



THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

2700 OGDEN AVENUE • DOWNERS GROVE • ILLINOIS • 60515



BASE SHEETS

MARCH 2026



THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

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BASE SHEETS

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

PART 1 of 2

MARCH 2026

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-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 ALTERNATE A
M-BRG-501	EXPANSION JOINT FRAME RAIL AND SEAL ALTERNATE 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-507	CRASH WALL MODIFICATIONS MEDIAN PIERS
M-BRG-508	CRASH WALL MODIFICATIONS SHOULDER PIERS
M-BRG-517	PPC BEAM DETAILS
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 SCHEDULE
M-BRG-530	STRUCTURE MOUNTED NOISE ABATEMENT WALL EXPANSION DETAILS
M-BRG-531	STRUCTURE MOUNTED NOISE ABATEMENT WALL COVER SHEET AND SCHEDULE; BUMP-OUT MOUNTED NOISE ABATEMENT WALL COVER SHEET
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)
M-DRN-609	STATION AND OFFSET FOR DRAINAGE STRUCTURES
M-DRN-610	SINGLE FACE CONCRETE BARRIER WITH DRAINAGE STRUCTURE

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-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
M-OHS-734	OVERHEAD SIGN STRUCTURE AET RAMP MONOTUBE TYPE (STEEL) GROUND MOUNTED SUMMARY AND TOTAL BILL OF MATERIAL
M-OHS-735	OVERHEAD SIGN STRUCTURE AET RAMP MONOTUBE TYPE (STEEL) BARRIER MOUNTED SUMMARY AND TOTAL BILL OF MATERIAL



**VOLUME II
INDEX OF
BASE SHEETS**

MARCH 2026

BASE SHEETS



SERIES 200 (ESC) ***EROSION AND SEDIMENT CONTROL***

MARCH 2026

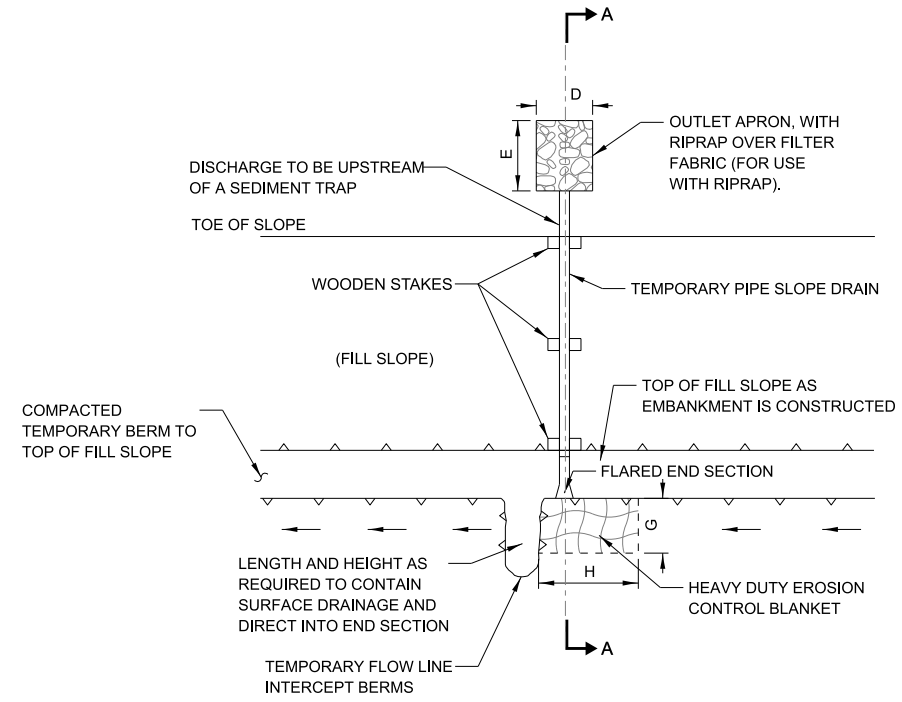
Illinois Tollway Base Sheet Revisions

Section M	Base Sheet Drawings	
	Drawing	Modification Summary Effective: 03-01-2026
	Erosion and Sediment Control (ESC) - Series 200	
	NOTE	NO CHANGES

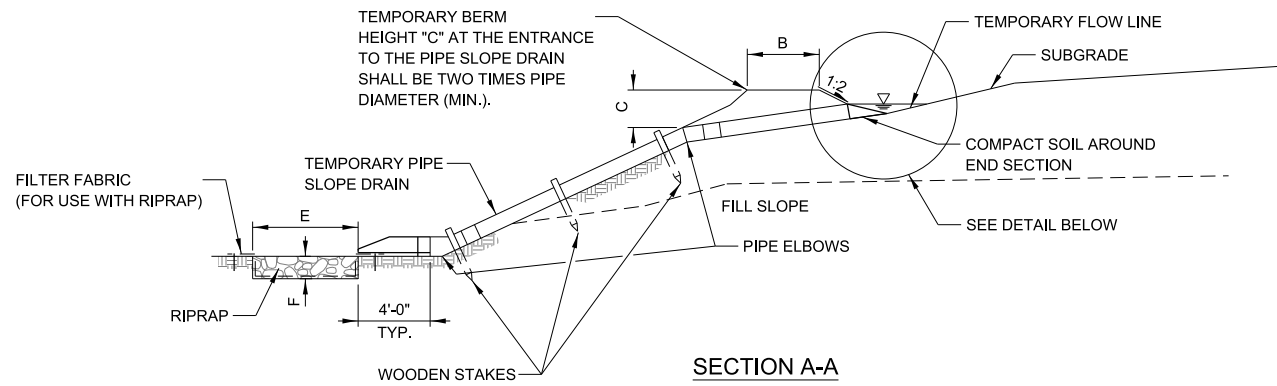
 **New Sheet**

 **Retired Standard**

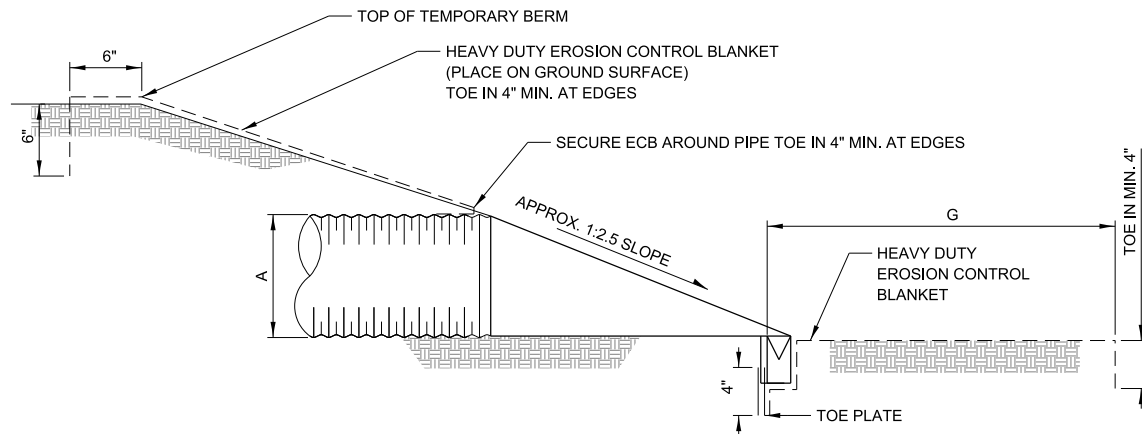
TEMPORARY PIPE SLOPE DRAIN



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)	

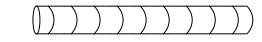
NOTE TO DESIGNER

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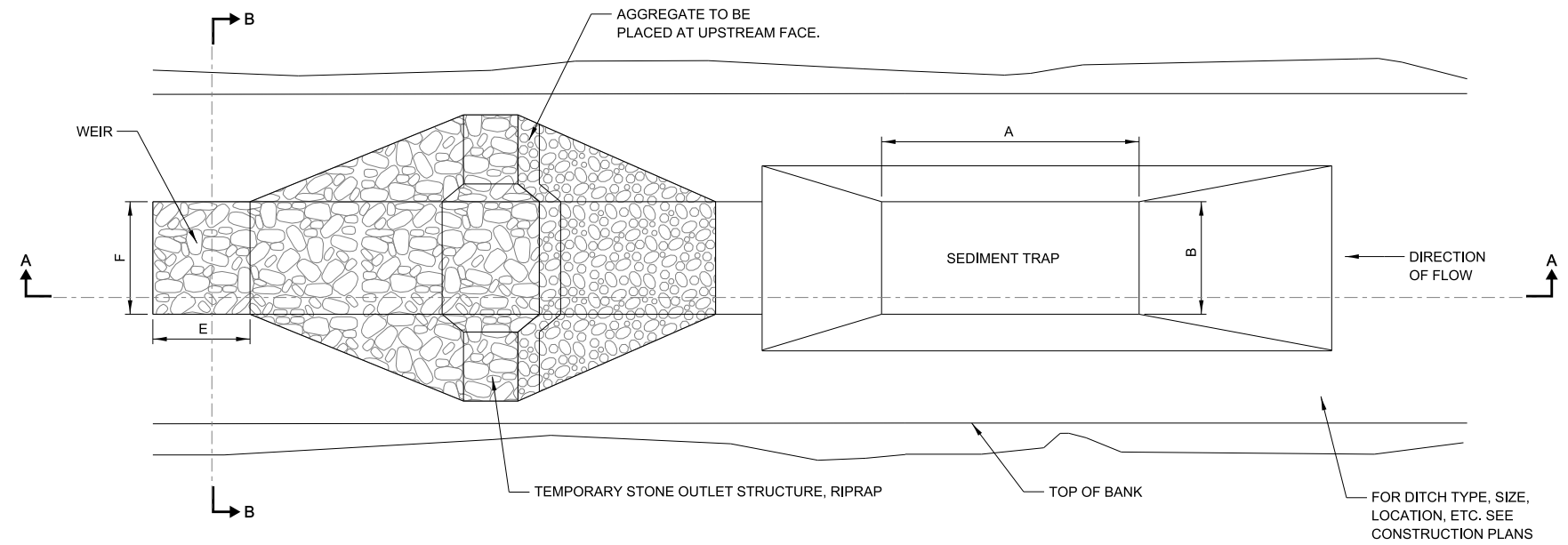
NOTE TO DESIGNER

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STANDARD SYMBOL



TEMPORARY PIPE SLOPE DRAIN

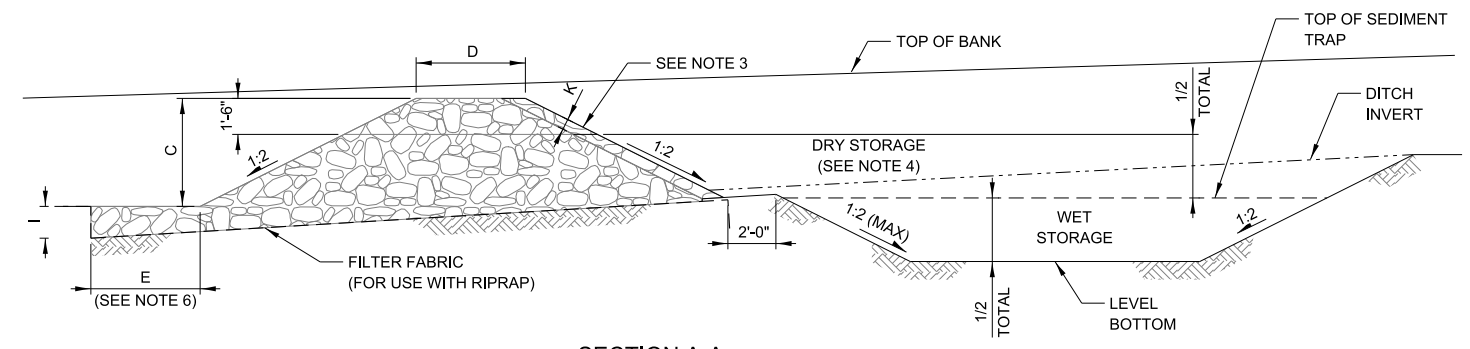


PLAN

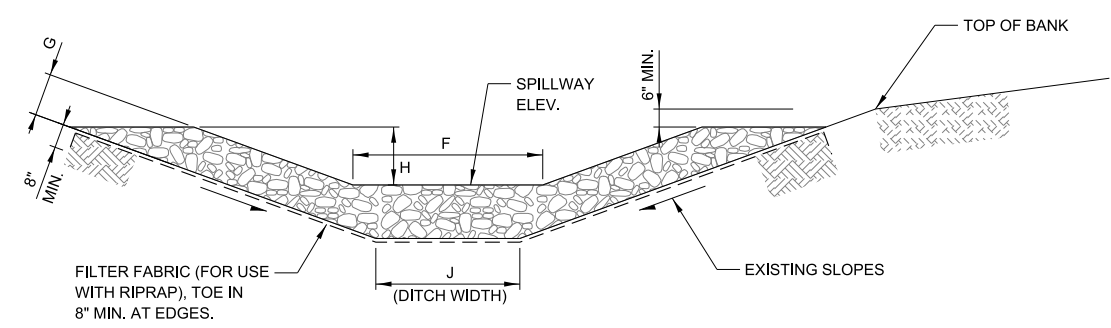
NOTES:

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).

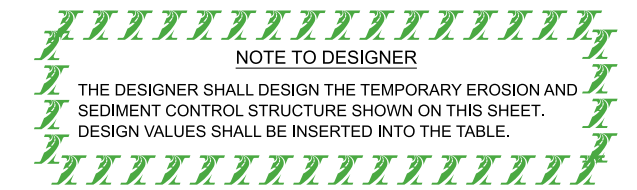
DESIGN ELEMENTS	UNITS	VALUES
DRAINAGE AREA	X (ACRES)	
SEDIMENT TRAP: STORAGE CAPACITY	V (CU. YD.)	
WET DETENTION STORAGE	1/2 V (CU. YD)	
DRY DETENTION STORAGE	1/2 V (CU. YD)	
SEDIMENT TRAP LENGTH	A (FEET)	
SEDIMENT TRAP WIDTH	B (FEET)	
STONE OUTLET STRUCTURE HEIGHT	C (FEET)	
STONE OUTLET STRUCTURE TOP 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)	



SECTION A-A

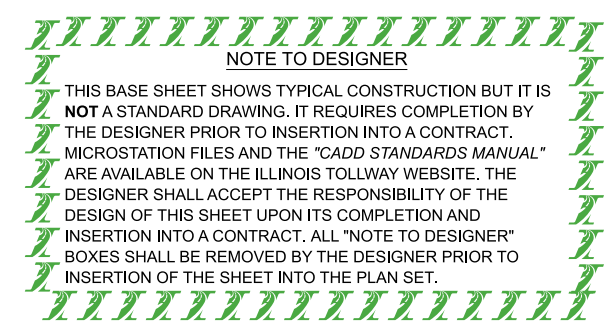
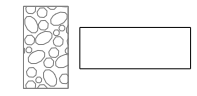


SECTION B-B



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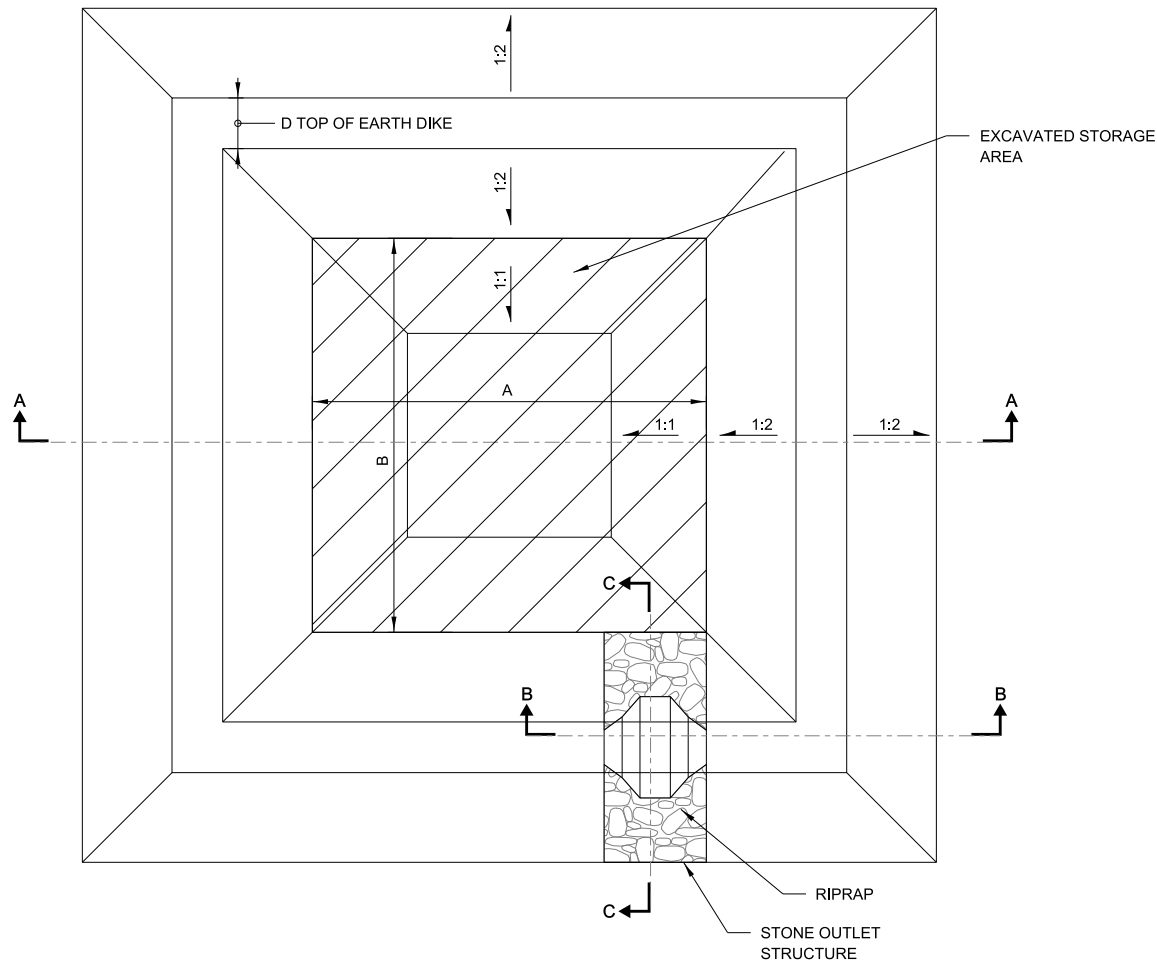
STANDARD SYMBOL



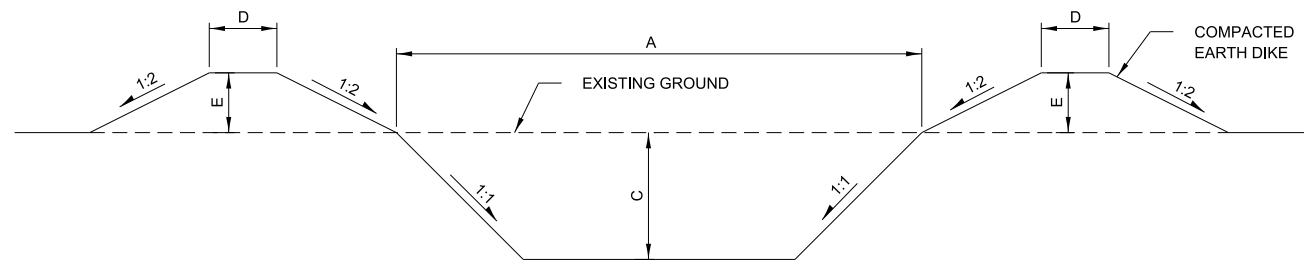
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**STONE OUTLET STRUCTURE
SEDIMENT TRAP**

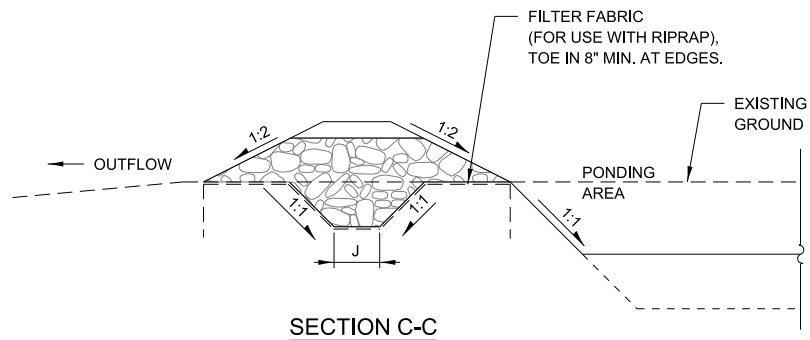
VERSION: 2025-03 BASE SHEET: M-ESC-201 SHEET: 1 OF 1



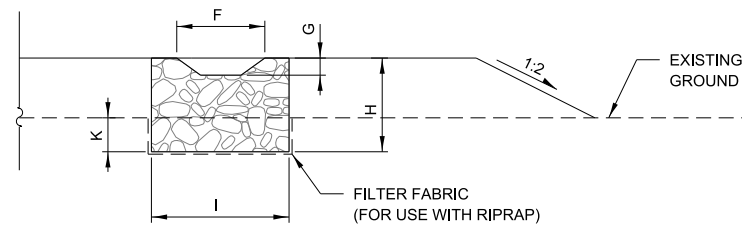
PLAN VIEW



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 1/2 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)	

NOTE TO DESIGNER

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NOTE TO DESIGNER

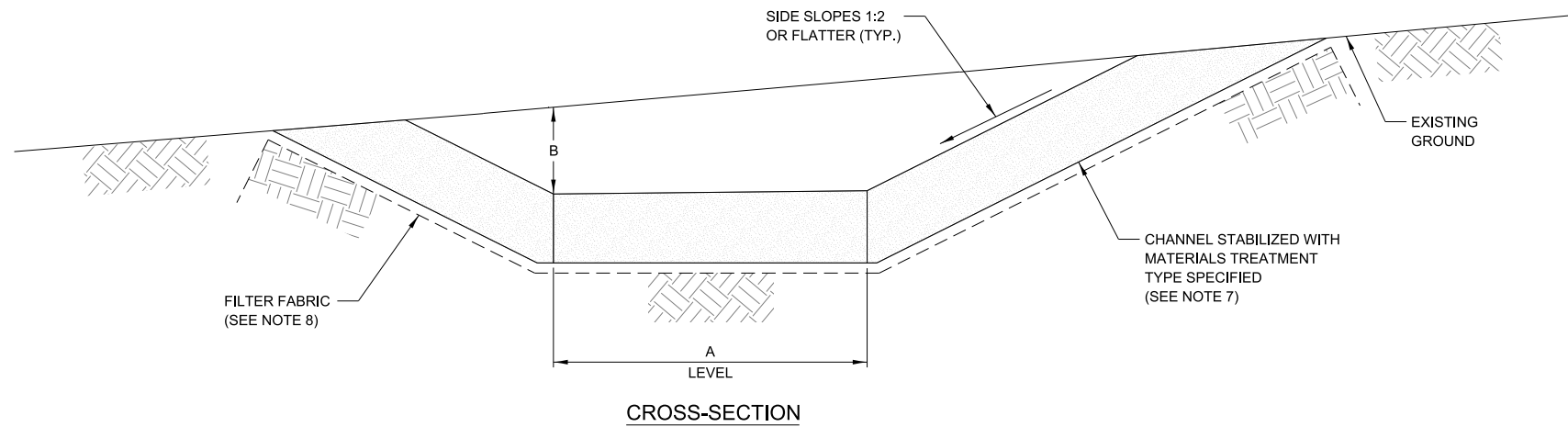
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STANDARD SYMBOL

DB



DEWATERING BASIN



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

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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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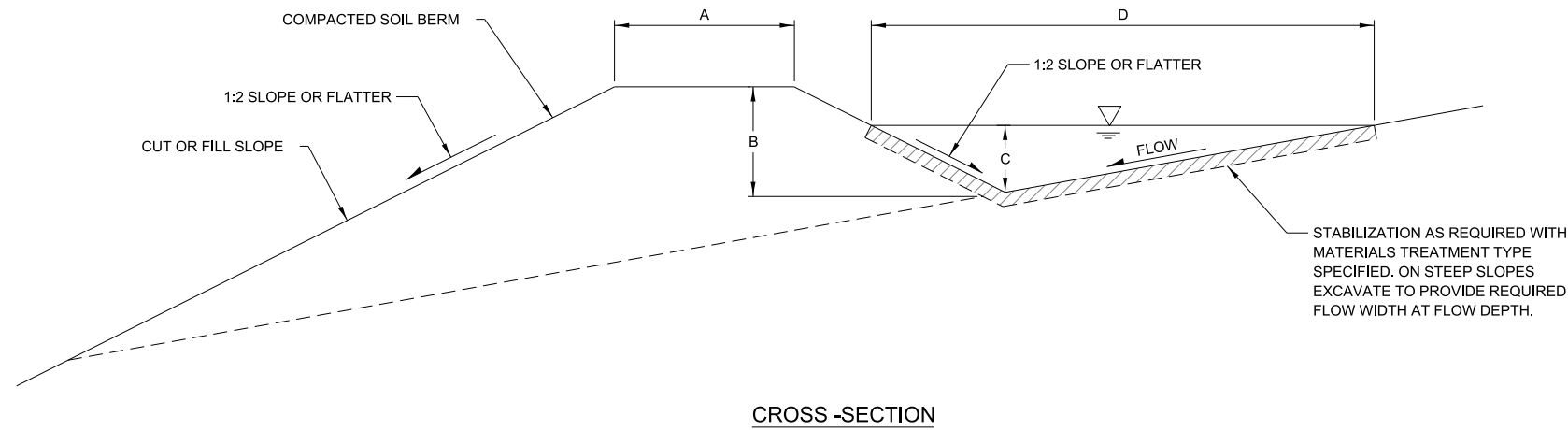
STANDARD SYMBOL



TEMPORARY SWALE

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:
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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	

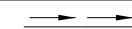
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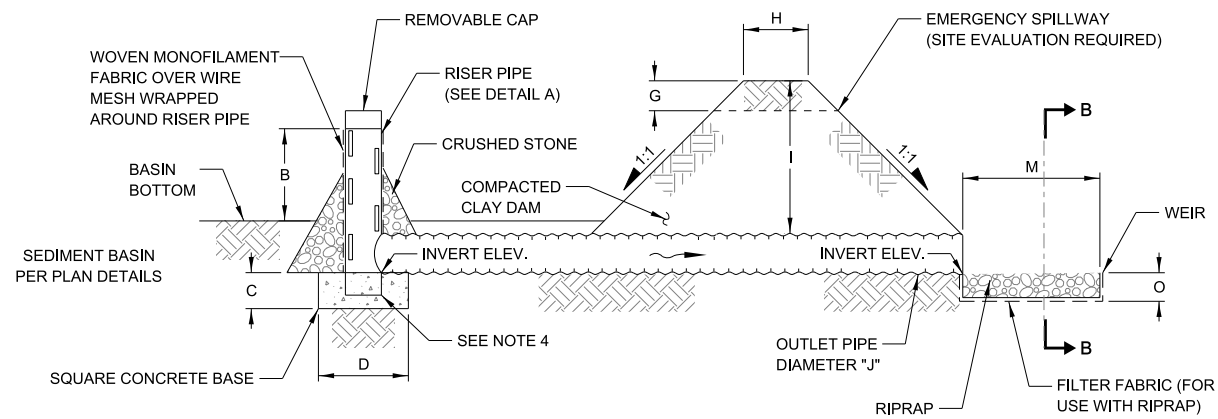
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STANDARD SYMBOL



DIVERSION DIKE



SECTION ON CENTERLINE

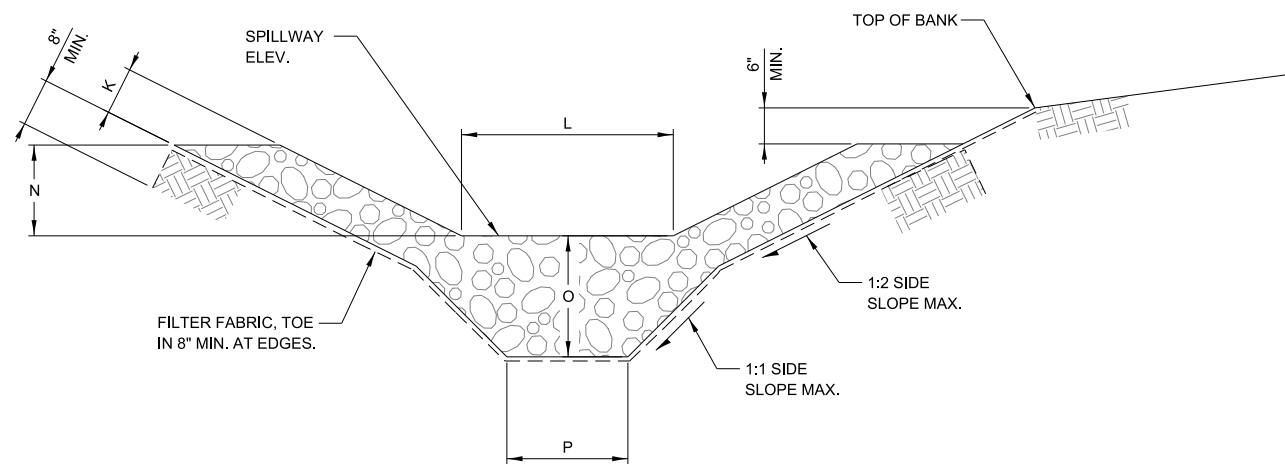
NOTES:

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).

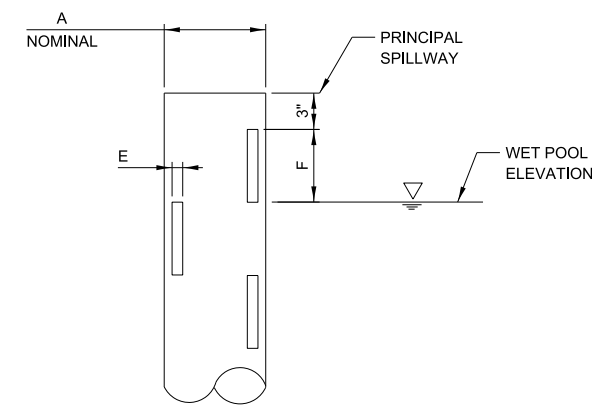
NOTE TO DESIGNER

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	



SECTION B-B



DETAIL A
RISER PIPE-SLOTTED INLET

NOTE TO DESIGNER

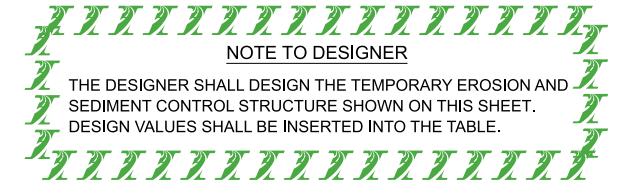
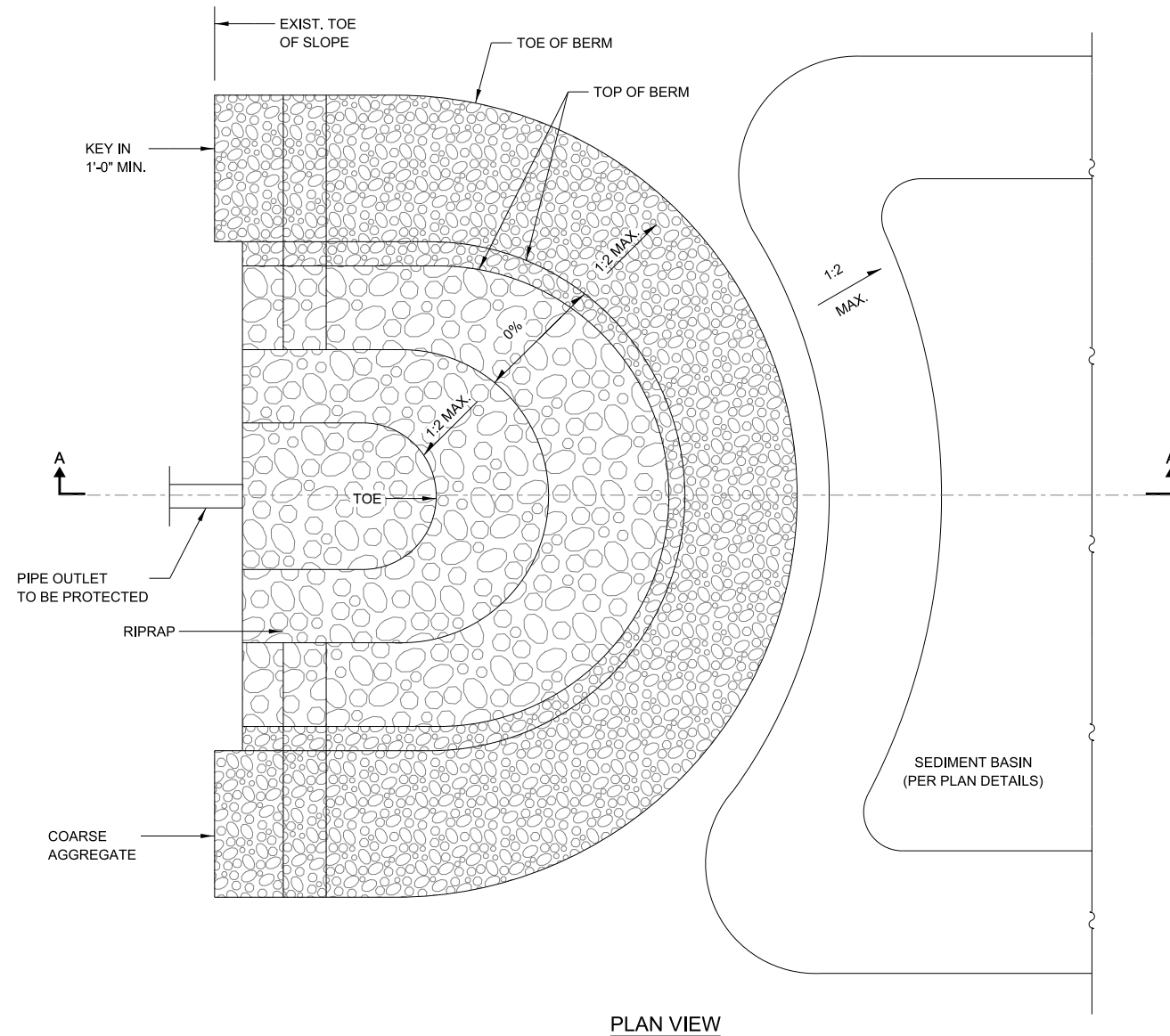
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE 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.



SEDIMENT BASIN
DEWATERING DEVICE

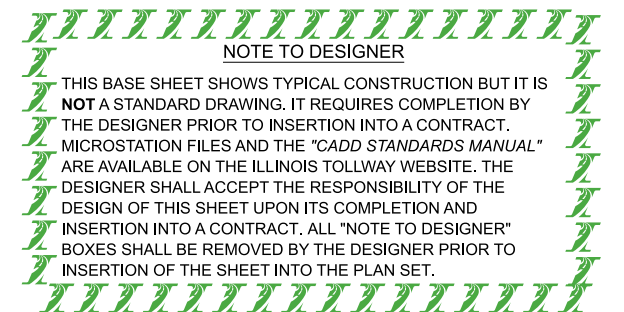
NOTES:

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.



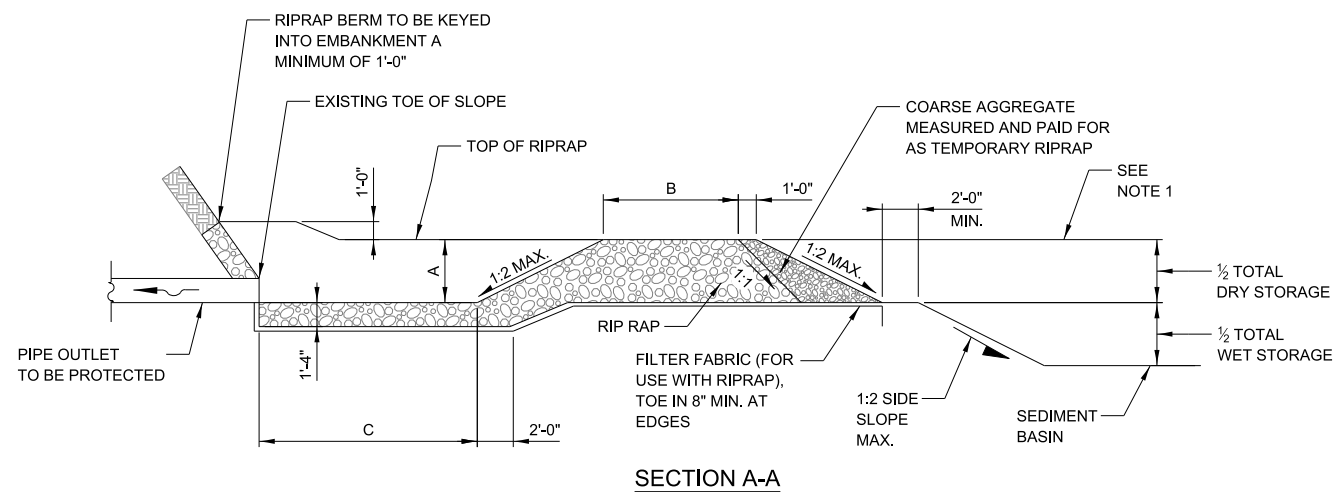
NOTE TO DESIGNER
 THE DESIGNER SHALL DESIGN THE TEMPORARY EROSION AND SEDIMENT CONTROL STRUCTURE SHOWN ON THIS SHEET. DESIGN VALUES SHALL BE INSERTED INTO THE TABLE.

DESIGN ELEMENTS	DATA	VALUES
DRAINAGE AREA	X (ACRES)	
SEDIMENT BASIN STORAGE CAPACITY	V (CU. YD.)	
WET DETENTION STORAGE	$\frac{1}{2}$ V (CU. YD.)	
DRY DETENTION STORAGE	$\frac{1}{2}$ V (CU. YD.)	
AGGREGATE BERM HEIGHT	A (FEET)	
AGGREGATE BERM TOP WIDTH	B (FEET)	
OUTLET WEIR LENGTH	C (FEET)	
RIPRAP	GRADATION	
COARSE AGGREGATE	GRADATION	



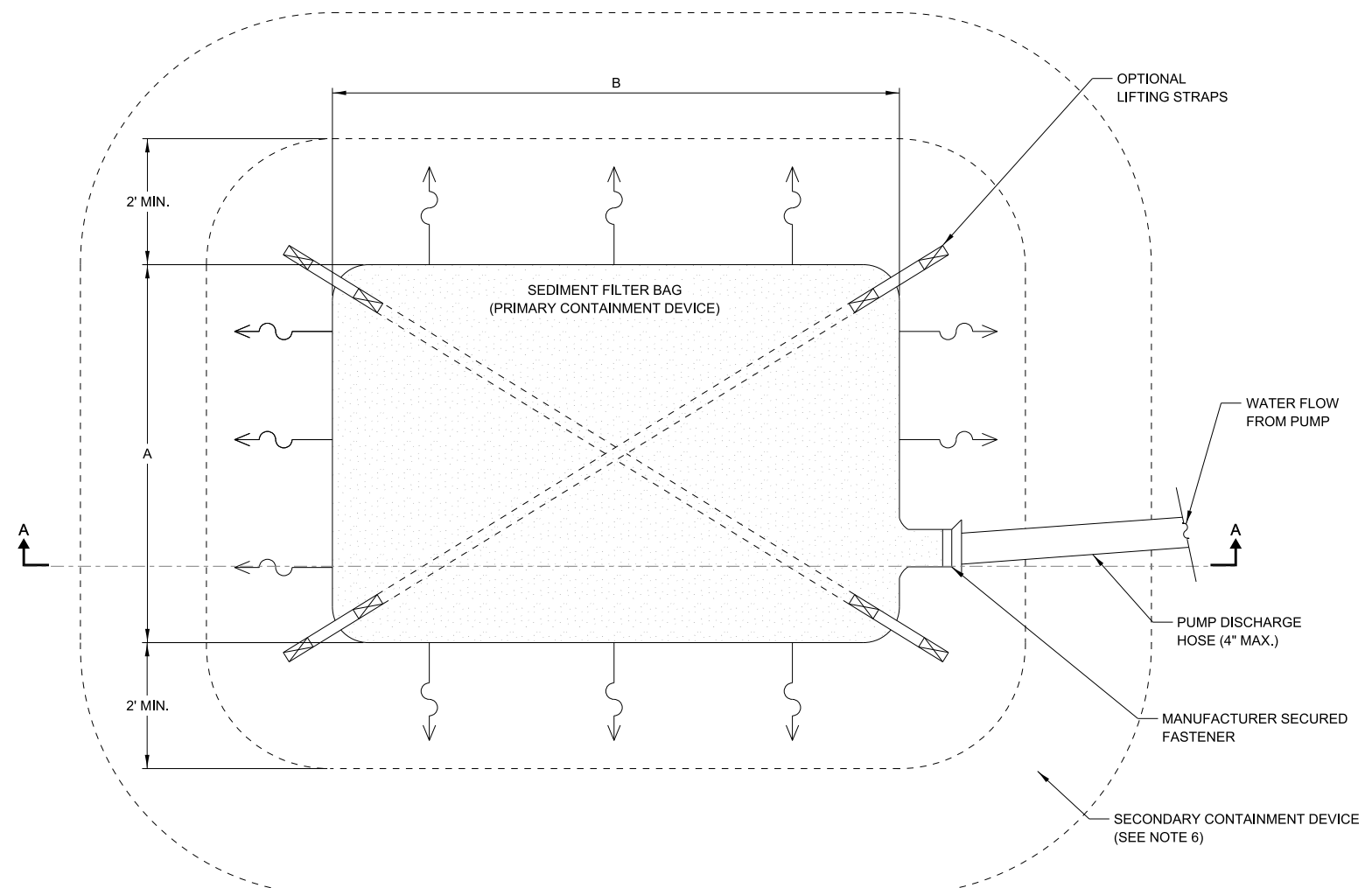
NOTE TO DESIGNER
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STANDARD SYMBOL

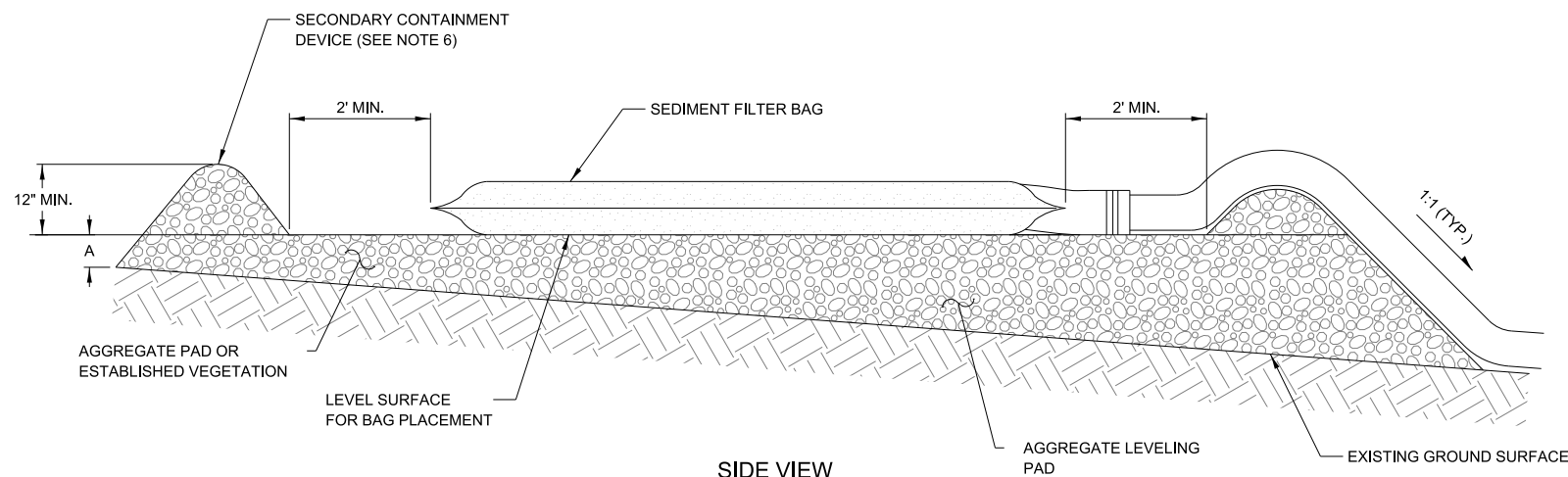



SEDIMENT BASIN AGGREGATE BERM

VERSION: 2024-03	BASE SHEET: M-ESC-206	SHEET: 1 OF 1
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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 1/2 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

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
AGGREGATE PAD AND SECONDARY CONTAINMENT DEVICE	GRADATION	
AGGREGATE PAD DEPTH (MIN.)	A (INCH)	

NOTE TO DESIGNER

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SEDIMENT FILTER BAG

BASE SHEETS



SERIES 400 (RDY)

ROADWAY

MARCH 2026

Illinois Tollway Base Sheet Revisions

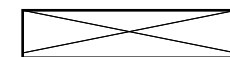
Section M		Base Sheet Drawings	
Drawing	Modification Summary	Effective: 03-01-2026	
Roadway (RDY) - Series 400			
M-RDY-403	ROADWAY TYPICAL SECTIONS - GROUP D		
Sheet 1	Revised 'Note 1' clarifying the 3'-0" shelf requirement in cut condition.		
M-RDY-407	EARTHWORK SCHEDULE		
Sheet 3	Added note in 'Note to Designer' for the Non-special waste disposal quantities calculations for contracts with over 1000 cubic yards of Type 1C and Type 1B		
M-RDY-407	GUARDRAIL SCHEDULE		
Sheet 4	Revised 'Note to Designer' to state that 9 foot post is no longer used for Tollway contracts. Removed columns for 9 feet post from 'Guardrail Schedule' table to reflect the change.		
M-RDY-408	APPROACH SLAB, MAINLINE		
Sheet 1	Note 2 is revised to refer the latest updates from 'IDOT Bridge Manual' (2025)		
Sheet 3	Added call out 'Subgrade Filter Fabric' and deleted 'Porous Granular Backfill' in the 'Longitudinal Cross Section' detail.		
Sheet 4	Revised 'Section F-F' and added 'Note to Designer' to show milling and overlay if proposed pavement is composite pavement.		
M-RDY-409	APPROACH SLAB, RAMP		
Sheet 1	Note 2 is revised to refer the latest updates from 'IDOT Bridge Manual' (2025)		
Sheet 3	Added call out 'Subgrade Filter Fabric' and deleted 'Porous Granular Backfill' in the 'Longitudinal Cross Section' detail.		
Sheet 4	Revised 'Section F-F' and added 'Note to Designer' to show milling and overlay if proposed pavement is composite pavement.		
M-RDY-410	PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB		
Sheet 1	Note 2 is revised to refer the latest updates from 'IDOT Bridge Manual' (2025)		
Sheet 2	Deleted anchor rod holes at pile cap in 'Precast Bridge Approach Slab Layout'.		
Sheet 3	Deleted 'Porous Granular Backfill' in the 'Longitudinal Cross Section' detail.		
	Added rebars at closure pours in 'Section A-A'.		
Sheet 4	Updated bar list table.		
Sheet 4	Added rebars at closure pour in 'Detail H'.		
Sheet 6	Revised 'Section F-F' and added 'Note to Designer' to show milling and overlay if proposed pavement is composite pavement.		

Illinois Tollway Base Sheet Revisions

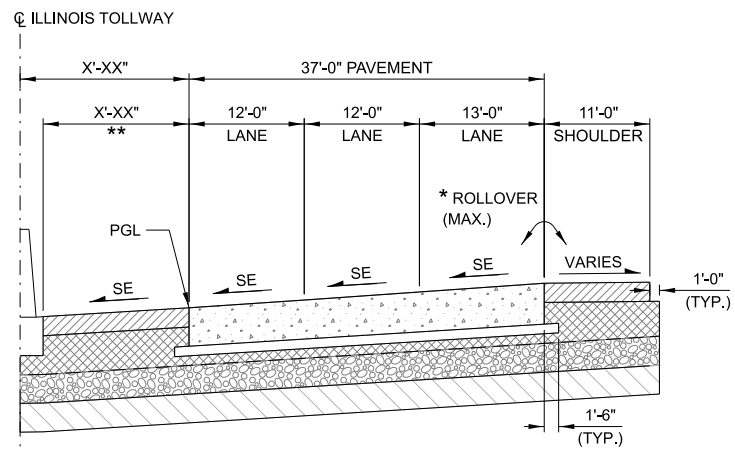
Section M		Base Sheet Drawings	
Drawing	Modification Summary	Effective: 03-01-2026	
Roadway (RDY) - Series 400			
M-RDY-411	EMERGENCY TURNAROUND MEDIAN WIDTH ≥ 35FT		
Sheet 1	Updated 'Concrete Barrier' & 'Base' taper rate call out for a clarification		
M-RDY-418	RAMP TOLL PLAZA PAVEMENT DETAILS		
Sheet 1	Revised 'Ramp Toll Plaza Roadway Details for Rehabilitation Projects' detail for a single face concrete barrier taper on the upstream end to comply with the Traffic Barrier Guidelines (TBG) Article 13.2.1 requirements. Additionally provided 'Note to Designer' to state TBG Article 13.2.1.		
	Added '...and must extend at least 1 foot beyond an existing transverse contraction joint' to 'Note to Designer' for 'Proposed JPCP Improvement Limit...'		
Sheet 2	Added 'Note to Designer' for 'Sleeper Slab Plan- Stage Construction'. Corrected axx (E) rebar quantities in 'Rebar Plan View...' and in 'Reinforcing Bar Schedule'.		



