTION SHOWN IS POSITIVE DOWNWARD. IT INCLUDES THE INSTANTANEOUS EFFECTS OF DEAD LOAD AND PRESTRESSING, AND A FACTOR OF THREE (3) MULTIPLIER TO ACCOUNT FOR LONG TERM CREEP. FORMED WEB ELEVATIONS MUST BE ADJUSTED UPWARD FOR AN INDICATED POSITIVE DEFLECTION.

STRESSING SEQUENCE:

CONTRACTOR SHALL SUBMIT THE STRESSING AND ELONGATION CALCULATIONS TO THE ENGINEER FOR APPROVAL. ALL LOSES DUE TO TENDON VERTICAL AND HORIZONTAL CURVATURES MUST BE INCLUDED IN ELONGATION CALCULATIONS. THE STRESSING SEQUENCE SHALL MEET THE FOLLOWING CRITERIA.

1. TENDONS MAY BE JACKED FROM BOTH ENDS, EITHER SIMULTANEOUSLY OR SEQUENTIALLY, OR ½ THE TENDONS MAY BE JACKED FROM EACH END. IF THE TENDONS ARE JACKED FROM EACH END THE JACKING FORCE SHALL BE INCREASED ____KIPS. IF JACKING FORCE OR STEEL AREA IS GREATER THAN ASSUMED IN THE DESIGN, PRESTRESSING QUANTITIES SHALL NOT BE ADJUSTED.

2. NO MORE THAN ½ OF THE PRESTRESSING FORCE IN ANY WEB MAY BE STRESSED BEFORE AN EQUAL FORCE IS STRESSED IN THE ADJACENT WEBS. AT NO TIME DURING THE STRESSING OPERATIONS WILL MORE THAN 10% OF THE TOTAL PRESTRESSING FORCE BE APPLIED ECCENTRICALLY ABOUT THE CENTERLINE OF THE STRUCTURE.

3. AT THE CONTRACTORS OPTION, THE PRESTRESSING FORCE MAY VARY ±5% FROM THE THEORETICAL FORCE PER WEB PROVIDED THE TOTAL P(JACK) FORCE IS OBTAINED AND IS DISTRIBUTED SYMMETRICALLY ABOUT THE CENTERLINE OF THE TYPICAL SECTION. P(JACK) IS THE SUM OF THE PEAK FORCES REACHED DURING JACKING IN EACH TENDON.

4. BOTTOM FLANGE TENDONS TO BE STRESSED AT CASTING YARD OR ON SITE BEFORE CLOSURE POURS ARE FORMED AND CAST.

POST-TENSIONING NOTES:

THE MINIMUM COMPRESSIVE STRENGTH OF THE CAST-IN-PLACE CONCRETE AT THE CLOSURE AT THE TIME OF POST-TENSIONING SHALL BE AS SHOWN IN POST-TENSIONING TABLE.

THE MAXIMUM OUTSIDE DIAMETER OF THE DUCT SHALL BE ----- INCHES. THE AREA OF THE DUCT SHALL BE AT LEAST 2.5 TIMES THE NET AREA OF THE PRESTRESSING STEEL IN THE DUCT.

THE DESIGN IS BASED ON 0.6" DIA. LOW RELAXATION STRANDS MEETING THE REQUIREMENT OF ASTM A416 GRADE 270 WITH AN ANCHOR SET OF ⅜", A CURVATURE FRICTION COEFFICIENT, K=0.0002/FT. THE ACTUAL ANCHOR SET AND JACKING FORCE USED BY THE CONTRACTOR SHALL BE SPECIFIED IN THE SHOP PLANS AND INCLUDED IN THE TRANSFER FORCE CALCULATIONS.

THE DESIGN IN BASED ON THE ESTIMATED PRESTRESS LOSS OF POST-TENSIONING STRANDS SHOWN IN THE POST-TENSIONING TABLE DUE TO STEEL RELAXATION, ELASTIC SHORTENING CREEP AND SHRINKAGE OF CONCRETE.

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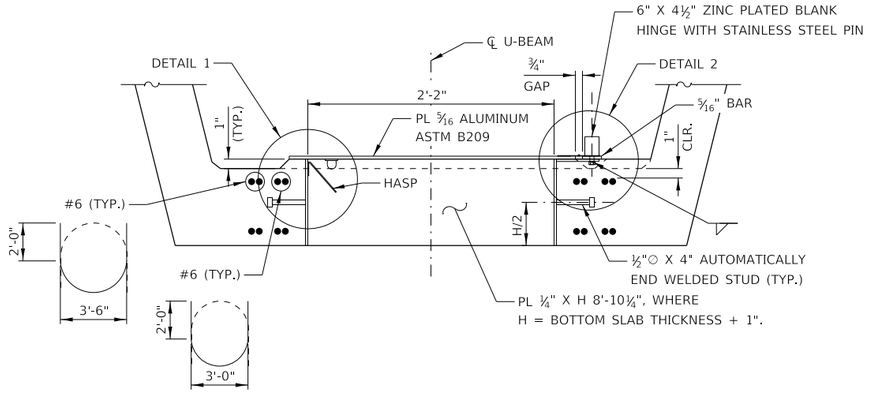
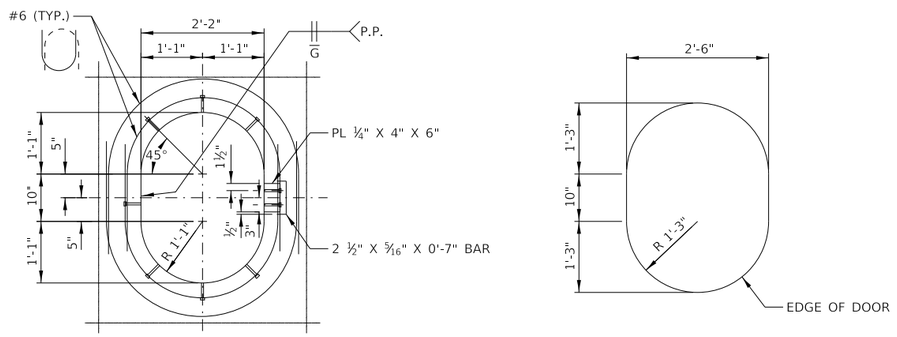
Illinois Tollway

72IN. AND 84IN. PPC U-BEAM POST-TENSIONED

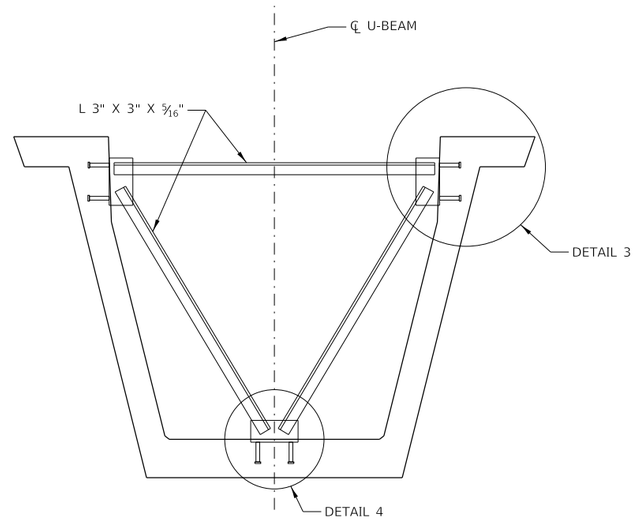
VERSION:	STANDARD:	SHEET:
2019-03	M-BRG-523	3 OF 3



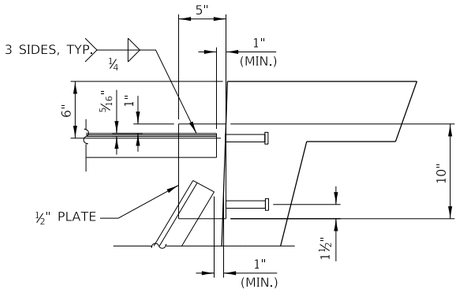
SECTION THROUGH ACCESS DOOR



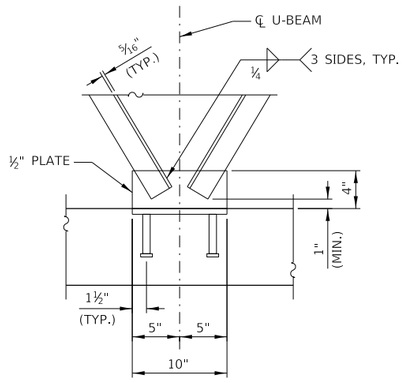
ACCESS DOOR DETAILS



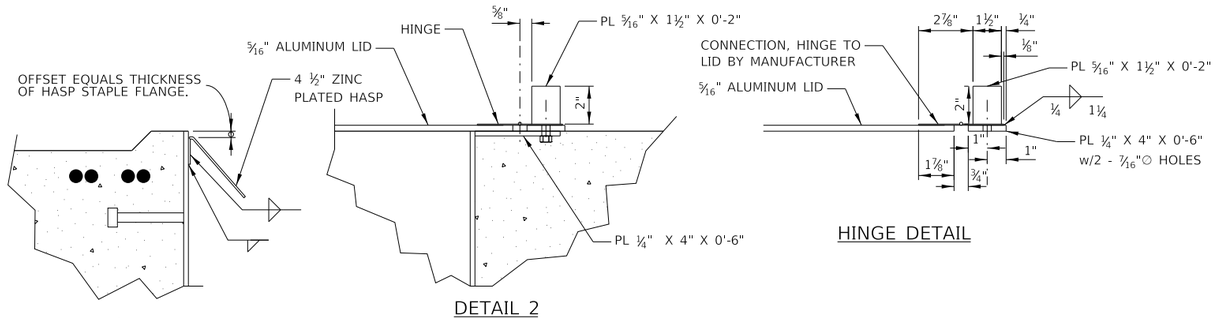
LIFTING DIAPHRAGM



DETAIL 3



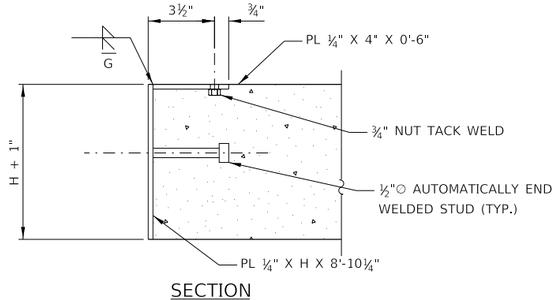
DETAIL 4



DETAIL 1

DETAIL 2

HINGE DETAIL



SECTION

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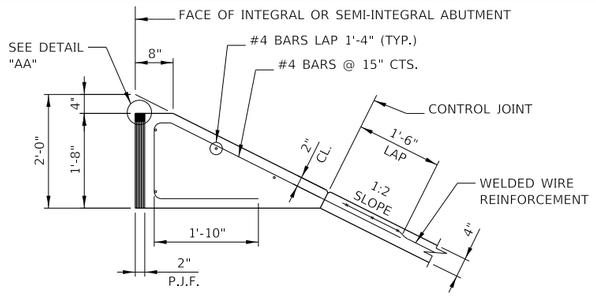
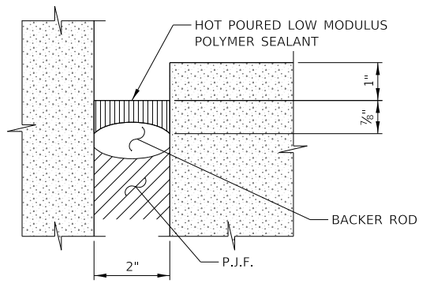
Illinois Tollway

PPC U-BEAM MISCELLANEOUS DETAILS

VERSION:	STANDARD:	SHEET:
2014-12	M-BRG-524	1 OF 1

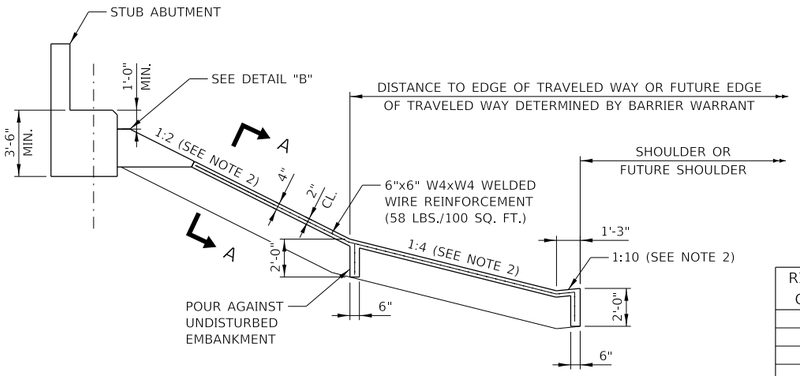


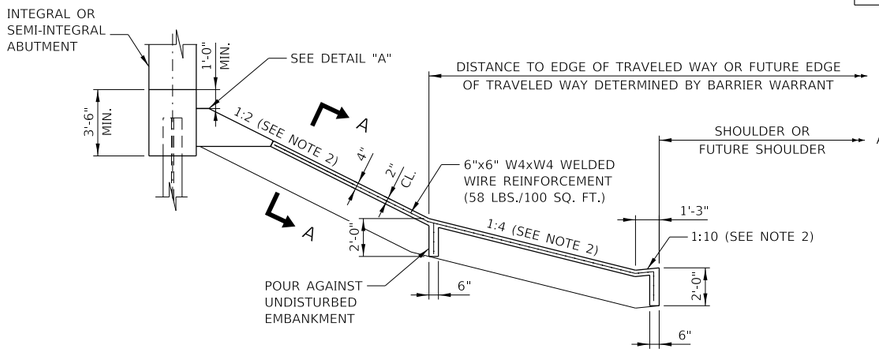
DETAIL "A"



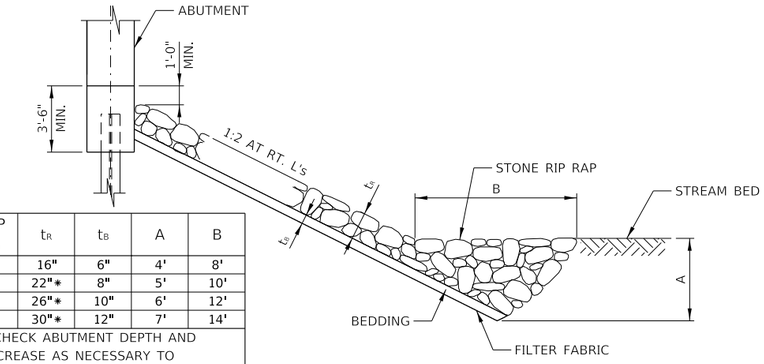
DETAIL "AA"

NOTE:
SEALANT, BACKER ROD AND PJF SHALL MEET THE REQUIREMENTS OF SECTIONS 1050 AND 1051 OF THE STANDARD SPECIFICATIONS.





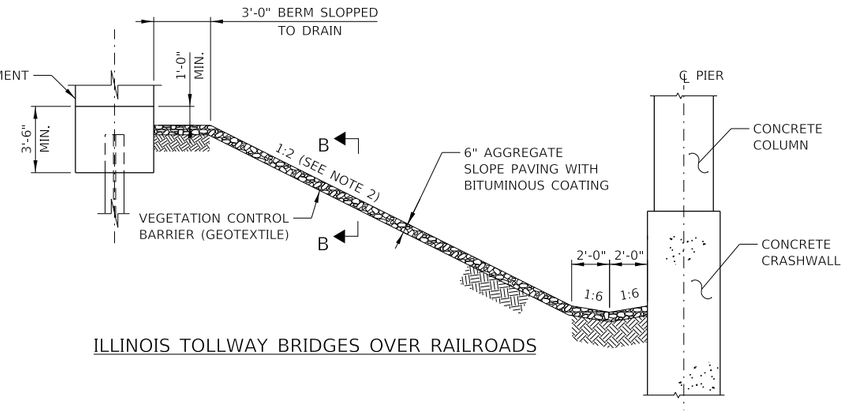
SLOPE WALLS FOR BRIDGES OVER ILLINOIS TOLLWAY



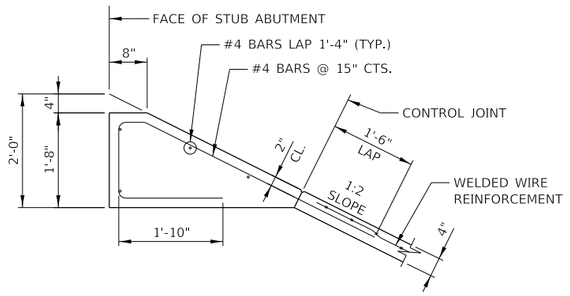
RIP RAP CLASS	t_R	t_B	A	B
A4	16"	6"	4'	8'
A5	22"∗	8"	5'	10'
A6	26"∗	10"	6'	12'
A7	30"∗	12"	7'	14'

∗CHECK ABUTMENT DEPTH AND INCREASE AS NECESSARY TO MATCH DEPTH OF RIP RAP

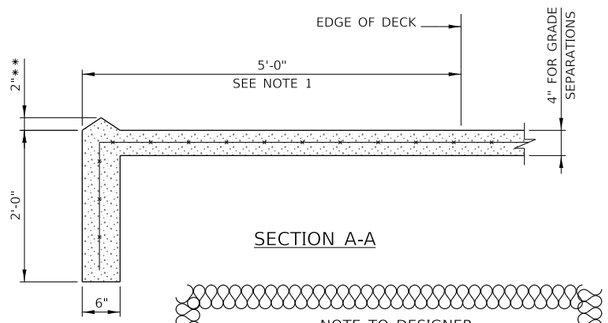
ILLINOIS TOLLWAY BRIDGES OVER WATERWAYS



ILLINOIS TOLLWAY BRIDGES OVER RAILROADS

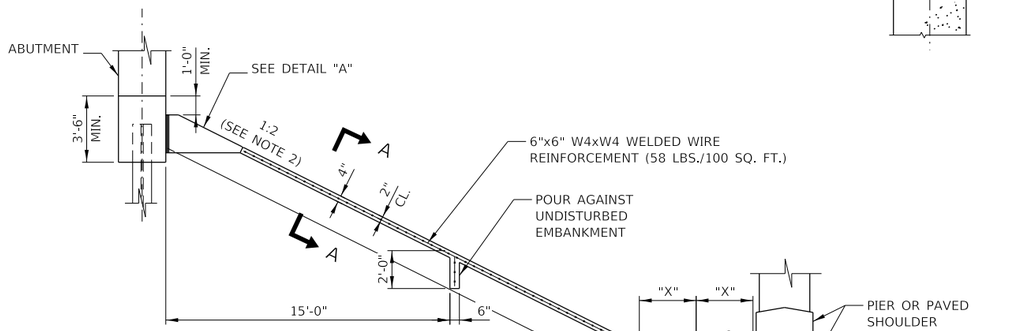


DETAIL "B"



SECTION A-A

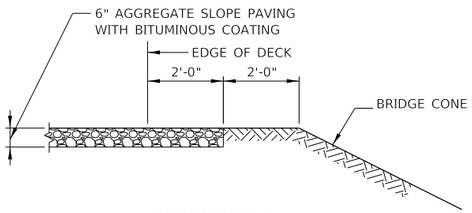
NOTE TO DESIGNER
∗∗THIS DIMENSION SHALL BE INCREASED TO 4" FOR STRUCTURES WITH SKEWS OF 10° OR GREATER AND DRAINAGE ELEMENTS THAT OUTLET ONTO SLOPEWALL.



NOTE:
SEE ROADWAY PLANS FOR DIMENSION "X" MEASURED NORMAL TO CENTERLINE OF ROADWAY.

ILLINOIS TOLLWAY BRIDGES OVER CROSSROADS

NOTE TO DESIGNER
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.



SECTION B-B

NOTE TO DESIGNER
DESIGNER TO REMOVE ALL DETAILS THAT DO NOT APPLY

NOTES:

1. DIMENSIONS SHALL BE 2'-0" IF DECK DRAINS ARE NOT PROVIDED.
2. DIMENSIONS MARKED THUS ARE MEASURED NORMAL TO CENTERLINE OF ROADWAY OR TRACK.
3. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

Illinois Tollway

SLOPEWALL DETAILS

VERSION:	STANDARD:	SHEET:
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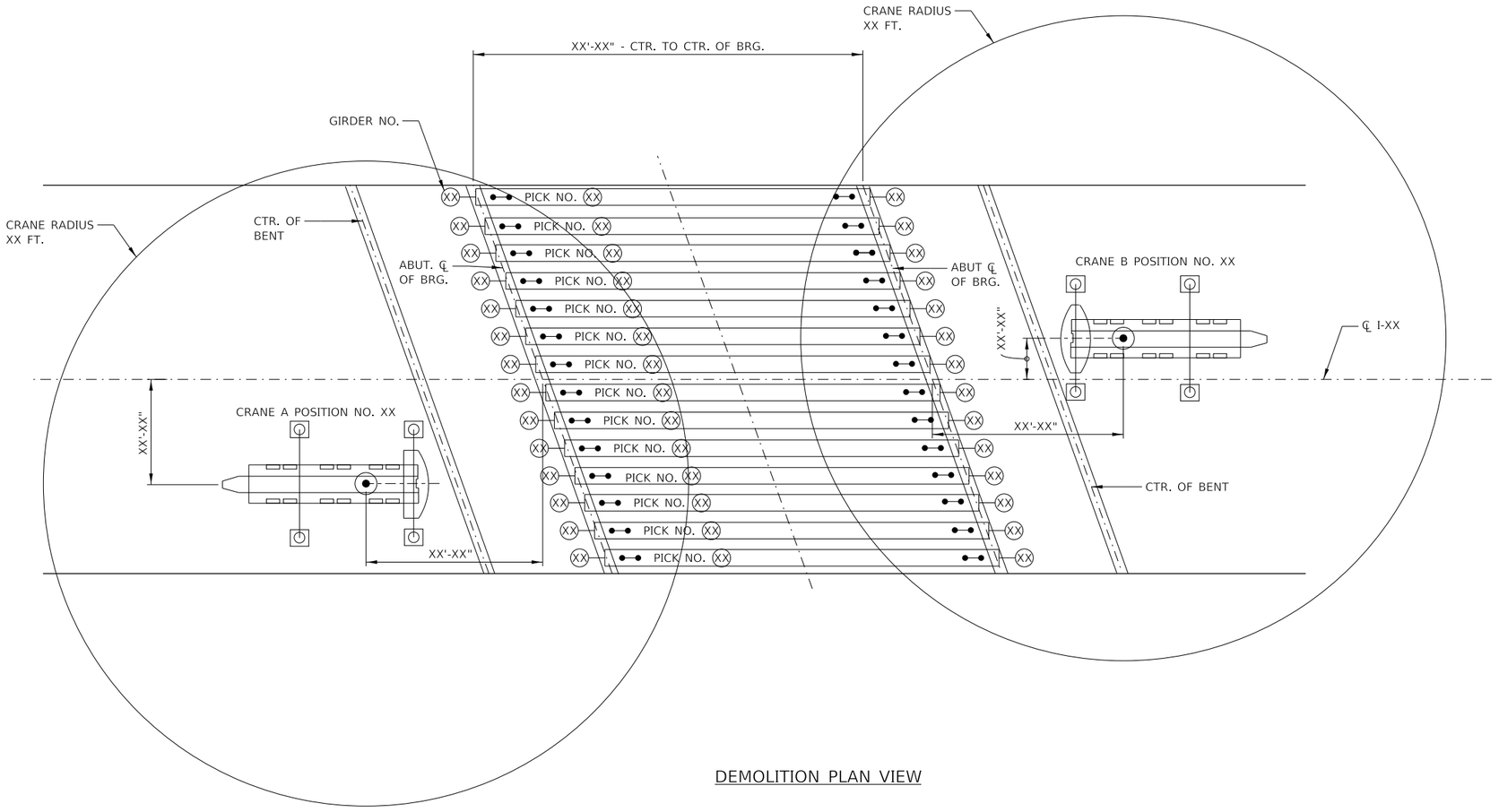

N

DEMOLITION PLAN VIEW

SCOPE OF WORK

1. LOCATION OF WORK ACTIVITIES.
2. LOAD TO BE LIFTED DESCRIPTION DETAIL (LIFTING POINTS, DIMENSIONS OF LOAD, CENTER OF GRAVITY, ETC.)
3. LOAD CALCULATION: LOAD WEIGHT, LIFTING GEAR WEIGHT, HOOK BLOCK WEIGHT, TOTAL WEIGHT, SAFETY FACTOR, CRANE CAPACITY USAGE (LOAD/SAFE WORKING LOAD (SWL)) (%).
4. MAXIMUM CRANE LOAD TO BE USED FOR CRANE PAD SIZE.
5. LIST GROUND ALLOWABLE BEARING PRESSURE AT CRANE LOADING LOCATIONS.
6. SCHEDULE WITH SPECIFIC WORKING HOUR LIMITATIONS.
7. LIST OF OPERATOR/LIFT SUPERVISOR QUALIFICATION.

CRANE INFORMATION:

CRANE "A"-XXX TON HYDRO
(OR EQUIVALENT)
COUNTERWEIGHT XXX,XXX LBS.
MAIN BOOM = XXX'
ANTICIPATED MAX WEIGHT XX,XXX LBS.
CAPACITY AT RADIUS= XX,XXX LBS.
MAX RADIUS=XX'-X"
SWING SPEED= XX MPH

CRANE "B"-XXX TON HYDRO
(OR EQUIVALENT)
COUNTERWEIGHT XXX,XXX LBS.
MAIN BOOM = XXX'
ANTICIPATED MAX WEIGHT XX,XXX LBS.
CAPACITY AT RADIUS= XX,XXX LBS.
MAX RADIUS=XX'-X"
SWING SPEED=XX MPH.

LIMITATIONS:

1. ACCESS AND EGRESS FOR THE ASSEMBLY AND DISASSEMBLY OF THE CRANE AND THE MATERIALS TO BE LIFTED WILL BE _____.
2. FEDERAL AVIATION ADMINISTRATION (FAA) RESTRICTIONS _____.
3. CRANE REACTIONS___ SITE GROUND IS SUITABLE / NON SUITABLE FOR CRANE OPERATION. PAD SIZE ____.
4. CRANE'S SUPERSTRUCTURE ROTATES 360° WITHOUT COMING INTO CONTACT WITH ANY OBJECT.
5. BOOM DEFLECTION TO BE CONSIDERED ARE ____.
6. ENVIRONMENTAL CONSIDERATIONS (MAXIMUM PERMISSIBLE WIND _____,WEATHER ___, LIGHTNING ____) IN WHICH LIFT OPERATIONS ARE TO BE STOPPED.
7. ELECTRICAL HAZARD (OVERHEAD/UNDERGROUND). CLEARANCE DISTANCES ___. SPOTTER IS REQUIRED/NOT REQUIRED. PUBLIC UTILITY CONTACT REQUIRED (LIST CONTACT INFORMATION).
8. _____
9. _____

DEMOLITION SEQUENCE:

1. "XX"
2. "XX"
3. "XX"
4. "XX"

NOTE TO DESIGNER

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NOTE TO DESIGNER

THIS BASE SHEET DEPICTS DEMOLITION OF CONCRETE GIRDERS, STEEL GIRDERS WOULD BE SIMILAR.

SUGGEST IDENTIFY BEAM WEIGHTS OR PICK WEIGHTS AND IDENTIFY CROSS FRAMES TO BE REMOVED DURING DEMOLITION.

"XX" DESIGNATES DIMENSION VALUES OR INPUT DATA TO BE PROVIDED ON SUBMITTED DRAWING.

SEQUENCE SHALL ADDRESS TEMPORARY BLOCKING, BRACING OR OTHER TEMPORARY SUPPORTS.

SEQUENCE OF LOAD PLACEMENT SHALL CONFIRM STRUCTURE CAN WITHSTAND THE NEW LOADS WITHOUT DAMAGE.

Illinois Tollway

DEMOLITION PLAN

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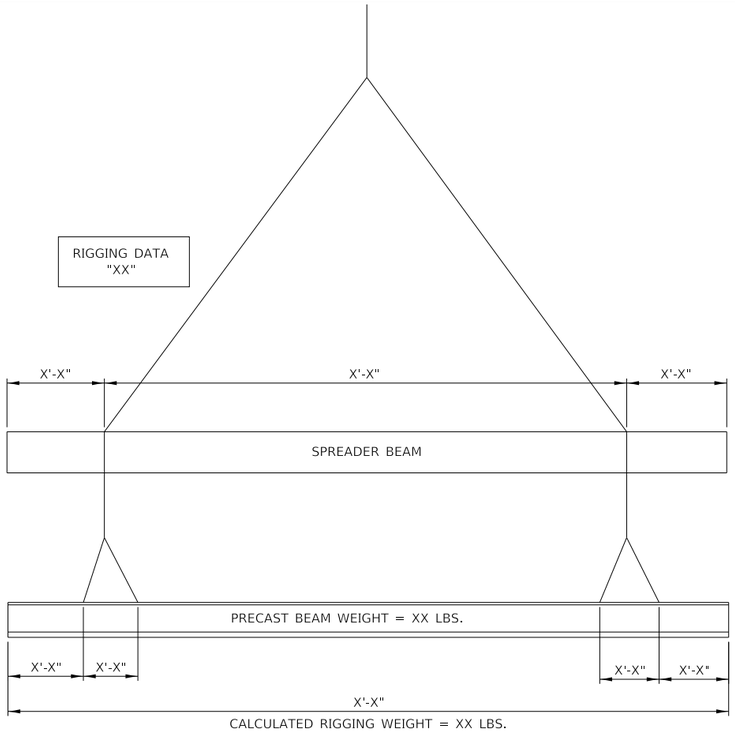
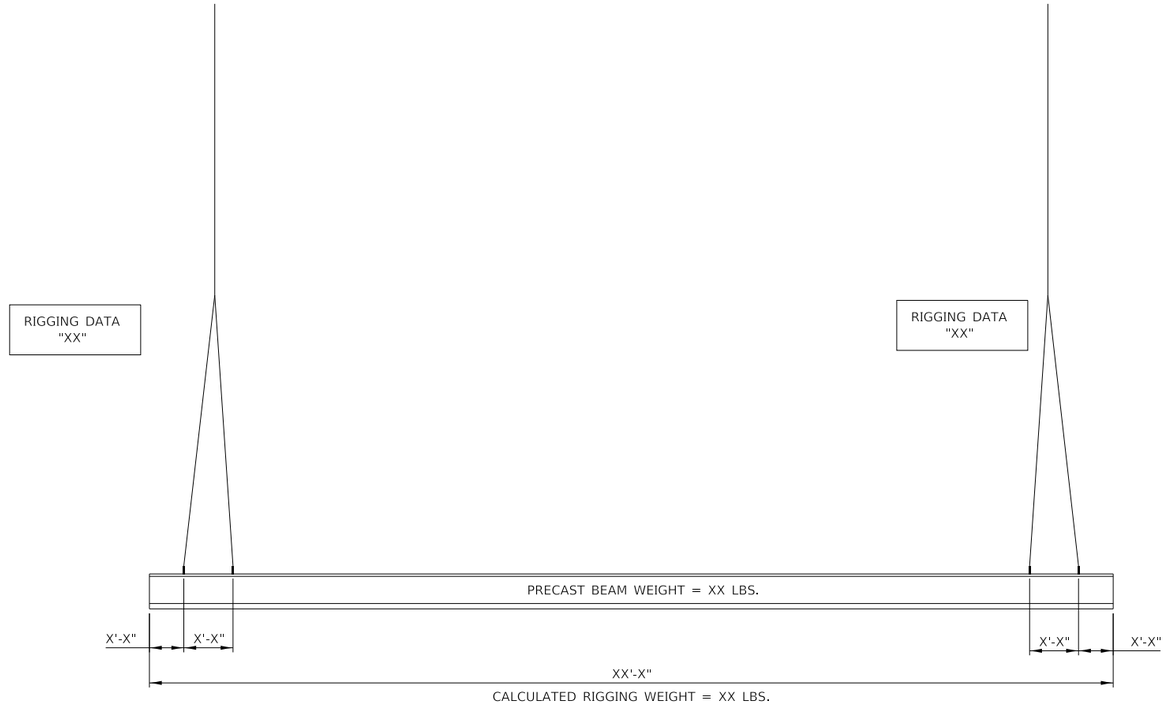
2021-03	M-BRG-526	1 OF 3



ELEVATION VIEW

RIGGING DETAILS

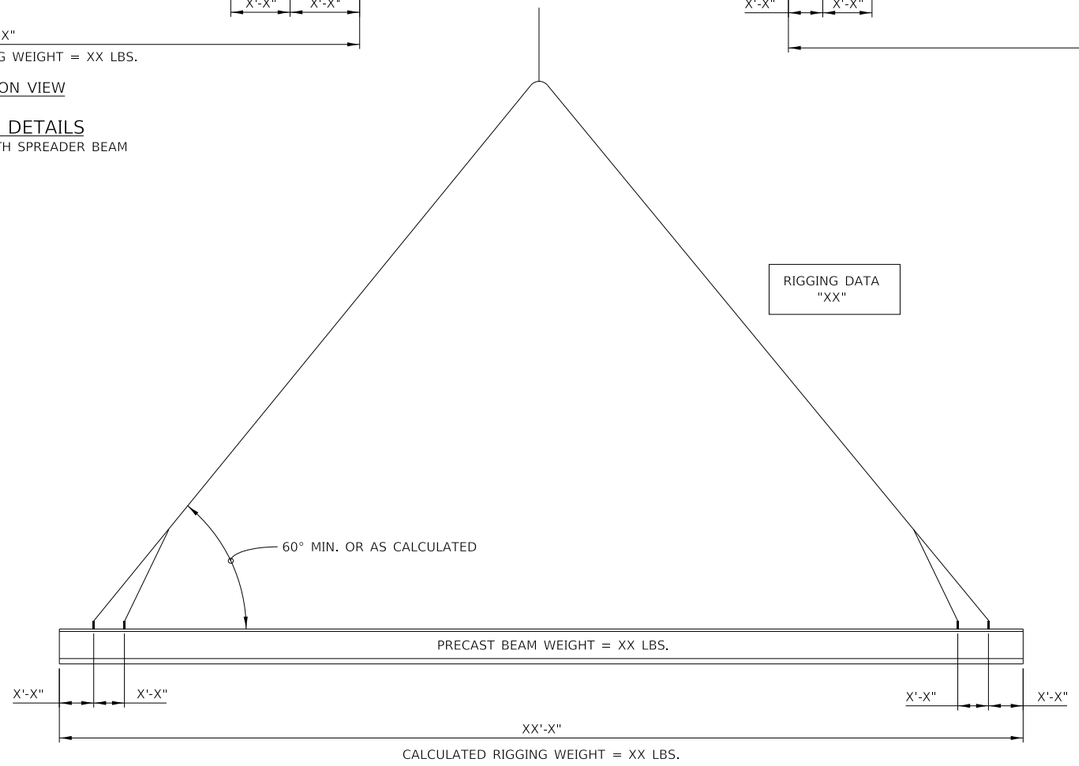
SINGLE CRANE WITH SPREADER BEAM



ELEVATION VIEW

RIGGING DETAILS

TWO CRANE



ELEVATION VIEW

RIGGING DETAILS

SINGLE CRANE

NOTE TO DESIGNER

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NOTE TO DESIGNER

THIS BASE SHEET DEPICTS DEMOLITION OF CONCRETE GIRDERS, STEEL GIRDERS WOULD BE SIMILAR.

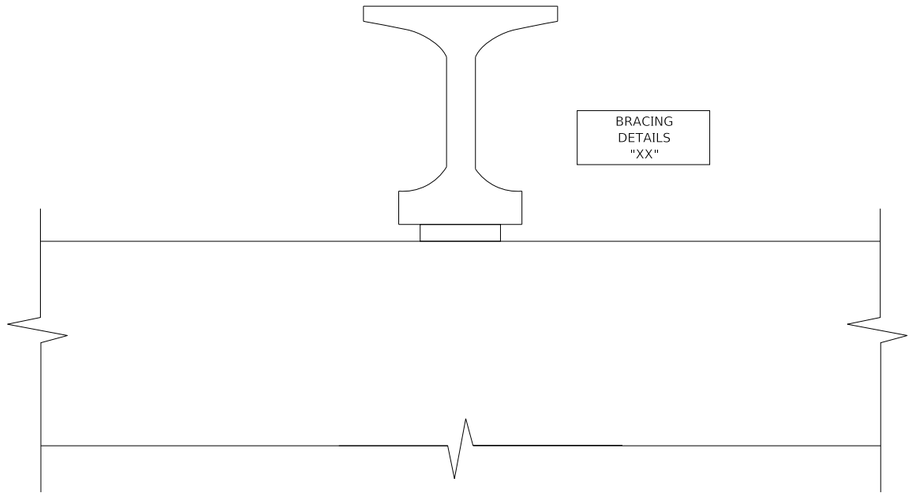
"XX" DESIGNATES DIMENSION VALUES OR INPUT DATA TO BE PROVIDED ON SUBMITTED DRAWING.

SPECIFY CENTER OF GRAVITY OF LOAD.

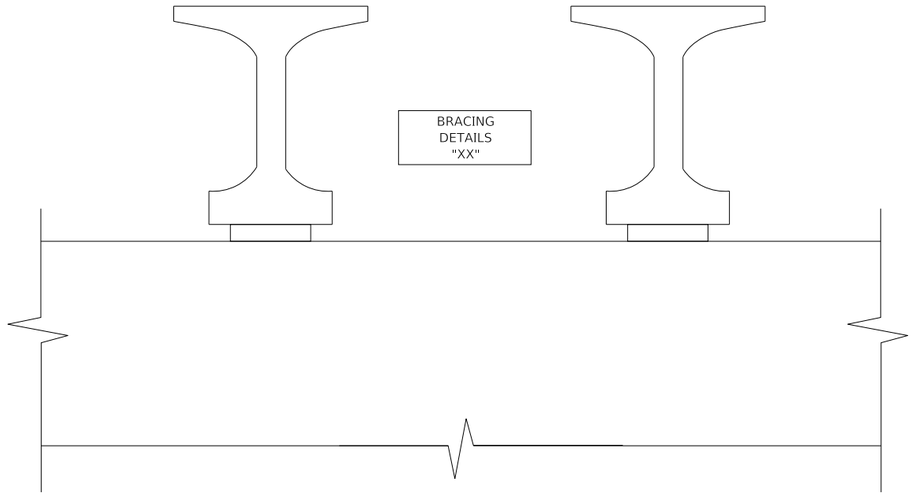
Illinois Tollway

DEMOLITION PLAN

VERSION:	STANDARD:	SHEET:
2021-03	M-BRG-526	2 OF 3



TEMPORARY DEMOLITION
BRACING DETAIL



TEMPORARY DEMOLITION
BRACING DETAIL

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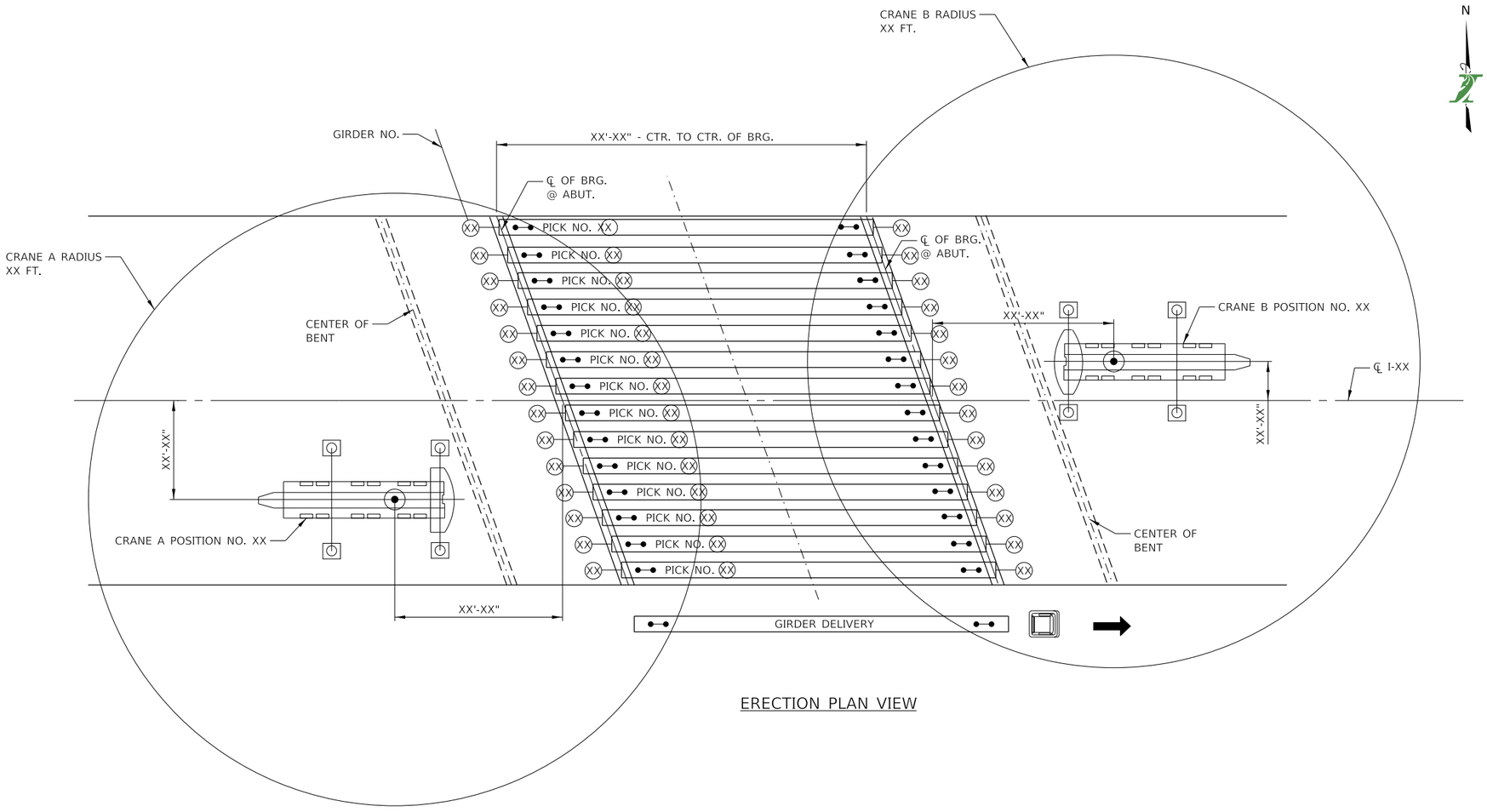
Illinois Tollway

DEMOLITION PLAN

VERSION:	STANDARD:	SHEET:
2021-03	M-BRG-526	3 OF 3



ERECTION PLAN VIEW

NOTE TO DESIGNER / CONTRACTOR

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- IDENTIFY TEMPORARY SHORING, IDENTIFY TEMPORARY, CROSS FRAMES DURING ERECTION.
- "XX" DESIGNATES DIMENSION VALUES OR PROVIDED DATA TO BE PROVIDED ON SUBMITTED DRAWING.
- SEQUENCE SHALL ADDRESS TEMPORARY BLOCKING, BRACING OR OTHER TEMPORARY SUPPORTS.
- SEQUENCE OF LOAD PLACEMENT SHALL CONFIRM STRUCTURE CAN WITHSTAND THE NEW LOADS WITHOUT DAMAGE.

SCOPE OF WORK:

1. LOCATION OF WORK ACTIVITIES.
2. LOAD TO BE LIFTED DESCRIPTION DETAIL (LIFTING POINTS,DIMENSIONS OF LOAD, CENTER OF GRAVITY, ETC.)
3. LOAD CALCULATION: LOAD WEIGHT, LIFTING GEAR WEIGHT, HOOK BLOCK WEIGHT, TOTAL WEIGHT, SAFETY FACTOR, CRANE CAPACITY USAGE (LOAD/SAFE WORKING LOAD (SWL)) (%).
4. MAXIMUM CRANE LOAD TO BE USED FOR CRANE PAD SIZE.
5. LIST GROUND ALLOWABLE BEARING PRESSURE AT CRANE LOADING LOCATIONS.
6. SCHEDULE WITH SPECIFIC WORKING HOUR LIMITATIONS.
7. LIST OF OPERATOR/LIFT SUPERVISOR QUALIFICATION.

CRANE INFORMATION:

CRANE "A"-XXX TON HYDRO
(OR EQUIVALENT)
COUNTERWEIGHT XXX,XXX LBS.
MAIN BOOM = XXX'
ANTICIPATED MAX WEIGHT XX,XXX LBS.
CAPACITY AT RADIUS= XX,XXX LBS.
MAX RADIUS=XX'-X"
SWING SPEED= XX MPH

CRANE "B"-XXX TON HYDRO
(OR EQUIVALENT)
COUNTERWEIGHT XXX,XXX LBS.
MAIN BOOM = XXX'
ANTICIPATED MAX WEIGHT XX,XXX LBS.
CAPACITY AT RADIUS= XX,XXX LBS.
MAX RADIUS=XX'-X"
SWING SPEED=XX MPH.

LIMITATIONS:

1. ACCESS AND EGRESS FOR THE ASSEMBLY AND DISASSEMBLY OF THE CRANE AND THE MATERIALS TO BE LIFTED WILL BE _____.
2. FEDERAL AVIATION ADMINISTRATION (FAA) RESTRICTIONS _____.
3. CRANE REACTIONS ___ SITE GROUND IS SUITABLE / NON SUITABLE FOR CRANE OPERATION. PAD SIZE ____.
4. CRANE'S SUPERSTRUCTURE ROTATES 360° WITHOUT COMING INTO CONTACT WITH ANY OBJECT.
5. BOOM DEFLECTION TO BE CONSIDERED ARE ____.
6. ENVIRONMENTAL CONSIDERATIONS (MAXIMUM PERMISSIBLE WIND ____, WEATHER ___, LIGHTNING ____) IN WHICH LIFT OPERATIONS ARE TO BE STOPPED.
7. ELECTRICAL HAZARD (OVERHEAD / UNDERGROUND). CLEARANCE DISTANCES ___. SPOTTER IS REQUIRED / NOT REQUIRED. PUBLIC UTILITY CONTACT REQUIRED (LIST CONTACT INFORMATION).
8. _____
9. _____

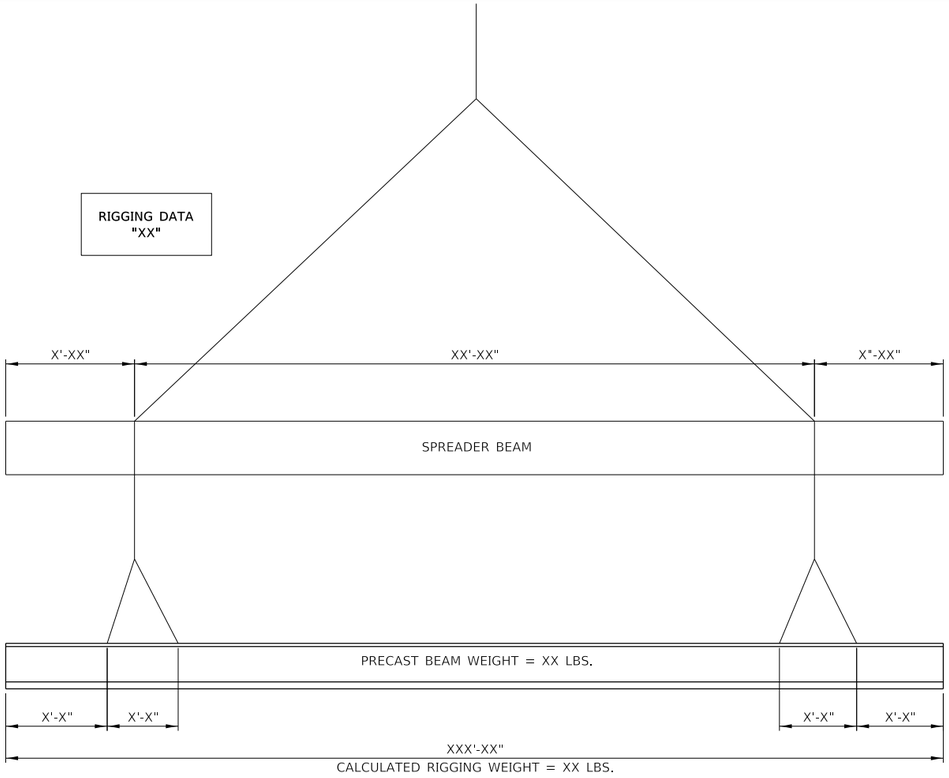
ERECTION SEQUENCE:

1. "XX"
2. "XX"
3. "XX"
4. "XX"

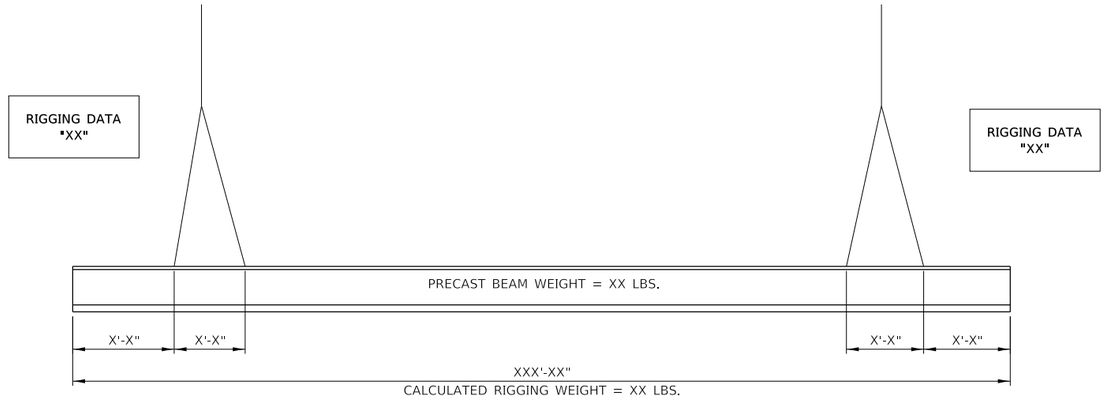
Illinois Tollway

ERECTION PLAN - CONCRETE

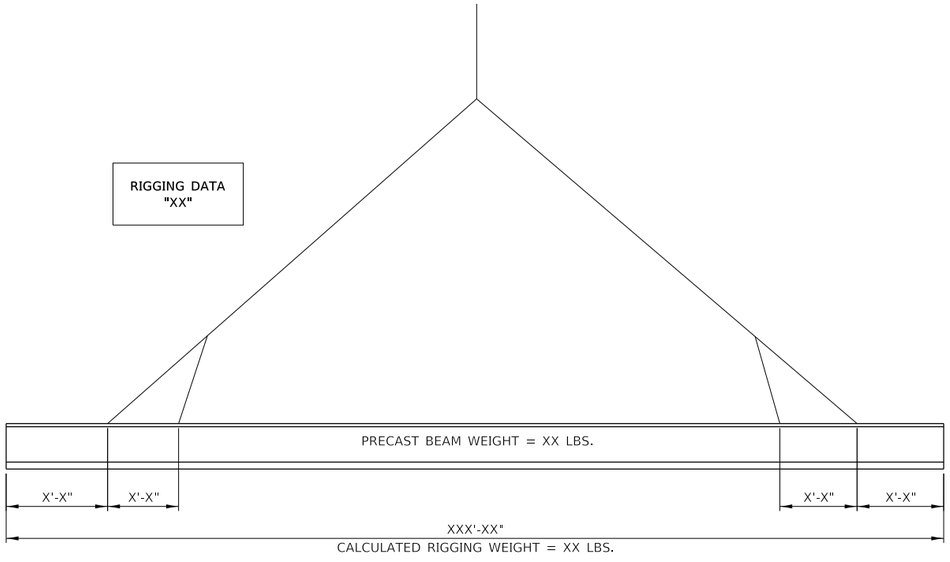
VERSION:	STANDARD:	SHEET:
2021-03	M-BRG-527	1 OF 3



ELEVATION VIEW
RIGGING DETAILS
SINGLE CRANE WITH SPREADER BEAM



ELEVATION VIEW
RIGGING DETAILS
TWO CRANE



ELEVATION VIEW
RIGGING DETAILS
SINGLE CRANE

NOTE TO DESIGNER / CONTRACTOR

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- "XX" DESIGNATES DIMENSION VALUES OR PROVIDED DATA TO BE PROVIDED ON SUBMITTED DRAWING.
- SPECIFY CENTER OF GRAVITY OF LOAD.

Illinois Tollway

ERECTION PLAN - CONCRETE

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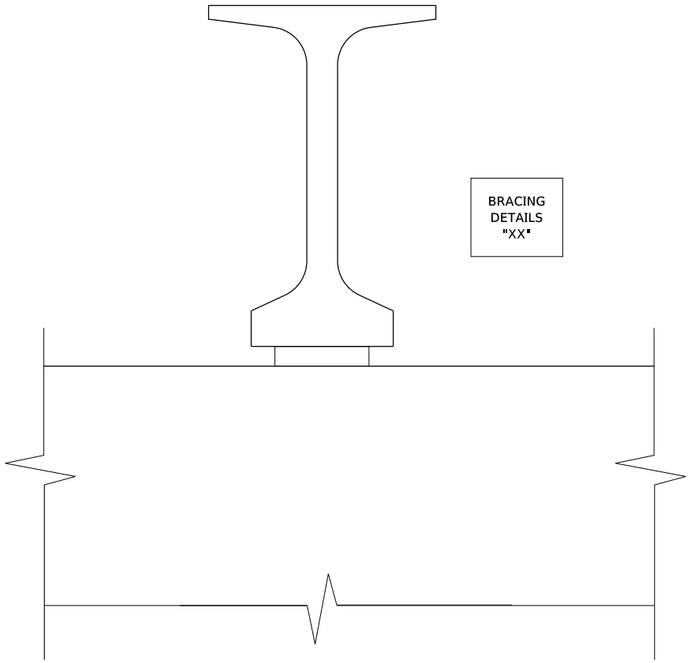
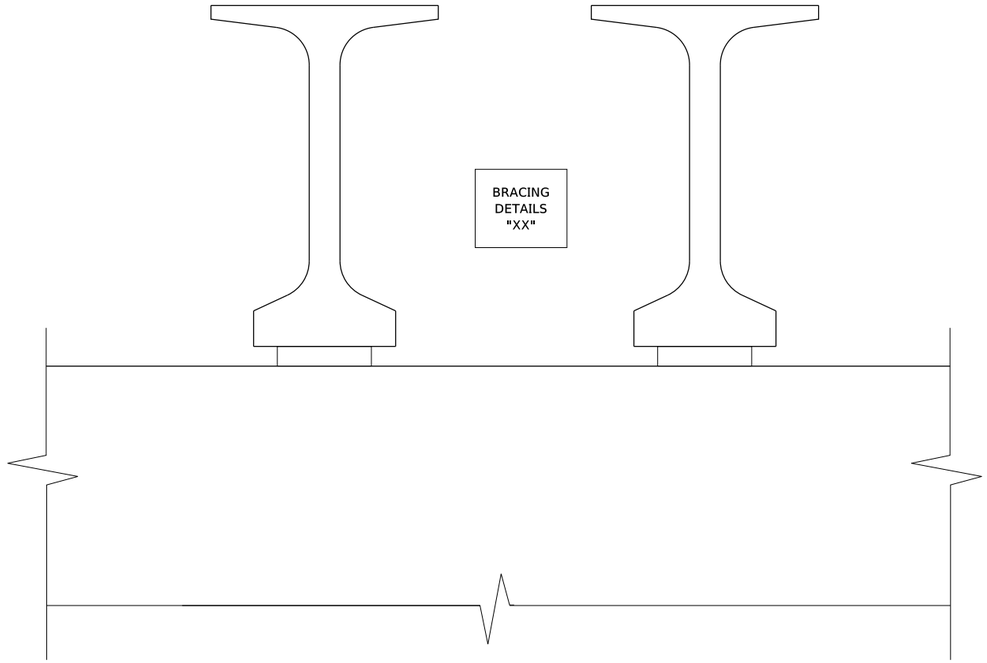


TEMPORARY ERECTION
BRACING DETAIL



TEMPORARY ERECTION
BRACING DETAIL

NOTE TO DESIGNER / CONTRACTOR

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Illinois Tollway

ERECTION PLAN - CONCRETE

VERSION:	STANDARD:	SHEET:
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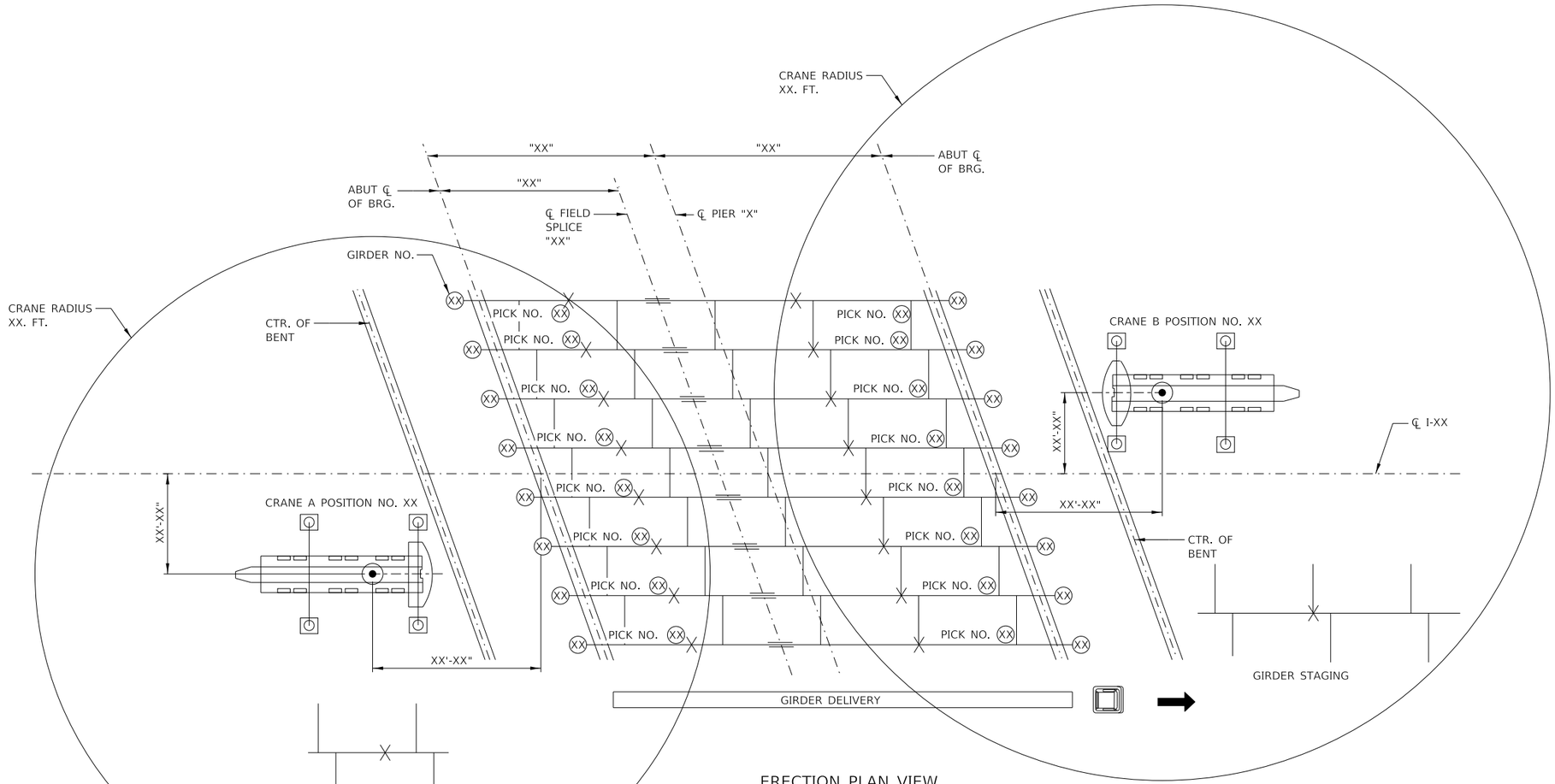

N

ERECTION PLAN VIEW

X DENOTES PICK LOCATION

PICK NO.	CRANE I.D.	GIRDER NO.	PIECE NO.	PIECE LENGTH	PIECE WEIGHT	RIGGING WEIGHT	TOTAL PICK WEIGHT	CRANE CAPACITY

SCOPE OF WORK

1. LOCATION OF WORK ACTIVITIES.
2. LOAD TO BE LIFTED DESCRIPTION DETAIL (LIFTING POINTS, DIMENSIONS OF LOAD, CENTER OF GRAVITY, ETC.)
3. LOAD CALCULATION: LOAD WEIGHT, LIFTING GEAR WEIGHT, HOOK BLOCK WEIGHT, TOTAL WEIGHT, SAFETY FACTOR, CRANE CAPACITY USAGE (LOAD/SAFE WORKING LOAD (SWL)) (%).
4. MAXIMUM CRANE LOAD TO BE USED FOR CRANE PAD SIZE.
5. LIST GROUND ALLOWABLE BEARING PRESSURE AT CRANE LOADING LOCATIONS.
6. SCHEDULE WITH SPECIFIC WORKING HOUR LIMITATIONS.
7. LIST OF OPERATOR/LIFT SUPERVISOR QUALIFICATION.