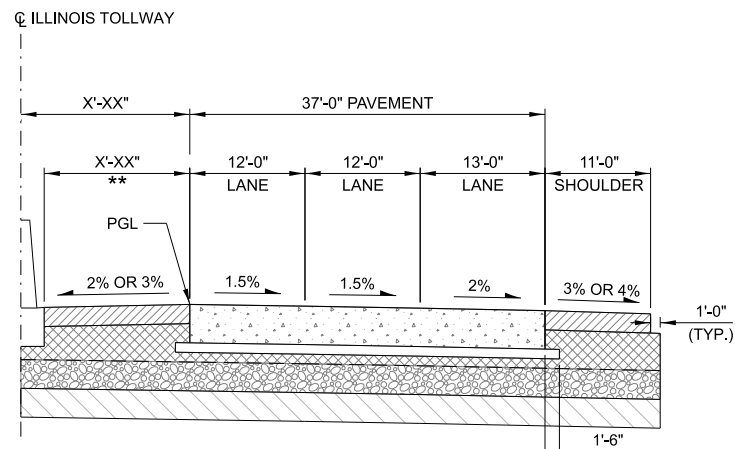
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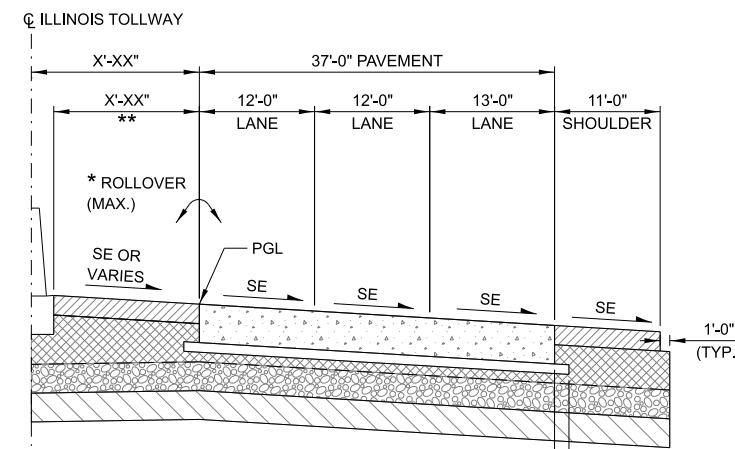
Retired Standard



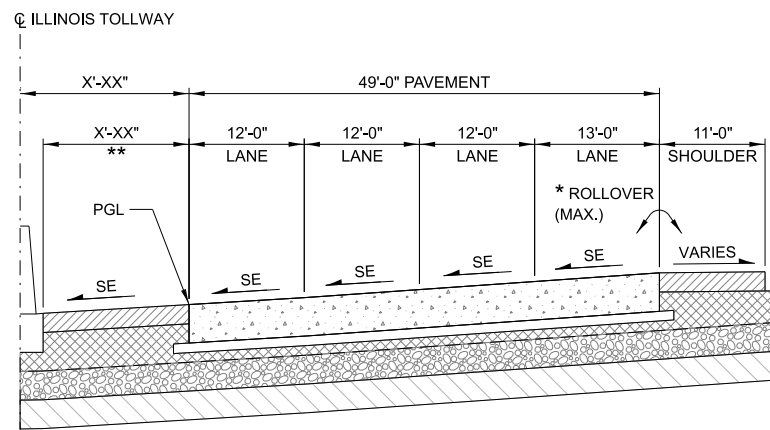
MAINLINE-3 LANES
SUPERELEVATION, LEFT



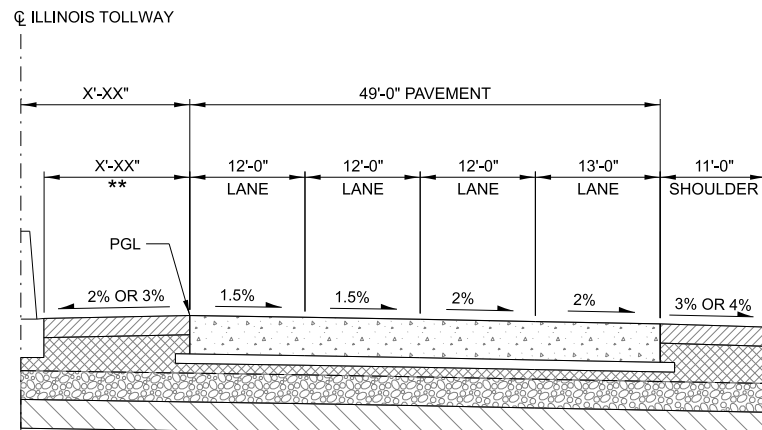
MAINLINE-3 LANES
NORMAL CROWN



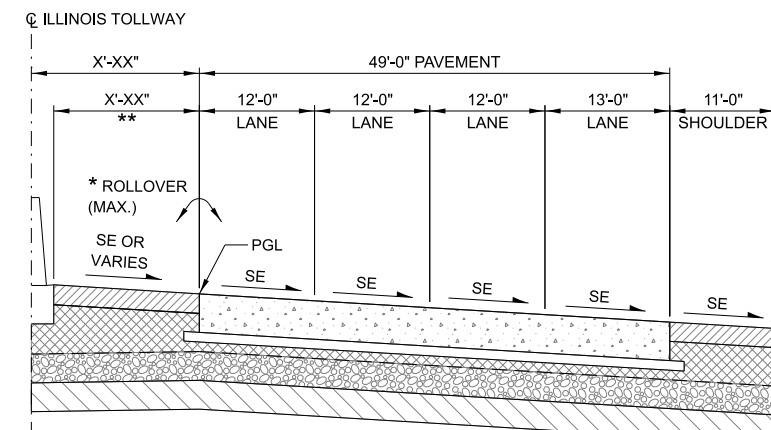
MAINLINE-3 LANES
SUPERELEVATION, RIGHT



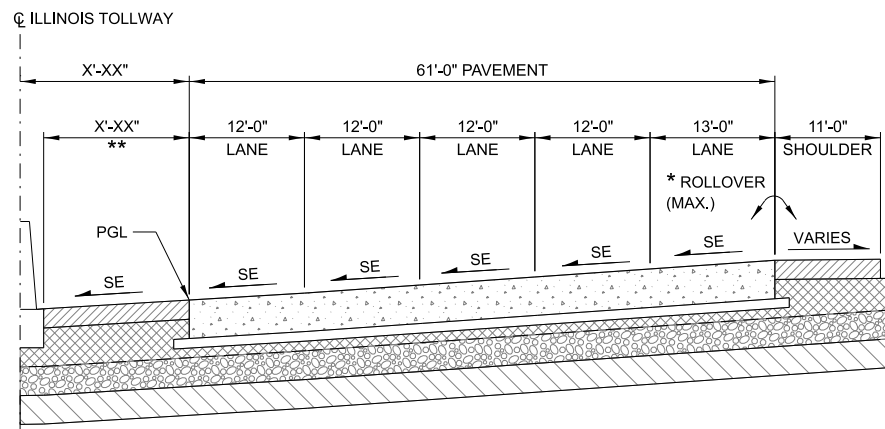
MAINLINE-4 LANES
SUPERELEVATION, LEFT



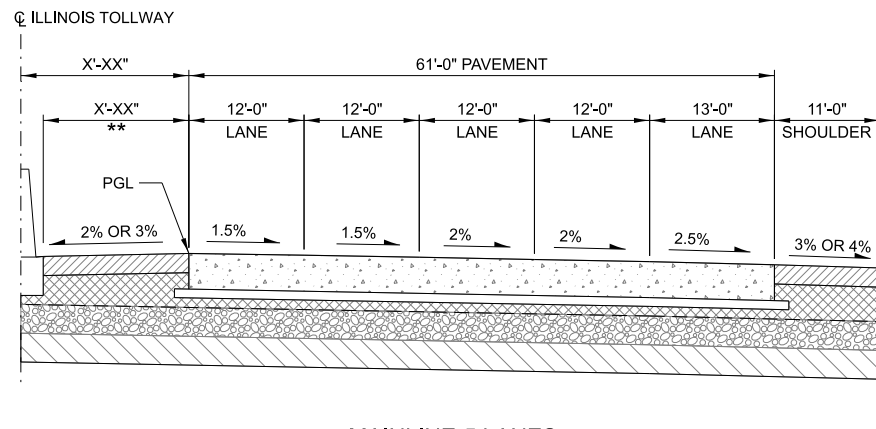
MAINLINE-4 LANES
NORMAL CROWN



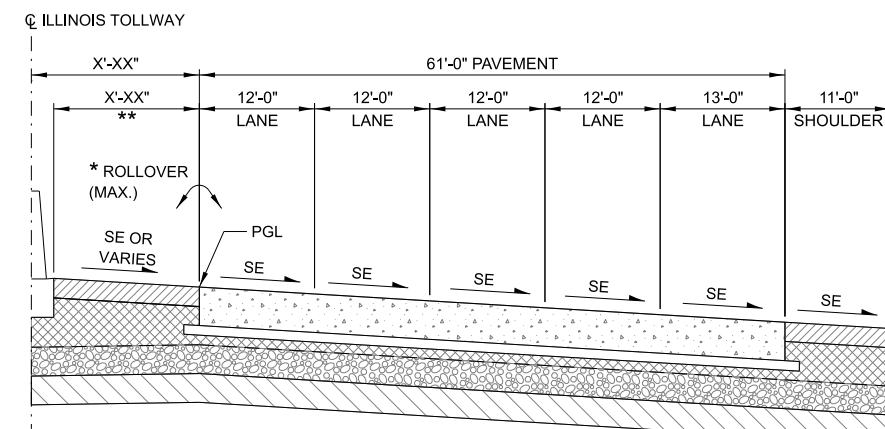
MAINLINE-4 LANES
SUPERELEVATION, RIGHT



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.

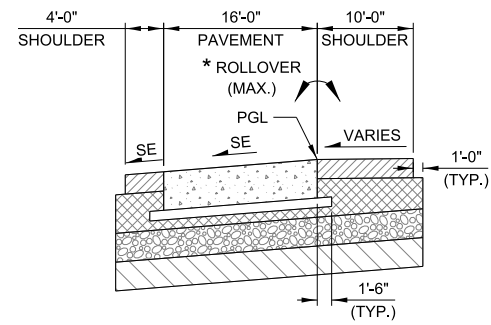
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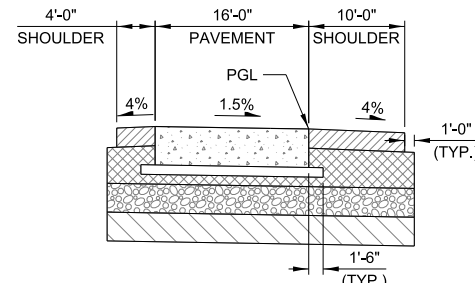


ROADWAY TYPICAL SECTIONS - GROUP A

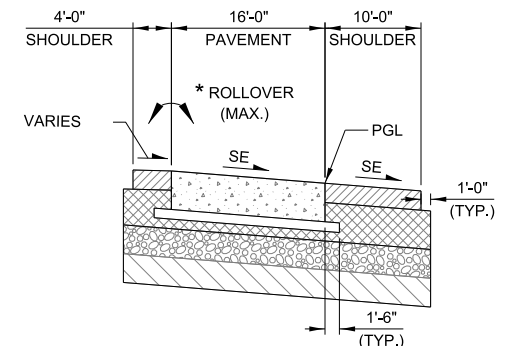
VERSION: 2023-03 BASE SHEET: M-RDY-400 SHEET: 1 OF 1



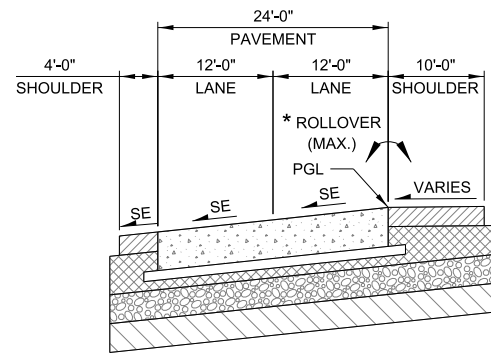
RAMP-1 LANE
SUPERELEVATION LEFT



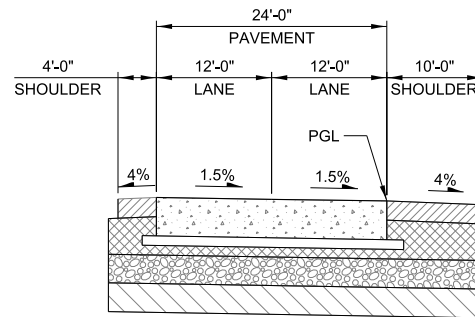
RAMP-1 LANE
NORMAL CROWN



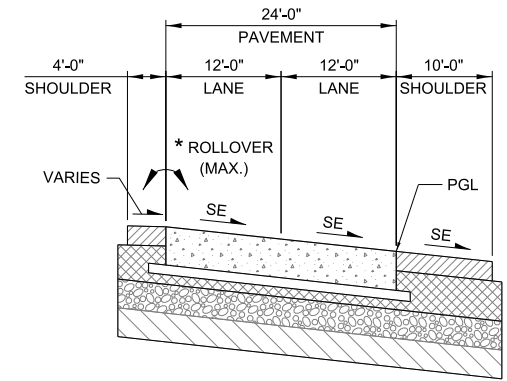
RAMP-1 LANE
SUPERELEVATION RIGHT



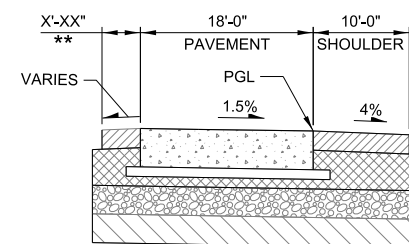
RAMP-2 LANES
SUPERELEVATION LEFT



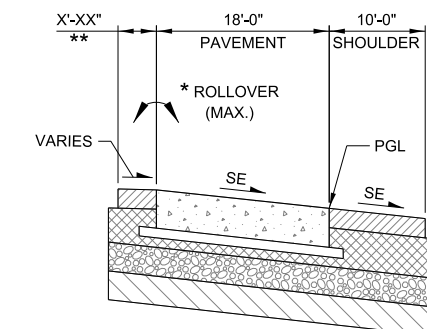
RAMP-2 LANES
NORMAL CROWN



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.

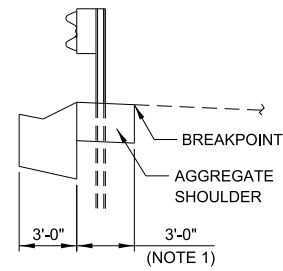
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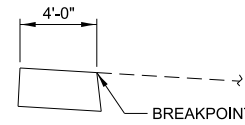


ROADWAY TYPICAL SECTIONS - GROUP B

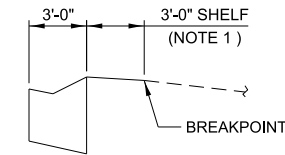
VERSION: 2023-03	BASE SHEET: M-RDY-401	SHEET: 1 OF 1
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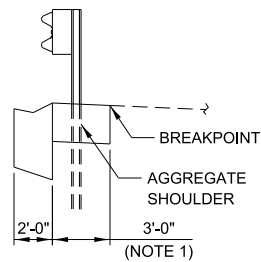
**GUTTER, TYPE G-3
WITH GUARDRAIL**



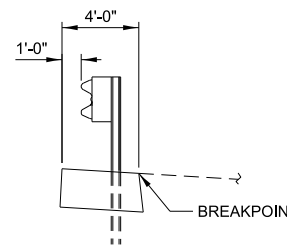
**AGGREGATE
SHOULDER
(NOTE 2)**



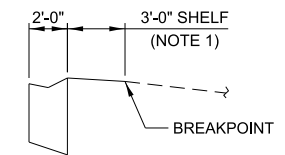
GUTTER, TYPE G-3



**GUTTER, TYPE G-2
WITH GUARDRAIL**





**AGGREGATE SHOULDER
WITH GUARDRAIL
(NOTE 2)**



GUTTER, TYPE G-2

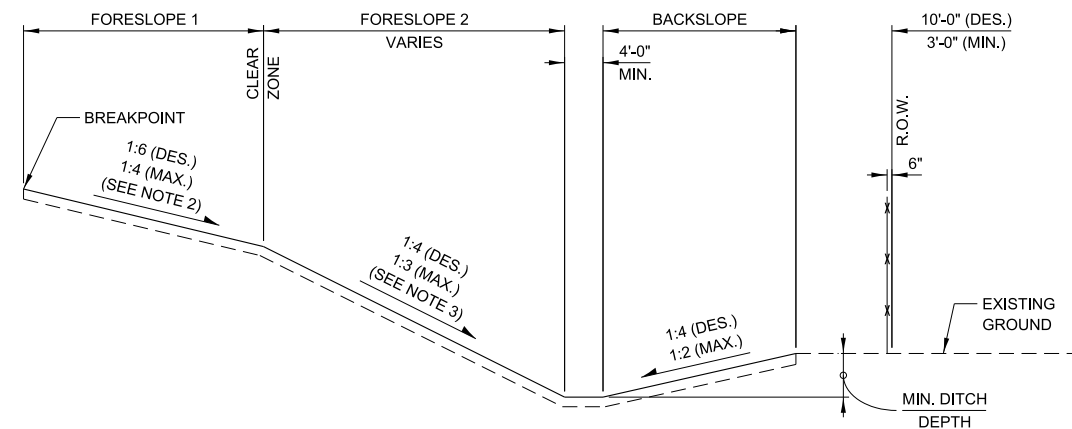
NOTES:

1. SLOPE TOWARD GUTTER AT 6% WHEN IN CUT SECTION AND SLOPE AWAY FROM GUTTER AT 6% WHEN IN FILL SECTION. THERE MIGHT BE CASES WHERE 3'-0" SHELF MIGHT NOT BE NEEDED IN CUT CONDITION.
2. AGGREGATE SHOULDER SLOPE SHALL NOT BE FLATTER THAN ADJACENT PAVED SHOULDER.


NOTE TO DESIGNER
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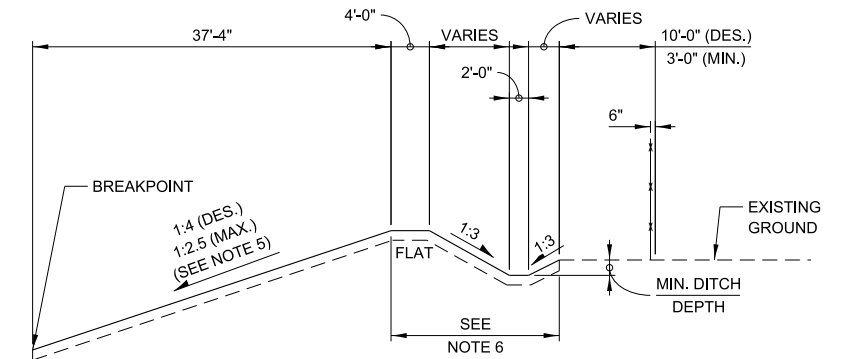
**ROADWAY TYPICAL
SECTIONS - GROUP D**



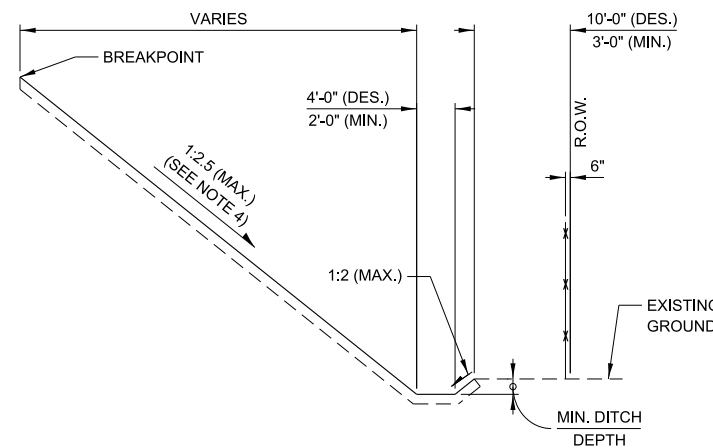
DESIRABLE FILL SECTION

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'	1:2
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



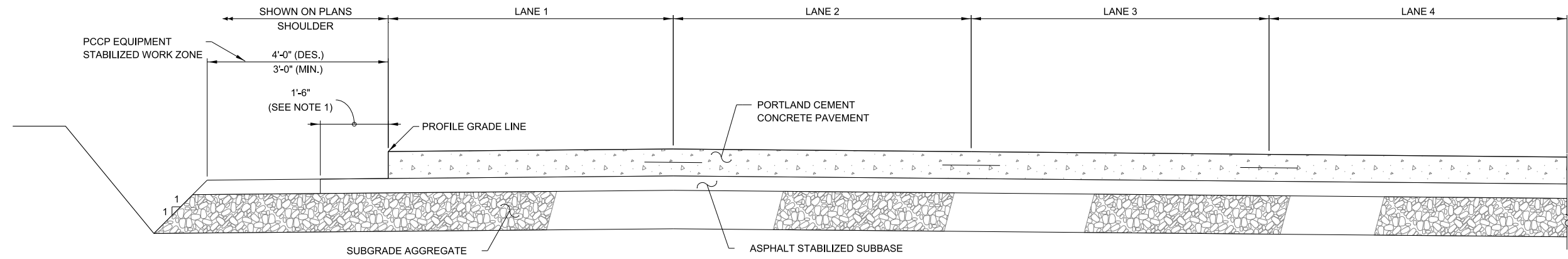
ACCEPTABLE FILL SECTION
FILL ≥ 9"
(CLEAR ZONE UNDEFINED)

NOTES:

- ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENTS TO UNITS OF HORIZONTAL DISPLACEMENTS (V:H).
- 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.
- 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.
- 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.
- BACKSLOPES STEEPER THAN 1:2.5 FROM THE SHOULDER POINT IN A CUT SECTION REQUIRE A DESIGN DEVIATION.
- CAN BE OMITTED WHEN EXISTING GROUND SLOPES AWAY FROM R.O.W. LINE.
- 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.



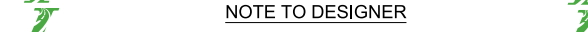
**PAVEMENT CROSS - SECTION REQUIREMENTS
FOR PAVING OPERATIONS**

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.



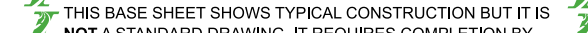
NOTE TO DESIGNER



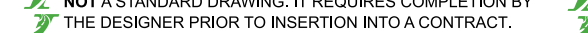
 THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS

NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY

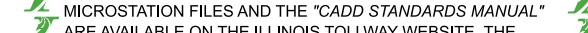
 THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT.



 MICROSTATION FILES AND THE "CADD STANDARDS MANUAL"

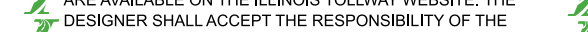


 ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE

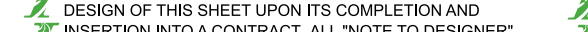


 DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE

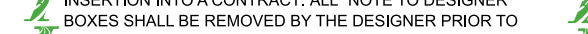
 DESIGN OF THIS SHEET UPON ITS COMPLETION AND




 INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER"



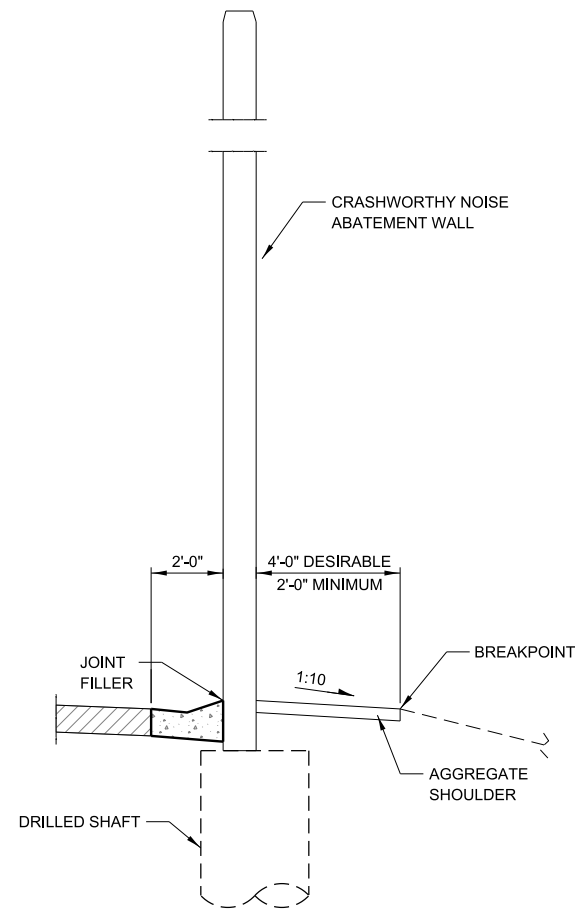
 BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO



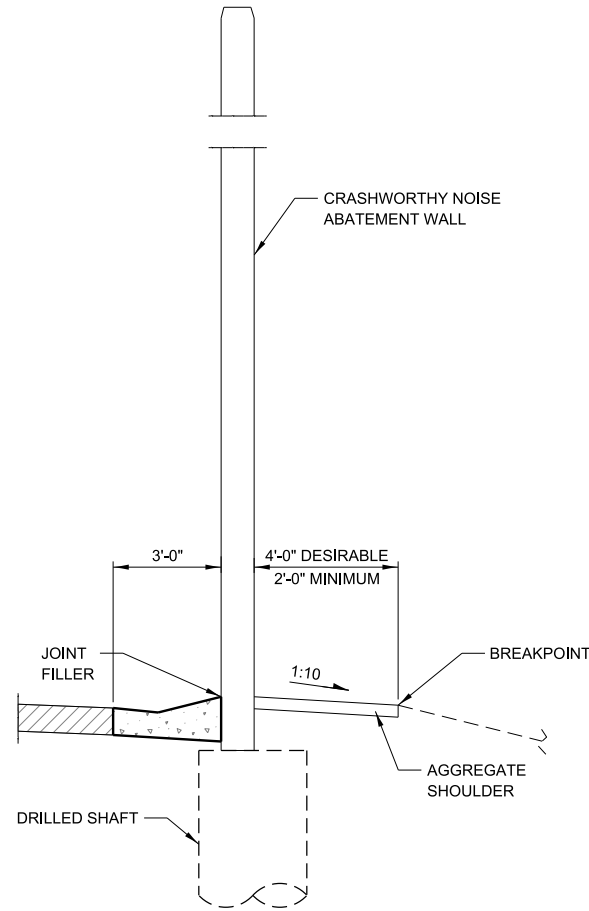
 INSERTION OF THE SHEET INTO THE PLAN SET.



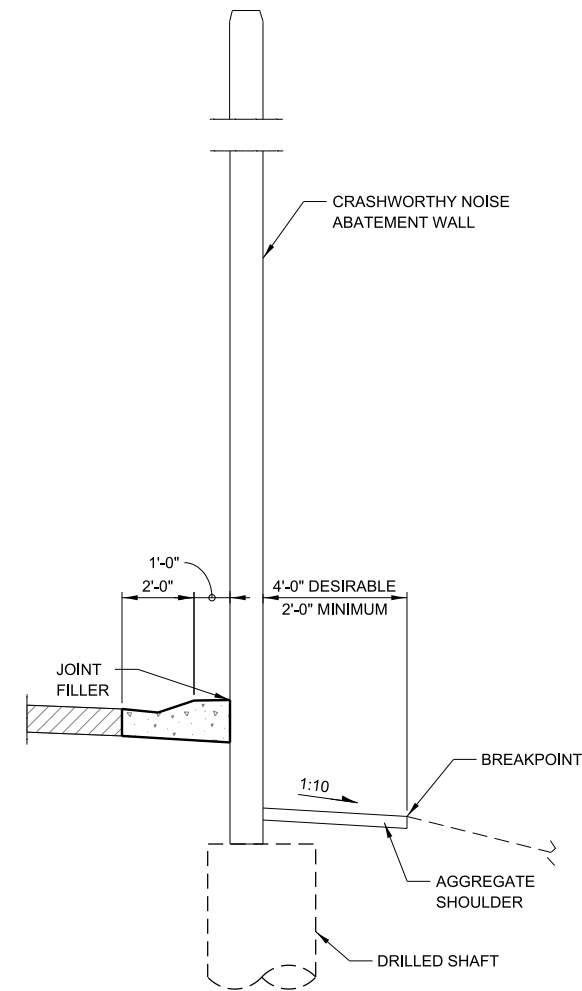
		
ROADWAY TYPICAL SECTIONS - GROUP F		
<small>VERSION:</small> 2020-03	<small>BASE SHEET:</small> M-RDY-405	<small>SHEET:</small> 1 OF 1



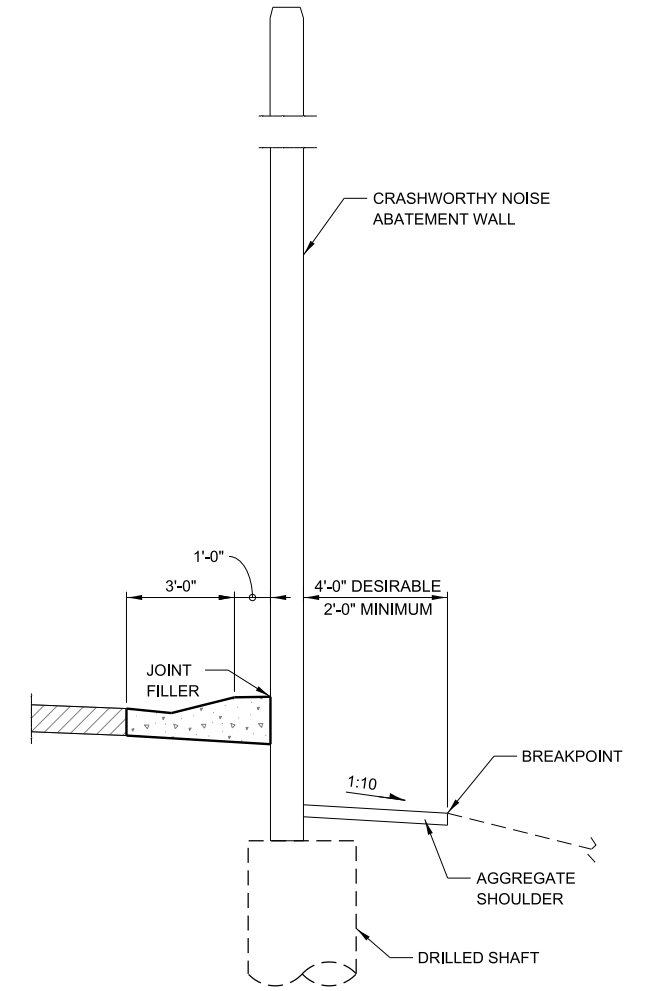
GUTTER, TYPE G-2
(BALANCED SOIL LOAD)



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

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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).

EARTHWORK SCHEDULE OF QUANTITIES								
LOCATION	EARTHWORK VOLUMES (CUYD)							
	A	B	C	D	E	F	G	H
	EARTH EXCAVATION 20200100	ROCK EXCAVATION 20200200	UNSUITABLE MATERIAL 20201200	STRUCTURE EXCAVATION 50200100	UNSUITABLE MATERIAL FOR STRUCTURES 50200450	(SEE NOTE 3) SUITABLE EXCAVATION (adjusted for shrinkage %)	EMBANKMENT	(SEE NOTE 3) EARTHWORK BALANCE EXCESS (+) or SHORTAGE (-)
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																	
LOCATION	ENVIRONMENTAL CLASSIFICATION (CUYD)																
	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	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 SOL 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 JT154207 WILL BE USED PER TOLLWAY SP FOR "ALLOWANCE FOR TESTING OF 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 JT154207 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 VARIOUS 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 (J1204005). THIS SHOULD BE EVALUATED ON A PROJECT SPECIFIC BASIS.

18. KEEP ALL TABLES (EARTHWORK, TOPSOIL, INCIDENTAL, AND RETAINING WALL) UNLESS THERE IS NO EXCAVATION OR PLACEMENT OF THAT TYPE ON THE CONTRACT.

NOTE TO DESIGNER
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EARTHWORK SCHEDULE

EARTHWORK SCHEDULE OF TOPSOIL QUANTITIES					ENVIRONMENTAL CLASSIFICATION (CUYD)													
EARTHWORK VOLUMES (CUYD)					I2	J2	K2	L2	M2	N2	O2	P2	Q2	R2	S2	T2	U2	EE2
LOCATION	V	W (SEE NOTE 3, SHEET 1)	X	Y 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
	TOPSOIL STRIPPING	SUITABLE TOPSOIL	TOPSOIL PLACEMENT		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					ENVIRONMENTAL CLASSIFICATION (CUYD)													
EARTHWORK VOLUMES (CUYD)					I3	J3	K3	L3	M3	N3	O3	P3	Q3	R3	S3	T3	U3	EE3
LOCATION	Z	AA	BB	CC	C: SOILS APPROVED FOR REUSE				B: SOILS APPROVED WITH RESTRICTIONS				A: SOILS NOT APPROVED FOR REUSE				HAZARDOUS WASTE	UNCLASSIFIED SOIL
	STORM SEWER TRENCH	ITS EXCAVATION	INCIDENTAL EXCAVATION (FILL IN TYPE)	INCIDENTAL EXCAVATION (FILL IN TYPE)	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					ENVIRONMENTAL CLASSIFICATION (CUYD)													
EARTHWORK VOLUMES (CUYD)					I4	J4	K4	L4	M4	N4	O4	P4	Q4	R4	S4	T4	U4	EE4
LOCATION	DD	C: SOILS APPROVED FOR REUSE				B: SOILS APPROVED WITH RESTRICTIONS				A: SOILS NOT APPROVED FOR REUSE				HAZARDOUS WASTE	UNCLASSIFIED SOIL			
	RETAINING WALL EXCAVATION*	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	
J1211110	TOPSOIL EXCAVATION AND PLACEMENT							CUYD	WHEN X<W, THEN X OR WHEN X>W, THEN W	
J1211112	TOPSOIL EXCAVATION AND DISPOSAL							CUYD	W-X	
J1211126	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 JT154207 WILL BE USED PER TOLLWAY SP FOR "ALLOWANCE FOR TESTING OF UNCLASSIFIED SOIL".



EARTHWORK SCHEDULE

LOCATION	EARTHWORK + INCIDENTAL (STEP 1)				NON SPECIAL WASTE (NSW) DISPOSAL, TYPE 1				STEP 3 (STEP 1 + STEP 2)		TOTAL NSW DISPOSAL, TYPE 1 (JT202009)
	WITH IEPA APPROVED GROUNDWATER ORDINANCE		WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE		TOPSOIL (STEP 2)				WITH IEPA APPROVED GROUNDWATER ORDINANCE	WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE	
	1	2	3	4	5	6	7	8	9	10	
	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 TO DESIGNER

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 = $\frac{((I1+M1)*SS-G)}{SS} + Q1+I3+Q3+M3$ (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 = $\frac{(I1*SS-G)}{SS} + Q1+M1+I3+Q3+M3$ (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

NOTES TO DESIGNER

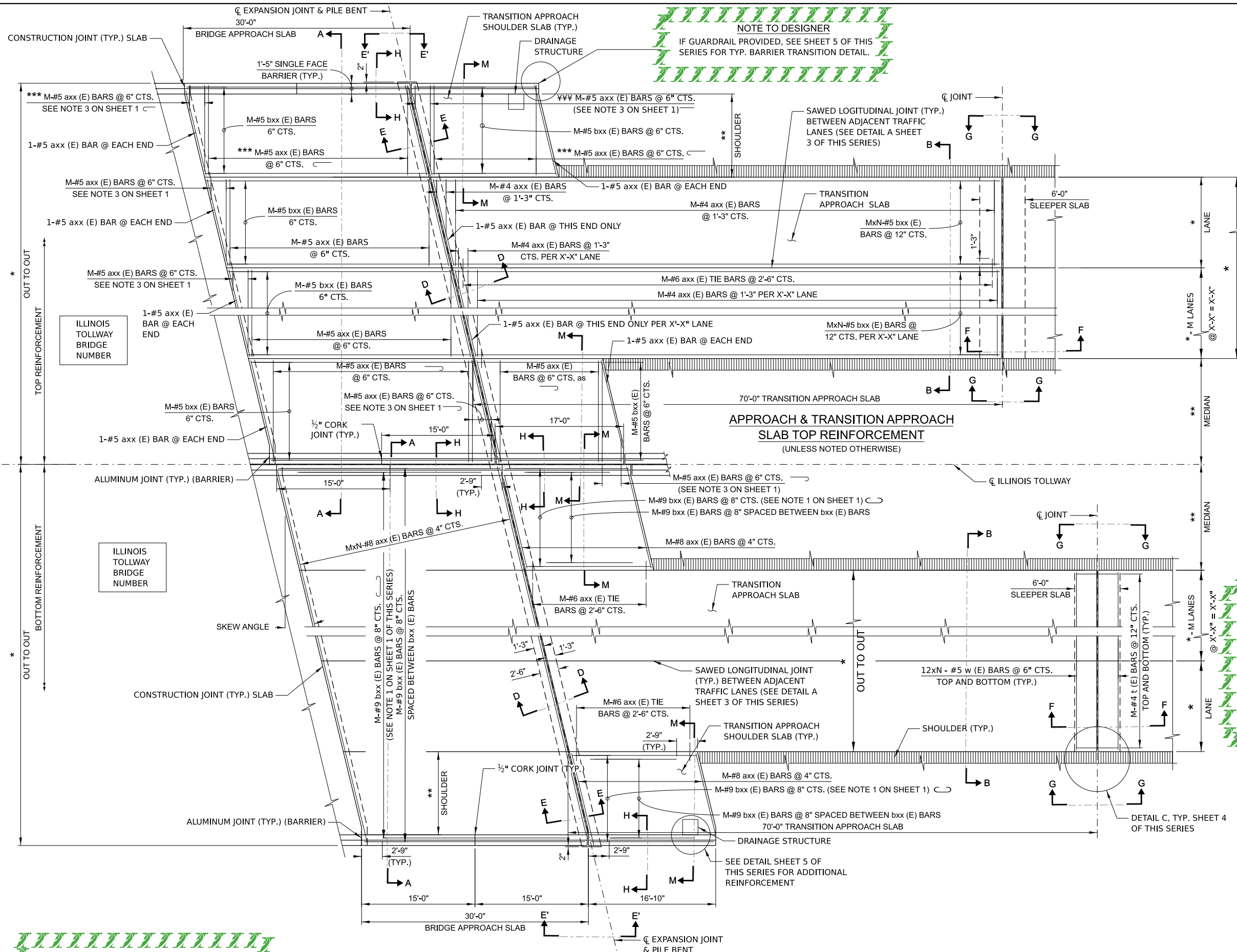
CONTRACTS WITH OVER 1,000 CUBIC YARDS OF TYPE 1C AND TYPE 1B

WITH IEPA APPROVED GROUNDWATER ORDINANCE
 IN ORDER TO MAXIMIZE THE REUSE OF TYPE 1 SOIL, CONSIDER OPPORTUNITIES FOR STORAGE AND REUSE WITHIN EACH STAGE OF TYPE 1C AND 1B SOIL, RATHER THAN CALCULATING EXCESS 1C AND 1B AND ASSUMING DISPOSAL AT EACH LOCATION. IF THERE IS EXCESS TYPE 1C OR 1B IN EARLIER STAGES, AND A NEED FOR FURNISHED EXCAVATION IN THE FOLLOWING STAGES, AND SPACE IS AVAILABLE FOR STORAGE, INCLUDE NOTES TO USE THE STOCKPILED TYPE 1C AND TYPE 1B MATERIAL AS FURNISHED EXCAVATION.

WITHOUT IEPA APPROVED GROUNDWATER ORDINANCE
 IN ORDER TO MAXIMIZE THE REUSE OF TYPE 1 SOIL, CONSIDER OPPORTUNITIES FOR STORAGE AND REUSE WITHIN EACH STAGE OF TYPE 1C SOIL, RATHER THAN CALCULATING EXCESS 1C AND ASSUMING DISPOSAL AT EACH LOCATION. IF THERE IS EXCESS TYPE 1C IN EARLIER STAGES, AND A NEED FOR FURNISHED EXCAVATION IN THE FOLLOWING STAGES, AND SPACE IS AVAILABLE FOR STORAGE, INCLUDE NOTES TO USE THE STOCKPILED TYPE 1C MATERIAL AS FURNISHED EXCAVATION.



EARTHWORK SCHEDULE



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

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.
 *** 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.

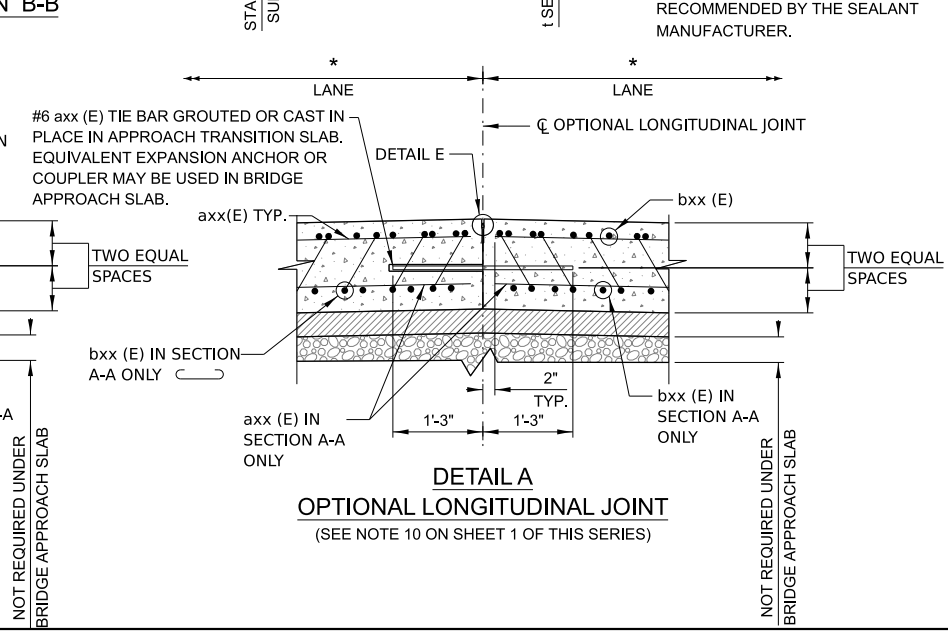
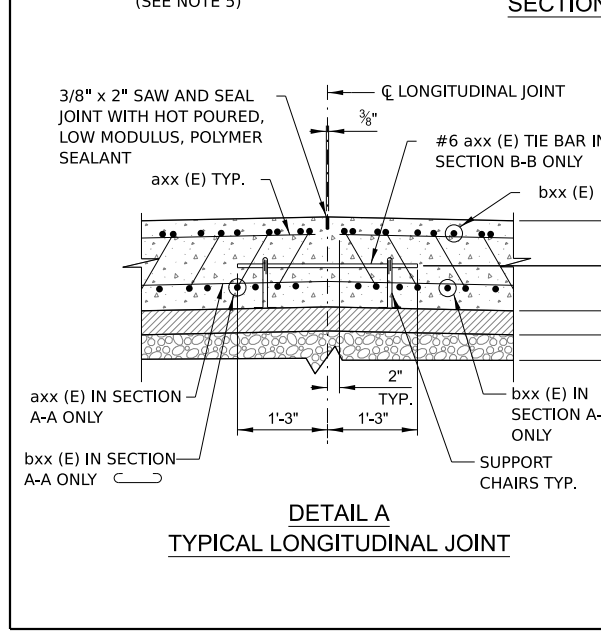
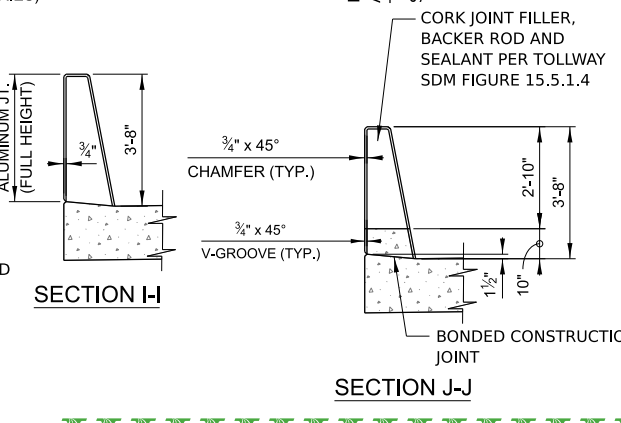
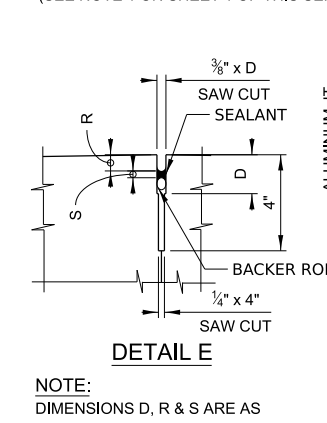
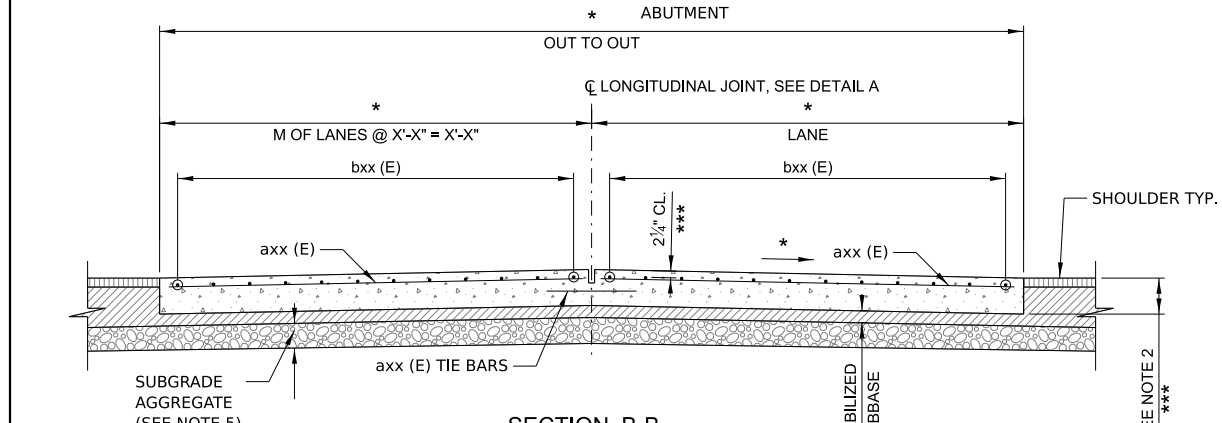
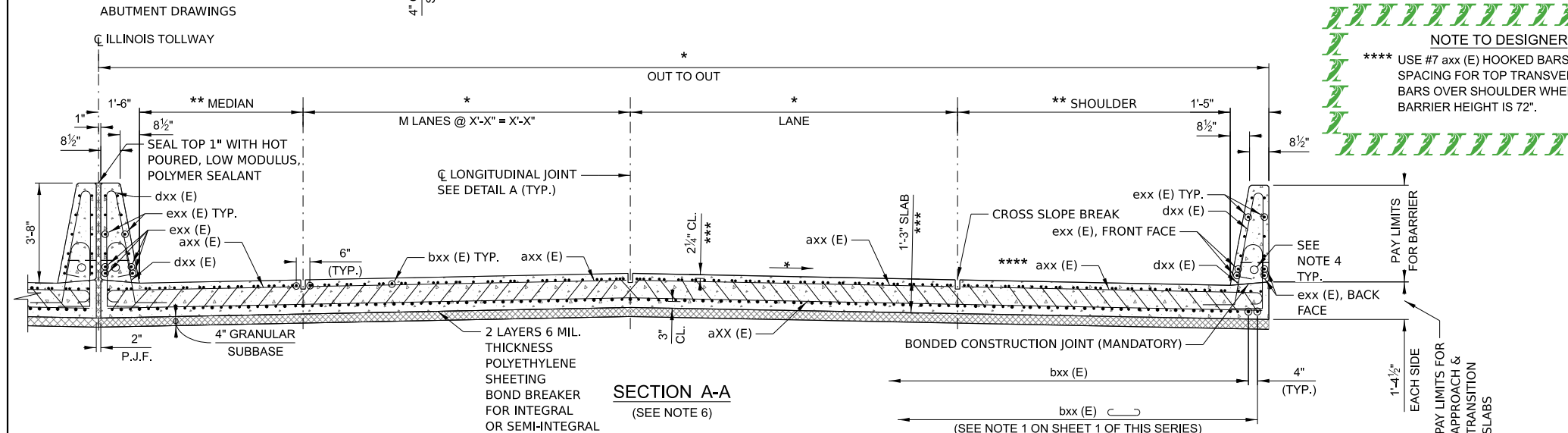
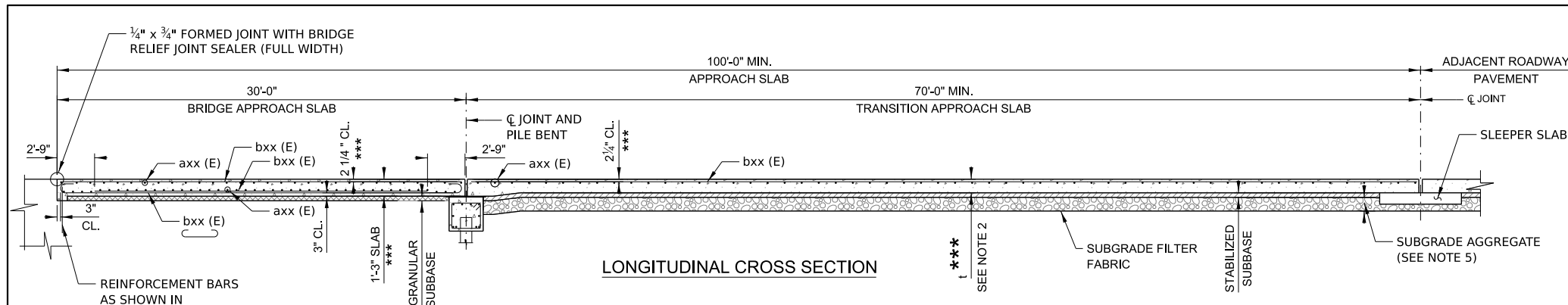
APPROACH SLAB BOTTOM REINFORCEMENT
 (UNLESS NOTED OTHERWISE)
PLAN (INTEGRAL OR SEMI-INTEGRAL ABUTMENTS)

- NOTE:**
- FOR GENERAL NOTES SEE SHEET 1 OF THIS SERIES.

Illinois Tollway

APPROACH SLAB, MAINLINE

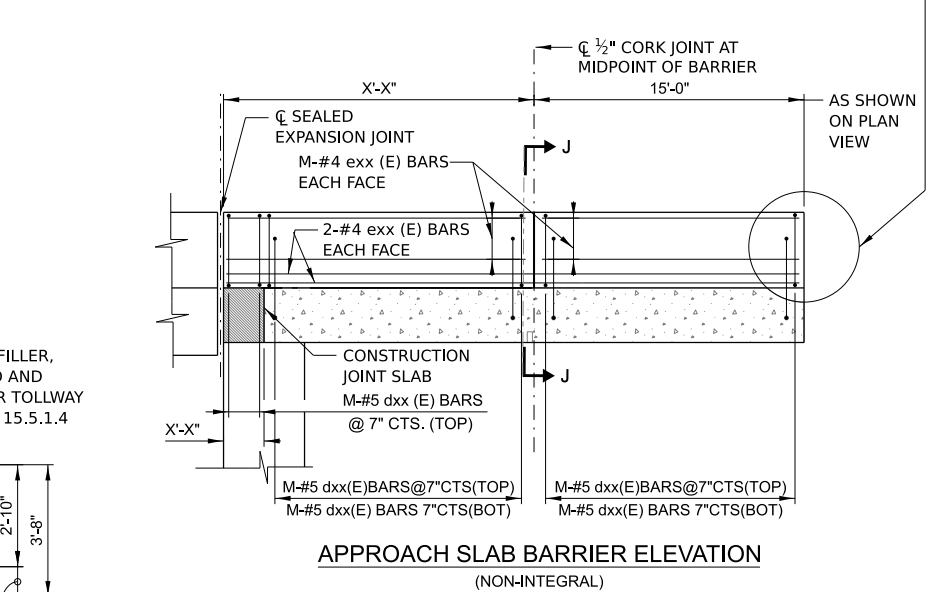
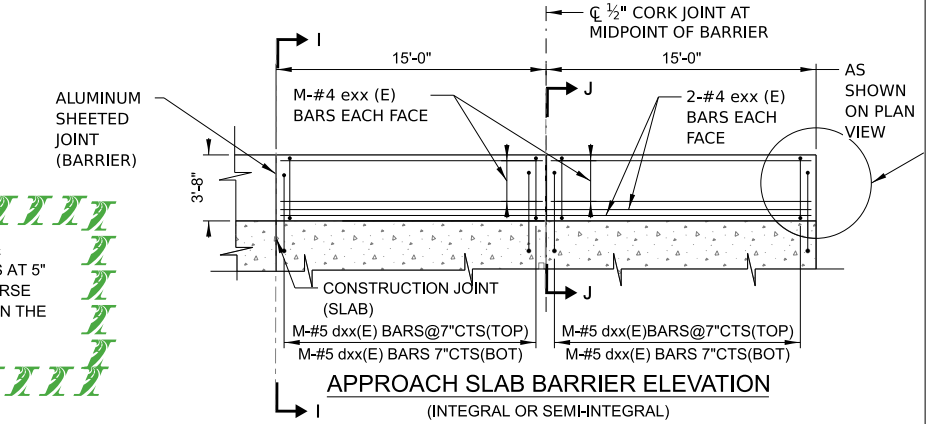
VERSION: 2026-03	BASE SHEET: M-RDY-408	SHEET: 2 OF 5
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NOTE TO DESIGNER

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

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



- NOTE:**
- SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES.
 - THE DIMENSION I IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
 - INTEGRAL ABUTMENT JOINT SHOWN NON-INTEGRAL ABUTMENT JOINT SIMILAR. SEE SHEET 4 OF THIS SERIES.
 - COORDINATE THE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.
 - THE THICKNESS OF THE STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT SECTIONS.
 - 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.
 - THE 1/8" ALUMINUM SHEET SHALL BE ASTM B 209 ALLOY 3003-H14 AND COATED TO MINIMIZE REACTION WITH WET CONCRETE.

NOTE TO DESIGNER

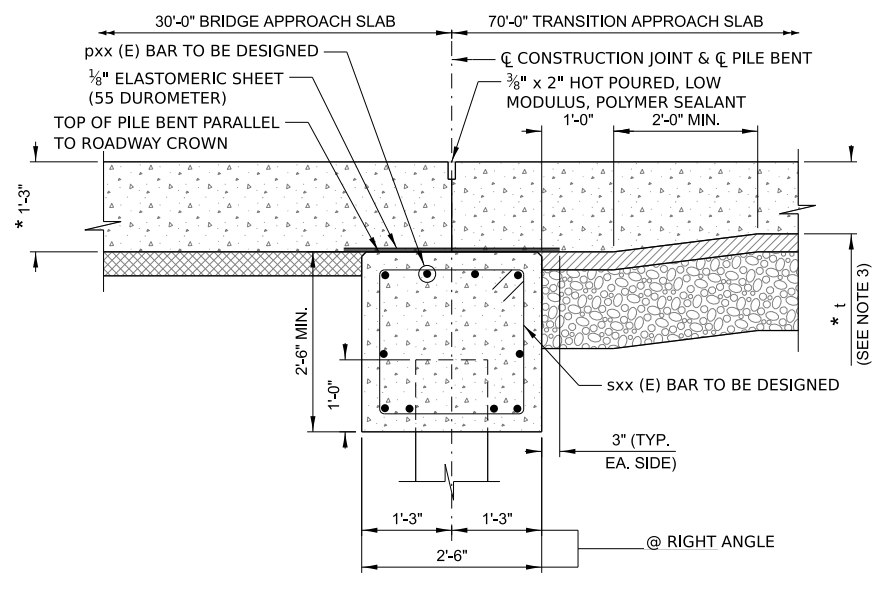
DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

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.

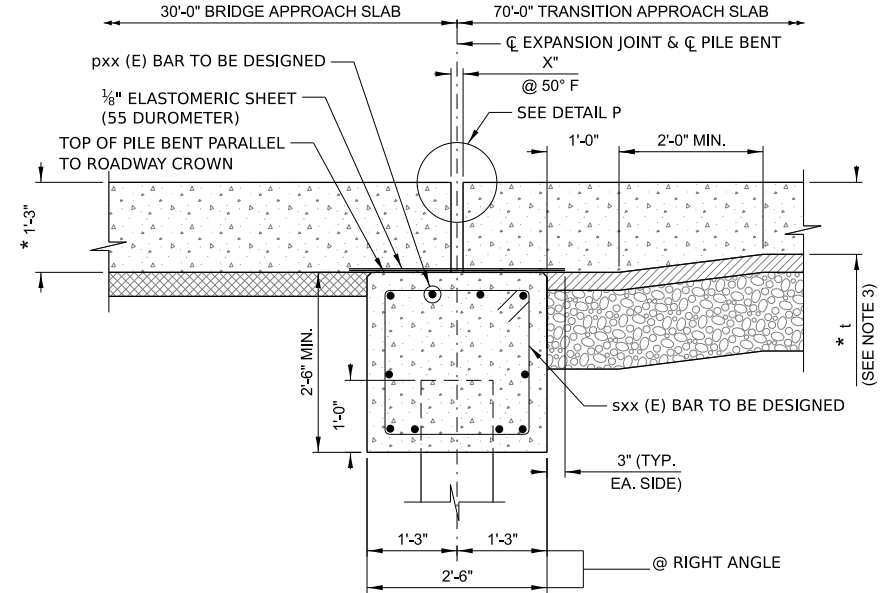
INCREASE BY 1/4" FOR SMOOTHNESS GRINDING

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.

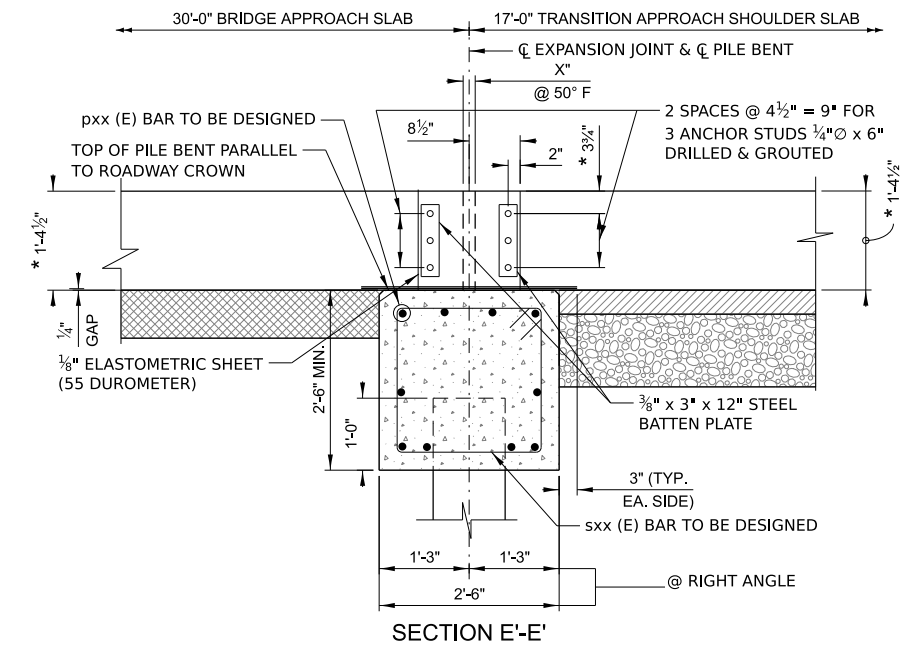
DESIGNER SHALL REPLACE BAR CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER IN DIMENSION LINE.