CRANE INFORMATION:

CRANE "A"-XXX TON HYDRO
(OR EQUIVALENT)
COUNTERWEIGHT XXX,XXX LBS.
MAIN BOOM = XXX'
ANTICIPATED MAX WEIGHT XX,XXX LBS.
CAPACITY AT RADIUS= XX,XXX LBS.
MAX RADIUS=XX'-X"
SWING SPEED= XX MPH

CRANE "B"-XXX TON HYDRO
(OR EQUIVALENT)
COUNTERWEIGHT XXX,XXX LBS.
MAIN BOOM = XXX'
ANTICIPATED MAX WEIGHT XX,XXX LBS.
CAPACITY AT RADIUS= XX,XXX LBS.
MAX RADIUS=XX'-X"
SWING SPEED=XX MPH.

RISK ASSESSMENT & LIMITATIONS:

1. ACCESS AND EGRESS FOR THE ASSEMBLY AND DISASSEMBLY OF THE CRANE AND THE MATERIALS TO BE LIFTED WILL BE _____.
2. FEDERAL AVIATION ADMINISTRATION (FAA) RESTRICTIONS _____.
3. CRANE REACTIONS___ SITE GROUND IS SUITABLE / NON SUITABLE FOR CRANE OPERATION. PAD SIZE ____.
4. CRANE'S SUPERSTRUCTURE ROTATES 360° WITHOUT COMING INTO CONTACT WITH ANY OBJECT.
5. BOOM DEFLECTION TO BE CONSIDERED ARE ____.
6. ENVIRONMENTAL CONSIDERATIONS (MAXIMUM PERMISSIBLE WIND _____,WEATHER ___, LIGHTNING ____) IN WHICH LIFT OPERATIONS ARE TO BE STOPPED.
7. ELECTRICAL HAZARD (OVERHEAD/UNDERGROUND). CLEARANCE DISTANCES ___. SPOTTER IS REQUIRED/NOT REQUIRED. PUBLIC UTILITY CONTACT REQUIRED (LIST CONTACT INFORMATION).
8. _____
9. _____

ERECTION SEQUENCE:

1. "XX"
2. "XX"
3. "XX"
4. "XX"

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NOTE TO DESIGNER

IDENTIFY TEMPORARY SHORING, TEMPORARY CROSS FRAMES DURING ERECTION.

"XX" DESIGNATES DIMENSION VALUES OR INPUT DATA TO BE PROVIDED ON SUBMITTED DRAWING.

SEQUENCE SHALL ADDRESS TEMPORARY BLOCKING, BRACING OR OTHER TEMPORARY BRACING SUPPORTS.

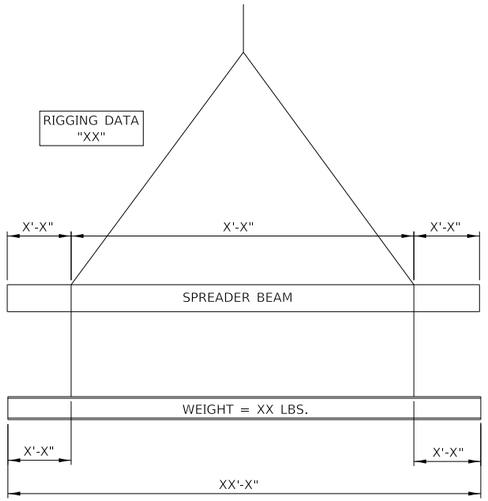
SEQUENCE OF LOAD PLACEMENT SHALL CONFIRM STRUCTURE CAN WITHSTAND THE NEW LOADS WITHOUT DAMAGE.

TABLE HEADING AND INFORMATION ARE SUGGESTED AND FOR USE AS A GUIDE FOR PREPARATION OF SUBMITTAL.

Illinois Tollway

ERECTION PLAN - STEEL

VERSION:	STANDARD:	SHEET:
2021-03	M-BRG-528	1 OF 3

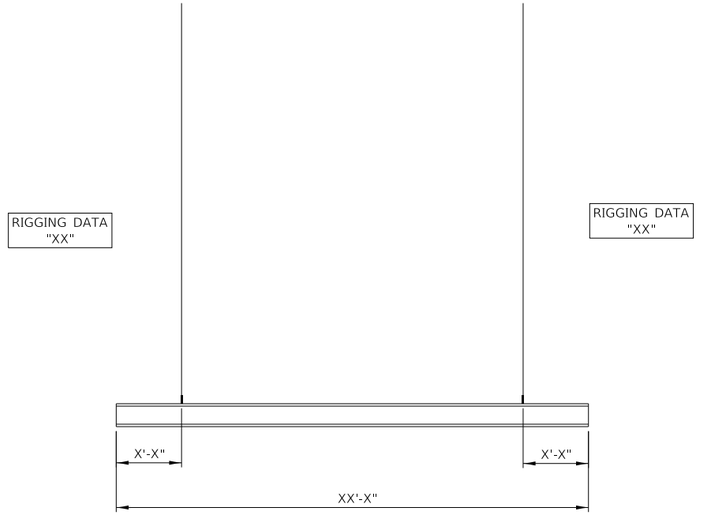


CALCULATED RIGGING WEIGHT = XX LBS.

ELEVATION VIEW

RIGGING DETAILS

SINGLE CRANE WITH SPREADER BEAM

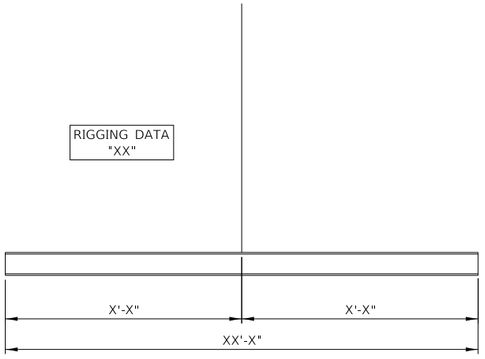


CALCULATED RIGGING WEIGHT = XX LBS.

ELEVATION VIEW

RIGGING DETAILS

TWO CRANE

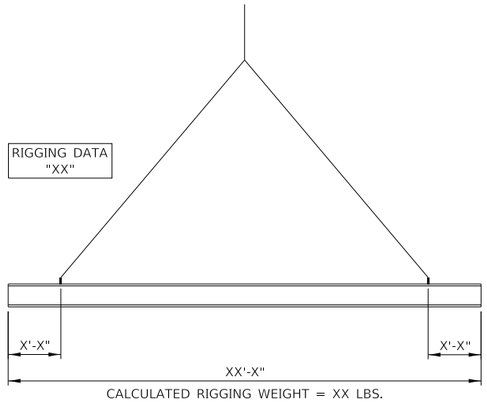


CALCULATED RIGGING WEIGHT = XX LBS.

ELEVATION VIEW

RIGGING DETAILS

SINGLE CRANE



CALCULATED RIGGING WEIGHT = XX LBS.

ELEVATION VIEW

RIGGING DETAILS

SINGLE CRANE

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTE TO DESIGNER

"XX" DESIGNATES DIMENSION VALUES OR INPUT DATA TO BE PROVIDED ON SUBMITTED DRAWING.

SPECIFY CENTER OF GRAVITY OF LOAD.

Illinois Tollway

ERECTION PLAN - STEEL

VERSION:	STANDARD:	SHEET:
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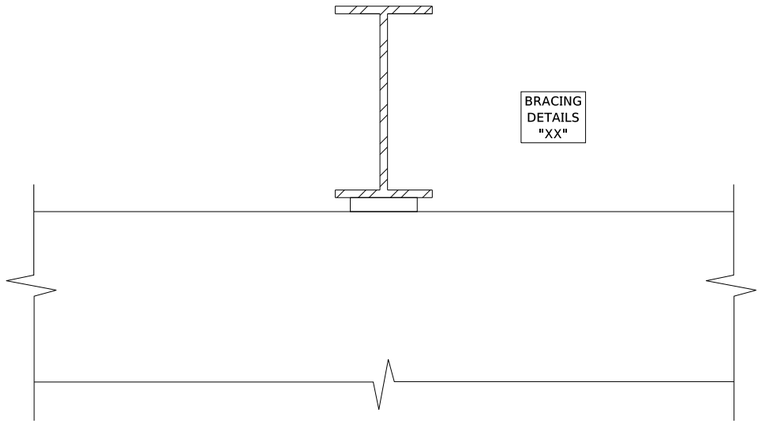
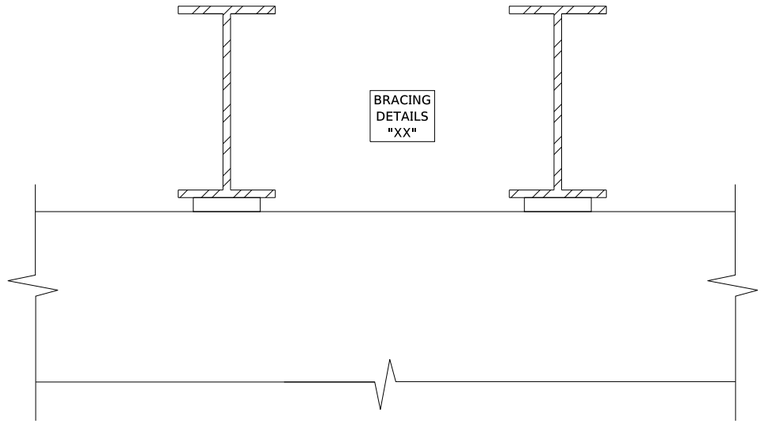
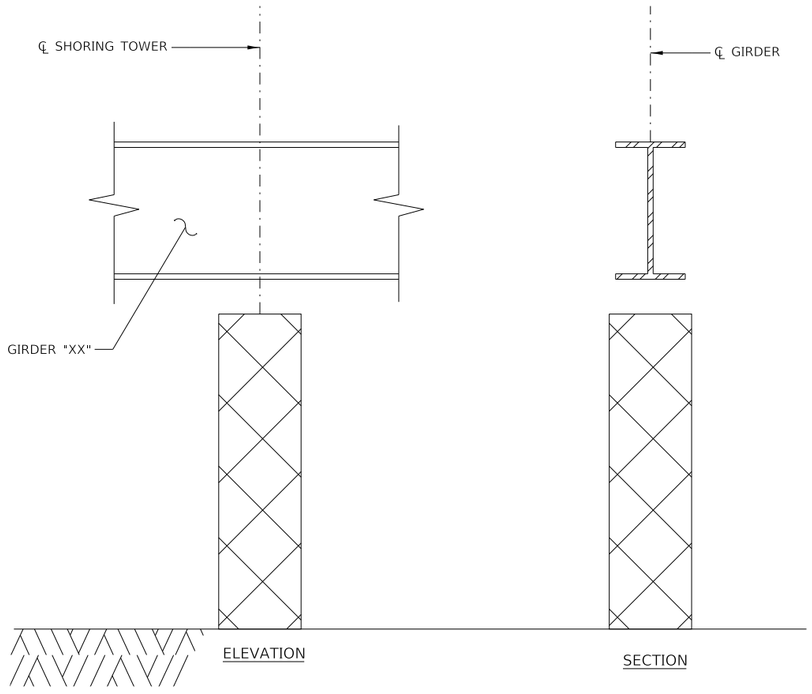


TEMPORARY ERECTION
BRACING DETAIL



TEMPORARY ERECTION
BRACING DETAIL



TEMPORARY SHORING DETAILS

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTE TO DESIGNER

"XX" DESIGNATES DIMENSION VALUES OR INPUT DATA TO BE PROVIDED ON SUBMITTED DRAWING.

PROPOSED TEMPORARY SHORING AND DETAILS SHALL BE SHOWN.

Illinois Tollway

ERECTION PLAN - STEEL

VERSION:	STANDARD:	SHEET:
2021-03	M-BRG-528	3 OF 3

NOTE TO DESIGNER

THIS SHEET IS NOT TO SCALE. DESIGNER TO DETERMINE APPROPRIATE SCALE ON GP&E SHEET TO ACCURATELY REPRESENT REQUIRED INFORMATION.

NOTE TO DESIGNER

ALL SIGNS MOUNTED TO NAW SHALL BE SHOWN ON GP&E IN ACCORDANCE WITH LATEST ILLINOIS TOLLWAY DETAIL FOR NOISE ABATEMENT WALL MOUNTED SIGN SUPPORT.

NOTE TO DESIGNER

THE BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DSE PRIOR TO INSERTION INTO A CONTRACT. THE DSE SHALL ACCEPT RESPONSIBILITY OF THE DESIGN UPON ITS COMPLETION AND INSERTION INTO A CONTRACT.

THIS BASE SHEET REPRESENTS THE TYPICAL DETAILS FOR STRUCTURE MOUNTED, NOISE ABATEMENT WALLS. THE DSE IS RESPONSIBLE FOR COMPLETING THE TABLES AND INCLUDE IN THEIR CONTRACT PLANS. IF ANY OF THE DESIGN PARAMETERS IN THE ILLINOIS TOLLWAY STANDARD ARE EXCEEDED, THE DSE WILL BE RESPONSIBLE FOR DESIGN CALCULATIONS AND DETAILS FOR THOSE COMPONENTS.

THE PLAN AND ELEVATION ON THIS COVER SHEET REPRESENTS ADDITIONAL INFORMATION TO SHOW ON THE GP&E SHEET. THE GP&E SHEET AND REMAINING NAW PLANS SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ARTICLES 6.2.5 AND 23.3.

NOTE TO DESIGNER

THE COVER SHEET IS FOR INFORMATION ONLY AND SHOULD NOT BE INCLUDED IN THE DSE'S SET OF PLANS.

NOTE TO DESIGNER

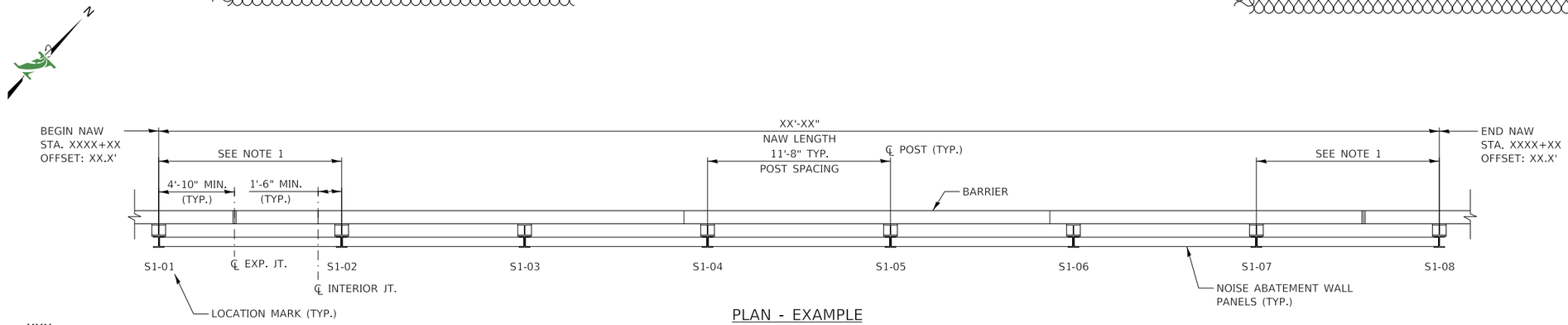
INCLUDE ACOUSTICAL PROFILE FOR INFORMATION ONLY.

NOTE TO DESIGNER

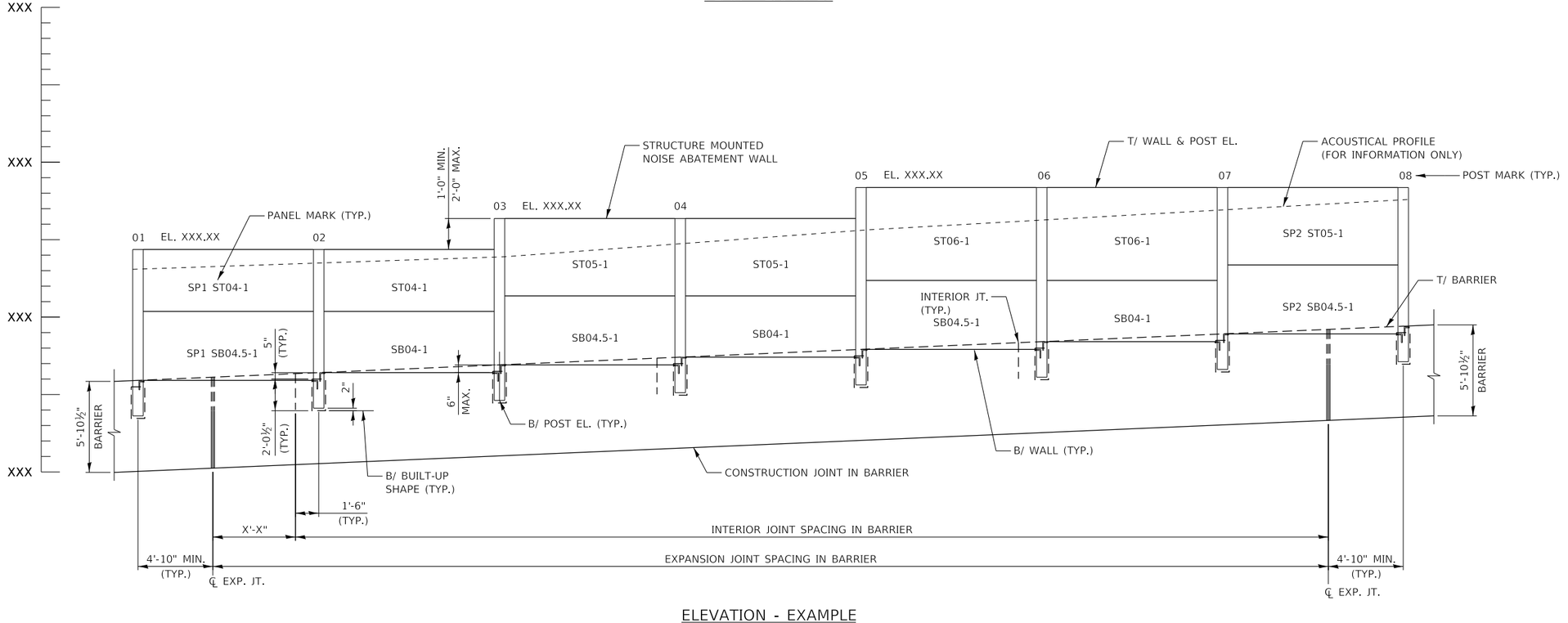
USE SPECIALTY PANEL AND POST SPACING AT ENDS OF WALL OR UNIQUE LOCATIONS SUCH AS INTERIOR OR EXPANSION JOINT CONFLICTS TO ACCOMMODATE TYPICAL 11'-8" POST SPACING ALONG THE MAJORITY OF THE LENGTH OF WALL. POST SPACING SHOULD NOT EXCEED LIMITS WITHIN THE ILLINOIS TOLLWAY STANDARD. IF LIMITS ARE EXCEEDED, DSE TO DESIGN AND DETAIL ALL COMPONENTS.

NOTE TO DESIGNER

ELEVATIONS SHOULD ACCOUNT FOR ¼" GAP BETWEEN PANELS.



PLAN - EXAMPLE



ELEVATION - EXAMPLE

Illinois Tollway

STRUCTURE MOUNTED NOISE ABATEMENT WALL COVER SHEET

VERSION:	STANDARD:	SHEET:
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STRUCTURE MOUNTED PANEL SCHEDULE

PANEL MARK	PANEL HEIGHT	PANEL WIDTH	TOTAL PANEL THICKNESS	NUMBER OF PANELS
*SB04-1	4'-0"	11'-6"	5½"	X
*SB04.5-1	4'-6"	11'-6"	5½"	X
SC04-1	4'-0"	11'-6"	5½"	X
ST04-1	4'-0"	11'-6"	5½"	X
ST05-1	5'-0"	11'-6"	5½"	X
ST06-1	6'-0"	11'-6"	5½"	X
ST07-1	7'-0"	11'-6"	5½"	X
ST08-1	8'-0"	11'-6"	5½"	X
STF04-1	4'-0"	11'-6"	5½"	X
STF04.5-1	4'-6"	11'-6"	5½"	X
STF05-1	5'-0"	11'-6"	5½"	X
STF05.5-1	5'-6"	11'-6"	5½"	X
STF06-1	6'-0"	11'-6"	5½"	X
STF06.5-1	6'-6"	11'-6"	5½"	X
STF07-1	7'-0"	11'-6"	5½"	X
STF07.5-1	7'-6"	11'-6"	5½"	X
STF08-1	8'-0"	11'-6"	5½"	X
*SPX SB04-1	4'-0"	XX'-X"	5½"	X
*SPX SB04.5-1	4'-6"	XX'-X"	5½"	X
SPX SC04-1	4'-0"	XX'-X"	5½"	X
SPX ST04-1	4'-0"	XX'-X"	5½"	X
SPX ST05-1	5'-0"	XX'-X"	5½"	X
SPX ST06-1	6'-0"	XX'-X"	5½"	X
SPX ST07-1	7'-0"	XX'-X"	5½"	X
SPX ST08-1	8'-0"	XX'-X"	5½"	X
SPX STF04-1	4'-0"	XX'-X"	5½"	X
SPX STF04.5-1	4'-6"	XX'-X"	5½"	X
SPX STF05-1	5'-0"	XX'-X"	5½"	X
SPX STF05.5-1	5'-6"	XX'-X"	5½"	X
SPX STF06-1	6'-0"	XX'-X"	5½"	X
SPX STF06.5-1	6'-6"	XX'-X"	5½"	X
SPX STF07-1	7'-0"	XX'-X"	5½"	X
SPX STF07.5-1	7'-6"	XX'-X"	5½"	X
SPX STF08-1	8'-0"	XX'-X"	5½"	X

NOTE:

1. WORK THIS SHEET WITH ILLINOIS TOLLWAY STANDARD G12.

   *CONTRACTOR MAY INCREASE BOTTOM PANEL HEIGHTS AND USE UP TO AN 8FT (NON-STANDARD) MAXIMUM HEIGHT PANEL. THE ADJACENT TOP PANEL MAY ALSO BE ADJUSTED, PROVIDED STANDARD PANEL HEIGHTS AS SHOWN IN STANDARD G12 ARE USED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

DESIGN SPECIFICATIONS

ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL,
DATED XXXXXXXXXXXXXXX.

ILLINOIS TOLLWAY GEOTECHNICAL MANUAL,
DATED XXXXXXXXXXXXXXX.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS,
DATED XXXXXXXXXXXXXXX.

CONSTRUCTION SPECIFICATIONS

ILLINOIS DEPARTMENT OF TRANSPORTATION LATEST GUIDE BRIDGE SPECIAL PROVISIONS (GBSPs)

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED XXXXXXXXXXXXXXX.

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, DATED XXXXXXXXXXXXXXX.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED XXXXXXXXXXXXXXX.

GENERAL NOTES

1. CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.
2. NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS SHALL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
3. THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COST WILL BE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.
4. NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E., 800-892-0123.
6. 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 LOCATION PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A "REQUEST ILLINOIS TOLLWAY UTILITIES LOCATE" FORM ONLINE AT THE ILLINOIS TOLLWAY WEBSITE UNDER "DOING BUSINESS" AT LEAST FOUR (4) BUSINESS DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN THE GENERAL AREA OF THE FIBER OPTIC CABLE."
7. WHENEVER ANY MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.

NOTE TO DESIGNER

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NOTE TO DESIGNER

REPLACE XXXXXXXXXXXXXXX WITH THE LATEST DATE

NOTE TO DESIGNER

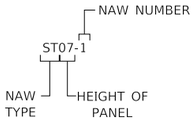
DESIGNER TO COMPLETE TABLES.

NOTE TO DESIGNER

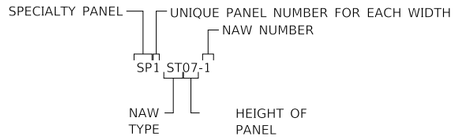
FOR CTS PROJECTS UTILIZING BUMP-OUTS, SEE M-BRG-531 SHEET 3 OF 4.

NAW TYPE

STF = STRUCTURE MOUNTED FULL HEIGHT PANEL
ST = STRUCTURE MOUNTED TOP PANEL
SC = STRUCTURE MOUNTED CENTER PANEL
SB = STRUCTURE MOUNTED BOTTOM PANEL
SP = SPECIALTY PANEL



TYPICAL PANEL NAMING CONVENTION



SPECIALTY PANEL NAMING CONVENTION

NOTE TO DESIGNER

PANEL MARK SHOULD BE SHOWN ON THE ELEVATION VIEW ON THE GP&E

NOTE TO DESIGNER

FOR PANELS SPANNING BRIDGE EXPANSION JOINTS, DETAILS FROM M-BRG-530 SHALL BE INCLUDED AND NOTE ADDED IDENTIFYING THE EXPANSION PANEL

LIST OF ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABUT.	ABUTMENT
BK.	BACK
B.F.	BACK FACE
℄	BASELINE
BRG.	BEARING
BOTT.	BOTTOM
B/	BOTTOM OF
BM	BRIDGE MOUNTED
℄	CENTERLINE
CL.	CLEARANCE
COL.	COLUMN
CONC.	CONCRETE
CGM	CRASHWORTHY GROUND MOUNTED
E.E.	EACH END
E.	EAST
EB	EASTBOUND
ELEV.	ELEVATION
EQ.	EQUAL
EXIST.	EXISTING
EXP.	EXPANSION
F.F.	FRONT FACE
JT.	JOINT
LOC.	LOCATION
MAX.	MAXIMUM
MIN.	MINIMUM
NAW	NOISE ABATEMENT WALL
N.	NORTH
N.A.	NOT APPLICABLE
O.C.	ON CENTER
ℙ	PLATE
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PROP.	PROPOSED
SHLDR.	SHOULDER
S.	SOUTH
S.P.	SPECIAL PROVISION
SQ. FT.	SQUARE FOOT
SQ. YD.	SQUARE YARD
STA.	STATION
STRUCT	STRUCTURAL
S.M.	STRUCTURE MOUNTED
T/	TOP OF
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
WB	WESTBOUND
WF	WIDE FLANGE

Illinois Tollway

STRUCTURE MOUNTED NOISE ABATEMENT WALL SCHEDULE

VERSION:	STANDARD:	SHEET:
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STEEL POST SCHEDULE

LOC MARK	POST MARK	STATION	OFFSET	T/WALL & POST EL.	BOTTOM POST EL.	BOTTOM WALL EL.	WF POST SIZE	POST LENGTH	MISC. STEEL WT. (POUNDS)	POST WT. (POUNDS)	TOTAL WT. (POUNDS)
S1-01	01										
S1-02	02										

NOTE TO DESIGNER

COMPLETE FOR ONE WALL ONLY

TOTAL BILL OF MATERIAL
(ADVANCE PROCUREMENT)

PAY ITEM NO.	ITEM	UNIT	TOTAL
JI504520	FURNISHING PRECAST CONCRETE PANELS, NOISE ABATEMENT WALL PANELS, STRUCTURE MOUNTED	SQ. FT.	X
JI505230	FURNISHING STRUCTURAL STEEL, NOISE ABATEMENT WALL	LBS.	X
JT599905	INSTALLING PRECAST CONCRETE NOISE ABATEMENT WALL, STRUCTURE MOUNTED	SQ. FT.	X
JI505500	STORAGE OF STRUCTURAL STEEL, NOISE ABATEMENT WALL	CAL. DAY	X
JI504550	STORAGE OF PRECAST CONCRETE PANELS, NOISE ABATEMENT WALL	CAL. DAY	X

ADVANCE PROCUREMENT NOTES:

FOR THE FABRICATION CONTRACT
PICK UP OF THE NOISE ABATEMENT WALL STRUCTURAL STEEL FROM THE CONTRACTORS STORAGE IS ANTICIPATED FROM (XXXX- TO XXX).

PICK UP OF THE PRECAST CONCRETE NOISE ABATEMENT PANELS FROM THE CONTRACTORS STORAGE IS ANTICIPATED FROM (XXXX- TO XXX).

OR COMBINE TO PICK UP OF THE MATERIALS FROM THE CONTRACTORS STORAGE IS ANTICIPATED FROM (XXXX- TO XXX).

FOR THE INSTALLATION CONTRACT
THE MATERIAL FOR THE PRECAST CONCRETE NOISE ABATEMENT WALLS ARE STORED FOR PICK UP AT (XXXXXX). THE PICKUP OF THE MATERIAL IS ANTICIPATED FROM (XXXXX TO XXXX).

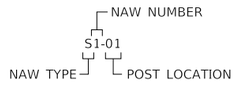
TOTAL BILL OF MATERIAL
(NO ADVANCE PROCUREMENT)

PAY ITEM NO.	ITEM	UNIT	TOTAL
JT599920	PRECAST CONCRETE NOISE ABATEMENT WALL, STRUCTURE MOUNTED	SQ. FT.	X

NAW TYPE

S = STRUCTURE MOUNTED

POST MARK CONVENTION



LOCATION MARK CONVENTION

NOTE TO DESIGNER

DESIGNER TO SELECT APPROPRIATE TOTAL BILL OF MATERIAL AND INCLUDE ONLY ONE IN PLANS BASED ON IF ADVANCE PROCUREMENT CONTRACT IS USED OR NOT.

NOTE:
1. WORK THIS SHEET WITH ILLINOIS TOLLWAY STANDARD G12.

NOTE TO DESIGNER

MISC. STEEL WT. INCLUDES BUILT-UP SHAPE, BEARING ANGLES, BENT PLATES, ANCHOR BOLT ASSEMBLY, AND NOISE BLOCKING ASSEMBLY. QUANTITIES SHOWN ON STANDARD G12 ARE FOR MAXIMUM NUMBER OF BENT PLATES. ACTUAL QUANTITY SHALL BE USED IN THE SCHEDULE.

NOTE TO DESIGNER

LOCATION AND POST MARKS SHOULD BE SHOWN ON THE GENERAL LAYOUT OF POSTS ON THE GP&E

NOTE TO DESIGNER

FOR CTS PROJECTS UTILIZING BUMP-OUTS, SEE M-BRG-531 SHEET 4 OF 4.

NOTE TO DESIGNER

FOR POSTS ADJACENT TO BRIDGE EXPANSION JOINTS, DETAILS FROM M-BRG-530 SHALL BE INCLUDED AND NOTE ADDED IDENTIFYING THE FIXED AND EXPANSION POSTS

NOTE TO DESIGNER

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Illinois Tollway

STRUCTURE MOUNTED NOISE ABATEMENT WALL SCHEDULE

VERSION:	STANDARD:	SHEET:
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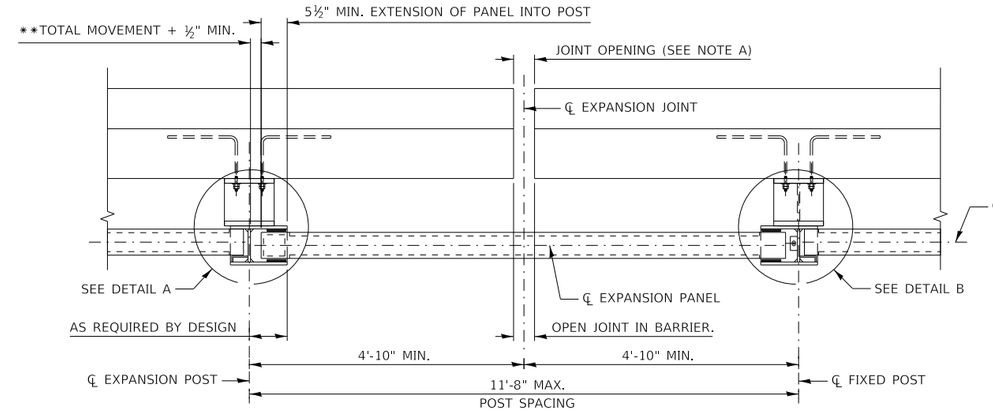
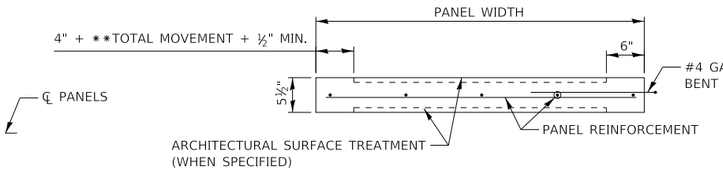
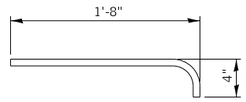


NOTE A
JOINT OPENING AS REQUIRED FOR BRIDGE EXPANSION AND CONTRACTION AT 50°F.

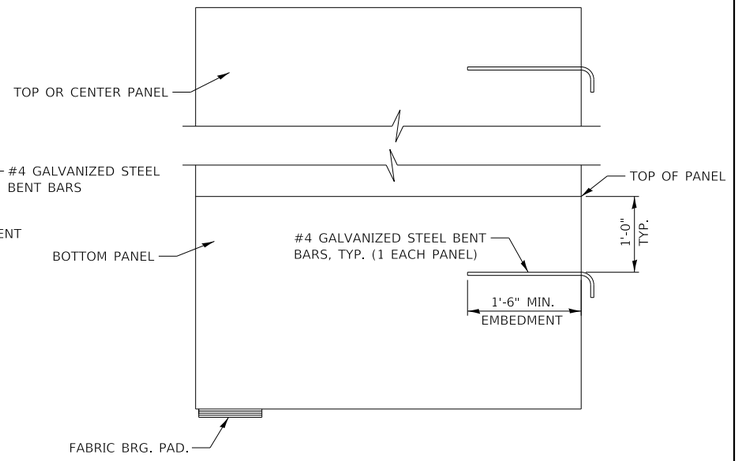
PLAN



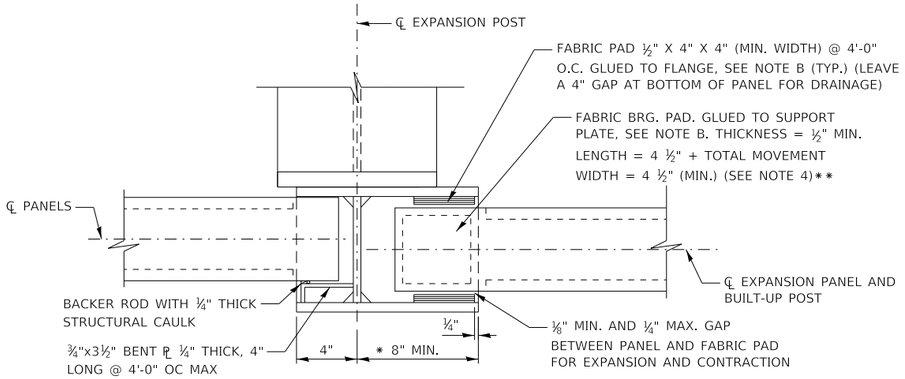
PRECAST CONCRETE EXPANSION PANEL



STEEL BENT BARS DETAIL

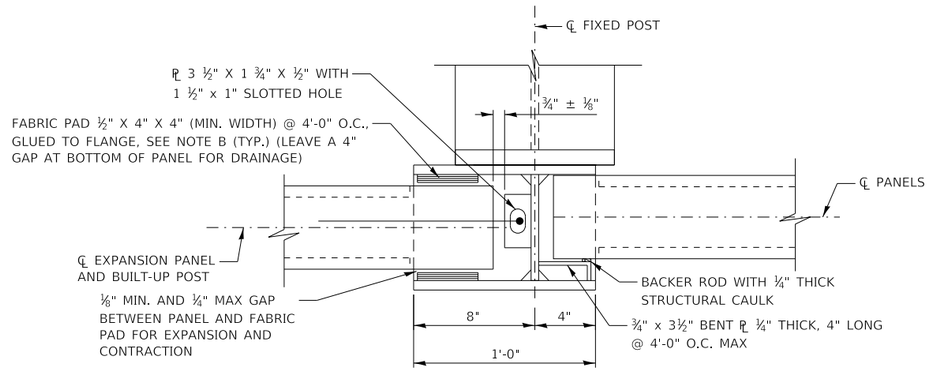


EXPANSION PANEL ELEVATION



DETAIL A
(EXPANSION POST)

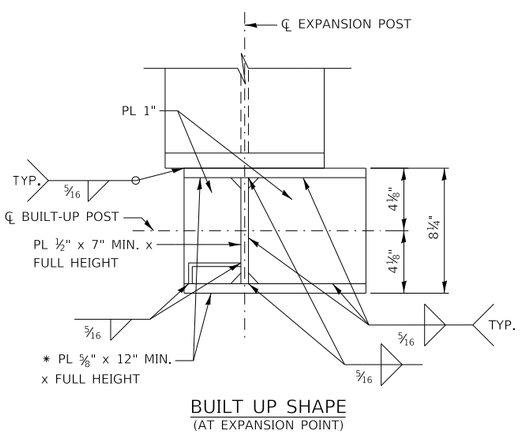
NOTE B
ADHESION OF THE PAD TO THE STEEL SHALL BE PER SECTION 1083.02 OF THE STANDARD SPECIFICATION.



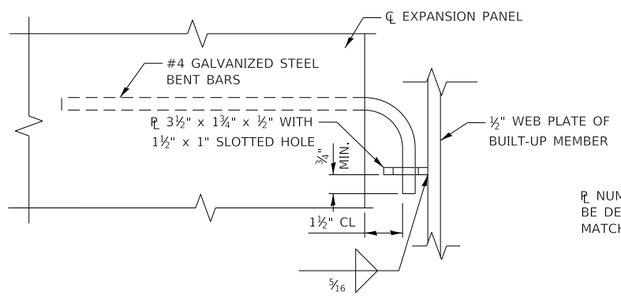
DETAIL B
(FIXED POST)

NOTE TO DESIGNER

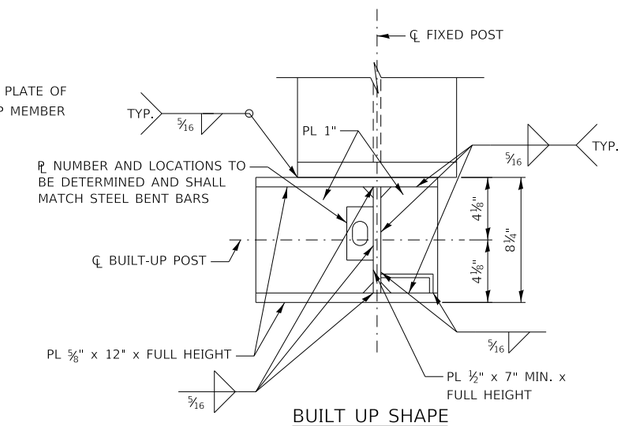
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.



BUILT UP SHAPE
(AT EXPANSION POINT)



BARS LOCKING DETAIL
(SECTION THRU HOLE)



BUILT UP SHAPE
(AT FIXED POST)

NOTE TO DESIGNER

1. THIS BASE SHEET SHALL BE USED WHEN THERE IS AN EXPANSION JOINT IN THE BRIDGE DECK AND PARAPET.
2. DESIGNER MUST INCLUDE ALL DETAILS REQUIRED ON THE CONTRACT DRAWINGS.
3. DESIGNER TO DETERMINE TOTAL MOVEMENT REQUIRED.
4. DESIGNER TO PROVIDE NEOPRENE BEARING SIZE AND PLATE WIDTH FOR THE BUILT-UP SECTION AT EXPANSION POST BASED ON THE JOINT OPENING AND MOVEMENT.
5. IF STRUCTURE MOUNTED SOUND BARRIER ENDS AT THE EXPANSION POST AND CONNECTS TO A GROUND MOUNTED BARRIER PROVIDE ADDITIONAL DETAILS AS REQUIRED IN ACCORDANCE WITH THESE STANDARDS.

* MIN. SIZE SHOWN, PROVIDE SIZE REQUIRED PER DESIGN.

** TOTAL EXPANSION MOVEMENT FROM NORMAL TEMPERATURE OF 50°F AT THE EXPANSION JOINT IN THE BRIDGE DECK AND PARAPET.

Illinois Tollway

STRUCTURE MOUNTED NOISE ABATEMENT WALL EXPANSION DETAILS

VERSION:	STANDARD:	SHEET:
2023-03	M-BRG-530	1 OF 1

NOTE TO DESIGNER

THIS SHEET IS NOT TO SCALE. DESIGNER TO DETERMINE APPROPRIATE SCALE ON GP&E SHEET TO ACCURATELY REPRESENT REQUIRED INFORMATION.

NOTE TO DESIGNER

ALL SIGNS MOUNTED TO NAW SHALL BE SHOWN ON GP&E IN ACCORDANCE WITH LATEST ILLINOIS TOLLWAY DETAIL FOR NOISE ABATEMENT WALL MOUNTED SIGN SUPPORT.

NOTE TO DESIGNER

THE BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DSE PRIOR TO INSERTION INTO A CONTRACT. THE DSE SHALL ACCEPT RESPONSIBILITY OF THE DESIGN UPON ITS COMPLETION AND INSERTION INTO A CONTRACT.

THIS BASE SHEET REPRESENTS THE TYPICAL DETAILS FOR STRUCTURE MOUNTED, NOISE ABATEMENT WALLS. THE DSE IS RESPONSIBLE FOR COMPLETING THE TABLES AND INCLUDE IN THEIR CONTRACT PLANS. IF ANY OF THE DESIGN PARAMETERS IN THE ILLINOIS TOLLWAY STANDARD ARE EXCEEDED, THE DSE WILL BE RESPONSIBLE FOR DESIGN CALCULATIONS AND DETAILS FOR THOSE COMPONENTS.

THE PLAN AND ELEVATION ON THIS COVER SHEET REPRESENTS ADDITIONAL INFORMATION TO SHOW ON THE GP&E SHEET. THE GP&E SHEET AND REMAINING NAW PLANS SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ARTICLES 6.2.5 AND 23.3.

NOTE TO DESIGNER

THE COVER SHEET IS FOR INFORMATION ONLY AND SHOULD NOT BE INCLUDED IN THE DSE'S SET OF PLANS.

NOTE TO DESIGNER

INCLUDE ACOUSTICAL PROFILE FOR INFORMATION ONLY.

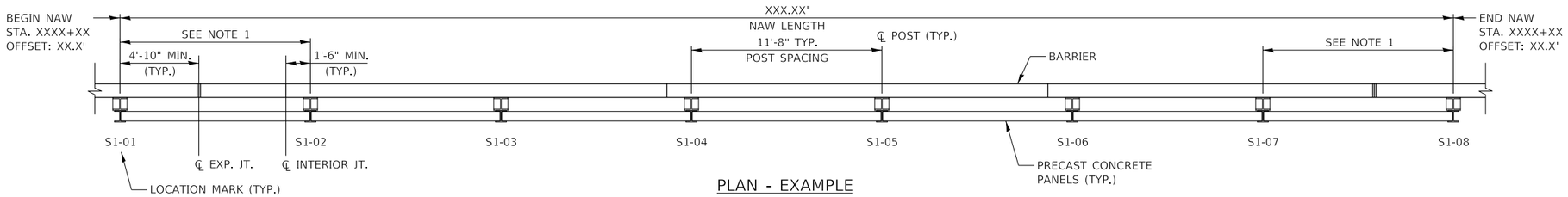
NOTE TO DESIGNER

ELEVATIONS SHOULD ACCOUNT FOR ¼" GAP BETWEEN PANELS.

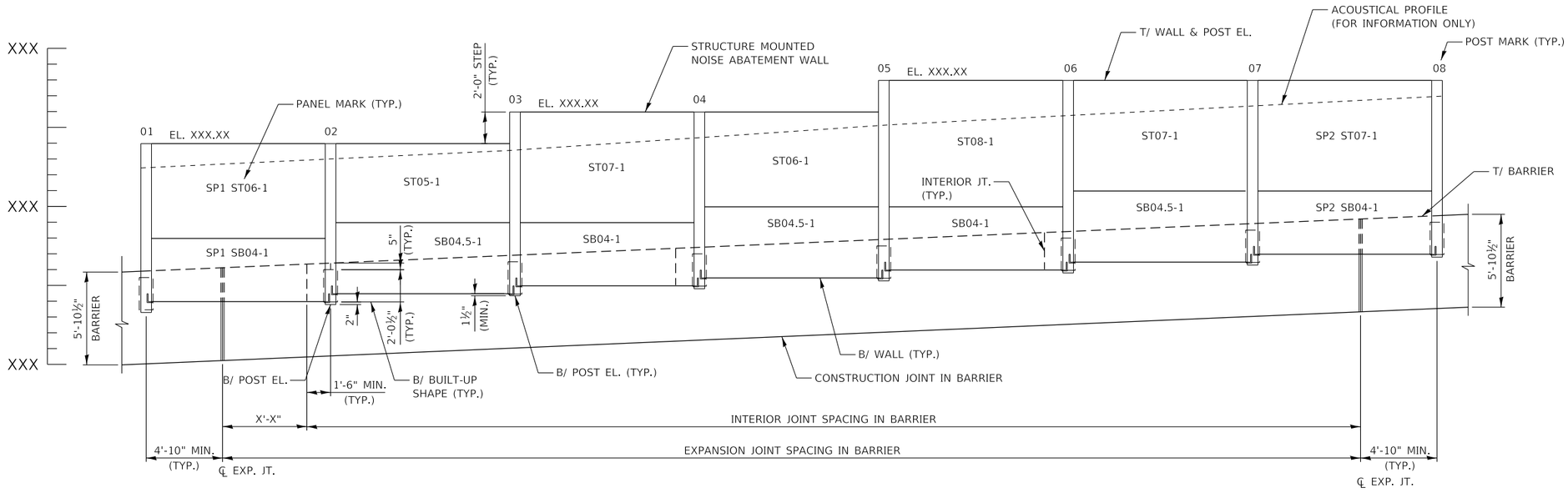
NOTE TO DESIGNER

NOTE:

1. USE SPECIALTY PANEL AND POST SPACING AT ENDS OF WALL OR UNIQUE LOCATIONS SUCH AS INTERIOR OR EXPANSION JOINT CONFLICTS TO ACCOMMODATE TYPICAL 11'-8" POST SPACING ALONG THE MAJORITY OF THE LENGTH OF WALL. POST SPACING SHOULD NOT EXCEED LIMITS WITHIN THE ILLINOIS TOLLWAY STANDARD. IF LIMITS ARE EXCEEDED, DSE TO DESIGN AND DETAIL ALL COMPONENTS. THE "SPX" DESIGNATION FOR SPECIALTY PANELS SHOULD BE USED FOR ALL PANELS WITHIN THAT BAY WITH THE SAME WIDTH.



PLAN - EXAMPLE

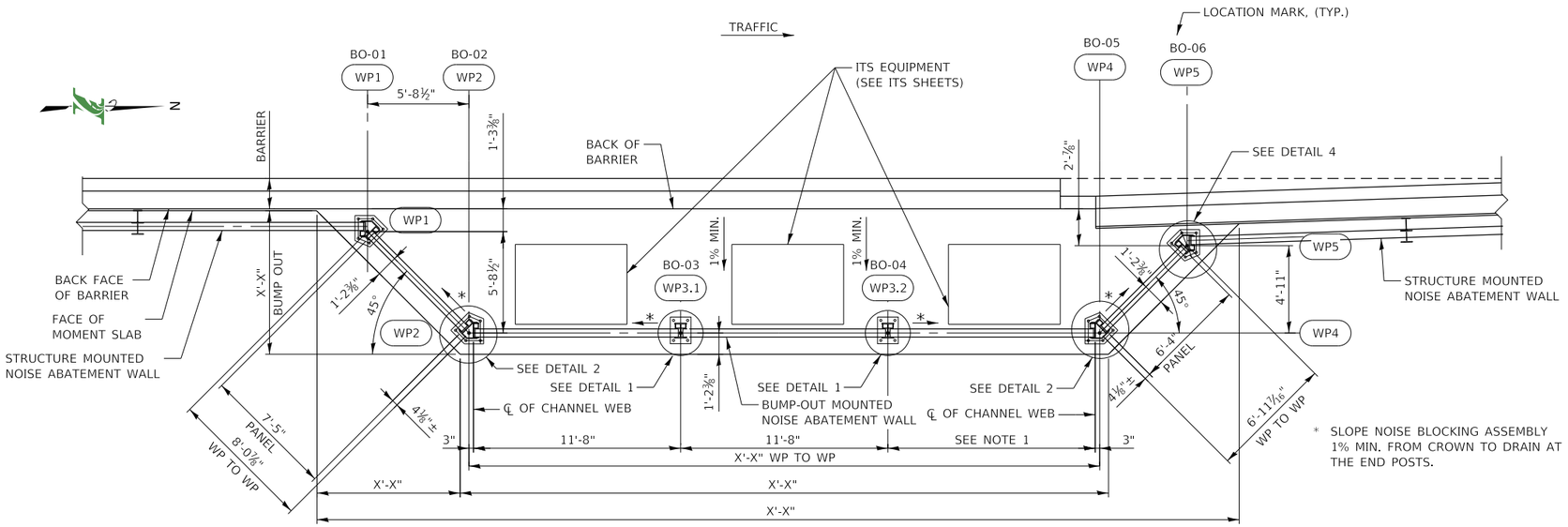


ELEVATION - EXAMPLE

Illinois Tollway

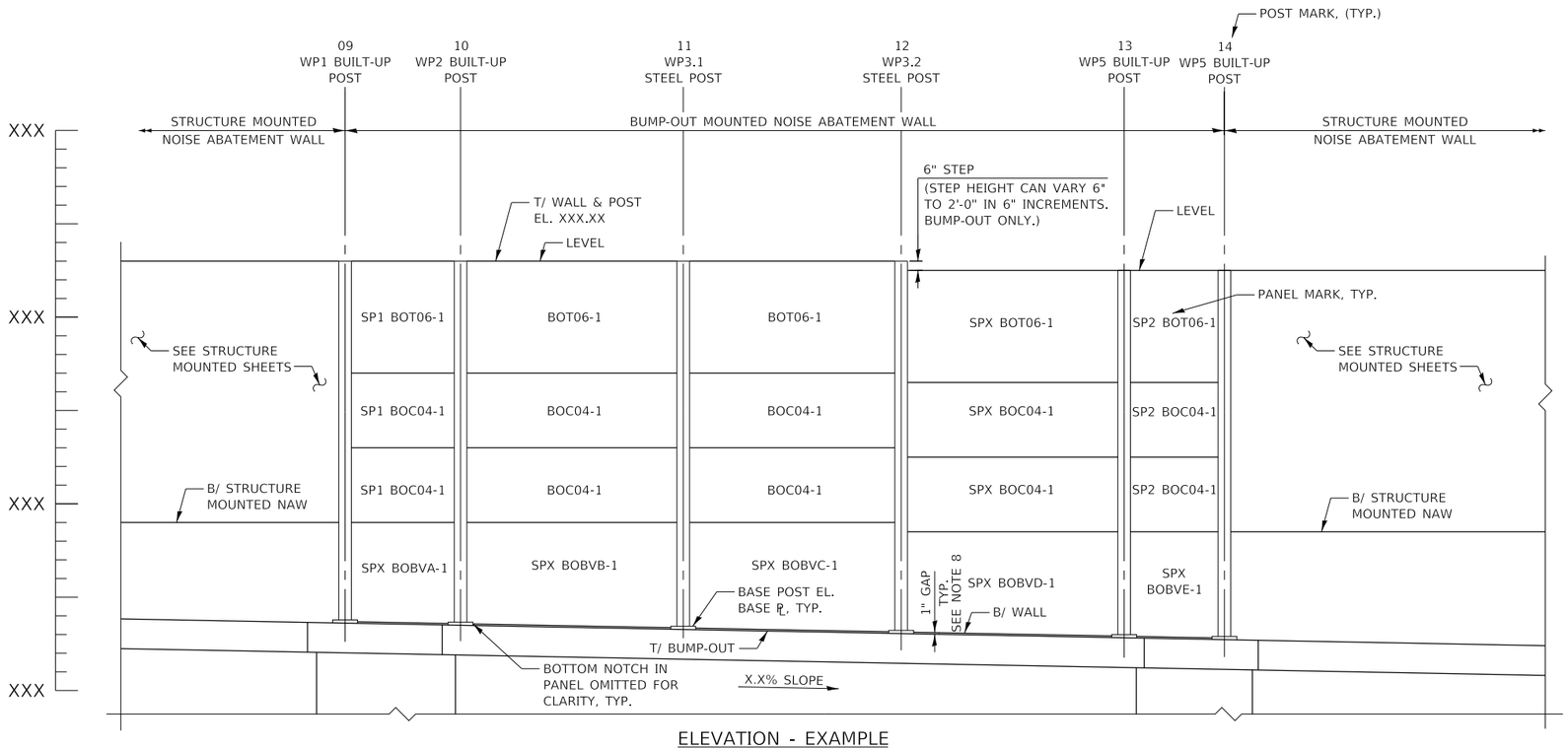
CENTRAL TRI-STATE STRUCTURE MOUNTED NOISE ABATEMENT WALL COVER SHEET

VERSION:	STANDARD:	SHEET:
2024-03	M-BRG-531	1 OF 4



* SLOPE NOISE BLOCKING ASSEMBLY 1% MIN. FROM CROWN TO DRAIN AT THE END POSTS.