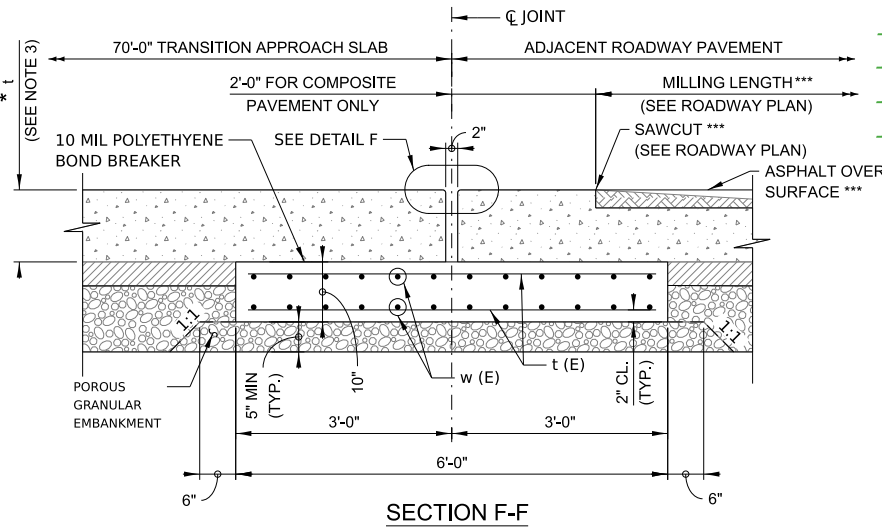
SECTION C-C
FOR NON-INTEGRAL ABUTMENT



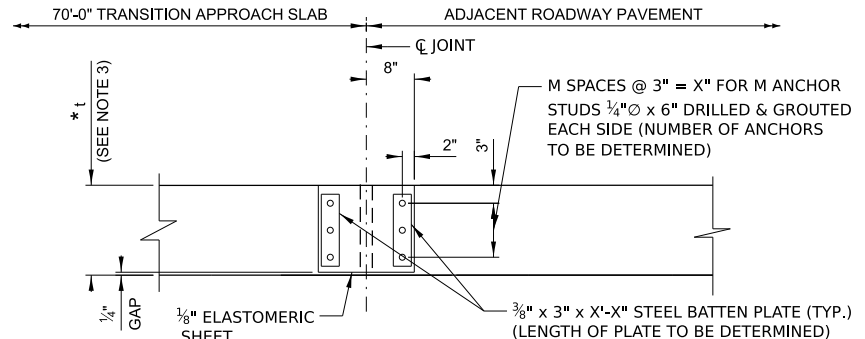
SECTION D-D
FOR INTEGRAL & SEMI-INTEGRAL ABUTMENT



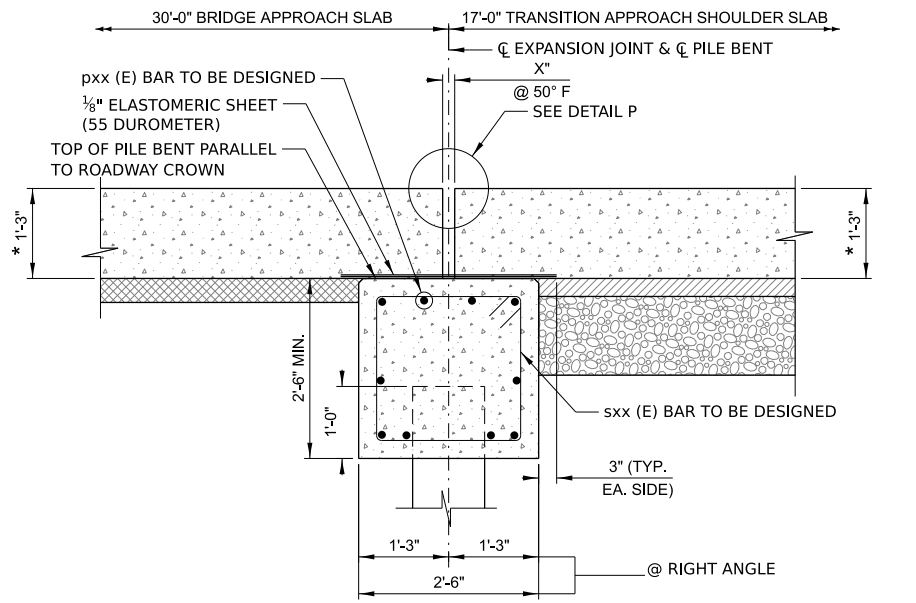
SECTION E-E'
END ELEVATION OF EXPANSION JOINT



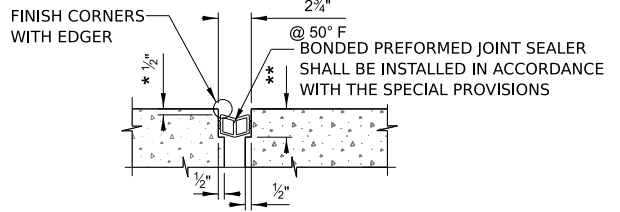
SECTION F-F



VIEW G-G
END ELEVATION OF JOINT

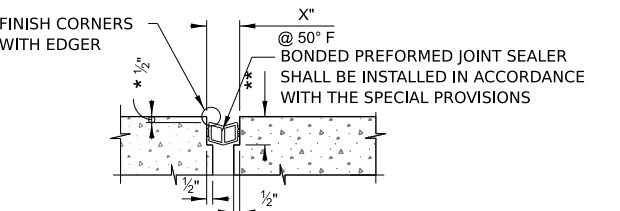


SECTION E-E

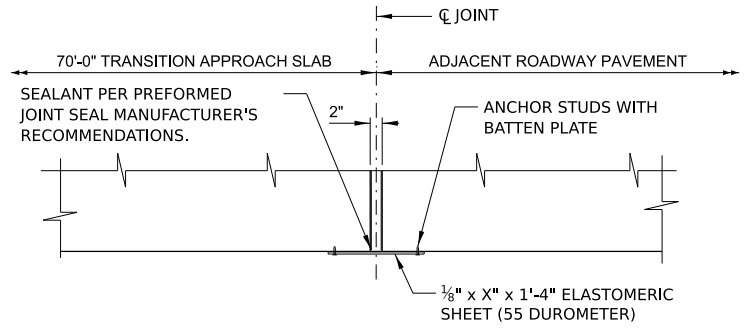
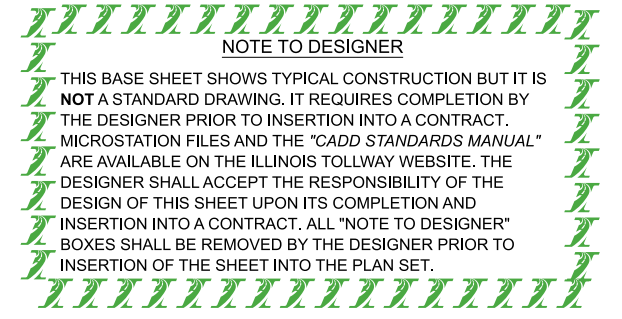
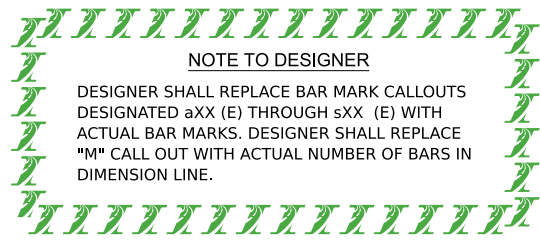


DETAIL F
TRANSITION JOINT

** PER MANUFACTURER'S RECOMMENDATIONS



DETAIL P
APPROACH & TRANSITION JOINT



DETAIL C
END PLAN OF JOINT

LEGEND

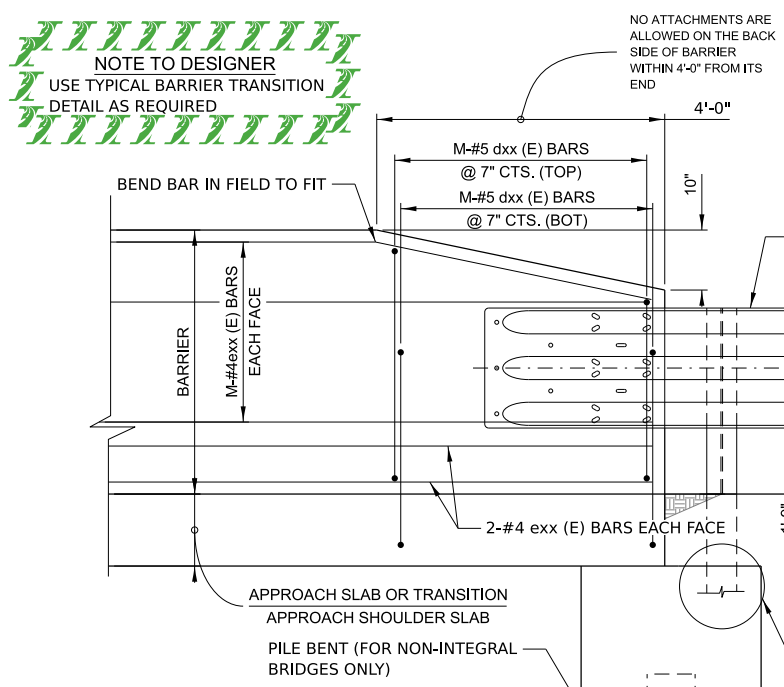
- CONCRETE
- STABILIZED SUBBASE
- SUBGRADE AGGREGATE
- GRANULAR SUBBASE
- MILLING

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.



APPROACH SLAB, MAINLINE



TYPICAL BARRIER TRANSITION DETAIL
(CURB AND GUTTER NOT SHOWN FOR CLARITY)

NOTE TO DESIGNER
USE TYPICAL BARRIER TRANSITION DETAIL AS REQUIRED

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

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.

NOTE TO DESIGNER
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

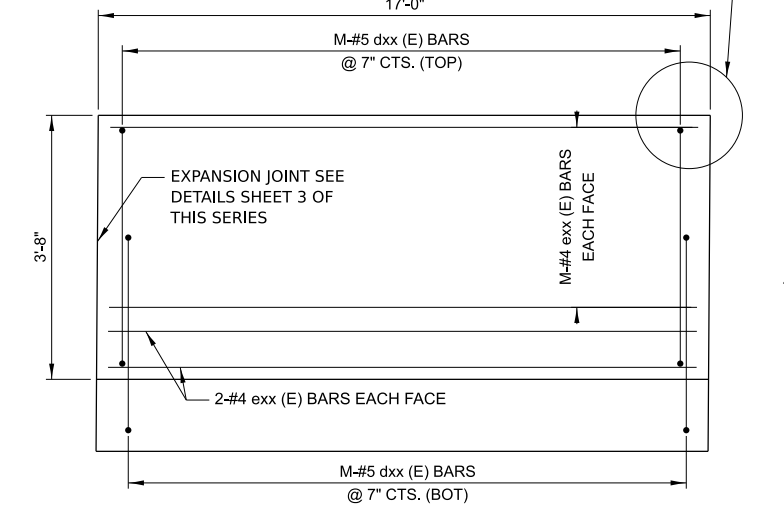
NOTE TO DESIGNER
* DIMENSIONS SHALL CONFORM WITH APPROACH ROADWAY.

**** 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.**

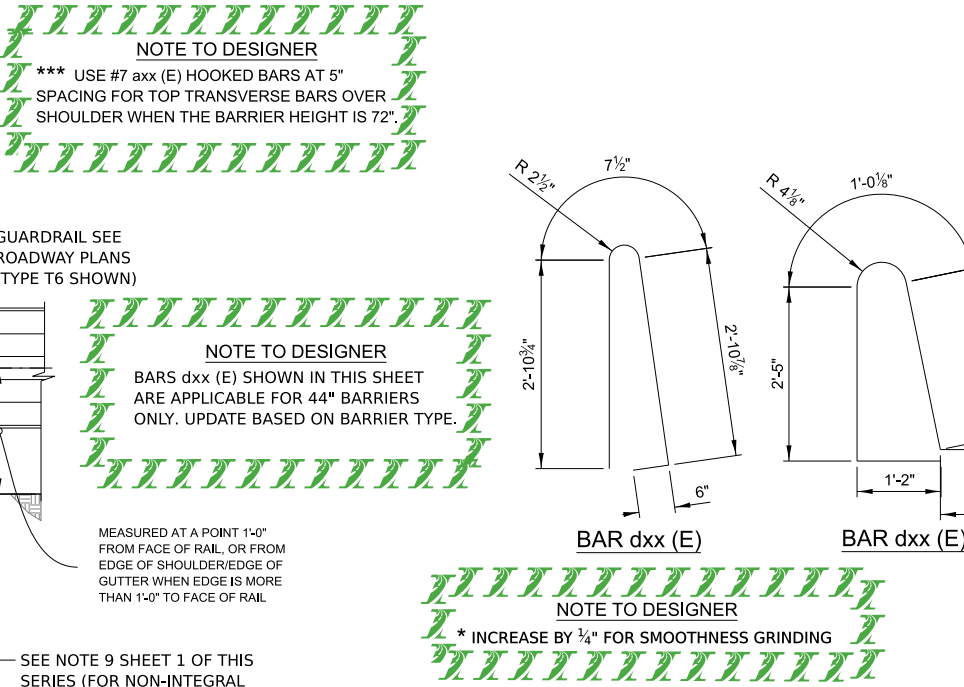
NOTE TO DESIGNER
DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

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.



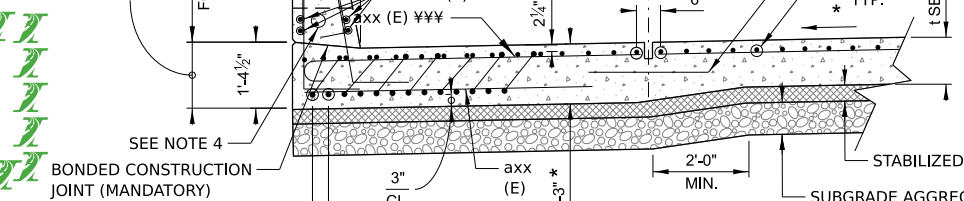
TRANSITION APPROACH SHOULDER SLAB BARRIER ELEVATION



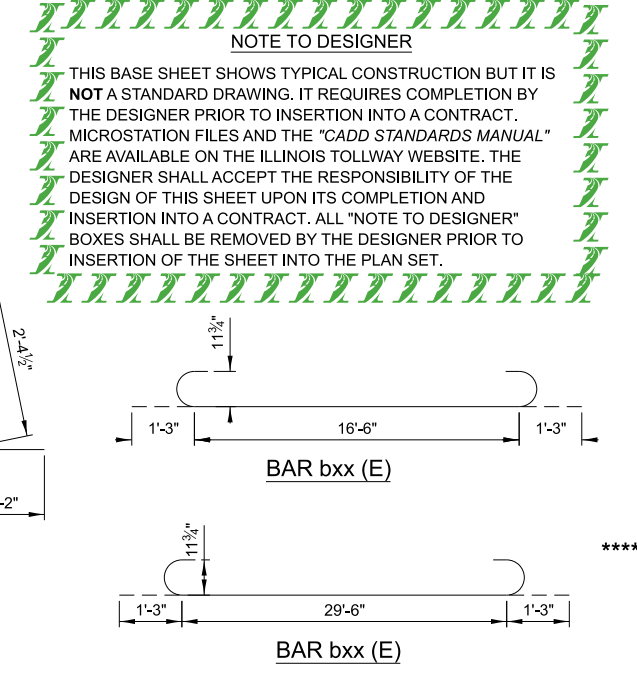
ADDITIONAL REINFORCEMENT AT DRAINAGE STRUCTURES

NOTE TO DESIGNER
IF GUARDRAIL PROVIDED, SEE TYP. BARRIER TRANSITION DETAIL

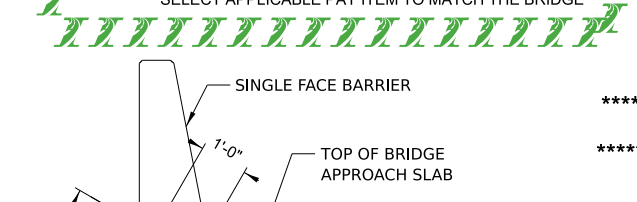
NOTE TO DESIGNER
#5-axx (E) BARS @ 4" CTS. (4'-0" LONG) TIED TO BOTTOM OF TOP REINFORCEMENT MAT. TYP.



PLAN OF JOINT AT BARRIER
(FOR SKEWS GREATER THAN OR EQUAL TO 10 DEGREES)



SECTION H-H



SECTION M-M
(SEE NOTE 6)

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 I 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 THE 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.	
J1420040	BRIDGE APPROACH SLAB	SQ. YD.	
J1420041	TRANSITION APPROACH SLAB	SQ. YD.	
J1420046	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.	

BILL OF MATERIAL FOR BARRIERS

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

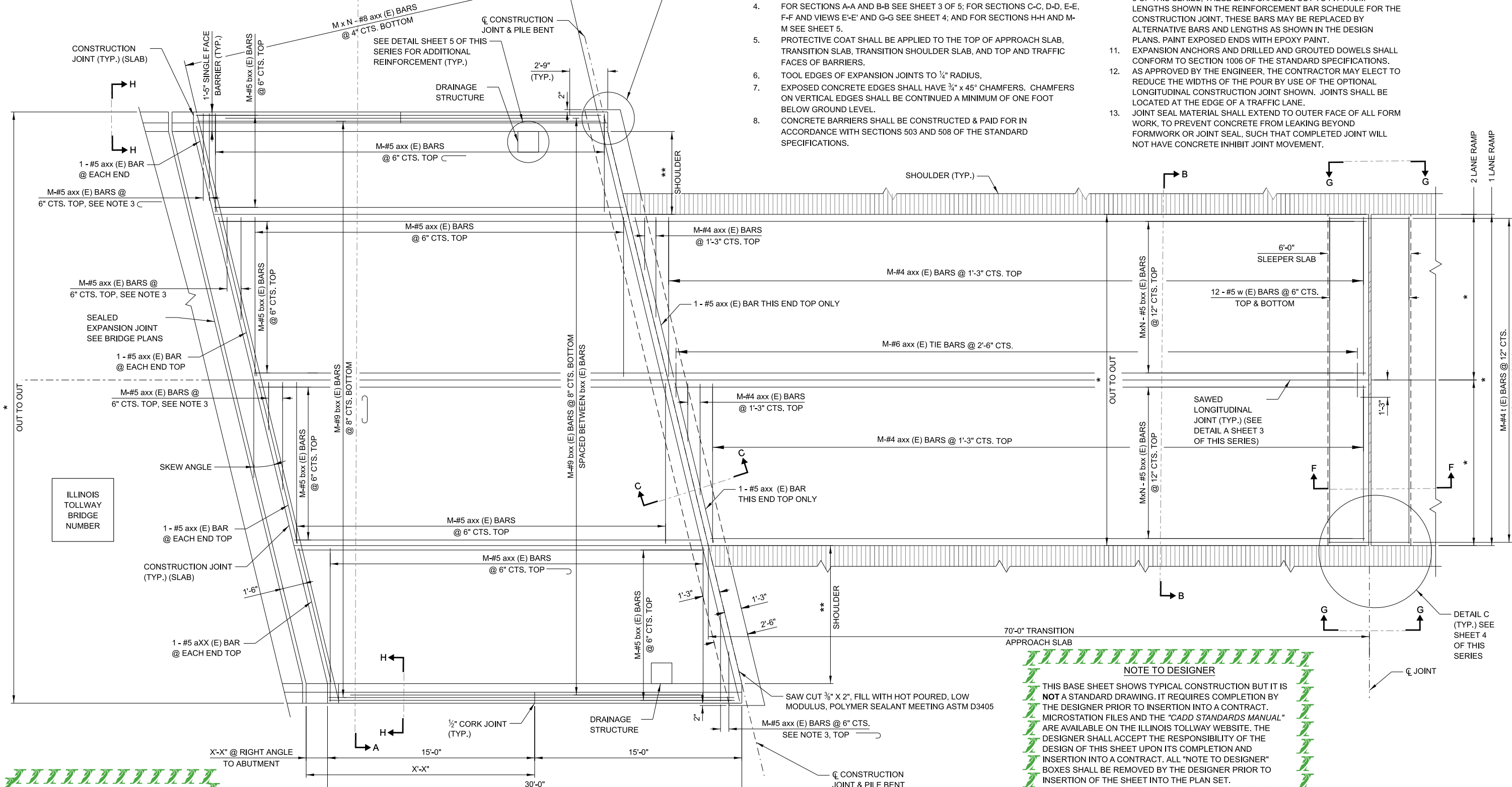
PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	
50300300	PROTECTIVE COAT	SQ. YD.	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	

ILLINOIS Tollway

APPROACH SLAB, MAINLINE

VERSION: 2026-03 BASE SHEET: M-RDY-408 SHEET: 5 OF 5

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 2 1/4" CLEARANCE.
2. USE 2'-6" MIN. LAP FOR #4 BARS, USE 3'-2" MIN. LAP FOR #5 BARS, USE 4'-5" MIN. LAP FOR #6 BARS, USE 8'-4" 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 1/4" RADIUS.
7. EXPOSED CONCRETE EDGES SHALL HAVE 3/4" 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 RESPALED (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.

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.

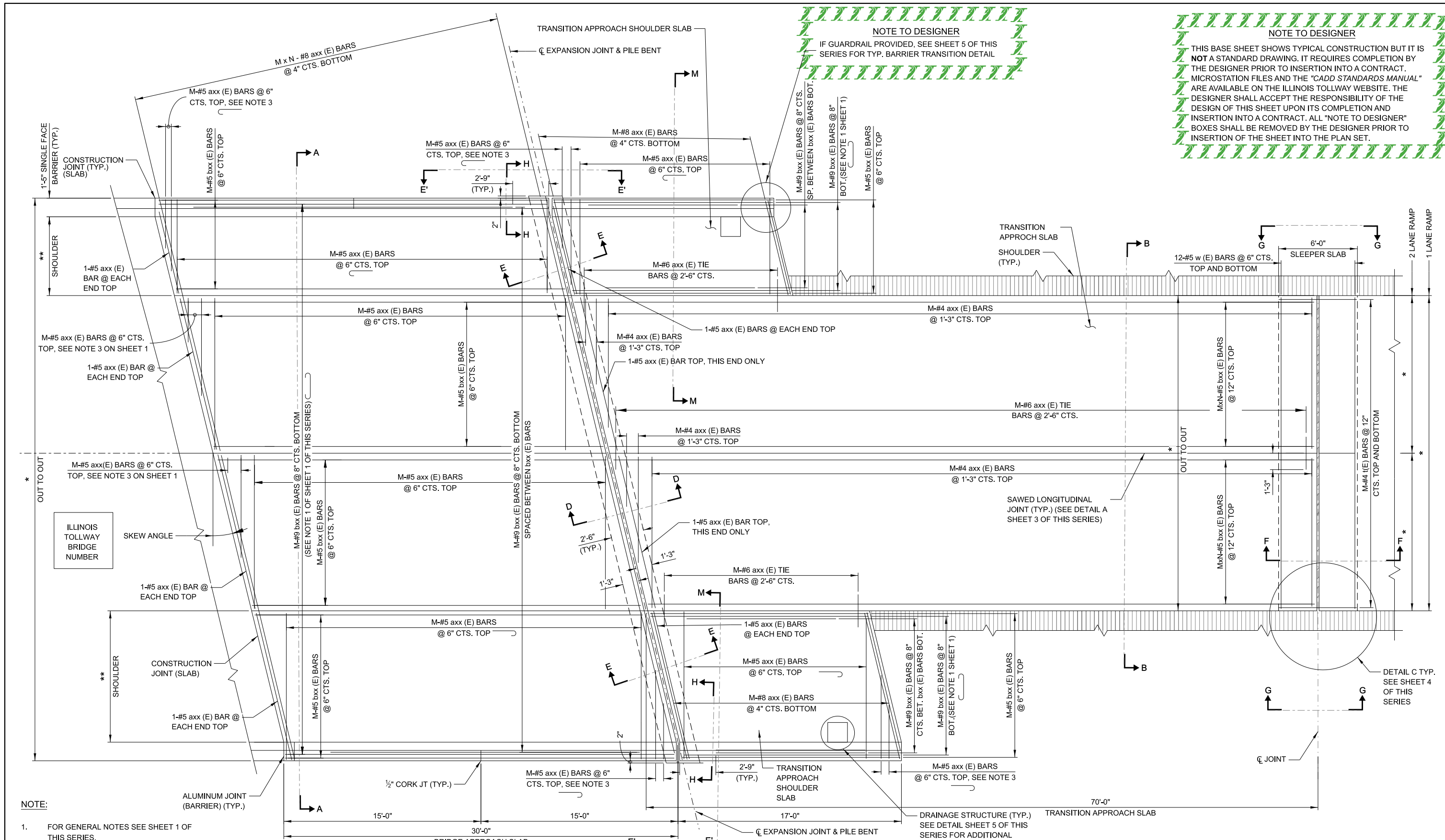
NOTE TO DESIGNER
 DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALL OUT WITH ACTUAL NUMBER OF BARS IN DIMENSION LINE.

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.



APPROACH SLAB, RAMP



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

NOTE TO DESIGNER
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NOTE:
 1. FOR GENERAL NOTES SEE SHEET 1 OF THIS SERIES.

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.)

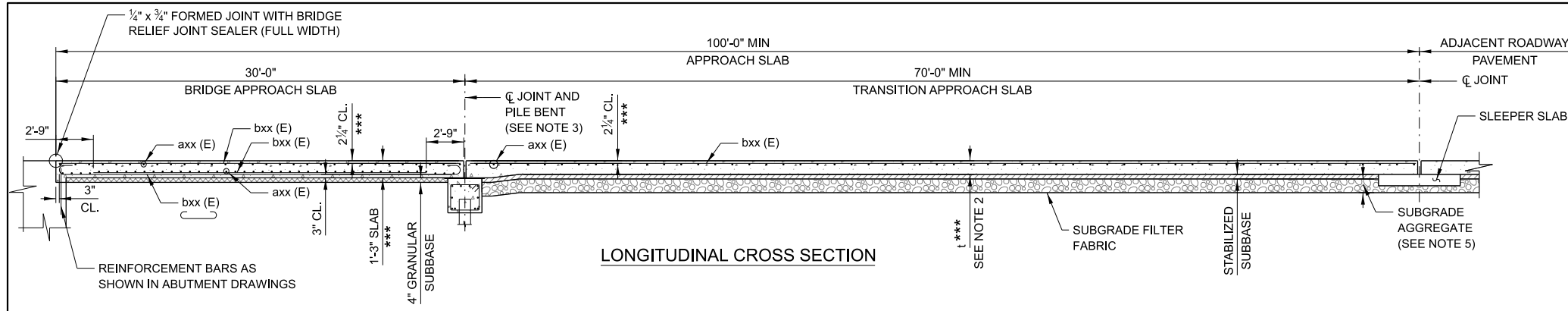
NOTE TO DESIGNER
 DESIGNER TO DETERMINE TYPE, SIZE AND LOCATION OF DRAINAGE STRUCTURE, IF REQUIRED.

NOTE TO DESIGNER
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Illinois Tollway

APPROACH SLAB, RAMP

VERSION: 2026-03 BASE SHEET: M-RDY-409 SHEET: 2 OF 5

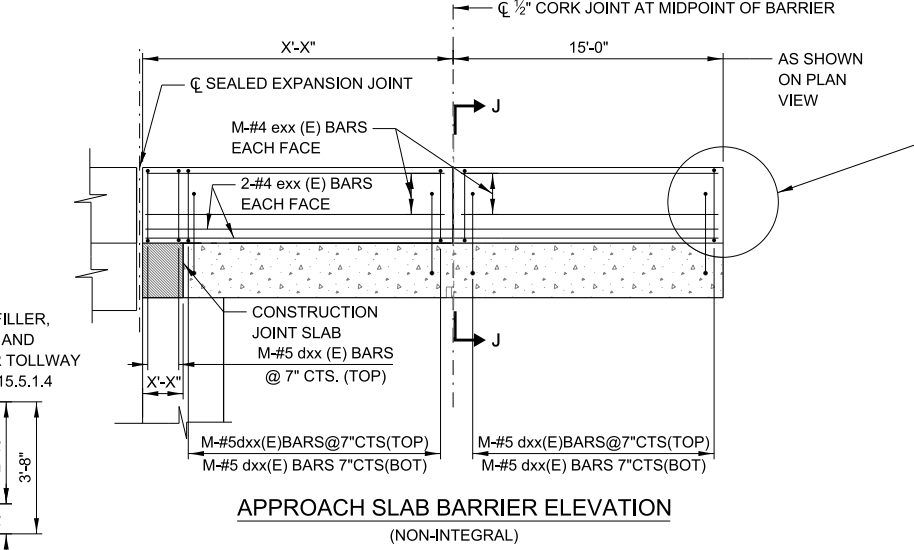
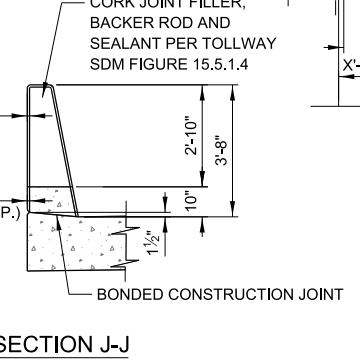
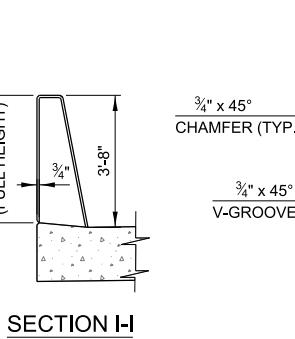
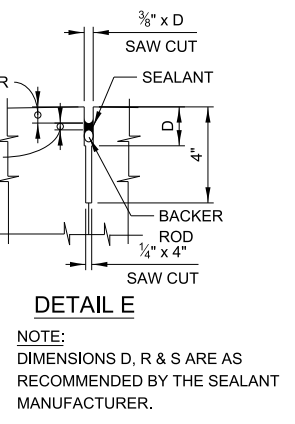
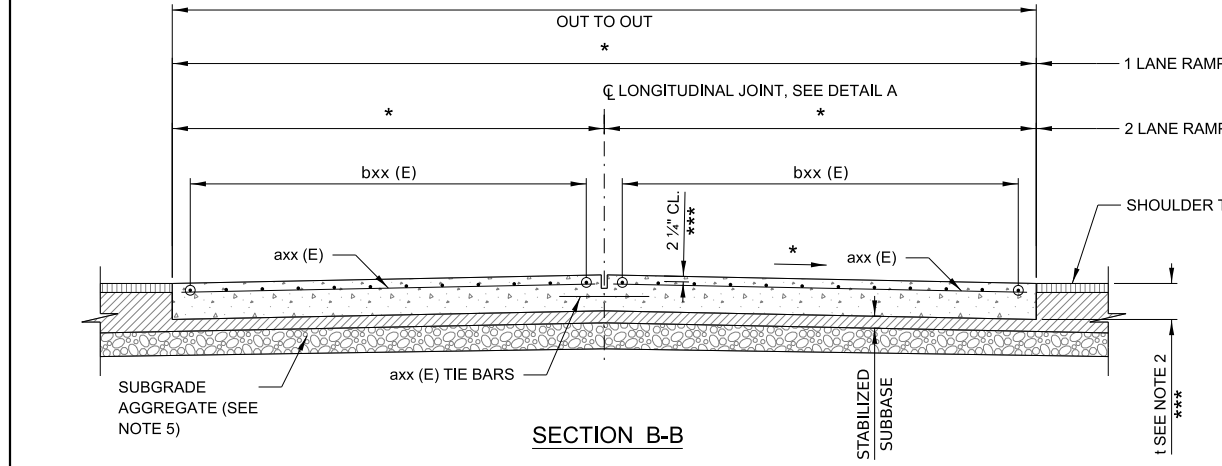
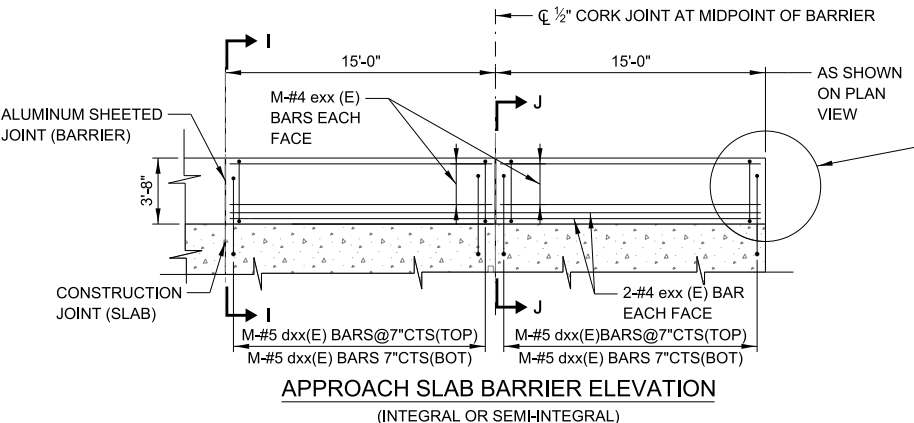
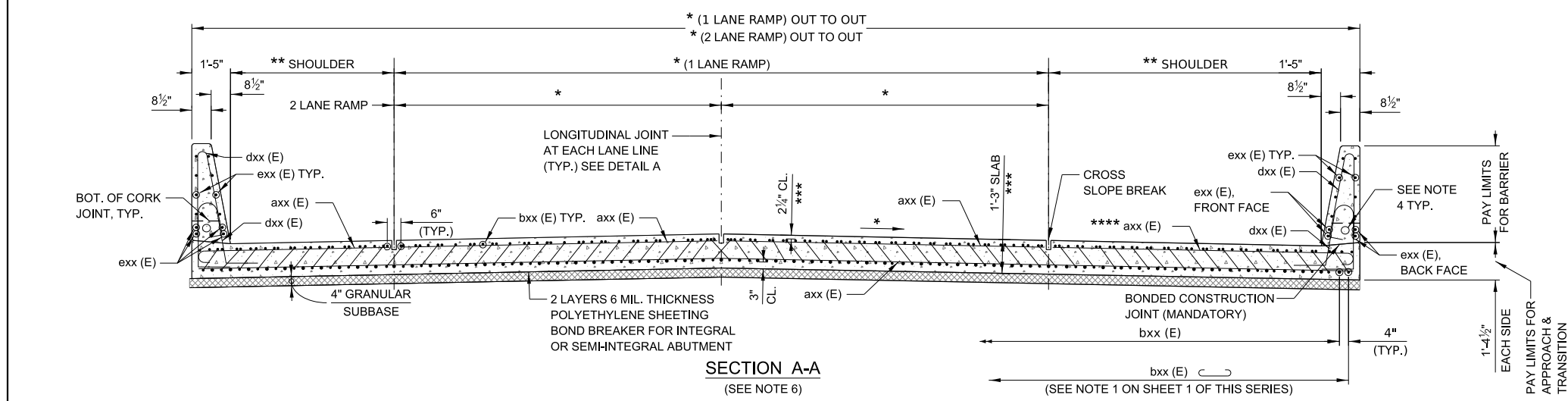


NOTE TO DESIGNER

**** 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



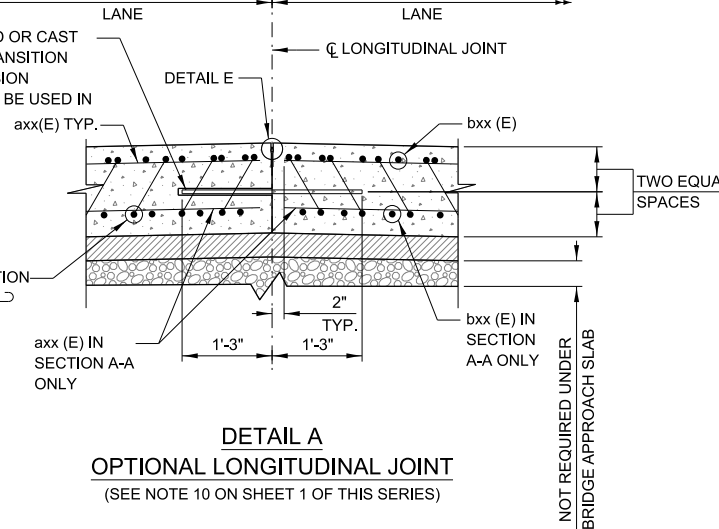
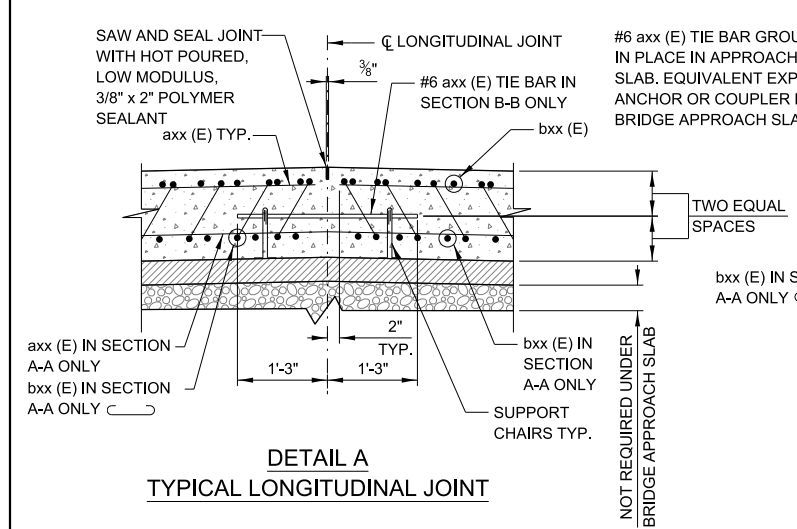
NOTE TO DESIGNER

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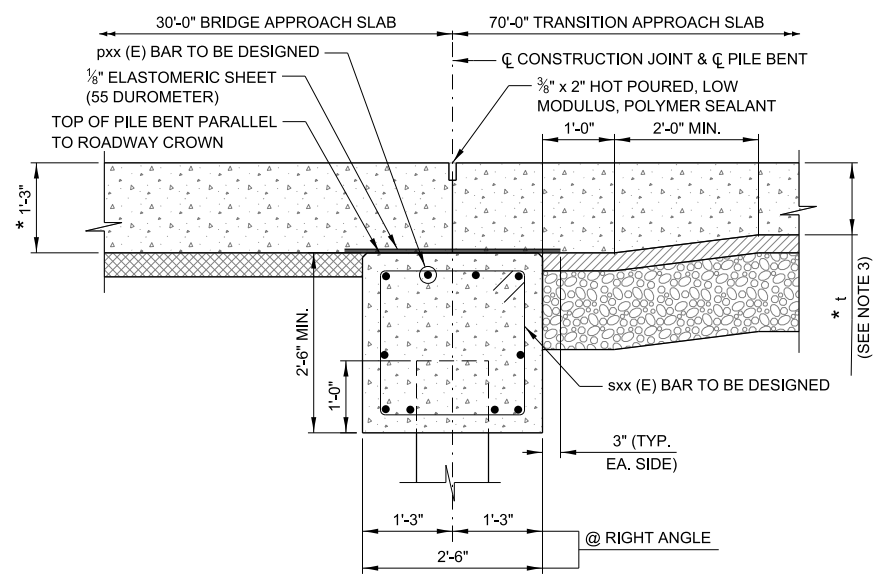
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*** INCREASE BY 1/4" FOR SMOOTHNESS GRINDING

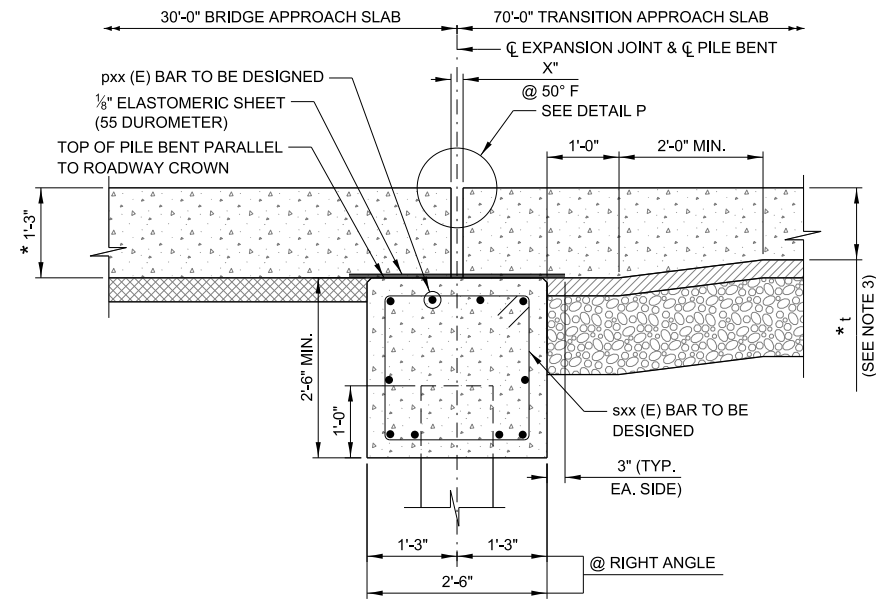
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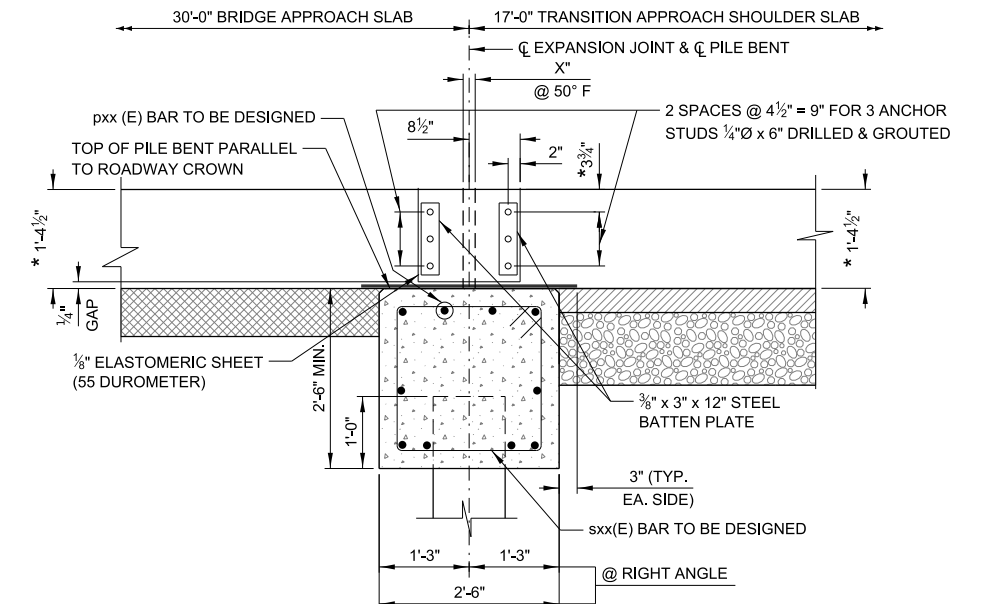
- NOTES:**
- SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES.
 - THE DIMENSION I IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
 - INTEGRAL ABUTMENT JOINT SHOWN NON-INTEGRAL ABUTMENT JOINT SIMILAR. SEE SHEET 4 OF THIS SERIES.
 - COORDINATE THE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.
 - THE THICKNESS OF THE STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT SECTIONS.
 - 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.
 - THE 3/8" ALUMINUM SHEET SHALL BE ASTM B 209 ALLOY 3003-H14 AND COATED TO MINIMIZE REACTION WITH WET CONCRETE.



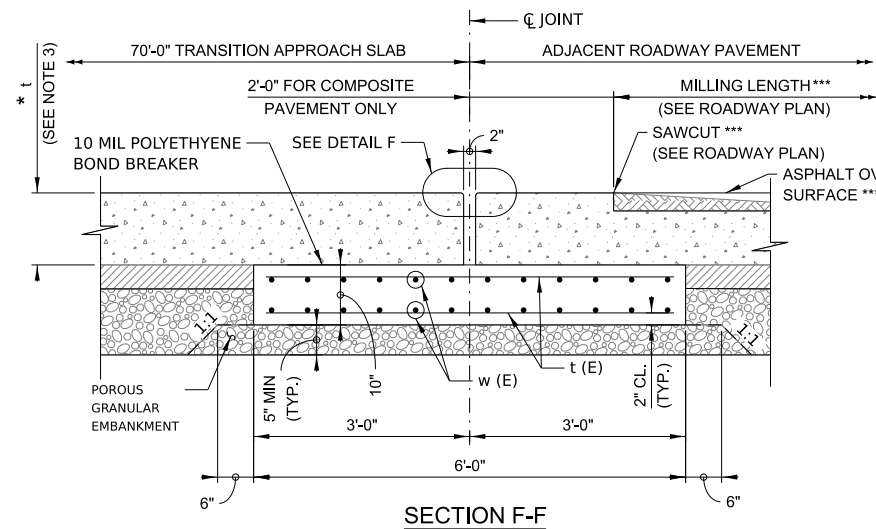
SECTION C-C
FOR NON-INTEGRAL ABUTMENT



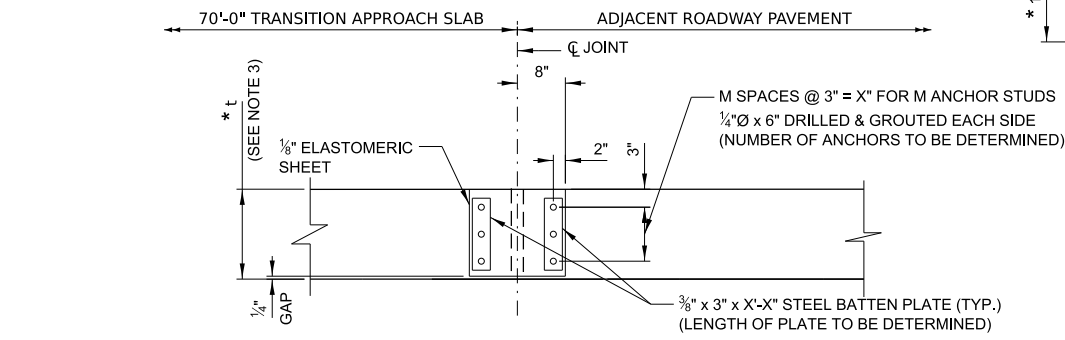
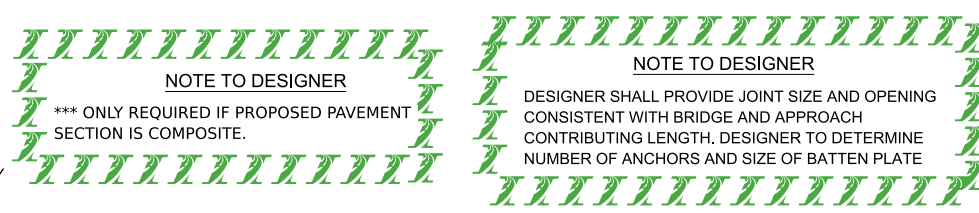
SECTION D-D
FOR INTEGRAL & SEMI-INTEGRAL ABUTMENT



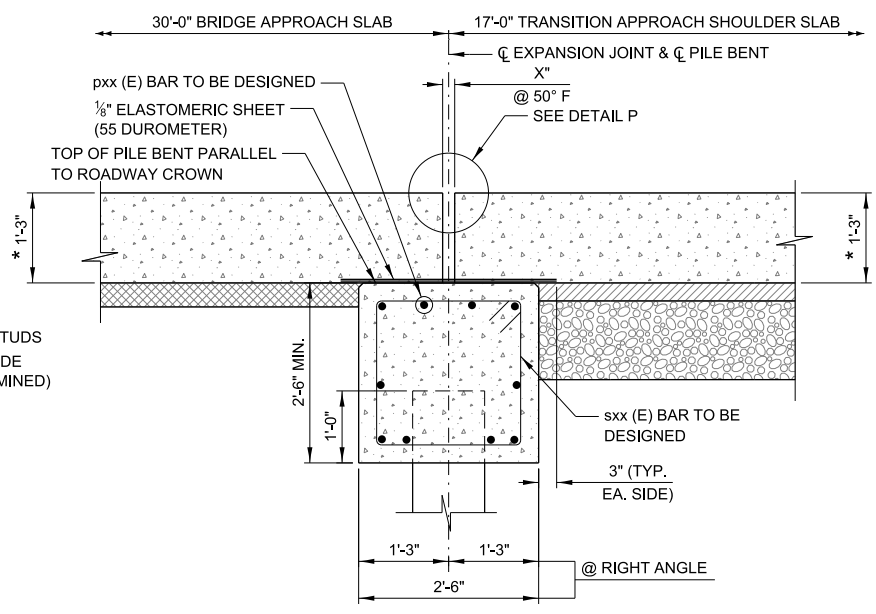
SECTION E-E'
END ELEVATION OF EXPANSION JOINT



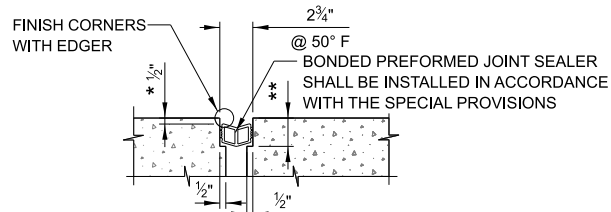
SECTION F-F



VIEW G-G
END ELEVATION OF JOINT

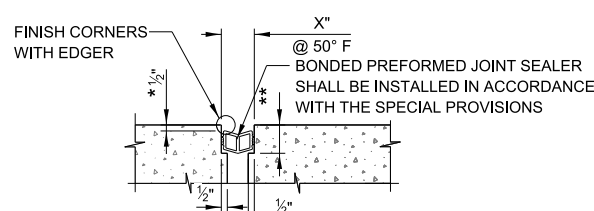


SECTION E-E

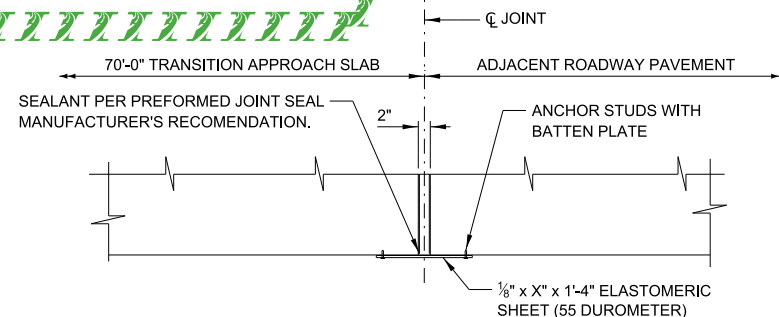


DETAIL F
TRANSITION JOINT

** PER MANUFACTURER RECOMMENDATIONS



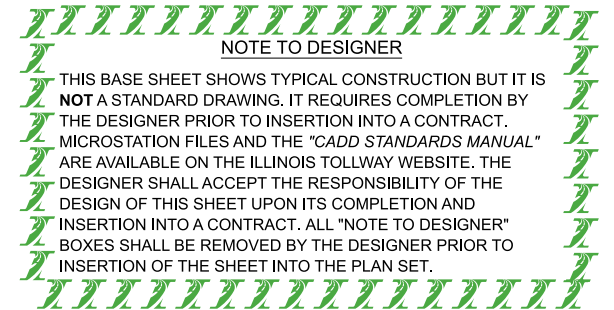
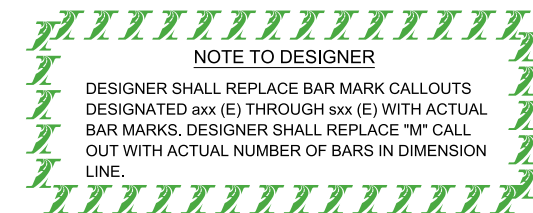
DETAIL P
APPROACH & TRANSITION JOINT



DETAIL C
END PLAN OF JOINT

LEGEND

	CONCRETE
	STABILIZED SUBBASE
	SUBGRADE AGGREGATE
	GRANULAR SUBBASE
	MILLING

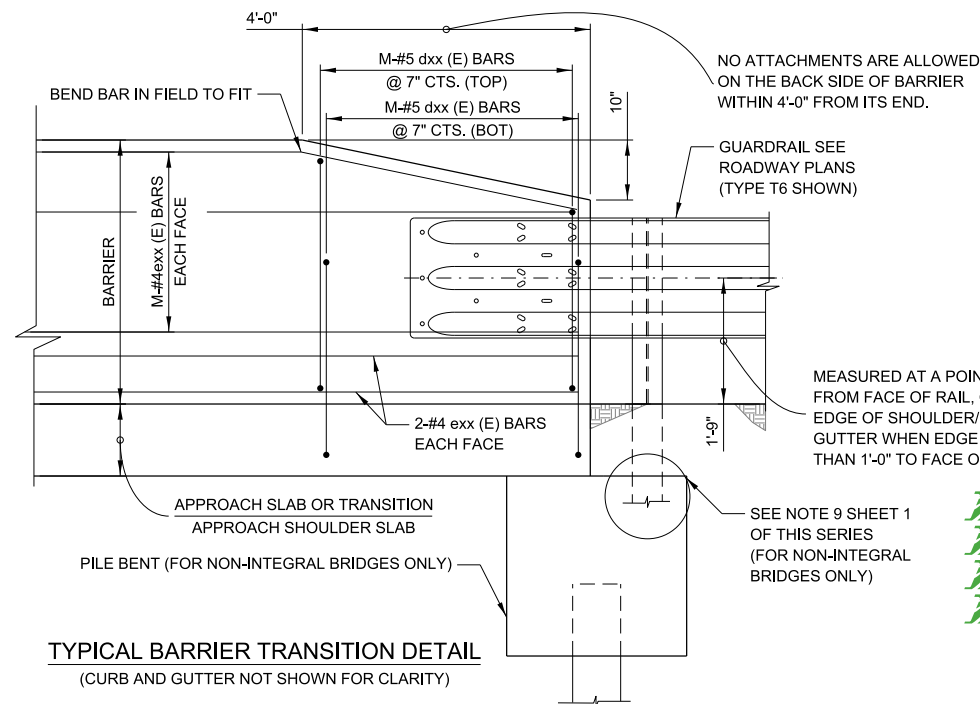


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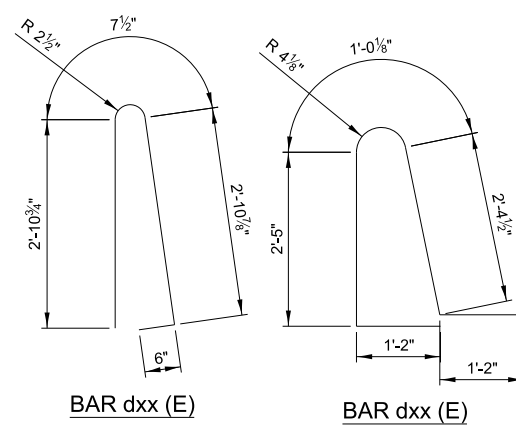
1. IN SECTION E-E' AND VIEW G-G, ANCHOR STUDS SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 1006.09 OF THE STANDARD SPECIFICATIONS. STEEL PLATES, ANCHOR STUDS, NUTS AND WASHERS SHALL BE GALVANIZED.
2. THE THICKNESSES OF STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE ADJACENT PAVEMENT 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.



APPROACH SLAB, RAMP

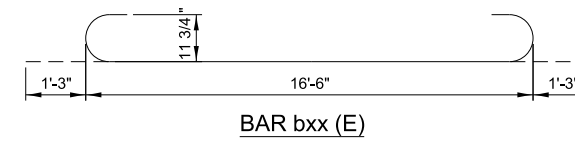


TYPICAL BARRIER TRANSITION DETAIL
(CURB AND GUTTER NOT SHOWN FOR CLARITY)

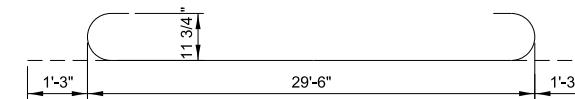


BAR dxx (E) BAR dxx (E)

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BAR bxx (E)



BAR bxx (E)

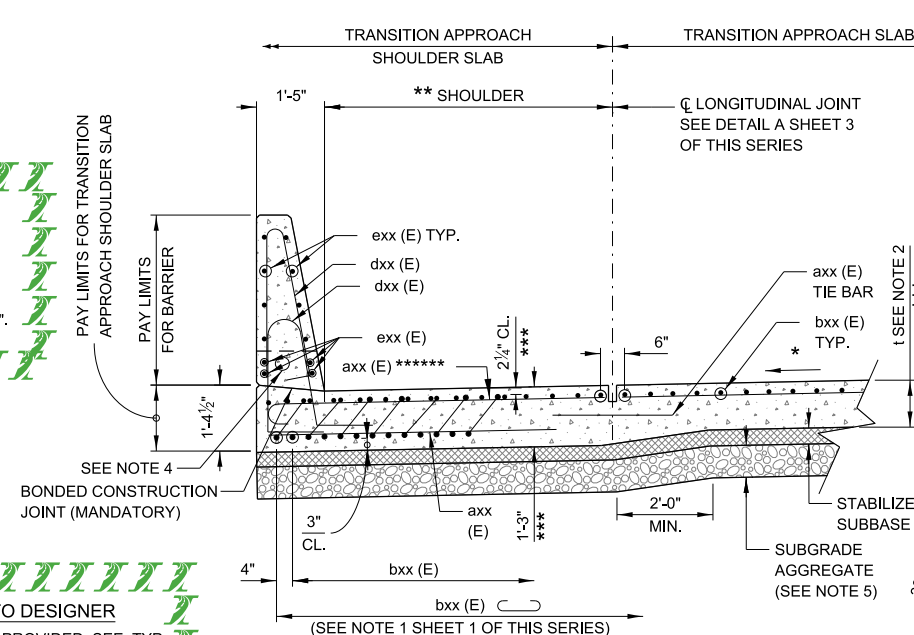
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** APPROACH SLAB SHOULDER WIDTH SHOULD BE ROADWAY SHOULDER WIDTH + 1'-0" FOR GUARDRAIL OR + 2'-0" FOR SINGLE FACE BARRIER SO APPROACH ROADWAY FLOW LINE MATCHES BARRIER BASE.
*** INCREASE BY 1/4" FOR SMOOTHNESS GRINDING
**** ADD PAY ITEM FOR OTHER JOINT SIZES AS APPLICABLE
***** SELECT APPLICABLE PAY ITEM TO MATCH THE BRIDGE

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

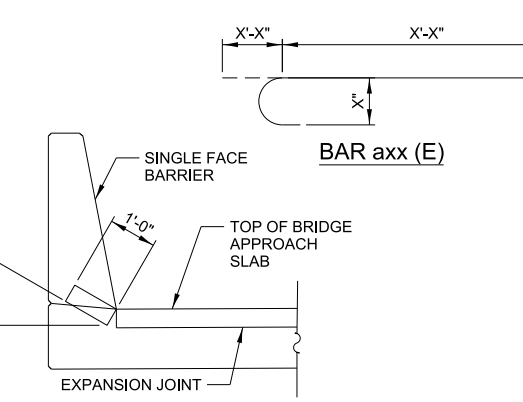
NOTE TO DESIGNER
QUANTITIES FOR BRIDGE DECK GROOVING SHALL INCLUDE BOTH TRANSITION AND APPROACH SLABS. LIMITS ARE TRAVEL LANES ONLY.

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.

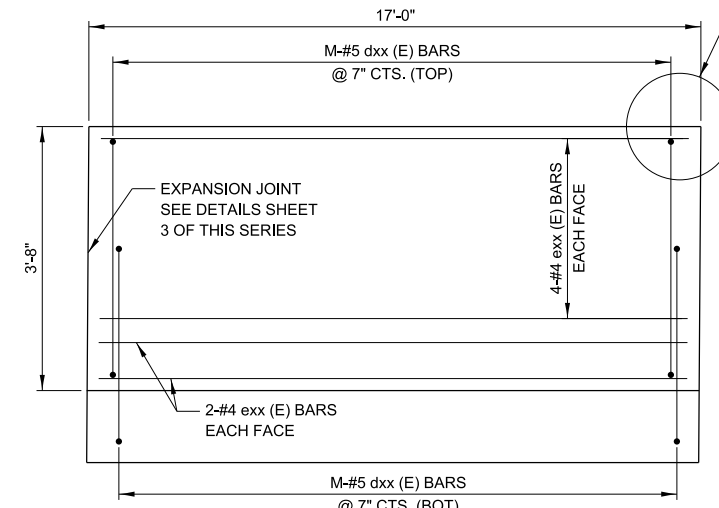
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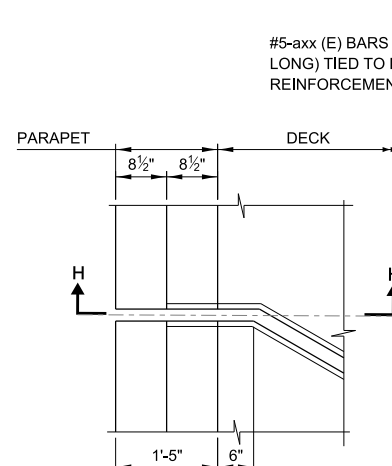
SECTION M-M
(SEE NOTE 6)



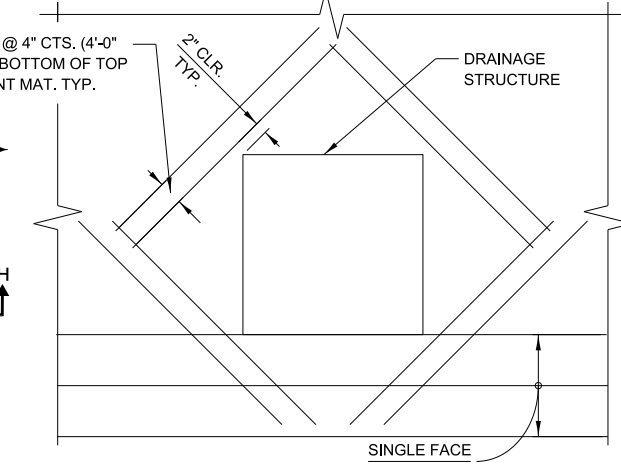
SECTION H-H



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:**
1. THE AREA OF EACH BRIDGE APPROACH SLAB, TRANSITION APPROACH SLAB AND TRANSITION APPROACH SHOULDER SLAB WILL BE MEASURED 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 THE 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)				
dxx (E)		#5	8'-2"	
t(E)		#4	5'-8"	
w(E)		#5		

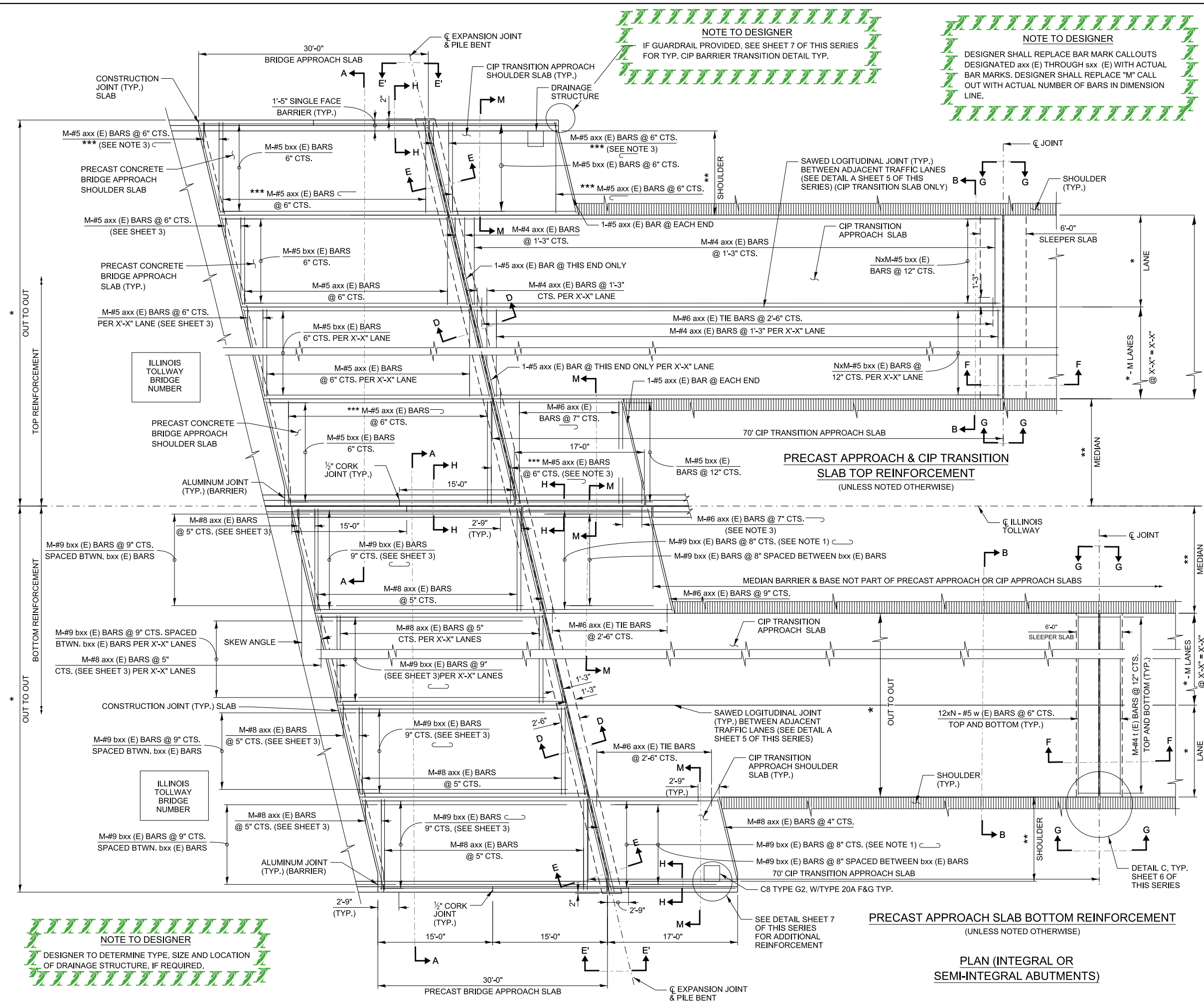
PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
50300260	BRIDGE DECK GROOVING	SQ. YD.	
50300300	PROTECTIVE COAT	SQ. YD.	
J1420040	BRIDGE APPROACH SLAB	SQ. YD.	
J1420041	TRANSITION APPROACH SLAB	SQ. YD.	
J1420046	TRANSITION APPROACH SHOULDER SLAB	SQ. YD.	
JS503160	DIAMOND GRINDING AND SURFACE SMOOTHNESS FOR BRIDGE 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.	

BILL OF MATERIAL FOR BARRIERS				
BAR	NO.	SIZE	LENGTH	SHAPE
dxx (E)		#5	6'-10"	
exx (E)				
exx (E)				
exx (E)				
exx (E)				

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



APPROACH SLAB, RAMP



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

NOTE TO DESIGNER
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- NOTE:**
1. TILT HOOK OF #9 BARS FOR MINIMUM 2 1/4" CLEARANCE.
 2. USE 2'-6" MIN. LAP FOR #4 BARS. USE 3'-2" MIN. LAP FOR #5 BARS. USE 4'-5" MIN. LAP FOR #6 BARS. USE 8'-4" MIN. LAP FOR #8 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 1/4" RADIUS.
 7. EXPOSED CONCRETE EDGES SHALL HAVE 3/8" 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
 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.
- *** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".

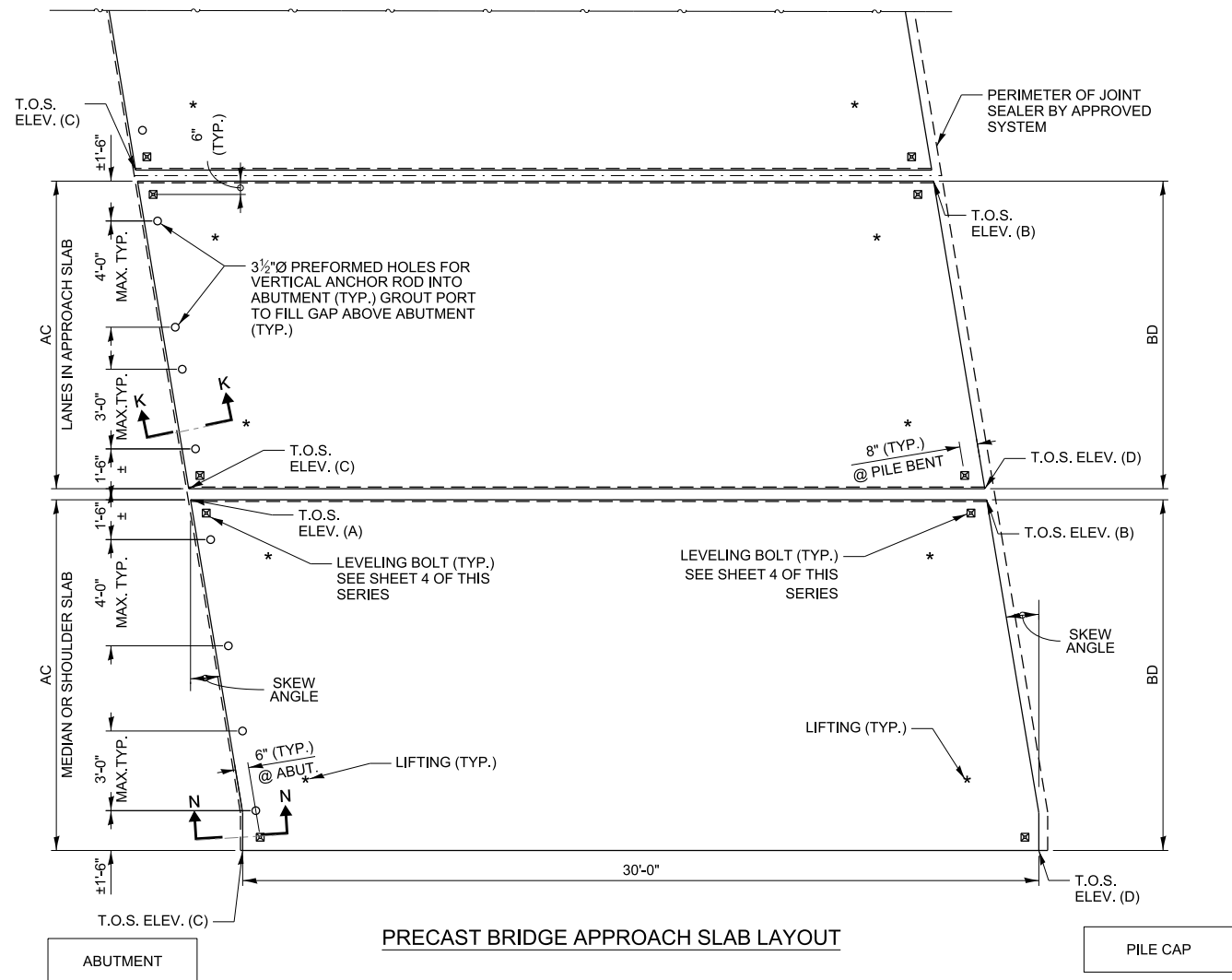
PRECAST APPROACH SLAB BOTTOM REINFORCEMENT
 (UNLESS NOTED OTHERWISE)

PLAN (INTEGRAL OR SEMI-INTEGRAL ABUTMENTS)



PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB

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.
	SKWEW ANGLE (DEG)	M (NO.)	N (NO.)										
MEDIAN													
LANE													
LANE													
SHOULDER													



PRECAST BRIDGE APPROACH SLAB LAYOUT

FABRICATION GENERAL NOTES:

MATERIALS:

- EPOXY COATED DOWEL BARS USED SHALL COMPLY WITH ASTM A 615 GRADE 60.
- ALL EMBEDDED LIFTING HARDWARE USED SHALL BE GALVANIZED.
 - 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 1 1/2" UNLESS THE SLAB IS TO BE OVERLAID IMMEDIATELY AFTER PLACEMENT. THE INSERT SHALL LEAVE A MAXIMUM 1 1/4" 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.
 - 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.
- 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.
- CONCRETE COVER OVER REINFORCEMENT TO BE MAINTAINED USING WIRE OR THERMOPLASTIC CHAIRS OR SPACERS OR AN APPROVED EQUIVALENT.
- 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)
- 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_{cd} SHALL BE 4,500 PSI.
- 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:

- GENERAL DESIGN REQUIREMENTS:
 - 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.
 - 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.
- MISCELLANEOUS DETAIL REQUIREMENTS:
 - 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.
 - RECESS LIFTING DEVICES 1 1/4" MINIMUM BELOW THE SURFACE OF THE SLAB TO ALLOW FOR A MINIMUM GROUT COVER OF 1" COVER AFTER MAXIMUM 1/4" DIAMOND GRINDING ON SLABS THAT WILL NOT BE OVERLAID.

INSTALLATION:

- 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.
- 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.
- 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.
- 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.
- ANY TIE BARS REQUIRED IN LONGITUDINAL JOINTS BETWEEN PRECAST SLABS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARDS OF THE APPROVED SYSTEM USED.
- 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.
- PERFORM SLAB GROOVING AFTER DIAMOND GRINDING IS COMPLETE.

FABRICATION:

- PREPARE WORKING DRAWINGS THAT SHALL INCLUDE THE FOLLOWING INFORMATION:
 - SLAB LAYOUT DRAWING FOR TYPICAL SLABS TO BE FABRICATED, WITH ACCURATE DIMENSIONS CITED.
 - REINFORCEMENT SIZES, SPACING, NUMBER OF MATS, AND METHOD OF MAINTAINING CONCRETE COVER.
 - SIZE AND LOCATION OF GROUT PORTS, LIFTING ANCHORS, AND GROUT SEAL GASKETS.
 - COMPRESSIVE STRENGTH AT 28 DAYS AND AIR CONTENT OF CONCRETE.
 - CONCRETE CURING METHOD TO BE USED.
 - 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.
 - WEIGHT OF EACH SLAB.
- 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 ± 1/16"
 - DOWEL VARIANCE FROM LEVEL, SQUARENESS TO EDGE OF SLAB, & LOCATION ± 1/8"
 - EDGE SQUARENESS 1/8" IN 10" (IN RELATION TO TOP AND BOTTOM SURFACES)
- INCLUDE A 1 INCH CHAMFER ALONG ALL BOTTOM EDGES OF SLABS AND A STONED EDGE TO ALL TOP EDGES OF THE SLAB.
- THE EXPOSED SURFACES OF ALL PREFORMED SLOTS FOR DOWEL BARS SHALL BE SANDBLASTED. PLASTIC SLEEVES FOR ANCHOR BOLTS. GROUT PORTS SHALL BE CAST 1/4" 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.
- AFTER REMOVAL OF FORMS AND ANY BLOCKOUTS, NO SPALLS OF THE FINISHED SURFACE WILL BE ALLOWED.
- 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, SKWEW 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 ENGINEER.

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 SPECIFICATIONS. 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 TRANSPORTATION 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 MINIMUM 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 KEYS 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.

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:

- PANELS FOR LANES SHALL BE FULL WIDTH.
- 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.
- PANEL CLOSEST TO THE BARRIER SHALL BE THE LARGER PANEL.
- 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.

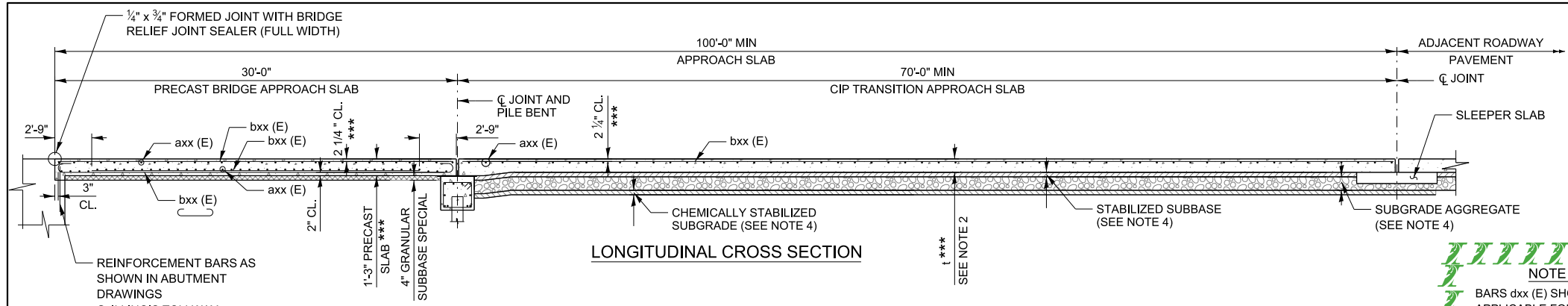
NOTE TO DESIGNER
THE DESIGNER IS TO INDICATE IF THE SLAB IS PLANAR OR NON-PLANAR, CURVED OR STRAIGHT. IF CURVED SHOW RADII.

NOTE TO DESIGNER
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PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB



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 1/4" FOR SMOOTHNESS GRINDING
- **** 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.

NOTE TO DESIGNER

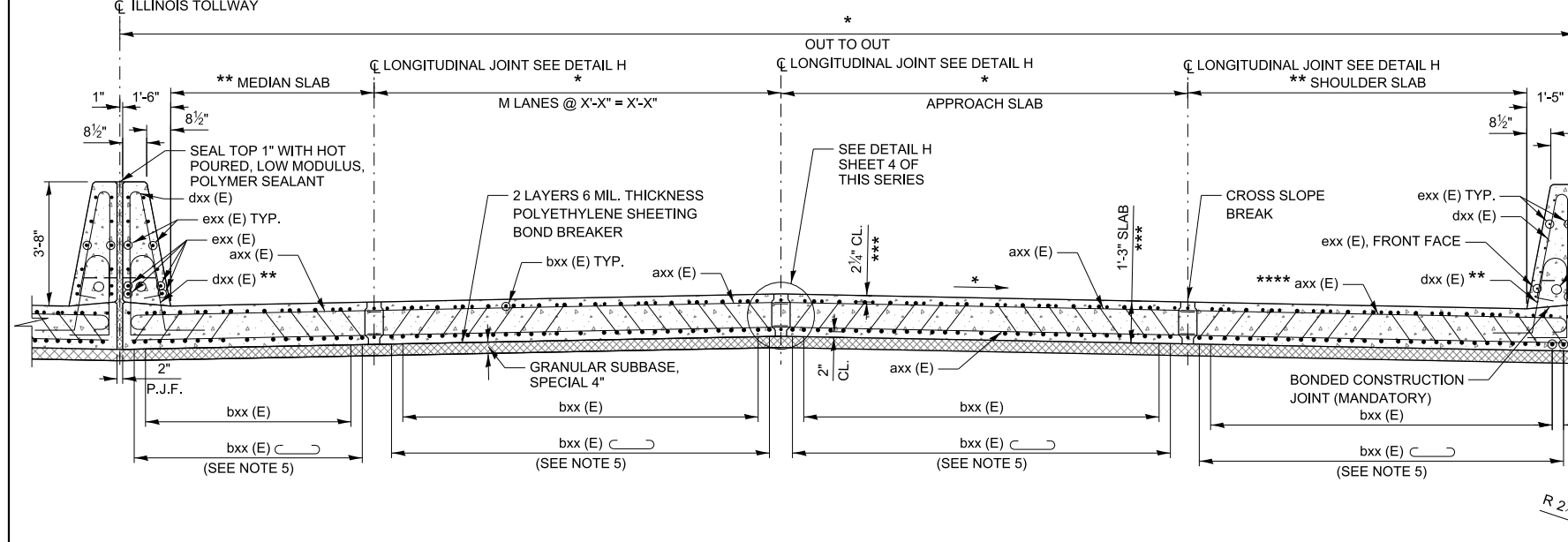
DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED axx (E) THROUGH sxx (E) WITH ACTUAL BAR MARKS. DESIGNER SHALL REPLACE "M" CALLOUT WITH ACTUAL NUMBER IN DIMENSION LINE.

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

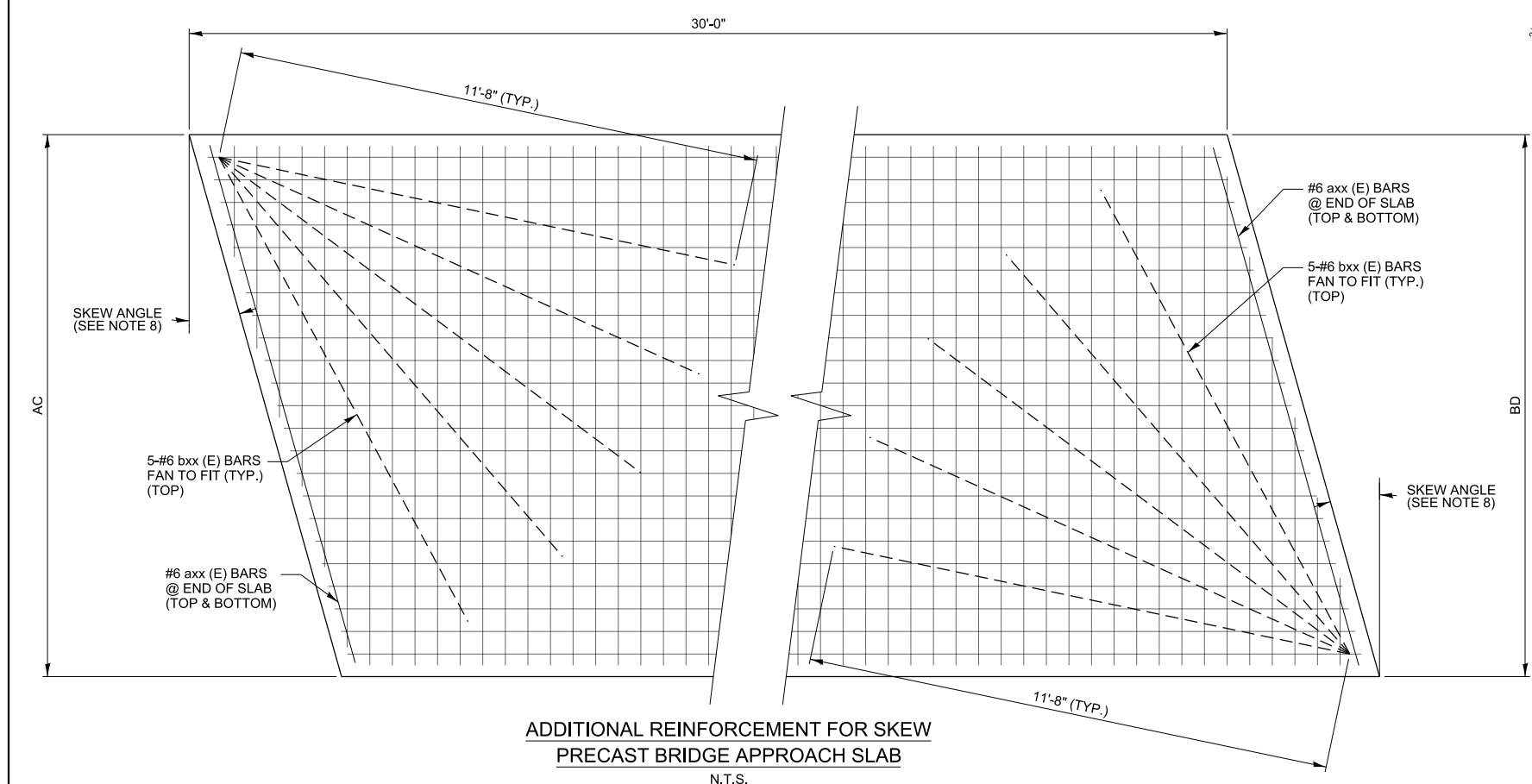
NOTES:

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

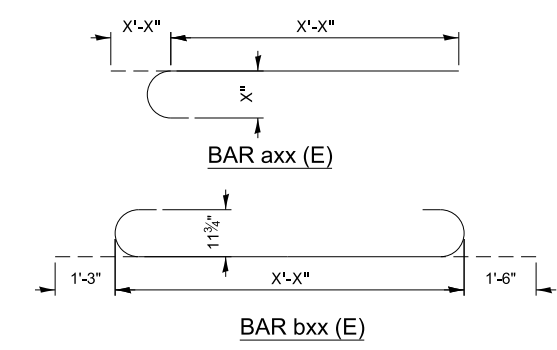
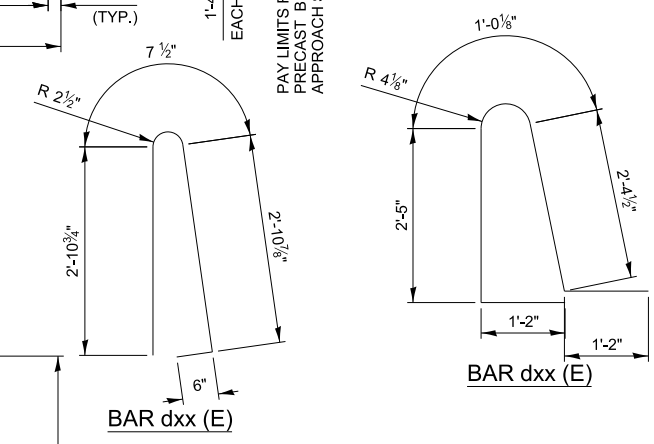
1. SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES. SEE SHEET 2 OF THIS SERIES FOR FABRICATION NOTES.
2. THE DIMENSION t IS THE FINAL THICKNESS OF THE CIP TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
3. COORDINATE THE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED 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 2 1/4" 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°, PROVIDE 5 #6 BARS, 11'-8" LONG DIRECTLY UNDER THE TOP LAYER OF BARS IN A FANNED ARRANGEMENT.



**SECTION A-A
PRECAST BRIDGE APPROACH SLAB**



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



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	11'-8"	---	
bxx (E)	#9	24'-6"	---	
bxx (E)	#9	32'-2"	---	
bxx (E)	#9	29'-8"	---	
dxx (E)	#5	8'-2"	---	

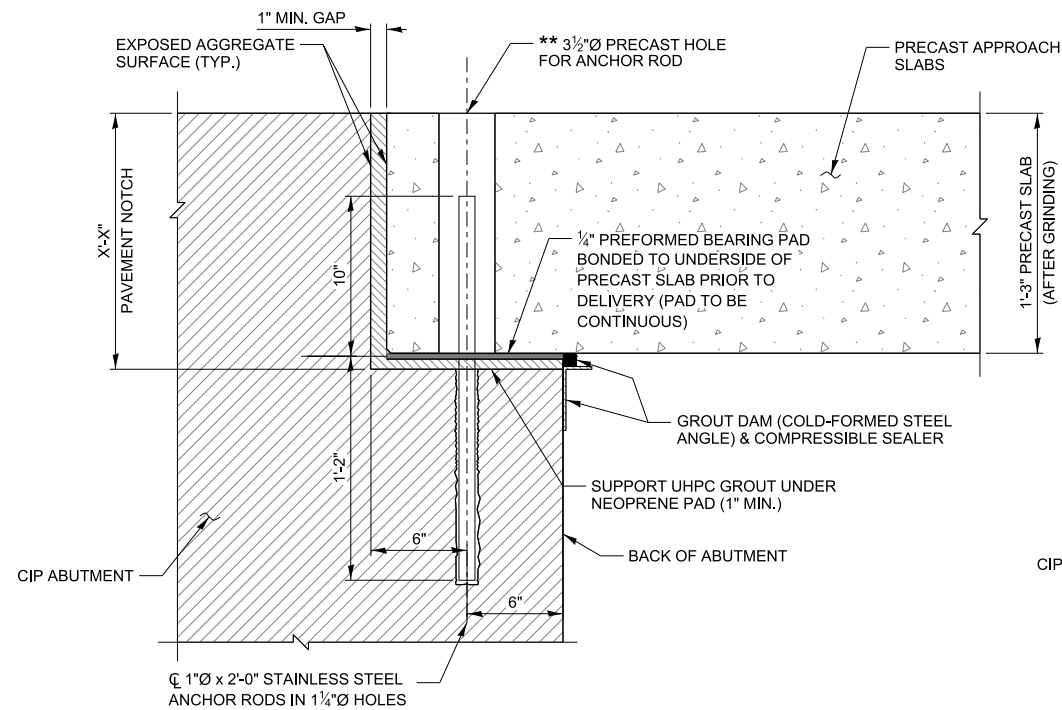
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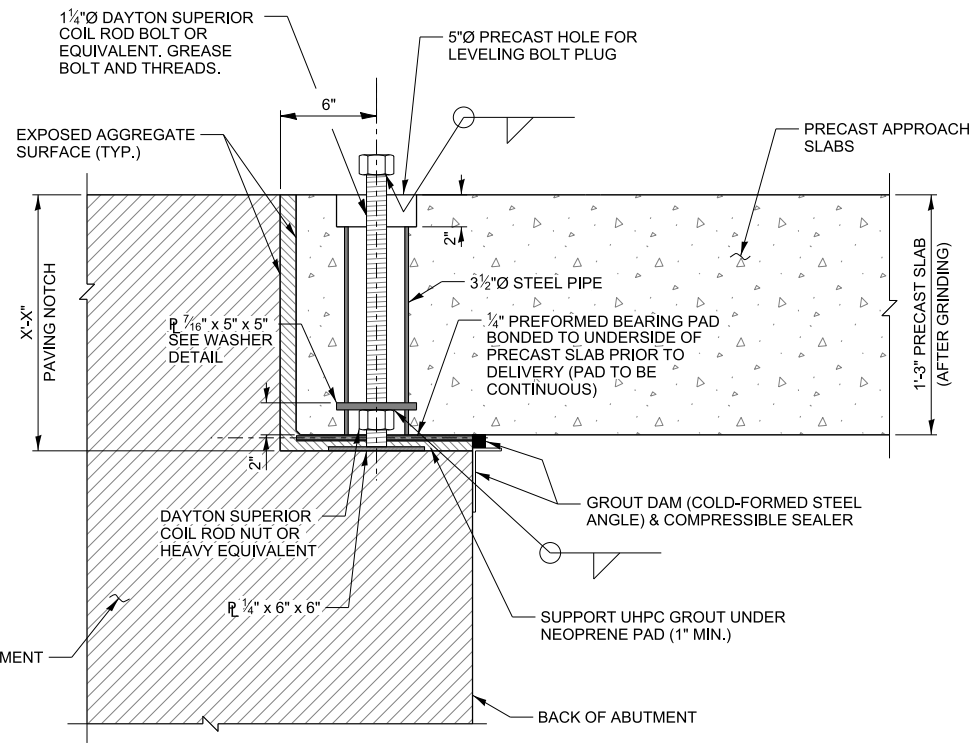


**PRECAST APPROACH SLAB
WITH CIP TRANSITION SLAB**

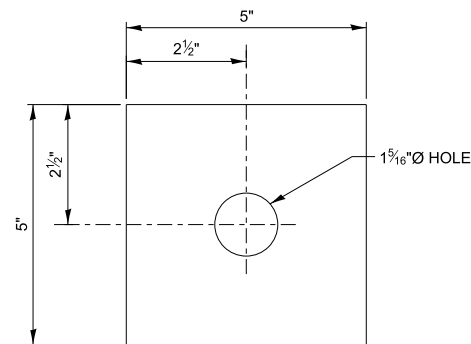
** HOLES SHALL BE FILLED WITH UHPC AFTER SLAB IS LEVELED. UHPC COST IS INCLUDED IN THE COST OF PRECAST CONCRETE BRIDGE APPROACH SLABS.



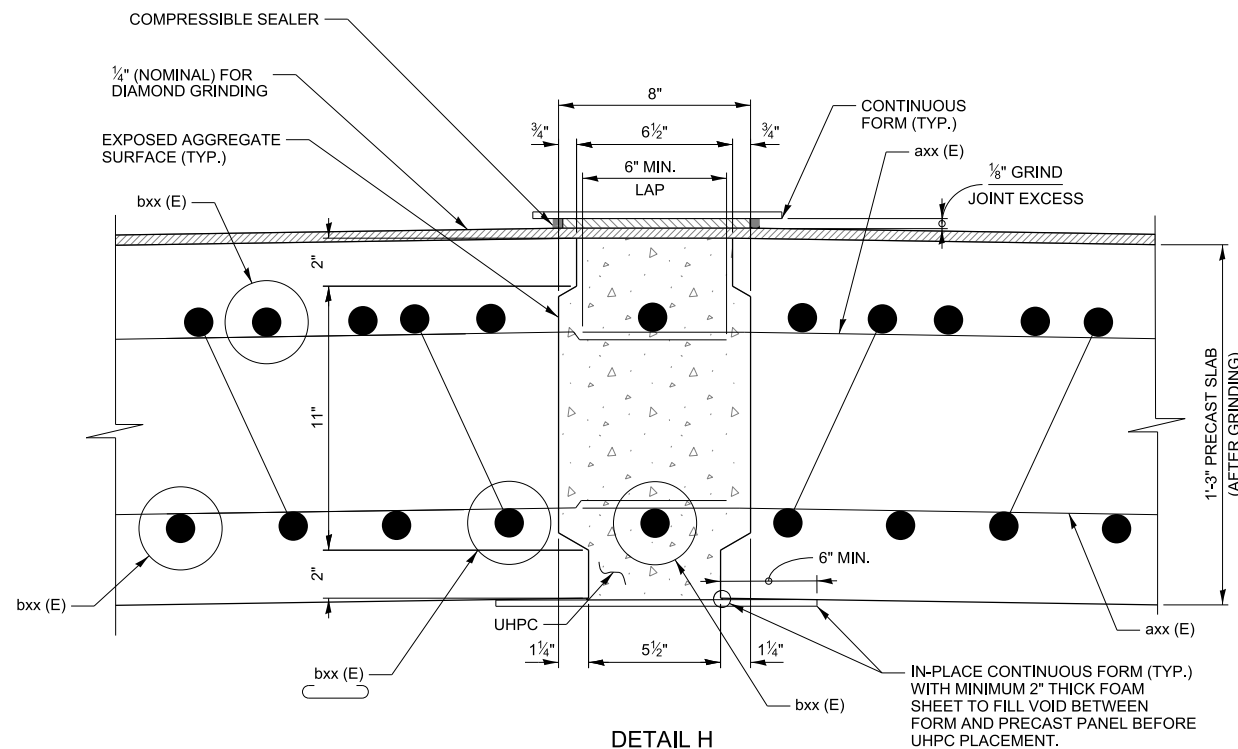
**SECTION K-K
ABUTMENT ANCHOR ROD DETAIL
PRECAST BRIDGE APPROACH SLAB**



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



WASHER DETAIL



**DETAIL H
LONGITUDINAL JOINT DETAIL FOR
PRECAST TO PRECAST SLABS**

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.	
J420070	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:

- DRILL HOLES THAT ARE ORIENTED AT $90^\circ \pm 5^\circ$ ANGLE TO THE PAVEMENT SURFACE. TYPICAL HOLE DIAMETER SHALL BE $1\frac{1}{4}$ ".
- HOLE CENTERLINES ARE PERPENDICULAR TO THE JOINT (IN PLAN VIEW) AT EACH LOCATION BEING DRILLED.
- SELECT A DRILL THAT MINIMIZES DAMAGE TO THE CONCRETE SURFACE, SUCH AS A HYDRAULIC POWERED DRILL.
- DRILL HOLES AT SPACING SHOWN ON PLAN.
- AIR BLOW THE HOLES TO REMOVE DUST AND DEBRIS AFTER DRILLING.
- INJECT EPOXY GROUT INTO THE HOLE, LEAVING SOME VOLUME FOR THE BAR TO OCCUPY THE HOLE. (POURING THE ADHESIVE IS ACCEPTABLE FOR SMALL QUANTITIES.)
- 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.
- 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.
- SEE SPECIAL PROVISIONS "PRECAST CONCRETE BRIDGE APPROACH SLABS" FOR INSTALLATION OF BRIDGE APPROACH SLAB ANCHOR RODS.

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.

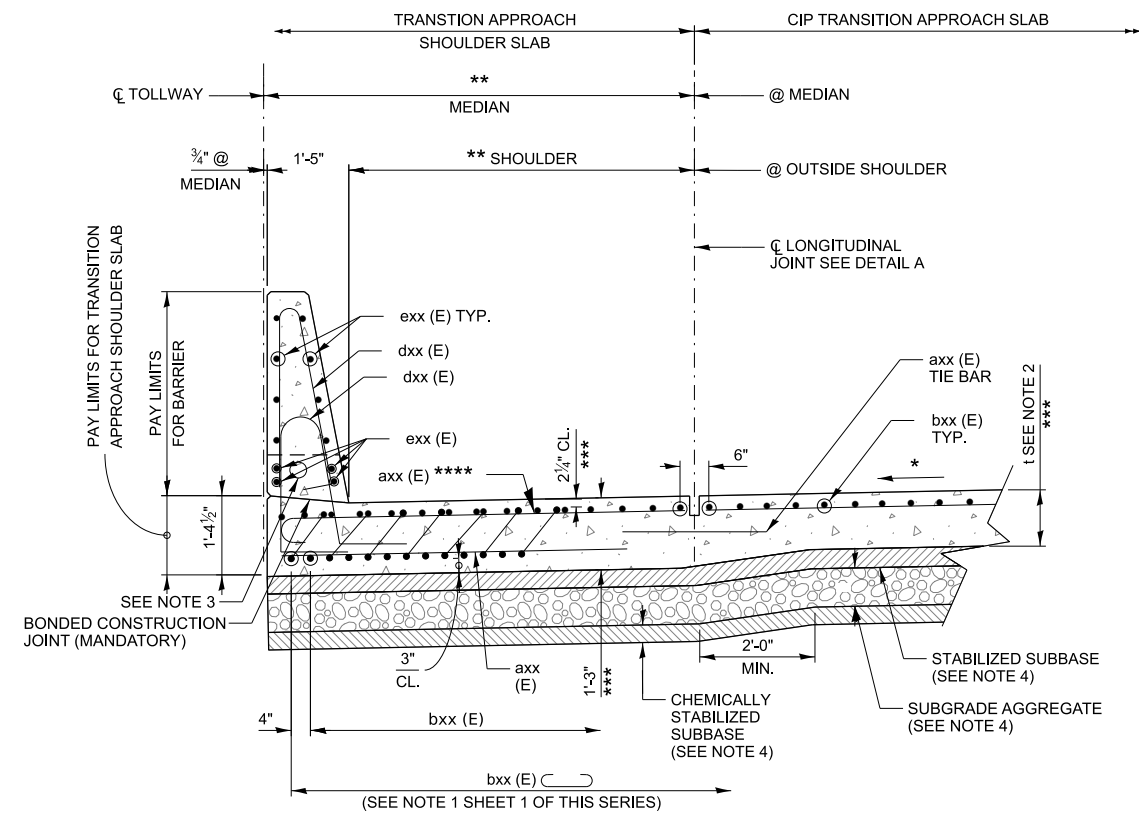
NOTE TO DESIGNER
DETERMINE FINAL HEIGHT OF PAVING NOTCH TO ACCOUNT FOR PROFILE, X-SLOPE, THICKNESS OF NEOPRENE BEARING PAD, GROUT AND PRECAST SLAB.

NOTE TO DESIGNER

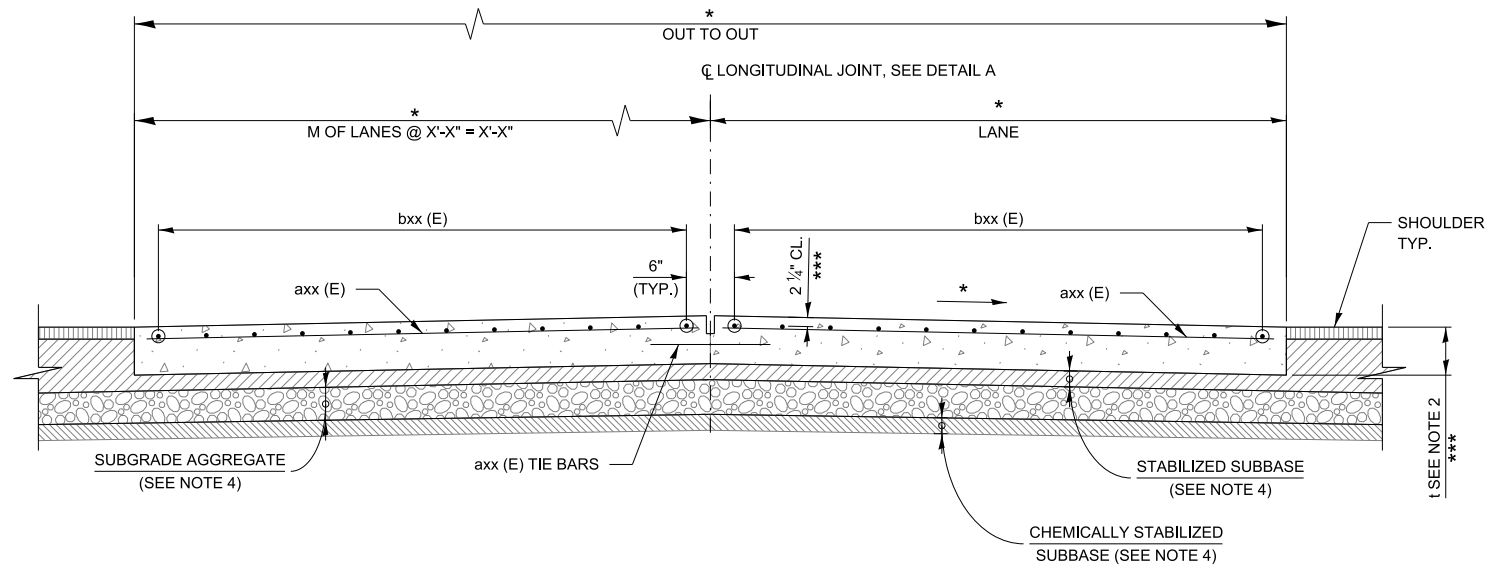
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PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB



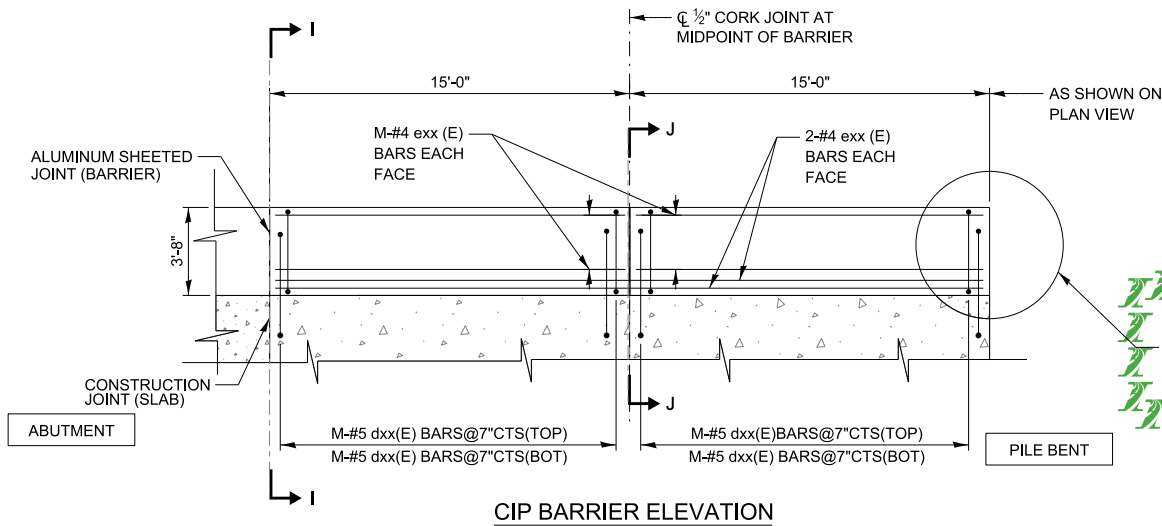
SECTION M-M
CIP TRANSITION APPROACH SHOULDER SLAB



SECTION B-B
CIP TRANSITION APPROACH SLAB

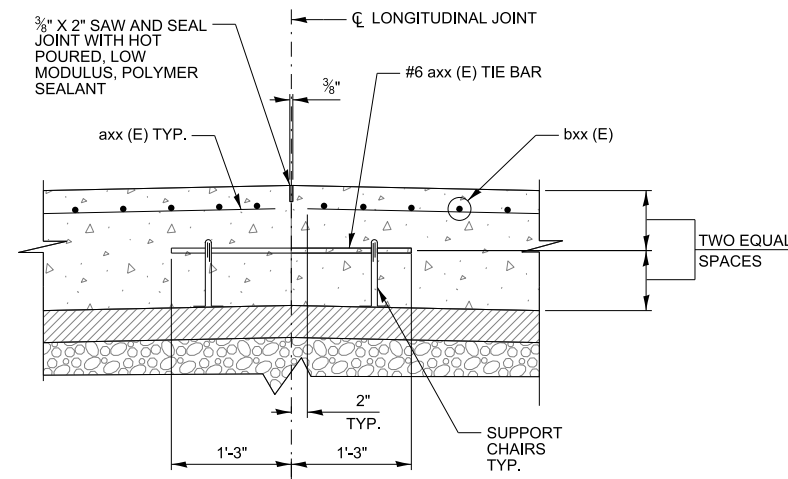
NOTE TO DESIGNER

- * 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 1/4" FOR SMOOTHNESS GRINDING
- **** USE #7 axx (E) HOOKED BARS AT 5" SPACING FOR TOP TRANSVERSE BARS OVER SHOULDER WHEN THE BARRIER HEIGHT IS 72".



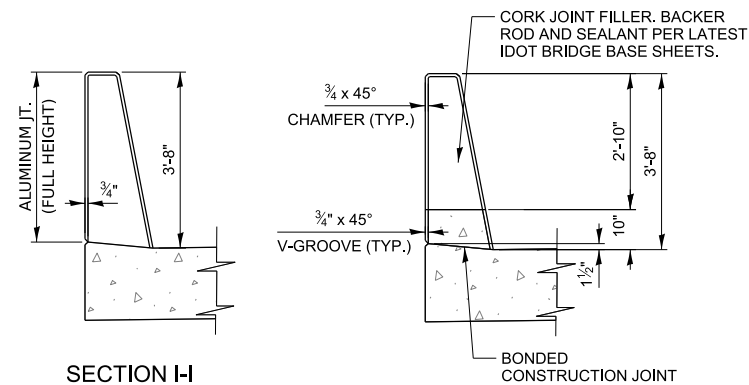
CIP BARRIER ELEVATION

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:**
- SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES.
 - THE DIMENSION I IS THE THICKNESS OF THE TRANSITION APPROACH SLAB AS DEFINED IN THE ROADWAY PLANS.
 - COORDINATE THE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.
 - THE THICKNESS OF THE STABILIZED SUBBASE, SUBGRADE AGGREGATE AND CHEMICALLY STABILIZED SUBGRADE SHALL MATCH THE ADJACENT ROADWAY PAVEMENT SECTIONS.
 - 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.
 - THE 3/8" ALUMINUM SHEET SHALL BE ASTM B 209 ALLOY 3003-H14 AND COATED TO MINIMIZE REACTION WITH WET CONCRETE.