PLAN - EXAMPLE



ELEVATION - EXAMPLE

NOTE TO DESIGNER

THE COVER SHEET IS FOR INFORMATION ONLY AND SHOULD NOT BE INCLUDED IN THE DSE'S SET OF PLANS.

NOTE TO DESIGNER

BUMP-OUT MOUNTED NAW DETAILS MAY BE USED WITH SYSTEM WIDE STRUCTURE MOUNTED NAW DETAILS SHOWN IN STANDARD G12 AND M-BRG-529. DSE TO UPDATE ACCORDINGLY FOR SYSTEM WIDE GEOMETRY.

NOTE TO DESIGNER

THIS SHEET IS NOT TO SCALE. DESIGNER TO DETERMINE APPROPRIATE SCALE ON GP&E SHEET TO ACCURATELY REPRESENT REQUIRED INFORMATION.

NOTE TO DESIGNER

NOTE:

1. USE SPECIALTY PANEL AND POST SPACING AT END OF WALL TO ACCOMMODATE TYPICAL 11'-8" POST SPACING ALONG THE STRAIGHT LENGTH OF WALL. POST SPACING SHOULD NOT EXCEED LIMITS WITHIN THE ILLINOIS TOLLWAY STANDARD. IF LIMITS ARE EXCEEDED, DSE TO DESIGN AND DETAIL ALL COMPONENTS. THE "SPX" DESIGNATION FOR SPECIALTY PANELS SHOULD BE USED FOR ALL PANELS WITHIN BAY WITH THE SAME WIDTH.

NOTE TO DESIGNER

THE BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DSE PRIOR TO INSERTION INTO A CONTRACT. THE DSE SHALL ACCEPT RESPONSIBILITY OF THE DESIGN UPON ITS COMPLETION AND INSERTION INTO A CONTRACT.

THIS BASE SHEET REPRESENTS THE TYPICAL DETAILS FOR BUMP-OUT MOUNTED, NOISE ABATEMENT WALLS. THE DSE IS RESPONSIBLE FOR COMPLETING THE TABLES AND INCLUDING THEM IN THEIR CONTRACT PLANS. IF ANY OF THE DESIGN PARAMETERS IN THE ILLINOIS TOLLWAY STANDARD ARE EXCEEDED, THE DSE WILL BE RESPONSIBLE FOR DESIGN CALCULATIONS AND DETAILS FOR THOSE COMPONENTS.

THE PLAN AND ELEVATION ON THIS COVER SHEET REPRESENTS ADDITIONAL INFORMATION TO SHOW ON THE GP&E SHEET. THE GP&E SHEET AND REMAINING NAW PLANS SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ARTICLES 6.2.5 AND 23.3.

NOTE:
SEE STANDARD G14 FOR DETAIL 1 AND DETAIL 2.

Illinois Tollway

CENTRAL TRI-STATE BUMP-OUT MOUNTED NOISE ABATEMENT WALL COVER SHEET

VERSION:	STANDARD:	SHEET:
2024-03	M-BRG-531	2 OF 4

STRUCTURE MOUNTED PANEL SCHEDULE

PANEL MARK	PANEL HEIGHT	PANEL WIDTH	TOTAL PANEL THICKNESS	NUMBER OF PANELS
***SB04-1	4'-0"	11'-6"	5½"	X
***SB04.5-1	4'-6"	11'-6"	5½"	X
SC04-1	4'-0"	11'-6"	5½"	X
ST04-1	4'-0"	11'-6"	5½"	X
ST05-1	5'-0"	11'-6"	5½"	X
ST06-1	6'-0"	11'-6"	5½"	X
ST07-1	7'-0"	11'-6"	5½"	X
ST08-1	8'-0"	11'-6"	5½"	X
STF04-1	4'-0"	11'-6"	5½"	X
STF04.5-1	4'-6"	11'-6"	5½"	X
STF05-1	5'-0"	11'-6"	5½"	X
STF05.5-1	5'-6"	11'-6"	5½"	X
STF06-1	6'-0"	11'-6"	5½"	X
STF06.5-1	6'-6"	11'-6"	5½"	X
STF07-1	7'-0"	11'-6"	5½"	X
STF07.5-1	7'-6"	11'-6"	5½"	X
STF08-1	8'-0"	11'-6"	5½"	X
***SPX SB04-1	4'-0"	X'-X"	5½"	X
***SPX SB04.5-1	4'-6"	X'-X"	5½"	X
SPX SC04-1	4'-0"	X'-X"	5½"	X
SPX ST04-1	4'-0"	X'-X"	5½"	X
SPX ST05-1	5'-0"	X'-X"	5½"	X
SPX ST06-1	6'-0"	X'-X"	5½"	X
SPX ST07-1	7'-0"	X'-X"	5½"	X
SPX ST08-1	8'-0"	X'-X"	5½"	X
SPX STF04-1	4'-0"	X'-X"	5½"	X
SPX STF04.5-1	4'-6"	X'-X"	5½"	X
SPX STF05-1	5'-0"	X'-X"	5½"	X
SPX STF05.5-1	5'-6"	X'-X"	5½"	X
SPX STF06-1	6'-0"	X'-X"	5½"	X
SPX STF06.5-1	6'-6"	X'-X"	5½"	X
SPX STF07-1	7'-0"	X'-X"	5½"	X
SPX STF07.5-1	7'-6"	X'-X"	5½"	X
SPX STF08-1	8'-0"	X'-X"	5½"	X

NOTE:

1. WORK THIS SHEET WITH ILLINOIS TOLLWAY STANDARD G12, G13 OR G14.

*** CONTRACTOR MAY INCREASE BOTTOM PANEL HEIGHTS AND USE UP TO AN 8FT (NON-STANDARD) MAXIMUM HEIGHT PANEL. THE ADJACENT TOP PANEL MAY ALSO BE ADJUSTED, PROVIDED STANDARD PANEL HEIGHTS AS SHOWN IN STANDARD G13 ARE USED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

DESIGN SPECIFICATIONS

ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, DATED XXXXXXXXXXXXXXX.

ILLINOIS TOLLWAY GEOTECHNICAL MANUAL, DATED XXXXXXXXXXXXXXX.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED XXXXXXXXXXXXXXX.

NOTE TO DESIGNER

REPLACE XXXXXXXXXXXXXXX WITH THE LATEST DATE

CONSTRUCTION SPECIFICATIONS

ILLINOIS DEPARTMENT OF TRANSPORTATION LATEST GUIDE BRIDGE SPECIAL PROVISIONS (GBSPs)

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED XXXXXXXXXXXXXXX.

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, DATED XXXXXXXXXXXXXXX.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED XXXXXXXXXXXXXXX.

BUMP-OUT STRUCTURE MOUNTED PANEL SCHEDULE

PANEL MARK	PANEL HEIGHT	PANEL WIDTH	TOTAL PANEL THICKNESS	NUMBER OF PANELS
**BOC04-1	4'-0"	11'-6"	5½"	X
**BOC04.5-1	4'-6"	11'-6"	5½"	X
BOT04-1	4'-0"	11'-6"	5½"	X
BOT05-1	5'-0"	11'-6"	5½"	X
BOT06-1	6'-0"	11'-6"	5½"	X
BOT07-1	7'-0"	11'-6"	5½"	X
BOT08-1	8'-0"	11'-6"	5½"	X
SP1 BOC04-1	4'-0"	7'-5"	5½"	X
SP1 BOC04.5-1	4'-6"	7'-5"	5½"	X
SP1 BOT04-1	4'-0"	7'-5"	5½"	X
SP1 BOT05-1	5'-0"	7'-5"	5½"	X
SP1 BOT06-1	6'-0"	7'-5"	5½"	X
SP1 BOT07-1	7'-0"	7'-5"	5½"	X
SP1 BOT08-1	8'-0"	7'-5"	5½"	X
SP2 BOC04-1	4'-0"	6'-4"	5½"	X
SP2 BOC04.5-1	4'-6"	6'-4"	5½"	X
SP2 BOT04-1	4'-0"	6'-4"	5½"	X
SP2 BOT05-1	5'-0"	6'-4"	5½"	X
SP2 BOT06-1	6'-0"	6'-4"	5½"	X
SP2 BOT07-1	7'-0"	6'-4"	5½"	X
SP2 BOT08-1	8'-0"	6'-4"	5½"	X
SPX BOC04-1	4'-0"	X'-X"	5½"	X
SPX BOC04.5-1	4'-6"	X'-X"	5½"	X
SPX BOT04-1	4'-0"	X'-X"	5½"	X
SPX BOT05-1	5'-0"	X'-X"	5½"	X
SPX BOT06-1	6'-0"	X'-X"	5½"	X
SPX BOT07-1	7'-0"	X'-X"	5½"	X
SPX BOT08-1	8'-0"	X'-X"	5½"	X

NOTE:

1. WORK THIS SHEET WITH ILLINOIS TOLLWAY STANDARD.

* TO ACCOMMODATE VARYING SLAB GRADES, PANEL HEIGHTS WILL VARY TO FOLLOW SLOPE ON BUMP-OUT SLAB AND MAINTAIN A 1" GAP BETWEEN BOTTOM OF PANEL AND TOP OF SLAB.

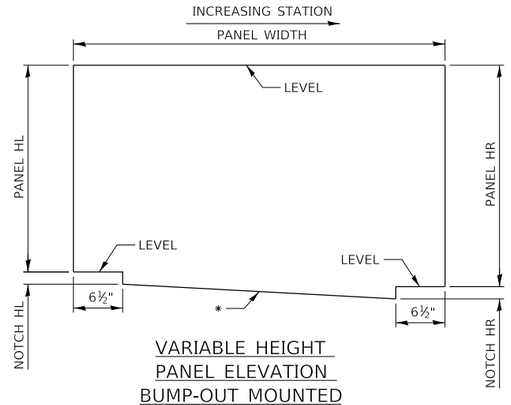
** CONTRACTOR MAY INCREASE THE STANDARD CENTER PANEL HEIGHTS, MAXIMUM 8FT, TO MINIMIZE THE NUMBER OF JOINTS. THE ADJACENT TOP PANEL MAY ALSO BE ADJUSTED, PROVIDED STANDARD PANEL HEIGHTS AS SHOWN IN STANDARD G14 ARE USED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

GENERAL NOTES

1. CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.
2. NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS SHALL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
3. THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COST WILL BE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.
4. NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E., 800-892-0123.
6. 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 LOCATION PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A "REQUEST ILLINOIS TOLLWAY UTILITIES LOCATE" FORM ONLINE AT THE ILLINOIS TOLLWAY WEBSITE UNDER "DOING BUSINESS" AT LEAST FOUR (4) BUSINESS DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN THE GENERAL AREA OF THE FIBER OPTIC CABLE."
7. WHENEVER ANY MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.
8. PROVIDE NOISE BLOCKING ASSEMBLY ALONG THE INSIDE PERIMETER OF THE WALL TO PREVENT SOUND THROUGH THE 1" GAP. SLOPE THE NOISE BLOCKING ASSEMBLY TO DRAIN AND STOP 3" SHORT OF THE END POSTS TO ALLOW WATER TO DRAIN.

BUMP-OUT STRUCTURE MOUNTED VARIABLE HEIGHT PANEL SCHEDULE

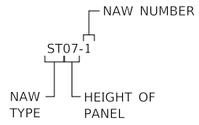
PANEL MARK	PANEL HL	NOTCH HL	PANEL HR	NOTCH HR	PANEL WIDTH	TOTAL PANEL THICKNESS	NUMBER OF PANELS
SPX BOBVA-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOBVB-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOBVC-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOBVD-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOBVE-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOTFVA-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOTFVB-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOTFVC-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOTFVD-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOTFVE-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X



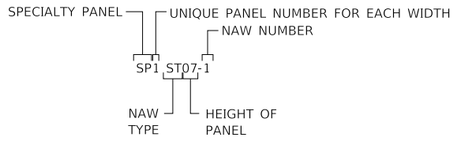
VARIABLE HEIGHT PANEL ELEVATION BUMP-OUT MOUNTED

NAW TYPE

STF = STRUCTURE MOUNTED FULL HEIGHT PANEL
ST = STRUCTURE MOUNTED TOP PANEL
SC = STRUCTURE MOUNTED CENTER PANEL
SB = STRUCTURE MOUNTED BOTTOM PANEL
BOTFV = BUMP-OUT STRUCTURE MOUNTED FULL HEIGHT PANEL (VARIABLE HEIGHT)
BOT = BUMP-OUT STRUCTURE MOUNTED TOP PANEL
BOC = BUMP-OUT STRUCTURE MOUNTED CENTER PANEL
BOBV = BUMP-OUT STRUCTURE MOUNTED BOTTOM PANEL (VARIABLE HEIGHT)
SP = SPECIALTY PANEL



TYPICAL PANEL NAMING CONVENTION



SPECIALTY PANEL NAMING CONVENTION

NOTE TO DESIGNER

PANEL MARK SHOULD BE SHOWN ON THE ELEVATION VIEW ON THE GP&E

NOTE TO DESIGNER

FOR PANELS SPANNING BRIDGE EXPANSION JOINTS, DETAILS FROM M-BRG-530 SHALL BE INCLUDED AND NOTE ADDED IDENTIFYING THE EXPANSION PANEL

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

LIST OF ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABUT.	ABUTMENT
BK.	BACK
B.F.	BACK FACE
℄	BASELINE
BRG.	BEARING
BOTT.	BOTTOM
B/	BOTTOM OF
BM	BRIDGE MOUNTED
℄	CENTERLINE
CL.	CLEARANCE
COL.	COLUMN
CONC.	CONCRETE
CGM	CRASHWORTHY GROUND MOUNTED
E.E.	EACH END
E.	EAST
EB	EASTBOUND
ELEV.	ELEVATION
EQ.	EQUAL
EXIST.	EXISTING
EXP.	EXPANSION
F.F.	FRONT FACE
JT.	JOINT
LOC.	LOCATION
MAX.	MAXIMUM
MIN.	MINIMUM
NAW	NOISE ABATEMENT WALL
N.	NORTH
N.A.	NOT APPLICABLE
O.C.	ON CENTER
ℙ	PLATE
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PROP.	PROPOSED
SHLDR.	SHOULDER
S.	SOUTH
S.P.	SPECIAL PROVISION
SQ. FT.	SQUARE FOOT
SQ. YD.	SQUARE YARD
STA.	STATION
STRUCT	STRUCTURAL
S.M.	STRUCTURE MOUNTED
T/	TOP OF
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
WB	WESTBOUND
WF	WIDE FLANGE

NOTE TO DESIGNER

DESIGNER TO COMPLETE TABLES.

Illinois Tollway

CENTRAL TRI-STATE STRUCTURE MOUNTED NOISE ABATEMENT WALL SCHEDULE

VERSION:	STANDARD:	SHEET:
2024-03	M-BRG-531	3 OF 4

STEEL POST SCHEDULE

LOC MARK	POST MARK	STATION	OFFSET	T/WALL & POST EL.	BOTTOM POST EL.	BOTTOM WALL EL.	WF POST SIZE	POST LENGTH	MISC. STEEL WT. (POUNDS)	POST WT. (POUNDS)	TOTAL WT. (POUNDS)
S1-01	01	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XXX.XX	WXxXX	XX'-XX"	XXX.XX	XXX.XX	XXX.XX
S2-02	02	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XXX.XX	WXxXX	XX'-XX"	XXX.XX	XXX.XX	XXX.XX
BO1-01	01	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	VARIES	WXxXX	XX'-XX"	XXX.XX	XXX.XX	XXX.XX
BO2-02	02	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	VARIES	WXxXX	XX'-XX"	XXX.XX	XXX.XX	XXX.XX
BO3-03	03	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	VARIES	WXxXX	XX'-XX"	XXX.XX	XXX.XX	XXX.XX

COMPLETE FOR ONE WALL ONLY

TOTAL BILL OF MATERIAL
(ADVANCE PROCUREMENT)

PAY ITEM NO.	ITEM	UNIT	TOTAL
JI504520	FURNISHING PRECAST CONCRETE PANELS, NOISE ABATEMENT WALL PANELS, STRUCTURE MOUNTED	SQ. FT.	X
JI505230	FURNISHING STRUCTURAL STEEL, NOISE ABATEMENT WALL	LBS.	X
JT599905	INSTALLING PRECAST CONCRETE NOISE ABATEMENT WALL, STRUCTURE MOUNTED	SQ. FT.	X
JI505500	STORAGE OF STRUCTURAL STEEL, NOISE ABATEMENT WALL	CAL. DAY	X
JI504550	STORAGE OF PRECAST CONCRETE PANELS, NOISE ABATEMENT WALL	CAL. DAY	X

ADVANCE PROCUREMENT NOTES:

FOR THE FABRICATION CONTRACT
PICK UP OF THE NOISE ABATEMENT WALL STRUCTURAL STEEL FROM THE CONTRACTORS STORAGE IS ANTICIPATED FROM (XXXX- TO XXX).
PICK UP OF THE PRECAST CONCRETE NOISE ABATEMENT PANELS FROM THE CONTRACTORS STORAGE IS ANTICIPATED FROM (XXXX- TO XXX).
OR COMBINE TO PICK UP OF THE MATERIALS FROM THE CONTRACTORS STORAGE IS ANTICIPATED FROM (XXXX- TO XXX).

FOR THE INSTALLATION CONTRACT
THE MATERIAL FOR THE PRECAST CONCRETE NOISE ABATEMENT WALLS ARE STORED FOR PICK UP AT (XXXXXX). THE PICKUP OF THE MATERIAL IS ANTICIPATED FROM (XXXXX TO XXXX).

TOTAL BILL OF MATERIAL
(NO ADVANCE PROCUREMENT)

PAY ITEM NO.	ITEM	UNIT	TOTAL
JT599920	PRECAST CONCRETE NOISE ABATEMENT WALL, STRUCTURE MOUNTED	SQ. FT.	X

NOTE TO DESIGNER

DESIGNER TO SELECT APPROPRIATE TOTAL BILL OF MATERIAL AND INCLUDE ONLY ONE IN PLANS BASED ON IF ADVANCE PROCUREMENT CONTRACT IS USED OR NOT.

NAW TYPE

S = STRUCTURE MOUNTED
BO = BUMP-OUT MOUNTED

NOTE TO DESIGNER

MISC. STEEL WT. INCLUDES BUILT-UP SHAPE, BEARING ANGLES, BENT PLATES, ANCHOR BOLT ASSEMBLY, NOISE BLOCKING ASSEMBLY, CAP PLATES ETC. QUANTITIES SHOWN ON STANDARDS G13 AND G14 ARE FOR MAXIMUM NUMBER OF BENT PLATES. ACTUAL QUANTITY SHALL BE USED IN THE SCHEDULE.

01
POST NUMBER

POST MARK CONVENTION

NAW NUMBER
S1-01
NAW TYPE
POST LOCATION

LOCATION MARK CONVENTION

NOTE TO DESIGNER

DESIGNER TO COMPLETE TABLES.

NOTE TO DESIGNER

LOCATION AND POST MARKS SHOULD BE SHOWN ON THE GENERAL LAYOUT OF POSTS ON THE GP&E

NOTE TO DESIGNER

FOR POSTS ADJACENT TO BRIDGE EXPANSION JOINTS, DETAILS FROM M-BRG-530 SHALL BE INCLUDED AND NOTE ADDED IDENTIFYING THE FIXED AND EXPANSION POSTS

NOTE TO DESIGNER

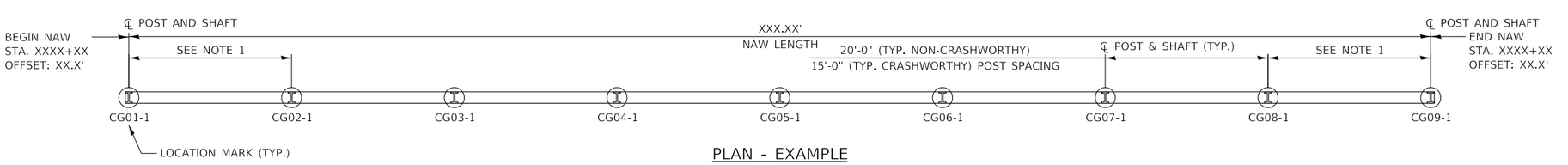
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTE TO DESIGNER

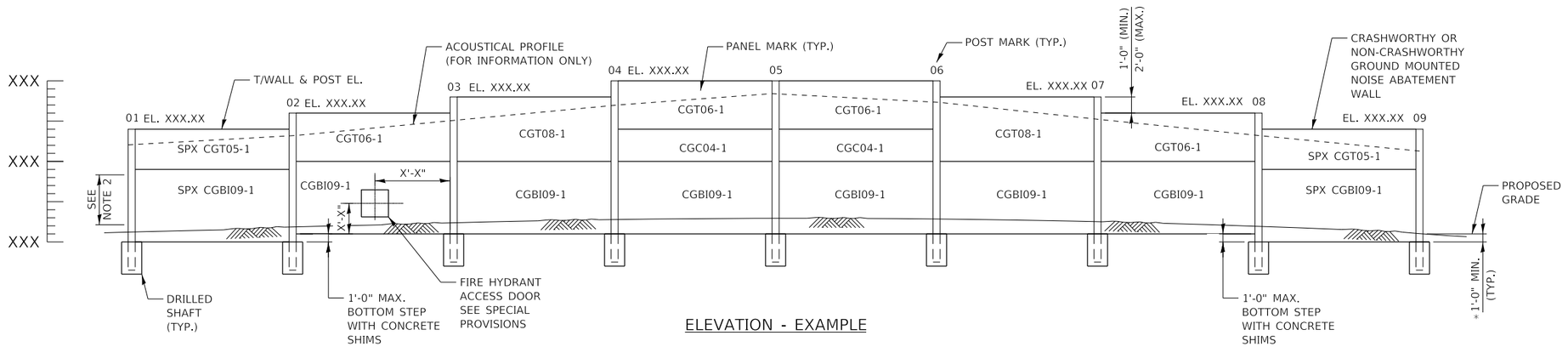
THE BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DSE PRIOR TO INSERTION INTO A CONTRACT. THE DSE SHALL ACCEPT RESPONSIBILITY OF THE DESIGN UPON ITS COMPLETION AND INSERTION INTO A CONTRACT.

THIS BASE SHEET REPRESENTS THE TYPICAL DETAILS FOR STRUCTURE MOUNTED, NOISE ABATEMENT WALLS. THE DSE IS RESPONSIBLE FOR COMPLETING THE TABLES AND INCLUDE IN THEIR CONTRACT PLANS. IF ANY OF THE DESIGN PARAMETERS IN THE ILLINOIS TOLLWAY STANDARD ARE EXCEEDED, THE DSE WILL BE RESPONSIBLE FOR DESIGN CALCULATIONS AND DETAILS FOR THOSE COMPONENTS.

THE PLAN AND ELEVATION ON THIS COVER SHEET REPRESENTS ADDITIONAL INFORMATION TO SHOW ON THE GP&E SHEET. THE GP&E SHEET AND REMAINING NAW PLANS SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ARTICLES 6.2.5 AND 23.3.



PLAN - EXAMPLE



ELEVATION - EXAMPLE

NOTE TO DESIGNER

NOTE:

1. USE SPECIALTY PANEL AND POST SPACING AT ENDS OF WALL OR UNIQUE LOCATIONS SUCH AS UTILITY CROSSINGS TO ACCOMMODATE TYPICAL 20'-0" OR 15'-0" POST SPACING FOR NON-CRASHWORTHY OR CRASHWORTHY, RESPECTIVELY ALONG THE MAJORITY OF THE LENGTH OF WALL. POST SPACING SHOULD NOT EXCEED LIMITS WITHIN THE ILLINOIS TOLLWAY STANDARD. IF LIMITS ARE EXCEEDED, DSE TO DESIGN AND DETAIL ALL COMPONENTS. THE "SPX" DESIGNATION FOR SPECIALTY PANELS SHOULD BE USED FOR ALL PANELS WITHIN THAT BAY WITH THE SAME WIDTH.
2. FOR CRASHWORTHY NAW, PANELS WITHIN 6FT ABOVE FACE OF ROADWAY PAVEMENT SHALL BE THE TL-4 IMPACT PANELS.

NOTE TO DESIGNER

* INCREASE TO ACCOMODATE THE GUTTER WHEN NEEDED

NOTE TO DESIGNER

ALL SIGNS MOUNTED TO NAW SHALL BE SHOWN ON GP&E IN ACCORDANCE WITH LATEST ILLINOIS TOLLWAY DETAIL FOR NOISE ABATEMENT WALL MOUNTED SIGN SUPPORT.

NOTE TO DESIGNER

* INCREASE TO ACCOMODATE THE GUTTER WHEN NEEDED

NOTE TO DESIGNER

SEE BASE SHEET M-BRG-532 SHEET 2 OF 3 FOR PANEL DESIGNATIONS AND M-BRG-532 SHEET 3 OF 3 FOR POST DESIGNATIONS TO BE SHOWN ON THIS SHEET

NOTE TO DESIGNER

INCLUDE ACOUSTICAL PROFILE FOR INFORMATION ONLY.

NOTE TO DESIGNER

ELEVATIONS SHOULD ACCOUNT FOR ¼" GAP BETWEEN PANELS.

Illinois Tollway

GROUND MOUNTED NOISE ABATEMENT WALL COVER SHEET

VERSION:	STANDARD:	SHEET:
2024-03	M-BRG-532	1 OF 4

NON-CRASHWORTHY NAW GROUND MOUNTED PANEL SCHEDULE

PANEL MARK	PANEL HEIGHT	PANEL WIDTH	TOTAL PANEL THICKNESS	NUMBER OF PANELS
GB04-1	4'-0"	19'-10"	7"	X
GBU04-1	4'-0"	19'-10"	7"	X
**GC04-1	4'-0"	19'-10"	7"	X
GT04-1	4'-0"	19'-10"	7"	X
GT05-1	5'-0"	19'-10"	7"	X
GT06-1	6'-0"	19'-10"	7"	X
GT07-1	7'-0"	19'-10"	7"	X
GT08-1	8-0"	19'-10"	7"	X
GTF04-1	4'-0"	19'-10"	7"	X
GTF05-1	5'-0"	19'-10"	7"	X
GTF06-1	6'-0"	19'-10"	7"	X
GTF07-1	7'-0"	19'-10"	7"	X
GTF08-1	8-0"	19'-10"	7"	X
GTFU04-1	4'-0"	19'-10"	9"	X
GTFU05-1	5'-0"	19'-10"	9"	X
GTFU06-1	6'-0"	19'-10"	9"	X
GTFU07-1	7'-0"	19'-10"	9"	X
GTFU08-1	8-0"	19'-10"	9"	X
SPX GB04-1	4'-0"	19'-10"	7"	X
SPX GBU04-1	4'-0"	19'-10"	9"	X
**SPX GC04-1	4'-0"	19'-10"	7"	X
SPX GT04-1	4'-0"	19'-10"	7"	X
SPX GT05-1	5'-0"	19'-10"	7"	X
SPX GT06-1	6'-0"	19'-10"	7"	X
SPX GT07-1	7'-0"	19'-10"	7"	X
SPX GT08-1	8-0"	19'-10"	7"	X
SPX GTF04-1	4'-0"	19'-10"	7"	X
SPX GTF05-1	5'-0"	19'-10"	7"	X
SPX GTF06-1	6'-0"	19'-10"	7"	X
SPX GTF07-1	7'-0"	19'-10"	7"	X
SPX GTF08-1	8-0"	19'-10"	7"	X
SPX GTFU04-1	4'-0"	19'-10"	9"	X
SPX GTFU05-1	5'-0"	19'-10"	9"	X
SPX GTFU06-1	6'-0"	19'-10"	9"	X
SPX GTFU07-1	7'-0"	19'-10"	9"	X
SPX GTFU08-1	8-0"	19'-10"	9"	X

NOTE:
1. WORK THIS SHEET WITH ILLINOIS TOLLWAY STANDARDS G15 AND G16.

GENERAL NOTES

1. CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.

2. NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS SHALL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.

3. THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COST WILL BE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

4. NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E., 800-892-0123.

6. 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 LOCATION PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A "REQUEST ILLINOIS TOLLWAY UTILITIES LOCATE" FORM ONLINE AT THE ILLINOIS TOLLWAY WEBSITE UNDER "DOING BUSINESS" AT LEAST FOUR (4) BUSINESS DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN THE GENERAL AREA OF THE FIBER OPTIC CABLE."

7. THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.

8. WHENEVER ANY MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.

CRASHWORTHY NAW GROUND MOUNTED PANEL SCHEDULE (NO TL-4 IMPACT)

PANEL MARK	PANEL HEIGHT	PANEL WIDTH	TOTAL PANEL THICKNESS	NUMBER OF PANELS
*CGC04-1	4'-0"	14'-10"	9"	X
CGT05-1	5'-0"	14'-10"	9"	X
CGT06-1	6'-0"	14'-10"	9"	X
CGT07-1	7'-0"	14'-10"	9"	X
CGT08-1	8-0"	14'-10"	9"	X
CGT09-1	9-0"	14'-10"	9"	X
*SPX CGC04-1	4'-0"	X'-X"	9"	X
SPX CGT05-1	5'-0"	X'-X"	9"	X
SPX CGT06-1	6'-0"	X'-X"	9"	X
SPX CGT07-1	7'-0"	X'-X"	9"	X
SPX CGT08-1	8-0"	X'-X"	9"	X
SPX CGT09-1	9-0"	X'-X"	9"	X

*CONTRACTOR MAY INCREASE THE STANDARD CENTER PANEL HEIGHTS, MAXIMUM 9FT, TO MINIMIZE THE NUMBER OF JOINTS. THE ADJACENT TOP PANEL MAY ALSO BE ADJUSTED, PROVIDED STANDARD PANEL HEIGHTS AS SHOWN IN STANDARD G16 ARE USED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

**CONTRACTOR MAY INCREASE THE STANDARD CENTER PANEL HEIGHTS, MAXIMUM 8FT, TO MINIMIZE THE NUMBER OF JOINTS. THE ADJACENT TOP PANEL MAY ALSO BE ADJUSTED, PROVIDED STANDARD PANEL HEIGHTS AS SHOWN IN STANDARD G15 ARE USED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

LIST OF ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABUT.	ABUTMENT
BK.	BACK
B.F.	BACK FACE
℄	BASELINE
BRG.	BEARING
BOTT.	BOTTOM
B/	BOTTOM OF
BM	BRIDGE MOUNTED
℄	CENTERLINE
CL.	CLEARANCE
COL.	COLUMN
CONC.	CONCRETE
CGM	CRASHWORTHY GROUND MOUNTED
E.E.	EACH END
E.	EAST
EB	EASTBOUND
ELEV.	ELEVATION
EQ.	EQUAL
EXIST.	EXISTING
EXP.	EXPANSION
F.F.	FRONT FACE
JT.	JOINT
LOC.	LOCATION
MAX.	MAXIMUM
MIN.	MINIMUM
NAW	NOISE ABATEMENT WALL
N.	NORTH
N.A.	NOT APPLICABLE
O.C.	ON CENTER
ℙ	PLATE
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PROP.	PROPOSED
SHLDR.	SHOULDER
S.	SOUTH
S.P.	SPECIAL PROVISION
SQ. FT.	SQUARE FOOT
SQ. YD.	SQUARE YARD
STA.	STATION
STRUCT	STRUCTURAL
S.M.	STRUCTURE MOUNTED
T/	TOP OF
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
WB	WESTBOUND
WF	WIDE FLANGE

CRASHWORTHY NAW GROUND MOUNTED PANEL SCHEDULE (TL-4 IMPACT)

PANEL MARK	PANEL HEIGHT	PANEL WIDTH	TOTAL PANEL THICKNESS	NUMBER OF PANELS
CGBI06-1	6'-0"	14'-10"	11"	X
CGBI07-1	7'-0"	14'-10"	11"	X
CGBI08-1	8'-0"	14'-10"	11"	X
CGBI09-1	9'-0"	14'-10"	11"	X
CGCI06-1	6'-0"	14'-10"	11"	X
CGCI07-1	7'-0"	14'-10"	11"	X
CGCI08-1	8'-0"	14'-10"	11"	X
CGCI09-1	9'-0"	14'-10"	11"	X
CGTI06-1	6'-0"	14'-10"	11"	X
CGTI07-1	7'-0"	14'-10"	11"	X
CGTI08-1	8'-0"	14'-10"	11"	X
CGTI09-1	9'-0"	14'-10"	11"	X
CGTFI06-1	6'-0"	14'-10"	11"	X
CGTFI07-1	7'-0"	14'-10"	11"	X
CGTFI08-1	8'-0"	14'-10"	11"	X
CGTFI09-1	9'-0"	14'-10"	11"	X
SPX CGBI06-1	6'-0"	X'-X"	11"	X
SPX CGBI07-1	7'-0"	X'-X"	11"	X
SPX CGBI08-1	8'-0"	X'-X"	11"	X
SPX CGBI09-1	9'-0"	X'-X"	11"	X
SPX CGCI06-1	6'-0"	X'-X"	11"	X
SPX CGCI07-1	7'-0"	X'-X"	11"	X
SPX CGCI08-1	8'-0"	X'-X"	11"	X
SPX CGCI09-1	9'-0"	X'-X"	11"	X
SPX CGTI06-1	6'-0"	X'-X"	11"	X
SPX CGTI07-1	7'-0"	X'-X"	11"	X
SPX CGTI08-1	8'-0"	X'-X"	11"	X
SPX CGTI09-1	9'-0"	X'-X"	11"	X
SPX CGTFI06-1	6'-0"	X'-X"	11"	X
SPX CGTFI07-1	7'-0"	X'-X"	11"	X
SPX CGTFI08-1	8'-0"	X'-X"	11"	X
SPX CGTFI09-1	9'-0"	X'-X"	11"	X

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTE TO DESIGNER

PANEL MARK SHOULD BE SHOWN ON THE ELEVATION VIEW ON THE GP&E

NOTE TO DESIGNER

DESIGNER TO COMPLETE TABLES.

NAW TYPE

GTF= NON-CRASHWORTHY GROUND MOUNTED FULL HEIGHT PANEL
* GTFU= NON-CRASHWORTHY GROUND MOUNTED FULL HEIGHT PANEL (UNBALANCED SOIL LOAD)
GT = NON-CRASHWORTHY GROUND MOUNTED TOP PANEL
GC = NON-CRASHWORTHY GROUND MOUNTED CENTER PANEL
GB = NON-CRASHWORTHY GROUND MOUNTED BOTTOM PANEL
* GBU = NON-CRASHWORTHY GROUND MOUNTED BOTTOM PANEL (UNBALANCED SOIL LOAD)
** CGT = CRASHWORTHY GROUND MOUNTED TOP PANEL (NO TL-4 IMPACT)
** CGC = CRASHWORTHY GROUND MOUNTED CENTER PANEL (NO TL-4 IMPACT)
**** CGTFI = CRASHWORTHY GROUND MOUNTED FULL HEIGHT PANEL (TL-4 IMPACT)
**** CGTI = CRASHWORTHY GROUND MOUNTED TOP PANEL (TL-4 IMPACT)
**** CGCI = CRASHWORTHY GROUND MOUNTED CENTER PANEL (TL-4 IMPACT)
**** CGBI = CRASHWORTHY GROUND MOUNTED BOTTOM PANEL (TL-4 IMPACT)
SP = SPECIALTY PANEL

* THESE PANELS HAVE BEEN DESIGNED FOR THE MAXIMUM UNBALANCED SOIL LOAD.
** THESE PANELS HAVE BEEN DESIGNED FOR THE 4KIP VEHICLE COLLISION LOADING.
*** THESE PANELS HAVE BEEN DESIGNED FOR THE 54KIP TL-4 VEHICLE COLLISION LOADING.

DESIGN SPECIFICATIONS

ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, DATED XXXXXXXXXXXXXXX.

ILLINOIS TOLLWAY GEOTECHNICAL MANUAL, DATED XXXXXXXXXXXXXXX.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED XXXXXXXXXXXXXXX.

NOTE TO DESIGNER

REPLACE XXXXXXXXXXXXXXX WITH THE LATEST DATE

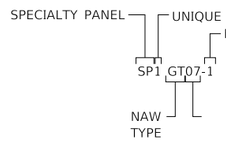
CONSTRUCTION SPECIFICATIONS

ILLINOIS DEPARTMENT OF TRANSPORTATION LATEST GUIDE BRIDGE SPECIAL PROVISIONS (GBSPs)

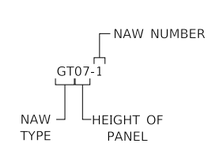
ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED XXXXXXXXXXXXXXX.

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, DATED XXXXXXXXXXXXXXX.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED XXXXXXXXXXXXXXX.



SPECIALTY PANEL NAMING CONVENTION



TYPICAL PANEL NAMING CONVENTION

Illinois Tollway

GROUND MOUNTED NOISE ABATEMENT WALL SCHEDULE

VERSION:	STANDARD:	SHEET:
2024-03	M-BRG-532	2 OF 4

DRILLED SHAFT SCHEDULE

	LOC MARK	STATION	OFFSET	T/ SHAFT EL.	B/ SHAFT EL.	SHAFT DEPTH	SHAFT DIAMETER	B/ POST EMBED EL.	POST EMBED DEPTH	POST MARK
	G01-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	01
	G02-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	02
	G03-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	03
	G04-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	04
	G05-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	05
	G06-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	06
	G07-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	07
	G08-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	08
	G09-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	09
*	G010-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	10
	G011-1	XXX+XX.XX	XX.XX	XXX.XX	XXX.XX	XX.XX	X'-XX"	XXX.XX	XXX.XX	11

COMPLETE FOR ONE WALL ONLY

* POST IS LOCATED AT 90° TURN AND REQUIRES ADDITIONAL ANGLES WELDED TO FLANGE.

STEEL POST SCHEDULE

POST MARK	STEEL POST SIZE	POST LENGTH	T/ WALL & POST EL.
01	WXxXX	XX'-XX"	XXX.XX
02	WXxXX	XX'-XX"	XXX.XX
03	WXxXX	XX'-XX"	XXX.XX
04	WXxXX	XX'-XX"	XXX.XX
05	WXxXX	XX'-XX"	XXX.XX
06	WXxXX	XX'-XX"	XXX.XX
07	WXxXX	XX'-XX"	XXX.XX
08	WXxXX	XX'-XX"	XXX.XX
09	WXxXX	XX'-XX"	XXX.XX
10	WXxXX	XX'-XX"	XXX.XX
11	WXxXX	XX'-XX"	XXX.XX

COMPLETE FOR ONE WALL ONLY

TOTAL BILL OF MATERIAL
(NO ADVANCE PROCUREMENT)

PAY ITEM NO.	ITEM	UNIT	TOTAL
JT599910	PRECAST CONCRETE NOISE ABATEMENT WALL, GROUND MOUNTED, NON-CRASHWORTHY	SQ. FT.	X
JT599915	PRECAST CONCRETE NOISE ABATEMENT WALL, GROUND MOUNTED, CRASHWORTHY	SQ. FT.	X

TOTAL BILL OF MATERIAL
(ADVANCE PROCUREMENT)

PAY ITEM NO.	ITEM	UNIT	TOTAL
JI504510	FURNISHING PRECAST CONCRETE PANELS, NOISE ABATEMENT WALL PANELS, GROUND MOUNTED, NON-CRASHWORTHY	SQ. FT.	X
JI504515	FURNISHING PRECAST CONCRETE PANELS, NOISE ABATEMENT WALL PANELS, GROUND MOUNTED, CRASHWORTHY 13"	SQ. FT.	X
JI504516	FURNISHING PRECAST CONCRETE PANELS, NOISE ABATEMENT WALL PANELS, GROUND MOUNTED, CRASHWORTHY 9"	SQ. FT.	X
JI504550	STORAGE OF PRECAST CONCRETE PANELS, NOISE ABATEMENT WALL	CAL. DAY	X
JI505230	FURNISHING STRUCTURAL STEEL, NOISE ABATEMENT WALL	LBS.	X
JI505500	STORAGE OF STRUCTURAL STEEL, NOISE ABATEMENT WALL	CAL. DAY	X
JT599900	INSTALLING PRECAST CONCRETE NOISE ABATEMENT WALL, GROUND MOUNTED	SQ. FT.	X

ADVANCE PROCUREMENT NOTES:

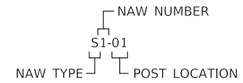
FOR THE FABRICATION CONTRACT
PICK UP OF THE NOISE ABATEMENT WALL STRUCTURAL STEEL FROM THE CONTRACTORS STORAGE IS ANTICIPATED FROM (XXXX- TO XXX).
PICK UP OF THE PRECAST CONCRETE NOISE ABATEMENT PANELS FROM THE CONTRACTORS STORAGE IS ANTICIPATED FROM (XXXX- TO XXX).
OR COMBINE TO PICK UP OF THE MATERIALS FROM THE CONTRACTORS STORAGE IS ANTICIPATED FROM (XXXX- TO XXX).

FOR THE INSTALLATION CONTRACT
THE MATERIAL FOR THE PRECAST CONCRETE NOISE ABATEMENT WALLS ARE STORED FOR PICK UP AT (XXXXXX). THE PICKUP OF THE MATERIAL IS ANTICIPATED FROM (XXXXX TO XXXX).

NAW TYPE

G = NON-CRASHWORTHY GROUND MOUNTED
CG = CRASHWORTHY GROUND MOUNTED

POST MARK CONVENTION



LOCATION MARK CONVENTION

NOTE TO DESIGNER
LOCATION AND POST MARKS SHOULD BE SHOWN ON THE GENERAL LAYOUT OF POSTS ON THE GP&E

NOTE TO DESIGNER
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

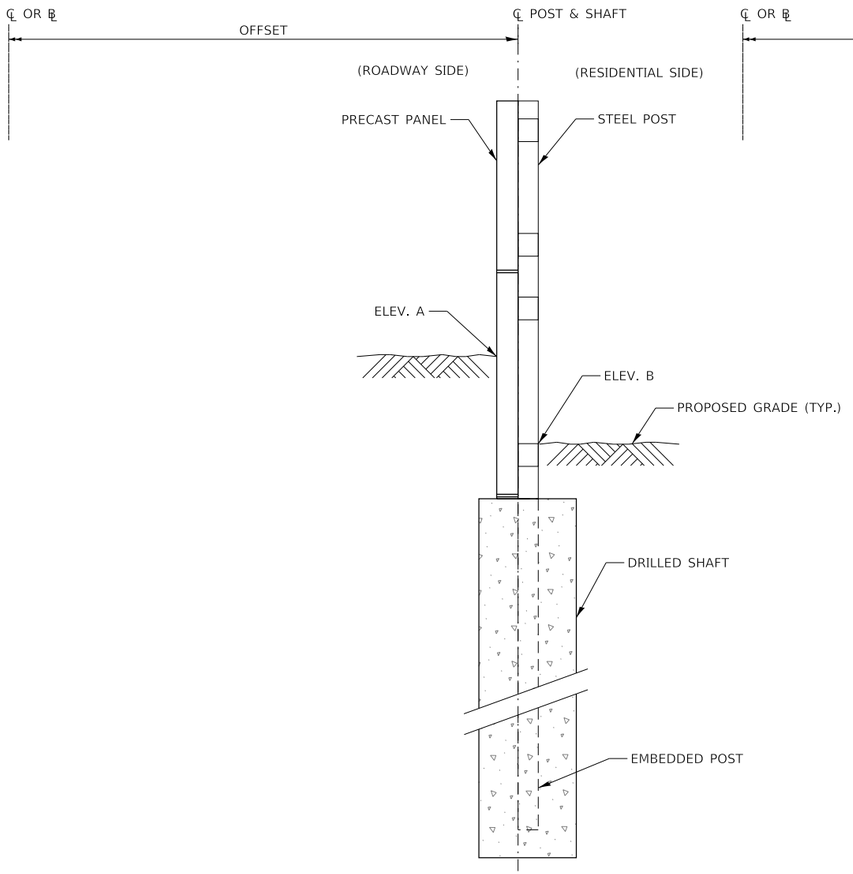
NOTE TO DESIGNER
DESIGNER TO SELECT APPROPRIATE TOTAL BILL OF MATERIAL AND INCLUDE ONLY ONE IN PLANS BASED ON IF ADVANCE PROCUREMENT CONTRACT IS USED OR NOT.

NOTE TO DESIGNER
DESIGNER TO COMPLETE TABLES.

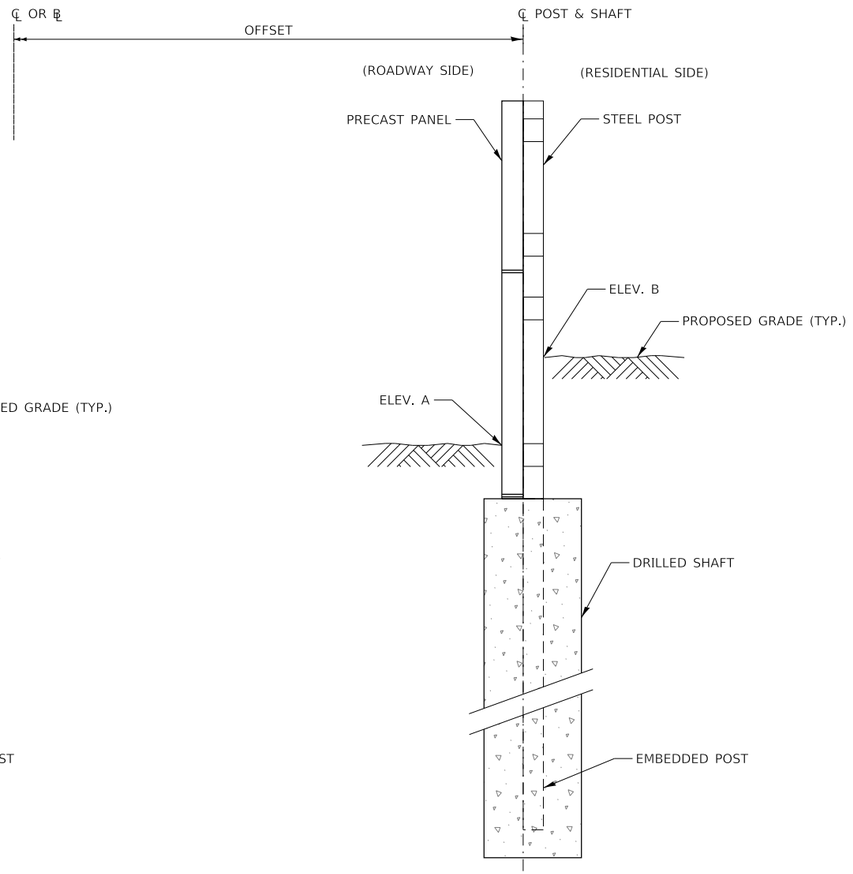
Illinois Tollway

GROUND MOUNTED NOISE ABATEMENT WALL SCHEDULE

VERSION:	STANDARD:	SHEET:
2024-03	M-BRG-532	3 OF 4



TYPICAL CROSS SECTION
(UNBALANCED SOIL CONDITION 1)



TYPICAL CROSS SECTION
(UNBALANCED SOIL CONDITION 2)

FINAL GRADING			
POST MARK	ELEV. A	ELEV. B	GRADE DIFFERENCE
01	XXX.XX	XXX.XX	XX'-XX"
02	XXX.XX	XXX.XX	XX'-XX"
03	XXX.XX	XXX.XX	XX'-XX"
04	XXX.XX	XXX.XX	XX'-XX"
05	XXX.XX	XXX.XX	XX'-XX"
06	XXX.XX	XXX.XX	XX'-XX"
07	XXX.XX	XXX.XX	XX'-XX"
08	XXX.XX	XXX.XX	XX'-XX"
09	XXX.XX	XXX.XX	XX'-XX"
10	XXX.XX	XXX.XX	XX'-XX"
11	XXX.XX	XXX.XX	XX'-XX"

COMPLETE FOR ONE WALL ONLY

NOTE TO DESIGNER

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NOTE TO DESIGNER

DESIGNER TO INCLUDE ANY REQUIRED DRAINAGE DETAILS. SEE M-DRN-607 AND M-DRN-608.

NOTE TO DESIGNER

TABLES ONLY NEED TO BE INCLUDED WHEN WALL SUPPORTS AN UNBALANCED SOIL LOAD

Illinois Tollway

GROUND MOUNTED NOISE ABATEMENT WALL DETAILS

VERSION:	STANDARD:	SHEET:
2024-03	M-BRG-532	4 OF 4

BASE SHEETS

SERIES 600 (DRN)

DRAINAGE

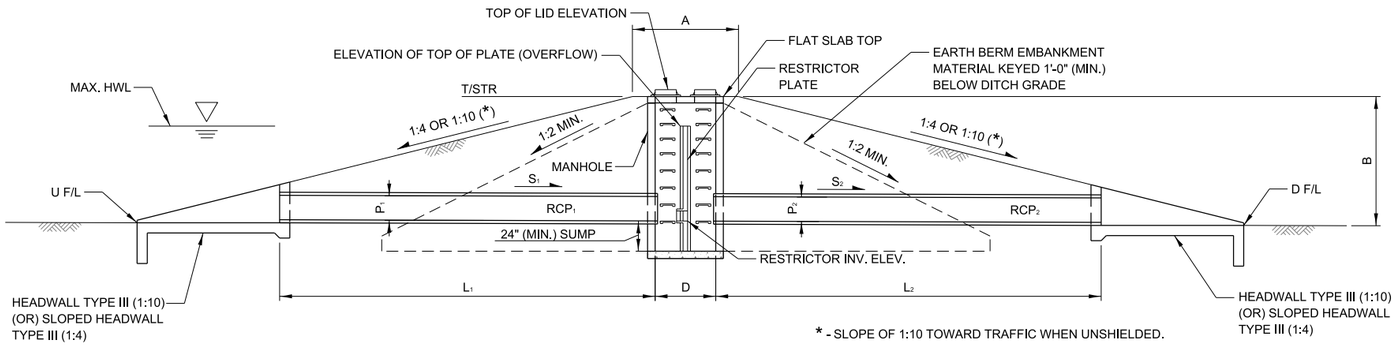
MARCH 2024

Illinois Tollway Base Sheet Revisions

Section M	Base Sheet Drawings	
	Drawing	**Modification Summary** **Effective: 03-01-2024**
	Drainage (DRN)-Series 600	
	M-DRN-601	**SLOPE DRAIN**
		Added callouts for the structures that are paid for separately.
		Added columns in the schedule for "U/S Drainage Structure No.", "D/S Drainage Structure No." and "Pay Item."
	M-DRN-603	**ARTICULATED CONCRETE BLOCK REVETMENT SYSTEM**
		Revised Note to Designer Number 4.
	M-DRN-606	**EXPOSED MOMENT SLAB WITH DRAINAGE STRUCTURE**
		Renamed the base sheet from "Section through Moment Slab with Drainage Structure Detail" to "Exposed Moment Slab with Drainage Structure."
		Revised the display of the load transfer system and soil reinforcement in Section A-A.
		Added callouts for 1/2" Preformed Joint Filler and sealant in Section A-A.
	M-DRN-607	**NOISE ABATEMENT WALL DRAINAGE DETAILS (ROADWAY SIDE)**
		Added clearance requirement between catch basin and drilled shaft.

New Sheet

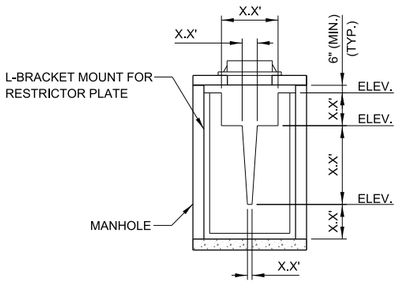
Retired Standard



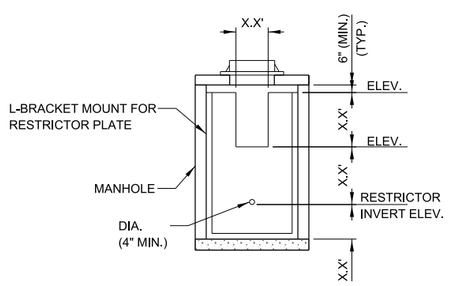
* - SLOPE OF 1:10 TOWARD TRAFFIC WHEN UNSHIELDED.

PROFILE VIEW

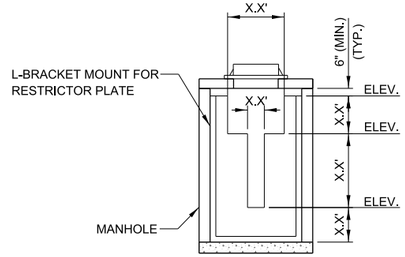
DESIGN ELEMENTS	UNITS	VALUES
DRAINAGE AREA	X (ACRES)	
STORAGE VOLUME	V (CU. YD.)	
CHECK DAM TOP WIDTH	A (FEET)	
CHECK DAM HEIGHT	B (FEET)	
MANHOLE	D (DIAMETER)	
MANHOLE-GRATE	TYPE	
HORIZONTAL PIPE (RCP)$_1$	P_1 (DIAMETER)	
HORIZONTAL PIPE (RCP)$_1$	L_1 (FEET)	
HORIZONTAL PIPE (RCP)$_1$	S_1 (SLOPE)	
HORIZONTAL PIPE (RCP)$_2$	P_2 (DIAMETER)	
HORIZONTAL PIPE (RCP)$_2$	L_2 (FEET)	
HORIZONTAL PIPE (RCP)$_2$	S_2 (SLOPE) (%)	
RESTRICTOR PLATE-DETAIL	SHAPE	
2-YEAR RELEASE RATE	CFS	
100-YEAR RELEASE RATE	CFS	
HEADWALL TYPE III (1:10)	PIPE DIAMETER	
SLOPED HEADWALL TYPE III (1:4)	PIPE DIAMETER	
HIGH WATER ELEVATION	HWL (FEET)	
TOP OF STRUCTURE ELEVATION	T/STR (FEET)	
UPSTREAM FLOWLINE	U F/L (FEET)	
DOWNSTREAM FLOWLINE	D F/L (FEET)	
2-YEAR ORIFICE INVERT ELEV.	(FEET)	
100-YEAR ORIFICE INVERT ELEV.	(FEET)	



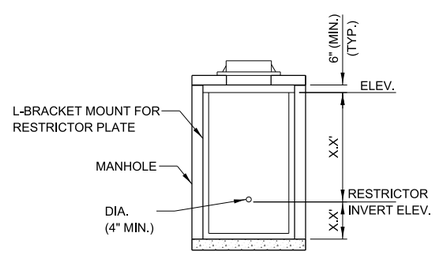
RESTRICTOR PLATE DETAIL



RESTRICTOR PLATE DETAIL



RESTRICTOR PLATE DETAIL



RESTRICTOR PLATE DETAIL

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NOTE TO DESIGNER

1. DSE SHALL DESIGN STEEL ANGLE BOLTS AND FASTENERS FOR THE STEEL RESTRICTOR PLATES. DETAILS ARE TO BE PROVIDED ON THIS SHEET.