SECTION I-I

PARAPET JOINT DETAIL

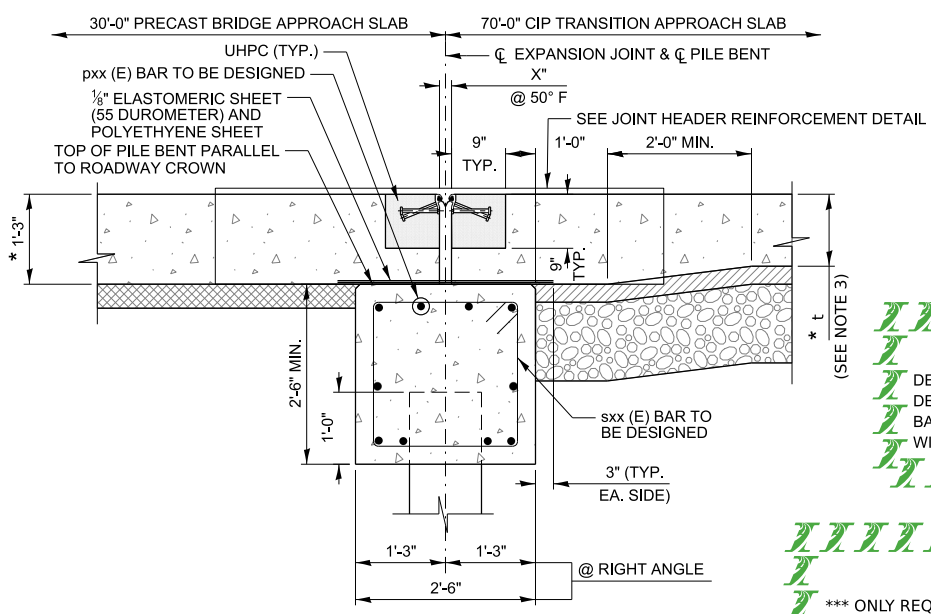
SECTION J-J

NOTE TO DESIGNER

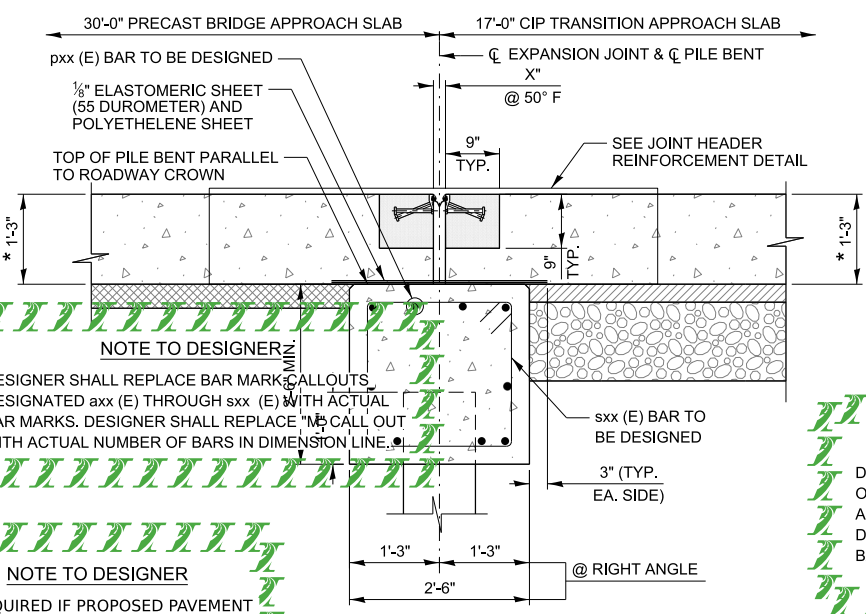
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE 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.



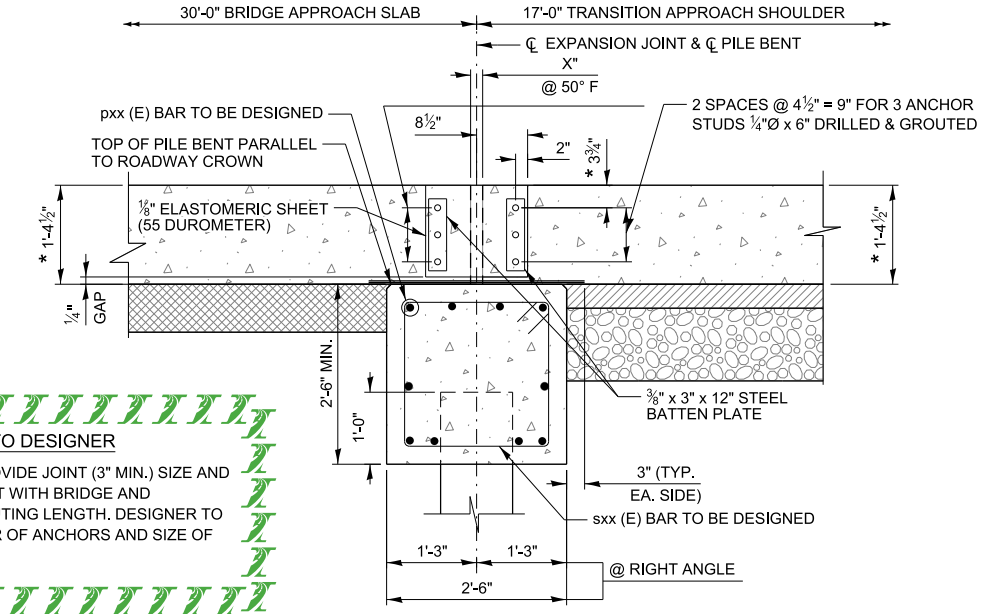
PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB



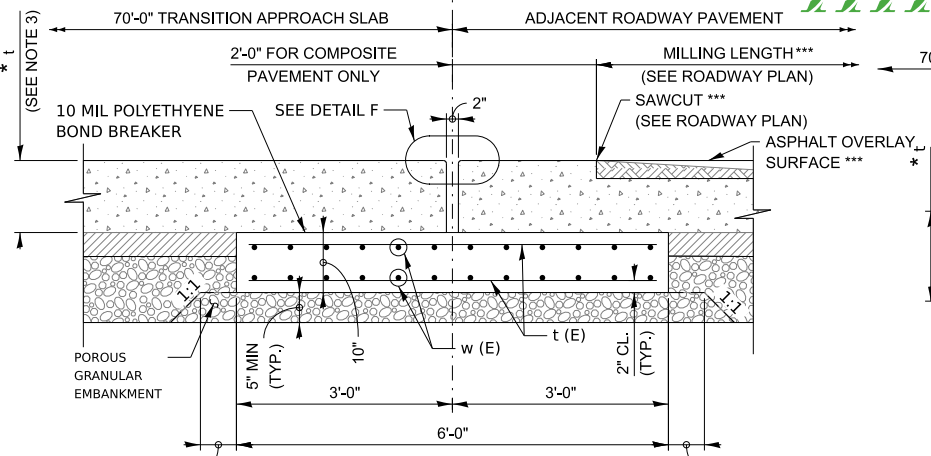
SECTION D-D JOINT



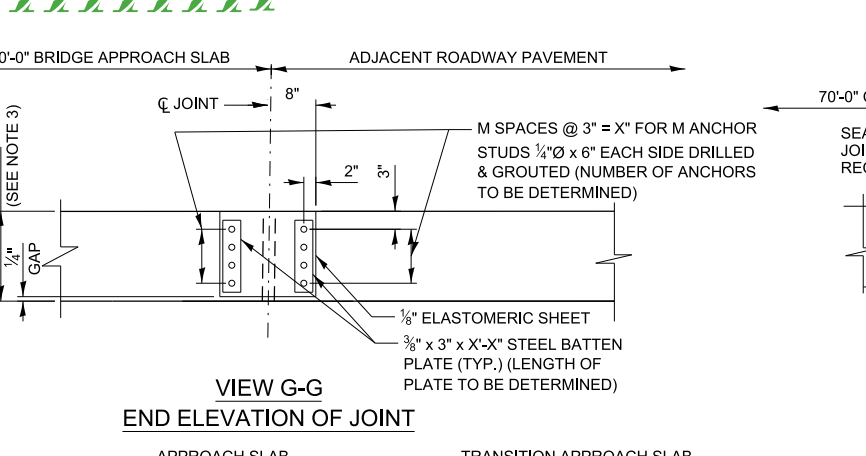
SECTION E-E



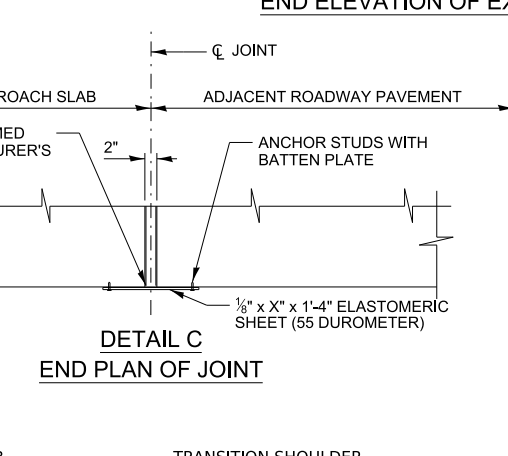
SECTION E'-E' END ELEVATION OF EXPANSION JOINT



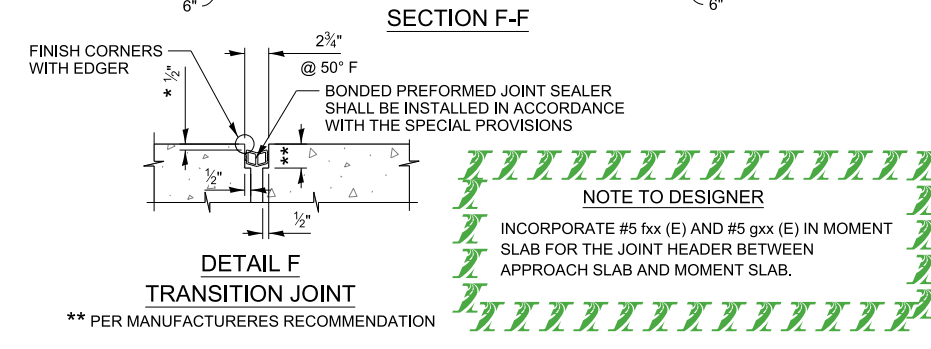
SECTION F-F



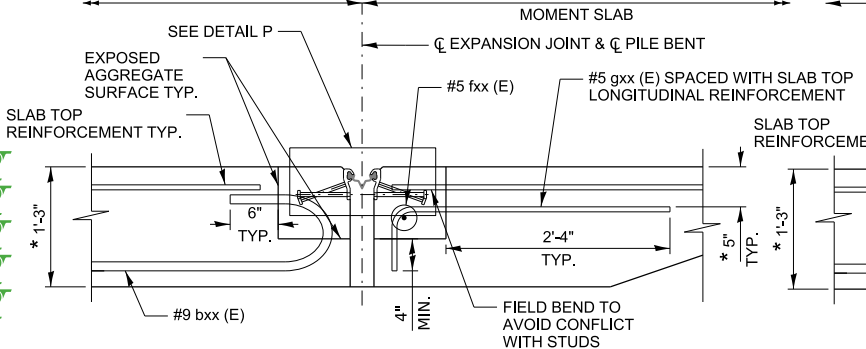
VIEW G-G END ELEVATION OF JOINT



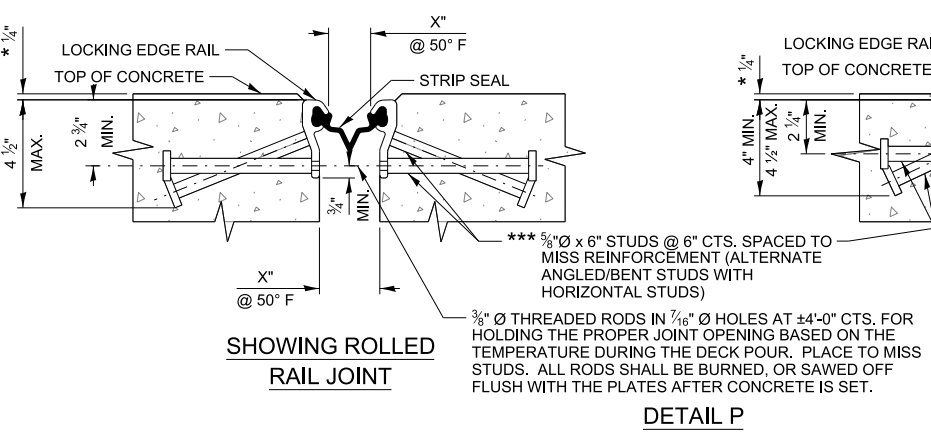
DETAIL C END PLAN OF JOINT



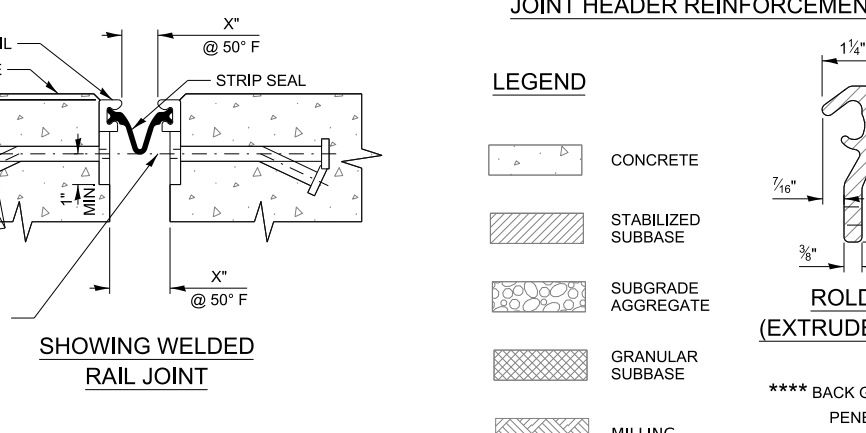
DETAIL F TRANSITION JOINT



JOINT HEADER REINFORCEMENT DETAIL



DETAIL P

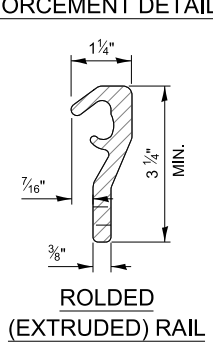


SHOWING WELDED RAIL JOINT

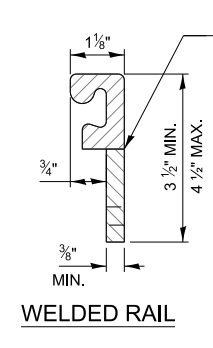
SHOWING ROLLED RAIL JOINT

LEGEND

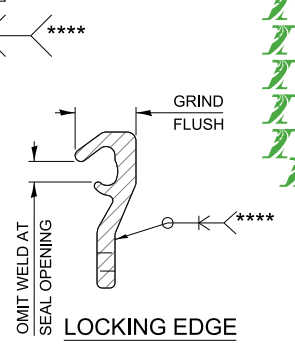
- CONCRETE
- STABILIZED SUBBASE
- SUBGRADE AGGREGATE
- GRANULAR SUBBASE
- MILLING



ROLDED (EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL RAIL SPLICE

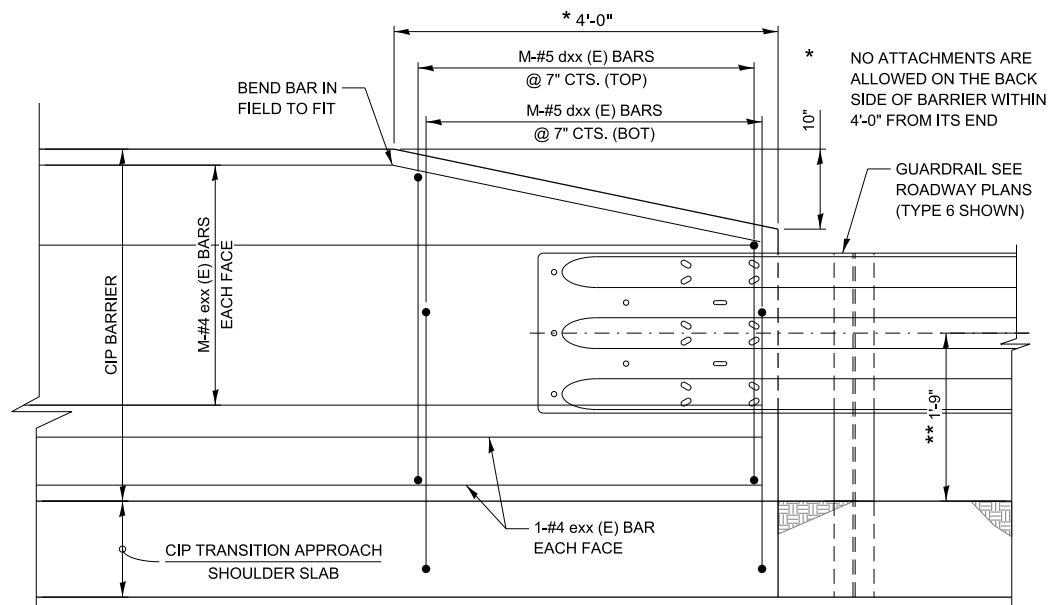
- NOTES:**
- IN VIEW E'-E' AND VIEW G-G, ANCHOR STUDS SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 1006.09 OF THE IDOT STANDARD SPECIFICATIONS. STEEL PLATES, ANCHOR STUDS, NUTS AND WASHERS SHALL BE GALVANIZED.
 - THE THICKNESSES OF STABILIZED SUBBASE AND SUBGRADE AGGREGATE SHALL BE THE SAME AS FOR THE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

NOTE TO DESIGNER
 * INCREASE BY 1/4" FOR SMOOTHNESS GRINDING

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.

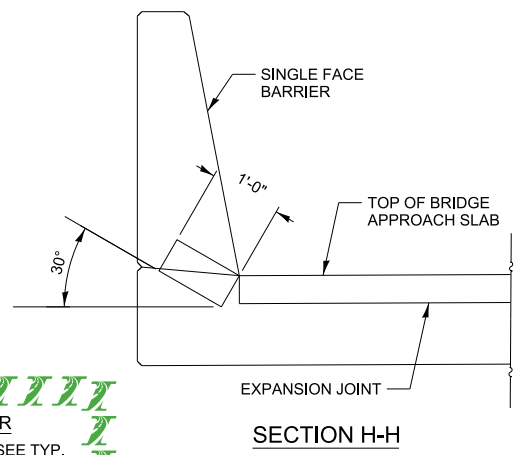
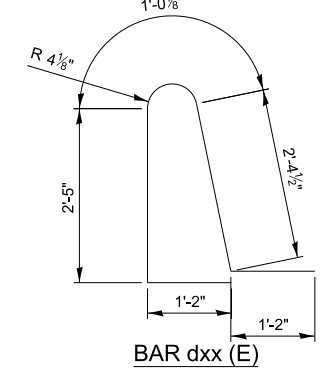
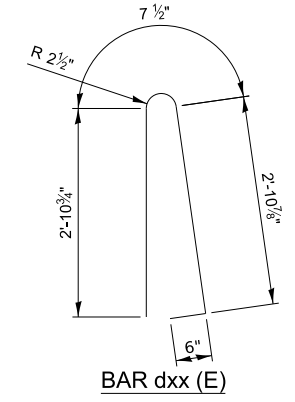
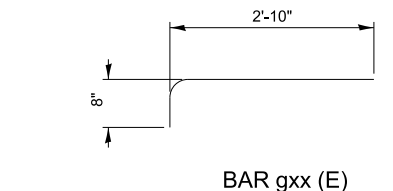
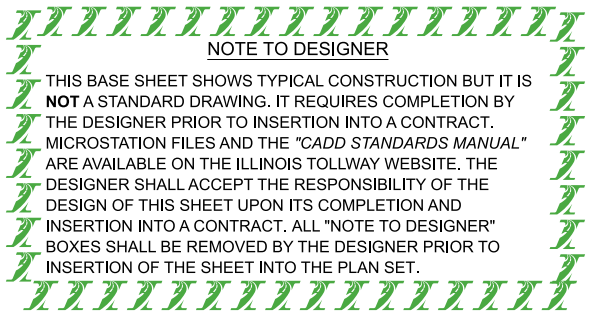
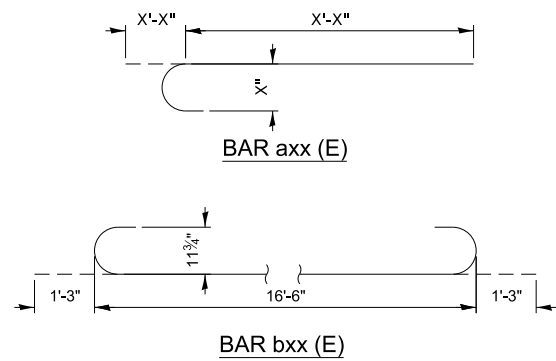
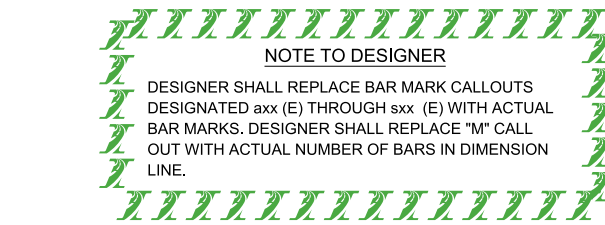


PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB

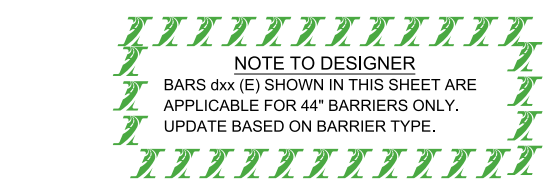


TYPICAL CIP BARRIER TRANSITION DETAIL
(CURB AND GUTTER NOT SHOWN FOR CLARITY)

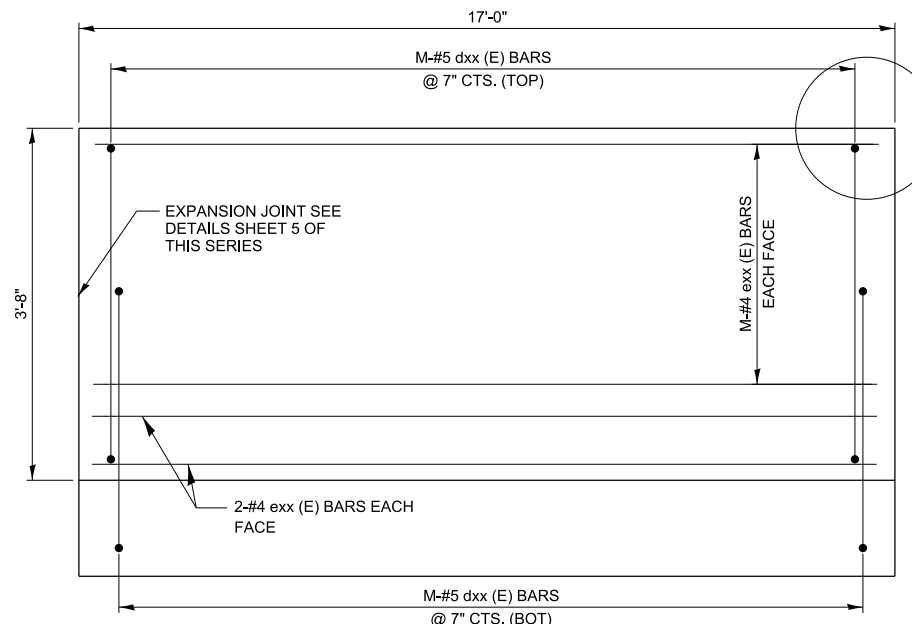
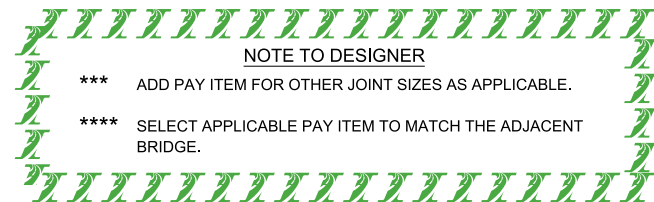
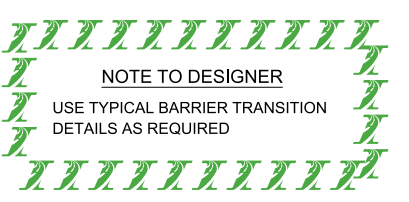
** MEASURED AT A POINT 1'-0" FROM FACE OF RAIL, OR FROM EDGE OF SHOULDER/EDGE OF GUTTER WHEN EDGE IS MORE THAN 1'-0" TO FACE OF RAIL



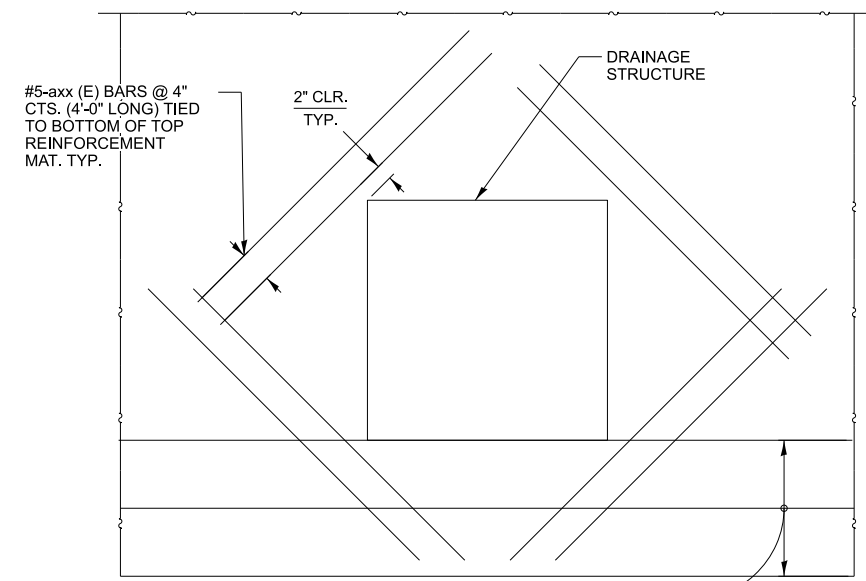
SECTION H-H



- NOTE:**
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 THE NEED FOR 2" PVC CONDUIT WITH ELECTRICAL AND ITS PLANS. CONDUIT SHALL BE PLACED TO MISS REINFORCEMENT. DO NOT CUT REINFORCEMENT BARS.

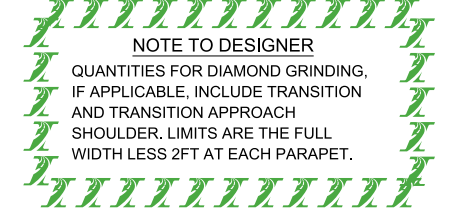


CIP TRANSITION APPROACH SHOULDER SLAB BARRIER ELEVATION



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.



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"	
dxx (E)				
fx (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.	
J1420041	TRANSITION APPROACH SLAB	SQ. YD.	
J1420046	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.	

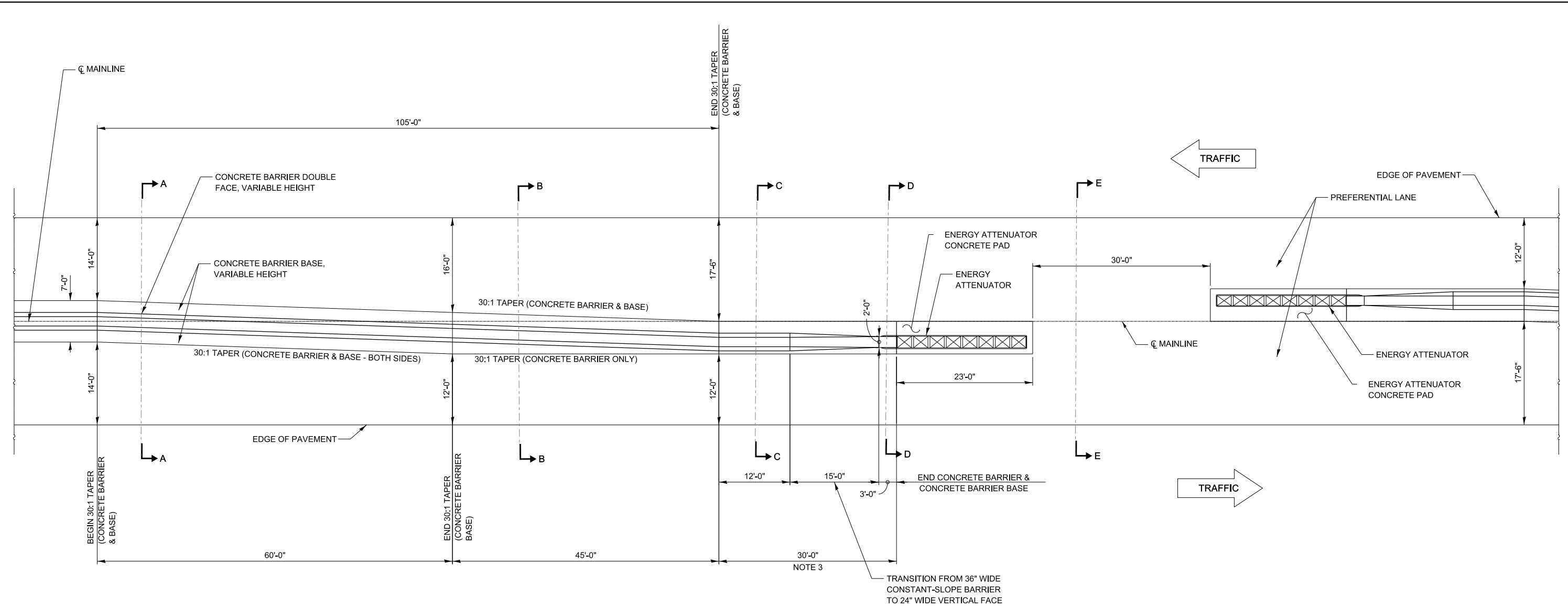
* FOR INFORMATION ONLY

BILL OF MATERIAL FOR CIP BARRIERS				
BAR	NO.	SIZE	LENGTH	SHAPE
dxx (E)		#5	7'-0"	
dxx (E)				
exx (E)		#4		
exx (E)				

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



PRECAST APPROACH SLAB WITH CIP TRANSITION SLAB



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.

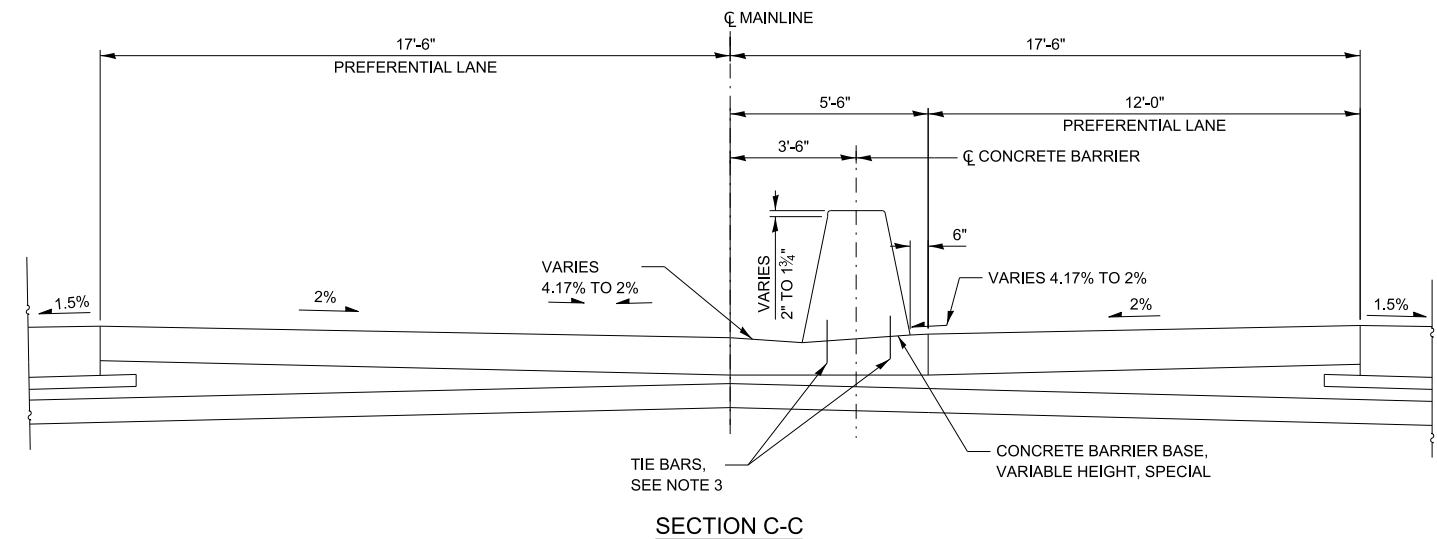
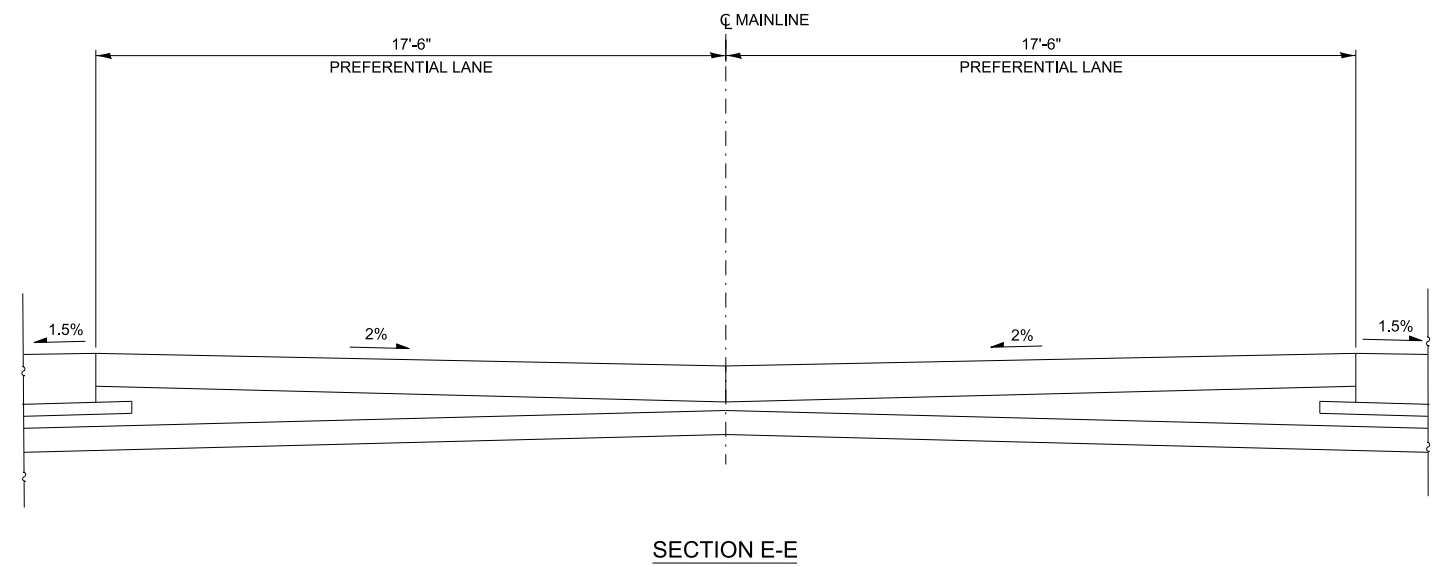
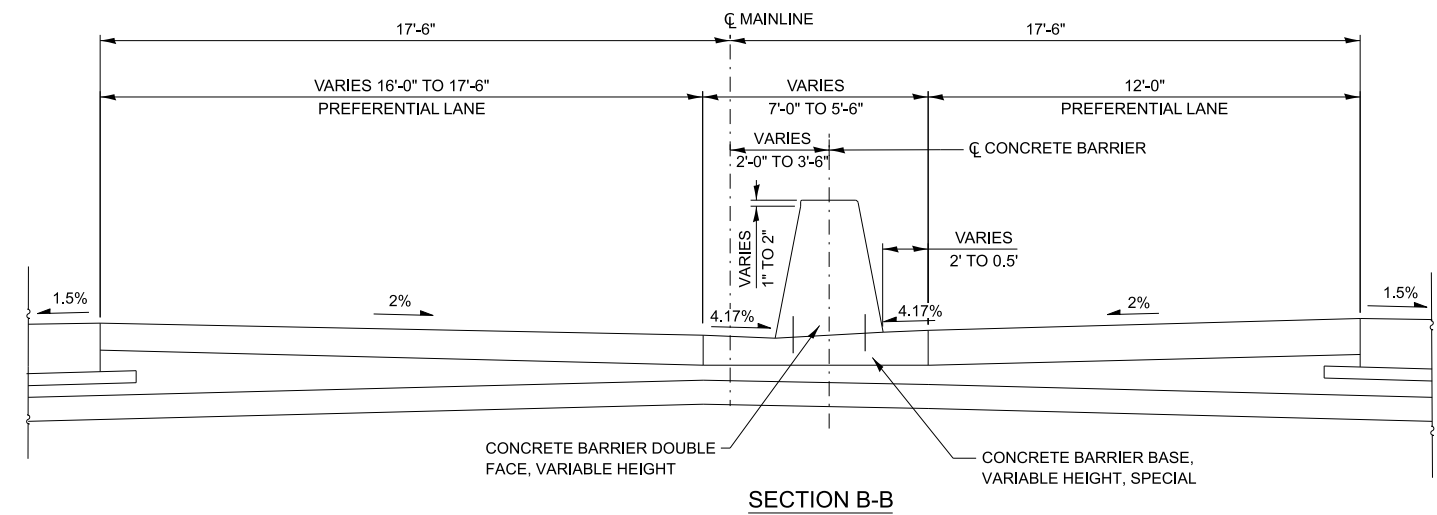
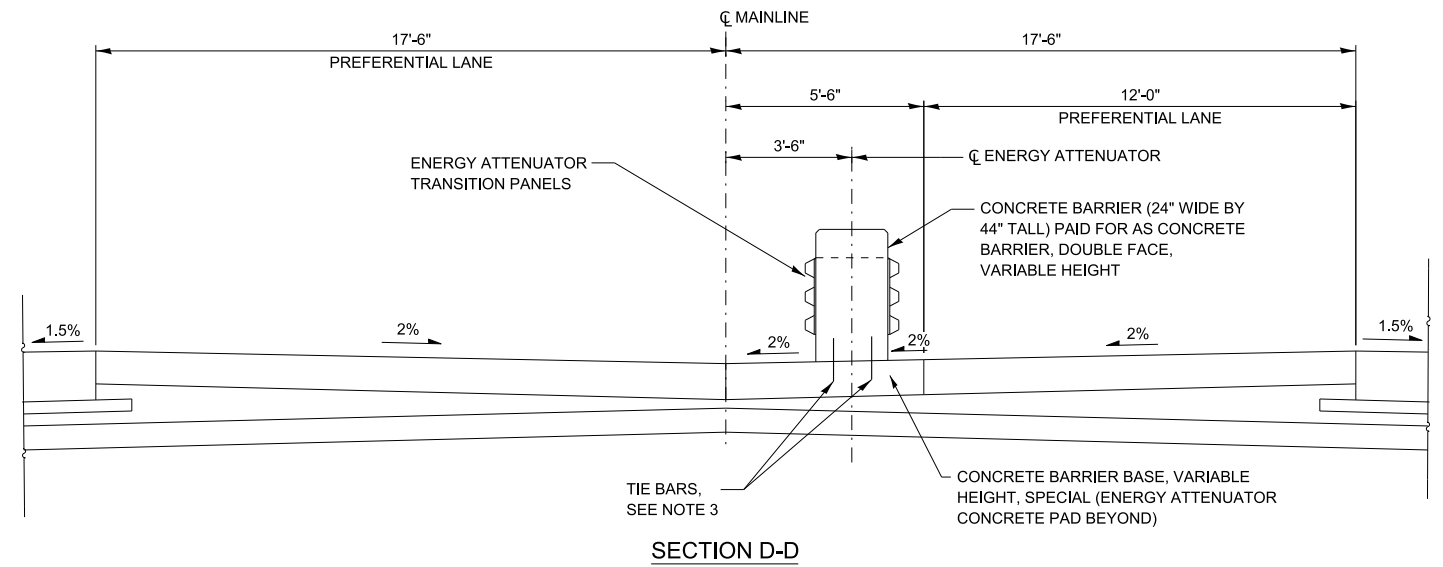
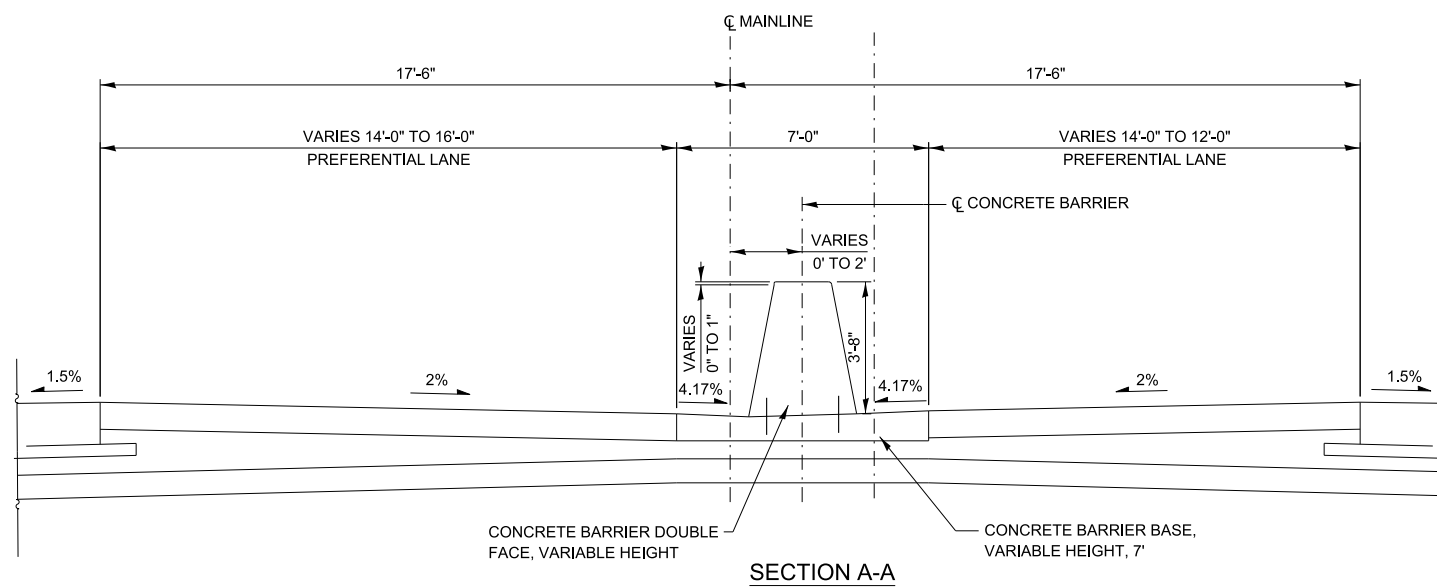
NOTE TO DESIGNER

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**EMERGENCY TURNAROUND
MEDIAN WIDTH ≥ 35 FT**

VERSION: 2026-03	BASE SHEET: M-RDY-411	SHEET: 1 OF 4
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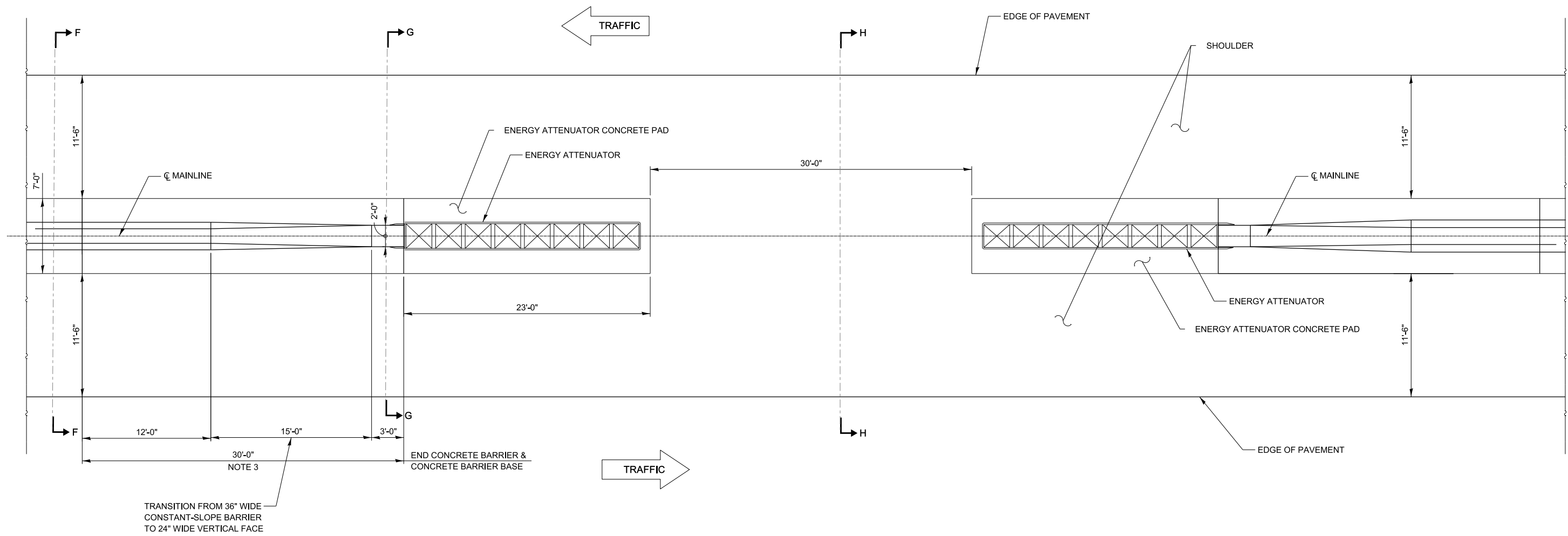


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**EMERGENCY TURNAROUND
MEDIAN WIDTH ≥ 35 FT**



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.

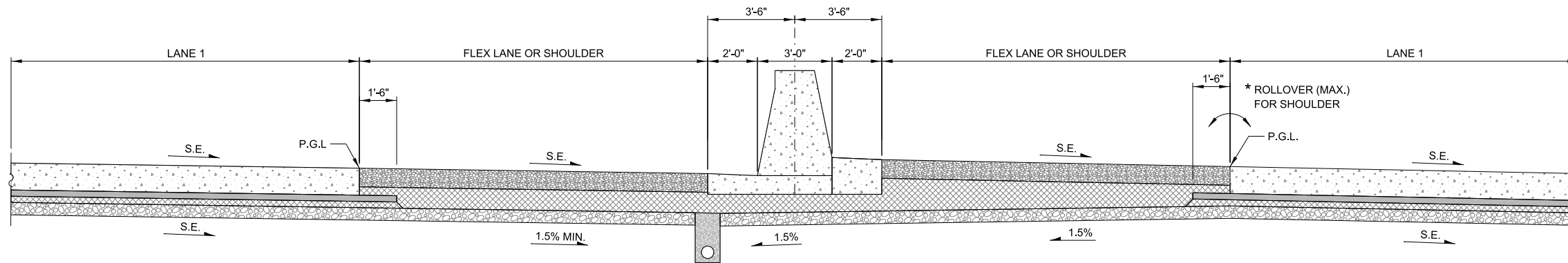
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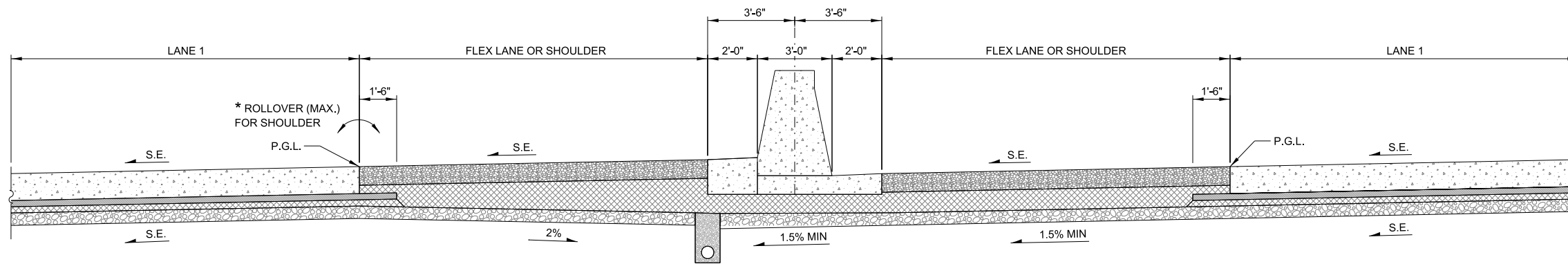


**EMERGENCY TURNAROUND
MEDIAN WIDTH < 35 FT**

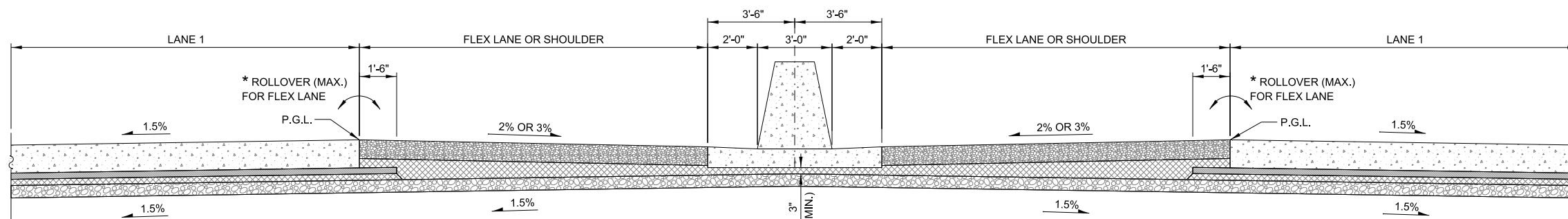
VERSION: 2026-03	BASE SHEET: M-RDY-411	SHEET: 3 OF 4
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SUBGRADE SLOPES AND PIPE UNDERDRAIN LOCATION
(SUPERELEVATED SECTION, CURVE TO THE RIGHT)



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



SUBGRADE SLOPES
(NORMAL CROWN SECTION)

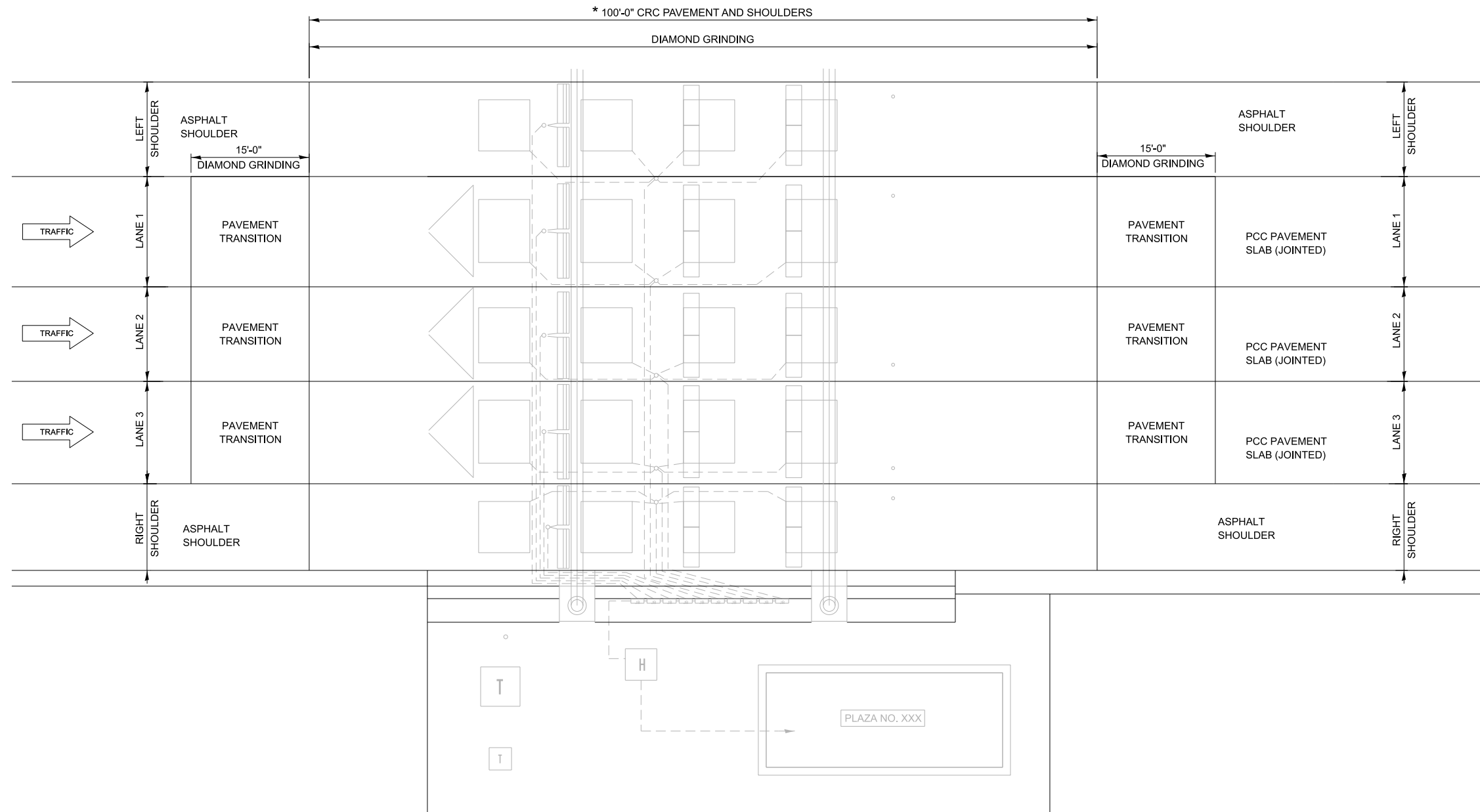
NOTE TO DESIGNER
 THE UNDERDRAIN CAN BE LOCATED ON EITHER SIDE OF THE MEDIAN. DESIGNER TO DETERMINE WHICH SIDE BASED ON CONSTRUCTION STAGING AND PROJECT SPECIFIC NEEDS.



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



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.