SAMPLE
RESTRICTOR PLATE DETAILS

OUTLET CONTROL STRUCTURE
(CHECK DAM)

NOTES:

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

2. THE CONTRACTOR HAS THE OPTION TO USE A CONCRETE RESTRICTOR PLATE THAT IS PRECAST WITHIN THE DRAINAGE STRUCTURE.

Illinois Tollway

OUTLET CONTROL STRUCTURE CHECK DAM DETAILS

VERSION:	STANDARD:	SHEET:
2021-03	M-DRN-600	1 OF 1

NOTE TO DESIGNER

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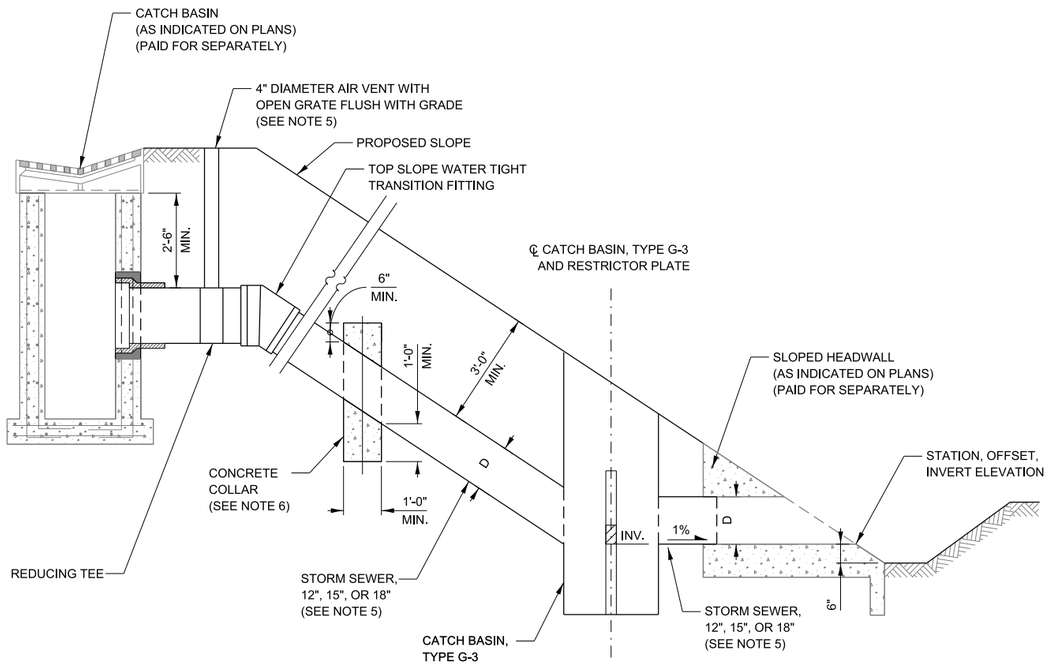
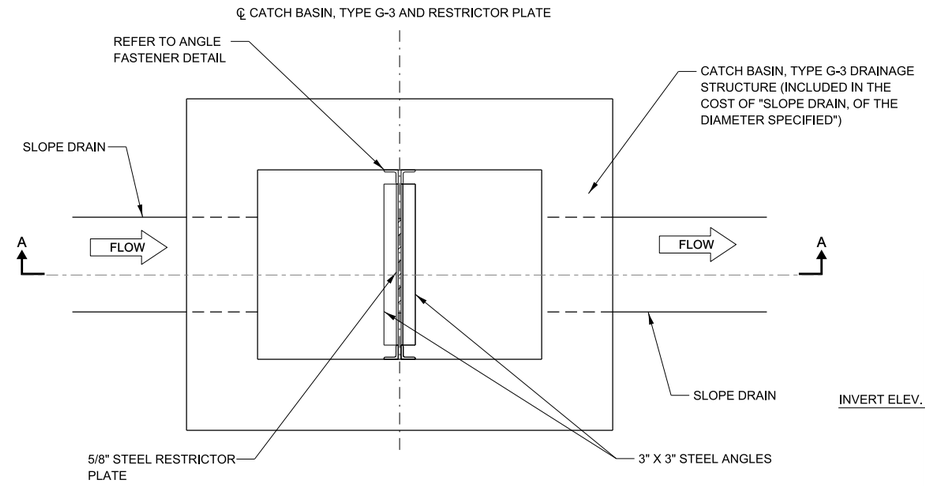
NOTES TO DESIGNER

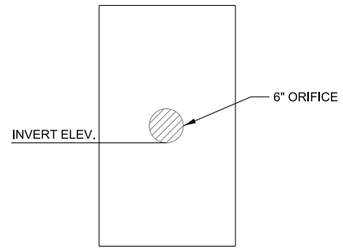
1. FOR SLOPES 1:3 OR FLATTER, PLACE A MINIMUM OF ONE CONCRETE COLLAR AT THE MIDDLE PIPE JOINT IF SLOPE DRAIN LENGTH ≤ 80 FEET. IF SLOPE DRAIN LENGTH > 80 FEET, PLACE CONCRETE COLLARS AT A MAXIMUM 40 FOOT SPACING.
2. FOR SLOPES STEEPER THAN 1:3, PLACE CONCRETE COLLARS AT A MAXIMUM 20 FOOT SPACING.
3. THE AIR VENT IS REQUIRED WHEN HW/D ≥ 0.8 TO PREVENT CAVITATION.



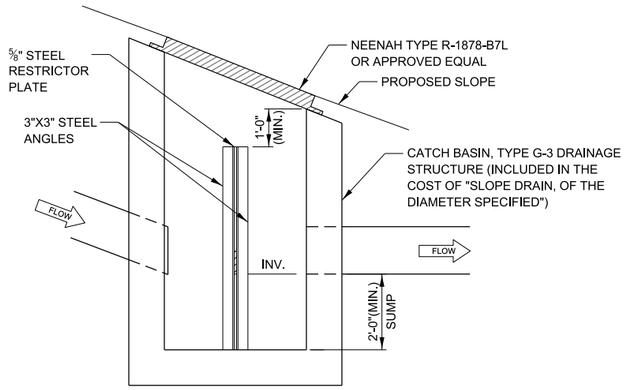
SLOPE DRAIN



CATCH BASIN, TYPE G-3
DRAINAGE STRUCTURE PLAN



RESTRICTOR PLATE DETAIL

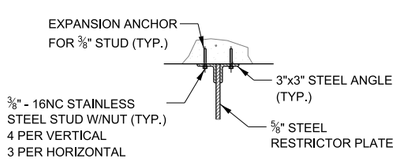


SECTION A-A

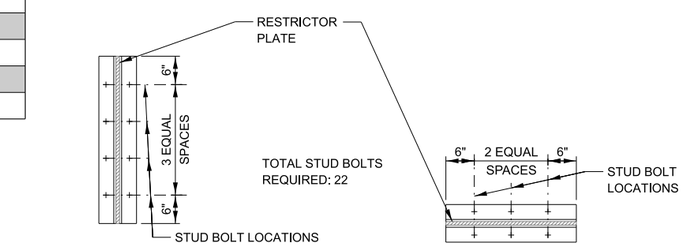
NOTES:

1. THE STORM SEWERS, CONCRETE COLLAR, CATCH BASIN, TYPE G-3, RESTRICTOR PLATE, ANGLES AND HARDWARE AND FRAME AND GRATE, SHALL BE INCLUDED IN THE COST OF SLOPE DRAIN OF THE DIAMETER SPECIFIED.
2. SEE ILLINOIS TOLLWAY STANDARD B8 FOR DIMENSION OF CATCH BASIN, TYPE G-3 STRUCTURE.
3. THE TOP OF THE CATCH BASIN, TYPE G-3 SHALL BE CUT IN THE FIELD TO MATCH THE PROPOSED EMBANKMENT SLOPE.
4. THE CONTRACTOR HAS THE OPTION TO USE A CONCRETE RESTRICTOR PLATE THAT IS PRECAST WITHIN THE DRAINAGE STRUCTURE.
5. PIPE MATERIAL SHALL BE HDPE WITH SMOOTH INTERIOR OR EPOXY COATED CORRUGATED GALVANIZED STEEL PIPE OF THE SIZE SPECIFIED.
6. THE MINIMUM CONCRETE COLLAR WIDTH SHALL BE D + 24".
7. ALL STEEL ANGLES AND PLATES SHALL BE GALVANIZED AFTER FABRICATION.
8. STEEL PLATE AND ANGLES SHALL BE IN ACCORDANCE WITH AASHTO M 270 GRADE 36.
9. ANGLES SHALL BE 3" X 3" X 3/8".
10. VERTICAL ANGLES SHALL EXTEND FROM THE BOTTOM OF THE CATCH BASIN TO THE TOP OF THE RESTRICTOR PLATE.
11. HORIZONTAL ANGLES SHALL EXTEND FROM VERTICAL ANGLE TO VERTICAL ANGLE.

SLOPE DRAIN PIPE NO.	DIAMETER (D) (IN)	LENGTH (FT)	CONCRETE COLLAR			CATCH BASIN, TYPE G-3			INV.	TOP OF RESTRICTOR PLATE ELEVATION	U/S DRAINAGE STRUCTURE NO.	D/S DRAINAGE STRUCTURE NO.	PAY ITEM
			STATION	OFFSET (FT)	OFFSET (LT/RT)	STATION	OFFSET (FT)	OFFSET (LT/RT)					



ANGLE FASTENER DETAIL



TYPICAL VERTICAL ANGLES
LOOKING TOWARD CATCH BASIN WALL

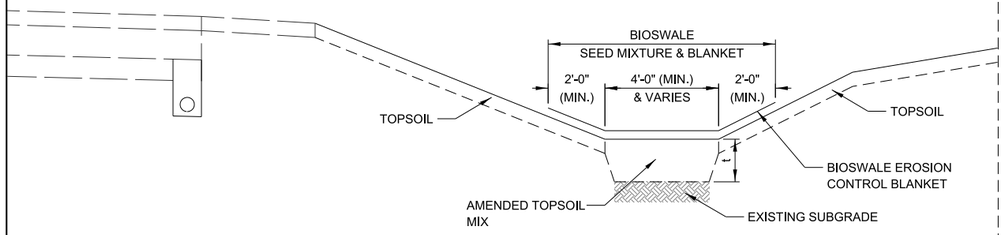
TYPICAL HORIZONTAL ANGLES
LOOKING TOWARD BOTTOM OF CATCH BASIN

STEEL ANGLE BOLTING DETAILS

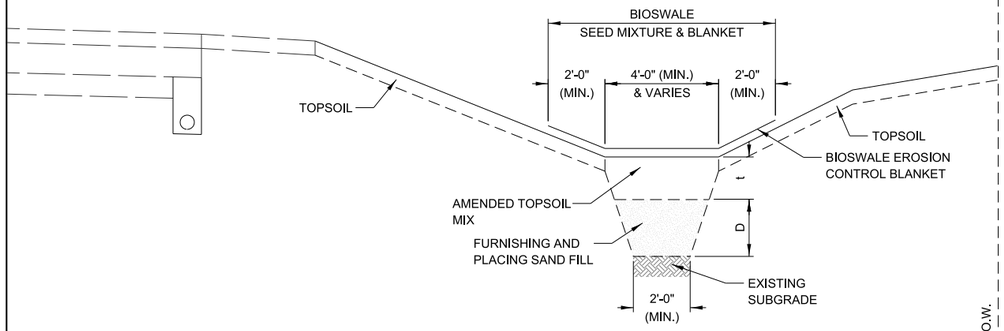
Illinois Tollway

SLOPE DRAIN

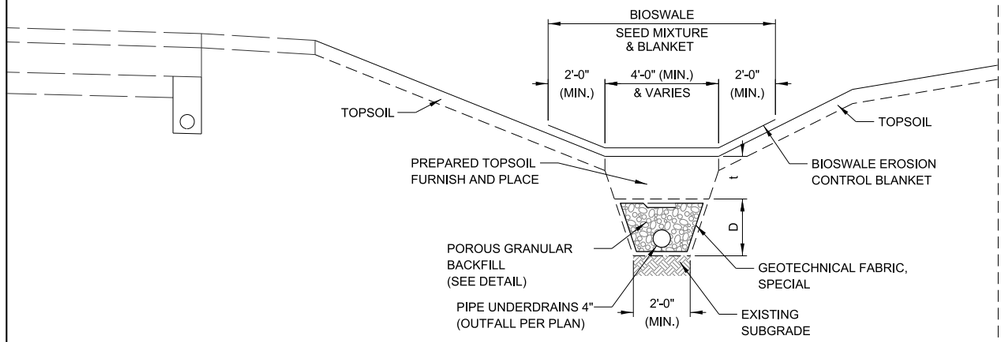
VERSION:	STANDARD:	SHEET:
2024-03	M-DRN-601	1 OF 1



BIOSWALE, TYPE 1



BIOSWALE, TYPE 2



BIOSWALE, TYPE 3

R.O.W.

R.O.W.

BIOSWALE NO.	BIOSWALE TYPE	BEGIN STATION	END STATION	PREP/AMENDED TOPSOIL THICKNESS (t)	BIOSWALE BASE (D)

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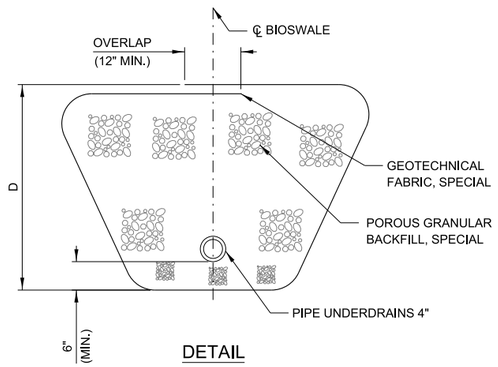
NOTES TO DESIGNER

1. ALL PIPE UNDERDRAINS SHALL EITHER OUTLET AT GRADE OR TO A DRAINAGE STRUCTURE AND GRAVITY DRAIN.
2. ALL PIPE UNDERDRAINS SHALL HAVE AN INLET ON THE UPSTREAM END AND EVERY 500' MINIMUM TO SERVE AS A CLEAN-OUT.



DETAIL

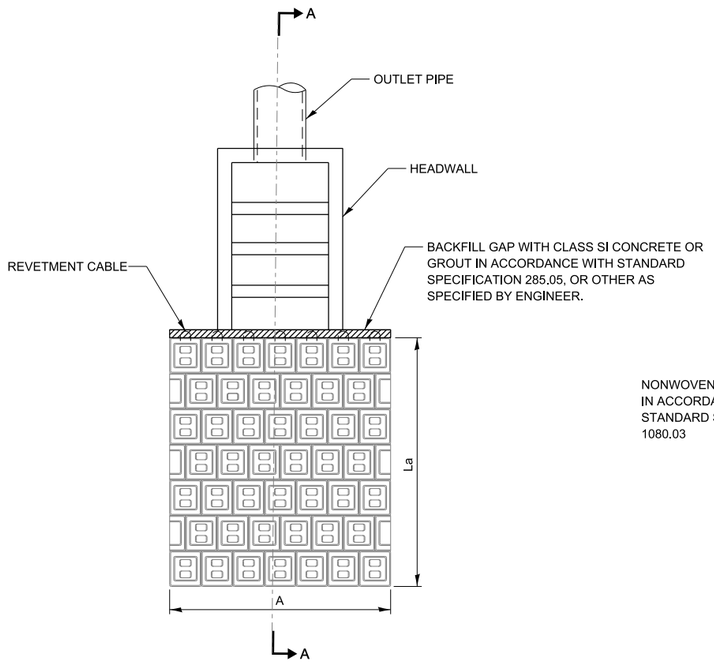
NOTES:

1. THE ENDS OF THE PIPE UNDERDRAIN OUTLET AT GRADE SHALL BE PROTECTED BY A PERMANENT RODENT SHIELD IN ACCORDANCE WITH STANDARD B24.

Illinois Tollway

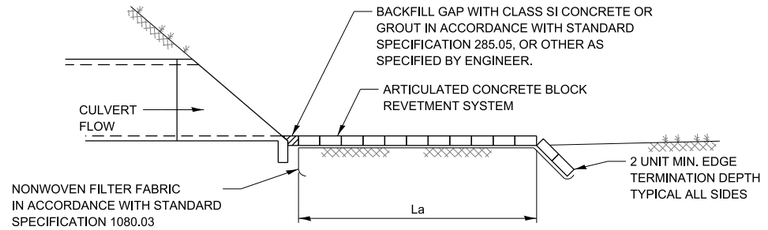
BIOSWALE

VERSION:	STANDARD:	SHEET:
2016-03	M-DRN-602	1 OF 1



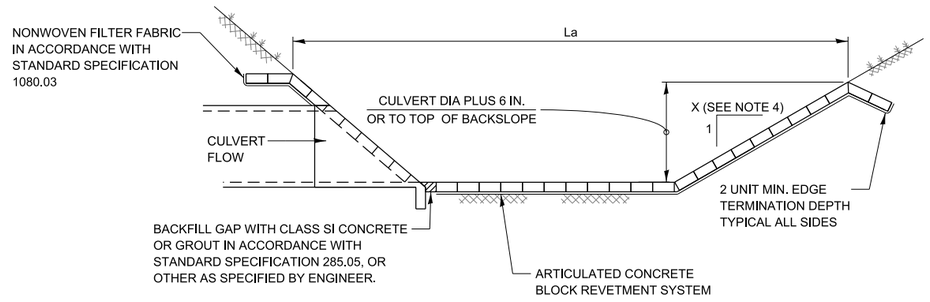
OUTLET PROTECTION DETAIL

NOT TO SCALE



SECTION A-A (NO DEFINED CHANNEL)

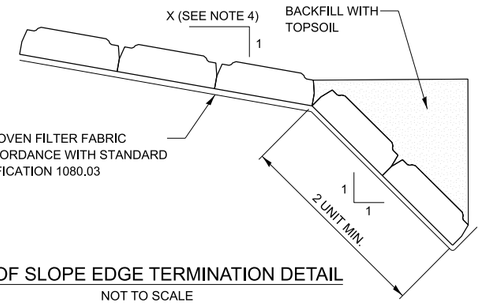
NOT TO SCALE



SECTION A-A (DEFINED CHANNEL)

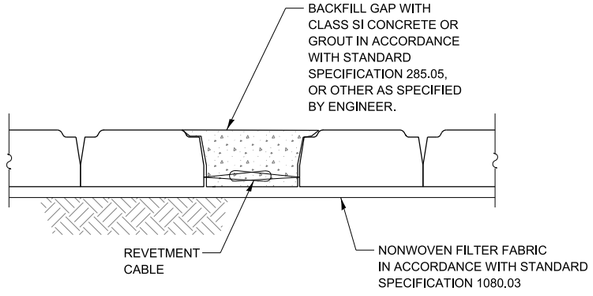
NOT TO SCALE

ARTICULATED CONCRETE BLOCK REVETMENT SYSTEM (ACBRS) SCHEDULE								
STRUCTURE NO.	D (IN.)	La (FT.)	A (FT.)	PAY LENGTH (FT.) (SEE NOTE 3)	PAY WIDTH (FT.) (SEE NOTE 3)	BLOCK TYPE	MAT CONFIGURATION	ACBRS (SQ YD)



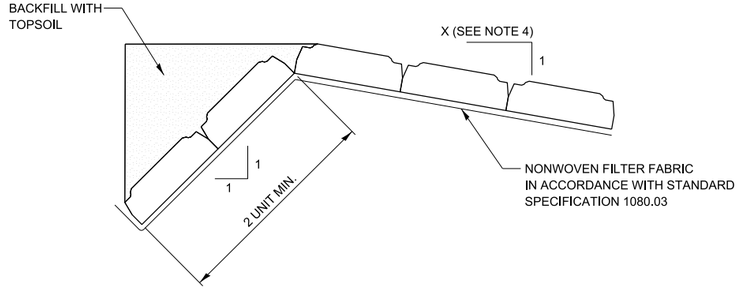
TOE OF SLOPE EDGE TERMINATION DETAIL

NOT TO SCALE



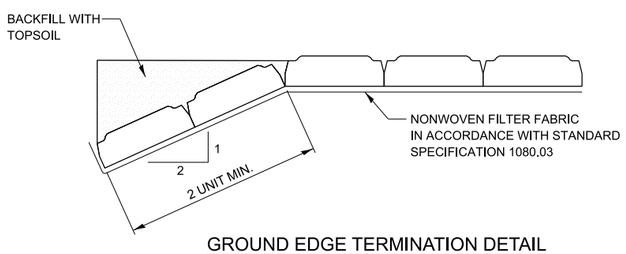
TYPICAL MAT TO MAT

NOT TO SCALE



TOP OF SLOPE EDGE TERMINATION DETAIL

NOT TO SCALE



GROUND EDGE TERMINATION DETAIL

NOT TO SCALE

NOTES:

1. EACH BLOCK SHALL INCORPORATE INTERLOCKING SURFACES THAT MINIMIZE LATERAL DISPLACEMENT OF THE BLOCKS WITHIN THE MATS WHEN THEY ARE LIFTED BY THE LONGITUDINAL REVETMENT CABLES. HAND PLACED INTERLOCKING BLOCKS ARE ALSO ACCEPTABLE.
2. THE TOP OF BLOCK ELEVATION SHALL BE AT OR BELOW THE DITCH FLOW LINE, OR FINISHED SURFACE.
3. PAY LENGTH IS EQUAL TO DIMENSION "La" PLUS THE TOTAL ESTIMATED LENGTH OF THE BURIED PORTION OF THE BLOCKS. PAY WIDTH IS EQUAL TO DIMENSION "A" PLUS THE TOTAL ESTIMATED WIDTH OF THE BURIED PORTION OF THE BLOCKS.
4. THE MAXIMUM BANK SLOPE FOR AN ACBRS SHALL BE 1:2 (V:H).

NOTES TO DESIGNER

1. THE AREA OF MEASURE WILL INCLUDE THE COMPLETE INSTALLED MATS, INCLUDING BOTH VISIBLE AREA AND THE BURIED EDGE PORTIONS OF THE INSTALLATION WHICH ARE NOT VISIBLE UPON PROJECT COMPLETION (EDGE TERMINATION).
2. THE STANDARD MAT DIMENSIONS ARE 8 FT BY 12 FT AND 8 FT BY 20 FT. THE DESIGNER SHOULD SPECIFY THE AREAS OF MEASURE IN THOSE INCREMENTS, TO THE EXTENT POSSIBLE. LOOSE BLOCKS ARE ALSO AVAILABLE WHERE THOSE INCREMENTS ARE NOT FEASIBLE.
3. THE NONWOVEN FILTER FABRIC SHALL BE INCLUDED IN THE COST OF THE ARTICULATED CONCRETE BLOCK REVETMENT SYSTEM (ACBRS) OF THE TYPE SPECIFIED.
4. THE NONWOVEN FILTER FABRIC SHALL NOT BE INCLUDED IF A DEEP-ROOTED PLANT (SEED MIX 3 AND ABOVE) IS USED IN CONJUNCTION WITH THE ACBRS.
5. TOPSOIL USED TO BACKFILL THE REVETMENT SYSTEM SHALL BE INCLUDED IN THE COST OF THE ACBRS OF THE TYPE SPECIFIED. SEEDING AND EROSION CONTROL BLANKET TYPE SHALL BE SHOWN ON THE LANDSCAPE PLANS AND WILL BE PAID FOR SEPARATELY.

NOTE TO DESIGNER

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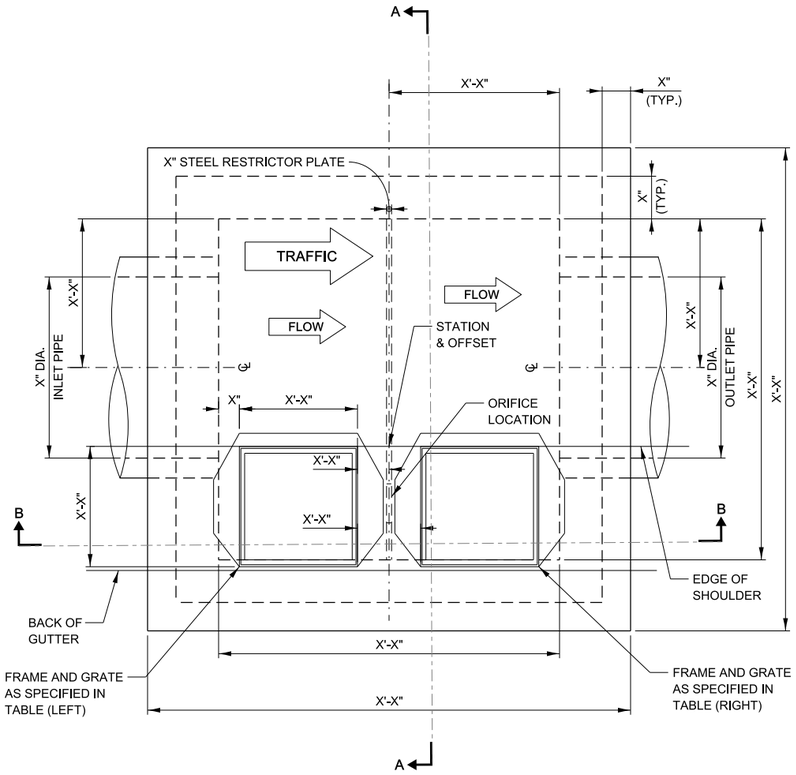
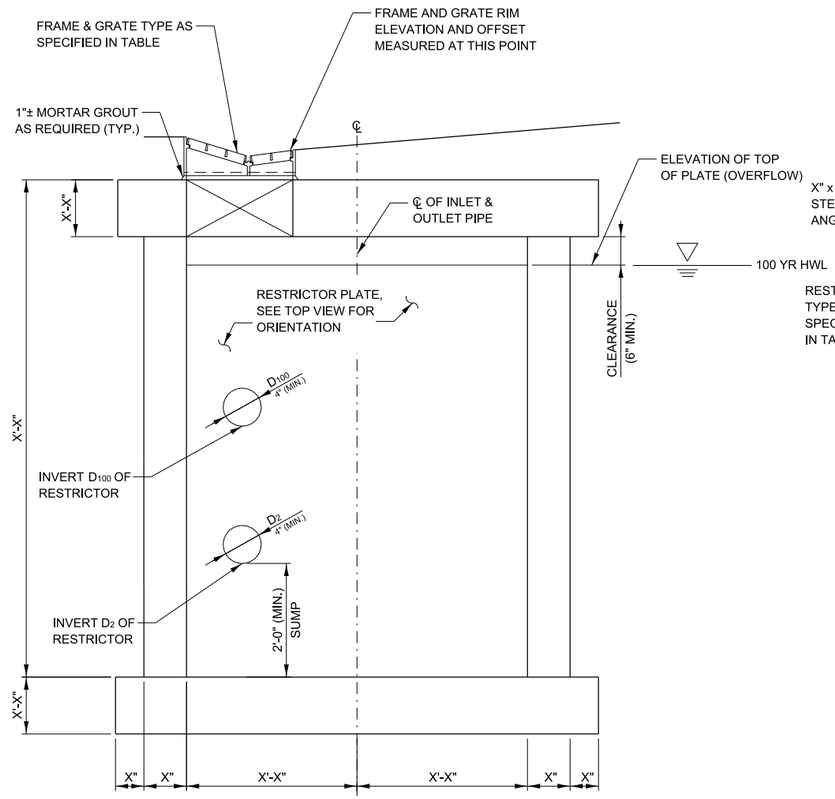
Illinois Tollway

ARTICULATED CONCRETE BLOCK REVETMENT SYSTEM

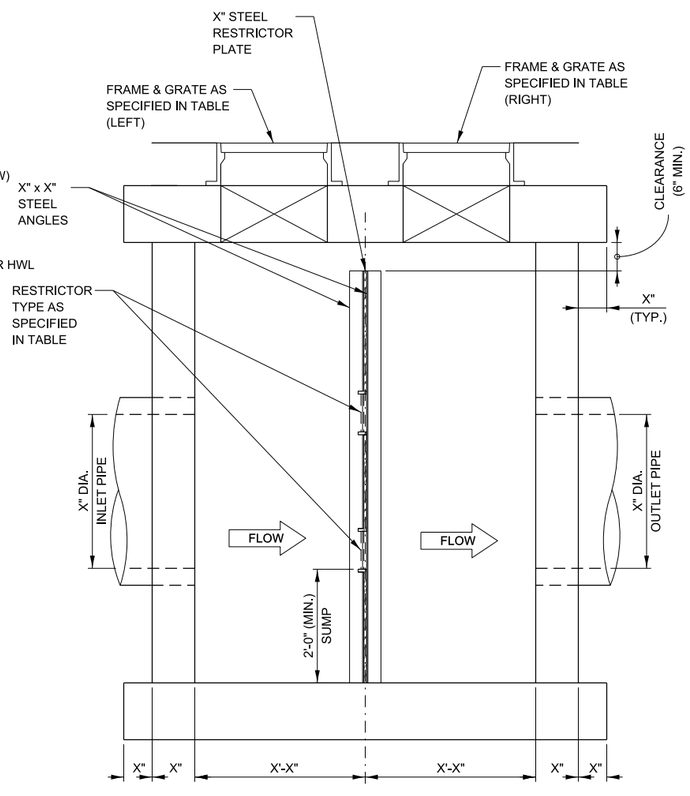
VERSION:	STANDARD:	SHEET:
2024-03	M-DRN-603	1 OF 1



TOP VIEW



SECTION A-A

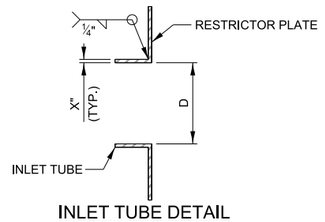


SECTION B-B

RESTRICTOR TYPE					
1	2	3	4	5	6
RE - ENTRANT TUBE	SHARP EDGES	SQUARE EDGED	RE - ENTRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH ½ TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-½ DIA.	LENGTH: 2-½ DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

RESTRICTOR TYPES

VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES



INLET TUBE DETAIL

NOTES TO DESIGNER

1. DSE SHALL DESIGN STEEL ANGLE BOLTS AND FASTENERS FOR THE RESTRICTOR PLATES. DETAILS ARE TO BE PROVIDED ON THIS SHEET.
2. DSE SHALL PROVIDE REINFORCEMENT DETAILS. DESIGN SHALL BE IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, LATEST EDITION, WITH IL-120 OR HL-93 LOADING REQUIREMENTS, WHICHEVER GOVERNS (REFER TO STRUCTURE DESIGN MANUAL).
3. ALL DIMENSIONS DESIGNATED "X" ARE REQUIRED AND SHALL BE UPDATED BY THE DSE.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

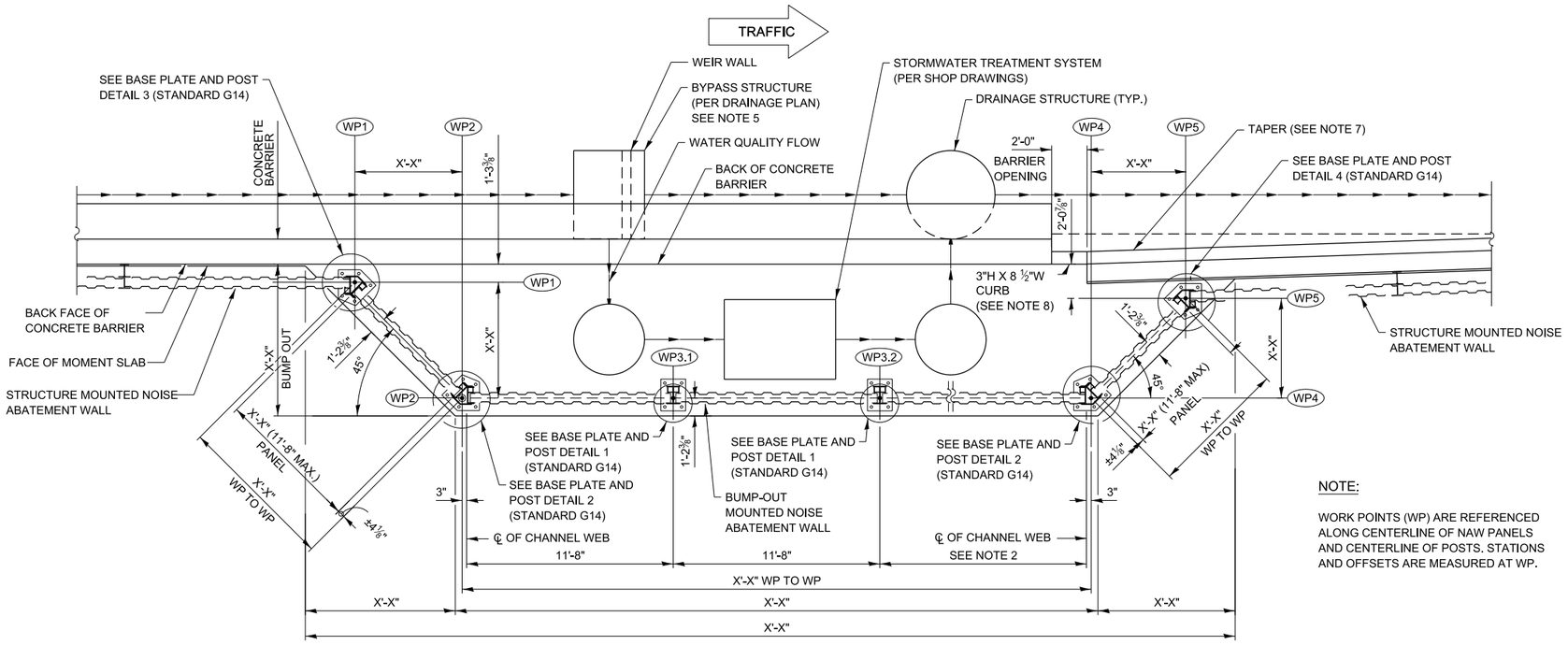
STRUCTURE NUMBER	* STATION	*OFFSET (FT.)	OFFSET LT/RT	STRUCTURE TYPE	FRAME AND GRATE TYPE	F&G RIM ELEV		INV D_{100}	D_{100} (IN.)	INV D_2	D_2 (IN.)	INLET PIPE DIAMETER (IN.)	OUTLET PIPE DIAMETER (IN.)	TOP OF RESTRICTOR PLATE ELEV	RESTRICTOR TYPE	CLEARANCE (FT.)	2 YEAR WATER SURFACE ELEVATION	100 YEAR WATER SURFACE ELEVATION
						LT	RT											

* SEE TOP VIEW FOR STRUCTURE STATION AND OFFSET

Illinois Tollway

CATCH BASIN TYPE G (SPECIAL) WITH RESTRICTOR

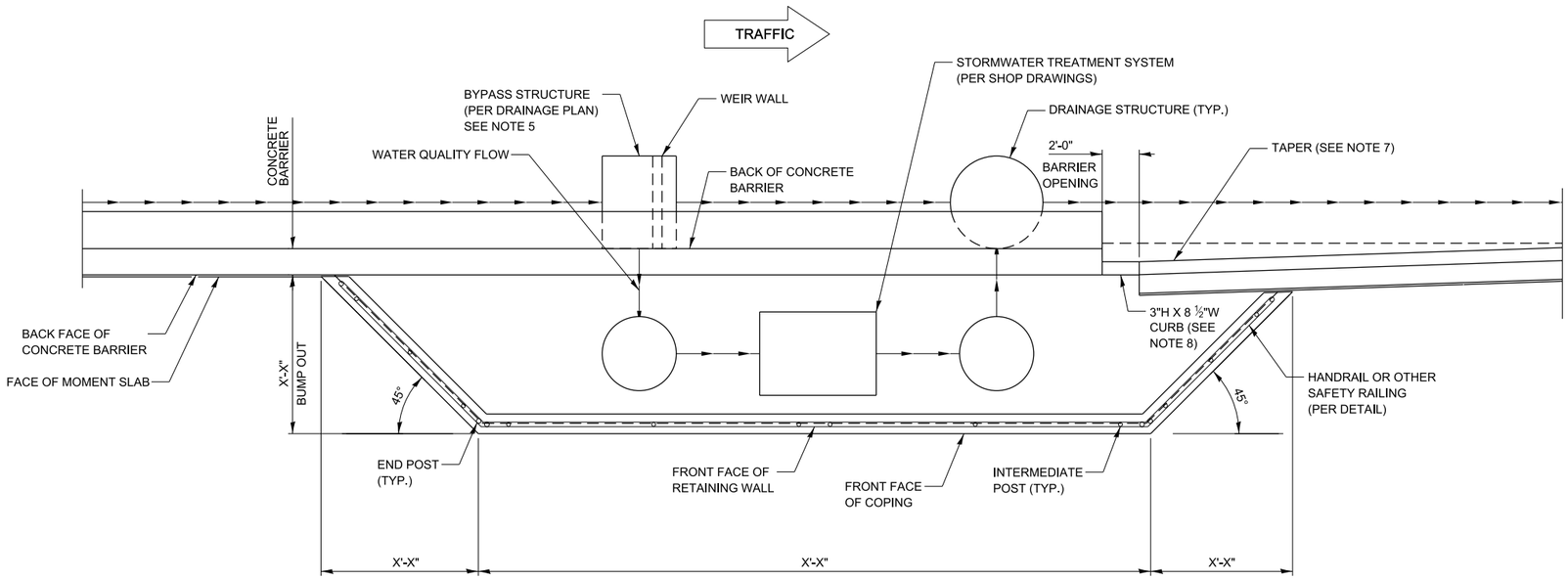
VERSION:	STANDARD:	SHEET:
2021-03	M-DRN-604	1 OF 1



PLAN - STRUCTURE MOUNTED NOISE ABATEMENT WALL EXAMPLE

NOTE:

WORK POINTS (WP) ARE REFERENCED ALONG CENTERLINE OF NAW PANELS AND CENTERLINE OF POSTS. STATIONS AND OFFSETS ARE MEASURED AT WP.



PLAN - RETAINING WALL EXAMPLE

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

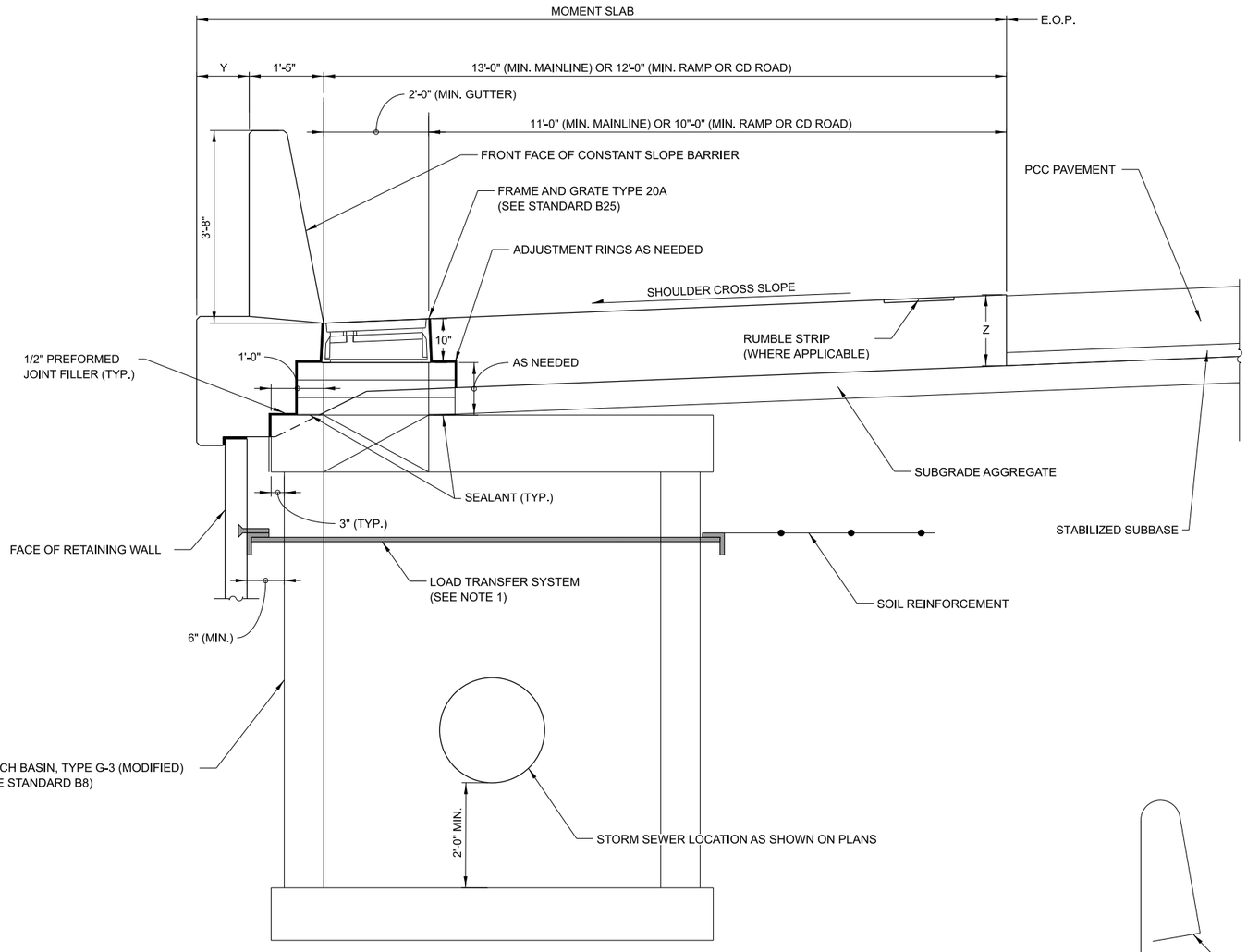
NOTES TO DESIGNER

1. THIS BASE SHEET REPRESENTS THE TYPICAL DETAILS FOR BUMP-OUT RETAINING WALLS OR MOUNTED, NOISE ABATEMENT WALLS. THE DSE IS RESPONSIBLE FOR COMPLETING THE TABLES AND INCLUDING THEM IN THEIR CONTRACT PLANS. IF ANY OF THE DESIGN PARAMETERS IN THE ILLINOIS TOLLWAY STANDARD ARE EXCEEDED, THE DSE WILL BE RESPONSIBLE FOR DESIGN CALCULATIONS AND DETAILS FOR THOSE COMPONENTS.
   THE GP&E SHEET AND REMAINING NAW PLANS SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ARTICLES 6.2.5 AND 23.3.
2. USE SPECIALTY PANEL AND POST SPACING AT END OF WALL TO ACCOMMODATE TYPICAL 11'-8" POST SPACING ALONG THE STRAIGHT LENGTH OF WALL. POST SPACING SHOULD NOT EXCEED LIMITS WITHIN THE ILLINOIS TOLLWAY STANDARD. IF LIMITS ARE EXCEEDED, DSE TO DESIGN AND DETAIL ALL COMPONENTS. THE "SPX" DESIGNATION FOR SPECIALTY PANELS SHOULD BE USED FOR ALL PANELS WITHIN BAY WITH THE SAME WIDTH.
3. BUMP-OUT MOUNTED NAW DETAILS MAY BE USED WITH SYSTEMWIDE STRUCTURE MOUNTED NAW DETAILS SHOWN IN STANDARD G12 AND M-BRG-529. DSE TO UPDATE ACCORDINGLY FOR SYSTEMWIDE GEOMETRY.
4. THIS SHEET IS NOT TO SCALE. DESIGNER TO DETERMINE APPROPRIATE SCALE ON GENERAL PLAN AND ELEVATION SHEET TO ACCURATELY REPRESENT REQUIRED INFORMATION.
5. A BYPASS STRUCTURE IS REQUIRED IF THE PEAK FLOW EXCEEDS THE CAPACITY OF THE STORMWATER TREATMENT SYSTEM'S INTERNAL OVERFLOW WEIR OR TO REDUCE THE SIZE OF THE STORMWATER TREATMENT SYSTEM.
6. ALL DIMENSIONS DESIGNATED "X" ARE REQUIRED AND SHALL BE UPDATED BY THE DSE.
7. TAPER RATE FOR MAINLINE INSTALLATIONS SHALL BE 30:1. TAPER RATE FOR RAMPS AND C-D ROADWAYS SHALL NOT EXCEED THE RATES SHOWN IN AASHTO RDG TABLE 5-9.
8. THE CURB SHALL BE PAID FOR AS CONCRETE SUPERSTRUCTURE.

Illinois Tollway

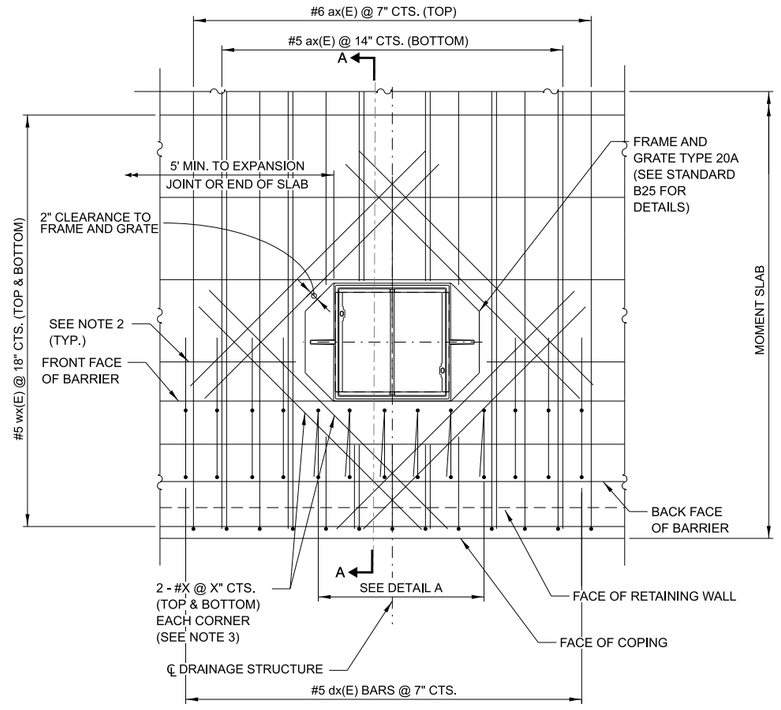
BUMP OUT FOR STORMWATER TREATMENT SYSTEM

VERSION:	STANDARD:	SHEET:
2022-03	M-DRN-605	1 OF 1



SECTION A-A THROUGH MOMENT SLAB WITH CATCH BASIN

REINFORCEMENT NOT SHOWN FOR CLARITY



PLAN - DRAINAGE STRUCTURE

TOP REINFORCING IN BARRIER NOT SHOWN FOR CLARITY

DETAIL A

NOTES:

1. MSE WALL SUPPLIER TO DESIGN LOAD TRANSFER SYSTEM TO ACCOMMODATE DRAINAGE STRUCTURE.
2. FIELD CUT MOMENT SLAB REINFORCEMENT ONLY AS REQUIRED FOR DRAINAGE STRUCTURE.
3. PLACE BARS SYMMETRICALLY ABOUT CENTERLINE OF DRAINAGE STRUCTURE AS SPACE PERMITS.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

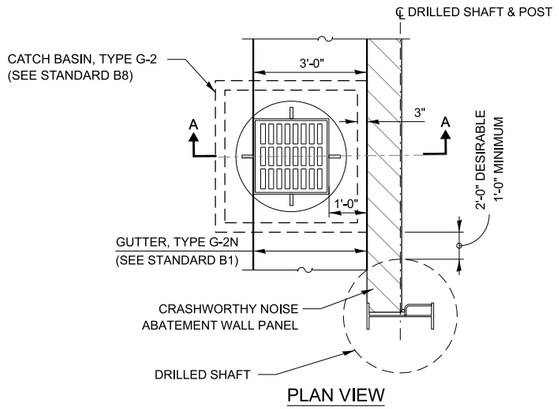
NOTES TO DESIGNER

1. THE PURPOSE OF THIS BASE SHEET IS TO SHOW THE PLACEMENT OF THE DRAINAGE STRUCTURE. DSE SHALL REFER TO THE STRUCTURE DESIGN MANUAL FOR THE DESIGN OF ALL STRUCTURAL ELEMENTS.
2. ALL VALUES DESIGNATED "X" ARE REQUIRED AND SHALL BE PROVIDED BY THE DSE.
3. USE 1'-0" MAXIMUM FOR DIMENSION Y TO ENSURE DRAINAGE STRUCTURE CAN BE LOCATED AT THE FRONT FACE OF BARRIER WALL.
4. USE 1'-4" MINIMUM FOR DIMENSION Z. THICKNESS MAY BE MODIFIED TO ACCOMMODATE ADJACENT PAVEMENT.
5. THIS BASE SHEET ILLUSTRATES TYPICAL DETAILS FOR A 44" BARRIER AND MOMENT SLAB WITH CATCH BASIN TYPE G-3 (MODIFIED) WITH FRAME AND GRATE TYPE 20A. DESIGNER SHALL MODIFY DETAILS FOR OTHER TYPES OF MOMENT SLABS, BARRIER HEIGHT AND / OR DRAINAGE STRUCTURES.
6. DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED a(E) THROUGH w(E) WITH ACTUAL BAR MARKS.

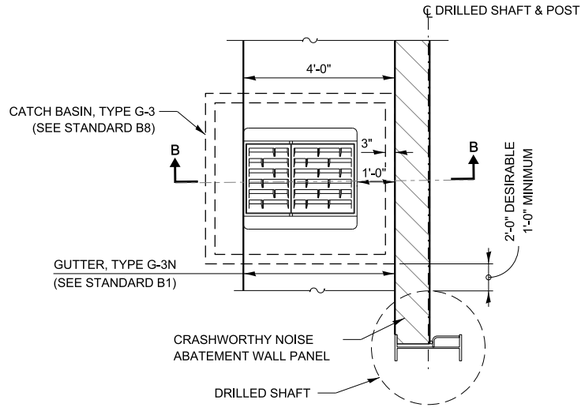
Illinois Tollway

EXPOSED MOMENT SLAB WITH DRAINAGE STRUCTURE

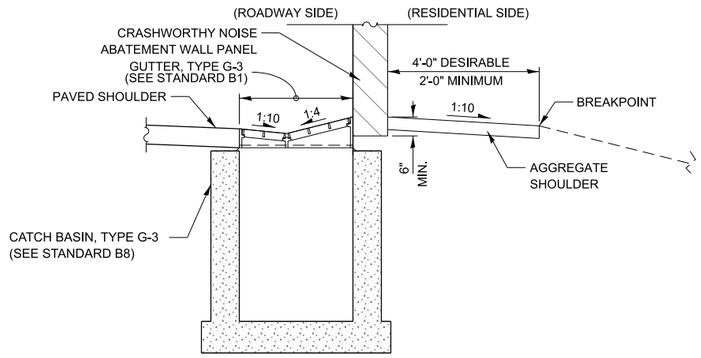
VERSION:	STANDARD:	SHEET:
2024-03	M-DRN-606	1 OF 1



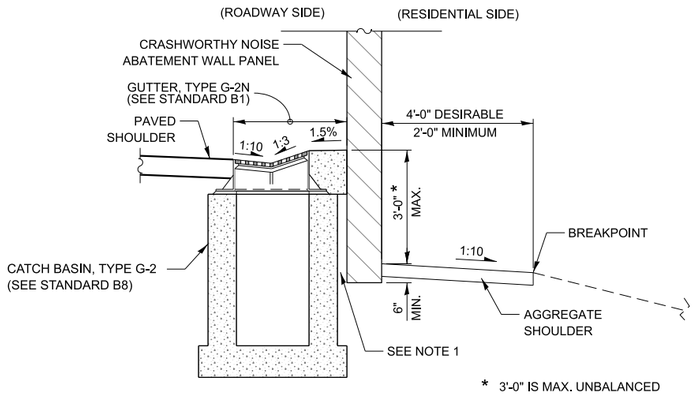
PLAN VIEW



PLAN VIEW

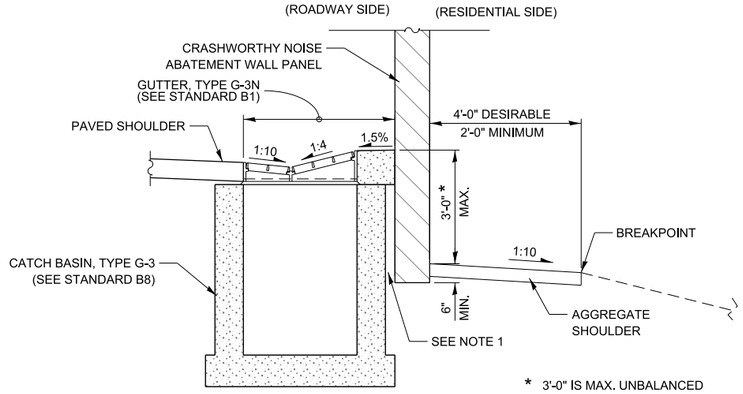


TYPICAL SECTION - GUTTER, TYPE G-3 OR GUTTER, TYPE G-2
(GUTTER, TYPE G-3 SHOWN)
(BALANCED SOIL LOAD, WHEN PANEL EMBEDMENT DEPTH IS ≤ 1 FT)



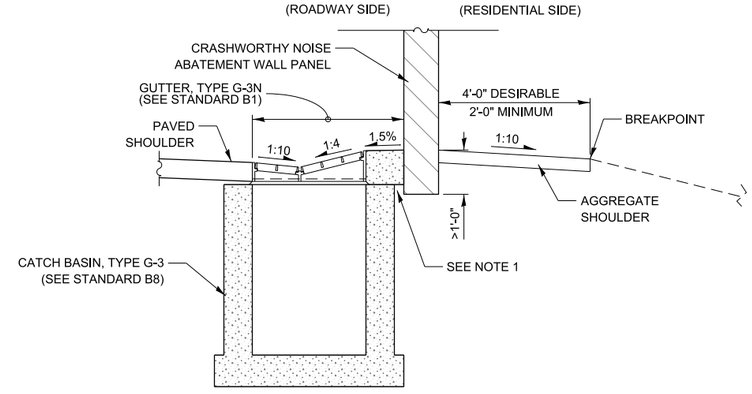
* 3'-0" IS MAX. UNBALANCED SOIL LOAD WHEN NAW IS PLACED INSIDE CLEAR ZONE TO MAINTAIN TL-4 TEST LEVEL.

SECTION A-A
GUTTER, TYPE G-2N
(UNBALANCED SOIL LOAD, WHEN
DRAINAGE STRUCTURE IS ON HIGH SIDE)



* 3'-0" IS MAX. UNBALANCED SOIL LOAD WHEN NAW IS PLACED INSIDE CLEAR ZONE TO MAINTAIN TL-4 TEST LEVEL.

SECTION B-B
GUTTER, TYPE G-3N
(UNBALANCED SOIL LOAD, WHEN
DRAINAGE STRUCTURE IS ON HIGH SIDE)



TYPICAL SECTION - GUTTER, TYPE G-3N OR GUTTER, TYPE G-2N
(GUTTER TYPE G-3N SHOWN)
(BALANCED SOIL LOAD, WHEN PANEL EMBEDMENT DEPTH IS > 1 FT.)

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

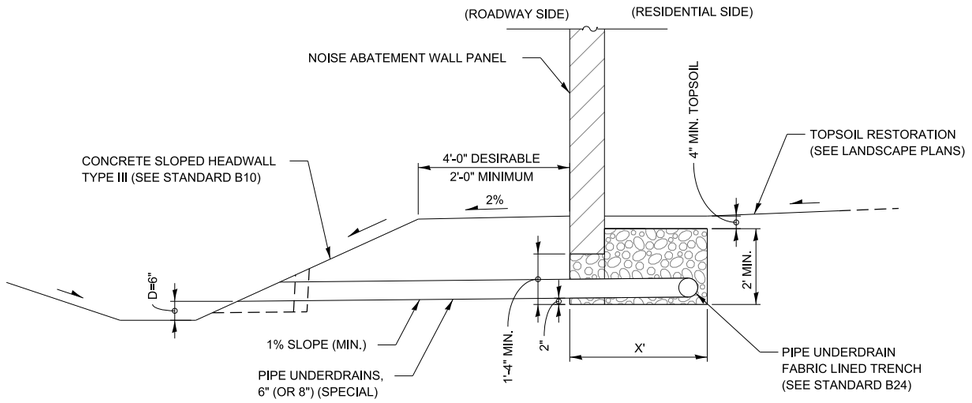
NOTES TO DESIGNER

1. FOR NOISE ABATEMENT WALL DETAILS, REFER TO ILLINOIS TOLLWAY STANDARD DRAWINGS G15 AND G16.
2. FOR THE SELECTION OF GUTTER TYPE, REFER TO ROADWAY DESIGN CRITERIA MANUAL, ARTICLE 2.6.6.