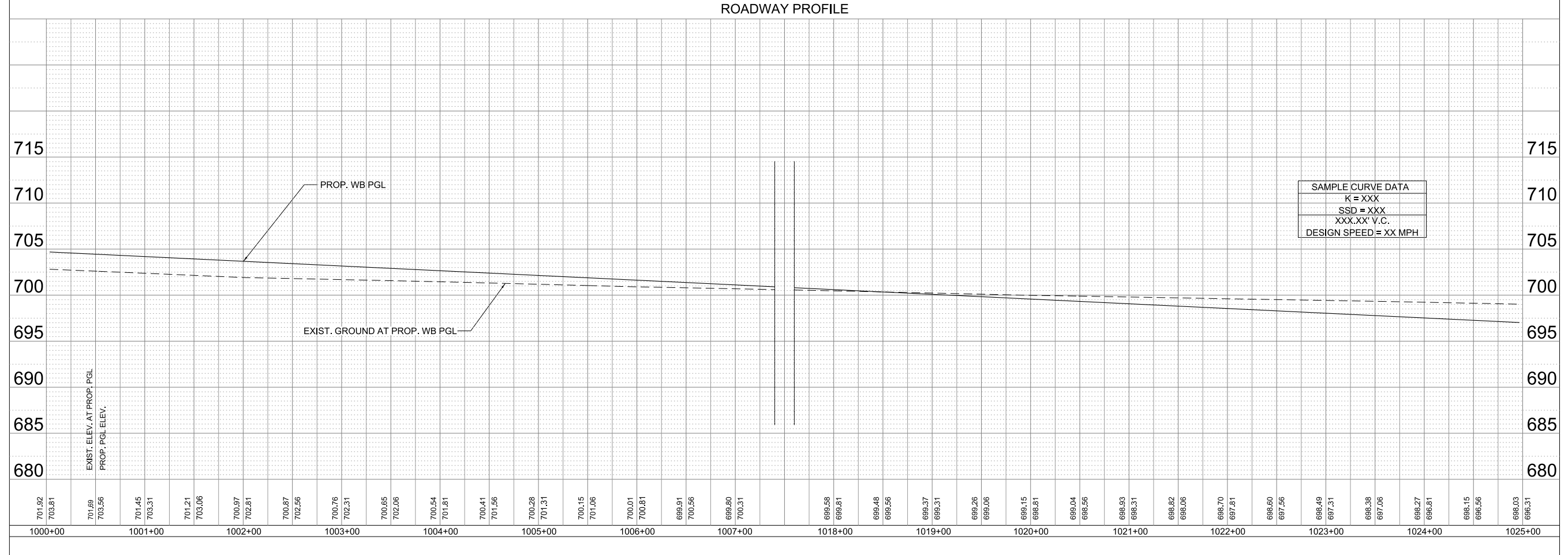
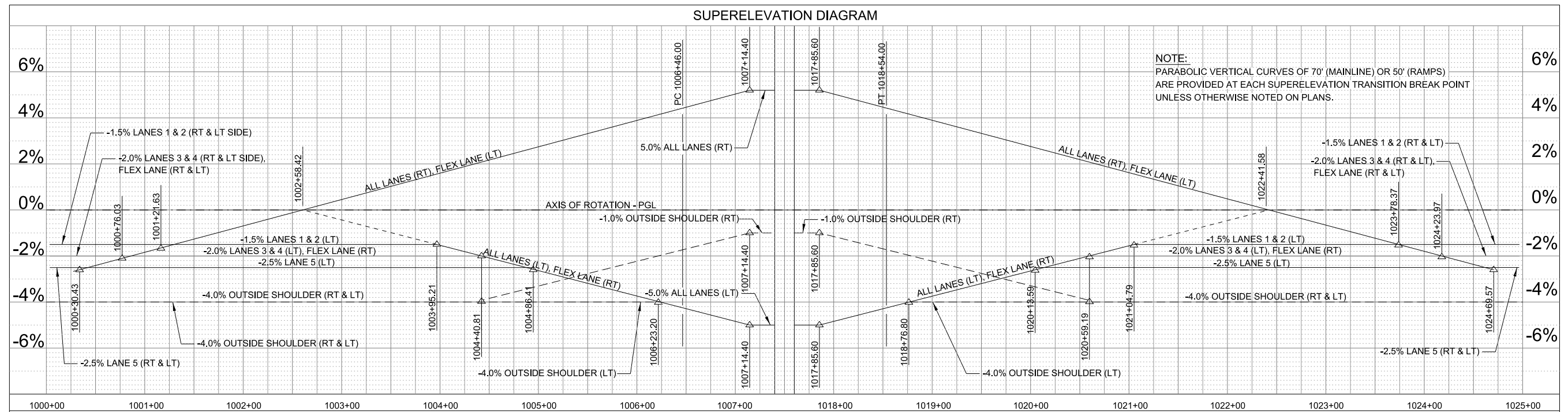
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* OMIT TILING OF CONCRETE PAVEMENT AND SHOULDER SURFACES THROUGH THE PLAZA




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
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NOTE TO DESIGNER

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

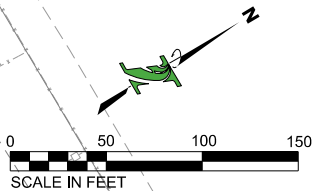
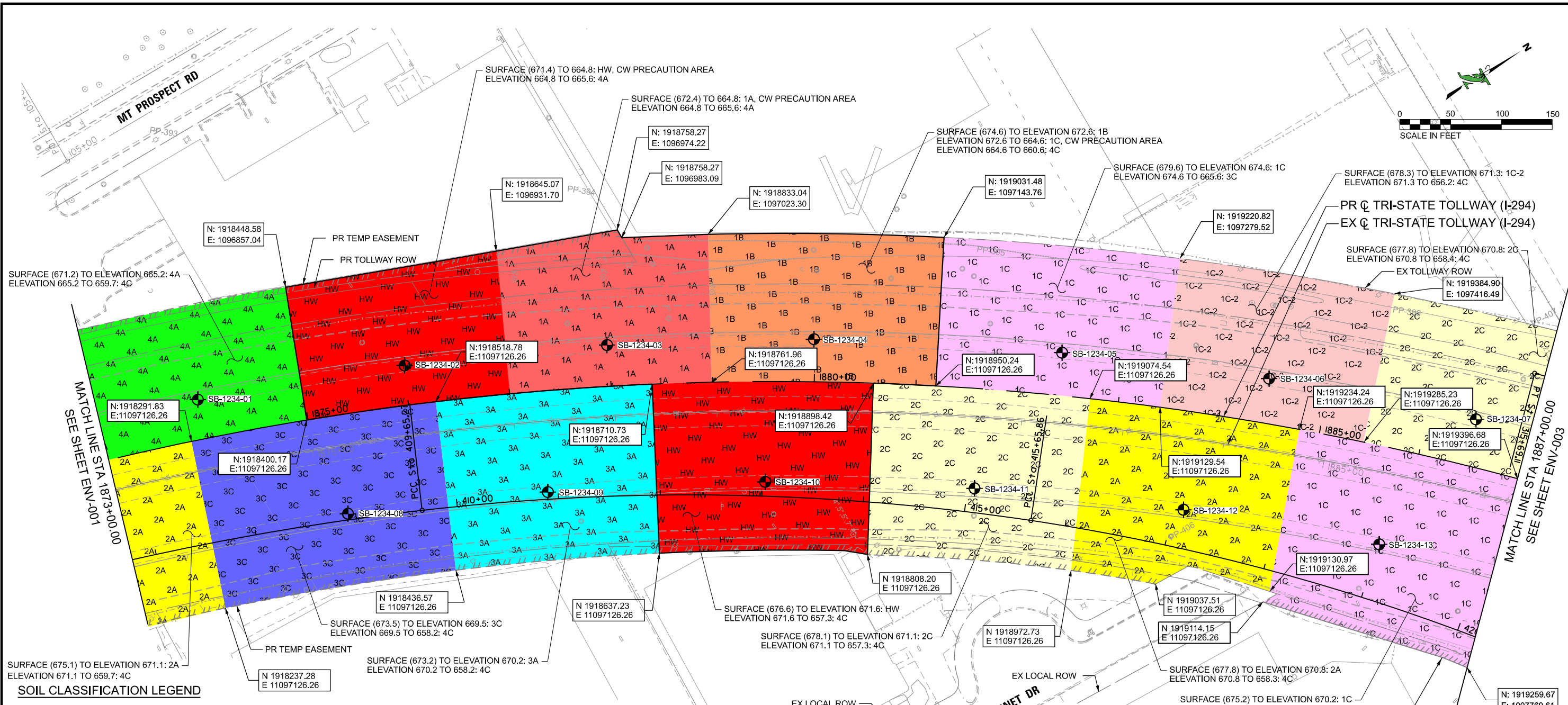
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ROADWAY PROFILE AND SUPERELEVATION

VERSION: 2020-03	BASE SHEET: M-RDY-414	SHEET: 1 OF 1
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SOIL CLASSIFICATION LEGEND

	CONSTRUCTION WORKER PRECAUTION AREA
	HAZARDOUS WASTE, REUSE TYPE A SOILS NOT APPROVED
	1A: DISPOSAL TYPE 1 NON-SPECIAL WASTE, REUSE TYPE A SOILS NOT APPROVED
	1B: DISPOSAL TYPE 1 NON-SPECIAL WASTE, REUSE TYPE B SOILS APPROVED WITH RESTRICTIONS
	1C: DISPOSAL TYPE 1 NON-SPECIAL WASTE, REUSE TYPE C SOILS APPROVED FOR REUSE
	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: DISPOSAL TYPE 2, REUSE TYPE A SOILS NOT APPROVED
	2C: DISPOSAL TYPE 2, REUSE TYPE C SOILS APPROVED FOR REUSE
	3A: DISPOSAL TYPE 3, REUSE TYPE A SOILS NOT APPROVED
	3C: DISPOSAL TYPE 3, REUSE TYPE C SOILS APPROVED FOR REUSE
	4A: DISPOSAL TYPE 4, REUSE TYPE A SOILS NOT APPROVED
	4C: DISPOSAL TYPE 4, REUSE TYPE C SOILS APPROVED FOR REUSE
	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.



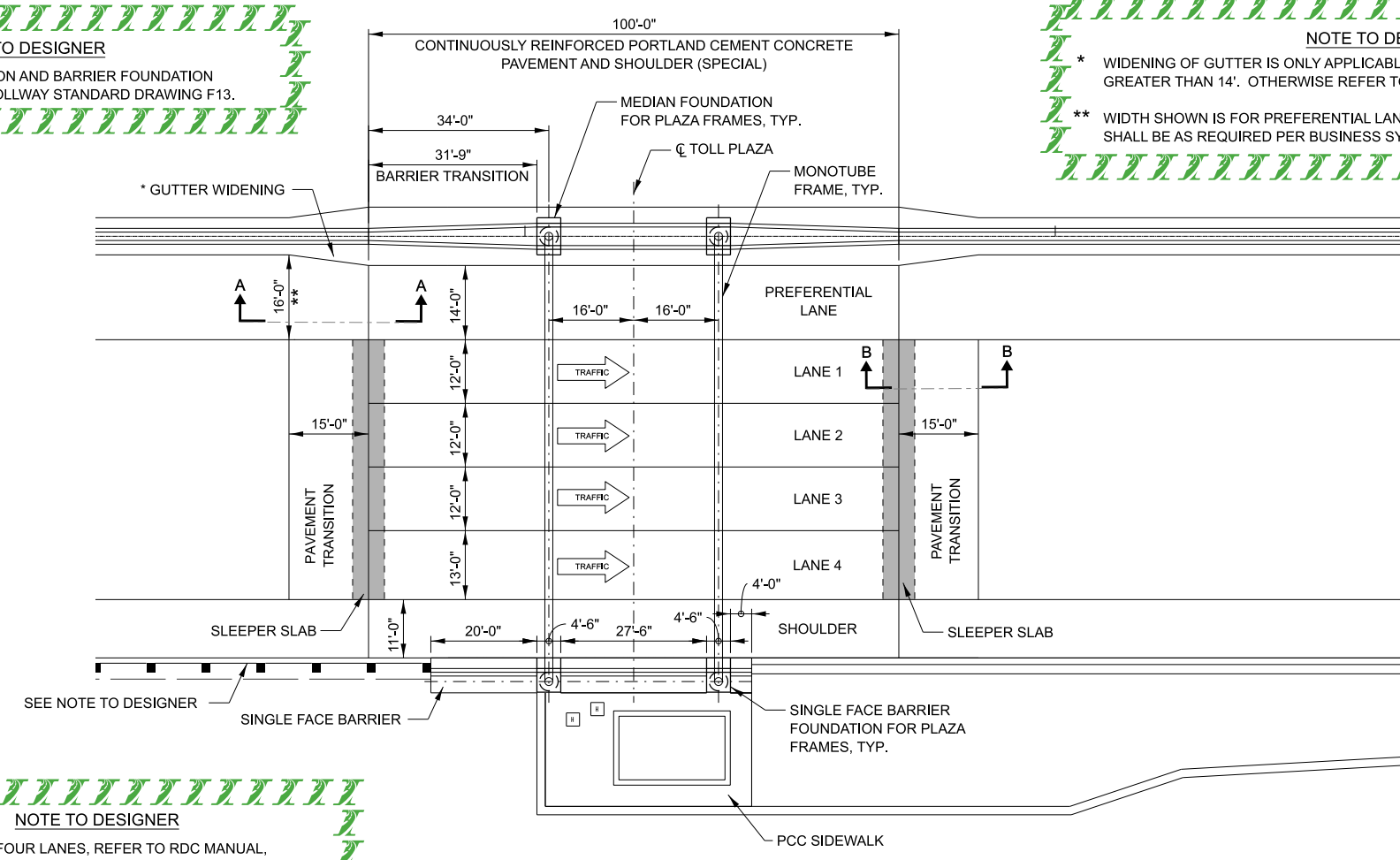
ENVIRONMENTAL SOIL CLASSIFICATION

VERSION: 2025-03	STANDARD: M-RDY-416	SHEET: 1 OF 1
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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 MINIMUM WIDTH SHALL BE AS REQUIRED PER BUSINESS SYSTEMS MANUAL, TABLE 4.1.1.

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.



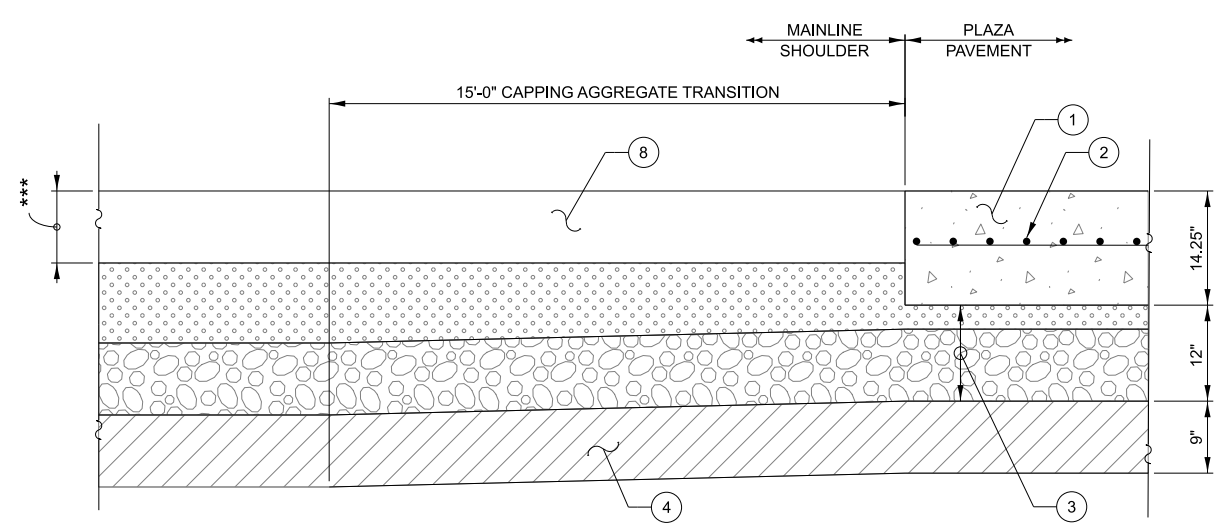
PLAN VIEW
 N.T.S.

NOTE TO DESIGNER
 CONTACT TOLLWAY BUSINESS SYSTEMS FOR SIDEWALK LIMITS.

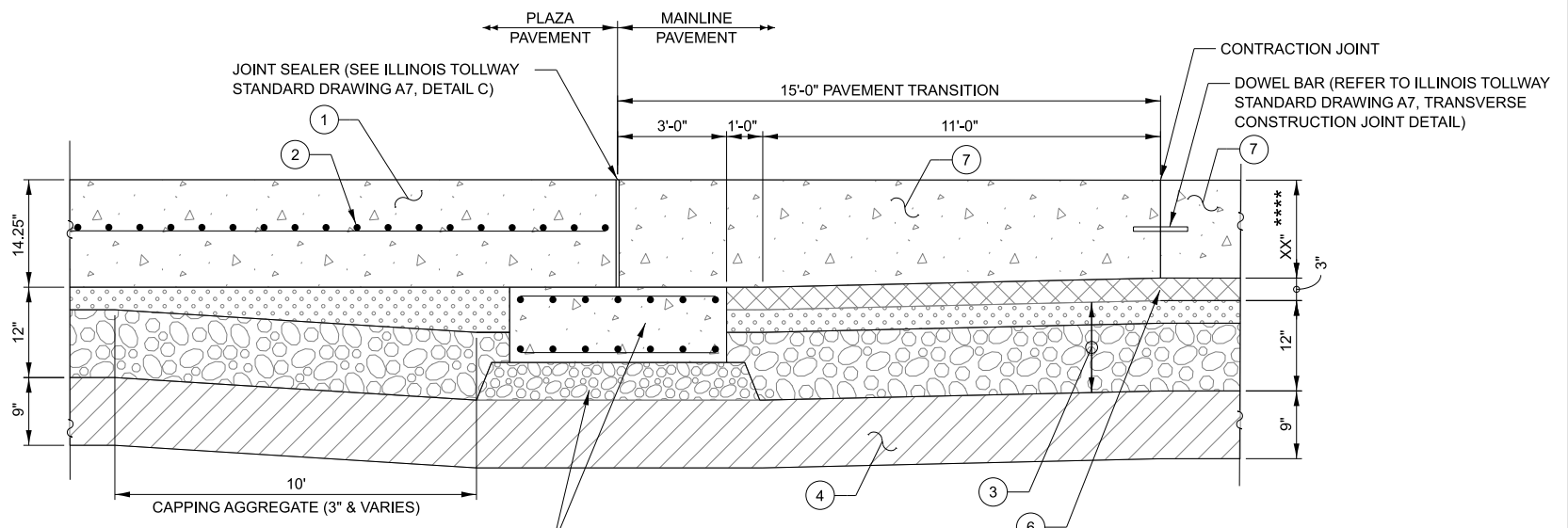
LEGEND:

- 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 CHEMICALLY STABILIZED SUBGRADE, 9" (JT900580)
- ⑤ GRANULAR SUBBASE, SPECIAL (4" MIN.) (JT301010)
- ⑥ STABILIZED SUBBASE - WMA, 3" (JI312022)
- ⑦ PORTLAND CEMENT CONCRETE PAVEMENT X* (JOINTED) (JI4200XX)
- ⑧ WARM-MIX ASPHALT SHOULDERS (X IN.) (JI4821XX)

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 EXTENSION) TO BE DETERMINED BY BARRIER WARRANT ANALYSIS.



SECTION A-A
 N.T.S.



SECTION B-B
 N.T.S.

PAVEMENT TRANSITION DETAIL
 N.T.S.

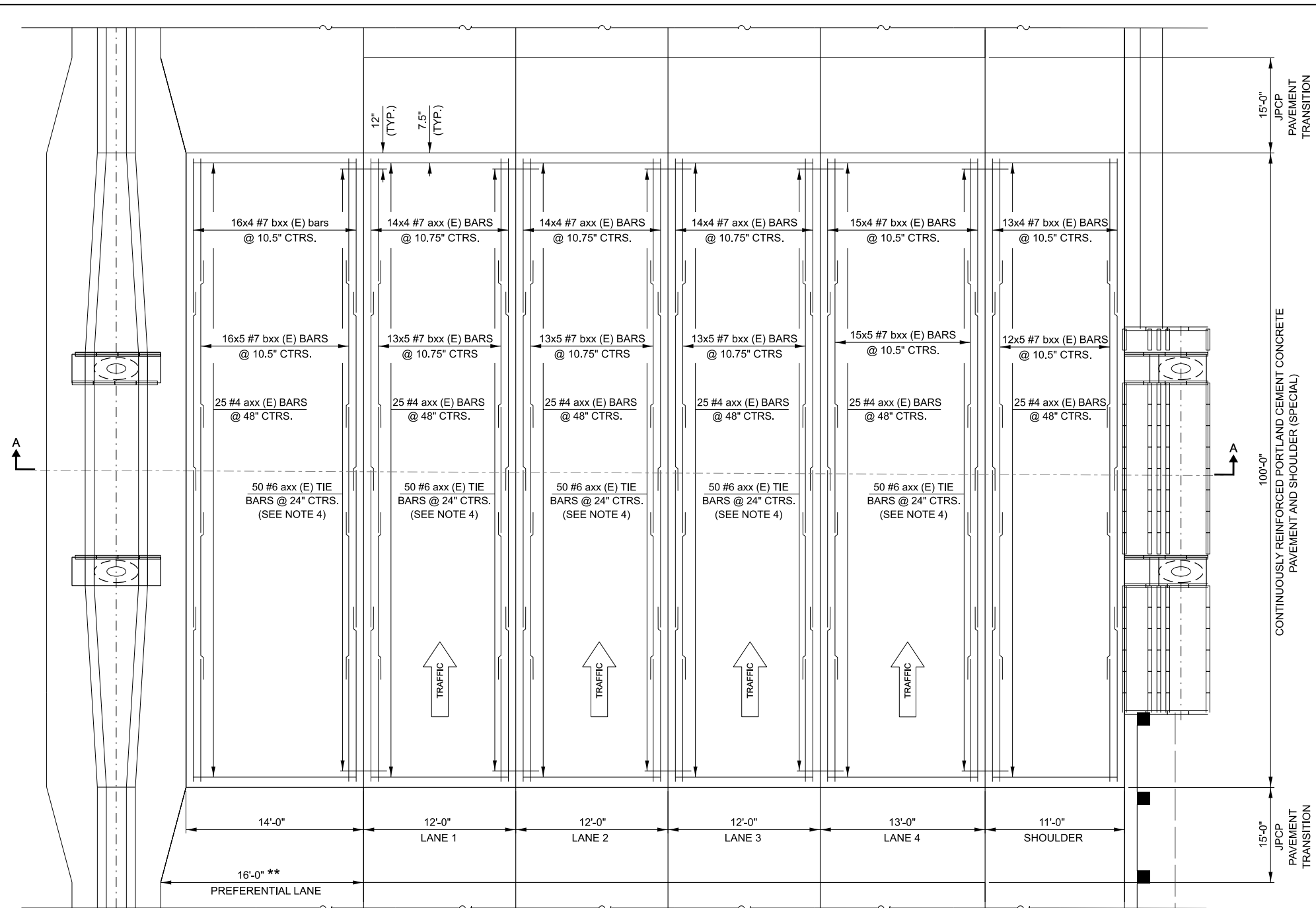
NOTE TO DESIGNER
 *** CONTACT TOLLWAY MATERIALS FOR SHOULDER THICKNESS

NOTE TO DESIGNER
 ***** DSE SHALL DEVELOP BAR SPlicing DETAILS FOR SLEEPER SLABS WHEN IT IS CONSTRUCTED IN DIFFERENT MOT STAGES.

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



MAINLINE TOLL PLAZA PAVEMENT DETAILS



- 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"	---

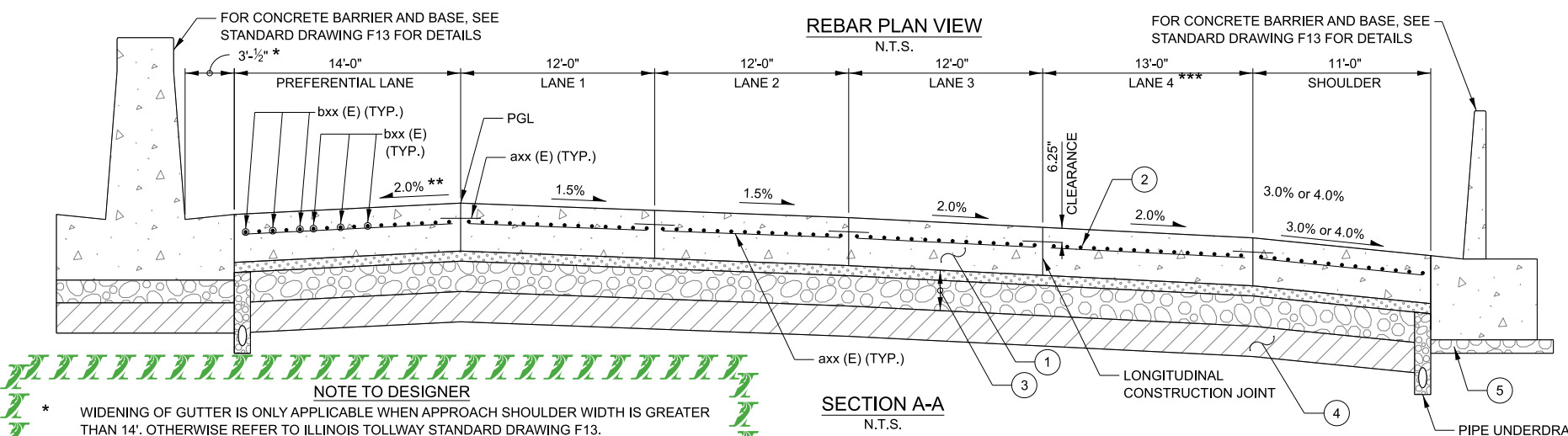
TOTAL REINFORCEMENT BARS, EPOXY COATED = XXXX LBS. (FOR INFORMATION ONLY)

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 1/4
11.5	26	5 1/4
12	27	5 3/8
13	30	5 1/2
14	32	5 1/4

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.



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.

- 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 CHEMICALLY STABILIZED SUBGRADE, 9" (JT900580)
 - ⑤ GRANULAR SUBBASE, SPECIAL (4" MIN.) (JT301010)

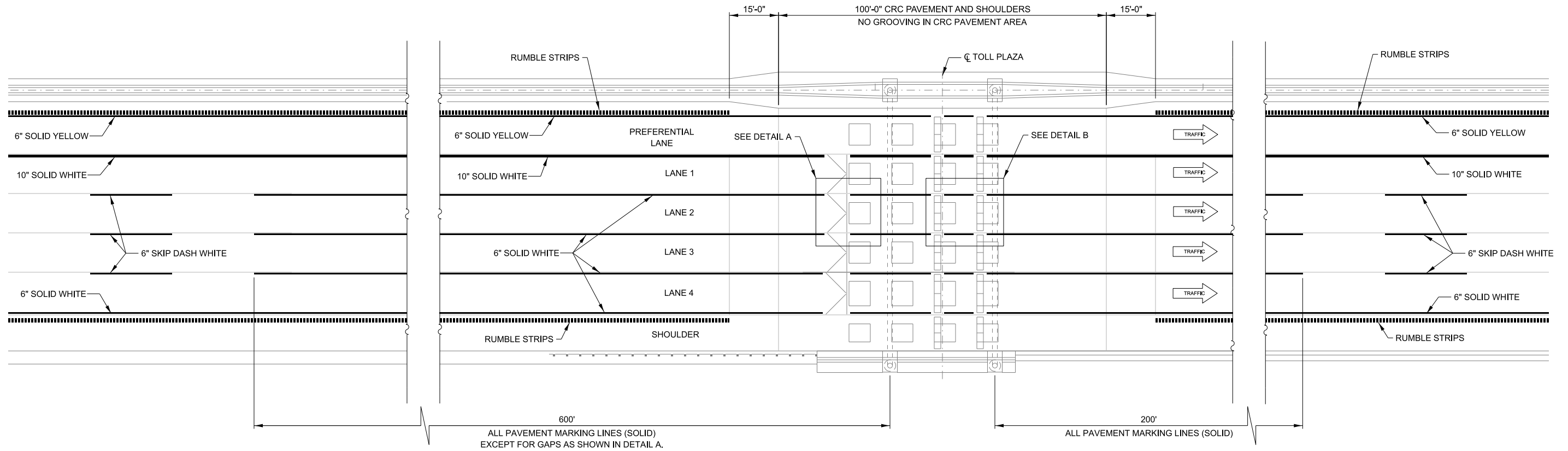
NOTE TO DESIGNER

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.



MAINLINE TOLL PLAZA PAVEMENT DETAILS

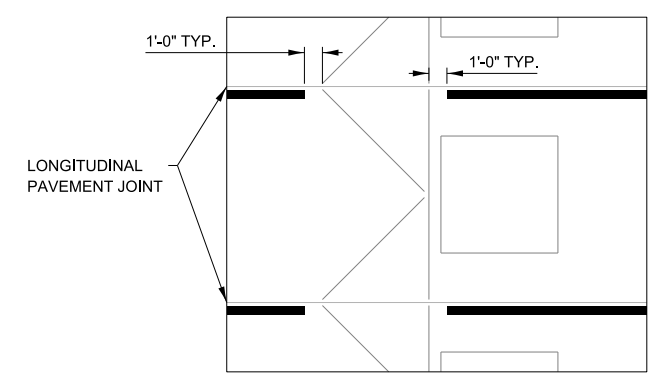
VERSION: 2025-03	BASE SHEET: M-RDY-417	SHEET: 2 OF 3
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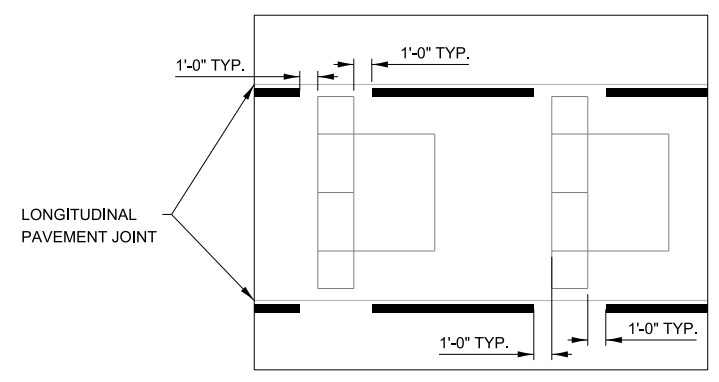
PAVEMENT MARKING DETAIL
N.T.S.

NOTE TO DESIGNER
FOR LOOP AND CONDUIT LAYOUT DIMENSIONS, REFER TO ILLINOIS TOLLWAY BASE SHEET M-BUS-2518A.

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.

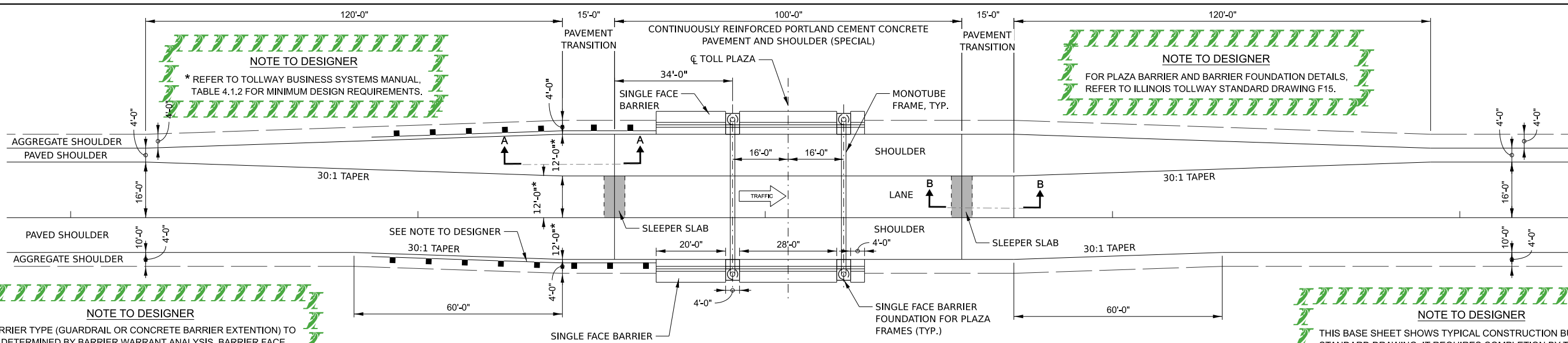


DETAIL A
PAVEMENT MARKING IN THE VICINITY OF PIEZO STRIPS



DETAIL B
PAVEMENT MARKING IN THE VICINITY OF NARROW LOOPS

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.



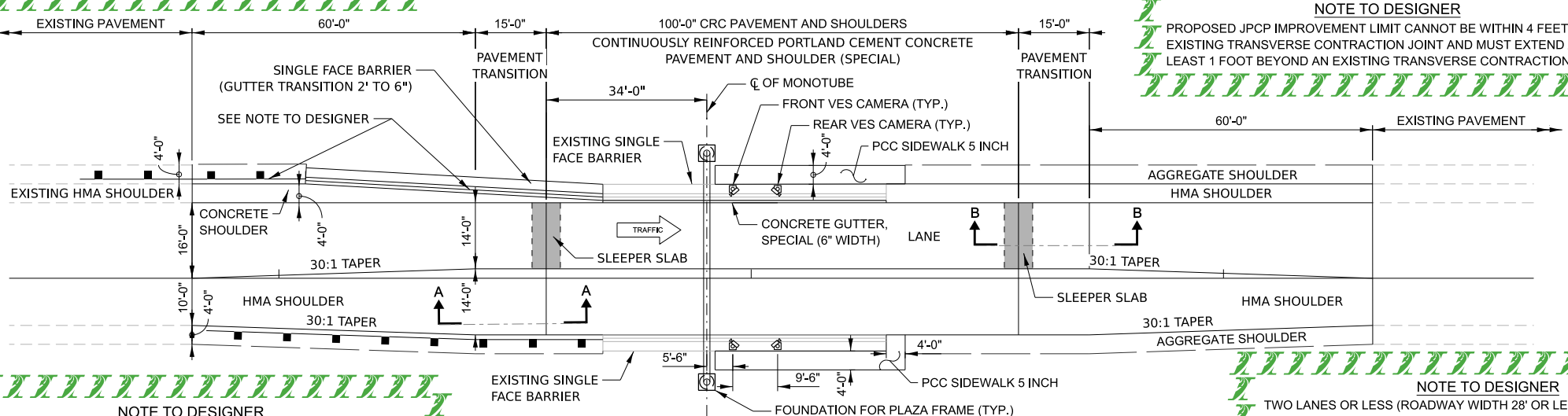
NOTE TO DESIGNER
 * REFER TO TOLLWAY BUSINESS SYSTEMS MANUAL, TABLE 4.1.2 FOR MINIMUM DESIGN REQUIREMENTS.

NOTE TO DESIGNER
 FOR PLAZA BARRIER AND BARRIER FOUNDATION DETAILS, REFER TO ILLINOIS TOLLWAY STANDARD DRAWING F15.

NOTE TO DESIGNER
 BARRIER TYPE (GUARDRAIL OR CONCRETE BARRIER EXTENSION) TO BE DETERMINED BY BARRIER WARRANT ANALYSIS. BARRIER FACE TAPER SHALL MEET AASHTO ROADSIDE DESIGN GUIDE, TABLE 5-9.
 REFER TO TRAFFIC BARRIER GUIDELINES ARTICLE 13.2.1 FOR PLACEMENT OF SINGLE-FACE BARRIER ALONG SHOULDER TAPER.

RAMP TOLL PLAZA ROADWAY DETAILS FOR NEW OR RECONSTRUCTION PROJECTS
 N.T.S.

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.

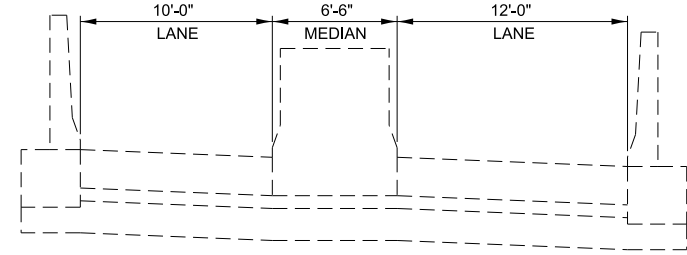


NOTE TO DESIGNER
 PROPOSED JPCP IMPROVEMENT LIMIT CANNOT BE WITHIN 4 FEET OF AN EXISTING TRANSVERSE CONTRACTION JOINT AND MUST EXTEND AT LEAST 1 FOOT BEYOND AN EXISTING TRANSVERSE CONTRACTION JOINT.

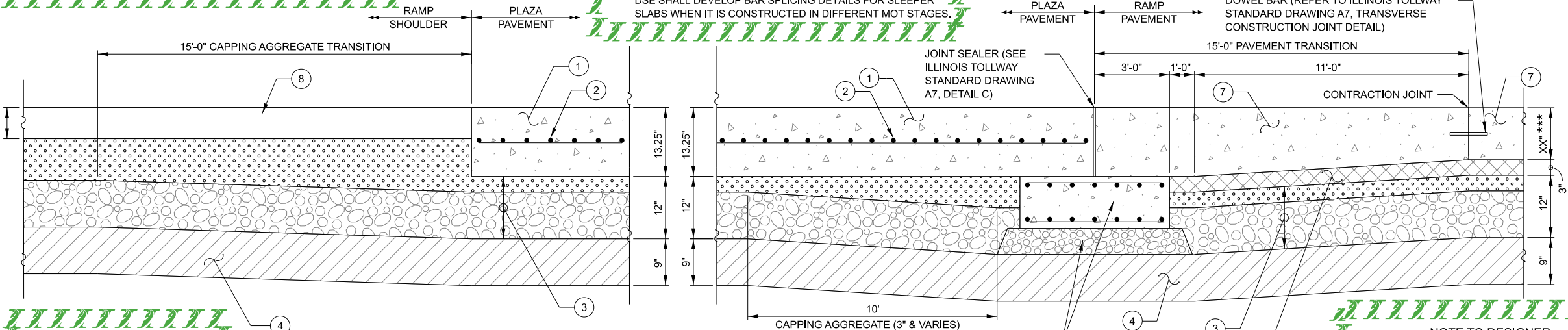
NOTE TO DESIGNER
 THE SAMPLE RAMP TOLL PLAZA ROADWAY PLAN FOR REHABILITATION PROJECTS IS BASED ON AN EXISTING TWO-LANE TYPICAL SECTION WITH PLAZA ISLAND (SHOWN ABOVE). FOR OTHER EXISTING PLAZA ROADWAY LAYOUTS, CONTACT TOLLWAY BUSINESS SYSTEMS FOR PROPOSED LANE CONFIGURATION REQUIREMENTS.

RAMP TOLL PLAZA ROADWAY DETAILS FOR REHABILITATION PROJECTS
 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 TYPICALLY MOUNTED ON THE BASE OF THE CONCRETE BARRIER.
 THREE OR MORE LANES SHALL REQUIRE TWO MONOTUBES WITH MONOTUBE MOUNTED CAMERAS.



EXISTING TWO-LANE TYPICAL SECTION - THROUGH PLAZA
 (FOR INFORMATION ONLY)
 N.T.S.



NOTE TO DESIGNER
 ** CONTACT TOLLWAY MATERIALS FOR SHOULDER THICKNESS

SECTION A-A
 N.T.S.

PAVEMENT TRANSITION DETAIL
 N.T.S.

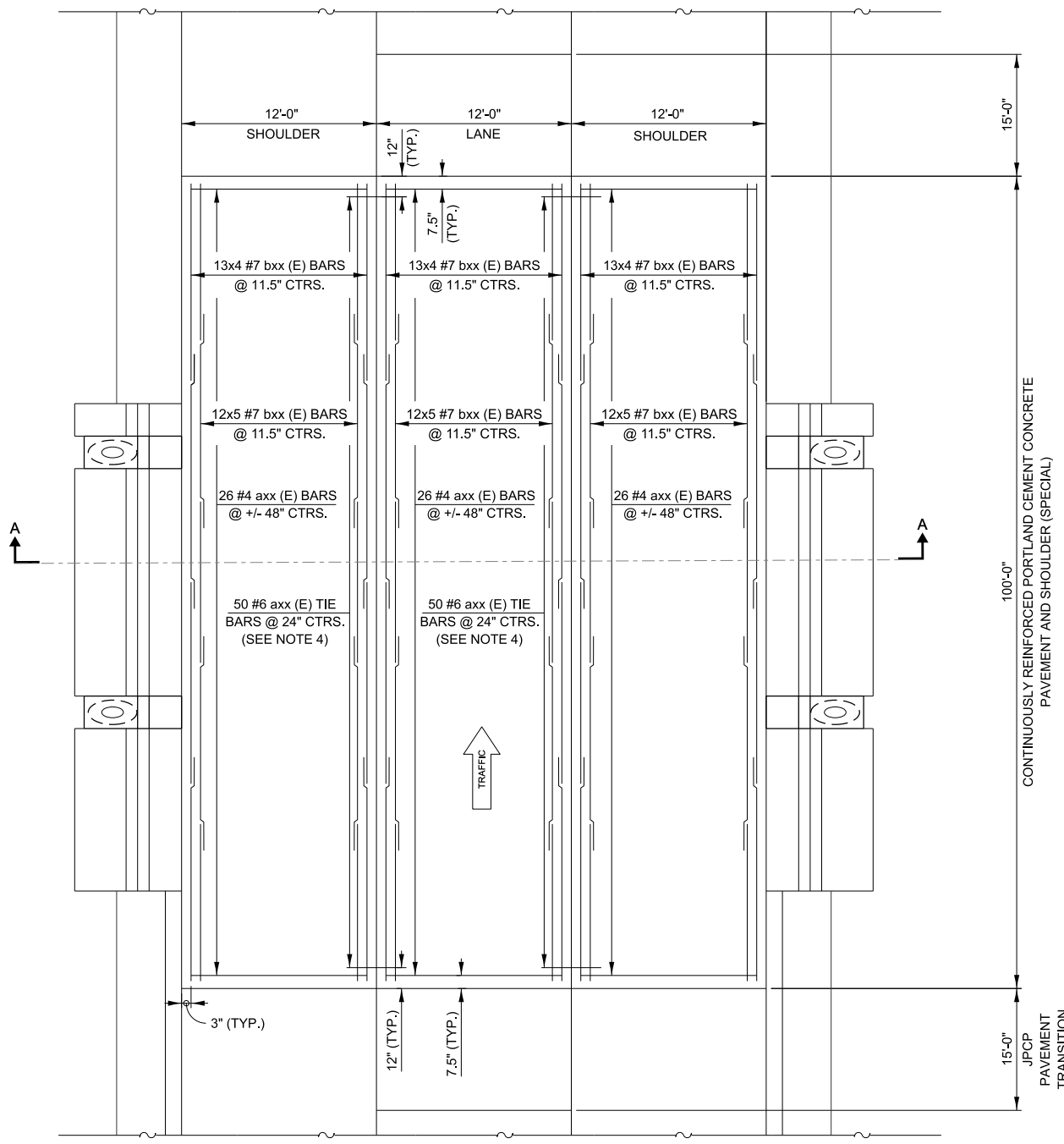
SECTION B-B
 N.T.S.

NOTE TO DESIGNER
 **** ITEM NO. 7 TO BE ADDED ONLY WHEN PAVEMENT RECONSTRUCTION ADJACENT TO THE CRCC PAVEMENT EXCEEDS 200 FEET.

- 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 CHEMICALLY STABILIZED SUBGRADE, 9" (JT900580)
 - ⑤ GRANULAR SUBBASE, SPECIAL (4" MIN.) (JT301010)
 - ⑥ STABILIZED SUBBASE - WMA, 3" (JI312022)****
 - ⑦ PORTLAND CEMENT CONCRETE PAVEMENT X" (JOINTED) (JI4200XX)
 - ⑧ WARM-MIX ASPHALT SHOULDERS (X IN.) (JI4821XX)



RAMP TOLL PLAZA PAVEMENT DETAILS



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)	78	#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.	
42001300	TIE BARS 3/4"	EACH	
42001300	PROTECTIVE COAT	SQ. YD.	
JT421971	PAVEMENT REINFORCEMENT (13.25 IN.)	SQ. YD.	

- NOTES:
- REINFORCING BARS DESIGNATED "E" SHALL BE EPOXY COATED.
 - REFER TO SPECIAL PROVISION FOR THE CLASS OF CONCRETE TO BE USED.
 - BARS INDICATED THUS MxN #7 ETC. INDICATES M LINES OF BARS WITH N LENGTHS PER LINE.
 - 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)

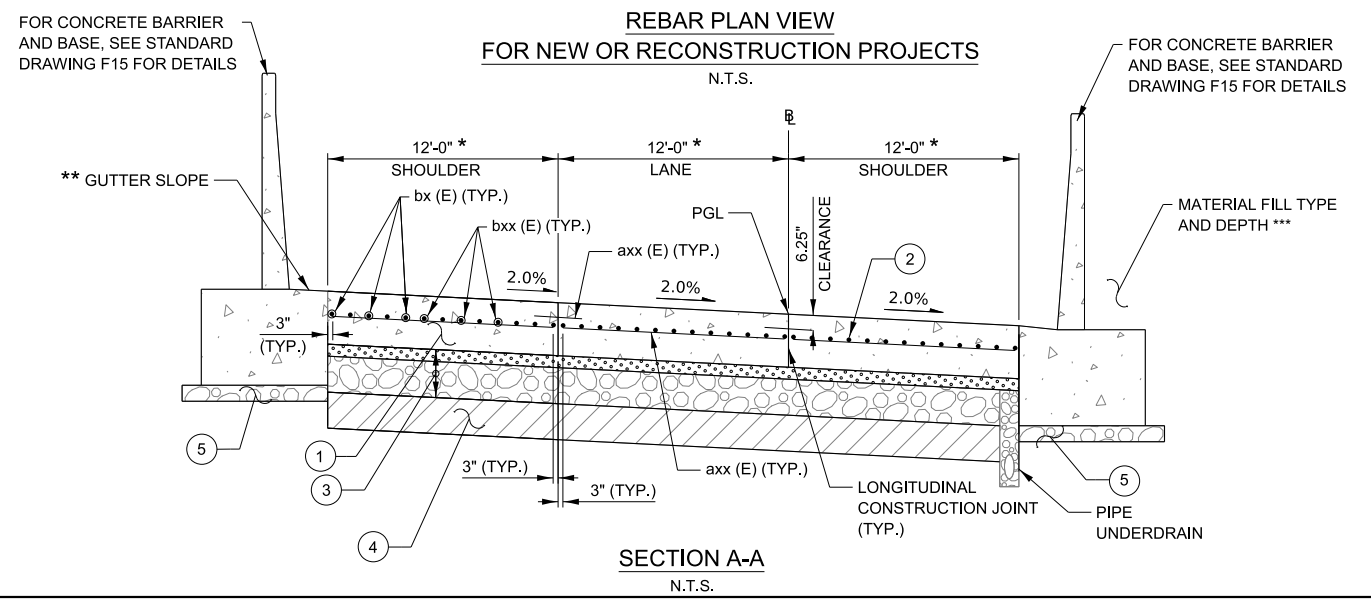
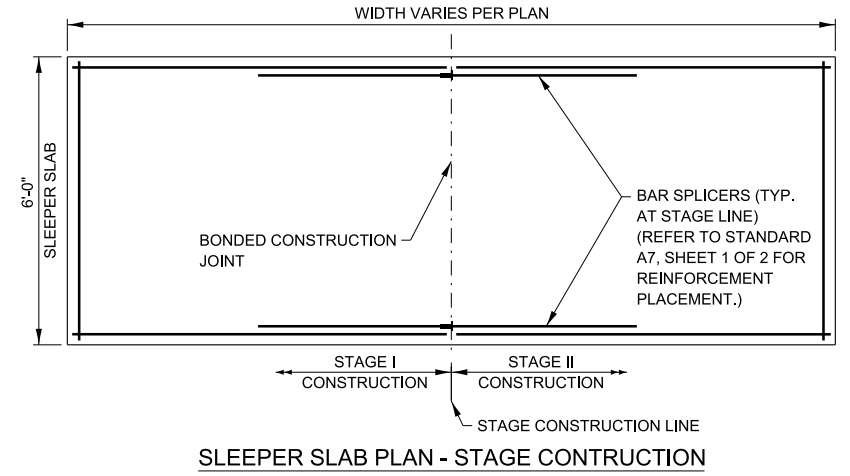
LANE/SHOULDER WIDTH (FT.)	NO. OF BARS (EA.)	SPACING (IN.)
6	13	5 1/2
7	15	5 5/8
8	17	5 3/4
9	19	5 5/8
10	21	5 3/4
11	23	5 5/8
12	25	5 3/4
13	27	5 5/8
14	30	5 3/4

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.

NOTE TO DESIGNER

WHEN A SLEEPER SLAB IS REQUIRED TO BE BUILT IN STAGED CONSTRUCTION, THE LATEST VERSION OF IDOT'S BASE SHEET BSD-1 FOR 'BAR SPLICER DETAILS' SHALL BE INCLUDED IN THE PLAN DRAWINGS.

DSE SHALL REMOVE 'SLEEPER SLAB PLAN-STAGE CONSTRUCTION' DETAIL IF IT IS NOT APPLICABLE.



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.

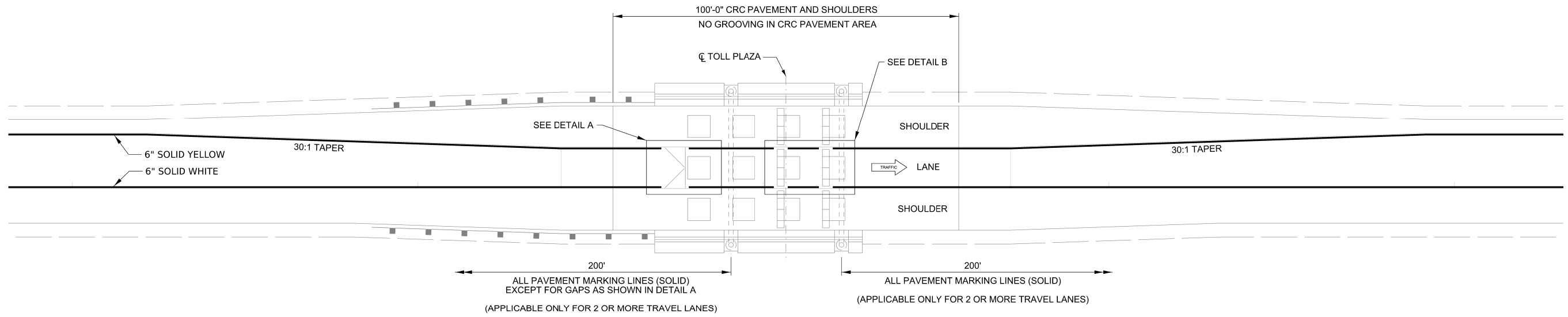
- LEGEND:
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 - SUBGRADE AGGREGATE 12" (JT211A11) CAPPING AGGREGATE, 3" (THICKNESS VARIES UNDER SHOULDERS) POROUS GRANULAR EMBANKMENT, 9"
 - CHEMICALLY STABILIZED SUBGRADE, 9" (JT900580)
 - GRANULAR SUBBASE, SPECIAL (4" MIN.) (JT301010)

NOTE TO DESIGNER

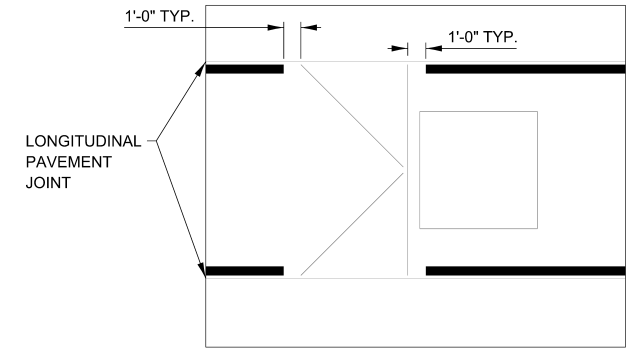
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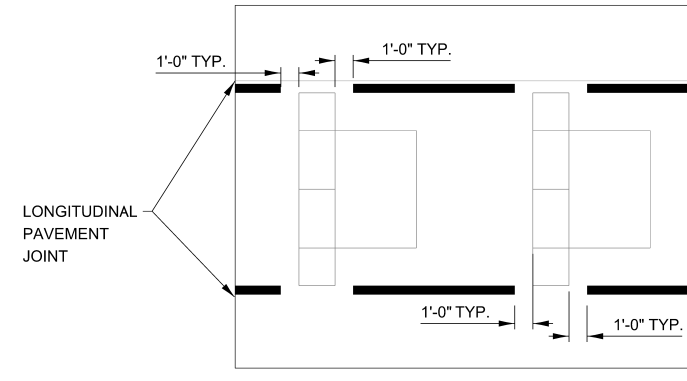
RAMP TOLL PLAZA PAVEMENT DETAILS



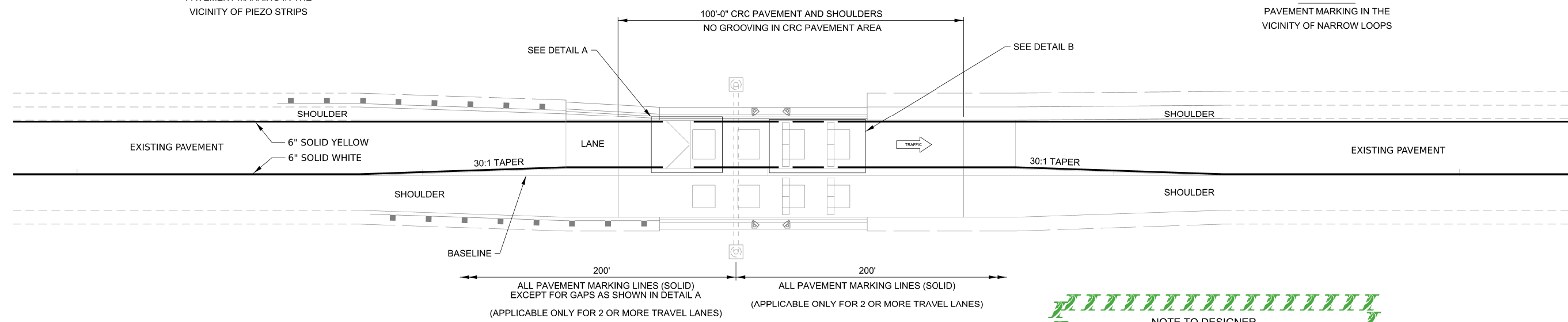
**PAVEMENT MARKING DETAILS
FOR NEW OR RECONSTRUCTION PROJECTS**
N.T.S.



DETAIL A
PAVEMENT MARKING IN THE
VICINITY OF PIEZO STRIPS



DETAIL B
PAVEMENT MARKING IN THE
VICINITY OF NARROW LOOPS



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

NOTE TO DESIGNER

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NOTE TO DESIGNER

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

NOTE TO DESIGNER

FOR LOOP AND CONDUIT LAYOUT DIMENSIONS, REFER TO ILLINOIS TOLLWAY BASE SHEET M-BUS-2518B.



**RAMP TOLL PLAZA
PAVEMENT MARKING DETAILS**

BASE SHEETS



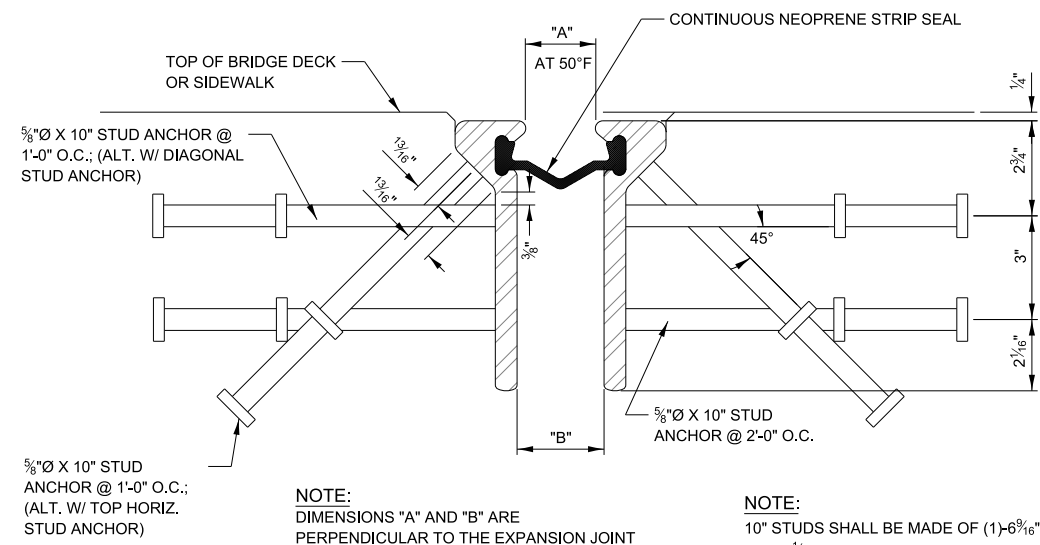
MARCH 2026

Illinois Tollway Base Sheet Revisions
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Section M	Base Sheet Drawings	
	Drawing	Modification Summary Effective: 03-01-2026
	Bridge (BRG)-Series 500	
	M-BRG-531	BUMP-OUT MOUNTED NOISE ABATEMENT WALL COVER SHEET
	Sheet 2	Detail 3 callout added and Bent Plate added in Detail 3 and 4. Note revised to include Detail 3 and 4.

 **New Sheet**

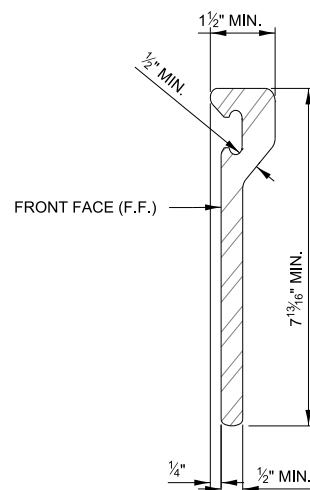
 **Retired Standard**



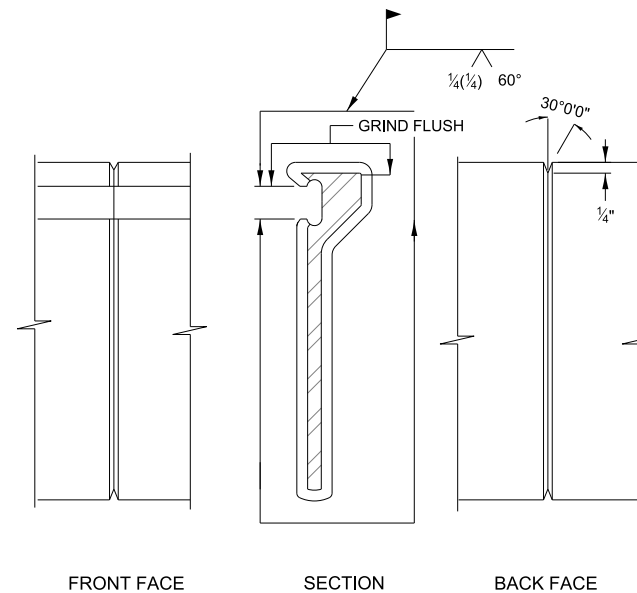
NOTE:
DIMENSIONS "A" AND "B" ARE
PERPENDICULAR TO THE EXPANSION JOINT

NOTE:
10" STUDS SHALL BE MADE OF (1)-6⁹/₁₆"
& (1)-4¹/₈" (LENGTH BEFORE WELDING)
PIGGY-BACKED.

SECTION THRU EXPANSION JOINT

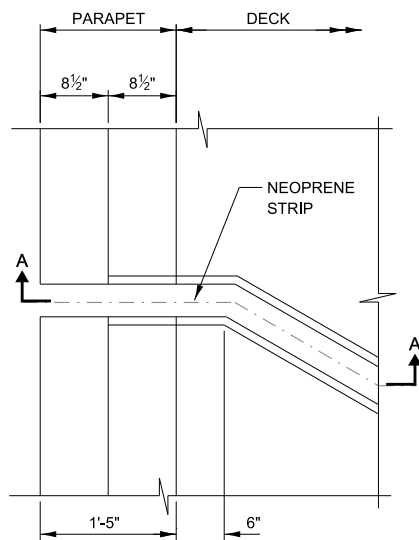


TYPICAL SECTION
THRU FRAME RAIL

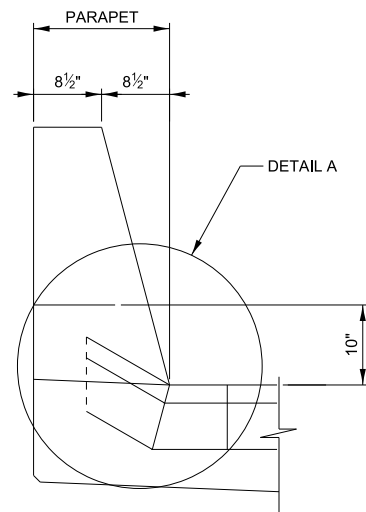


NOTE:
WELD ON FRONT SIDE OF FRAME MAY BE
OMITTED AT STAGE CONSTRUCTION LINES.

FRAME RAIL SPLICE DETAIL

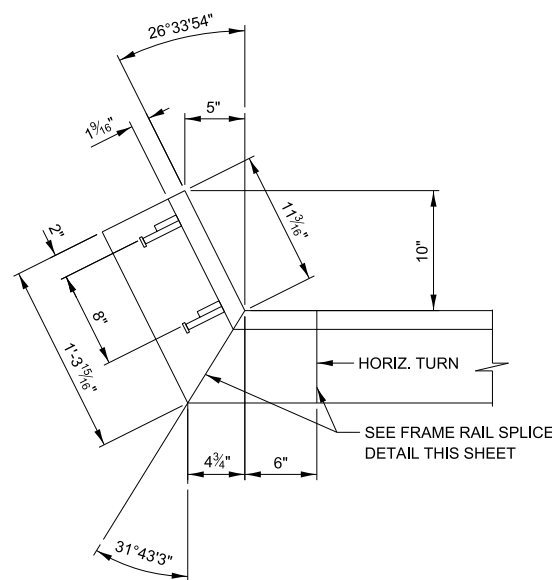


PLAN



SECTION A-A

UPTURN AT PARAPET



DETAIL A

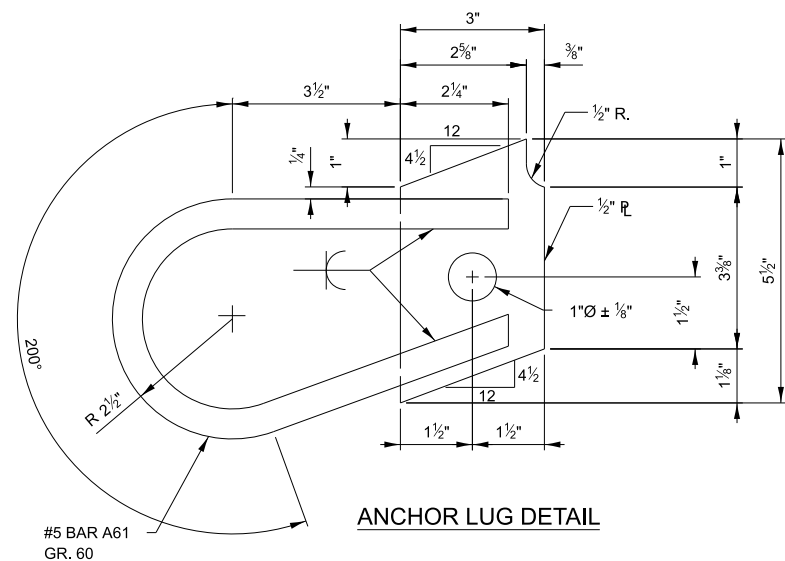
NOTES:

- EXPANSION JOINT SHALL FOLLOW ROADWAY GRADE & CROSS SLOPE. EXPANSION JOINT TO BE SET TO GRADE BY ATTACHING FRAME RAILS TO BACKWALL AND BEAMS.
- FRAME RAILS AND OTHER STEEL SHALL BE AASHTO M270 GRADE 36, (ASTM A36).
- STUD ANCHORS SHALL BE AASHTO M169 (ASTM A108).
- EXPANSION ANCHORS SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS, SECTION 1211.
- 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.
- AT SPLICES, A CONTINUOUS GROUND SMOOTH WELD SHALL BE PROVIDED EXCEPT ON SURFACES IN LOCKING CONTACT WITH SEAL WHICH SHALL HAVE NO BURRS.
- ALL STUD ANCHORS TO BE ELECTRIC ARC END WELDED WITH COMPLETE FUSION.
- AFTER FABRICATION IS COMPLETE FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M232 (ASTM A153).
- CORRESPONDING SECTIONS SHALL BE TEMPORARILY SHOP ASSEMBLED, CHECKED FOR FIT, AND MATCH MARKED WITH STENCIL AND BLACK PAINT FOR SHIPMENT.
- NEOPRENE SEAL SHALL BE CONTINUOUS. FACTORY VULCANIZED HORIZONTAL MITERS SHALL BE REQUIRED FOR ALL SKEWS.
- NEOPRENE SEAL SHALL BE INSTALLED CONTINUOUS, SPLICING OF SEAL IN THE FIELD IS NOT PERMITTED.
- NEOPRENE SEAL SHALL BE BONDED TO THE FRAME RAILS WITH AN ADHESIVE MEETING THE REQUIREMENTS OF ASTM D4070.
- 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).
- SUPPORT PLATES ON STEEL GIRDERS SHALL BE WELDED IN ACCORDANCE WITH ARTICLES 505.04 (q) & 505.08 (n) OF THE IDOT STANDARD SPECIFICATIONS.
- FURNISHING AND INSTALLING EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM SHALL BE INCLUDED IN THE COST OF BRIDGE EXPANSION JOINT SYSTEM.
- JOINT OPENINGS SHALL BE ADJUSTED IN ACCORDANCE WITH THE FIELD ENGINEER'S INSTRUCTIONS.
- 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.

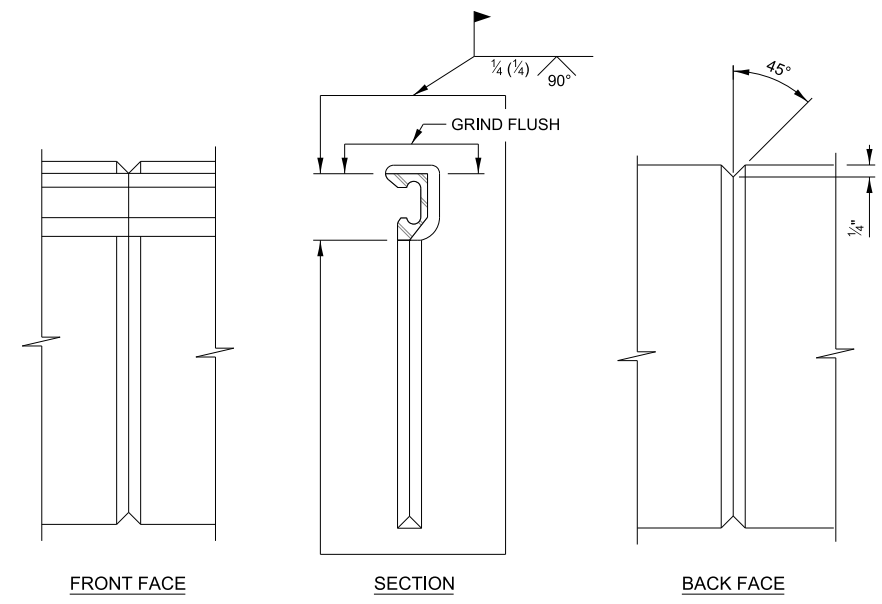
NOTE TO DESIGNER
FOR SKEWS > 30° DESIGNER SHALL SUPPLEMENT PARAPET
DETAILS SHOWN WITH SLIDING PLATE DETAILS ON THE
LATEST IDOT BASE SHEET EJ-SS

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

NOTE TO DESIGNER
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.



ANCHOR LUG DETAIL

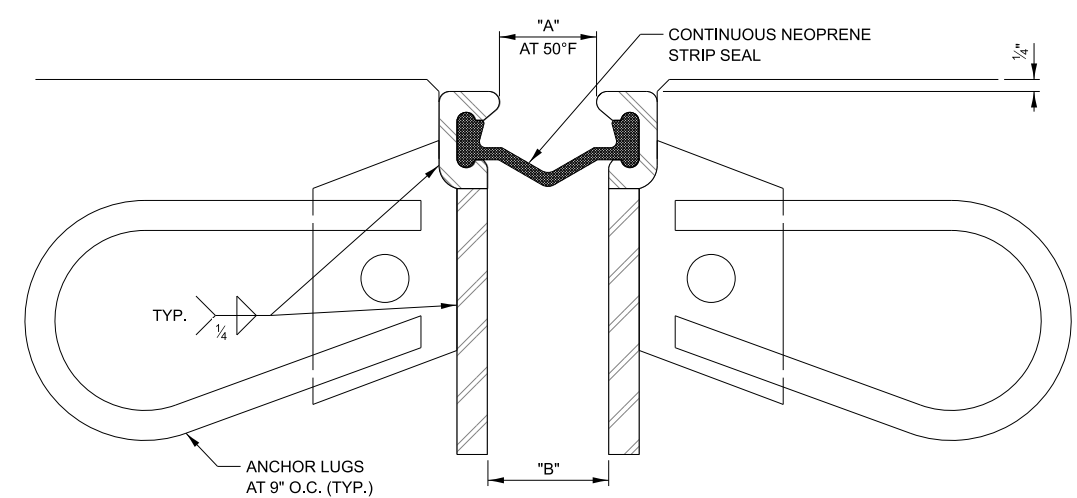


FRAME RAIL SPLICE DETAIL

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

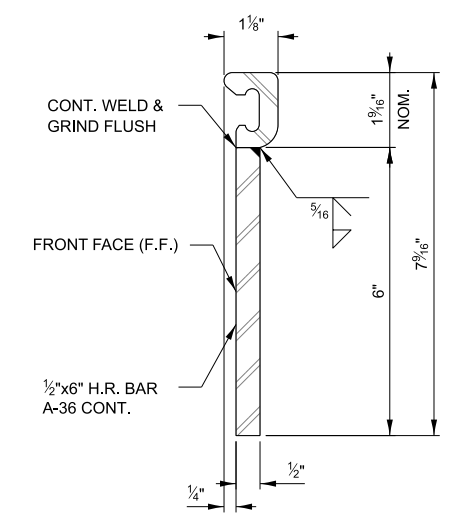
NOTES:

- EXPANSION JOINT SHALL FOLLOW ROADWAY GRADE & CROSS SLOPE. EXPANSION JOINT TO BE SET TO GRADE BY ATTACHING FRAME RAILS TO BACK WALL AND BEAMS.
- AT SPLICES, A CONTINUOUS GROUND SMOOTH WELD SHALL BE PROVIDED EXCEPT ON SURFACES IN LOCKING CONTACT WITH SEAL WHICH SHALL HAVE NO BURRS.
- FRAME RAILS AND OTHER STEEL SHALL BE AASHTO M270 GRADE 36, (ASTM A36).
- ANCHOR LUGS SHALL BE AASHTO M31 (ASTM A615).
- EXPANSION ANCHORS SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION, 1211.
- 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.
- AFTER FABRICATION IS COMPLETE FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123).
- CORRESPONDING SECTIONS SHALL BE TEMPORARILY SHOP ASSEMBLED, CHECKED FOR FIT, AND MATCH MARKED WITH STENCIL AND BLACK PAINT FOR SHIPMENT.
- NEOPRENE SEAL SHALL BE CONTINUOUS. FACTORY VULCANIZED HORIZONTAL MITERS SHALL BE REQUIRED FOR ALL SKEWS.
- NEOPRENE SEAL SHALL BE INSTALLED CONTINUOUS, SPLICING OF SEAL IN THE FIELD IS NOT PERMITTED.
- NEOPRENE SEAL SHALL BE BONDED TO THE FRAME RAILS WITH AN ADHESIVE MEETING THE REQUIREMENTS OF ASTM D4070.
- SUPPORT PLATES ON STEEL GIRDERS SHALL BE WELDED IN ACCORDANCE WITH ARTICLES 505.04 (q) & 505.08(n) OF THE IDOT STANDARD SPECIFICATIONS.
- FURNISHING AND INSTALLING EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM SHALL BE INCLUDED IN THE COST OF BRIDGE EXPANSION JOINT SYSTEM.
- JOINT OPENINGS SHALL BE ADJUSTED IN ACCORDANCE WITH THE FIELD ENGINEER'S INSTRUCTIONS.
- 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).
- 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.

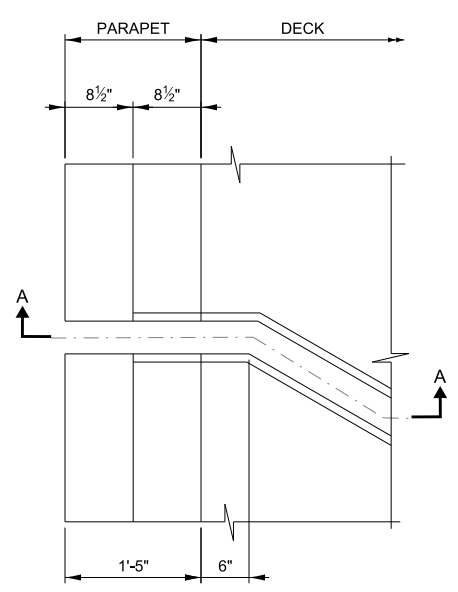


SECTION THRU EXPANSION JOINT

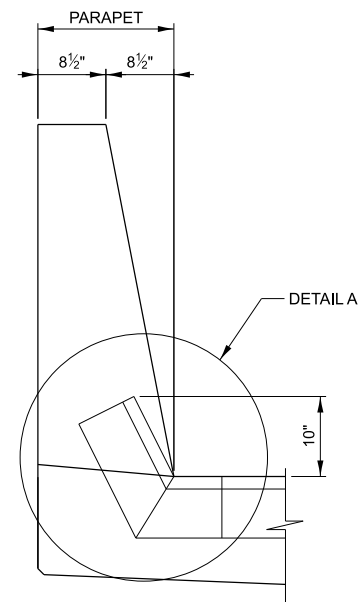
NOTE:
DIMENSIONS "A" AND "B" ARE PERPENDICULAR
TO THE EXPANSION JOINT



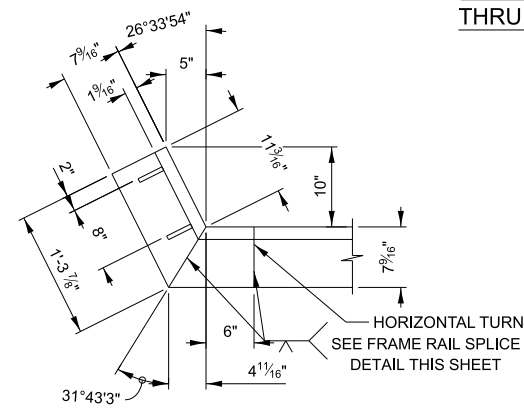
TYPICAL SECTION THRU FRAME RAIL



PLAN



SECTION A-A



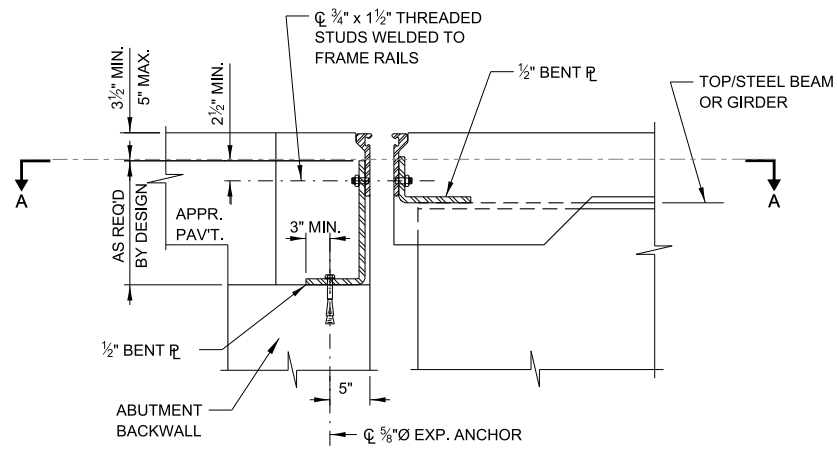
DETAIL A

NOTE TO DESIGNER
FOR SKEWS > 30°, DESIGNER SHALL SUPPLEMENT PARAPET DETAILS SHOWN WITH SLIDING PLATE DETAILS ON THE LATEST IDOT BASE SHEET E-J-SS
WORK THIS DRAWING WITH THE BASE SHEET FOR EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM.

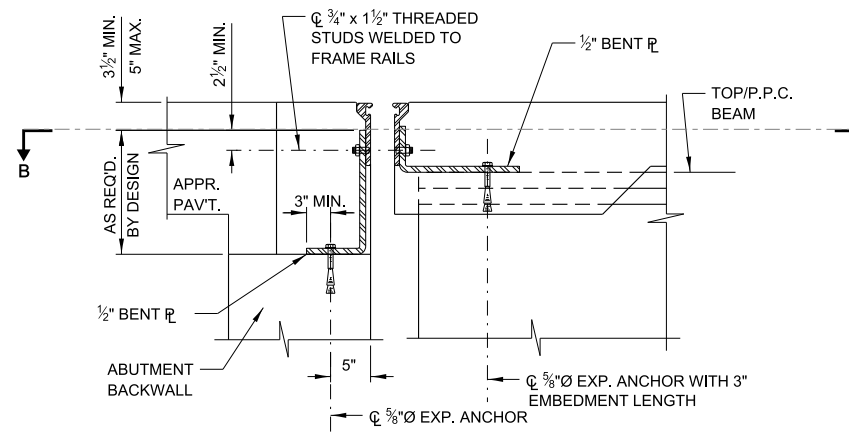
NOTE TO DESIGNER
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY 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.



EXPANSION JOINT FRAME RAIL AND SEAL ALTERNATE B

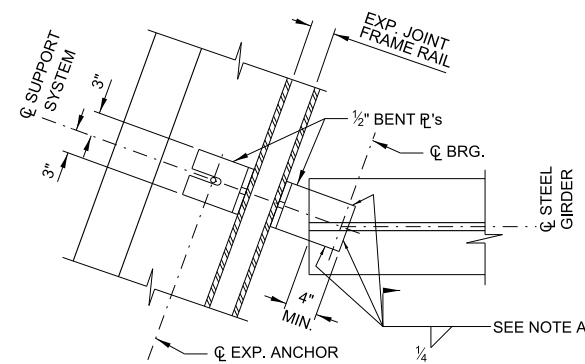


TYPICAL SECTION THRU EXP. JOINT AND SUPPORT SYSTEM AT STEEL GIRDERS

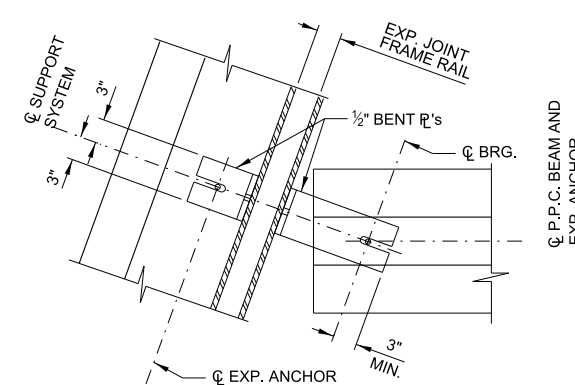


TYPICAL SECTION THRU EXP. JOINT AND SUPPORT SYSTEM AT P.P.C. BEAMS

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

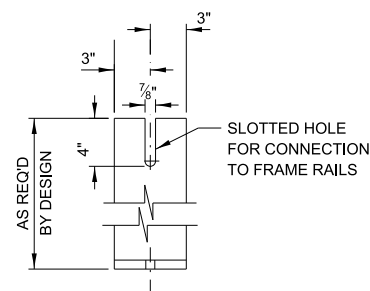


SECTION A-A

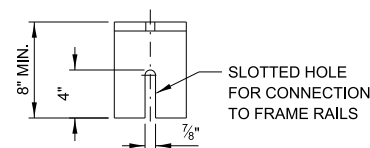


SECTION B-B

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.

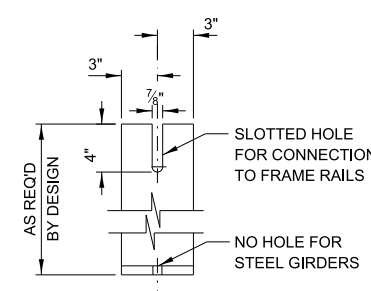


ELEVATION

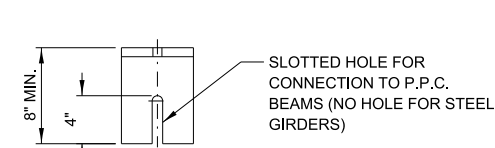


PLAN

BENT SUPPORT PLATE AT ABUTMENT



ELEVATION



PLAN

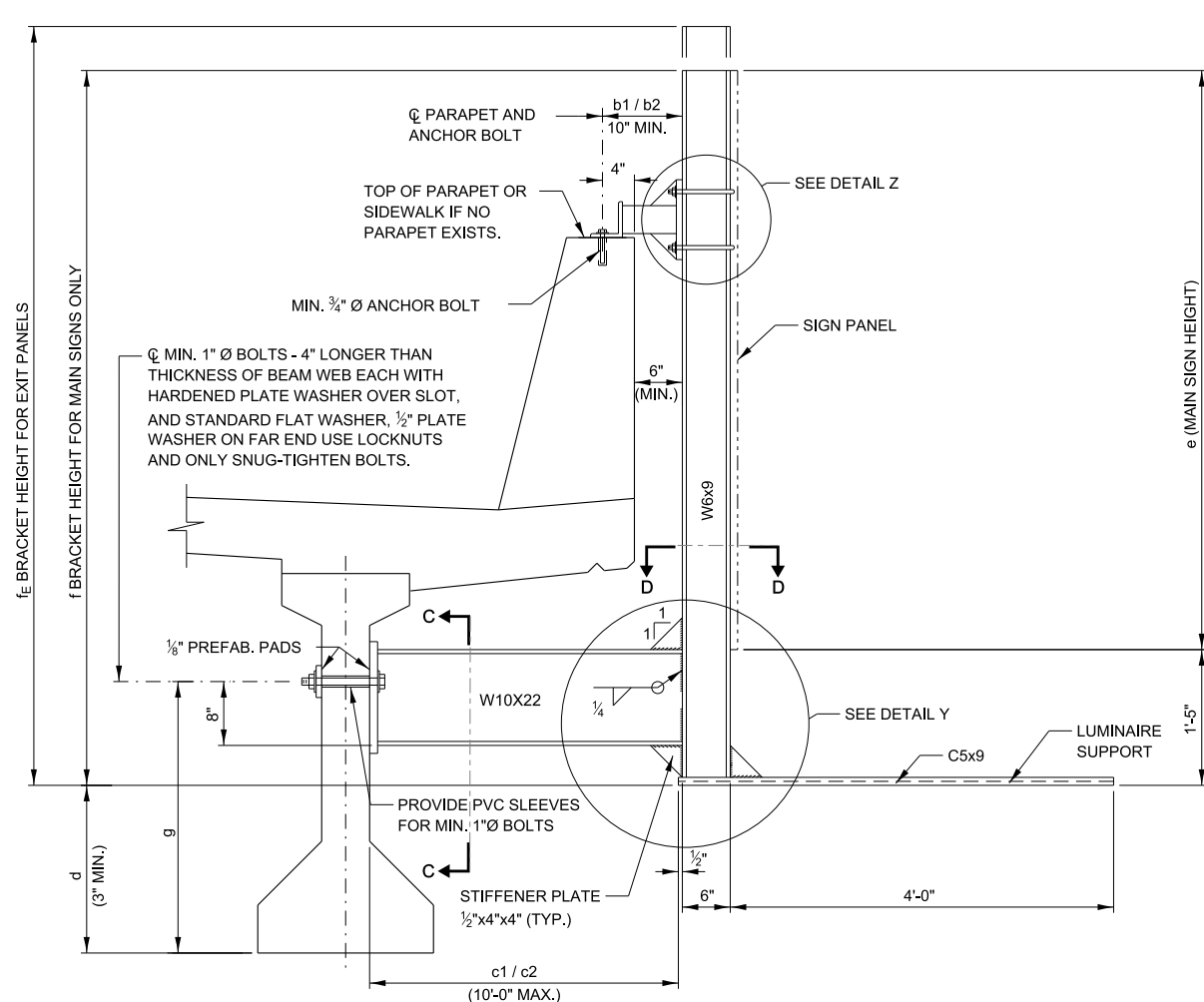
BENT SUPPORT PLATE AT BRIDGE DECK

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.

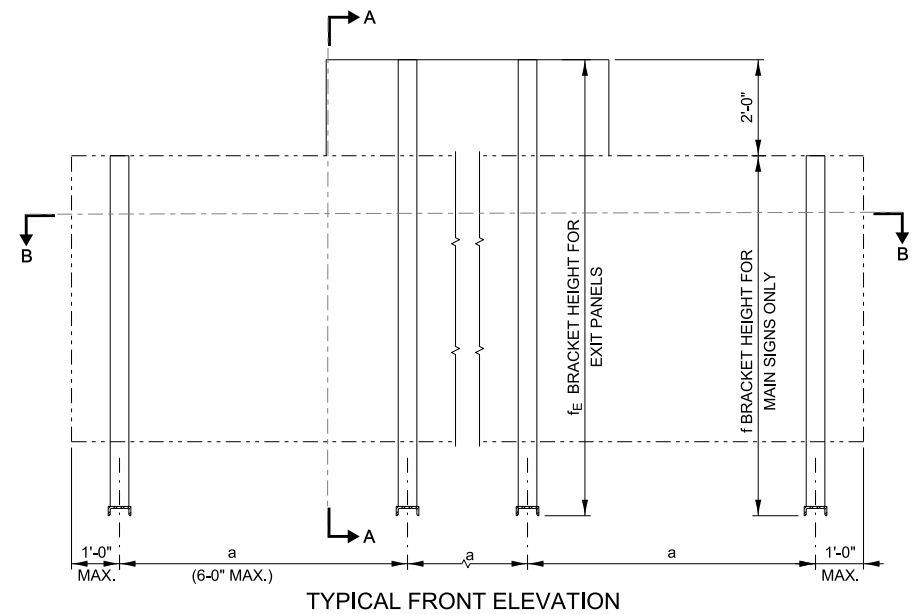
NOTE TO DESIGNER
WORK THIS DRAWING WITH THE BASE SHEETS M-BRG-500 AND M-BRG-501 FOR EITHER EXPANSION JOINT FRAME RAIL AND SEAL ALTERNATIVE A OR ALTERNATIVE B



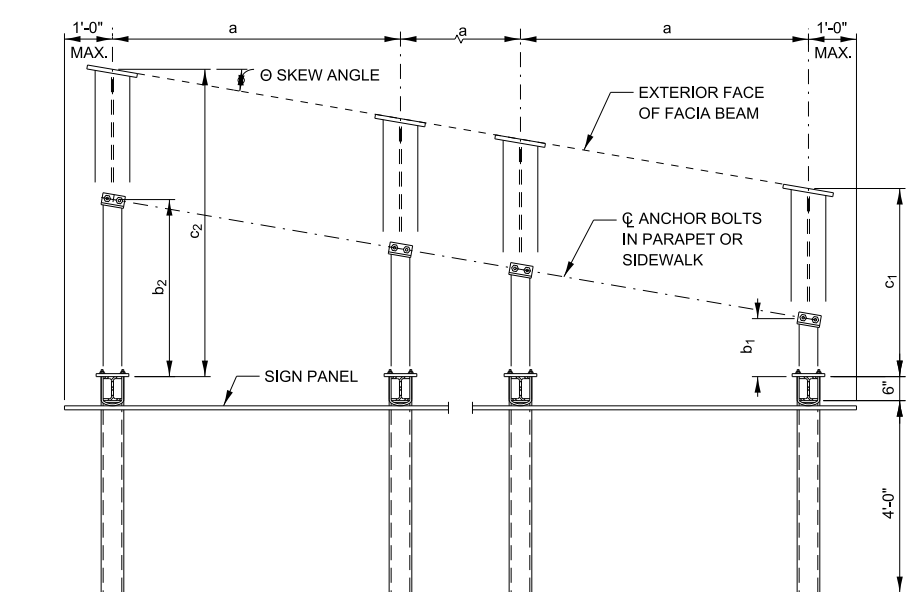
EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM



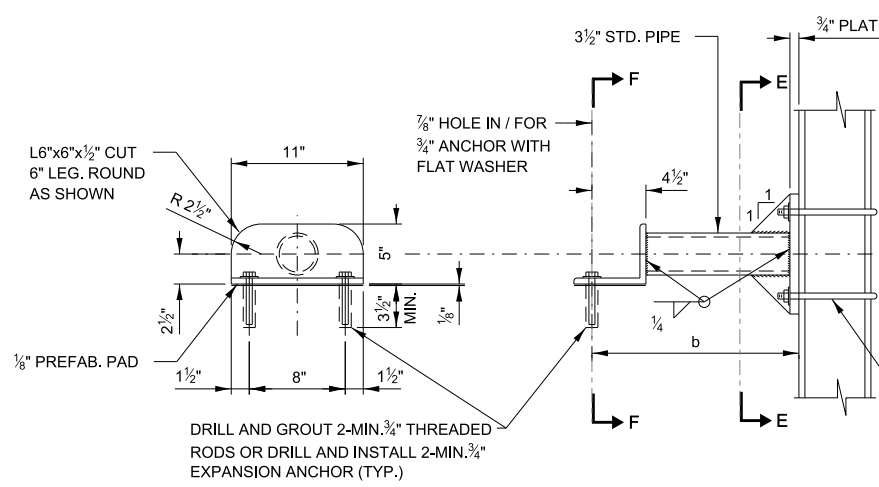
SECTION A-A



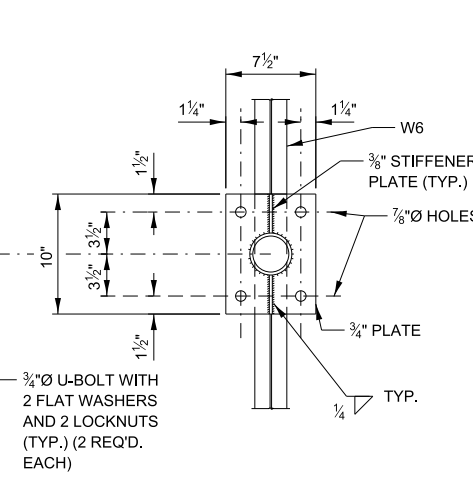
TYPICAL FRONT ELEVATION



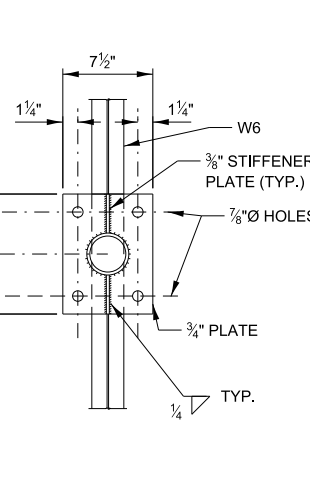
SECTION B-B



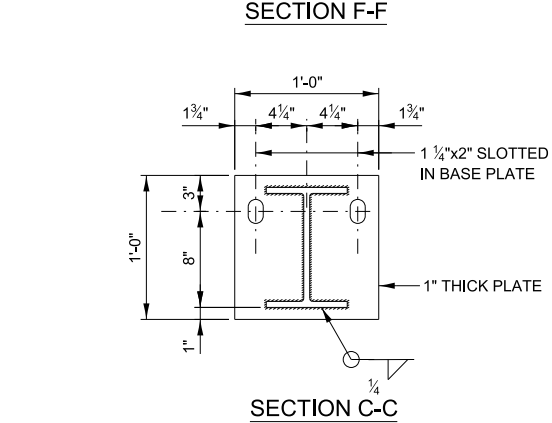
SECTION F-F



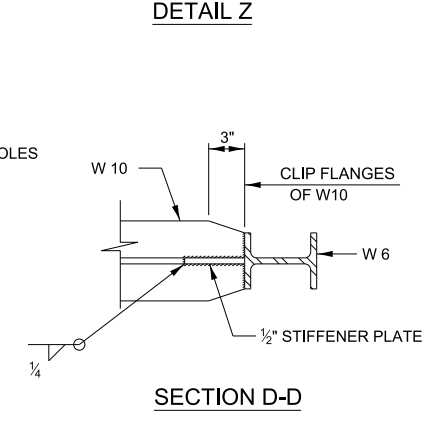
DETAIL Z



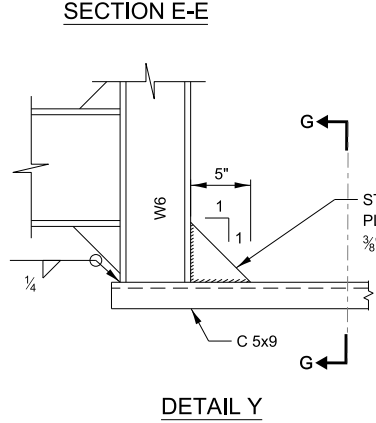
SECTION E-E



SECTION C-C



SECTION D-D



DETAIL Y

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.

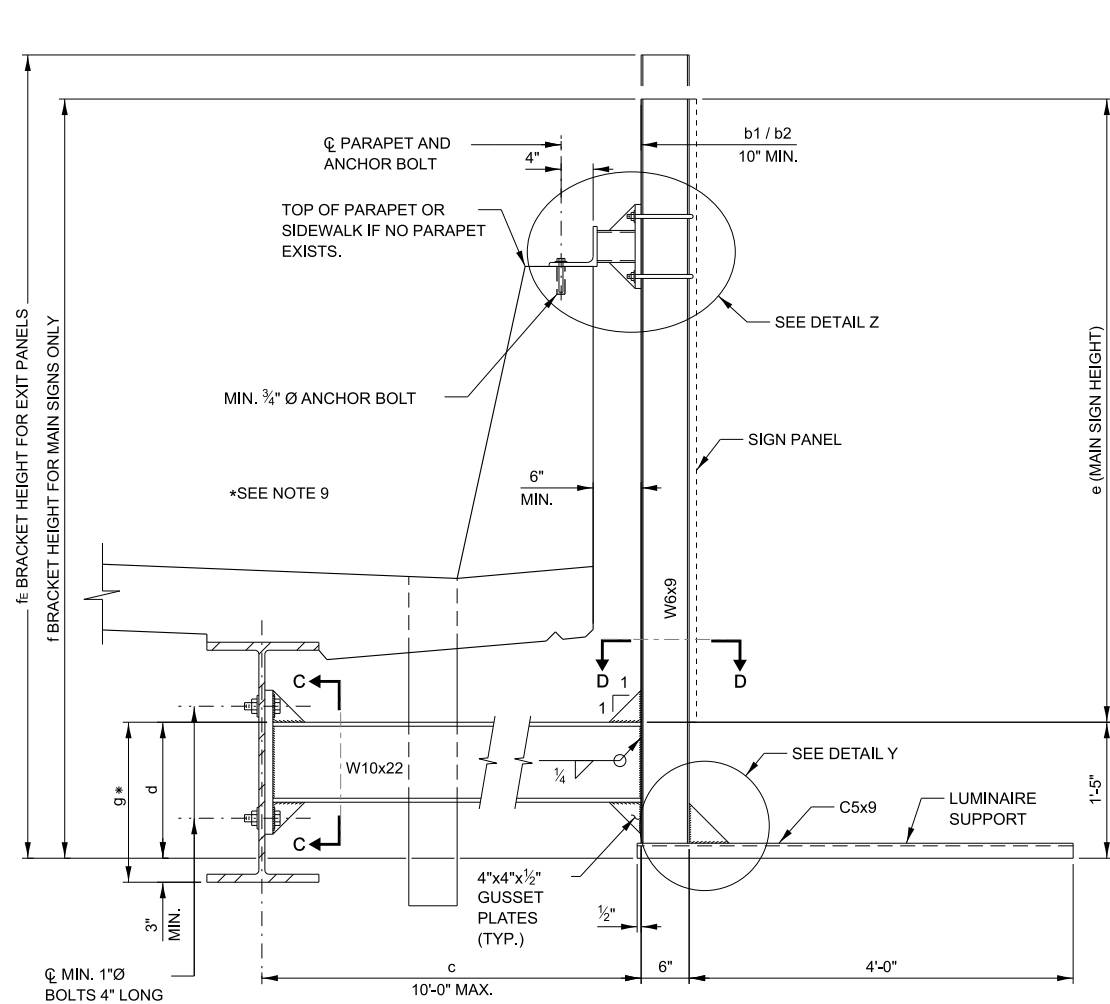
SIGN NO.	ROUTE	STATION	BRIDGE NAME	SIGN SKEW ANGLE (°)	NO. BR'K'TS f	NO. BR'K'TS f	a	b ₁	b ₂	c ₁	c ₂	d	e	f	f _e	g	MAIN SIGN SIZE	EXIT PANEL WIDTH

TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL

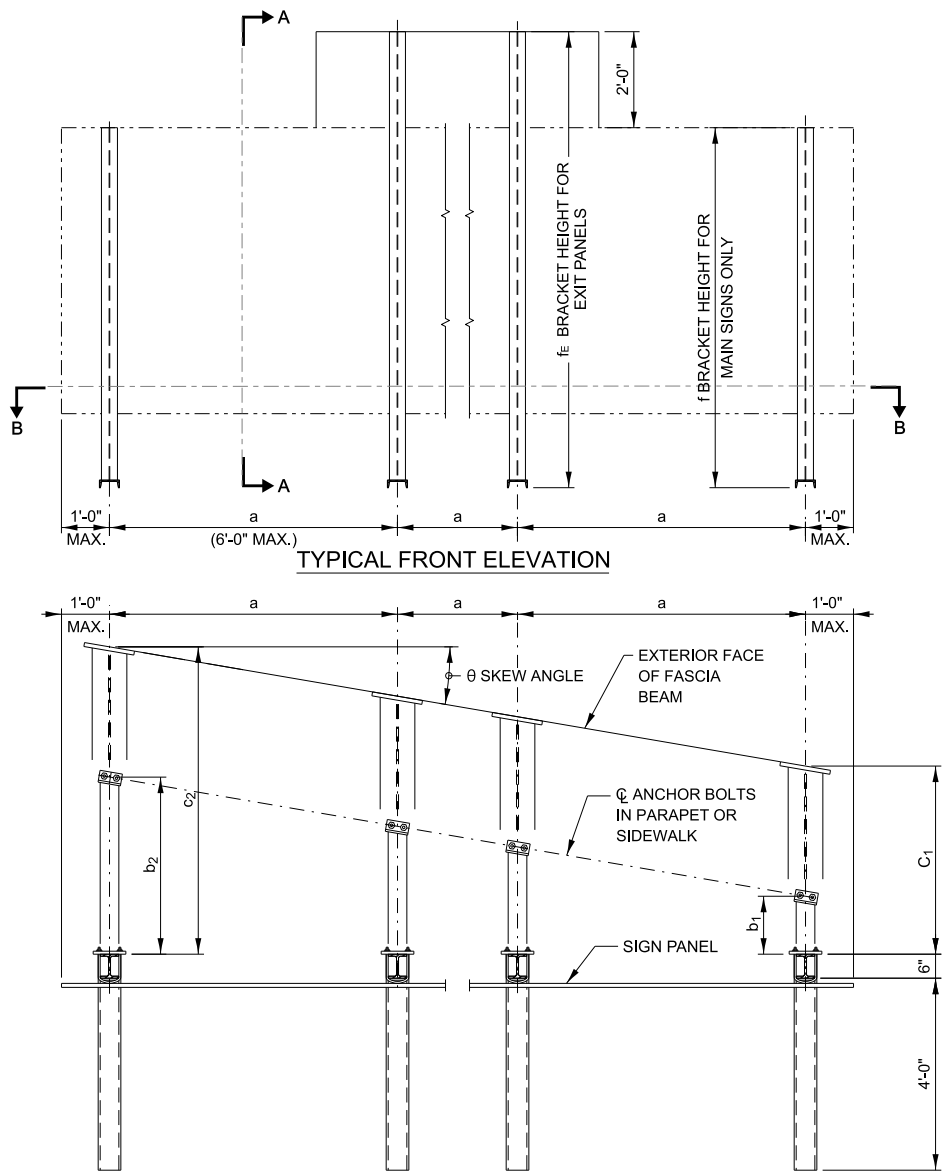
BRIDGE (CONCRETE) MOUNTED SIGN SUPPORT

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

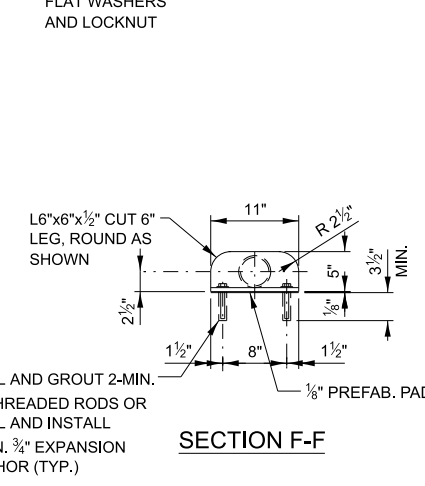
- NOTES:**
- ALL STRUCTURE STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 (AASHTO M-270).
 - ALL STRUCTURAL STEEL PIPE SHALL BE ASTM A53 TYPE E OR S GRADE B WITH A MINIMUM YIELD OF 35,000 PSI. IF ASTM A500 GRADE B PIPE IS SUBSTITUTED FOR A53 THEN THE OUTSIDE DIAMETER SHALL BE AS DETAILED AND THE WALL THICKNESS GREATER THAN OR EQUAL TO ASTM A53.
 - 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.
 - 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.
 - 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.
 - ALL FABRICATION SHALL BE COMPLETE AND READY FOR ASSEMBLY BEFORE GALVANIZING. NO PUNCHING, DRILLING, CUTTING, NOR WELDING SHALL BE PERMITTED AFTER GALVANIZING.
 - ALL STRUCTURAL STEEL PLATES, SHAPES AND PIPE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ASTM A325 AASHTO M111. PAINTING IS NOT PERMITTED.
 - 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.
 - THE COST OF FURNISHING AND INSTALLING THE BEARING PADS AS HEREIN SPECIFIED SHALL BE INCLUDED WITH THE COST OF BRIDGE (CONCRETE) MOUNTED SIGN SUPPORT.
 - PRE-FAB BEARING PADS: NEOPRENE BEARING PADS SHALL HAVE A SHORE DUROMETER SURFACE HARDNESS OF 65.
 - 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.
 - SIGN STRUCTURE WIRING SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS, SECTION 823.
 - 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.