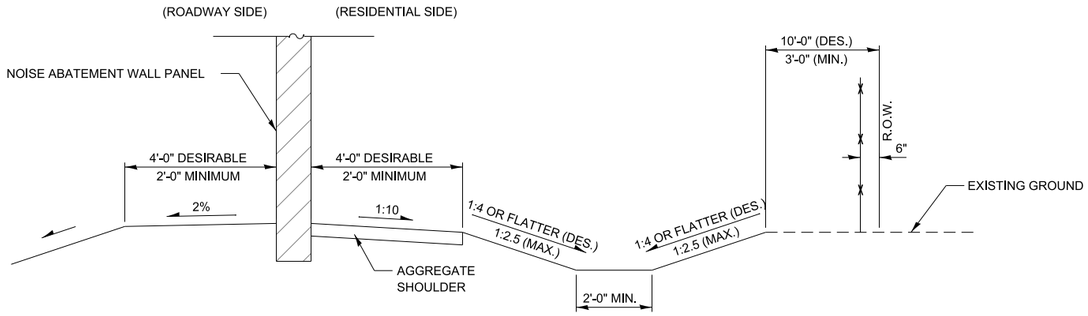
Illinois Tollway

NOISE ABATEMENT WALL DRAINAGE DETAILS (ROADWAY SIDE)

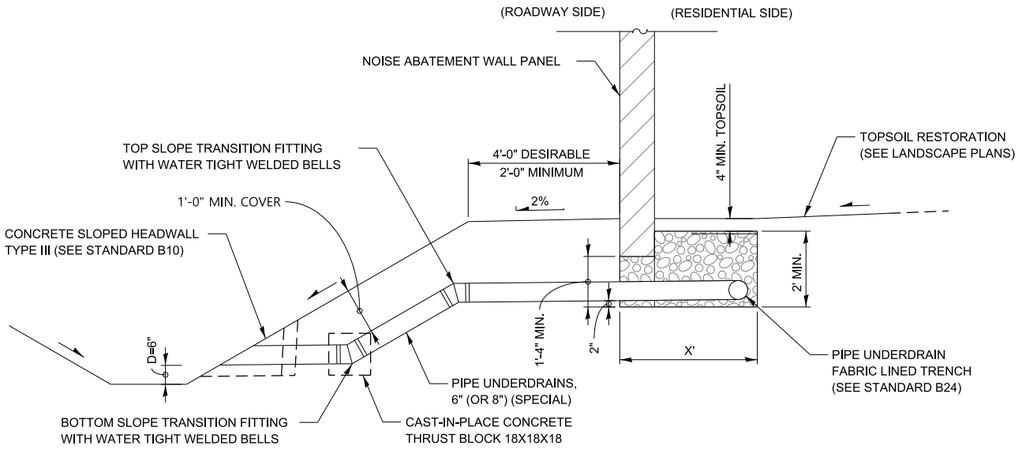
VERSION:	STANDARD:	SHEET:
2024-03	M-DRN-607	1 OF 1



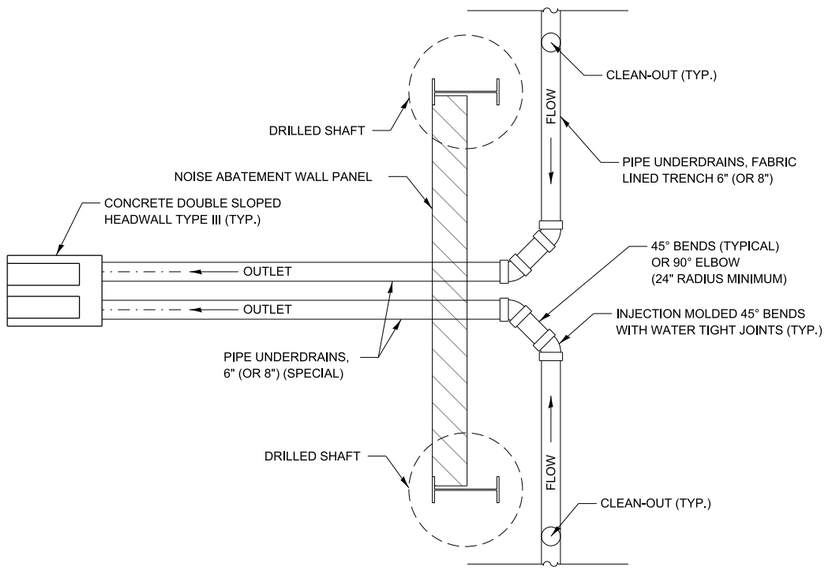
TYPICAL SECTION - PIPE UNDERDRAIN



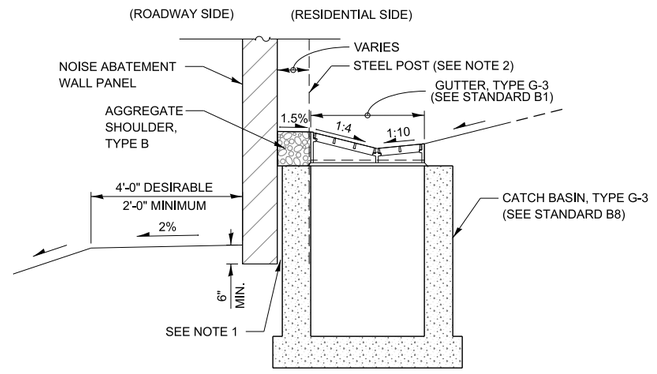
TYPICAL SECTION - DITCH AT THE TOP OF BACKSLOPE



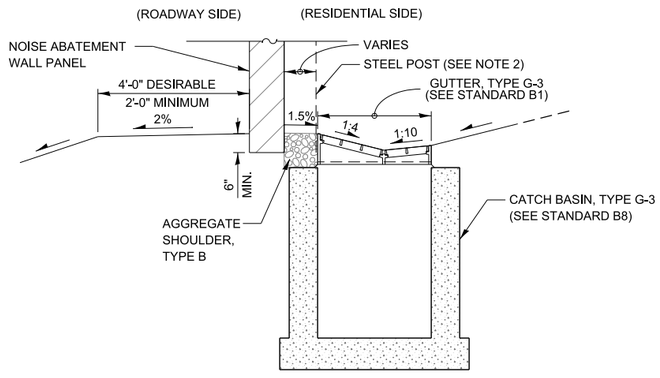
TYPICAL SECTION - PIPE UNDERDRAIN ON HIGH FILL SLOPE



PLAN VIEW - PIPE UNDERDRAIN
(AT SAG SHOWN)



TYPICAL SECTION - GUTTER, TYPE G-3 OR GUTTER, TYPE G-2
(GUTTER, TYPE G-3 SHOWN)
(UNBALANCED SOIL LOAD, WHEN DRAINAGE STRUCTURE IS ON HIGH SIDE)



TYPICAL SECTION - GUTTER, TYPE G-3 OR GUTTER, TYPE G-2
(GUTTER, TYPE G-3 SHOWN)
(BALANCED SOIL LOAD, WHEN PANEL EMBEDMENT DEPTH IS ≤ 1 FT)

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING, IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. **ALL** "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTES TO DESIGNER

1. THE DETAILS SHOWN ARE ACCEPTABLE OPTIONS TO DRAIN THE AREA ADJACENT TO A NOISE ABATEMENT WALL (RESIDENTIAL SIDE). THE MOST FEASIBLE OPTION IS SITE SPECIFIC. IF GUTTER IS USED, REFER TO ROADWAY DESIGN CRITERIA MANUAL, ARTICLE 2.6.6 FOR THE SELECTION OF GUTTER TYPE. THE DESIGNER IS RESPONSIBLE FOR PROVIDING SUPPORTING DRAINAGE CALCULATIONS TO DETERMINE THE MOST FEASIBLE OPTION. THE DESIGNER IS ALSO RESPONSIBLE FOR DESIGNING AND DETAILING ALL DITCHES, DRAINAGE STRUCTURES AND STORM SEWERS ON THE DRAINAGE PLAN AND PROFILES.
2. DETERMINE DIMENSION X TO OFFSET PIPE UNDERDRAIN TO AVOID CONFLICT WITH THE DRILLED SHAFTS.
3. PIPE UNDERDRAINS SHALL MEET THE REQUIREMENTS OF DDM ARTICLE 9.7.2, DDM TABLE 9.3 AND STANDARD B24.
4. FOR NOISE ABATEMENT WALL DETAILS, REFER TO ILLINOIS TOLLWAY STANDARD DRAWINGS G15 AND G16.

NOTES:

1. FILL GAP WITH CLSM, GROUT OR CLASS SI CONCRETE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
2. PROVIDE JOINT FILLER BETWEEN THE STEEL POST AND GUTTER.

Illinois Tollway

NOISE ABATEMENT WALL DRAINAGE DETAILS (RESIDENTIAL SIDE)

VERSION:	STANDARD:	SHEET:
2023-03	M-DRN-608	1 OF 1

BASE SHEETS

SERIES 700 (MOT)

MAINTENANCE OF TRAFFIC

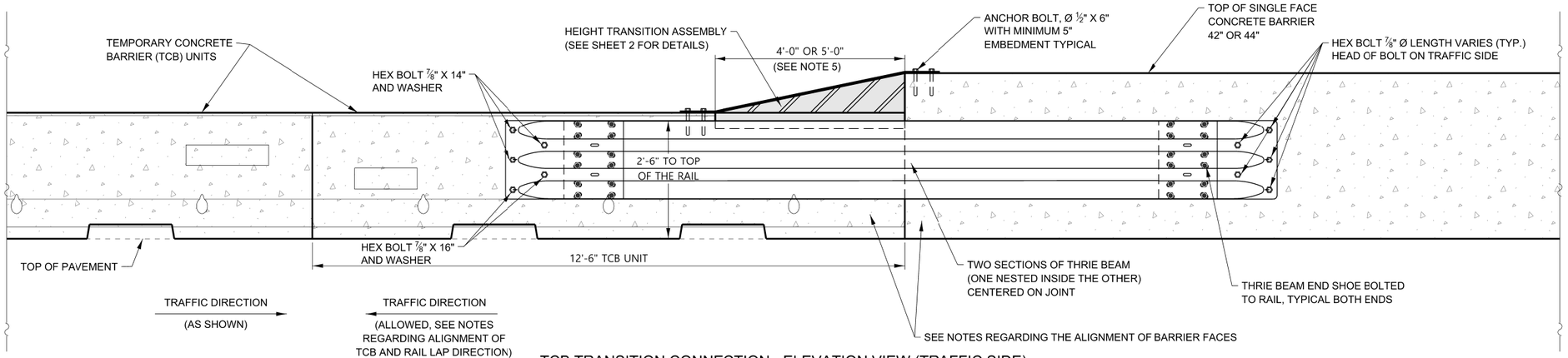
MARCH 2024

Illinois Tollway Base Sheet Revisions

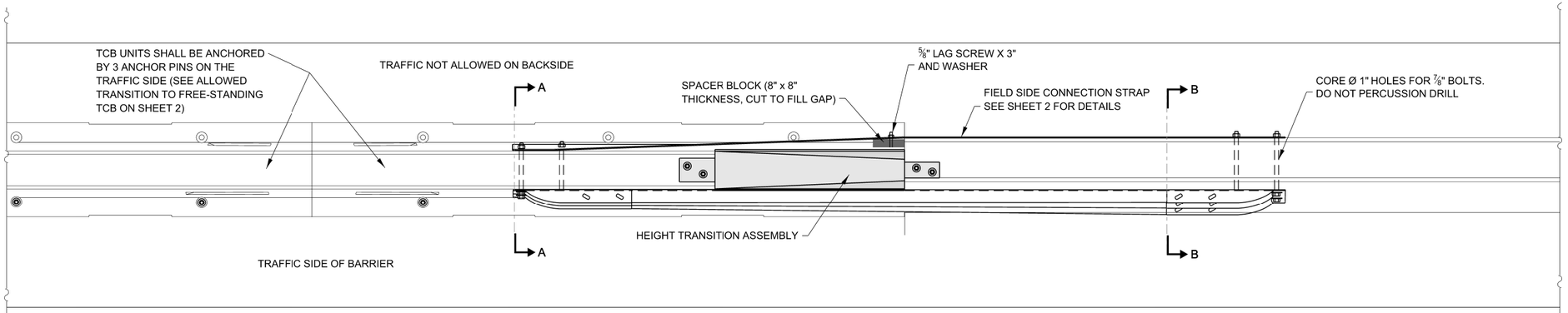
Section M	Base Sheet Drawings	
	Drawing	**Modification Summary** **Effective: 03-01-2024**
	Maintenance of Traffic (MOT)-Series 700	
	M-MOT-701	**TCB CONNECTION TO SINGLE FACE CONCRETE BARRIER**
		New base sheet added for attaching TCB to permanent single face concrete barrier.

New Sheet

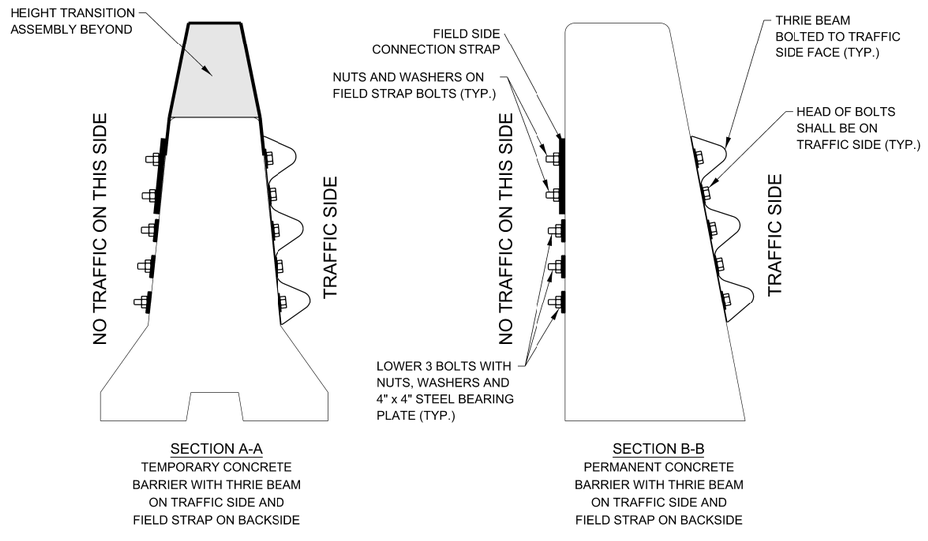
Retired Standard



TCB TRANSITION CONNECTION - ELEVATION VIEW (TRAFFIC SIDE)



TCB TRANSITION CONNECTION - PLAN VIEW



SECTION A-A
TEMPORARY CONCRETE BARRIER WITH THRIE BEAM ON TRAFFIC SIDE AND FIELD STRAP ON BACKSIDE

SECTION B-B
PERMANENT CONCRETE BARRIER WITH THRIE BEAM ON TRAFFIC SIDE AND FIELD STRAP ON BACKSIDE

NOTES:

1. THE TEMPORARY CONCRETE BARRIER (TCB) CONNECTION TO A SINGLE FACE CONCRETE BARRIER (SFCB), EITHER F-SHAPE OR CONSTANT SLOPE, SHALL BE INSTALLED WITH TRAFFIC ON ONE SIDE ONLY AND WHEN THE TRAFFIC DIRECTION IS AS SHOWN ON THIS PLAN. THIS TRANSITION SHALL NOT BE USED WITH A DOUBLE FACE CONCRETE BARRIER OR WHEN TRAFFIC IS ALONG THE BACKSIDE.
2. LAP SPLICES BETWEEN THE NESTED THRIE BEAM RAIL ELEMENTS AND END SHOES SHALL LAP IN THE DIRECTION OF TRAFFIC. WHEN THE TRAFFIC DIRECTION IS FROM THE TCB TO SFCB THEN BARRIER FACES SHALL ALIGN ON THE TRAFFIC SIDE, AT THE TOP OF THE TCB UNIT . WHEN THE TRAFFIC DIRECTION IS FROM THE SFCB TO TCB THEN BARRIER FACES SHALL ALIGN ON THE TRAFFIC SIDE, AT THE BOTTOM OF THE TCB UNIT. THE TCB SHALL BE ALIGNED SUCH THAT THERE ARE NO POTENTIAL SNAG POINTS.
3. THE TWO TCB END UNITS SHALL BE ANCHORED TO THE PAVEMENT. TO AID INSTALLATION, INSTALL THE ANCHOR PINS IN THE END UNIT PRIOR TO INSTALLING THE THRIE BEAM ASSEMBLY.
4. WHEN THIS DETAIL IS USED AT THE END OF AN UNANCHORED RUN OF TCB, A TRANSITION CONSISTING OF FOUR TCB UNITS SHALL BE USED. THE FIRST TWO UNITS, ADJACENT TO THE SFCB, SHALL BE ANCHORED TO THE PAVEMENT (3 PINS IN EACH UNIT ON THE TRAFFIC SIDE), THE THIRD UNIT SHALL BE ANCHORED WITH A PIN AT EACH END OF THE UNIT ON THE TRAFFIC SIDE (2 PINS TOTAL) AND THE FOURTH UNIT SHALL BE ANCHORED WITH 1 PIN AT CORNER, CLOSEST TO UNIT THREE, ON THE TRAFFIC SIDE. THE REMAINING TCB UNITS MAY BE UNANCHORED PROVIDED A MINIMUM UNANCHORED LENGTH OF 100' IS INSTALLED BEYOND THE 4-UNIT TRANSITION.
5. HEIGHT TRANSITION ASSEMBLY SHALL BE A MINIMUM OF 4' LONG FOR A TRANSITION FROM 32" TCB TO 42" TALL SFCB AND SHALL BE A MINIMUM OF 5' LONG FOR A TRANSITION FROM 32" TCB TO 44" TALL SFCB. SEE SHEET 2 FOR FABRICATION DETAILS. WHEN THE TRAFFIC DIRECTION IS FROM THE TALLER BARRIER TOWARD THE SHORTER BARRIER THE HEIGHT TRANSITION IS OPTIONAL.
6. THE HEIGHT TRANSITION ASSEMBLY AND FIELD SIDE CONNECTION STRAP SHALL BE FABRICATED FROM 1/4" THICK ASTM A36 STEEL. THE WIDTH DIMENSIONS FOR THE RIB PLATES ARE TO THE INSIDE OF THE CAPPING PLATE. THE CAPPING PLATE MAY BE EITHER A BENT PLATE OR INDIVIDUAL PLATES CONTINOUSLY WELDED.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

NOTES TO DESIGNER

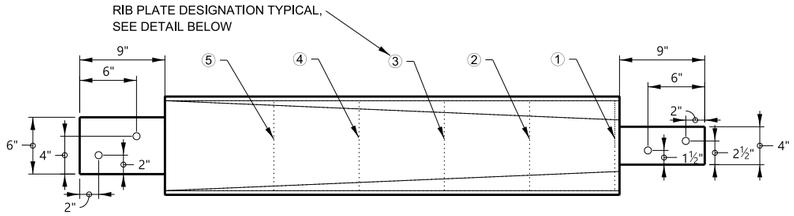
1. THIS CONNECTION DETAIL SHALL ONLY BE USED TO CONNECT TEMPORARY CONCRETE BARRIER (TCB) TO PERMANENT, SINGLE FACE CONCRETE BARRIER (SFCB) OR PARAPET. THE PERMANENT BARRIER MAY BE EITHER CONSTANT-SLOPE OR F-SHAPE AND SHALL BE EITHER 42" OR 44" TALL.
2. THIS DETAIL SHALL ONLY BE USED WHEN TRAFFIC IS ON ONE SIDE OF THE BARRIER AS INDICATED.
3. THIS DETAIL MAY BE USED WITH ANCHORED TCB OR UN-ANCHORED TCB PROVIDED THAT THE UNANCHORED LENGTH IS AT LEAST 100' PAST THE 4-UNIT TRANSITION SHOWN ON SHEET 2.
4. THIS DETAIL SHALL NOT BE USED TO CONNECT A TCB TO A DOUBLE FACE CONCRETE BARRIER (I.E. CONCRETE MEDIAN BARRIER).
5. IF DESIGNER DETERMINES THAT ONLY ONE HEIGHT SFCB (42" OR 44") IS PRESENT, THEN THE DESIGNER MAY REMOVE THE TRANSITION CAP DETAIL THAT IS NOT NEEDED.

Illinois Tollway

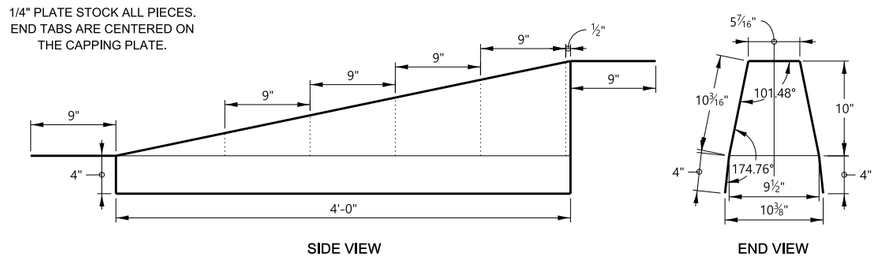
TCB CONNECTION TO SINGLE FACE CONCRETE BARRIER

VERSION:	STANDARD:	SHEET:
2024-03	M-MOT-701	1 OF 2

TCB CONNECTION TO SINGLE FACE CONCRETE BARRIER

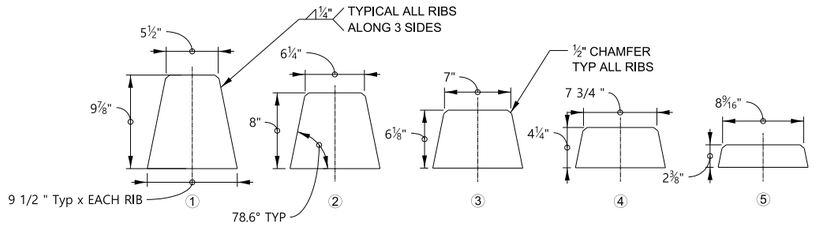


TOP VIEW

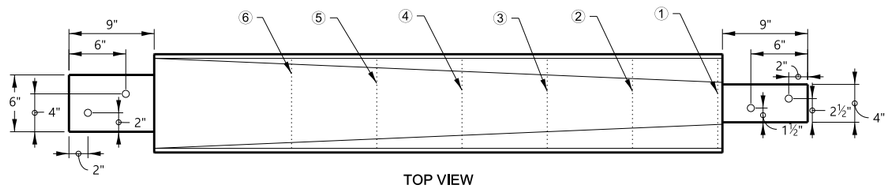


SIDE VIEW END VIEW

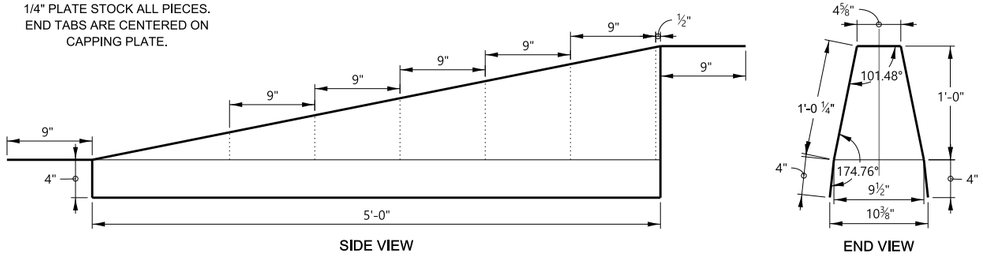
TCB TO 42 INCH SFCB HEIGHT TRANSITION ASSEMBLY



RIB DETAIL FOR 4 FT LONG HEIGHT TRANSITION ASSEMBLY
USE FOR CONNECTION BETWEEN 32" TALL TCB AND 42" TALL SINGLE FACE CONCRETE BARRIER

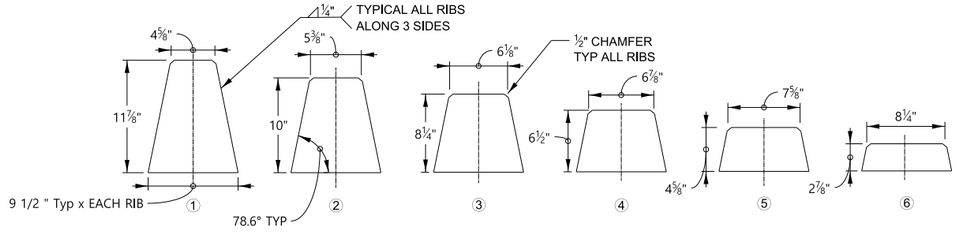


TOP VIEW

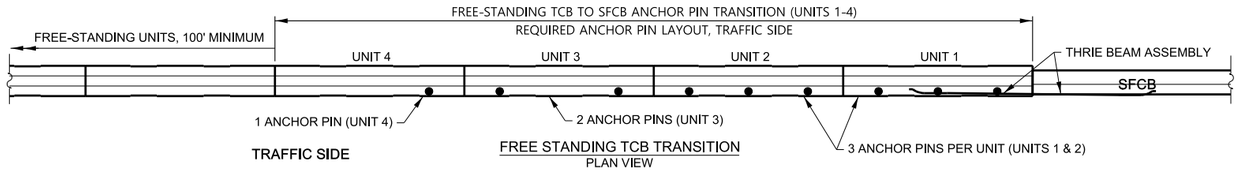


SIDE VIEW END VIEW

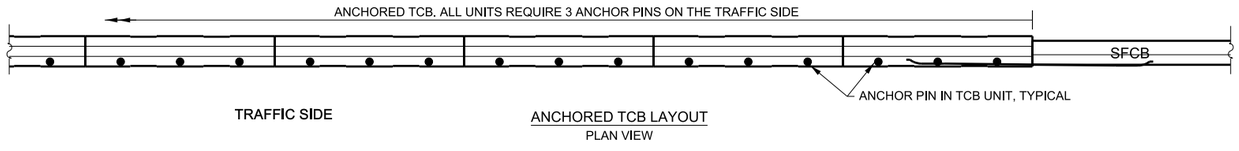
TCB TO 44 INCH SFCB HEIGHT TRANSITION ASSEMBLY



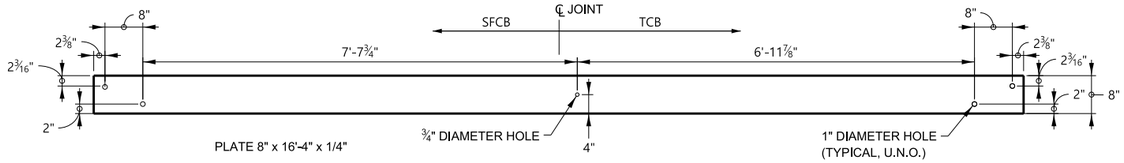
RIB DETAIL FOR 5 FT LONG HEIGHT TRANSITION ASSEMBLY
USE FOR CONNECTION BETWEEN 32" TALL TCB AND 44" TALL SINGLE FACE CONCRETE BARRIER



FREE STANDING TCB TRANSITION
PLAN VIEW



ANCHORED TCB LAYOUT
PLAN VIEW



FIELD SIDE CONNECTION STRAP
FACING BACKSIDE OF BARRIERS

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

TCB CONNECTION TO SINGLE FACE CONCRETE BARRIER

VERSION:	STANDARD:	SHEET:
2024-03	M-MOT-701	2 OF 2

BASE SHEETS

SERIES 720 (OHS)

OVERHEAD SIGN

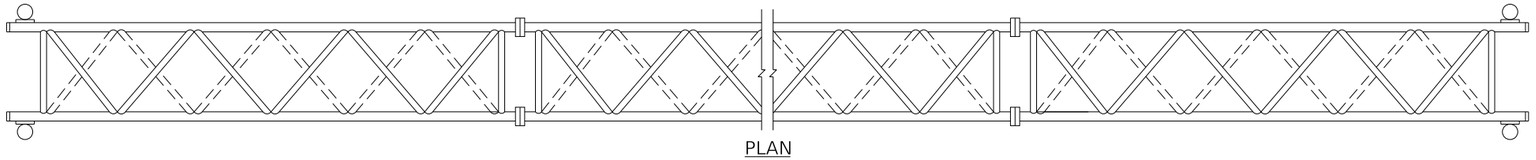
MARCH 2024

Illinois Tollway Base Sheet Revisions

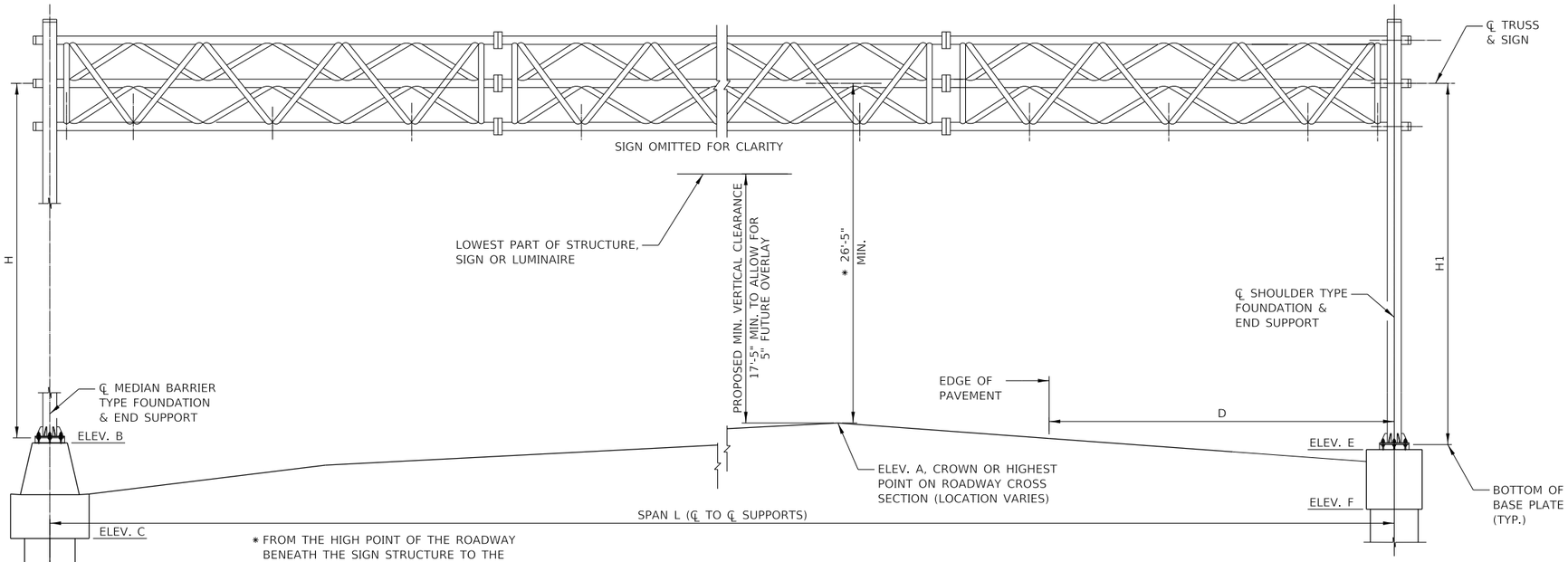
Section M	Base Sheet Drawings	
	Drawing	**Modification Summary** **Effective: 03-01-2024**
	Overhead Sign (OHS)-Series 720	
	M-OHS-722	**OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND BILL OF MATERIAL**
		Added pay item details for double face barrier to the bill of materials.
	M-OHS-723	**OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND BILL OF MATERIAL**
		Added pay item details for double face barrier to the bill of materials.
	M-OHS-729	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS**
	Sheet 1	Changed the material specification of HSS from ASTM A618 Grade III to ASTM A1065 Grade 50 with additional Charpy V-Notch Impact Energy Requirements.
	Sheet 3	Revised the connection "Detail A" and eliminated the diagonal stiffener.
		Revised the welding details shown for the beam to column connection.
		Revised Section G-G to account for new connection details.
		Section A-A is drawn to clarify the new connection details.
	Sheet 6	Revised the orientation and number of anchor bolts to match with base plate in Shoulder Foundation Type II Plan.
	M-OHS-730	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS**
	Sheet 1	Changed the material specification of HSS from ASTM A618 Grade III to ASTM A1065 Grade 50 with additional Charpy V-Notch Impact Energy Requirements.
	Sheet 3	Revised the connection "Detail A" and eliminated the diagonal stiffener.
		Revised the welding details shown for the beam to column connection.
		Revised Section G-G to account for new connection details.
		Section A-A is drawn to clarify the new connection details.
	Sheet 7	Revised the orientation and number of anchor bolts to match with base plate in Shoulder Foundation Type II Plan.

New Sheet

Retired Standard



PLAN



* FROM THE HIGH POINT OF THE ROADWAY BENEATH THE SIGN STRUCTURE TO THE CENTERLINE OF TRUSS, WHICH INCLUDES AN ALLOWANCE FOR 9' FROM CENTERLINE OF TRUSS TO BOTTOM OF AN 18' TALL SIGN PANEL.

ELEVATION

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

PAY ITEM USED IS BASED ON THE DESIGN LENGTH, NOT THE CONSTRUCTED LENGTH.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-OHS-732)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	DESIGN TRUSS TYPE	SHEET 1 OF STANDARD F1		ELEVATIONS					PROPOSED MINIMUM VERTICAL CLEARANCE	D	MEDIAN BARRIER END SUPPORT		SHOULDER END SUPPORT		HEIGHT OF TALLEST SIGN	TOTAL SIGN AREA (SQ FT)	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ. YD.)
			SPAN L	P	A	B	C	E	F			H	PIPE COLUMN (NOMINAL DIAMETER) (INCH)	H_1	PIPE COLUMN (NOMINAL DIAMETER) (INCH)			CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
																	TOTAL				

TOTAL BILL OF MATERIAL

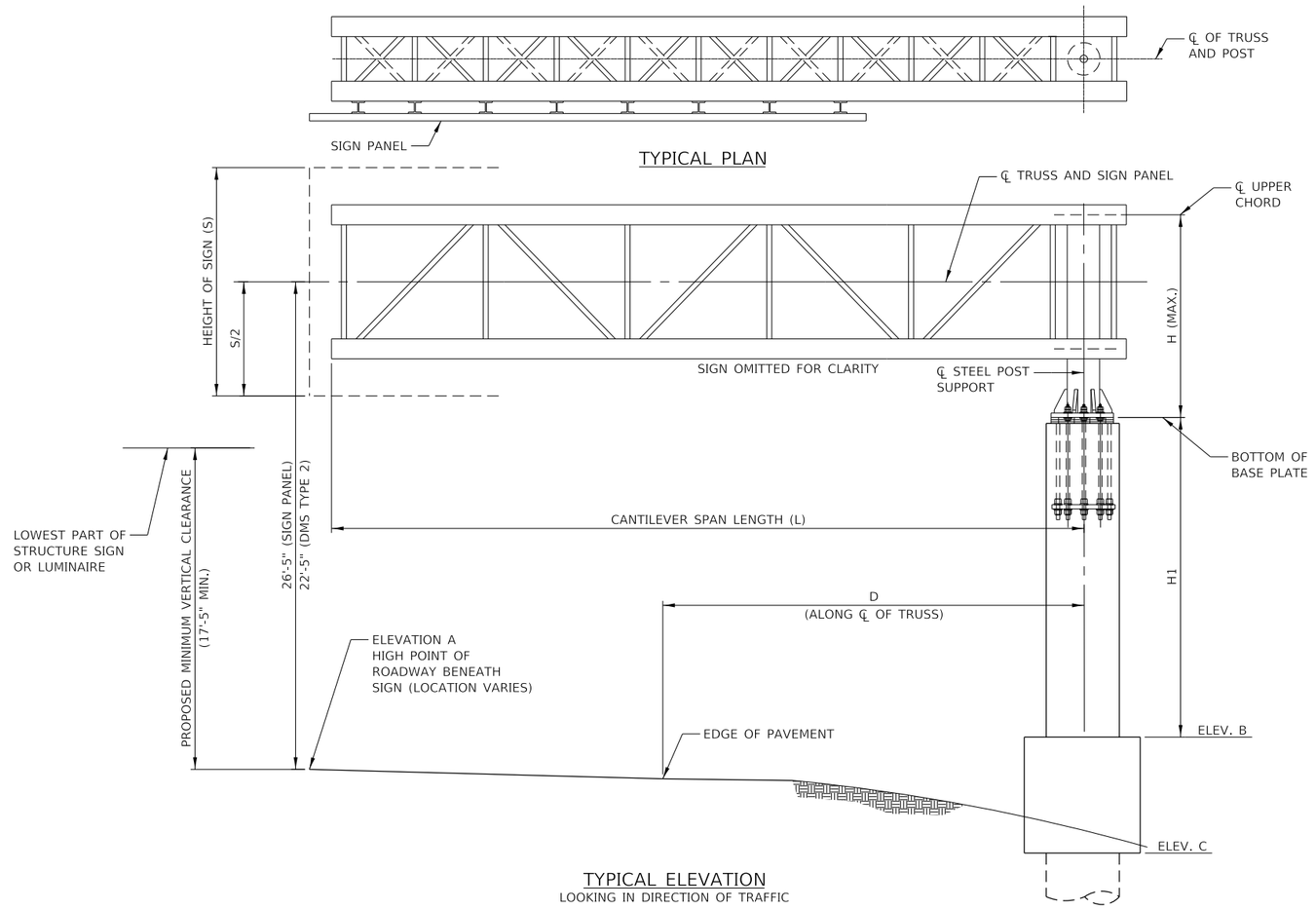
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733XXX	OVERHEAD SIGN STRUCTURE, SPAN TYPE (ALUMINUM)	FOOT	XXX'-XX"
JS734A10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

NOTE:
WORK THIS SHEET WITH STANDARD F1

Illinois Tollway

OVERHEAD SIGN STRUCTURE SPAN TYPE SUMMARY AND BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2022-03	M-OHS-720	1 OF 1



TYPICAL ELEVATION
LOOKING IN DIRECTION OF TRAFFIC

NOTE TO DESIGNER

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1105 OR M-OHS-733)

INSTALLATIONS NOT WITHIN DIMENSIONAL LIMITS SHOWN REQUIRE SPECIAL ANALYSIS FOR ALL COMPONENTS.

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	DESIGN TRUSS TYPE	SPAN L	ELEVATIONS			PROPOSED MINIMUM VERTICAL CLEARANCE	D	H	H_1	HEIGHT OF TALLEST SIGN	TOTAL SIGN AREA (SQ FT)	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ. YD.)
				A	B	C							CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
												TOTAL				

TOTAL BILL OF MATERIAL

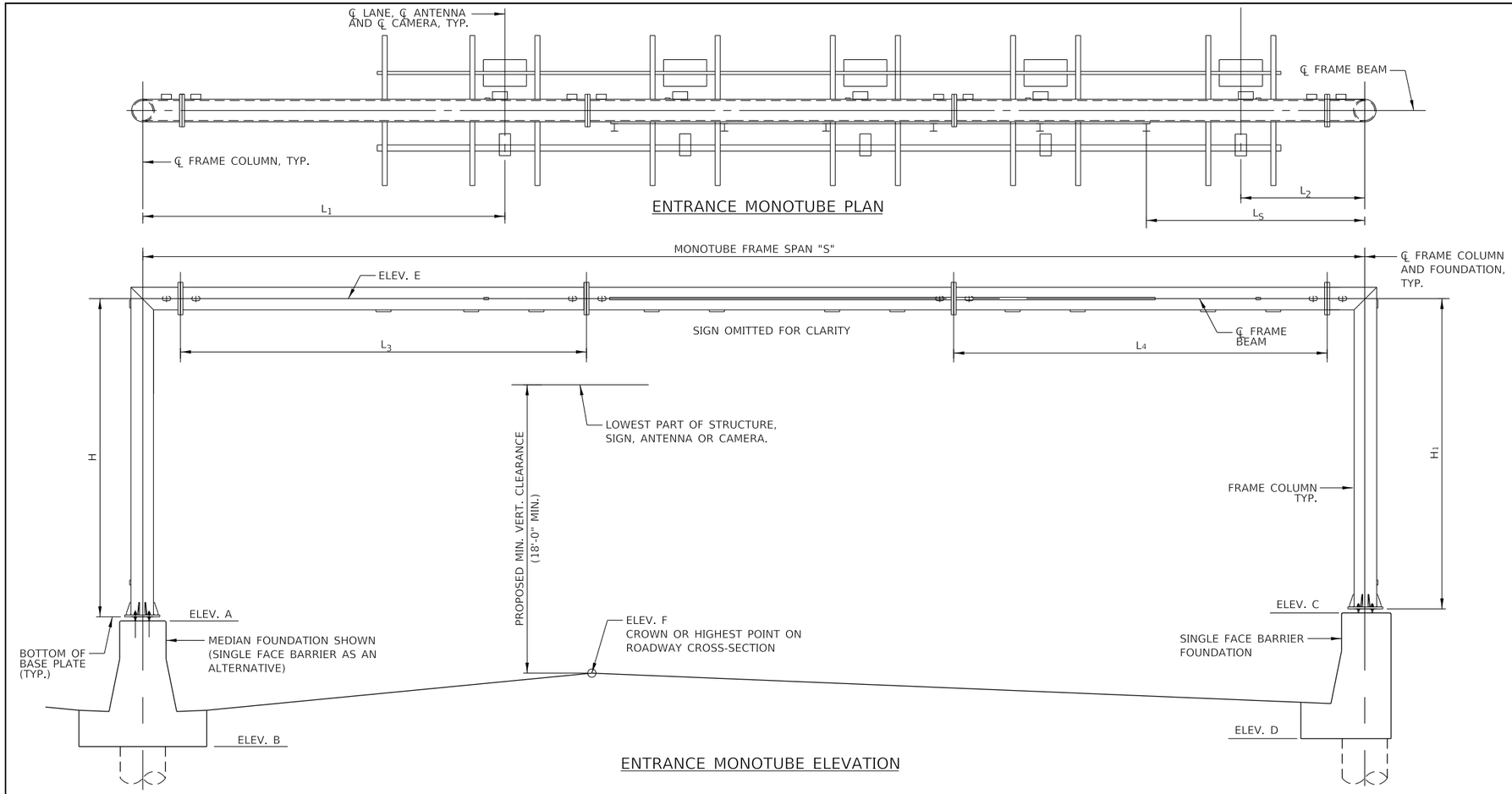
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733BXX	OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE (STEEL)	FOOT	XXX'-XX"
JS734B10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

NOTE:
WORK THIS SHEET WITH STANDARD F4

Illinois Tollway

OVERHEAD SIGN STRUCTURE CANTILEVER TYPE SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2021-03	M-OHS-721	1 OF 1



ENTRANCE MONOTUBE PLAN

ENTRANCE MONOTUBE ELEVATION

NOTE TO DESIGNER

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	MONOTUBE FRAME TYPE	SPAN "S"	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F13							SHEETS 6 AND 7 OF STANDARD F13	SIGN AREA (SQ FT)	SIGN LENGTH	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		OUTSIDE CONCRETE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUND)	MEDIAN BARRIER (FOOT)	MEDIAN BARRIER TRANSITION (FOOT)	PROTECTIVE COAT (SQ YD)
				A	B	C	D	E	F		L_S	L_1	L_2	L_3	L_4	H	H_1	"C"			CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	CONCRETE STRUCTURES (CU YD)				
TOTAL																											

TOTAL BILL OF MATERIAL

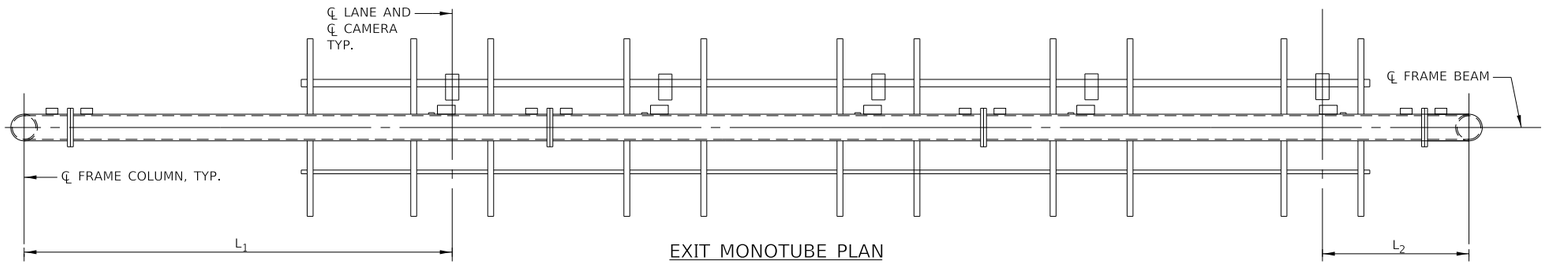
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733710	OVERHEAD SIGN STRUCTURE, MAINLINE ENTRANCE MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
JS734E10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, MAINLINE MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X
JT637550	CONCRETE BARRIER MEDIAN TRANSITION, DOUBLE FACE, AT PLAZA MONOTUBE	FOOT	XX'-XX"
JT637554	CONCRETE BARRIER MEDIAN, DOUBLE FACE, AT PLAZA MONOTUBE	FOOT	XX'-XX"

NOTE:
WORK THIS SHEET WITH STANDARD F13

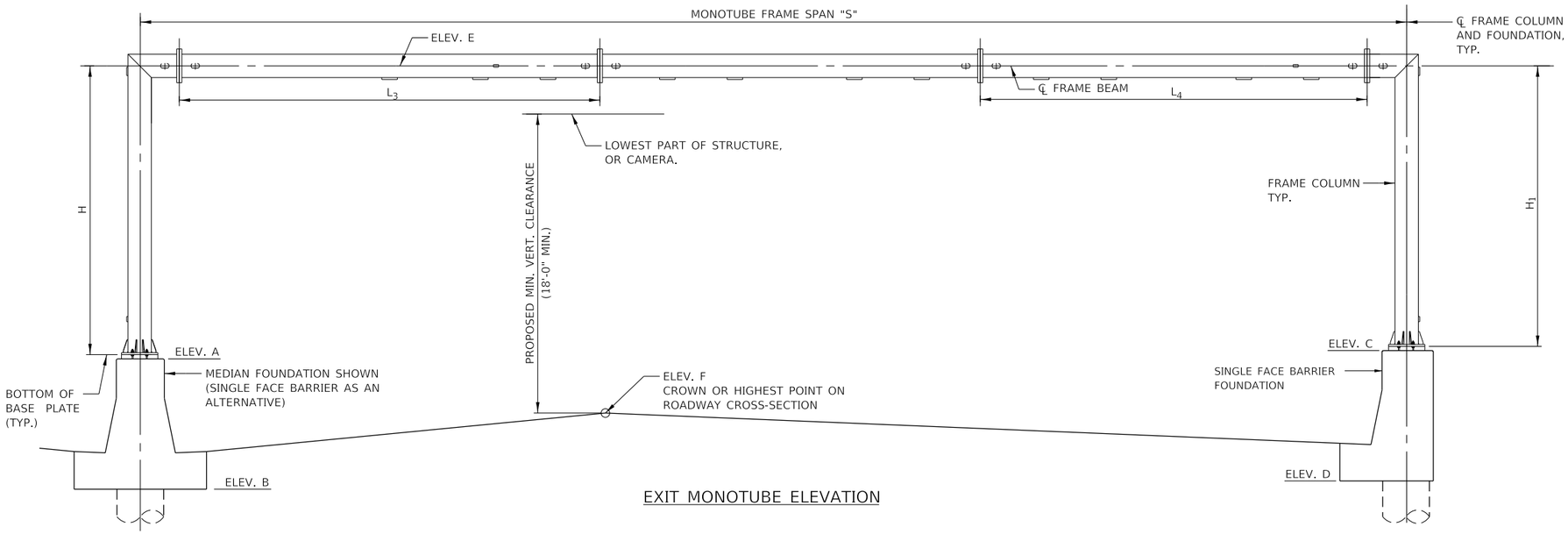
Illinois Tollway

OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-722	1 OF 1



EXIT MONOTUBE PLAN



EXIT MONOTUBE ELEVATION

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	MONOTUBE FRAME TYPE	SPAN "S"	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F13							SHEETS 6 AND 7 OF STANDARD F13	SIGN AREA (SQ FT)	SIGN LENGTH	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		OUTSIDE CONCRETE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUND)	MEDIAN BARRIER (FOOT)	MEDIAN BARRIER TRANSITION (FOOT)	PROTECTIVE COAT (SQ YD)
				A	B	C	D	E	F		L_S	L_1	L_2	L_3	L_4	H	H_1	"C"			CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	CONCRETE STRUCTURES (CU YD)				
TOTAL																											

TOTAL BILL OF MATERIAL

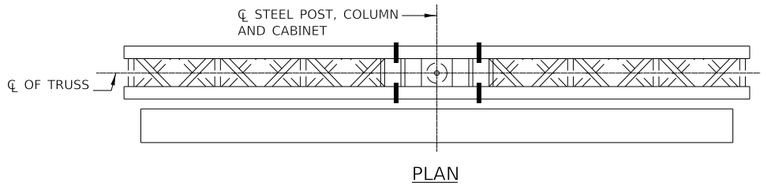
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733750	OVERHEAD SIGN STRUCTURE, MAINLINE EXIT MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
JS734E10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, MAINLINE MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X
JT637550	CONCRETE BARRIER MEDIAN TRANSITION, DOUBLE FACE, AT PLAZA MONOTUBE	FOOT	XX'-XX"
JT637554	CONCRETE BARRIER MEDIAN, DOUBLE FACE, AT PLAZA MONOTUBE	FOOT	XX'-XX"

NOTE:
WORK THIS SHEET WITH STANDARD F13

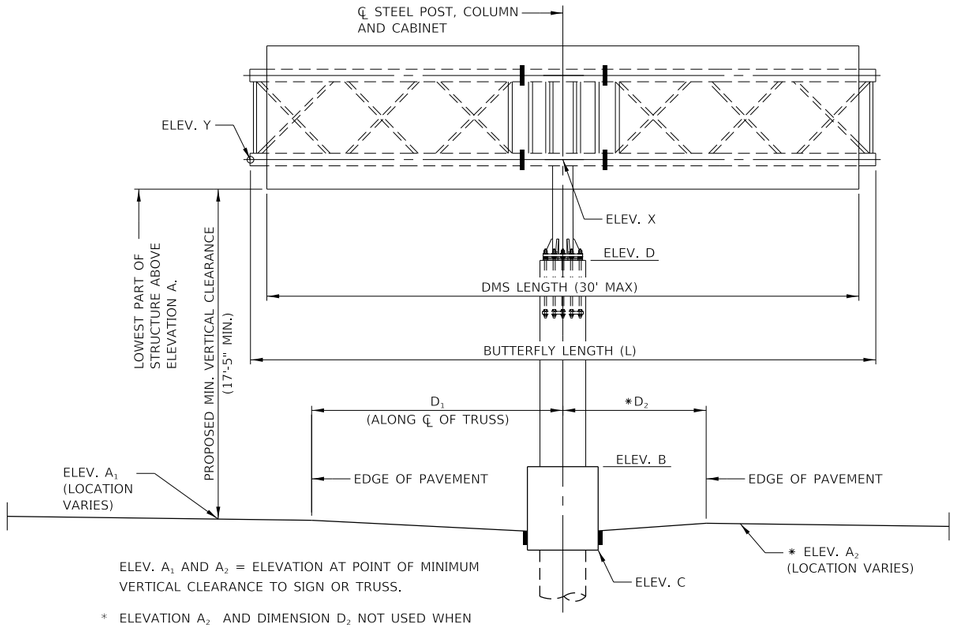
Illinois Tollway

OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-723	1 OF 1



PLAN



ELEV. A_1 AND A_2 = ELEVATION AT POINT OF MINIMUM VERTICAL CLEARANCE TO SIGN OR TRUSS.

* ELEVATION A_2 AND DIMENSION D_2 NOT USED WHEN BUTTERFLY STRUCTURE IS MOUNTED ON RIGHT SIDE OF THE SHOULDER.

ELEVATION

NOTE TO DESIGNER

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1105 OR M-OHS-733)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733460	OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE (STEEL)	FOOT	XXX'-XX"
JS734C10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

SUMMARY

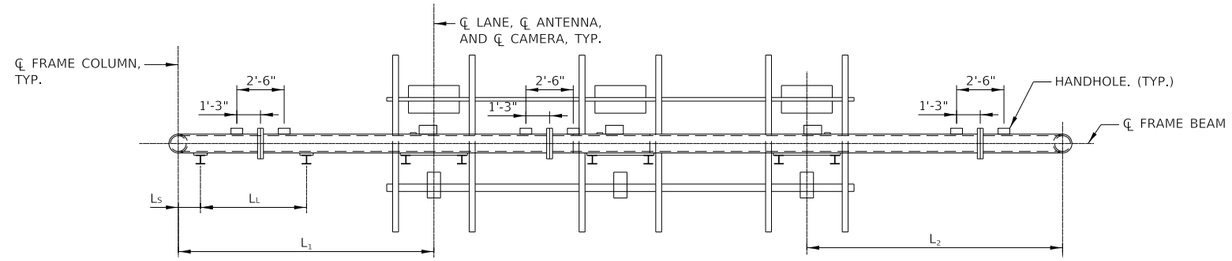
STRUCTURE NUMBER	STATION	ELEVATIONS							PROPOSED MINIMUM VERTICAL CLEARANCE	D_1	D_2	L	SHEET 2 OF STANDARD F14				SHEET 8 OF STANDARD F14			DMS CABINET		FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
		A_1	A_2	B	C	D	X	Y					L_1	L_2	P_1	P_2	I	J	K	TOTAL AREA (SQ FT)	TOTAL WEIGHT (POUND)	CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
XXX-XXXX	XXXXX+XX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XX.XX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX"	X'-XX"	X'-XX"	X,XXX.XX	X,XXX	XXX.XX	XXX.XX	X,XXX	XXX.XX
																					TOTAL				

NOTE:
WORK THIS SHEET WITH STANDARD F14

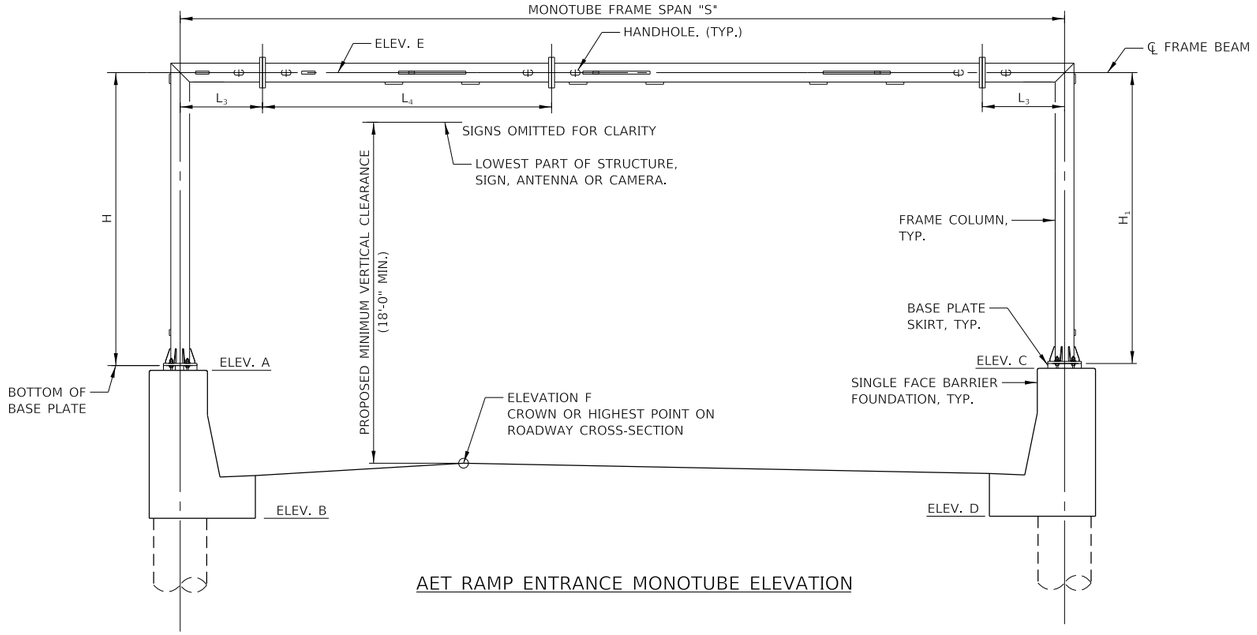
Illinois Tollway

OVERHEAD SIGN STRUCTURE BUTTERFLY TYPE (STEEL) SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2021-03	M-OHS-724	1 OF 1



AET RAMP ENTRANCE MONOTUBE PLAN



AET RAMP ENTRANCE MONOTUBE ELEVATION

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REPLACE THIS "NOTE TO DESIGNER" WITH SITE GROUNDING ELECTRODE SYSTEM DETAIL.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F15								SHEET 6 OF STANDARD F15	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ. YD.)
			A	B	C	D	E	F		L_S	L_L	L_1	L_2	L_3	L_4	H	H_1	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		
																		TOTAL					

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733610	OVERHEAD SIGN STRUCTURE, AET RAMP ENTRANCE MONOTUBE TYPE (STEEL))	FOOT	XXX'-XX"
JS734F10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

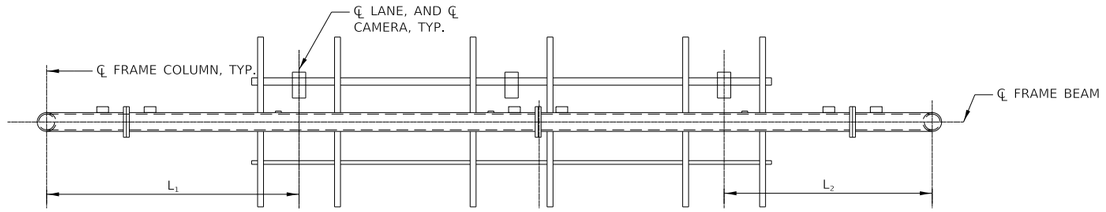
NOTE:

WORK THIS SHEET WITH STANDARD F15

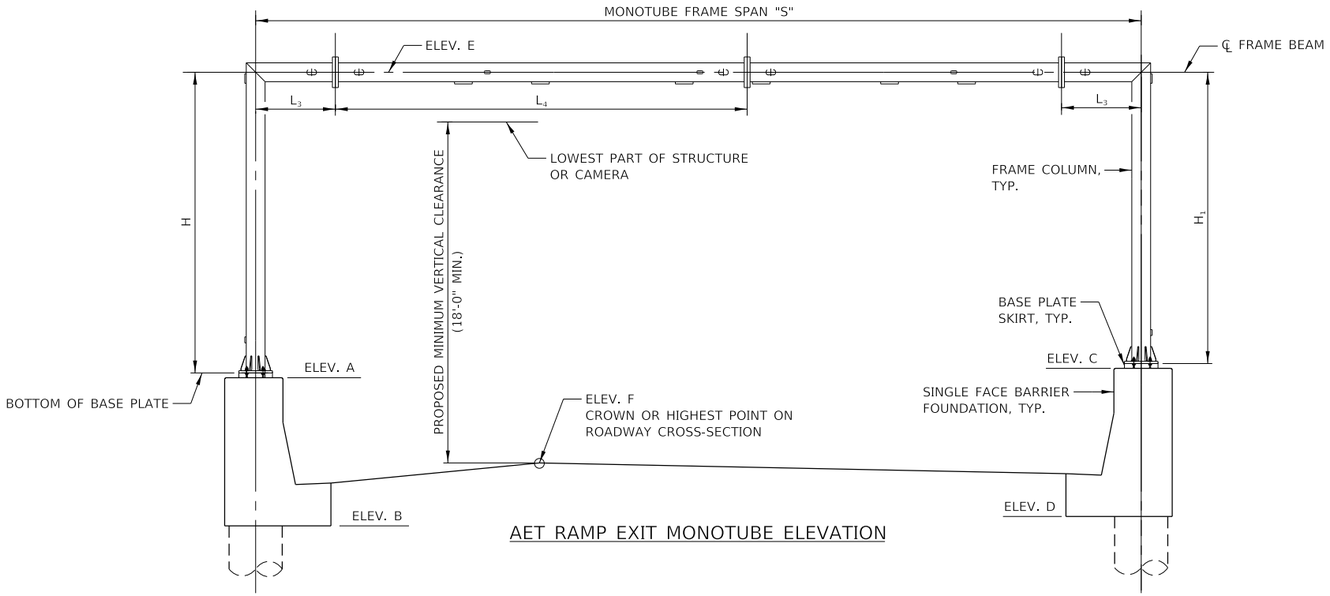
Illinois Tollway

OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2020-03	M-OHS-725	1 OF 1



AET RAMP EXIT MONOTUBE PLAN



AET RAMP EXIT MONOTUBE ELEVATION

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

REPLACE THIS "NOTE TO DESIGNER" WITH SITE GROUNDING ELECTRODE SYSTEM DETAIL.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F15						SHEET 6 OF STANDARD F15	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ. YD.)
			A	B	C	D	E	F		L_1	L_2	L_3	L_4	H	H_1	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		
																TOTAL					

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733630	OVERHEAD SIGN STRUCTURE, AET RAMP EXIT MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
JS734F10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

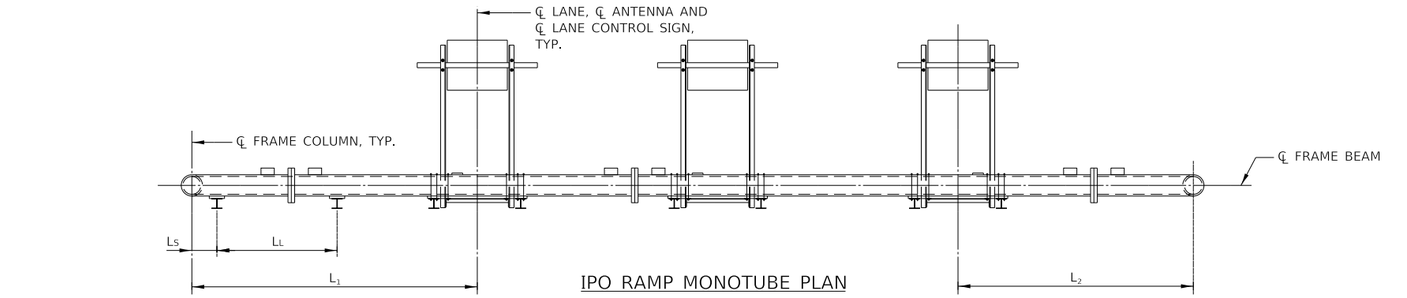
NOTE:

WORK THIS SHEET WITH STANDARD F15

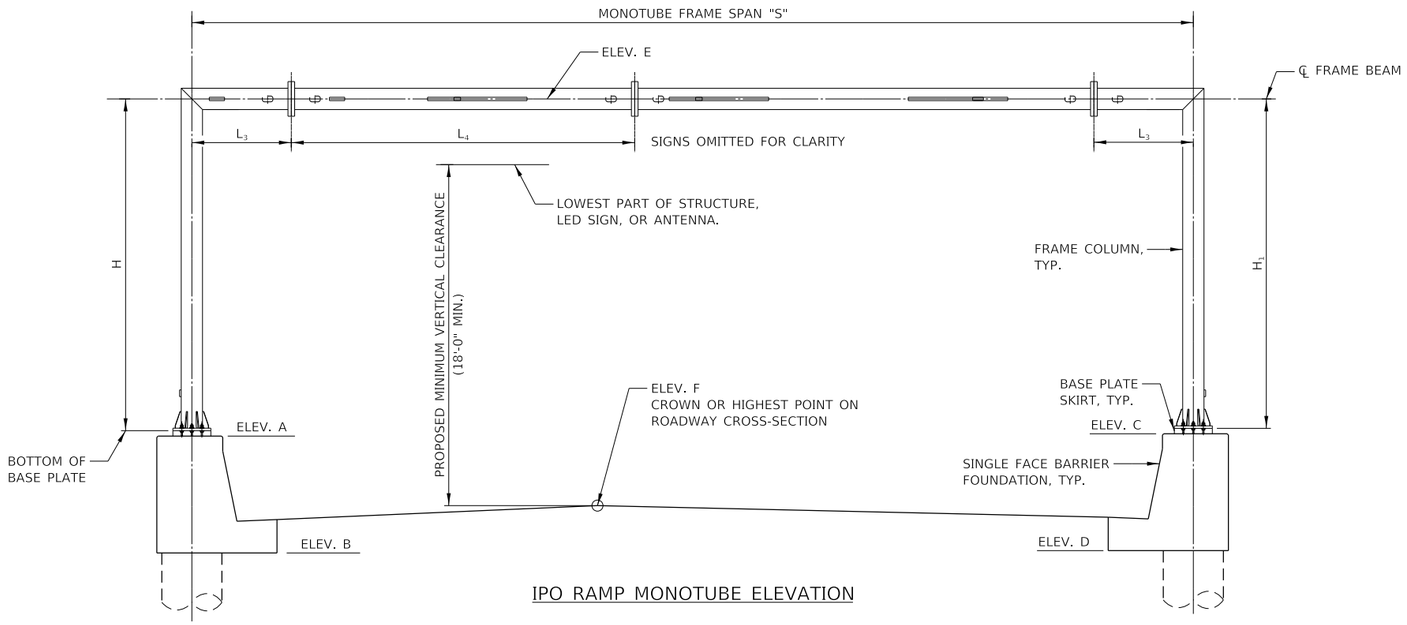
Illinois Tollway

OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2022-03	M-OHS-726	1 OF 1



IPO RAMP MONOTUBE PLAN



IPO RAMP MONOTUBE ELEVATION

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

REPLACE THIS "NOTE TO DESIGNER" WITH SITE GROUNDING ELECTRODE SYSTEM DETAIL.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F16								SHEET 6 OF STANDARD F16	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ. YD.)
			A	B	C	D	E	F		L_S	L_L	L_1	L_2	L_3	L_4	H	H_1	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		
TOTAL																							

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733650	OVERHEAD SIGN STRUCTURE, CASH-IPO RAMP MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
JS734F10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

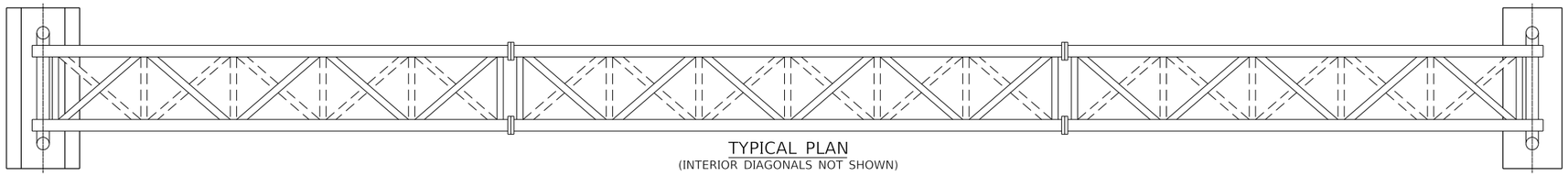
NOTE:

WORK THIS SHEET WITH STANDARD F16

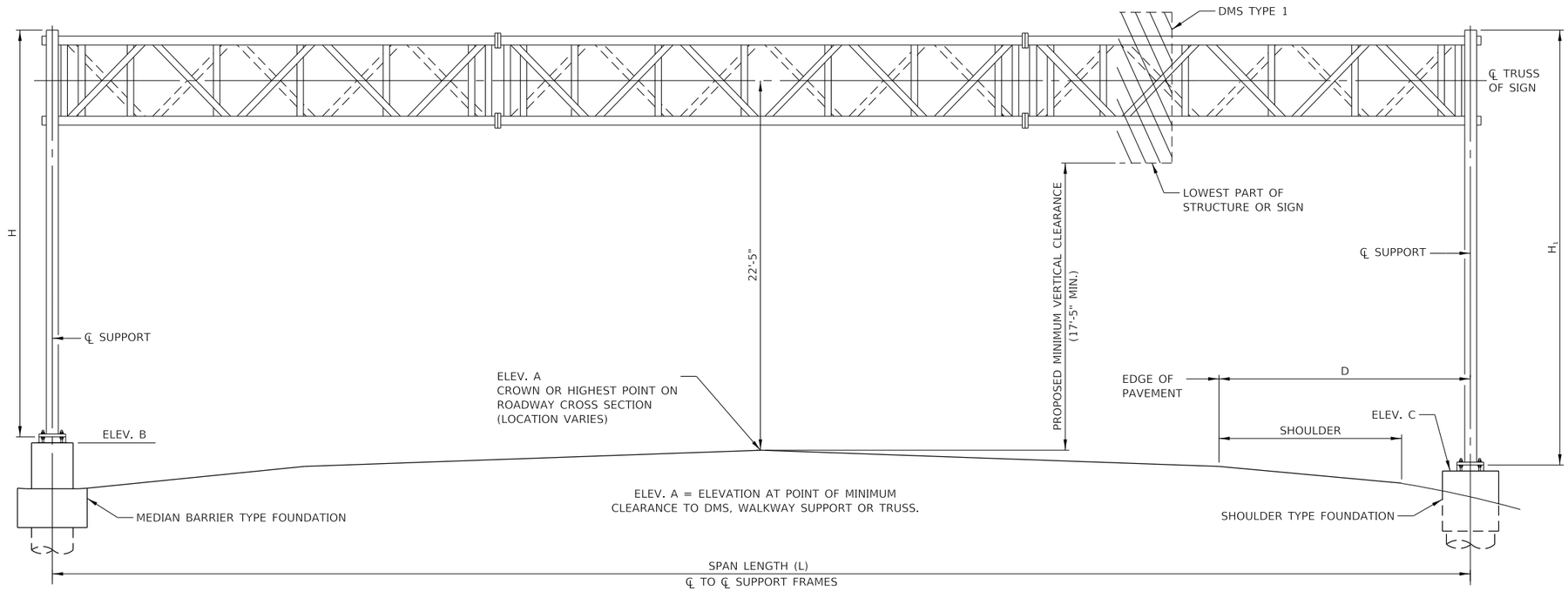
Illinois Tollway

OVERHEAD SIGN STRUCTURE MONOTUBE TYPE (STEEL) CASH-IPO RAMP SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2020-03	M-OHS-727	1 OF 1



TYPICAL PLAN
(INTERIOR DIAGONALS NOT SHOWN)



TYPICAL ELEVATION
(LOOKING AT FACE OF SIGN)

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

PAY ITEM USED IS BASED ON THE DESIGN LENGTH, NOT THE CONSTRUCTED LENGTH.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

SUMMARY

STRUCTURE NUMBER	STATION	DESIGN TRUSS TYPE	SPAN LENGTH (FT)	ELEVATIONS			PROPOSED MINIMUM VERTICAL CLEARANCE	FOUNDATION TYPE		D	H	H_1	SHEET 2 OF STANDARD F17		SHEET 5 OF STANDARD F17	SHEET 10 OF STANDARD F17				SHEET 11 OF STANDARD F17		DMS TYPE 1		FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (CU YD)
				A	B	C		LT.	RT.				F	P	A	a	b	c	L_S	B	C	TOTAL AREA (SQ. FT.)	TOTAL WEIGHT (LBS.)	CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
TOTAL																											

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS7338XX	OVERHEAD SIGN STRUCTURE, SPAN TYPE (STEEL)	FOOT	XXX'-XX"
JS734A10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU YD	XXX.X
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

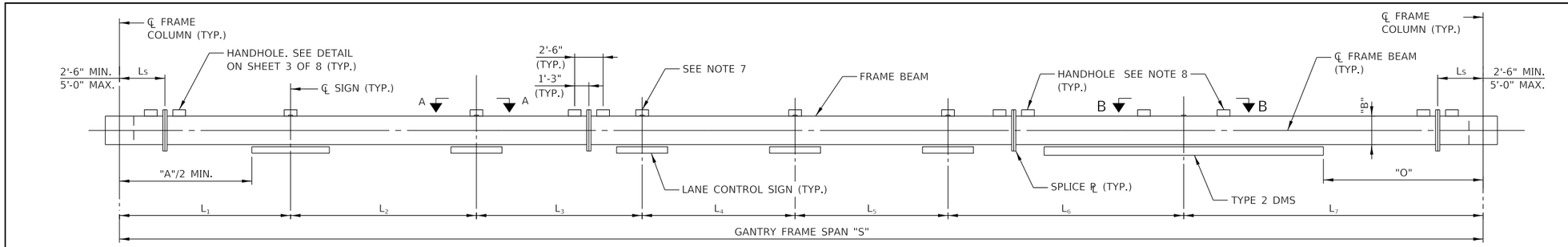
NOTE:

WORK THIS SHEET WITH STANDARD F17

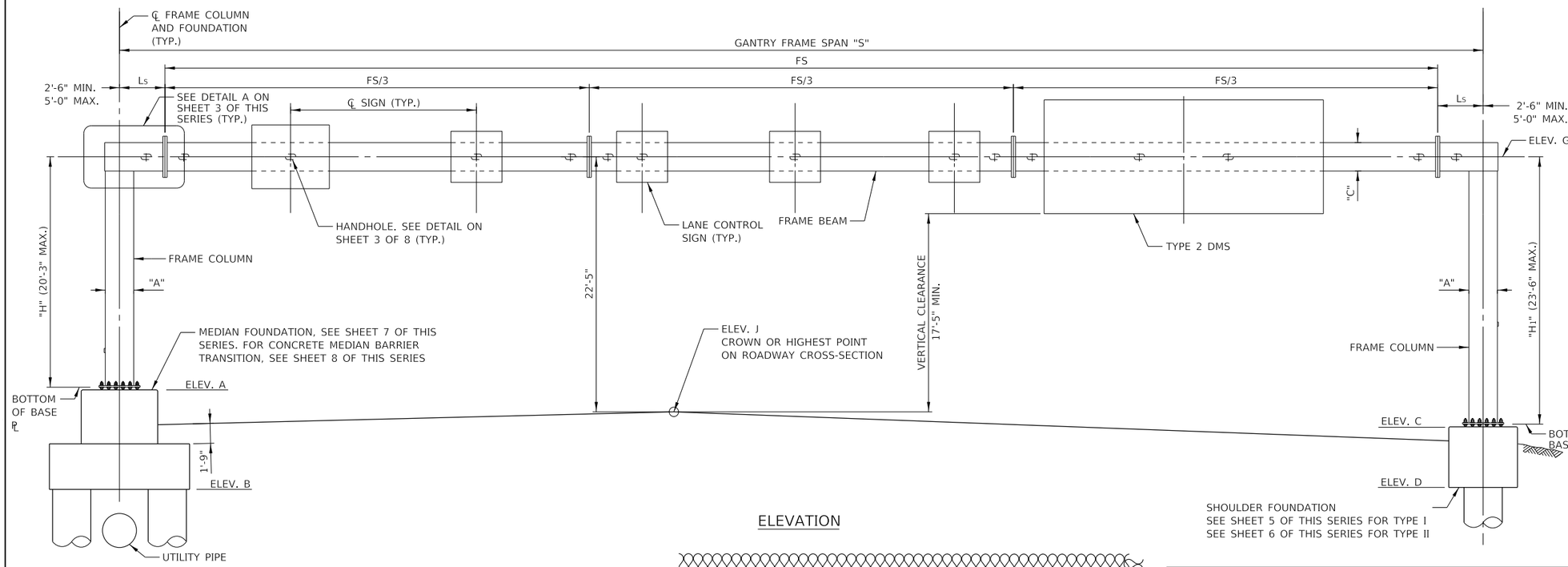
Illinois Tollway

OVERHEAD SIGN STRUCTURE SPAN TYPE (STEEL) SUMMARY AND TOTAL BILL OF MATERIAL

VERSION:	STANDARD:	SHEET:
2020-03	M-OHS-728	1 OF 1



PLAN



ELEVATION

MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL AND FASTENERS

ELEMENT OF STRUCTURE	SPECIFICATION	F_y(ksi)	F_u(ksi)
STRUCTURAL STEEL TUBE FRAME (HSS)	*ASTM A1065 GRADE 50	50	60
STRUCTURAL STEEL TUBE MOUNTING BEAMS (HSS)	ASTM A500 GRADE B	46	58
STEEL SHAPES	ASTM A709, GRADE 50	50	65
STEEL PLATES	ASTM A572 GR. 50 OR ASTM A709 GR. 50	50	65
STEEL BOLTS	ASTM 325 TYPE 1	--	105
SIGN BRACKET RODS	ASTM A307	--	60
LOCK NUTS	ASTM A194 GR. 8F OR ASTM A194 GR. 2H	--	--
NUTS	ASTM A563 GRADE DH	--	--
STEEL WASHERS	ASTM F436	--	--
STAINLESS STEEL WASHERS	ASTM A240, TYPE 302	--	--
ANCHOR BOLTS	AASHTO M 314 OR ASTM F1554	55	75

* SHALL CONFORM TO THE CHARPY-V-NOTCH IMPACT ENERGY REQUIREMENT, ZONE 2

NOTES:

1. SEE SHEET 2 OF THIS SERIES FOR VIEW A-A, VIEW B-B AND DESIGN SUMMARY TABLE.
2. CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
3. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L_1 THROUGH L_7)
4. FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 2 COLUMNS AND 3 FIELD SECTIONS.
5. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF EACH FOUNDATION, ANCHOR BOLTS AND DETAILS AFFECTING GANTRY FRAME FABRICATION AND CONSTRUCTION. NOTIFY THE ENGINEER OF ANY VARIATIONS FROM CONTRACT PLANS AND MAKE NECESSARY APPROVED ADJUSTMENTS. SUCH VARIATIONS DO NOT CONSTITUTE ADDITIONAL COMPENSATION FOR CHANGE IN SCOPE OF WORK. CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
6. WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO ¼" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.
7. IF THE DISTANCE BETWEEN AN LCS TYPE 1 OR LCS TYPE 2 CENTERLINE HANDHOLE AND THE HANDHOLD ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SPLICE HANDHOLE SHALL BE ELIMINATED.
8. IF THE DISTANCE BETWEEN A TYPE 2 DMS SIGN HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SIGN HANDHOLD SHALL BE ELIMINATED, AND THE HANDHOLE ADJACENT TO THE SPLICE SHALL BE USED INSTEAD. THE CONDUIT COUPLERS SHALL BE INCLUDED AT THE HANDHOLE ADJACENT TO THE SPLICE IF THE TYPE 2 DMS SIGN HANDHOLE IS ELIMINATED.
9. LIMIT DMS TO THE FACE OF COLUMN WITH 1'-0" MAXIMUM OVERHANG FROM THE SUPPORT BRACKET. MAINTAIN 9" MINIMUM DISTANCE BETWEEN SPLICE AND SUPPORT BRACKET.

NOTE TO DESIGNER

PROVIDE APPROPRIATE PROTECTION FOR SHOULDER FOUNDATION.

USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED IN LINE WITH SINGLE FACE CONCRETE BARRIER. THIS FOUNDATION REQUIRES MINIMUM 35 FT OF BARRIER ON EACH SIDE OF THE FOUNDATION TO RESIST LONGITUDINAL FORCE FROM THE GANTRY COLUMN.

USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED OUTSIDE CLEAR ZONE OR BEHIND GUARDRAIL.

PROVIDE SITE GROUNDING ELECTRODE SYSTEM DETAIL ACCORDING TO THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION 734.

REFERENCE BASE SHEET M-ITS-1101.

DIFFERENCE BETWEEN ELEV. A AND ELEV. C SHOULD NOT EXCEED 5'-0".

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TOTAL BILL OF MATERIAL

PAY ITEM	ITEM	UNIT	TOTAL
JS734G10	FOUNDATION FOR ITS GANTRY FRAME	CU YD	XXX.X
JS740110	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	XXX'-XX"
JS740130	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	XXX'-XX"
JS740150	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	XXX'-XX"
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	XXXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

STRUCTURAL STEEL TUBE (HSS) FRAME TABLE

SPAN "S"	FRAME COLUMN	FRAME BEAM	CAMBER	"A"	"B"	"C"	"O"
<=110'	HSS 28x24x0.625	HSS 28x24x0.500	3½"	2'-0"	2'-4"	2'-0"	1'-0"
110'<"S"<=130'	HSS 28x28x0.625	HSS 28x24x0.625	5"	2'-4"	2'-4"	2'-0"	1'-2"
130'<"S"<=150'	HSS 30x30x0.625	HSS 30x30x0.625	5½"	2'-6"	2'-6"	2'-6"	1'-3"

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
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GENERAL NOTES:

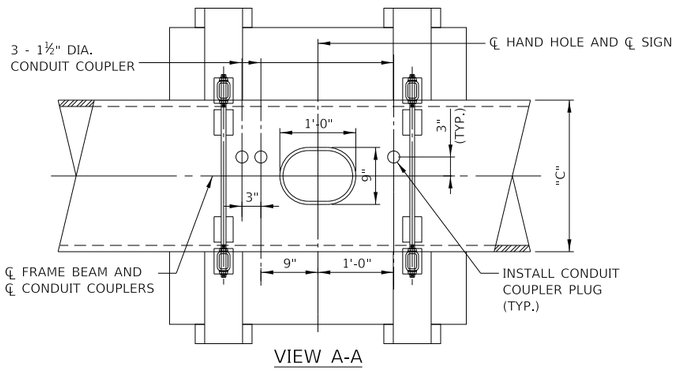
1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A ¾" x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS:

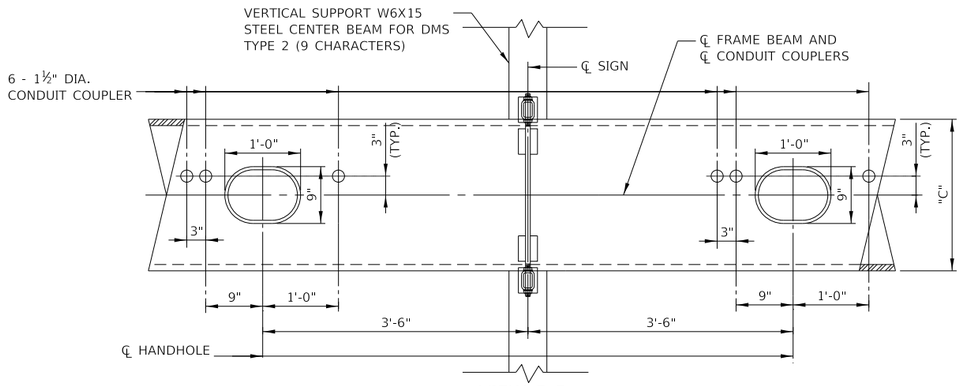
1. REINFORCEMENT BARS, INCLUDING REINFORCEMENT BARS, EPOXY-COATED SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS SECTION 508 AND ARTICLE 1006.10.
2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
4. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.
5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

CONSTRUCTION SPECIFICATIONS:

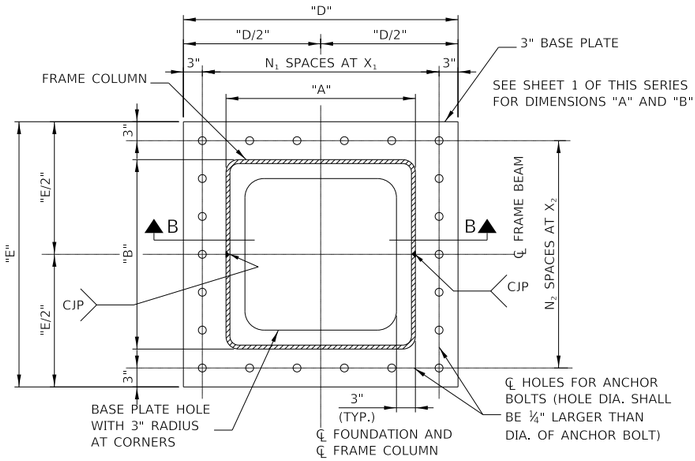
1. ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS ISSUED MARCH, 2015 TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2015.
3. ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012.



VIEW A-A



VIEW B-B



BASE PLATE PLAN

DESIGN LOADING:

WIND LOAD CRITERIA

SIGN PANEL	60.7 P.S.F.	BASIC WIND SPEED	120 M.P.H.
COLUMN/BEAM	60.7 P.S.F.	G	1.14
TYPE 2 DMS	62 P.S.F.	I_F (FATIGUE IMPORTANCE FACTOR)	1.0
		K_Z	1.0

TL-5 DESIGN REQUIREMENTS, WHERE APPLICABLE FOR FOUNDATION ONLY, PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION WITH CURRENT INTERIMS

ICE = 3 P.S.F. (APPLIED WITH A FACTOR OF 1.0 FOR STRENGTH I ONLY)

EQUIPMENT LOADS:

LANE CONTROL SIGNS	220 LB. MAX. (4'-0" H. X 4'-0" W. X 1'-2" D. MAX.)
TYPE 2 DMS	2,700 LB. MAX. (7'-9" H. X 25'-10" W. X 1'-2" D. MAX.)

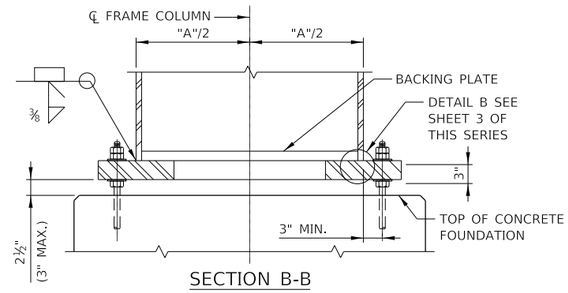
ITS GANTRY FRAMES AND FOUNDATIONS ARE DESIGNED FOR MAX. LOADING OF 2-TYPE 2 DMS (ONE OVER EACH SHOULDER) AND 1-LANE CONTROL SIGN IN EACH ADDITIONAL 12' LANE.

DESIGN STRESSES FOR REINFORCED CONCRETE:

f'c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS BS)	= 4,000 P.S.I.
f'c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS DS)	= 4,000 P.S.I.
fy = YIELD STRENGTH OF REINFORCEMENT BARS (GRADE 60)	= 60,000 P.S.I.

DESIGN SPECIFICATIONS:

1. ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, LATEST EDITION.
2. AASHTO LRFD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION WITH CURRENT INTERIMS
3. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION, 2020.
4. ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012.
5. ILLINOIS TOLLWAY GEOTECHNICAL ENGINEER MANUAL, LATEST EDITION.



SECTION B-B

DESIGN SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT)	ELEVATIONS A	B	C	D	J	G	FOUNDATION TYPE	PROPOSED MINIMUM VERTICAL CLEARANCE	F_S	L_S	L_1	L_2	L_3	L_4	L_5	L_6	L_7	H	H_1	FOUNDATION CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
XXX-XXXX	XXXXX+XX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXXXX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XXX.XX	XXX.XX	X,XXX	XXX.XX
																						TOTAL				

NOTE TO DESIGNER

1. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
2. NO STANDARD DRILLED SHAFT FOUNDATIONS WERE DESIGNED OR DETAILED FOR COHESION LESS SOIL CONDITIONS. REGARDLESS, THE DESIGNER MUST CONDUCT A SUBSURFACE INVESTIGATION AT EACH OVERHEAD SIGN STRUCTURE FOUNDATION TO DETERMINE THE ACTUAL SOIL PROPERTIES. SHOULD THE INVESTIGATION REVEAL THE PRESENCE OF COHESION LESS SOIL OR COHESIVE SOILS WITH PROPERTIES LESS THAN THE AVERAGES INDICATED IN THIS STANDARD, THE DESIGNER SHALL DESIGN AND DETAIL THE DRILLED SHAFT FOUNDATIONS TO MEET THE ACTUAL SOIL CONDITIONS.
3. DESIGN AND CONSTRUCTION SPECIFICATIONS: THE DESIGNER IS RESPONSIBLE FOR UPDATING THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION TO THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION USED IN DESIGN.
4. DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
5. DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.

NOTE TO DESIGNER

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NOTE:

WHERE THE DISTANCE BETWEEN SIGN ACCESS HOLE(S) AND THE ACCESS HOLES ADJACENT TO THE SPLICE ARE LESS THAN 6'-0", THE SIGN ACCESS HOLE SHALL BE ELIMINATED AND THE HOLE ADJACENT TO THE SPLICE IS USED INSTEAD. CONDUIT COUPLERS SHALL BE INCLUDED AT THE ACCESS HOLE ADJACENT TO THE SPLICE IF SIGN ACCESS HOLE IS ELIMINATED.

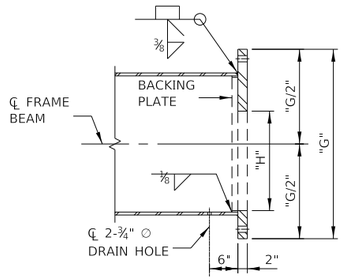
BASE PLATE TABLE - TYPE N

SPAN "S"	"D"	"E"	N_1	X_1	N_2	X_2	ANCHOR BOLT DIAMETER	NO. ANCHOR BOLT
<=110'	3'-2"	3'-5"	4	8"	5	7"	1¾"	18
110'<"S"<=130'	3'-5"	3'-6"	5	7"	6	6"	1¾"	22
130'<"S"<=150'	3'-7½"	3'-6"	5	7½"	6	6"	1¾"	22

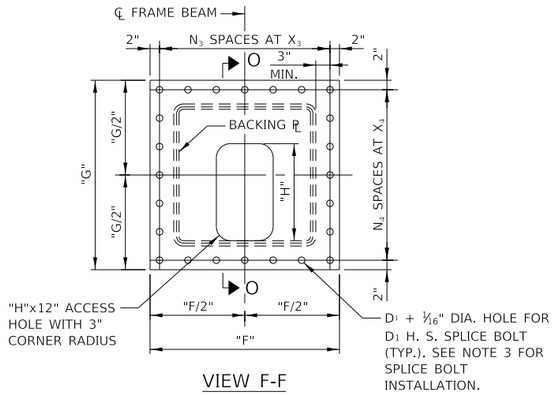
Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

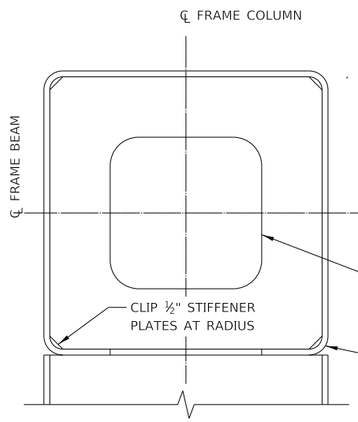
VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-729	2 OF 8



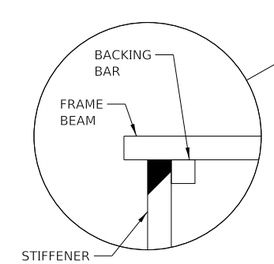
SECTION O-O
SPLICE PLATE DETAIL

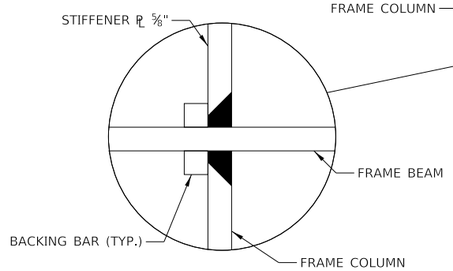


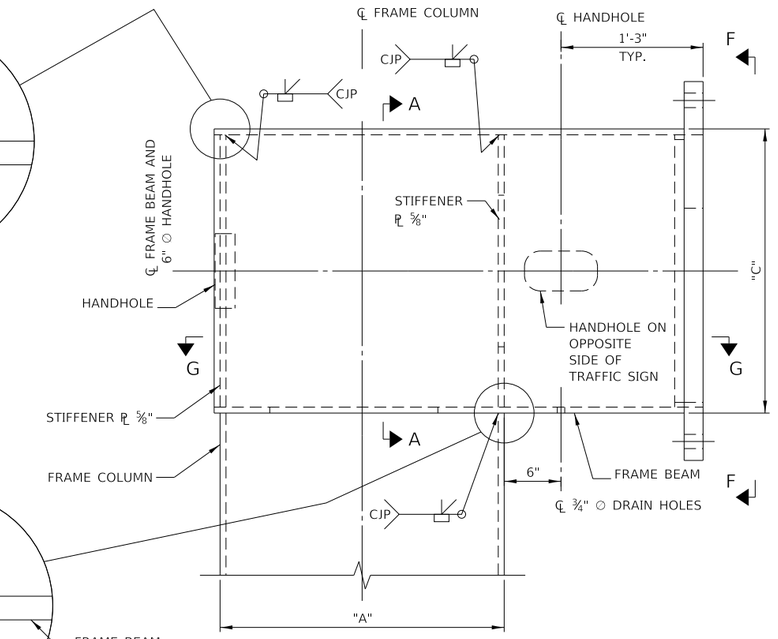
VIEW F-F



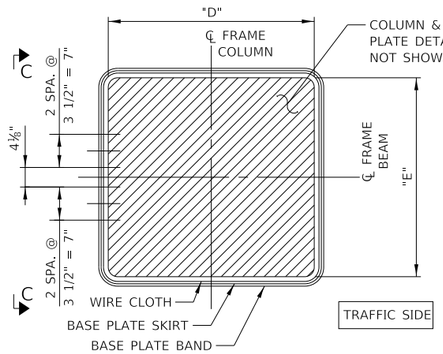
SECTION A-A



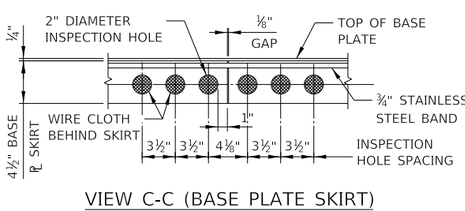




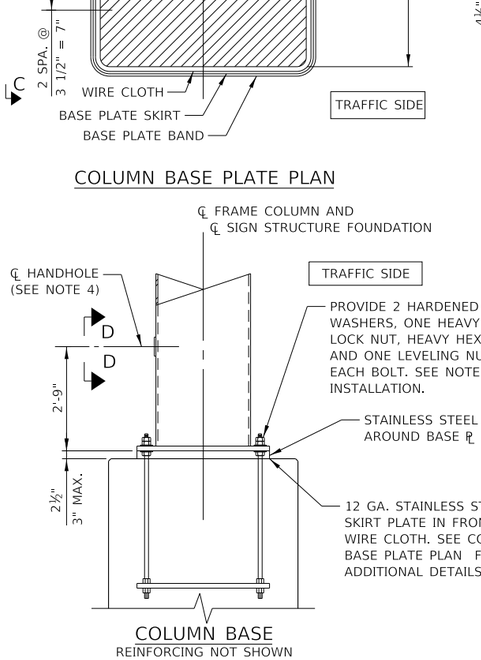
DETAIL A



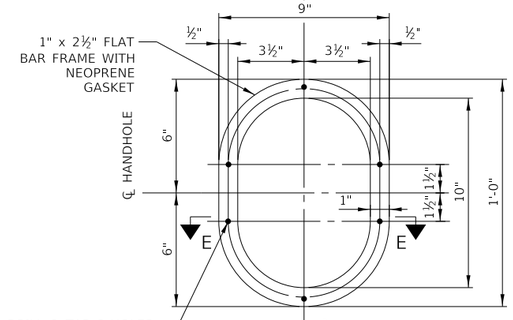
COLUMN BASE PLATE PLAN



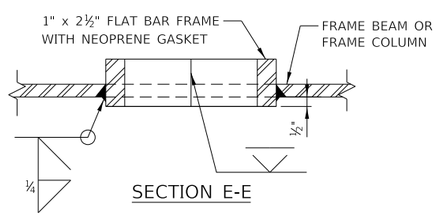
VIEW C-C (BASE PLATE SKIRT)



COLUMN BASE
REINFORCING NOT SHOWN



VIEW D-D
HANDHOLE DETAIL

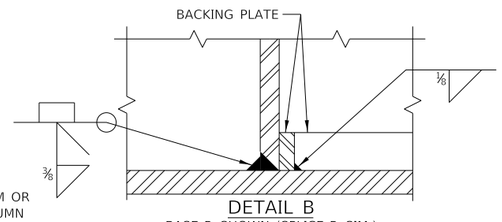


SECTION E-E

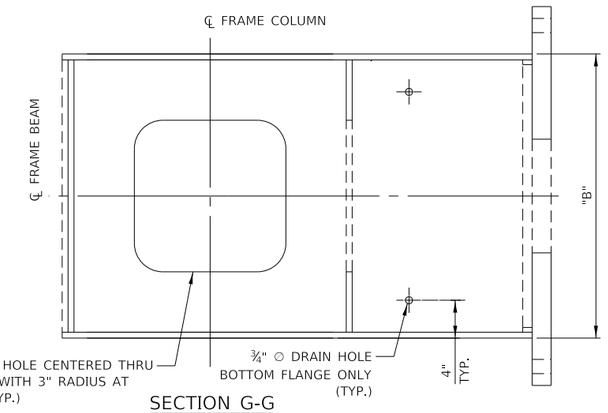
NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.



DETAIL B
BASE ℄ SHOWN (SPLICE ℄ SIM.)



SECTION G-G

NOTE:

1. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
2. SEE SHEET 2 OF THIS SERIES FOR DIMENSIONS "D" AND "E".
3. INSTALLATION AND INSPECTION OF SPLICE BOLTS AND ANCHOR BOLTS SHALL COMPLY WITH ILLINOIS TOLLWAY SPECIAL PROVISION "INTELLIGENT TRANSPORTATION SYSTEMS GANTRY FRAME (STEEL)".
4. SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.

SPLICE PLATE TABLE

SPAN "S"	F	G	H	J	N_3	X_3	N_4	X_4	SPLICE BOLT DIAMETER (D_1)	NO. SPLICE BOLT
<=110'	3'-1"	2'-8½"	1'-6"	2⅛"	6	5½"	6	4¾"	1"	24
110'<"S"<=130'	3'-0½"	2'-10"	1'-6"	2⅛"	5	6½"	5	6"	1¼"	20
130'<"S"<=150'	3'-4"	3'-4"	1'-9"	2⅜"	6	6"	6	6"	1¼"	24

Illinois Tollway

OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN STRUCTURE
DETAILS

VERSION:	STANDARD:	SHEET:
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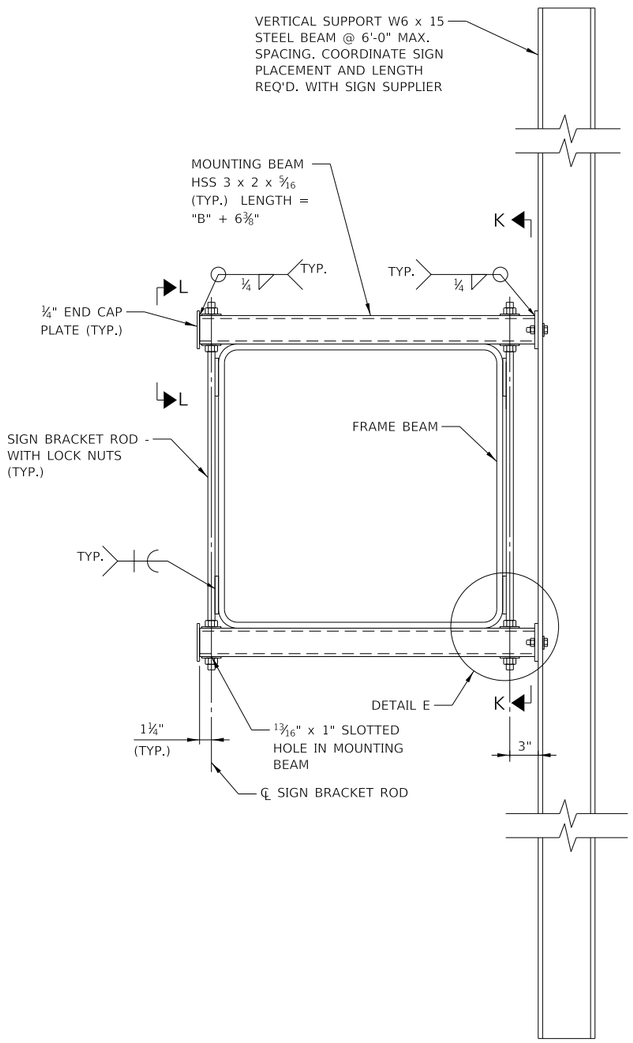
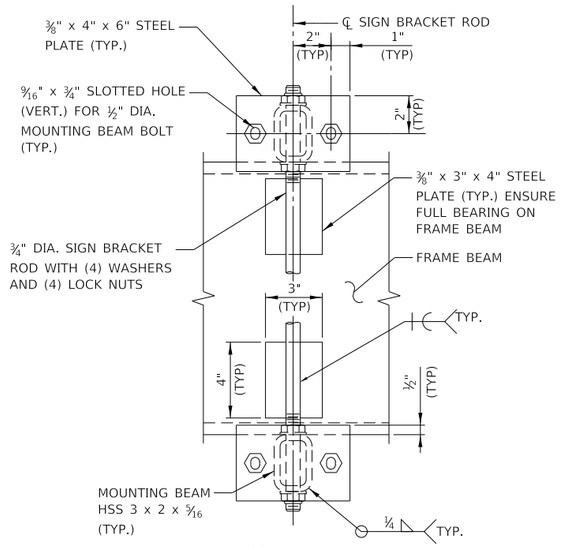
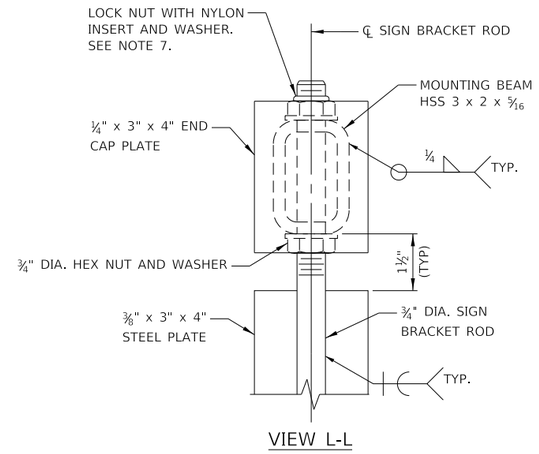


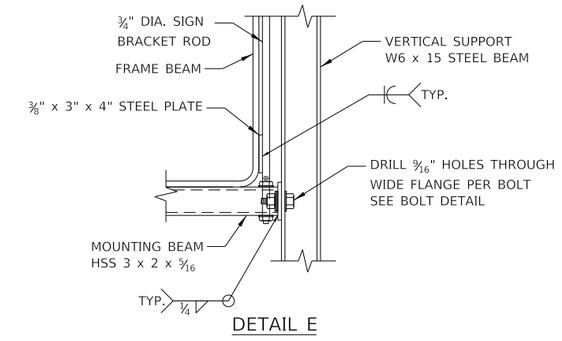
CONNECTION SIDE VIEW



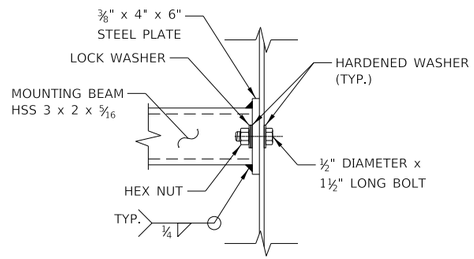
SECTION K-K



VIEW L-L



DETAIL E



BOLT DETAIL
SIGN BRACKET ROD NOT SHOWN FOR CLARITY

VERTICAL SUPPORT TABLE		
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5

NOTES:

1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED BY MANUFACTURER. VERIFY VERTICAL SPACING WITH HOLES ON W6x15 VERTICAL SUPPORT.
4. PROVIDE HIGH STRENGTH BOLTS WITH WASHERS AND LOCK NUTS TO FASTEN DMS AND LANE CONTROL SIGN TO VERTICAL SUPPORT MEMBERS.
5. GALVANIZE ALL NON-STAINLESS STEEL PARTS.
6. SIGN BRACKET RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307.
7. LOCK NUTS SHALL BE STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A194 GRADE 8F OR ASTM A194 GRADE 2H.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

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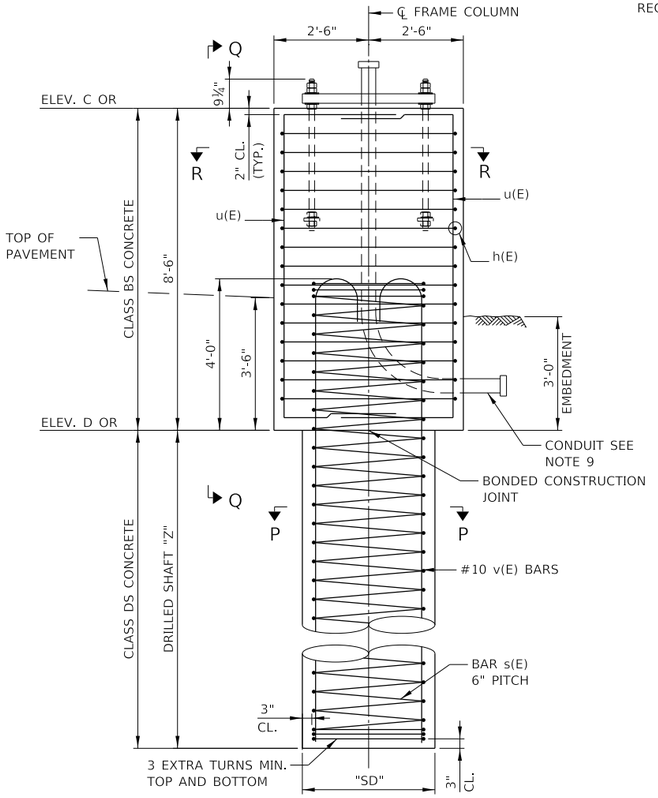
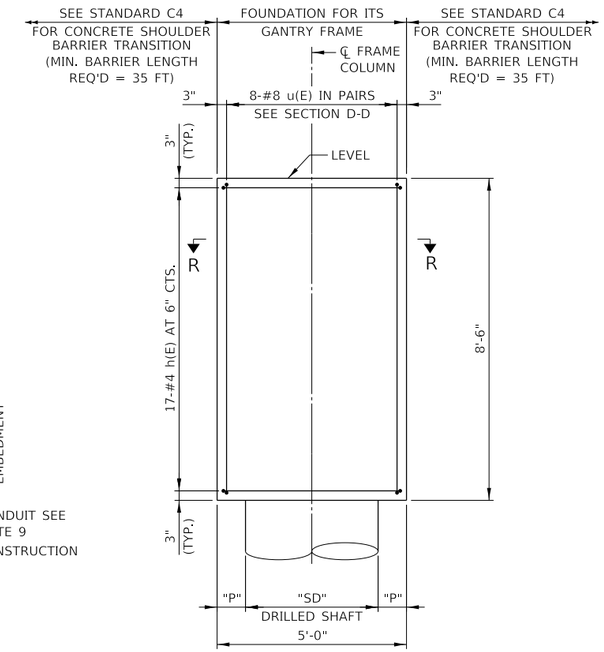
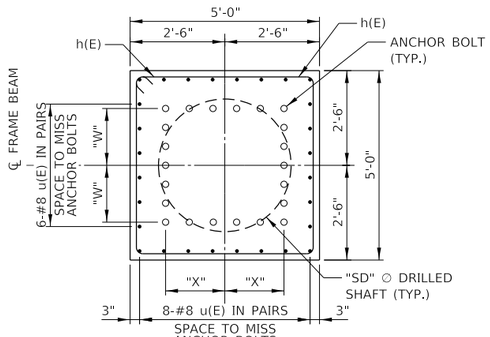


ELEVATION
SHOULDER FOUNDATION TYPE I



VIEW Q-Q



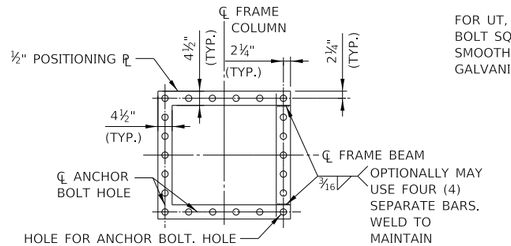
SECTION R-R

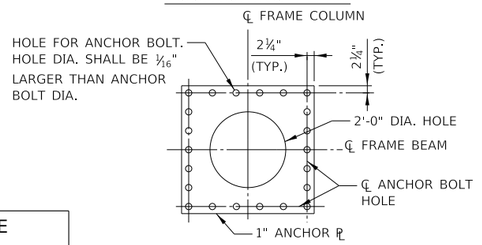
NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOBSITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
5. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D. COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
6. ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
9. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

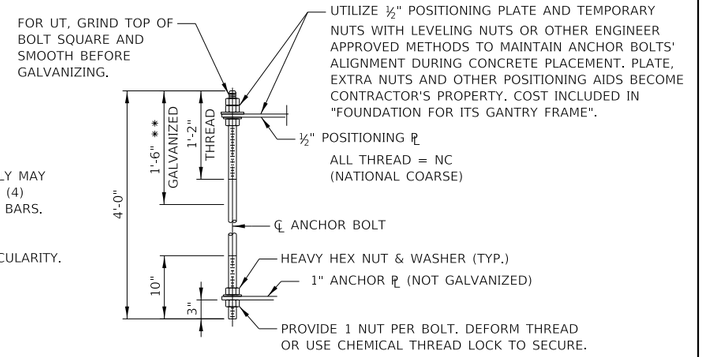
NOTE TO DESIGNER

DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.





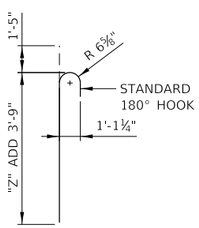
ANCHOR PLATE DETAIL



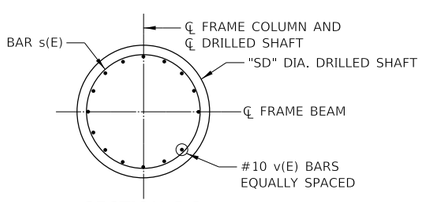
ANCHOR BOLT DETAIL

ANCHOR BOLTS SHALL CONFORM TO AASHTO M314 OR ASTM F1554 GRADE 55 AND MEET CHARPY V-NOTCH (CVN) ENERGY OF 15 LB.-FT. AT 40° F. GALVANIZE UPPER 18" PER AASHTO M 232. NO WELDING SHALL BE PERMITTED ON ANCHOR BOLTS.

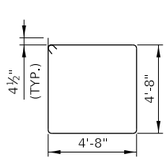
** 18" IS MINIMUM TO BE GALVANIZED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPTION.



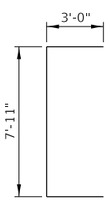
BAR v(E)



SECTION P-P



BAR h(E)



BAR u(E)

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION						
SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE	
<=110'	h(E)	17	#4	19'-5"		
	h_1(E)	17	#4	12'-9"		
	s(E)	1	#4	31'-9"		*
	v(E)	16	#10	33'-2"		
	u(E)	28	#8	13'-11"		
110'<"S"<=130'	h(E)	17	#4	19'-5"		
	h_1(E)	17	#4	12'-9"		
	s(E)	1	#6	31'-9"		*
	v(E)	16	#10	37'-2"		
	u(E)	28	#8	13'-11"		
130'<"S"<=150'	h(E)	17	#4	19'-5"		
	h_1(E)	17	#4	12'-9"		
	s(E)	1	#6	38'-9"		*
	v(E)	19	#10	40'-2"		
	u(E)	28	#8	13'-11"		

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

SHOULDER FOUNDATION TYPE I SCHEDULE			
SPAN "S"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	8.0	10.0	4,130
110'<"S"<=130'	8.0	11.4	4,900
130'<"S"<=150'	8.0	16.3	6,010

NOTE TO DESIGNER

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SHOULDER FOUNDATION TYPE I TABLE							
SPAN "S"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5½"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"<=130'	1'-6"	1'-5½"	32'-0"	3'-6"	9"	6"	22
130'<"S"<=150'	1'-6"	1'-6¾"	35'-0"	4'-0"	6"	6"	22

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

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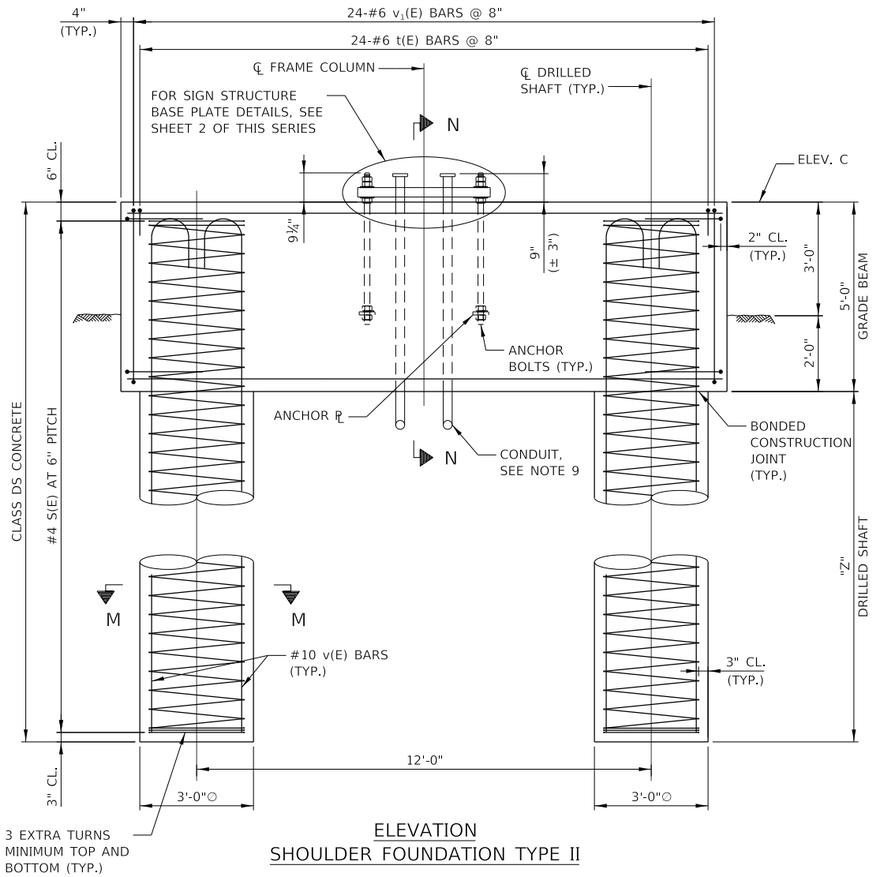
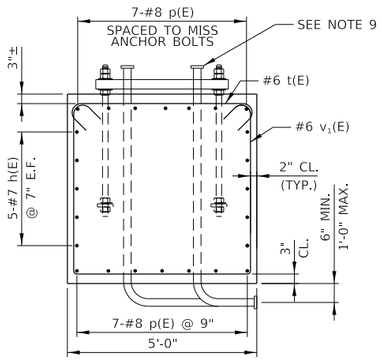
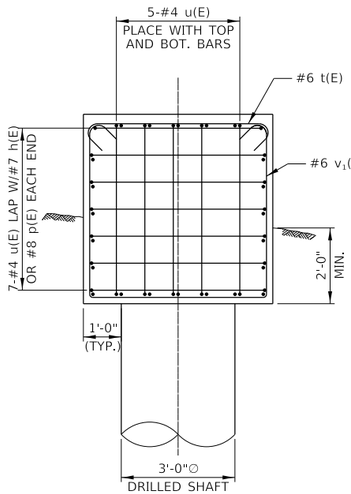


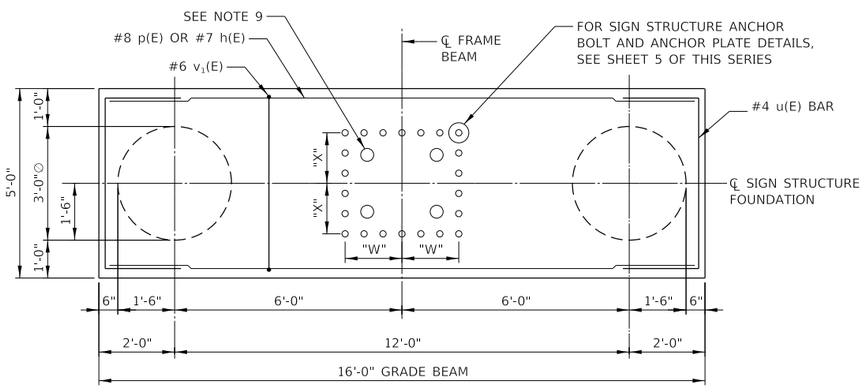
ELEVATION
SHOULDER FOUNDATION TYPE II



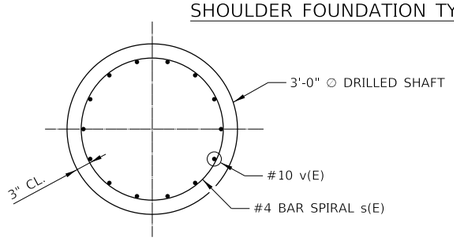
SECTION N-N



END VIEW



PLAN
SHOULDER FOUNDATION TYPE II



SECTION M-M
(TYPICAL BOTH SHAFTS)

SHOULDER FOUNDATION TYPE II SCHEDULE					
SPAN "S"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5½"	1'-4"	35.0	8,020
110'<"S"<=130'	42'-0"	1'-6"	1'-5½"	37.0	8,590
130'<"S"<=150'	46'-0"	1'-6"	1'-6¾"	39.0	9,150

NOTES:

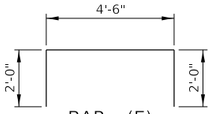
1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOB SITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
5. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D. COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
6. ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
9. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

NOTE TO DESIGNER

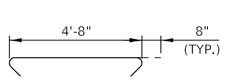
DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.

NOTE TO DESIGNER

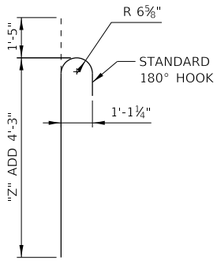
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.



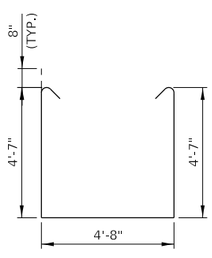
BAR u(E)



BAR t(E)



BAR v(E)



BAR v_1(E)

REINFORCEMENT BAR SCHEDULE (2 DRILLED SHAFTS AND 1 GRADE BEAM)					
SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
"S"<=110'	h(E)	10	#7	15'-8"	
	p(E)	14	#8	15'-8"	
	t(E)	24	#6	6'-0"	
	s(E)	2	#4	42'-3"	*
	v(E)	28	#10	43'-8"	
	v_1(E)	24	#6	15'-2"	
	u(E)	24	#4	8'-6"	
110'<"S"<=130'	h(E)	10	#7	15'-8"	
	p(E)	14	#8	15'-8"	
	t(E)	24	#6	6'-0"	
	s(E)	2	#4	46'-3"	*
	v(E)	28	#10	47'-8"	
	v_1(E)	24	#6	15'-2"	
	u(E)	24	#4	8'-6"	
130'<"S"<=150'	h(E)	10	#7	15'-8"	
	p(E)	14	#8	15'-8"	
	t(E)	24	#6	6'-0"	
	s(E)	2	#4	50'-3"	*
	v(E)	28	#10	51'-8"	
	v_1(E)	24	#6	15'-2"	
	u(E)	24	#4	8'-6"	

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

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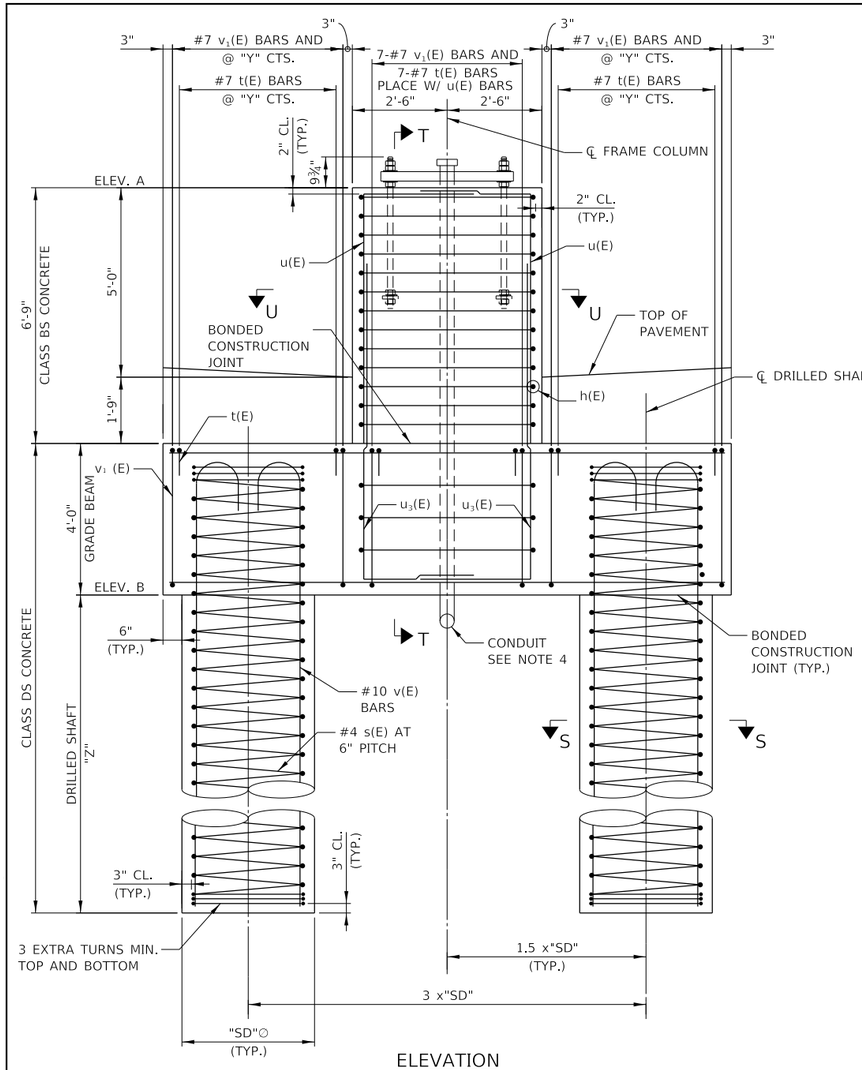
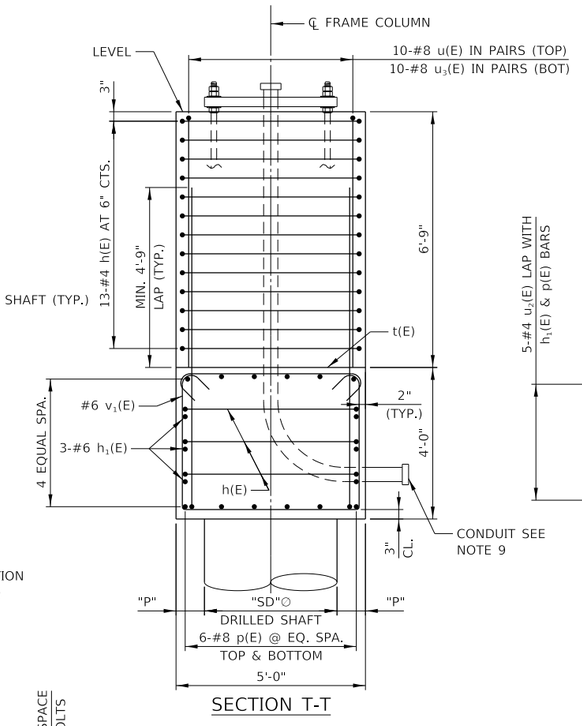
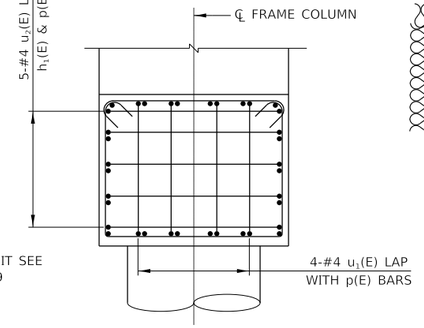


ELEVATION
MEDIAN FOUNDATION



SECTION T-T



END VIEW

NOTES:

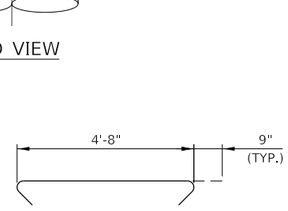
1. SEE SHEET 5 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
2. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE TOP OF GRADE BEAM.
3. SEE SHEET 8 OF THIS SERIES FOR CONCRETE MEDIAN BARRIER TRANSITION. COST OF BARRIER TRANSITION INCLUDED IN COST OF "CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F".
4. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.
5. PROTECTIVE COAT SHALL BE APPLIED TO TRAFFIC AND TOP FACES OF CONCRETE CRASH WALL.

NOTE TO DESIGNER

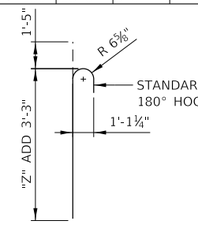
DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.

MEDIAN FOUNDATION TABLE

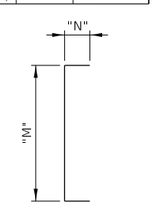
SPAN "S"	"Z"	"SD"	"P"	"W"	"X"	"Y"	NO. ANCHOR BOLT
<=110'	30'-0"	3'-0"	1'-0"	1'-5½"	1'-4"	6"	18
110'<"S"<=130'	28'-0"	3'-6"	9"	1'-6"	1'-5½"	6"	22
130'<"S"<=150'	28'-0"	3'-6"	9"	1'-6"	1'-6¾"	5"	22



BAR t(E)

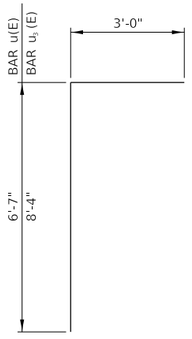


BAR v(E)

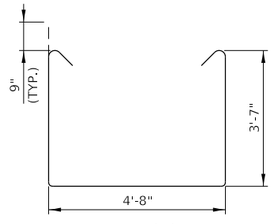


BAR u_1(E)
BAR u_2(E)

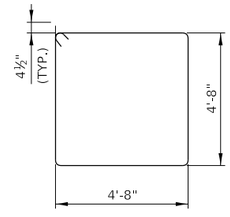
BAR	"M"	"N"
u_1(E)	3'-7"	8"
u_2(E)	4'-6"	8"



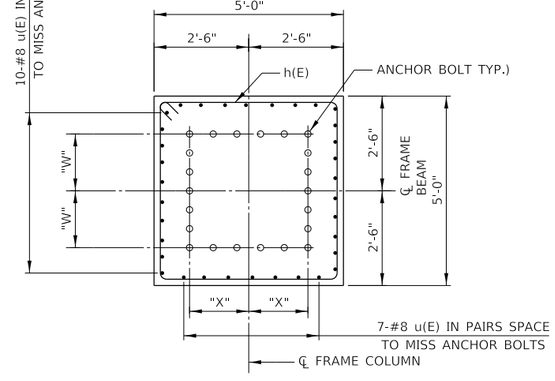
BAR u(E)
BAR u_3(E)



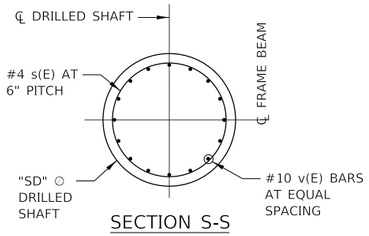
BAR v_1(E)



BAR h(E)



SECTION U-U



SECTION S-S

REINFORCEMENT BAR SCHEDULE
FOR ONE FOUNDATION

SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
"S"<=110'	h_1(E)	6	#6	12'-8"	
	p(E)	12	#8	12'-8"	
	t(E)	23	#7	6'-2"	
	s(E)	2	#4	33'-3"	*
	v(E)	28	#10	34'-8"	
	v_1(E)	23	#7	13'-4"	
110'<"S"<=130'	h_1(E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	27	#7	6'-2"	
	s(E)	2	#4	31'-3"	*
	v(E)	32	#10	32'-8"	
	v_1(E)	27	#7	13'-4"	
130'<"S"<=150'	h_1(E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	31	#7	6'-2"	
	s(E)	2	#4	31'-3"	*
	v(E)	34	#10	32'-8"	
	v_1(E)	31	#7	13'-4"	

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

REINFORCEMENT BAR SCHEDULE
FOR ONE FOUNDATION

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	16	#4	19'-5"	
u(E)	34	#8	9'-7"	
u_1(E)	8	#4	4'-11"	
u_2(E)	10	#4	5'-10"	
u_3(E)	34	#8	11'-4"	

NOTE TO DESIGNER

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MEDIAN FOUNDATION SCHEDULE

SPAN "S"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)	PROTECTIVE COAT (SQ YD)
<=110'	6.3	25.3	8,540	8.3
110'<"S"<=130'	6.3	31.1	9,220	8.3
130'<"S"<=150'	6.3	31.1	9,650	8.3

Illinois Tollway

OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN STRUCTURE
DETAILS

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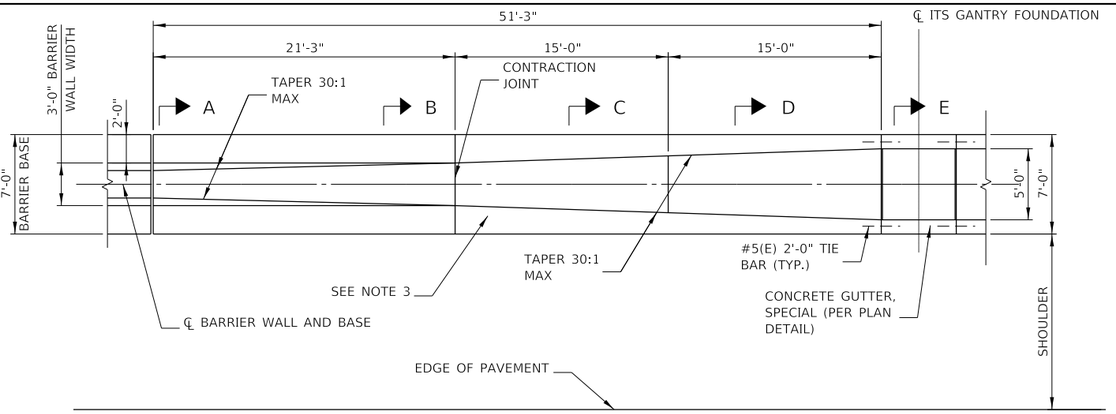
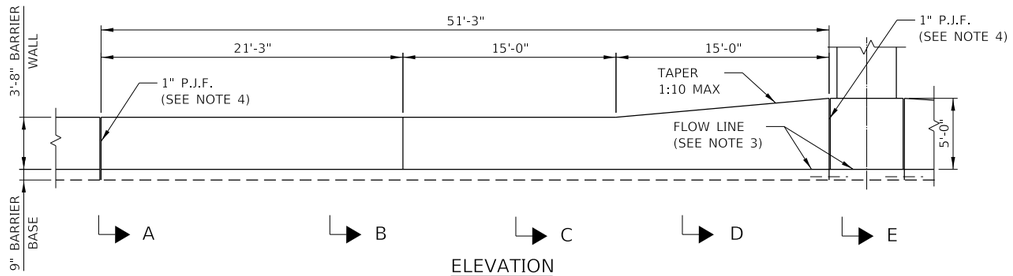
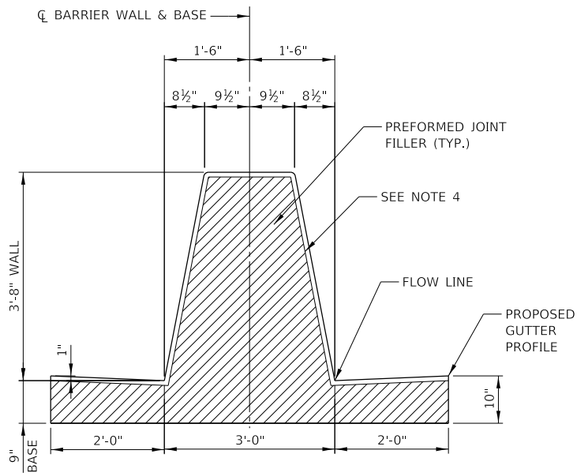


PLAN

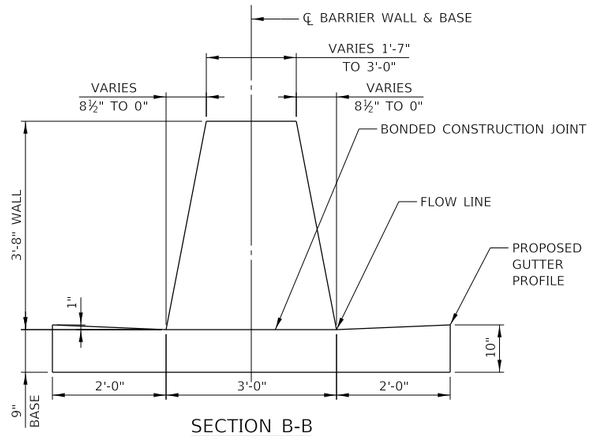


ELEVATION

CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY



SECTION A-A



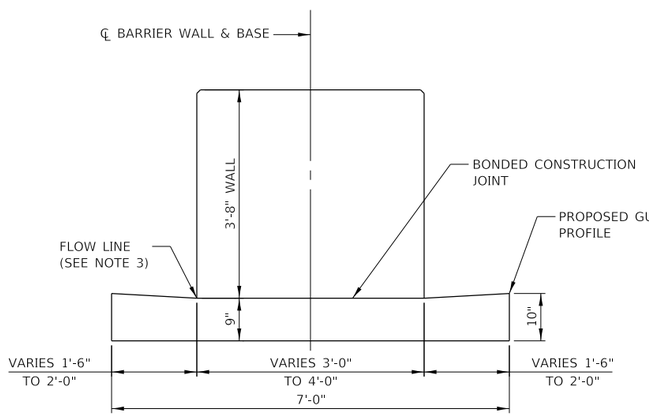
SECTION B-B

NOTE TO DESIGNER

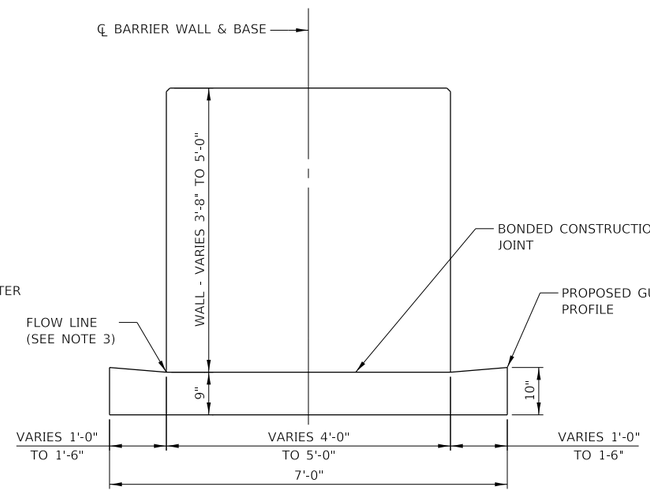
1. WITHIN SECTION B-B, THE GUTTER PORTION OF THE BARRIER BASE REMAINS 2'-0"; HERETOFORE, STANDARD TYPE 20A F&G SHALL BE USED.
2. WITHIN SECTION C-C & D-D, THE GUTTER PORTION OF THE BARRIER BASE IS LESS THAN 2'-0"; THEREFORE, NON-ILLINOIS TOLLWAY STD. F&G SHALL BE USED.
3. WITHIN SECTION B-B & C-C, THE BARRIER HEIGHT REMAINS 44", THIS ALLOWS THE PLACEMENT OF LIGHT POLE FOUNDATIONS WITHIN THIS AREA.
4. WITHIN SECTION D-D, THE BARRIER HEIGHT IS INCREASING FROM 44" TO 60", THE LIGHT POLE FOUNDATIONS SHALL NOT BE PLACED WITHIN THIS AREA.

NOTES:

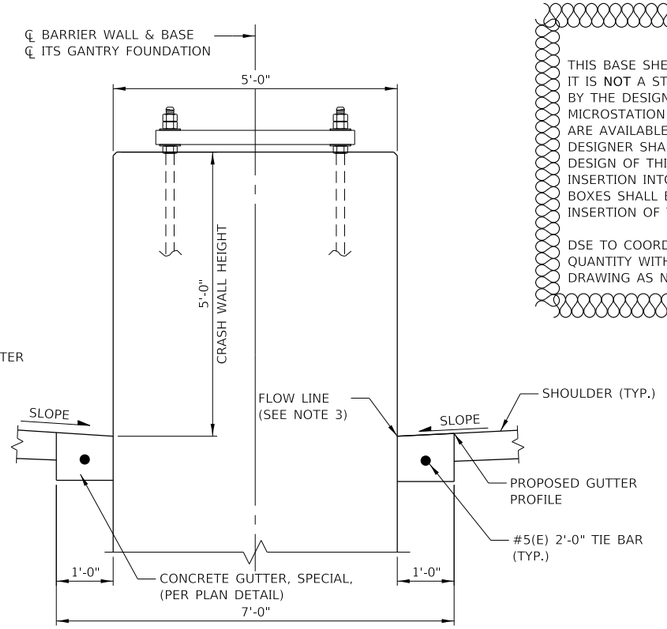
1. 2" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL AND IN THE CONCRETE BARRIER BASE. CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30'.
2. THE FORMING OF CONTRACTION JOINTS SHALL BE DONE BY SAWING.
3. GUTTER PROFILE IN THE VICINITY OF SAG VERTICAL CURVES, ALONG FLAT GRADES AND AT THE MEETING OF PROPOSED AND EXISTING GUTTER, SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.
4. PROVIDE NON-STAINING GRAY ONE COMPONENT NON-SAG ELASTOMERIC GUN GRADE POLYURETHANE SEALANT WITH BACKER ROD.



SECTION C-C



SECTION D-D



SECTION E-E

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

DSE TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. MODIFY DRAWING AS NECESSARY.

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

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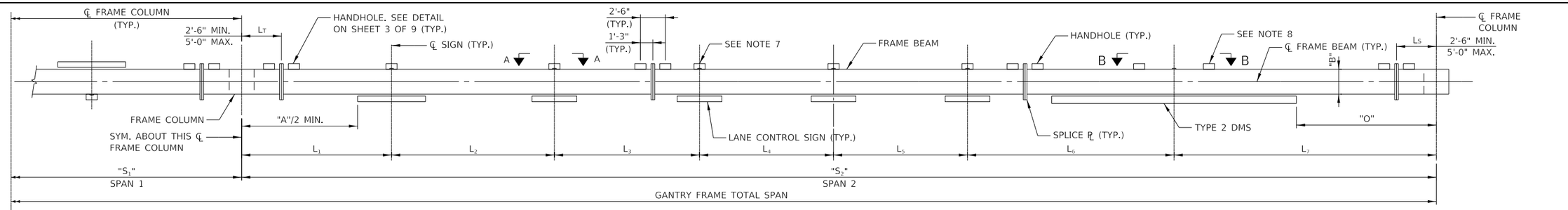
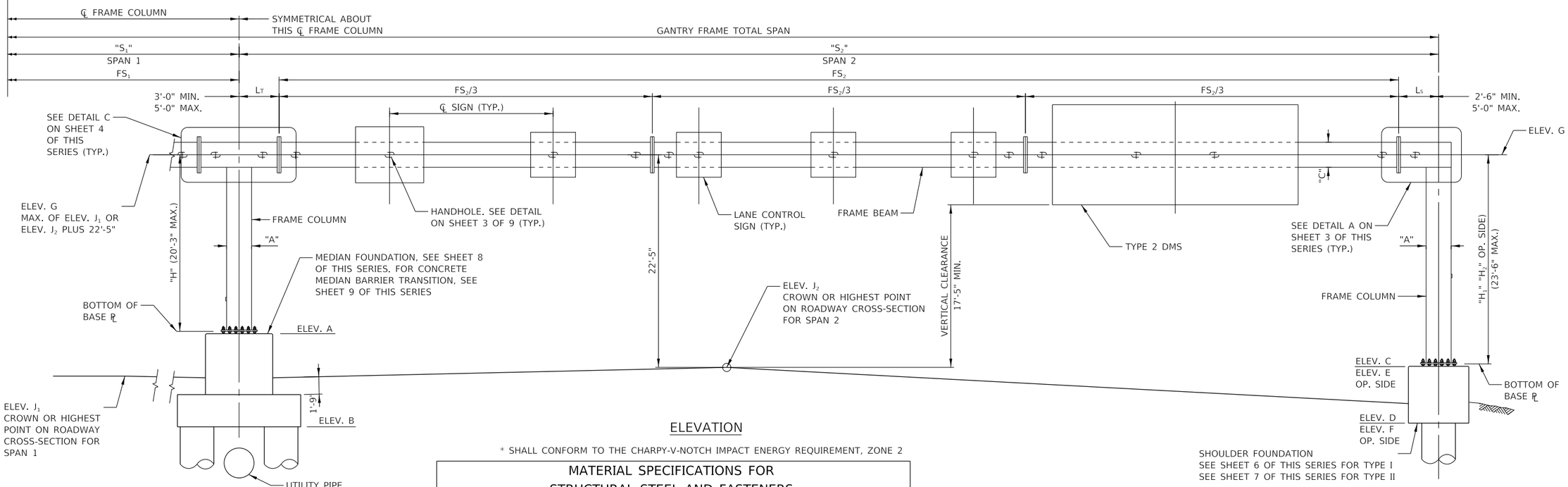


PLAN



ELEVATION

NOTES:

1. SEE SHEET 2 OF THIS SERIES FOR VIEW A-A, VIEW B-B AND DESIGN SUMMARY TABLE.
2. CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
3. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L_1 THROUGH L_7)
4. FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 3 COLUMNS AND 6 FIELD SECTIONS.
5. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF EACH FOUNDATION, ANCHOR BOLTS AND DETAILS AFFECTING GANTRY FRAME FABRICATION AND CONSTRUCTION. NOTIFY THE ENGINEER OF ANY VARIATIONS FROM CONTRACT PLANS AND MAKE NECESSARY APPROVED ADJUSTMENTS. SUCH VARIATIONS DO NOT CONSTITUTE ADDITIONAL COMPENSATION FOR CHANGE IN SCOPE OF WORK. CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
6. WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO ¼" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.
7. IF THE DISTANCE BETWEEN AN LCS TYPE 1 OR LCS TYPE 2 CENTERLINE HANDHOLE AND THE HANDHOLD ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SPLICE HANDHOLE SHALL BE ELIMINATED.
8. IF THE DISTANCE BETWEEN A TYPE 2 DMS SIGN HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SIGN HANDHOLD SHALL BE ELIMINATED, AND THE HANDHOLE ADJACENT TO THE SPLICE SHALL BE USED INSTEAD. THE CONDUIT COUPLERS SHALL BE INCLUDED AT THE HANDHOLE ADJACENT TO THE SPLICE IF THE TYPE 2 DMS SIGN HANDHOLE IS ELIMINATED.
9. LIMIT DMS TO THE FACE OF COLUMN WITH 1'-0" MAXIMUM OVERHANG FROM THE SUPPORT BRACKET. MAINTAIN 9" MINIMUM DISTANCE BETWEEN SPLICE AND SUPPORT BRACKET.

* SHALL CONFORM TO THE CHARPY-V-NOTCH IMPACT ENERGY REQUIREMENT, ZONE 2

MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL AND FASTENERS

ELEMENT OF STRUCTURE	SPECIFICATION	F_y(ksl)	F_u(ksl)
STRUCTURAL STEEL TUBE FRAME (HSS)	*ASTM A1065 GRADE 50	50	60
STRUCTURAL STEEL TUBE MOUNTING BEAMS (HSS)	ASTM A500, GRADE B	46	58
STEEL SHAPES	ASTM A709, GRADE 50	50	65
STEEL PLATES	ASTM A572 GR. 50 OR ASTM A709 GR. 50	50	65
STEEL BOLTS	ASTM 325 TYPE 1	--	105
SIGN BRACKET RODS	ASTM A307	--	60
LOCK NUTS	ASTM A194 GR. 8F OR ASTM A194 GR. 2H	--	--
NUTS	ASTM A563 GRADE DH	--	--
STEEL WASHERS	ASTM F436	--	--
STAINLESS STEEL WASHERS	ASTM A240, TYPE 302	--	--
ANCHOR BOLTS	AASHTO M 314 OR ASTM F1554	55	75

NOTE TO DESIGNER

PROVIDE APPROPRIATE PROTECTION FOR SHOULDER FOUNDATION.
USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED IN LINE WITH SINGLE FACE CONCRETE BARRIER. THIS FOUNDATION REQUIRES MINIMUM 35 FT OF BARRIER ON EACH SIDE OF THE FOUNDATION TO RESIST LONGITUDINAL FORCE FROM THE GANTRY COLUMN.
USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED OUTSIDE CLEAR ZONE OR BEHIND GUARDRAIL.
PROVIDE SITE GROUNDING ELECTRODE SYSTEM DETAIL ACCORDING TO THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION 734.
REFERENCE BASE SHEET M-ITS-1101.
DIFFERENCE BETWEEN ELEV. A AND ELEV. C (OR ELEV. E) SHOULD NOT EXCEED 5'-0".

STRUCTURAL STEEL TUBE (HSS) FRAME TABLE

MAX. SPAN "S1" OR "S2"	FRAME COLUMN	FRAME BEAM	"A"	"B"	"C"	"O"	SPAN "S1" OR "S2"	CAMBER
<=110'	HSS 28x24x0.625	HSS 28x24x0.500	2'-0"	2'-4"	2'-0"	1'-0"	<=110'	3¼"
110'<"S"<=130'	HSS 28x28x0.625	HSS 28x24x0.625	2'-4"	2'-4"	2'-0"	1'-2"	110'<"S"<=130'	4½"
130'<"S"<=150'	HSS 30x30x0.625	HSS 30x30x0.625	2'-6"	2'-6"	2'-6"	1'-3"	130'<"S"<=150'	5"

TOTAL BILL OF MATERIAL

PAY ITEM	ITEM	UNIT	TOTAL
JS734G10	FOUNDATION FOR ITS GANTRY FRAME	CU YD	XXX.X
JS740110	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	XXX'-XX"
JS740130	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	XXX'-XX"
JS740150	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	XXX'-XX"
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	XXXX
50300300	PROTECTIVE COAT	SQ YD	XXX.X

NOTE TO DESIGNER

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Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

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GENERAL NOTES:

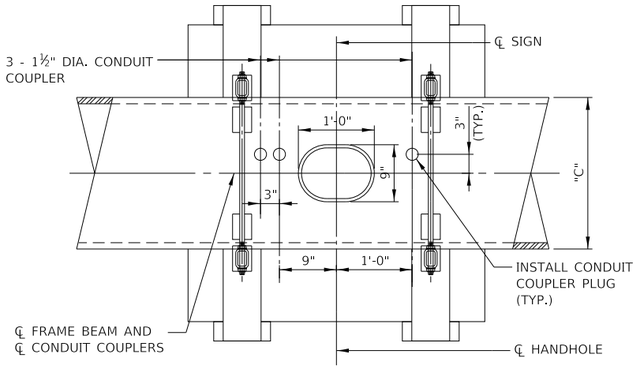
1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A ¾" x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS:

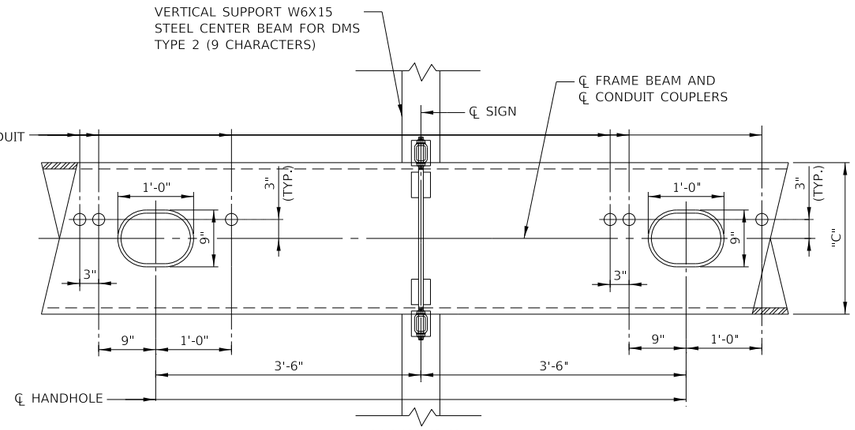
1. REINFORCEMENT BARS, INCLUDING REINFORCEMENT BARS, EPOXY-COATED SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS SECTION 508 AND ARTICLE 1006.10.
2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
4. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.
5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

CONSTRUCTION SPECIFICATIONS:

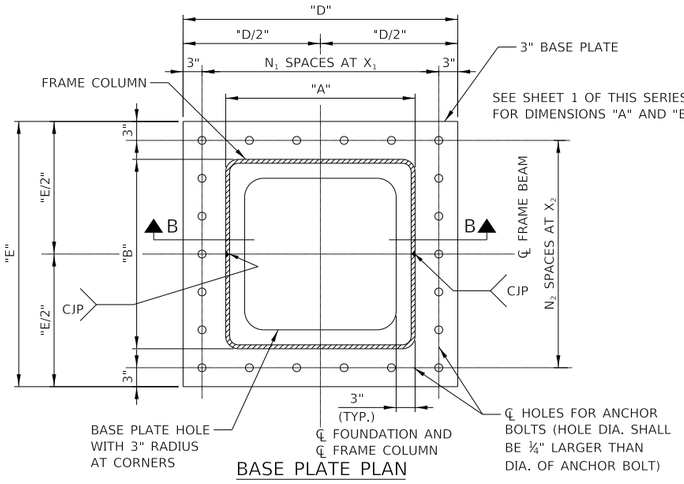
1. ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS ISSUED MARCH, 2015 TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2015.
3. ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012.



VIEW A-A



VIEW B-B



BASE PLATE PLAN

DESIGN LOADING:

WIND LOAD CRITERIA

SIGN PANEL	60.7 P.S.F.	BASIC WIND SPEED	120 M.P.H.
COLUMN/BEAM	60.7 P.S.F.	G	1.14
TYPE 2 DMS	62 P.S.F.	I_F (FATIGUE IMPORTANCE FACTOR)	1.0
		K_Z	1.0

TL-5 DESIGN REQUIREMENTS, WHERE APPLICABLE FOR FOUNDATION ONLY, PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION WITH CURRENT INTERIMS

ICE = 3 P.S.F. (APPLIED WITH A FACTOR OF 1.0 FOR STRENGTH I ONLY)

EQUIPMENT LOADS:

LANE CONTROL SIGNS	220 LB. MAX. (4'-0" H. X 4'-0" W. X 1'-2" D. MAX.)
TYPE 2 DMS	2,700 LB. MAX. (7'-9" H. X 25'-10" W. X 1'-2" D. MAX.)

ITS GANTRY FRAMES AND FOUNDATIONS ARE DESIGNED FOR MAX. LOADING OF 2-TYPE 2 DMS PER SPAN (ONE OVER EACH SHOULDER) AND 1-LANE CONTROL SIGN IN EACH ADDITIONAL 12' LANE.

DESIGN STRESSES FOR REINFORCED CONCRETE:

f'_c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS BS) = 4,000 P.S.I.
f'_c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS DS) = 4,000 P.S.I.
f_y = YIELD STRENGTH OF REINFORCEMENT BARS (GRADE 60) = 60,000 P.S.I.

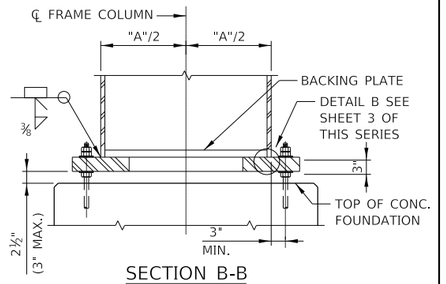
DESIGN SPECIFICATIONS:

1. ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, LATEST EDITION.
2. AASHTO LRFD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION WITH CURRENT INTERIMS
3. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION, 2020.
4. ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012.
5. ILLINOIS TOLLWAY GEOTECHNICAL ENGINEER MANUAL, LATEST EDITION.

BASE PLATE TABLE - TYPE N

MAX. SPAN "S_1" OR "S_2"	"D"	"E"	N_1	X_1	N_2	X_2	ANCHOR BOLT DIAMETER	NO. ANCHOR BOLT
<=110'	3'-2"	3'-5"	4	8"	5	7"	1¾"	18
110'<"S"<=130'	3'-5"	3'-6"	5	7"	6	6"	1¾"	22
130'<"S"<=150'	3'-7½"	3'-6"	5	7½"	6	6"	1¾"	22

NOTE:
WHERE THE DISTANCE BETWEEN SIGN ACCESS HOLE(S) AND THE ACCESS HOLES ADJACENT TO THE SPLICE ARE LESS THAN 6'-0", THE SIGN ACCESS HOLE SHALL BE ELIMINATED AND THE HOLE ADJACENT TO THE SPLICE IS USED INSTEAD. CONDUIT COUPLERS SHALL BE INCLUDED AT THE ACCESS HOLE ADJACENT TO THE SPLICE IF SIGN ACCESS HOLE IS ELIMINATED.



SECTION B-B

DESIGN SUMMARY

STRUCTURE NUMBER	STATION	SPANS "S_1" (FT)	SPANS "S_2" (FT)	TOTAL SPAN (FT)	ELEVATIONS A	B	C	D	E	F	G	J_1	J_2	FOUNDATION TYPE	PROPOSED MINIMUM VERTICAL CLEARANCE	F_{S_1}	FS_2	L_S	L_T	H	H_1	H_2	FOUNDATION CLASS BS CONCRETE (CU YD)	FOUNDATION CLASS DS CONCRETE (CU YD)	REINF. BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
XXX-XXXX	XXXXX+XX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXXXX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXXX-XX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XXX.XX	XXX.XX	X,XXX	XXX.XX
																						TOTAL				

NOTE TO DESIGNER

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1. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
2. NO STANDARD DRILLED SHAFT FOUNDATIONS WERE DESIGNED OR DETAILED FOR COHESION LESS SOIL CONDITIONS. REGARDLESS, THE DESIGNER MUST CONDUCT A SUBSURFACE INVESTIGATION AT EACH OVERHEAD SIGN STRUCTURE FOUNDATION TO DETERMINE THE ACTUAL SOIL PROPERTIES. SHOULD THE INVESTIGATION REVEAL THE PRESENCE OF COHESION LESS SOIL OR COHESIVE SOILS WITH PROPERTIES LESS THAN THE AVERAGES INDICATED IN THIS STANDARD, THE DESIGNER SHALL DESIGN AND DETAIL THE DRILLED SHAFT FOUNDATIONS TO MEET THE ACTUAL SOIL CONDITIONS.
3. DESIGN AND CONSTRUCTION SPECIFICATIONS: THE DESIGNER IS RESPONSIBLE FOR UPDATING THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION TO THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION USED IN DESIGN.
4. DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
5. DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.

STRUCTURE NUMBER	STATION	SPAN 1 L_7	L_6	L_5	L_4	L_3	L_2	L_1	SPAN 2 L_1	L_2	L_3	L_4	L_5	L_6	L_7
XXX-XXXX	XXXXX+XX.XX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

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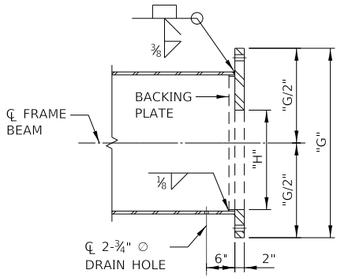
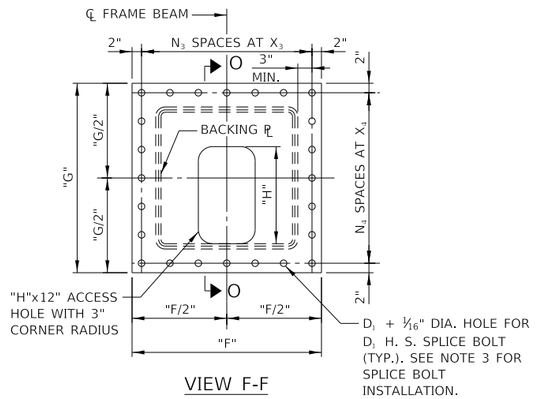
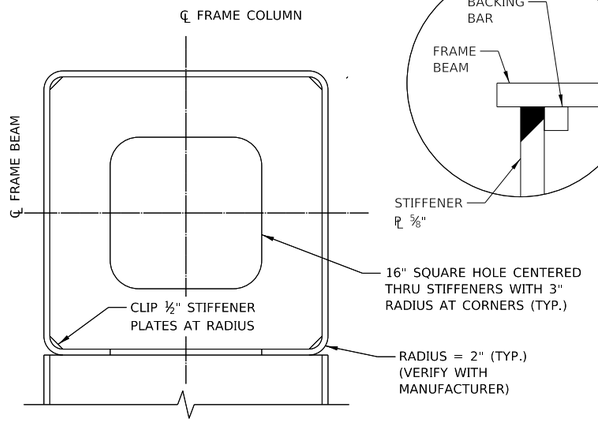


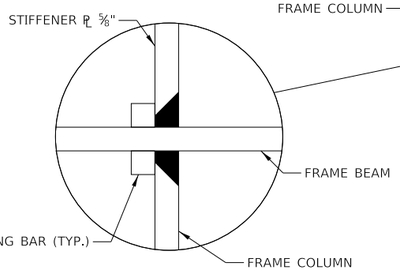
SECTION O-O
SPLICE PLATE DETAIL

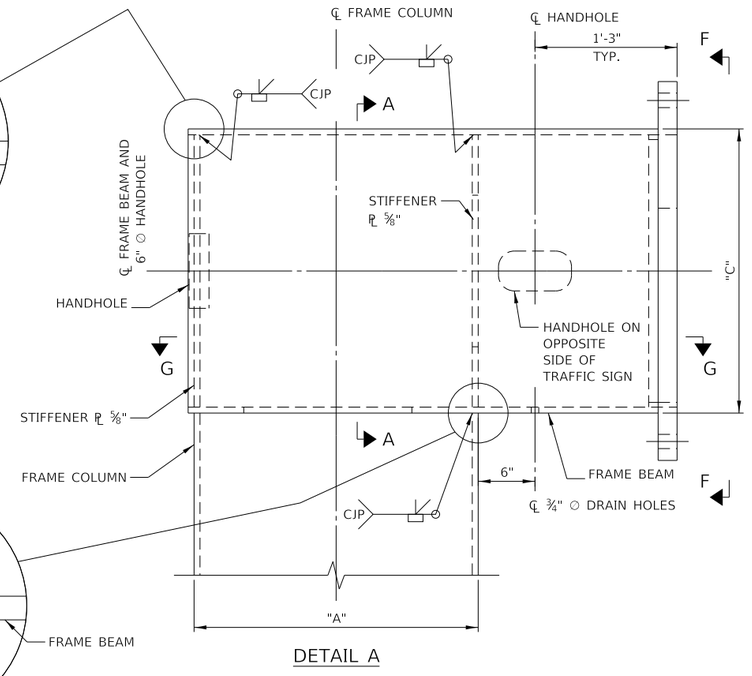


VIEW F-F

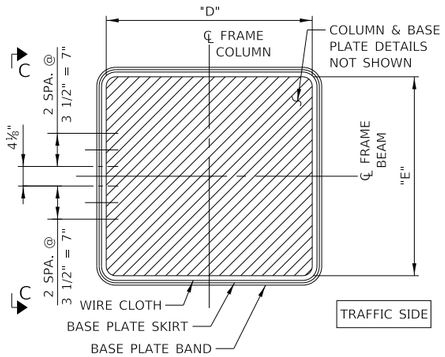


SECTION A-A

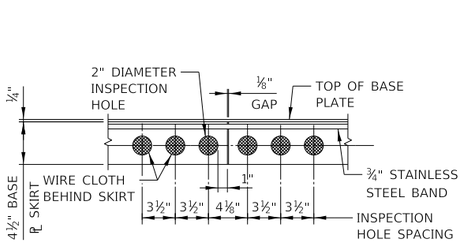




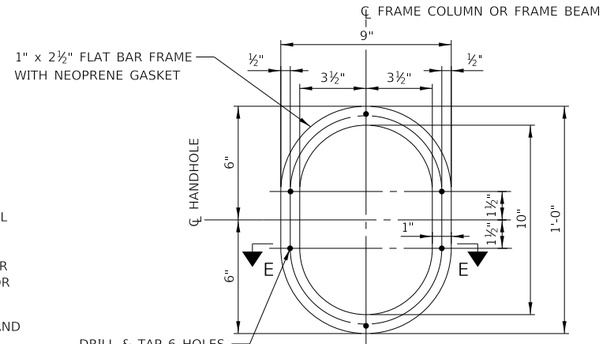
DETAIL A



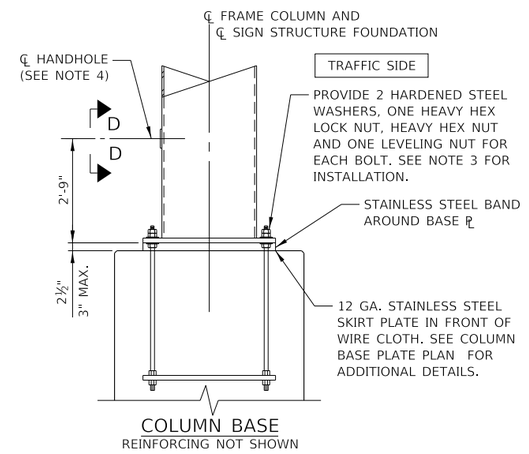
COLUMN BASE PLATE PLAN



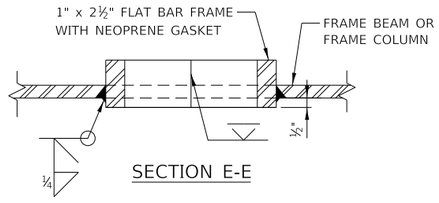
VIEW C-C (BASE PLATE SKIRT)



VIEW D-D
HANDHOLE DETAIL



COLUMN BASE
REINFORCING NOT SHOWN



SECTION E-E

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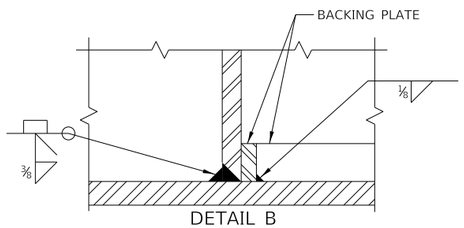
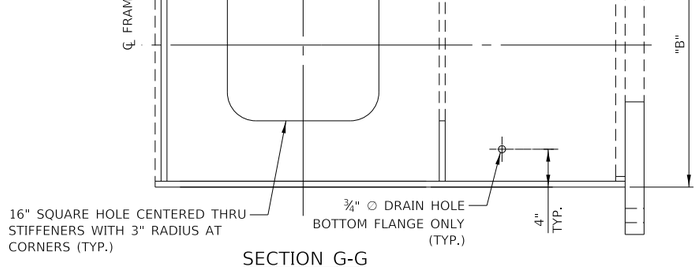
VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.



DETAIL B
BASE PL SHOWN (SPLICE PL SIM.)



SECTION G-G

NOTE:

1. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
2. SEE SHEET 2 OF THIS SERIES FOR DIMENSIONS "D" AND "E".
3. INSTALLATION AND INSPECTION OF SPLICE BOLTS AND ANCHOR BOLTS SHALL COMPLY WITH ILLINOIS TOLLWAY SPECIAL PROVISION "INTELLIGENT TRANSPORTATION SYSTEMS GANTRY FRAME (STEEL)".
4. SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.

SPLICE PLATE TABLE

MAX. SPAN "S_1" OR "S_2"	"F"	"G"	"H"	"J"	N_3	X_3	N_4	X_4	SPLICE BOLT DIAMETER (D_1)	NO. SPLICE BOLT
<=110'	3'-1"	2'-8½"	1'-6"	2¼"	6	5½"	6	4¾"	1"	24
110'<"S"<=130'	3'-0½"	2'-10"	1'-6"	2¼"	5	6½"	5	6"	1¼"	20
130'<"S"<=150'	3'-4"	3'-4"	1'-9"	2⅜"	6	6"	6	6"	1¼"	24

Illinois Tollway

OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN STRUCTURE
DETAILS

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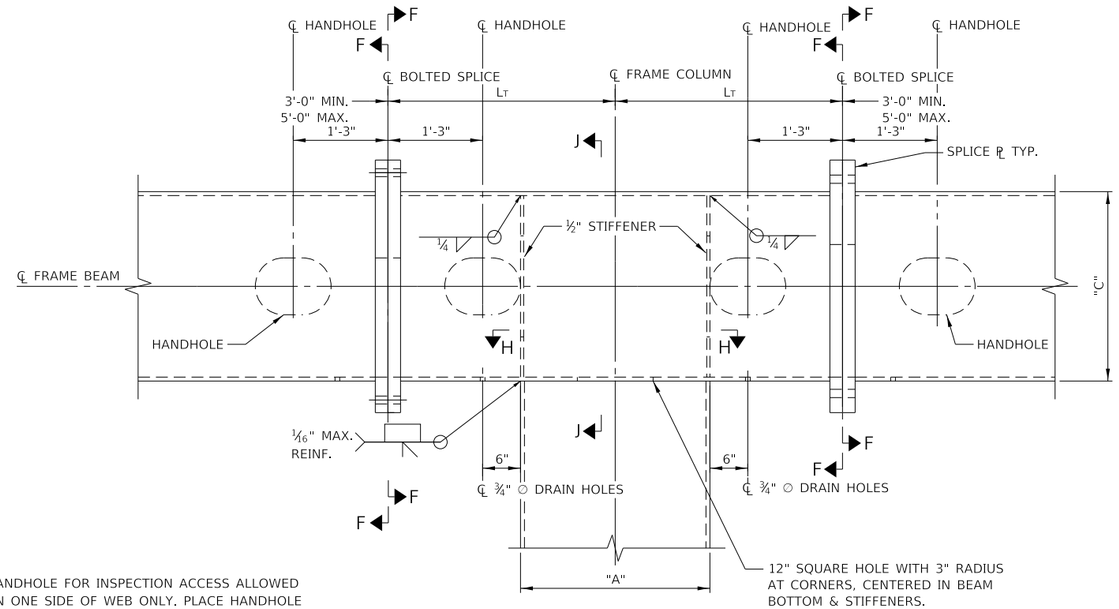
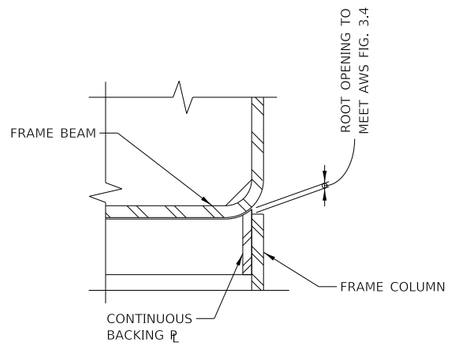


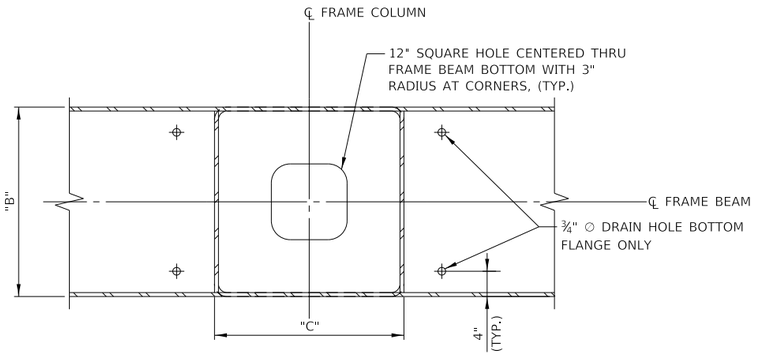
DETAIL C

NOTE

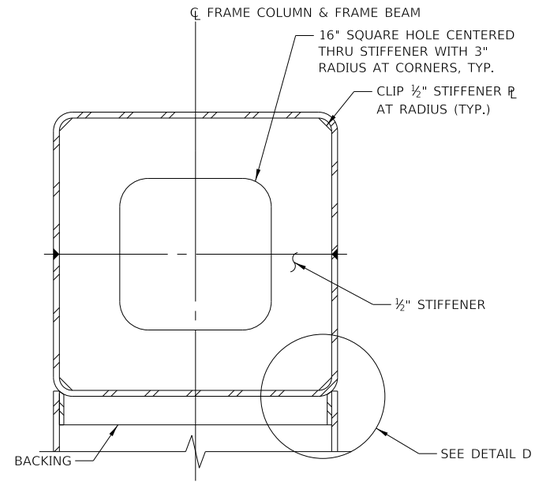
1. HANDHOLE FOR INSPECTION ACCESS ALLOWED ON ONE SIDE OF WEB ONLY. PLACE HANDHOLE ON SAME SIDE AS OTHER HANDHOLES.
2. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
3. SEE SHEET 3 OF THIS SERIES FOR SECTION F-F.



DETAIL D



SECTION H-H



SECTION J-J

AWS FIG. 3.6 MAY BE USED AT THE FABRICATOR'S OPTION.

WELDING SHALL NOT BEGIN UNTIL THE ENGINEER HAS INSPECTED AND APPROVED FIT-UP OF THE JOINT.

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Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

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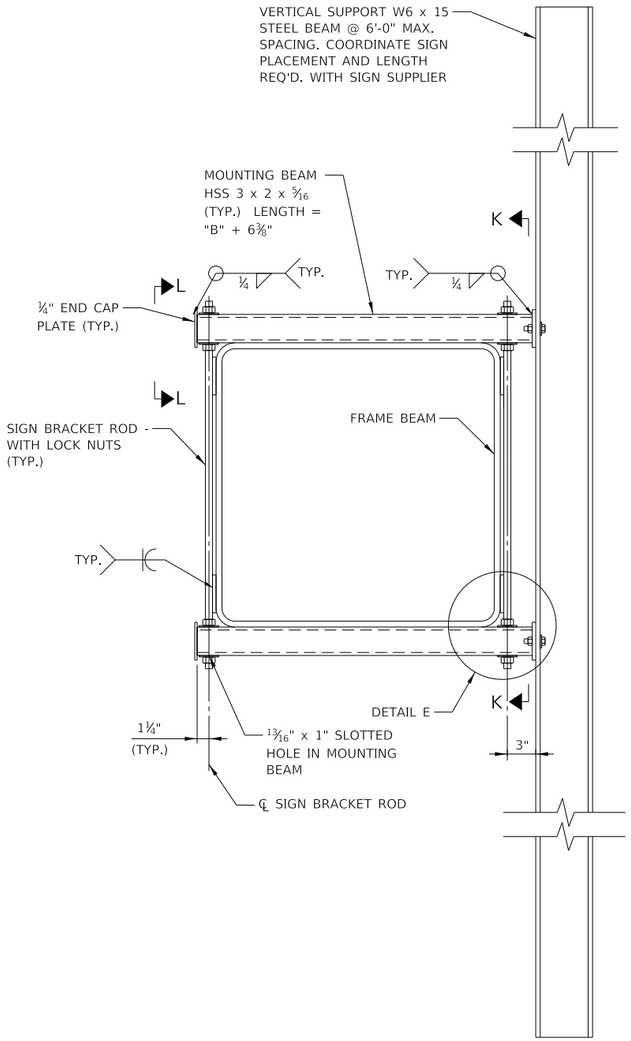
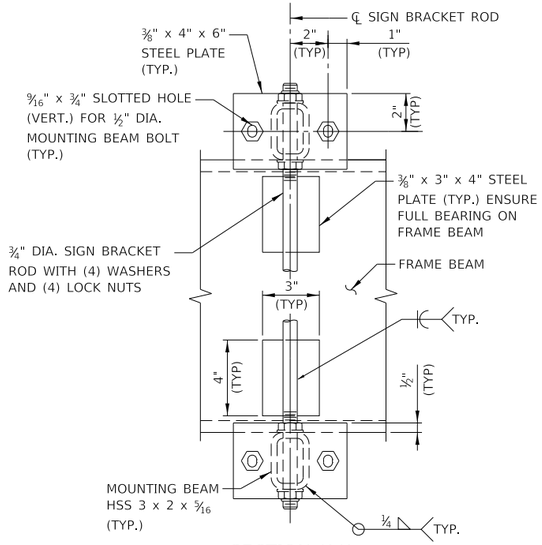
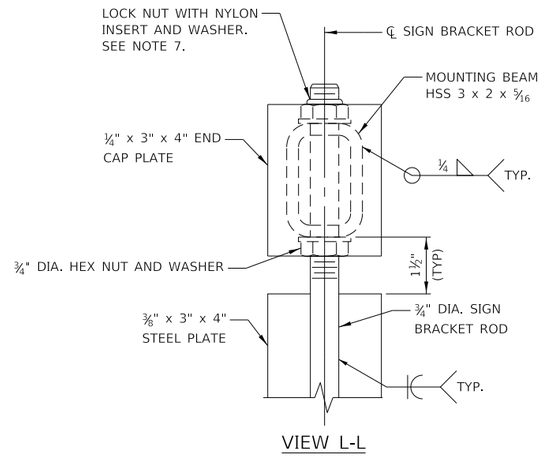


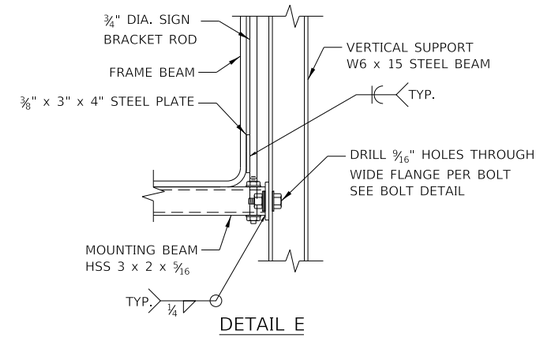
CONNECTION SIDE VIEW



SECTION K-K

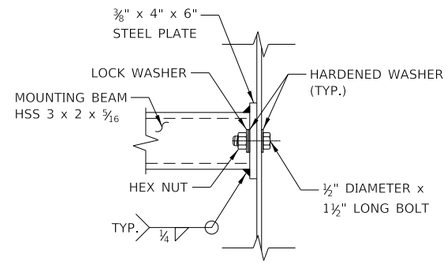


VIEW L-L



DETAIL E

VERTICAL SUPPORT TABLE		
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5



BOLT DETAIL

SIGN BRACKET ROD NOT SHOWN FOR CLARITY

NOTES:

1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED BY MANUFACTURER. VERIFY VERTICAL SPACING WITH HOLES ON W6x15 VERTICAL SUPPORT.
4. PROVIDE HIGH STRENGTH BOLTS WITH WASHERS AND LOCK NUTS TO FASTEN DMS AND LANE CONTROL SIGN TO VERTICAL SUPPORT MEMBERS.
5. GALVANIZE ALL NON-STAINLESS STEEL PARTS.
6. SIGN BRACKET RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307.
7. LOCK NUTS SHALL BE STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A194 GRADE 8F OR ASTM A194 GRADE 2H.

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Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
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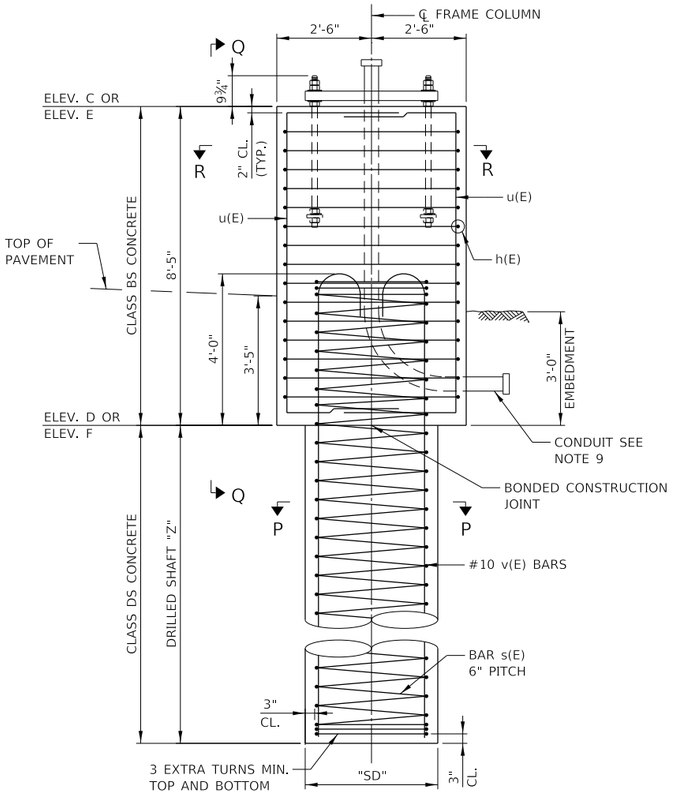
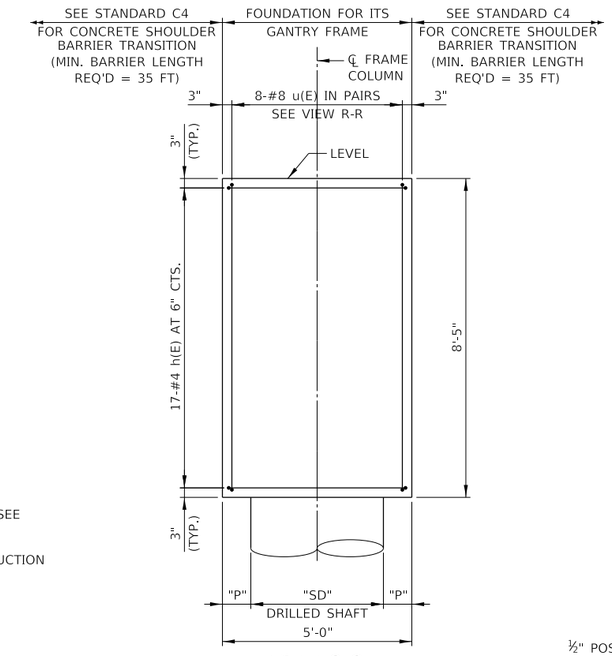
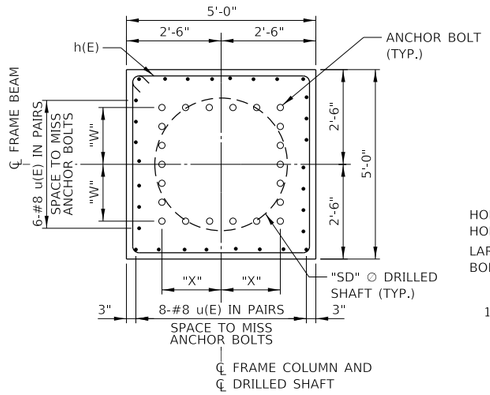


ELEVATION
SHOULDER FOUNDATION TYPE I

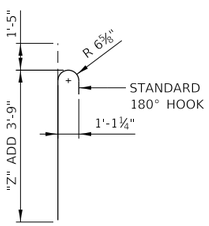


VIEW Q-Q

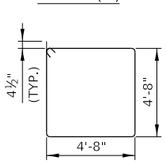


SECTION R-R

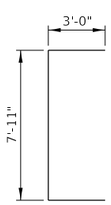
SECTION P-P



BAR v(E)



BAR h(E)



BAR u(E)

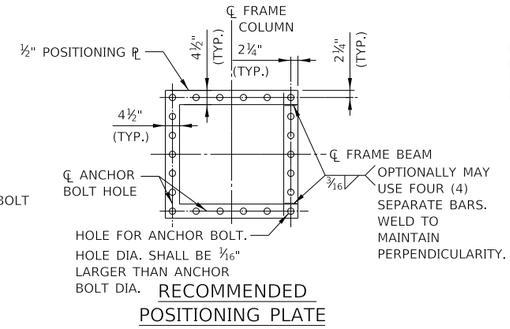
SHOULDER FOUNDATION
TYPE I SCHEDULE

MAX. SPAN "S_1" OR "S_2"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	7.8	10.0	4,120
110'<"S"<=130'	7.8	10.0	4,630
130'<"S"<=150'	7.8	16.3	5,850

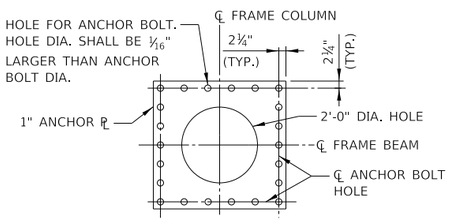
REINFORCEMENT BAR SCHEDULE
FOR ONE FOUNDATION

SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
<=110'	h(E)	17	#4	19'-5"	
	s(E)	1	#4	31'-9"	∗
	v(E)	17	#10	33'-2"	
	u(E)	28	#8	13'-11"	
110'<"S"<=130'	h(E)	17	#4	19'-5"	
	s(E)	1	#5	31'-9"	∗
	v(E)	16	#10	37'-2"	
	u(E)	28	#8	13'-11"	
130'<"S"<=150'	h(E)	17	#4	19'-5"	
	s(E)	1	#5	38'-9"	∗
	v(E)	20	#10	40'-2"	
	u(E)	28	#8	13'-11"	

∗ THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.



RECOMMENDED
POSITIONING PLATE



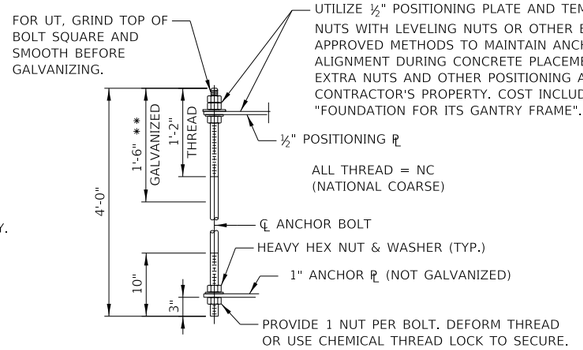
ANCHOR PLATE DETAIL

NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOBSITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
5. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D (OR ELEV. F). COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
6. ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
9. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

NOTE TO DESIGNER

DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.



ANCHOR BOLT DETAIL

ANCHOR BOLTS SHALL CONFORM TO AASHTO M314 OR ASTM F1554 GRADE 55 AND MEET CHARPY V-NOTCH (CVN) ENERGY OF 15 LB.-FT. AT 40° F. GALVANIZE UPPER 18" PER AASHTO M 232. NO WELDING SHALL BE PERMITTED ON ANCHOR BOLTS.

** 18" IS MINIMUM TO BE GALVANIZED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPTION.

SHOULDER FOUNDATION TYPE I TABLE

MAX. SPAN "S1" OR "S2"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5½"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"<=130'	1'-6"	1'-5½"	28'-0"	3'-6"	9"	5"	22
130'<"S"<=150'	1'-6"	1'-6¾"	35'-0"	4'-0"	6"	5"	22

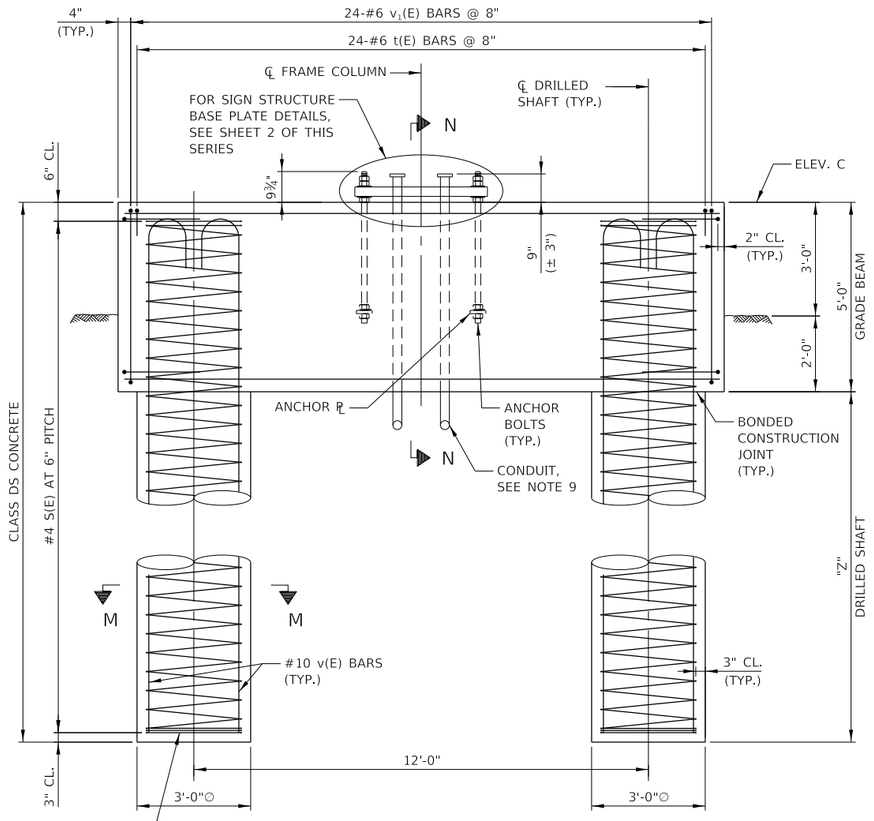
NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

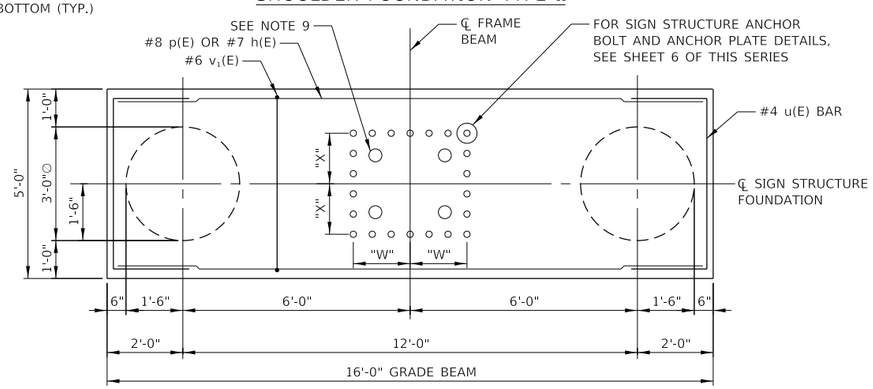
Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

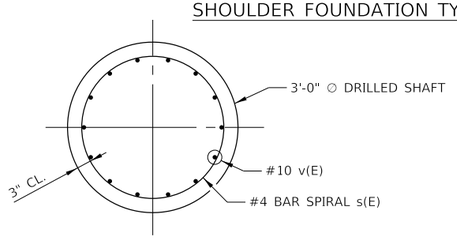
VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-730	6 OF 9



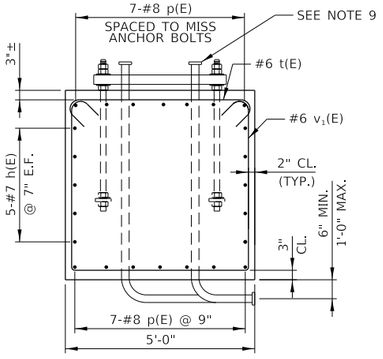
ELEVATION
SHOULDER FOUNDATION TYPE II



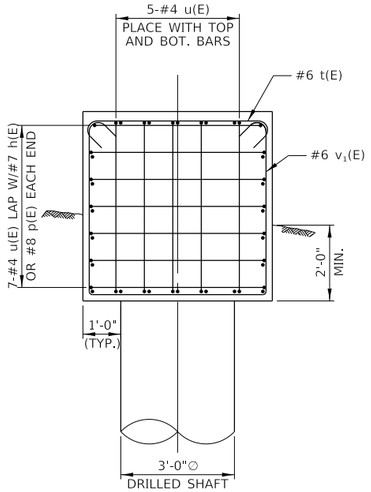
PLAN
SHOULDER FOUNDATION TYPE II



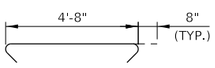
SECTION M-M
(TYPICAL BOTH SHAFTS)



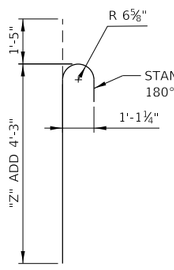
SECTION N-N



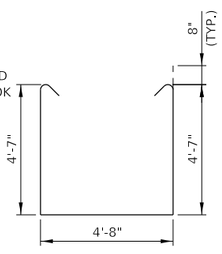
END VIEW



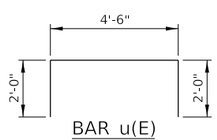
BAR t(E)



BAR v(E)



BAR v_1(E)



BAR u(E)

NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOB SITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
5. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D (OR ELEV. F). COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
6. ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
9. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

NOTE TO DESIGNER

DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.

SHOULDER FOUNDATION TYPE II SCHEDULE

MAX. SPAN "S1" OR "S2"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5½"	1'-4"	34.7	7,990
110'<"S"<=130'	42'-0"	1'-6"	1'-5½"	36.8	8,570
130'<"S"<=150'	46'-0"	1'-6"	1'-6¾"	39.0	9,130

NOTE TO DESIGNER

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REINFORCEMENT BAR SCHEDULE
(2 DRILLED SHAFTS AND 1 GRADE BEAM)

SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE	
"S"<=110'	h(E)	10	#7	15'-8"		
	p(E)	14	#8	15'-8"		
	t(E)	24	#6	6'-0"		
	s(E)	2	#4	42'-3"		*
	v(E)	28	#10	43'-8"		
	v_1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		
110'<"S"<=130'	h(E)	10	#7	15'-8"		
	p(E)	14	#8	15'-8"		
	t(E)	24	#6	6'-0"		
	s(E)	2	#4	46'-3"		*
	v(E)	28	#10	47'-8"		
	v_1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		
130'<"S"<=150'	h(E)	10	#7	15'-8"		
	p(E)	14	#8	15'-8"		
	t(E)	24	#6	6'-0"		
	s(E)	2	#4	50'-3"		*
	v(E)	28	#10	51'-8"		
	v_1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
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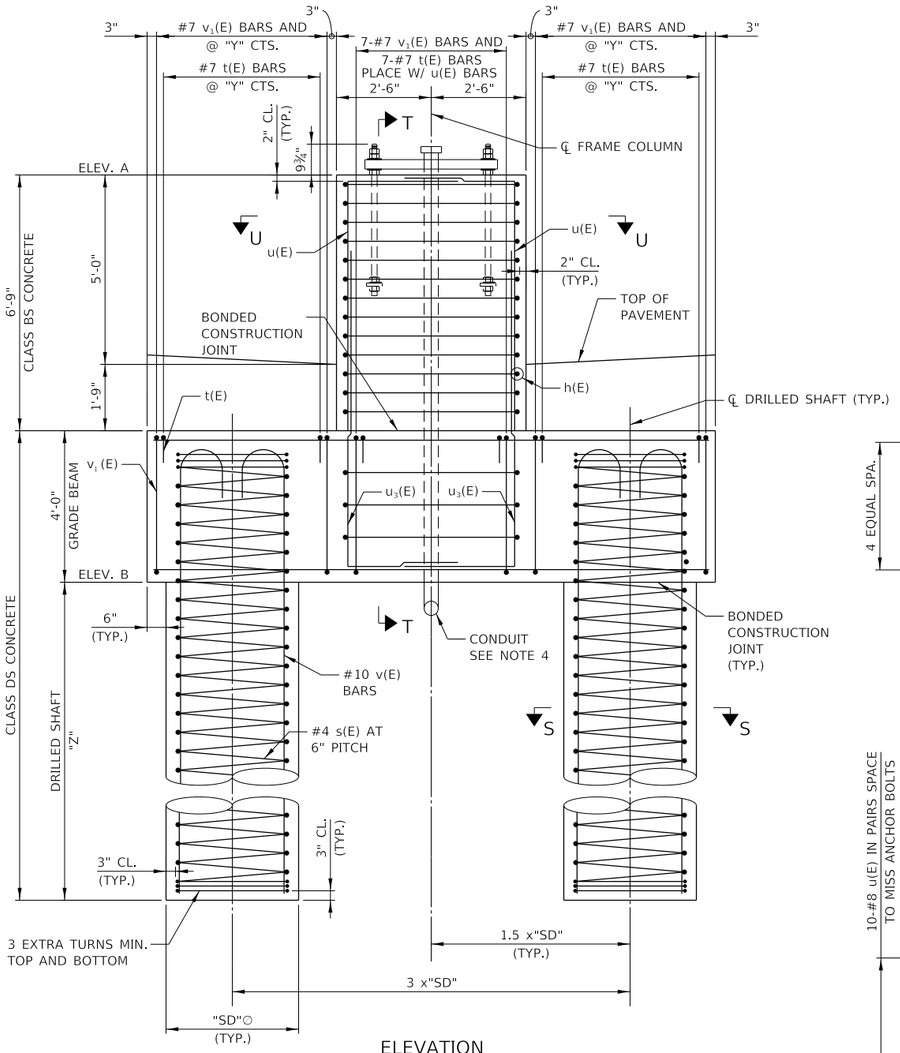
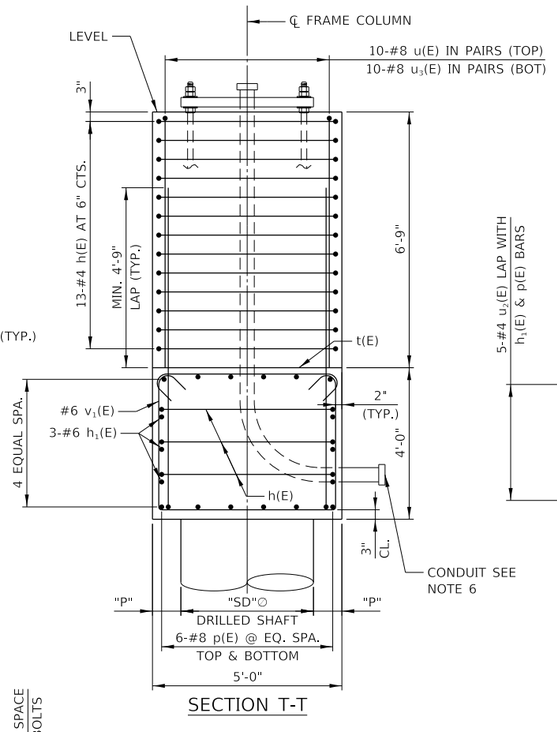
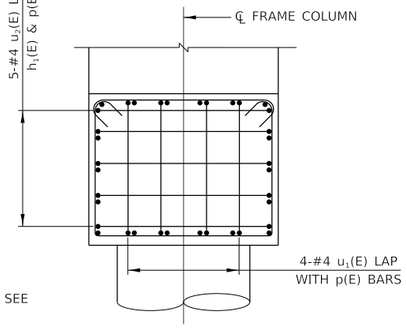


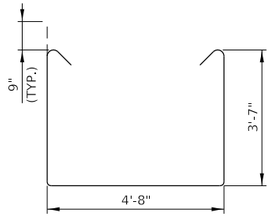
ELEVATION
MEDIAN FOUNDATION



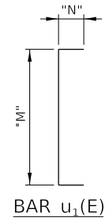
SECTION T-T



END VIEW

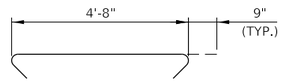


BAR v1(E)

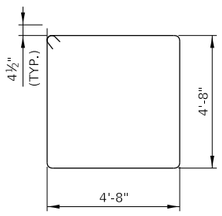


BAR u1(E)
BAR u2(E)

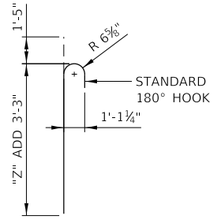
BAR	"M"	"N"
u1(E)	3'-7"	8"
u2(E)	4'-6"	8"



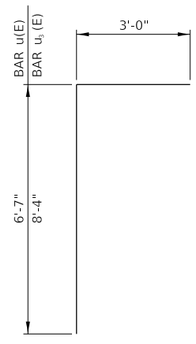
BAR t(E)



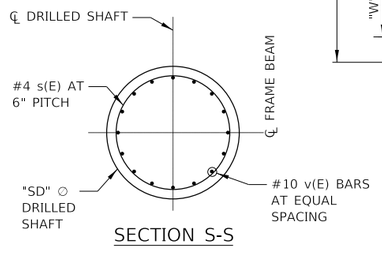
BAR h(E)



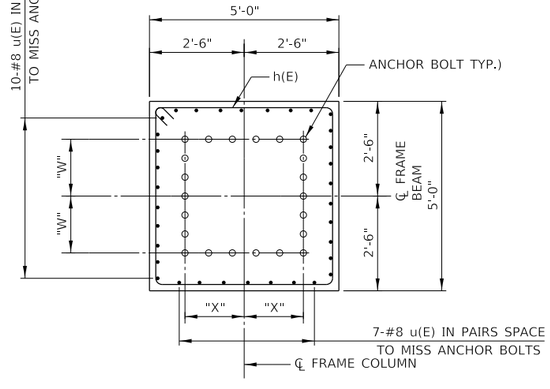
BAR v(E)



BAR u(E)
BAR u3(E)



SECTION S-S



SECTION U-U

NOTES:

1. SEE SHEET 6 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
2. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE TOP OF GRADE BEAM.
3. SEE SHEET 9 OF THIS SERIES FOR CONCRETE MEDIAN BARRIER TRANSITION. COST OF BARRIER TRANSITION INCLUDED IN COST OF "CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F".
4. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.
5. PROTECTIVE COAT SHALL BE APPLIED TO TRAFFIC AND TOP FACES OF CONCRETE CRASH WALL.
6. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION

MAX. SPAN "S1" OR "S2"	BAR	NO.	SIZE	LENGTH	SHAPE
"S"<=110'	h1(E)	6	#6	12'-8"	
	p(E)	12	#8	12'-8"	
	t(E)	23	#7	6'-2"	
	s(E)	2	#4	33'-3"	*
	v(E)	28	#10	34'-8"	
	v1(E)	23	#7	13'-4"	
110'<"S"<=130'	h1(E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	27	#7	6'-2"	
	s(E)	2	#4	31'-3"	*
	v(E)	32	#10	32'-8"	
	v1(E)	27	#7	13'-4"	
130'<"S"<=150'	h1(E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	31	#7	6'-2"	
	s(E)	2	#4	31'-3"	*
	v(E)	34	#10	32'-8"	
	v1(E)	31	#7	13'-4"	

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	16	#4	19'-5"	
u(E)	34	#8	9'-7"	
u1(E)	8	#4	4'-11"	
u2(E)	10	#4	5'-10"	
u3(E)	34	#8	11'-4"	

MEDIAN FOUNDATION SCHEDULE

MAX. SPAN "S1" OR "S2"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)	PROTECTIVE COAT (SQ YD)
<=110'	6.3	25.3	8,540	8.3
110'<"S"<=130'	6.3	31.1	9,220	8.3
130'<"S"<=150'	6.3	31.1	9,650	8.3

MEDIAN FOUNDATION TABLE

MAX. SPAN "S1" OR "S2"	"Z"	"SD"	"P"	"W"	"X"	"Y"	NO. ANCHOR BOLT
<=110'	30'-0"	3'-0"	1'-0"	1'-5½"	1'-4"	6"	18
110'<"S"<=130'	28'-0"	3'-6"	9"	1'-6"	1'-5½"	6"	22
130'<"S"<=150'	28'-0"	3'-6"	9"	1'-6"	1'-6¾"	5"	22

NOTE TO DESIGNER

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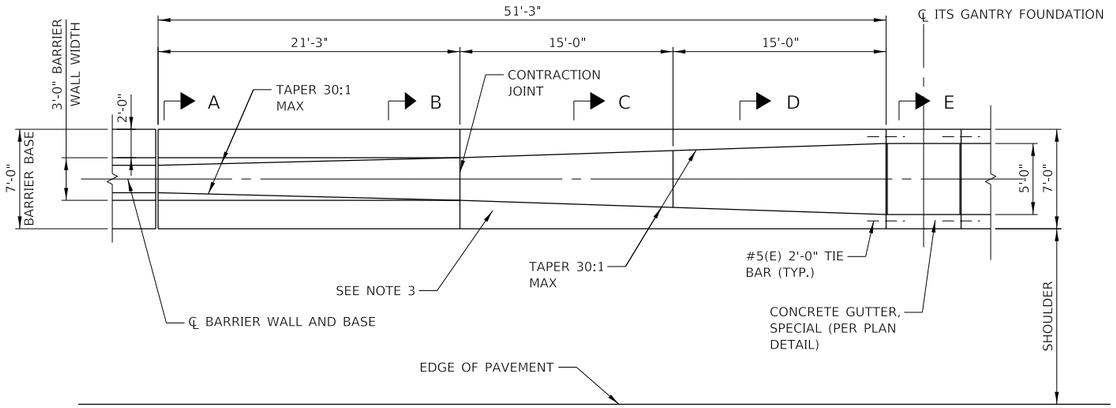
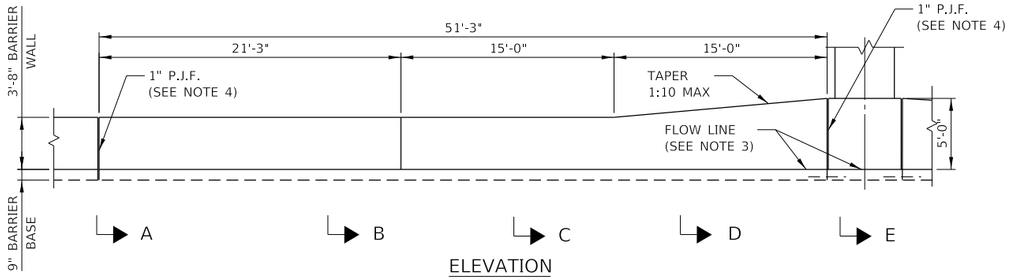
Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION: 2024-03 | STANDARD: M-OHS-730 | SHEET: 8 OF 9

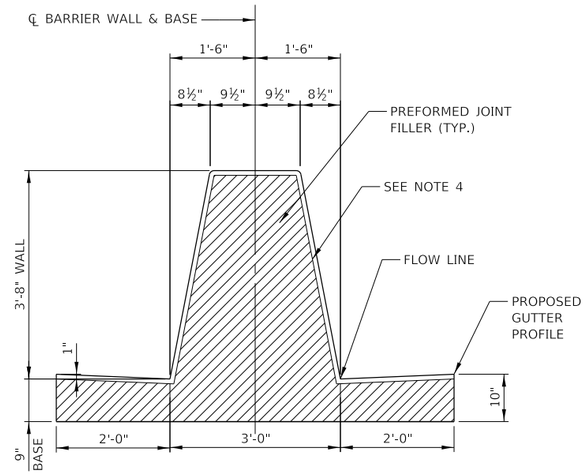


PLAN

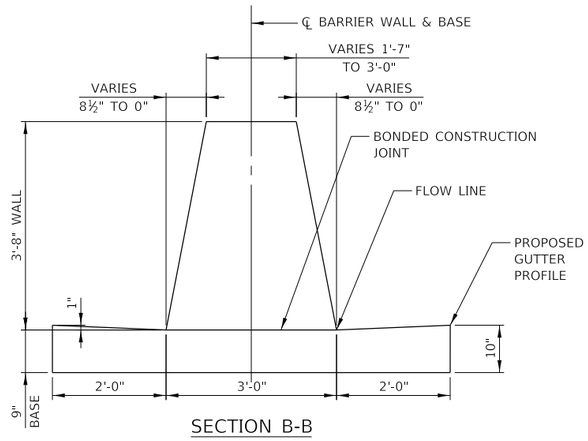


ELEVATION

CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY



SECTION A-A



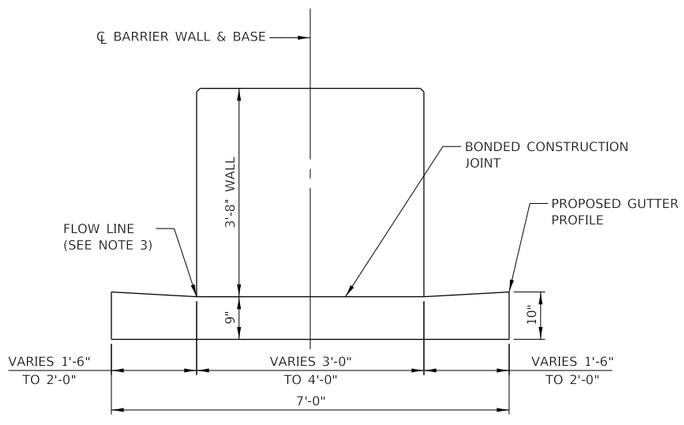
SECTION B-B

NOTE TO DESIGNER

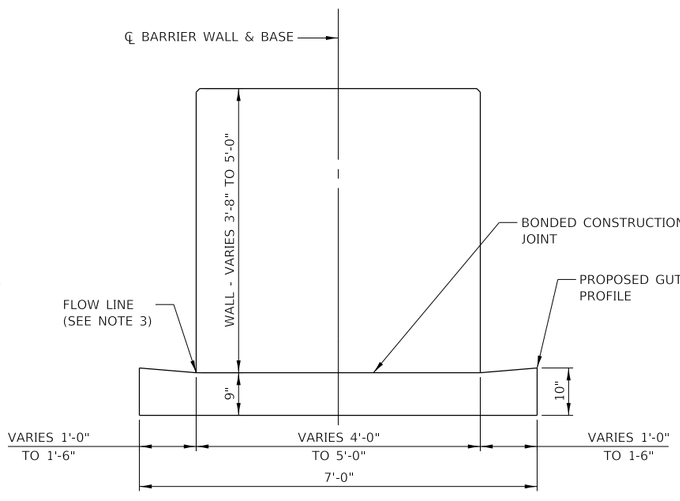
1. WITHIN SECTION B-B, THE GUTTER PORTION OF THE BARRIER BASE REMAINS 2'-0";HERETOFORE, STANDARD TYPE 20A F&G SHALL BE USED.
2. WITHIN SECTION C-C & D-D, THE GUTTER PORTION OF THE BARRIER BASE IS LESS THAN 2'-0"; THEREFORE, NON-ILLINOIS TOLLWAY STD. F&G SHALL BE USED.
3. WITHIN SECTION B-B & C-C, THE BARRIER HEIGHT REMAINS 44", THIS ALLOWS THE PLACEMENT OF LIGHT POLE FOUNDATIONS WITHIN THIS AREA.
4. WITHIN SECTION D-D, THE BARRIER HEIGHT IS INCREASING FROM 44" TO 60", THE LIGHT POLE FOUNDATIONS SHALL NOT BE PLACED WITHIN THIS AREA.

NOTES:

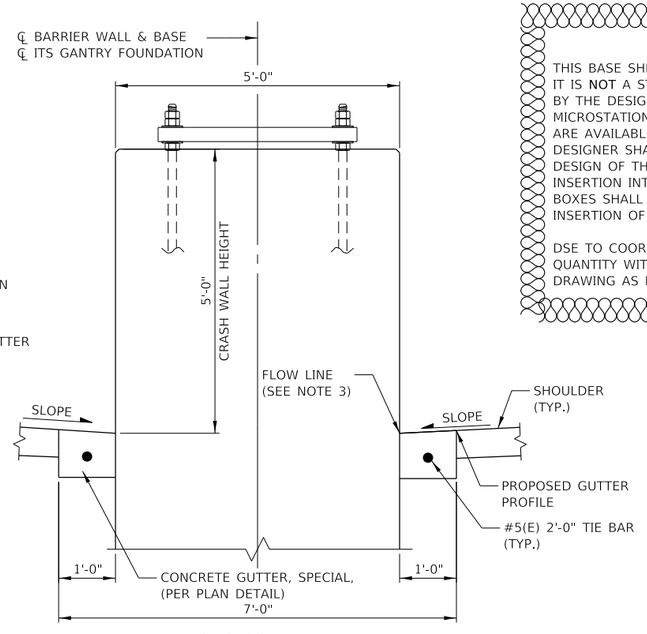
1. 2" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL AND IN THE CONCRETE BARRIER BASE. CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30'.
2. THE FORMING OF CONTRACTION JOINTS SHALL BE DONE BY SAWING.
3. GUTTER PROFILE IN THE VICINITY OF SAG VERTICAL CURVES, ALONG FLAT GRADES AND AT THE MEETING OF PROPOSED AND EXISTING GUTTER, SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.
4. PROVIDE NON-STAINING GRAY ONE COMPONENT NON-SAG ELASTOMERIC GUN GRADE POLYURETHANE SEALANT WITH BACKER ROD.



SECTION C-C



SECTION D-D



SECTION E-E

NOTE TO DESIGNER

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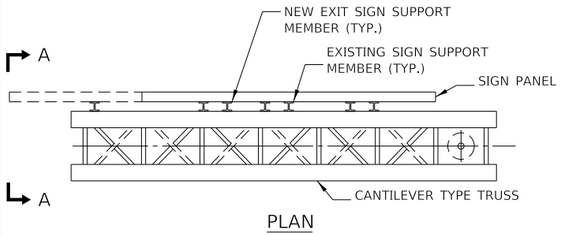
DSE TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. MODIFY DRAWING AS NECESSARY.

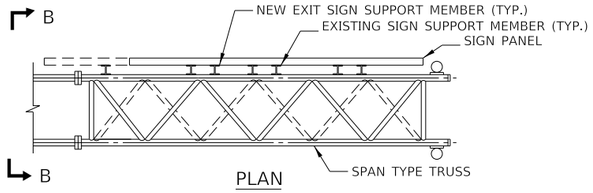
Illinois Tollway

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION:	STANDARD:	SHEET:
2024-03	M-OHS-730	9 OF 9



PLAN



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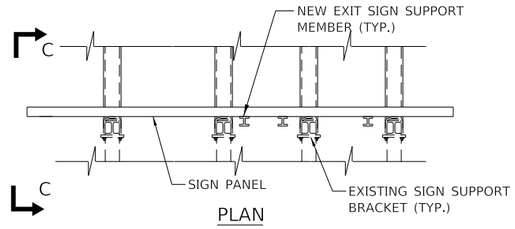
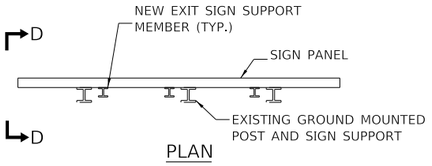
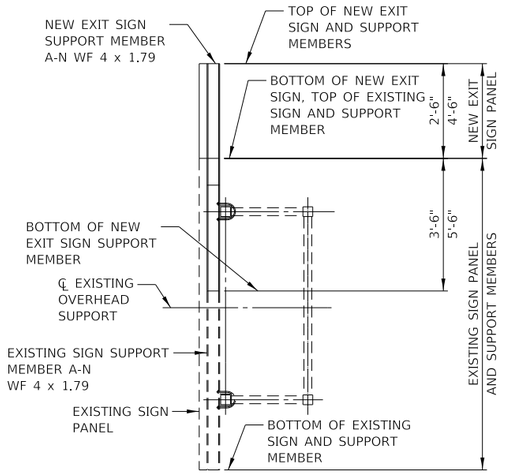


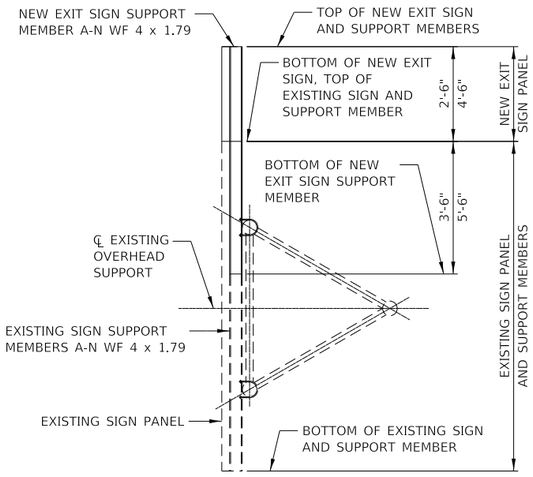
PLAN



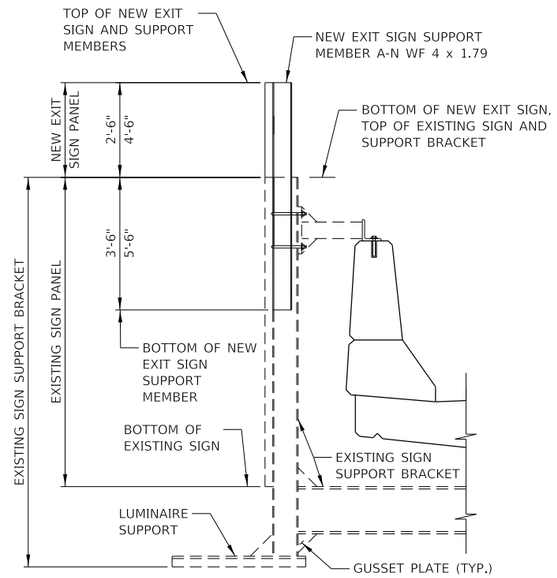
PLAN



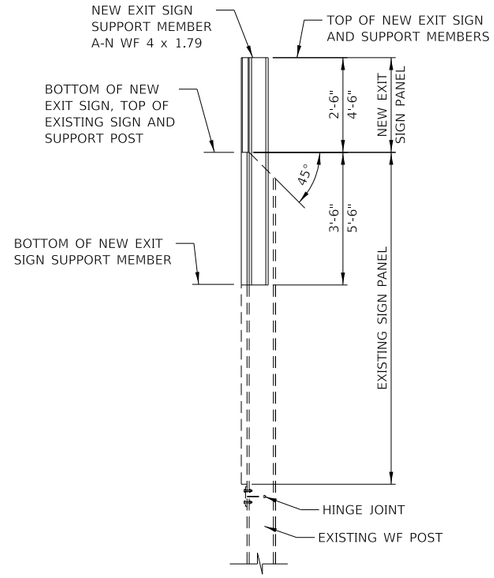
SECTION A-A
OVERHEAD CANTILEVER TYPE SIGN SUPPORT



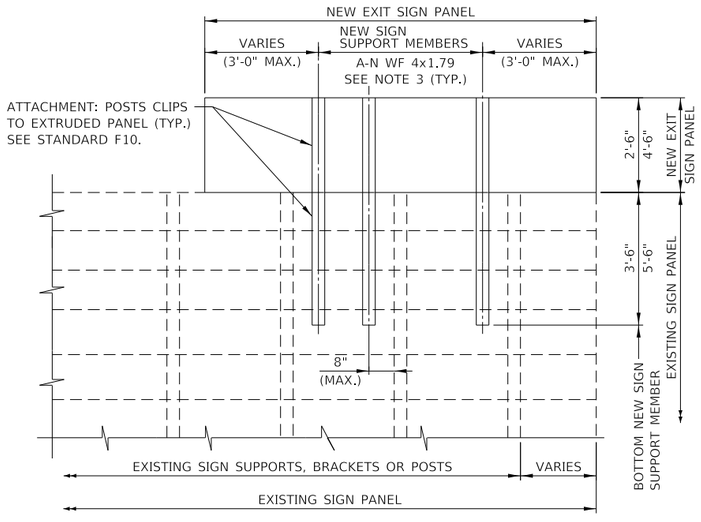
SECTION B-B
OVERHEAD SPAN TYPE SIGN SUPPORT



SECTION C-C
BRIDGE MOUNTED SIGN SUPPORT



SECTION D-D
GROUND MOUNTED SIGN SUPPORT



PARTIAL REAR ELEVATION OF SIGN PANELS AND SUPPORT MEMBERS

DETAILS FOR RETROFITTING NEW EXIT SIGN

NOTES:

1. ALL MATERIAL IS ALUMINUM IN ACCORDANCE WITH SECTION 733 OF THE LATEST IDOT STANDARD SPECIFICATIONS. (UNLESS OTHERWISE NOTED).
2. NEW SIGN SUPPORT MEMBERS SHALL BE SPACED WITH EXISTING SIGN SUPPORTS. SPACING SHALL NOT EXCEED 6'-0".
3. STANDARD SHALL ALSO BE UTILIZED FOR RETROFITTING OTHER SIGN PANELS WITH EXISTING SIGN SUPPORTS THAT DO NOT CONFORM TO STANDARD F8. NEW SIGN SUPPORT MEMBERS SHALL BE TWICE THE UNSUPPORTED HEIGHT PLUS ONE FOOT.

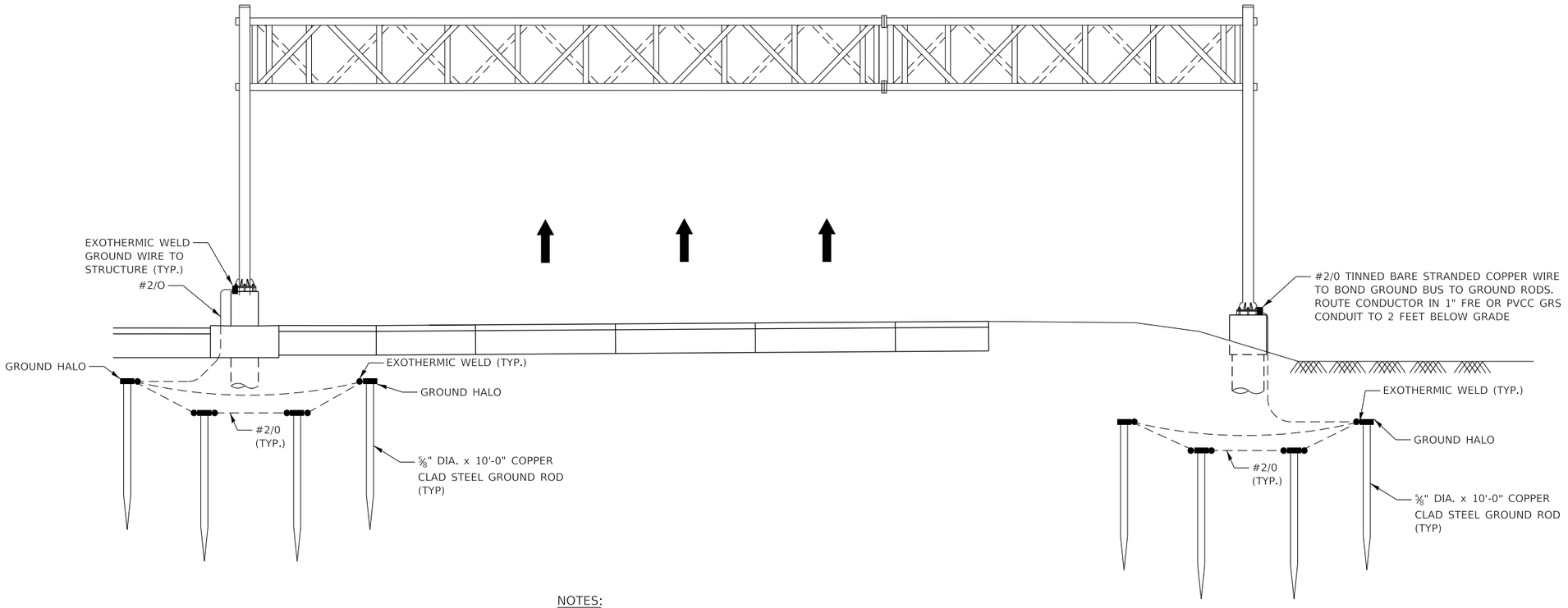
NOTE TO DESIGNER

EXISTING TRUSS AND SUPPORT MEMBERS SHALL BE CHECKED FOR STRUCTURAL ADEQUACY TO SUPPORT THE ADDITIONAL SIGN PANEL AREA.

Illinois Tollway

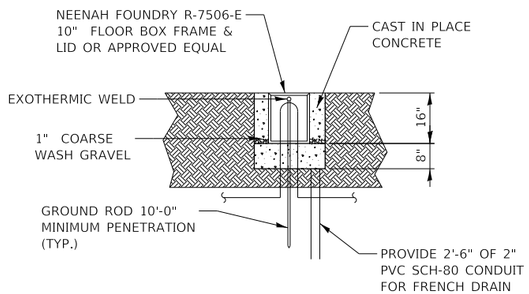
MOUNTING DETAILS FOR RETROFITTING NEW EXIT SIGN PANELS

VERSION:	STANDARD:	SHEET:
2022-03	M-OHS-731	1 OF 1

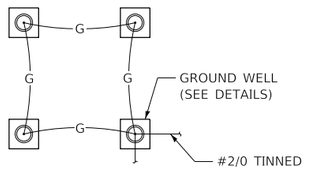


NOTES:

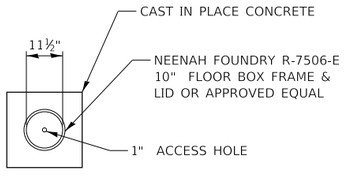
1. GROUNDING SYSTEM SHALL BE PLACED WITHIN ILLINOIS TOLLWAY RIGHT-OF-WAY.
2. INSTALL MARKER TAPE DIRECTLY ABOVE GROUNDING ELECTRODE CONDUCTORS.
3. THE COST OF ALL MATERIALS, EXOTHERMIC WELDING, GROUND WELL, GROUND RODS AND ALL OTHER ITEMS TO COMPLETE THE GROUNDING ELECTRODE SYSTEM SHALL BE INCLUDED IN THE COST OF THE SIGN STRUCTURE.
4. GROUND RODS SHALL BE INSTALLED IN GROUND WELLS IN FINISHED GRADE UNLESS INSTALLED UNDER SHOULDERS OR PAVEMENT.
5. CA-11, A QUALITY, IN ACCORDANCE WITH SSRBC 1004.



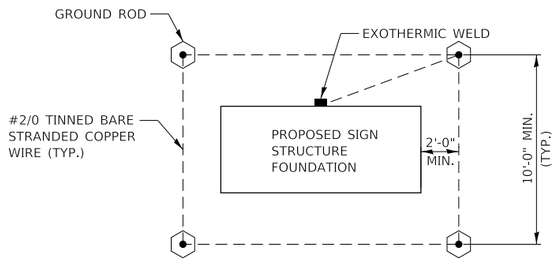
GROUND WELL ELEVATION DETAIL
(NOT TO SCALE, NOTE 3)



GROUND HALO DETAIL
(NOT TO SCALE)



GROUND WELL PLAN DETAIL
(NOT TO SCALE, NOTE 3)



GROUNDING SCHEMATIC
(NOT TO SCALE)

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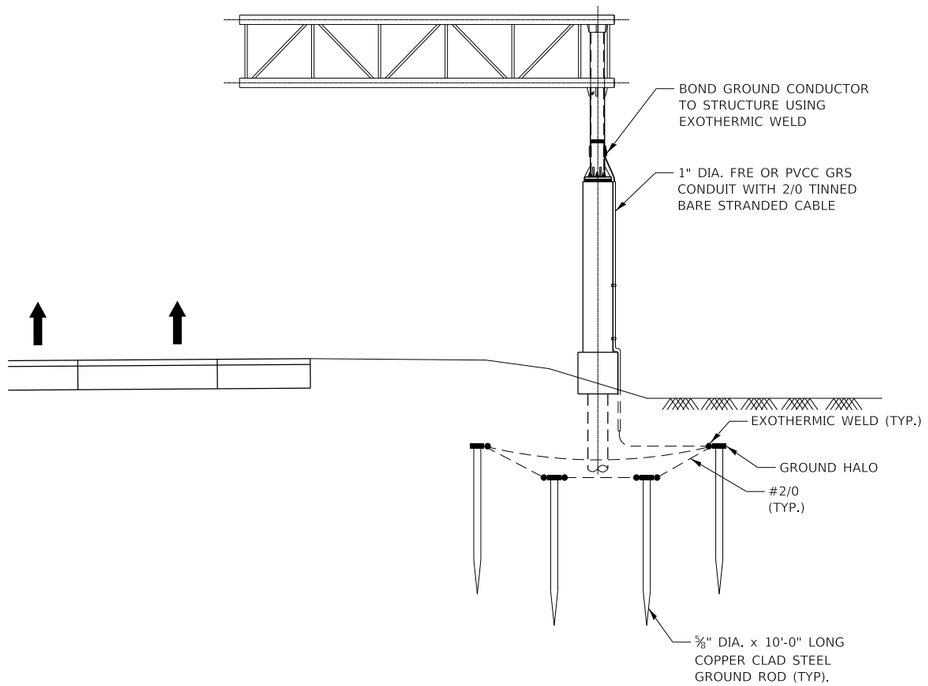
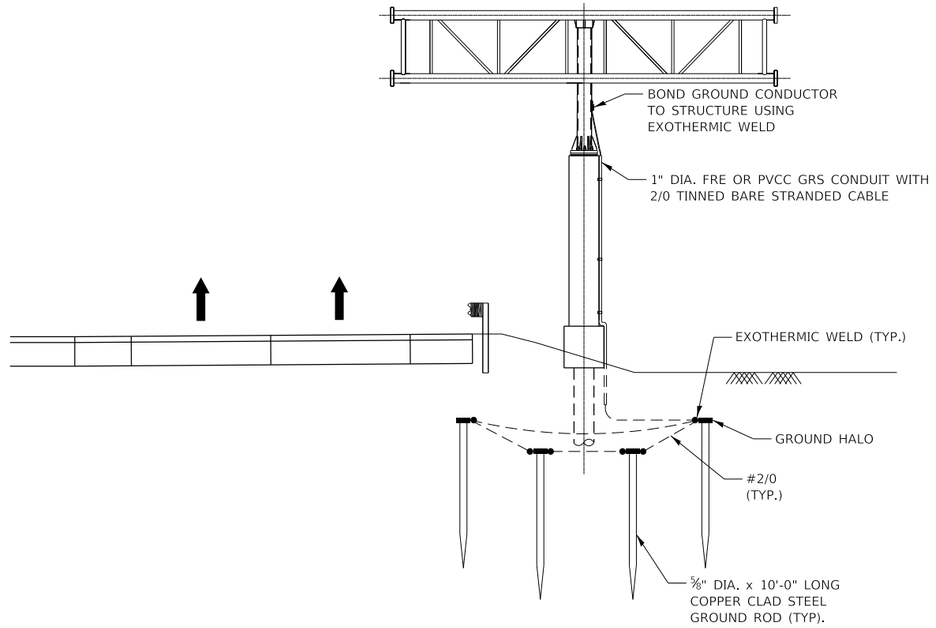
Illinois Tollway

SIGN STRUCTURE SPAN SITE GROUNDING PLAN

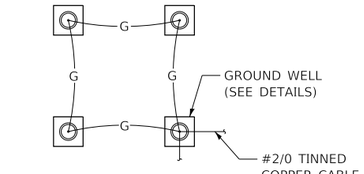
VERSION:	STANDARD:	SHEET:
2021-03	M-OHS-732	1 OF 1



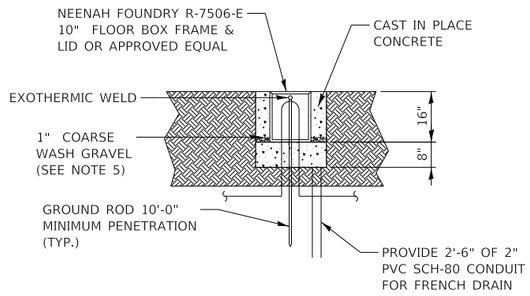
CANTILEVER ELEVATION



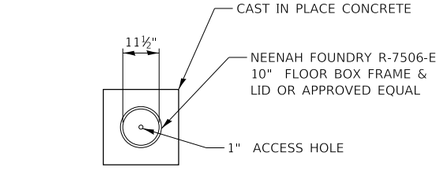
BUTTERFLY ELEVATION



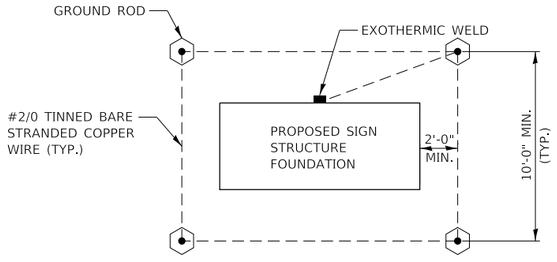
GROUND HALO DETAIL
(NOT TO SCALE)



GROUND WELL ELEVATION DETAIL
(NOT TO SCALE, NOTE 3)



GROUND WELL PLAN DETAIL
(NOT TO SCALE, NOTE 3)



GROUNDING SCHEMATIC
(NOT TO SCALE)

NOTES:

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2. INSTALL MARKER TAPE DIRECTLY ABOVE GROUNDING ELECTRODE CONDUCTORS.
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4. GROUND RODS SHALL BE INSTALLED IN GROUND WELLS IN FINISHED GRADE UNLESS INSTALLED UNDER SHOULDERS OR PAVEMENT.
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Illinois Tollway

SIGN STRUCTURE CANTILEVER AND BUTTERFLY SITE GROUNDING PLANS

VERSION:	STANDARD:	SHEET:
2021-03	M-OHS-733	1 OF 1