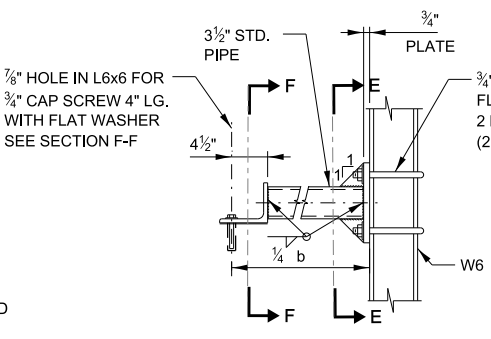
SECTION A-A



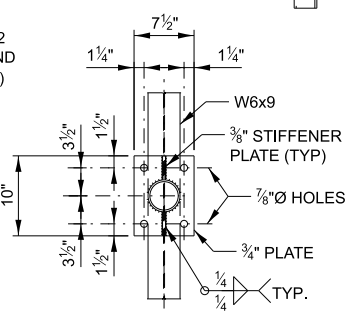
SECTION B-B



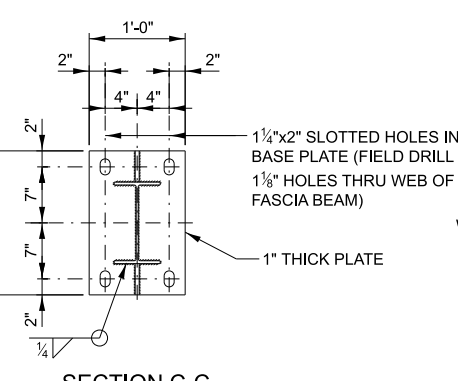
SECTION F-F



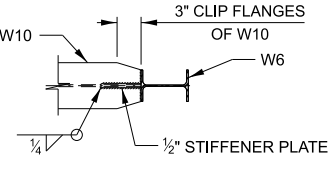
DETAIL Z



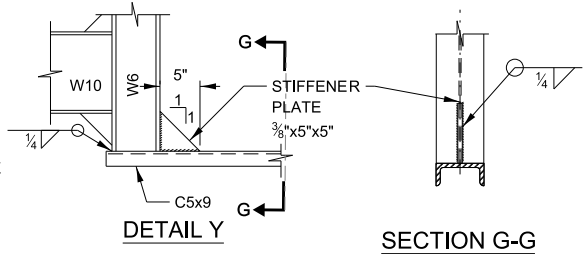
SECTION E-E



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

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:

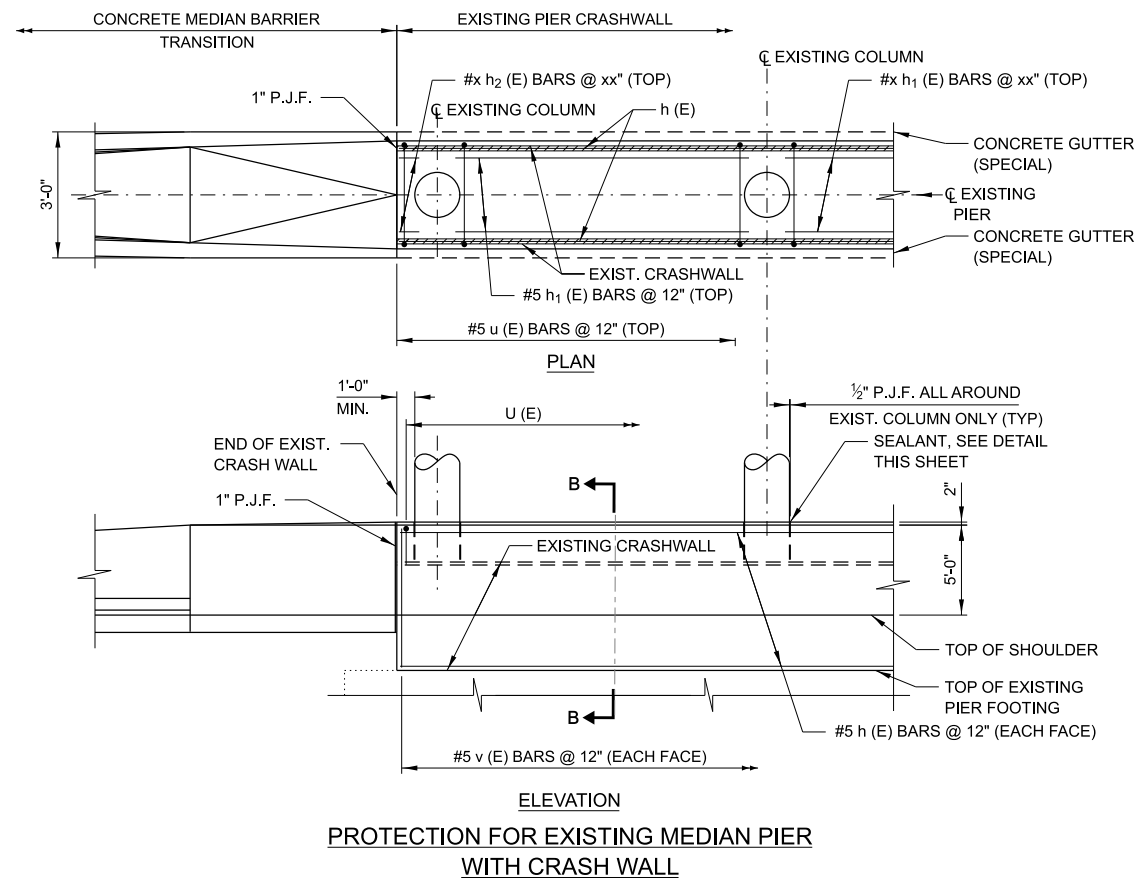
- ALL STRUCTURE STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 (AASHTO M-270).
- ALL STRUCTURAL STEEL PIPE SHALL BE ASTM A53 TYPE E OR S GRADE B WITH A MINIMUM YIELD OF 35,000 PSI. IF ASTM A500 GRADE B PIPE IS SUBSTITUTED FOR A53 THEN THE OUTSIDE DIAMETER SHALL BE AS DETAILED AND THE WALL THICKNESS GREATER THAN OR EQUAL TO ASTM A53.
- 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.
- 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.
- 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.
- ALL FABRICATION SHALL BE COMPLETE AND READY FOR ASSEMBLY BEFORE GALVANIZING. NO PUNCHING, DRILLING, CUTTING, NOR WELDING SHALL BE PERMITTED AFTER GALVANIZING.
- ALL STRUCTURAL STEEL PLATES, SHAPES AND PIPE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ASTM A325 AASHTO M111. PAINTING IS NOT PERMITTED.
- 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.
- 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 (1/4) THE DEPTH OF THE BEAM. THE ENGINEER MAY ADJUST DIMENSION "g" TO MEET THE ABOVE CONDITION AND TO KEEP THE SIGN LEVEL.
- THE COST OF FURNISHING AND INSTALLING THE BEARING PADS AS HEREIN SPECIFIED SHALL BE INCLUDED WITH THE COST OF BRIDGE (STEEL) MOUNTED SIGN SUPPORT.
- PRE-FAB BEARING PADS: NEOPRENE BEARING PADS SHALL HAVE A SHORE DUROMETER SURFACE HARDNESS OF 65.
- 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.
- SIGN STRUCTURE WIRING SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS, SECTION 823.
- 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

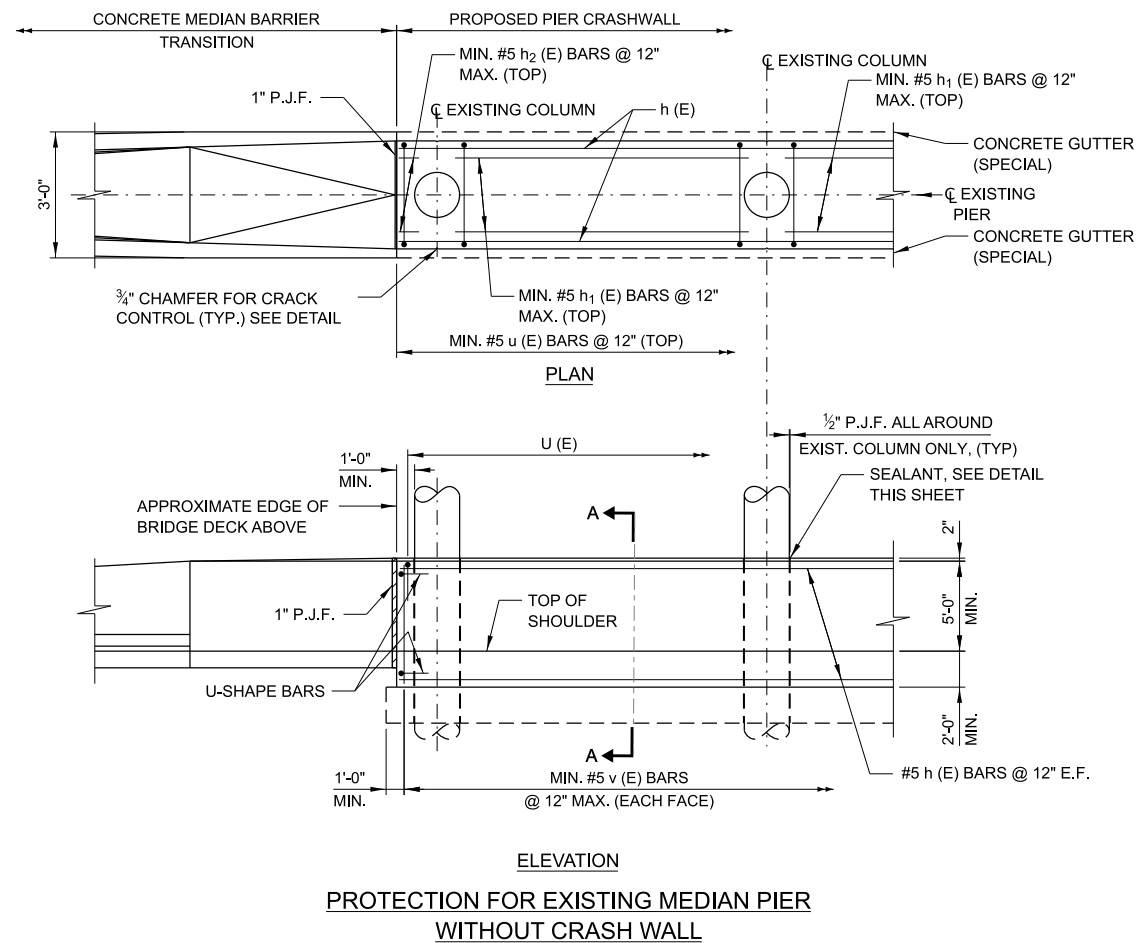
TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL
XXXXXXX			

BRIDGE (STEEL) MOUNTED SIGN SUPPORT

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

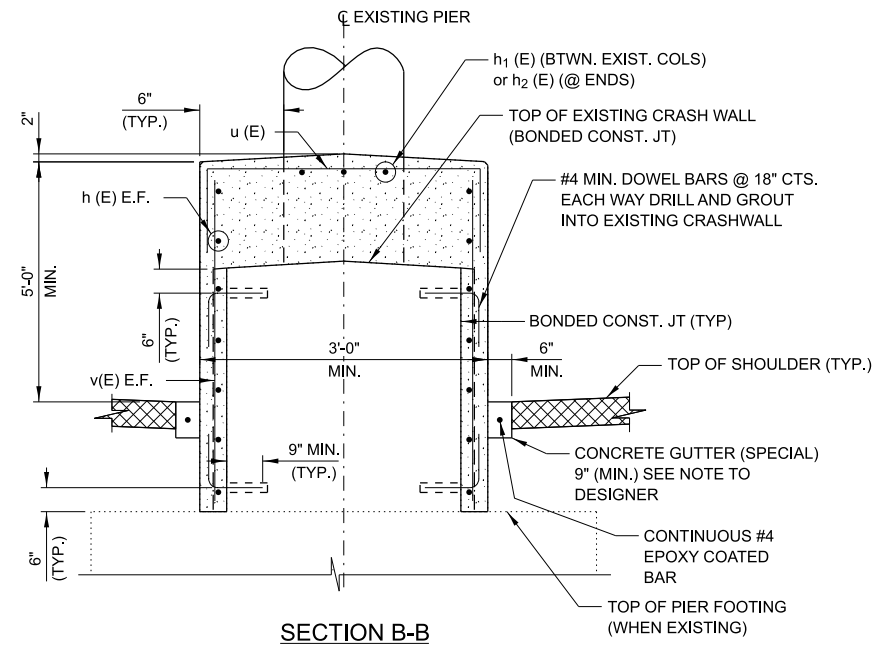


PROTECTION FOR EXISTING MEDIAN PIER WITH CRASH WALL



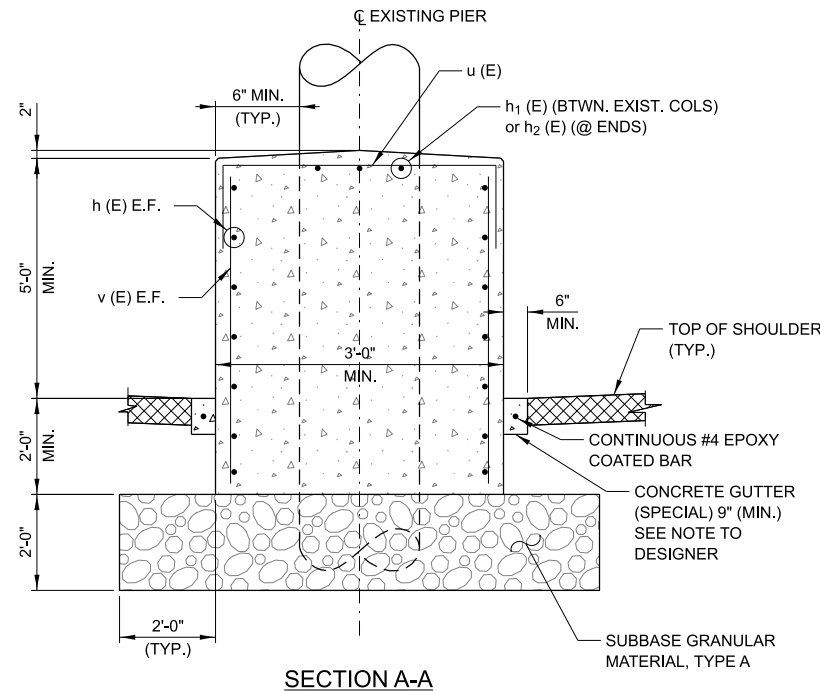
PROTECTION FOR EXISTING MEDIAN PIER WITHOUT CRASH WALL

NOTE TO DESIGNER
 TOP REINFORCEMENT SHALL MATCH EXISTING REINFORCEMENT
 DOWEL SHALL BE ADEQUATELY DESIGNED FOR LOAD TRANSFER



SECTION B-B

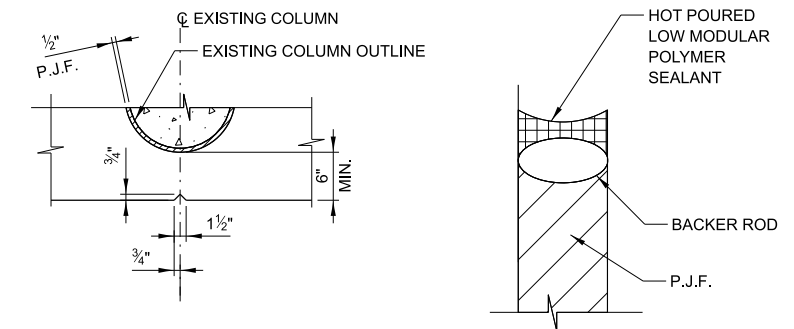
NOTE TO DESIGNER
 LAP LENGTH OF h (E) AND v (E) BARS SHALL BE DESIGNED CONSIDERING THE VARIATION IN THE HEIGHT OF THE CRASHWALL



SECTION A-A

NOTE TO DESIGNER
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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

NOTES:

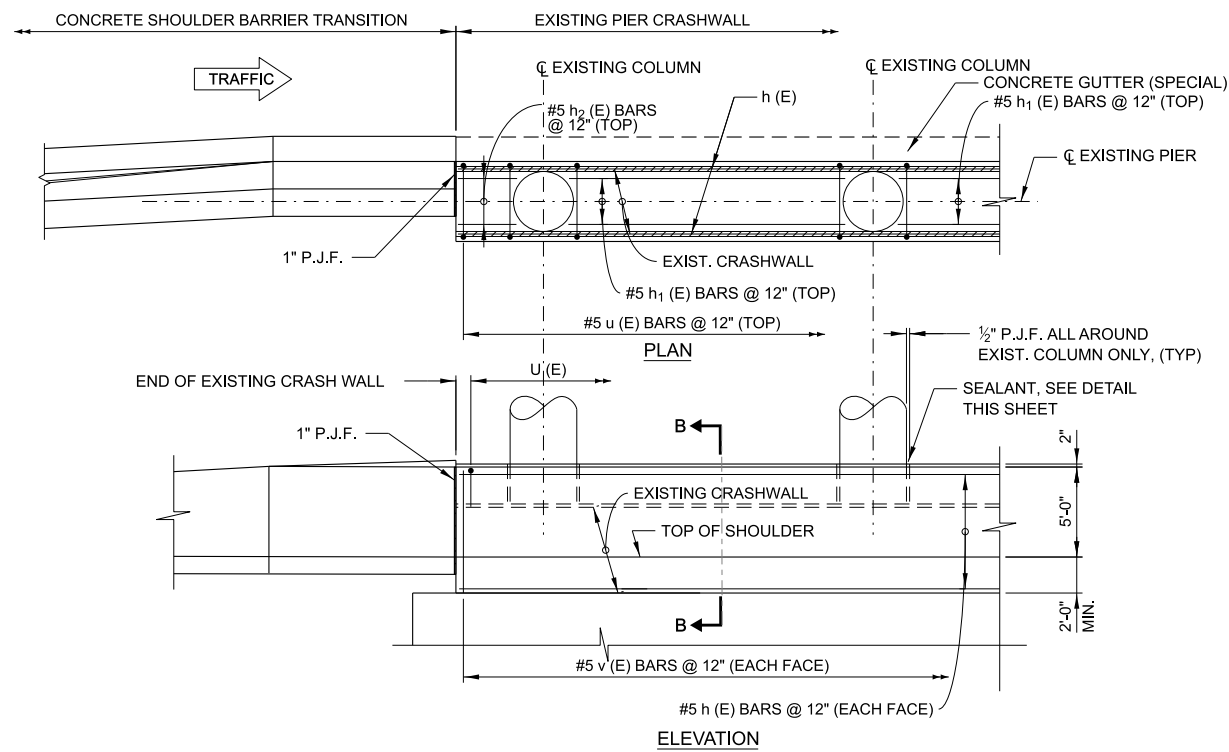
1. REMOVE EXISTING CONCRETE CRASHWALL BACK TO FACE OF COLUMNS PRIOR TO PLACING CONCRETE AROUND EXISTING CRASHWALL AND COLUMNS. SURFACES TO RECEIVE NEW CONCRETE SHALL BE BLAST CLEANED. COST OF CLEANING SHALL BE INCLUDED IN THE COST OF CONCRETE REMOVAL.
2. CONCRETE MEDIAN BARRIER TRANSITION TAPER LENGTHS, 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 3/4"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:

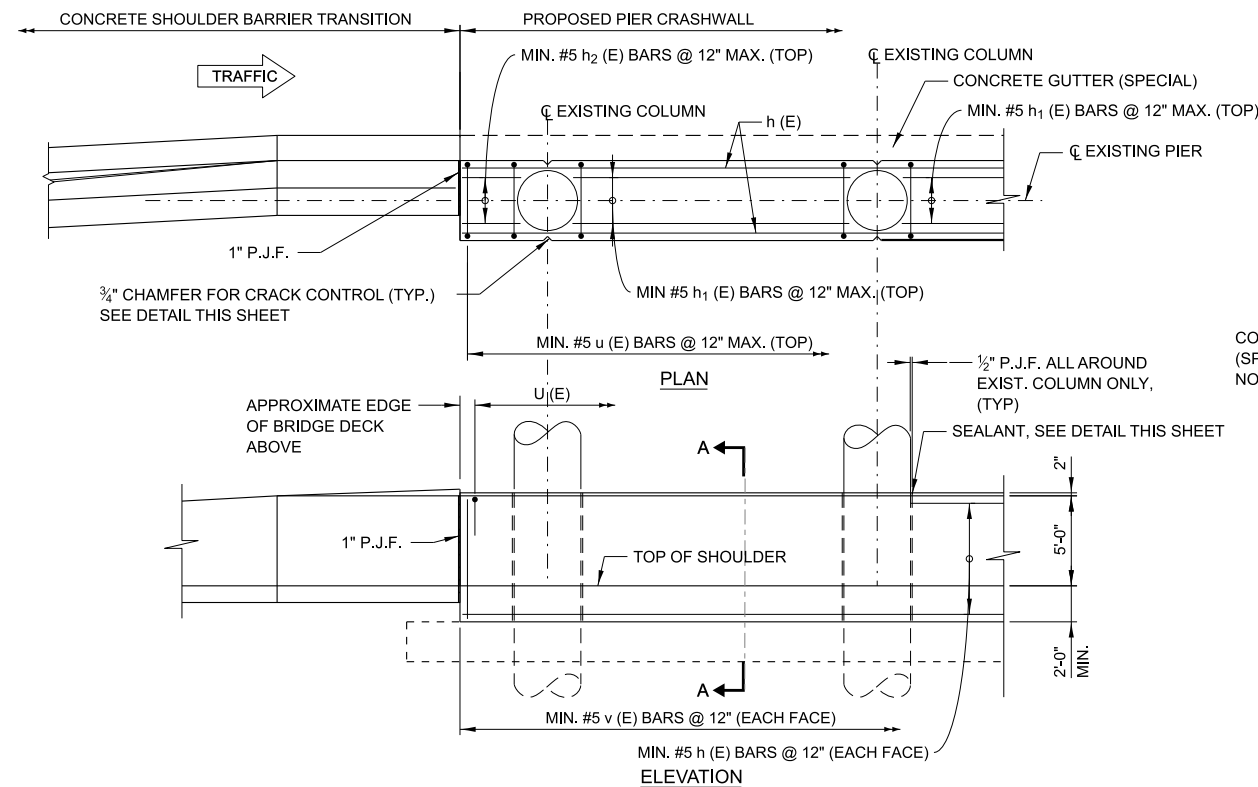
- P.J.F.
- NEW CONCRETE
- BITUMINOUS SHOULDER
- SUBBASE

**CRASH WALL MODIFICATIONS
 MEDIAN PIERS**

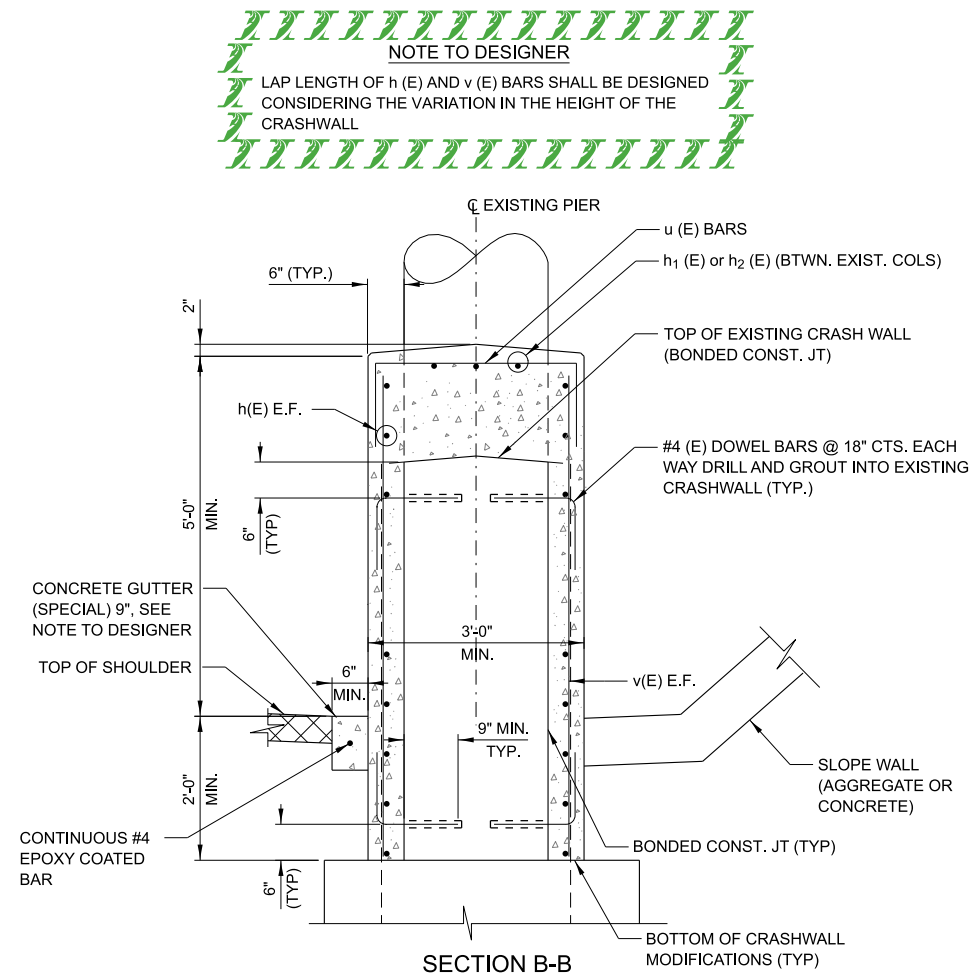
VERSION: 2022-03 BASE SHEET: M-BRG-507 SHEET: 1 OF 1



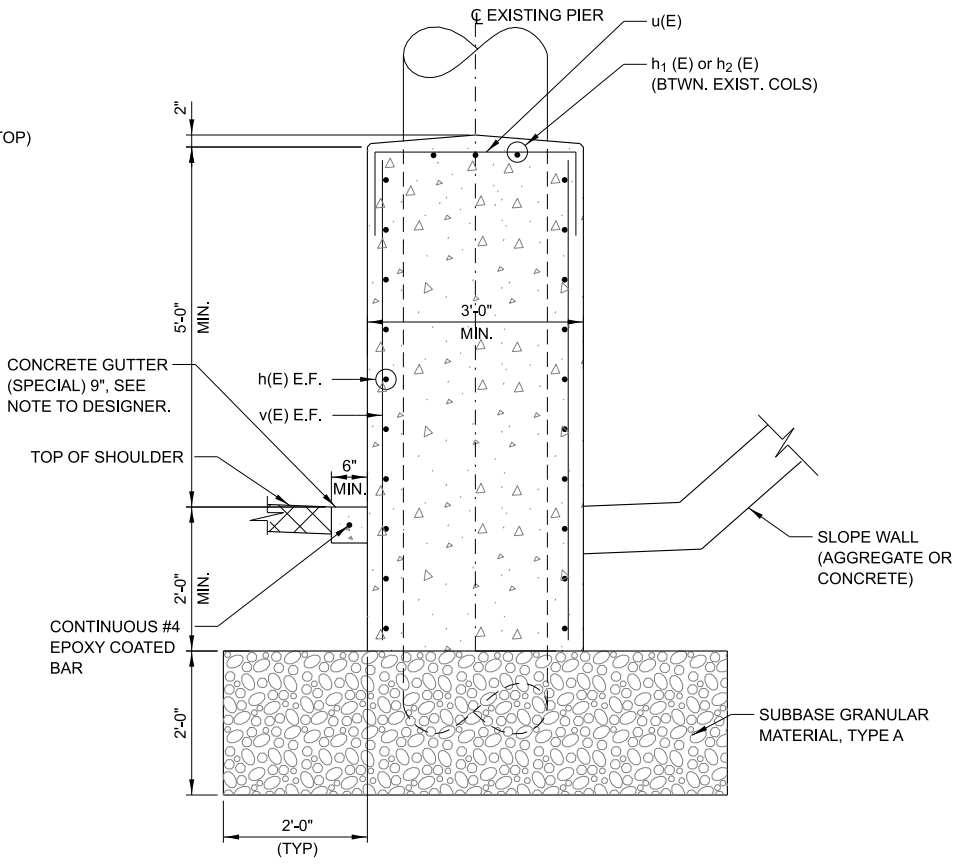
PROTECTION FOR EXISTING SHOULDER PIER WITH CRASH WALL



PROTECTION FOR EXISTING SHOULDER PIER WITHOUT CRASH WALL



SECTION B-B

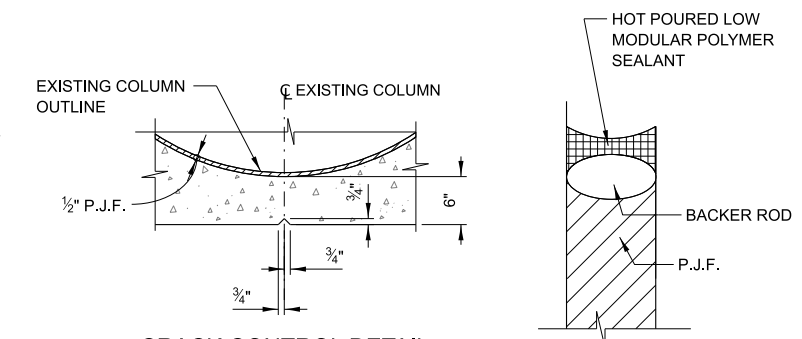


SECTION A-A

NOTE TO DESIGNER
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NOTE TO DESIGNER
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CRACK CONTROL DETAIL
 REINFORCEMENT BARS OMITTED FOR CLARITY

SEALANT DETAIL

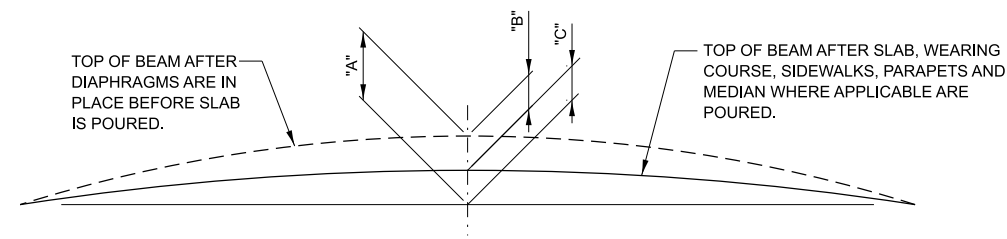
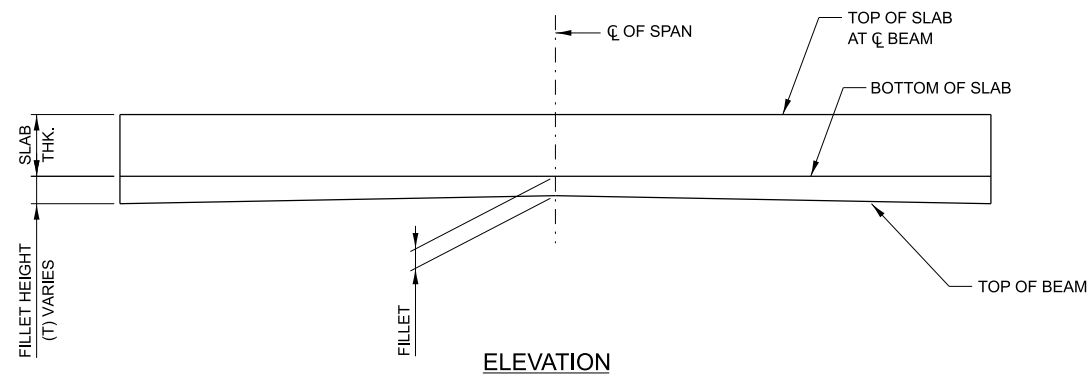
- NOTES**
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 - CONCRETE SHOULDER BARRIER TRANSITION TAPER LENGTHS, PAY LIMITS AND MEASUREMENT, AND BASIS OF PAYMENT ALL IN ACCORDANCE WITH THE ILLINOIS TOLLWAY STANDARD DRAWING C7, C13, C14 AND THE SPECIAL PROVISIONS.
 - THE CLEAR COVER FOR REINFORCEMENT BARS TO THE SURFACE OF CONCRETE SHALL BE 2" UNLESS OTHERWISE SHOWN.
 - REINFORCEMENT BARS DESIGNATED "E" SHALL BE EPOXY COATED.
 - EXPOSED CONCRETE EDGES SHALL HAVE 3/4"x45" CHAMFERS. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.
 - CONCRETE SEALANT SHALL BE APPLIED TO THE EXPOSED SURFACES OF ALL NEW AND/OR MODIFIED PIER CRASH WALLS.
 - E.F. DENOTES EACH FACE

LEGEND:

	P.J.F.
	NEW CONCRETE
	BITUMINOUS SHOULDER
	SUBBASE

CRASH WALL MODIFICATIONS SHOULDER PIERS

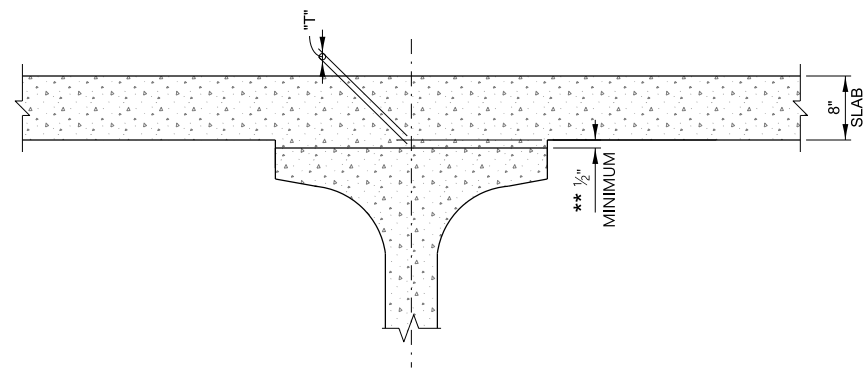
VERSION: 2021-03 BASE SHEET: M-BRG-508 SHEET: 1 OF 1



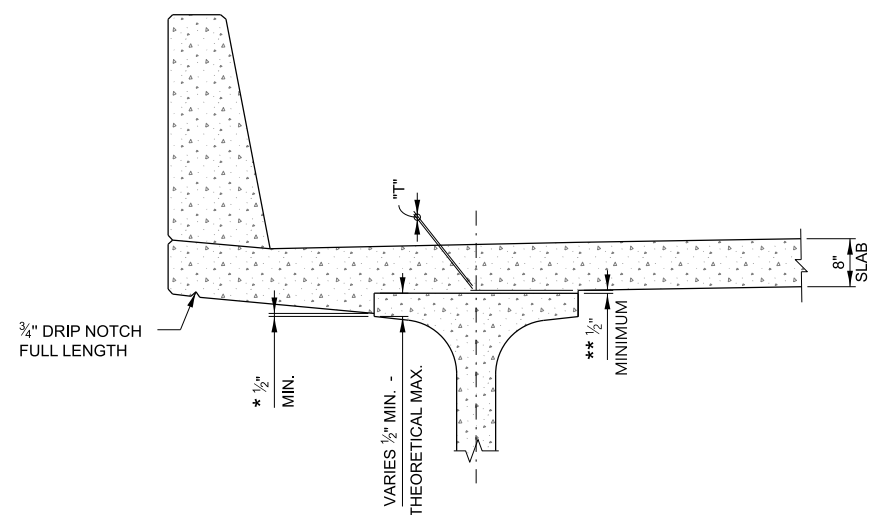
CAMBER & DEFLECTION DIAGRAM

- * "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.



**ALL GIRDER SIZES
INTERIOR GIRDER DETAIL**

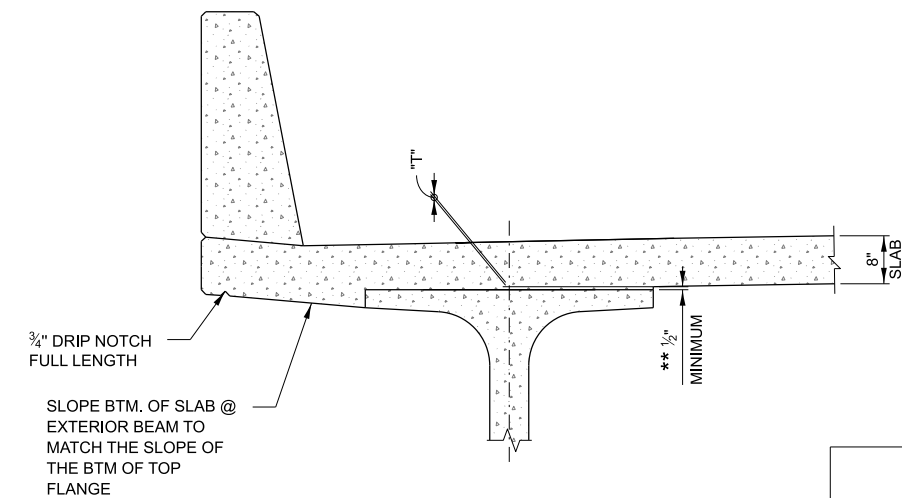


**45" OR LESS PPC BULB-T EXTERIOR BEAMS
DECK HAUNCH DETAIL**
* VARIABLE, NOT LESS THAN 1/2"

IF 1/2" 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 CL 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**

NOTE TO DESIGNER

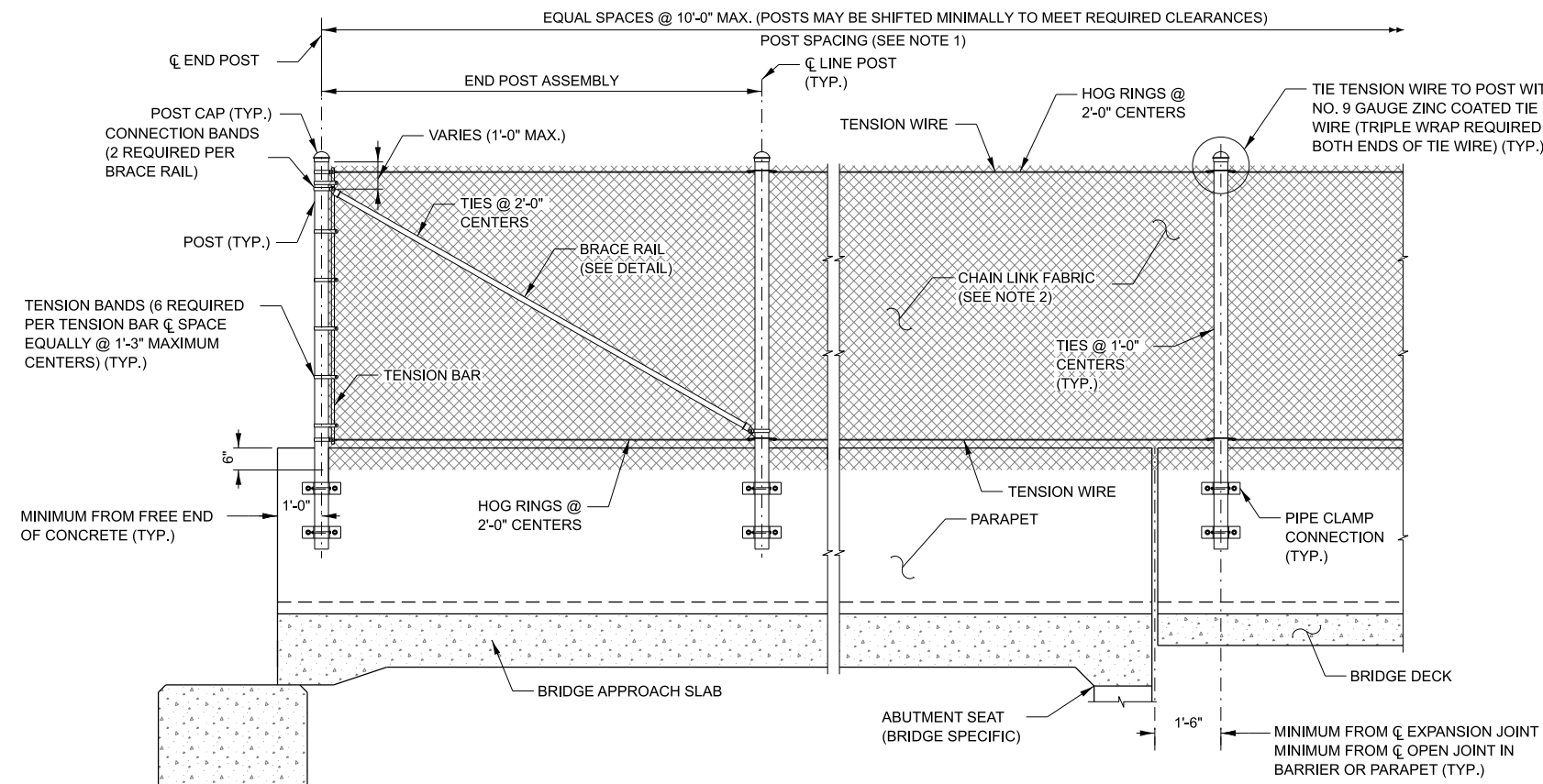
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NOTE TO DESIGNER

1. PRESENT PRACTICE IS TO USE A MINIMUM "FILLET" (AT EDGE OF BEAM FLANGE) OF 1/2" FOR DESIGN CALCULATIONS. THE MINIMUM FILLET (AT EDGE OF BEAM FLANGE) ALLOWED IN CONSTRUCTION IS 1/2" AT MID-SPAN AND 2" AT CENTERLINE OF BEARING.
- ** 2. IF 1/2" MINIMUM FILLET HEIGHT AT EDGE OF BEAM AT MID-SPAN CANNOT BE MAINTAINED DURING CONSTRUCTION, THE GRADE LINE MAY BE RAISED BY UP TO 1/2" 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 1/3 AND 2/3 POINTS.

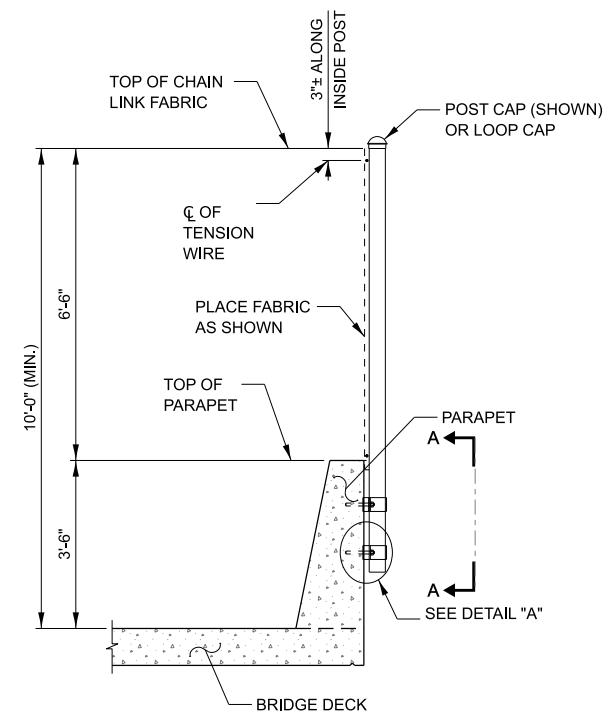


PPC BEAM DETAILS



ELEVATION OF OUTSIDE FACE OF BARRIER PARAPET AND FENCE

*FENCING SHALL NOT ANCHOR TO THE TOP OF PARAPETS

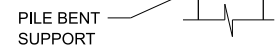


TYPICAL SECTION ON PARAPET OR BARRIER

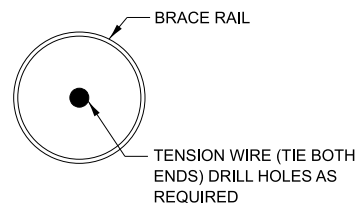
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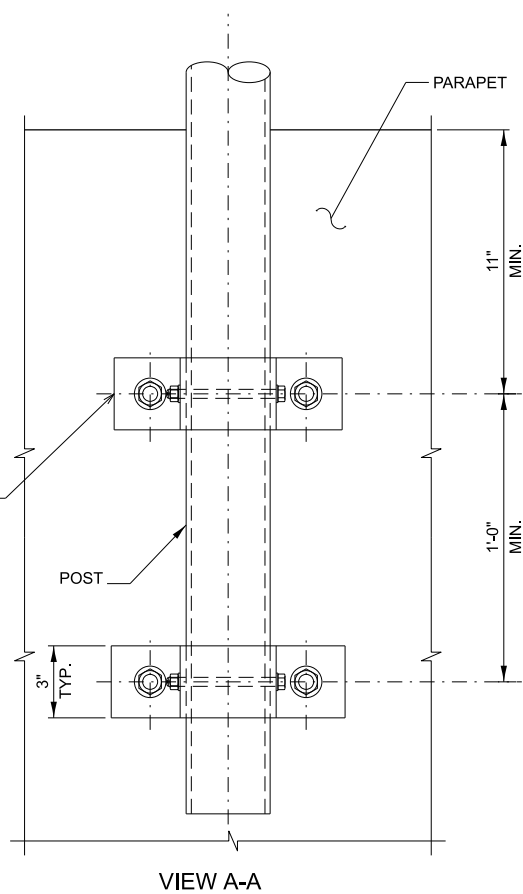
- DESIGNER NOTES:**
- PULL POST ASSEMBLY IS REQUIRED AT MAXIMUM INTERVALS OF 200'. SEE SHEET 2 OF THIS SERIES.
 - INSTALL POSTS PLUMB (WITHIN A TOLERANCE OF $\pm 1\frac{1}{2}$ ". USE SHIM PLATES AS REQUIRED TO ACHIEVE PLUMB. INSTALL CHAIN LINK FENCE IN ACCORDANCE WITH ASTM F5678 AS APPLICABLE.
 - FABRIC 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.)
 - RAILROAD BRIDGE FENCE SHALL BE DETAILED ON SUPERSTRUCTURE DRAWING.
 - COORDINATE LIMITS OF RAILROAD BRIDGE FENCE WITH SPECIFIC RAILROAD REQUIREMENTS.
 - VERIFY LIMITS OF THE FENCING REQUIREMENTS ON THE BRIDGE APPROACH PER THE ILLINOIS TOLLWAY STRUCTURAL DESIGN MANUAL ARTICLE 23.5.2.



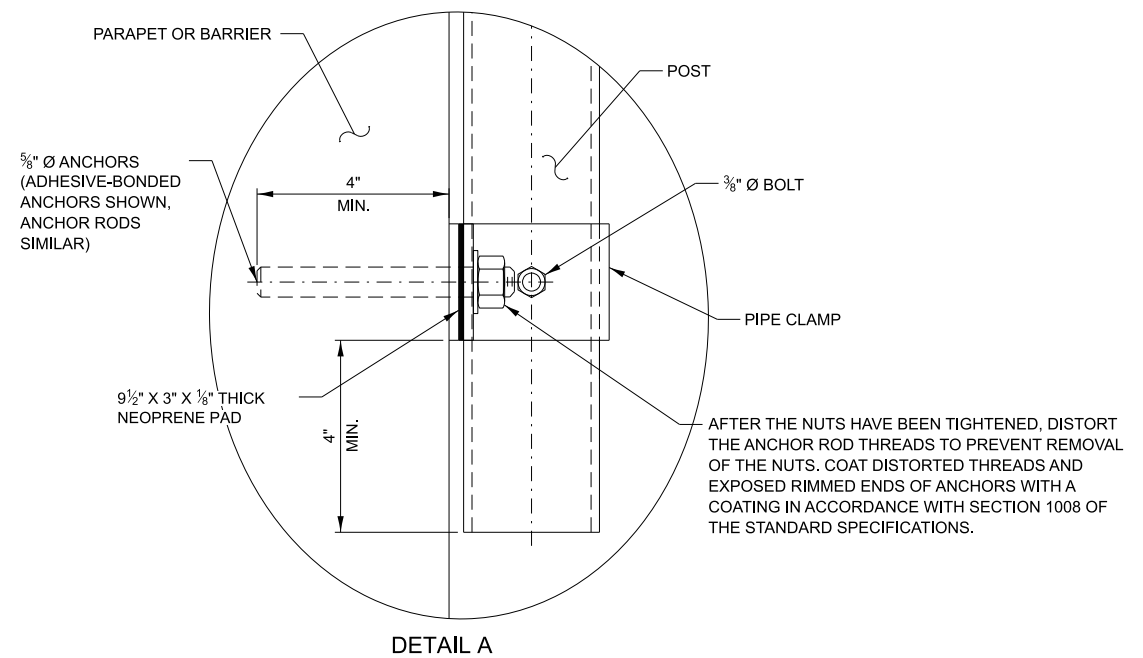
BRACE RAIL DETAIL



PIPE CLAMP CONNECTION (SEE DETAIL ON BASE SHEET 2 OF 2 M-BRG-521) (TYP.)



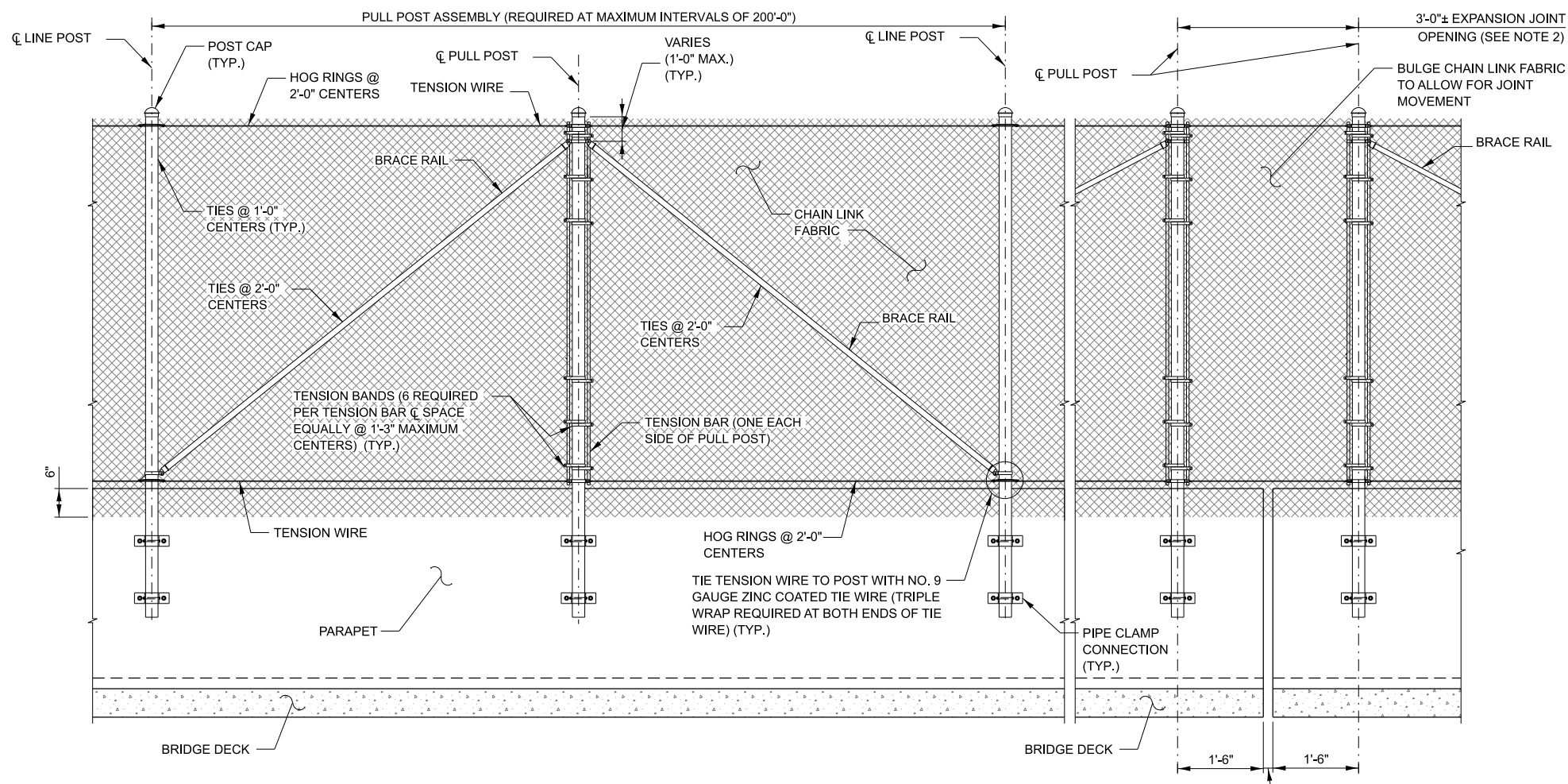
VIEW A-A



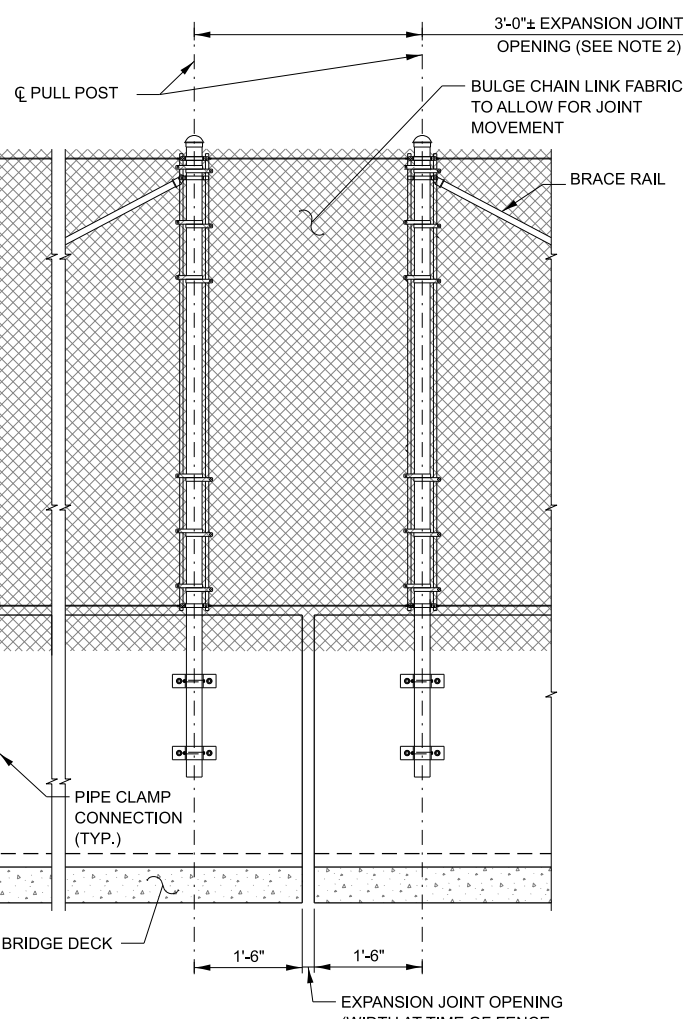
DETAIL A



RAILROAD BRIDGE FENCE



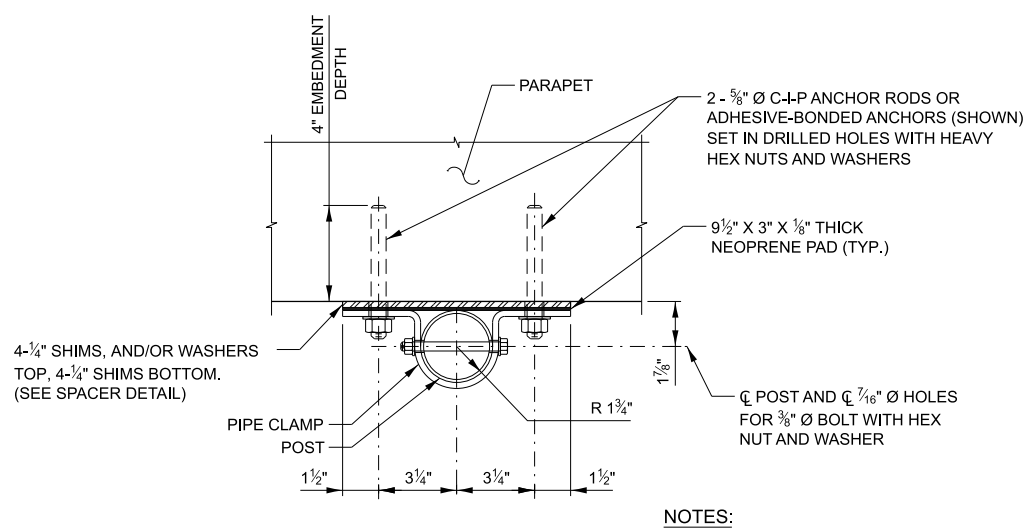
PULL POST ASSEMBLY DETAIL FOR BARRIER PARAPET FENCE



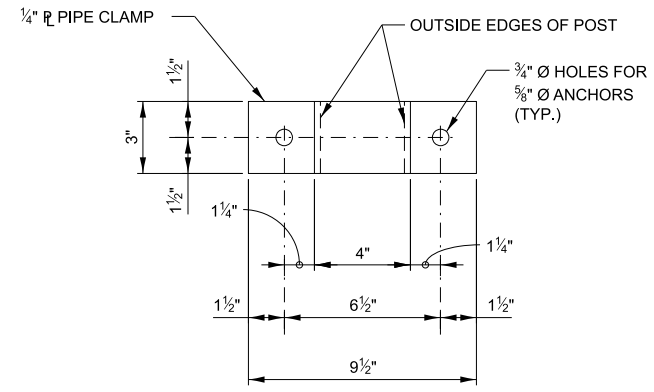
EXPANSION ASSEMBLY DETAIL
(REQUIRED ONLY AT EXPANSION JOINT LOCATIONS WHERE TOTAL MOVEMENT EXCEEDS 6")

NOTE TO DESIGNER

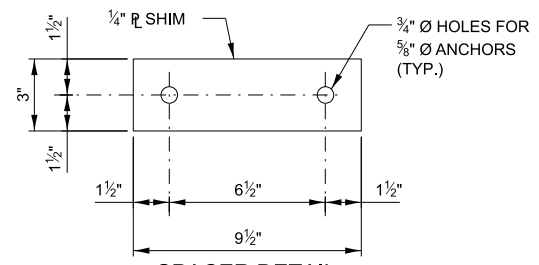
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PIPE CLAMP CONNECTION DETAIL



PIPE CLAMP DETAIL

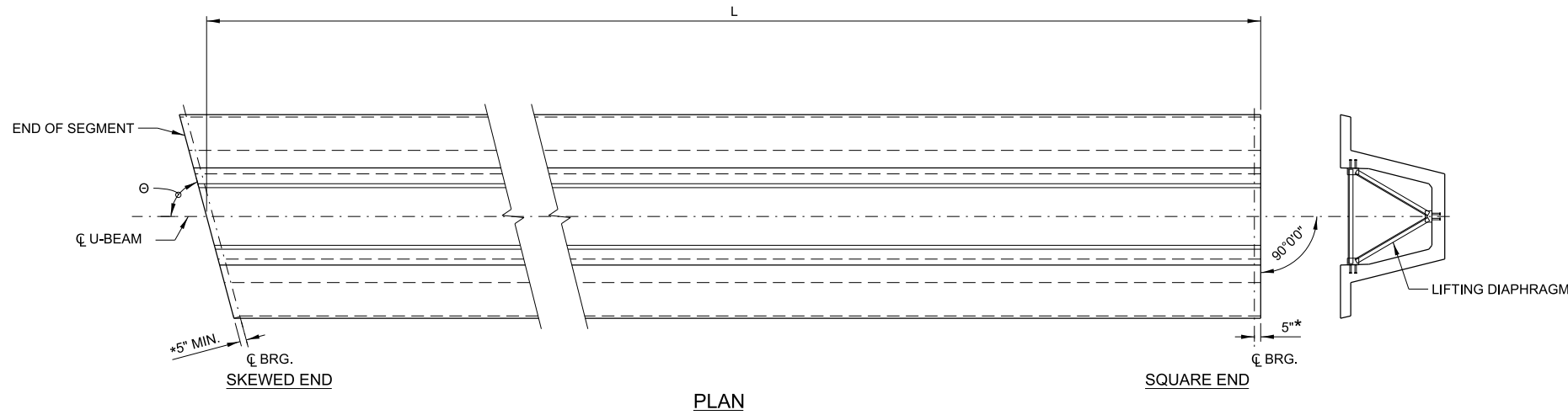


SPACER DETAIL
(MUST BE MANUFACTURED FROM AN INCOMPRESSIBLE MATERIAL (I.E., STEEL OR ALUMINUM))

- NOTES:**
- FOR TREATMENT AT BRIDGE ENDS, SEE BASE SHEET 1 OF 2 M-BRG-521.
 - 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".



RAILROAD BRIDGE FENCE



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:

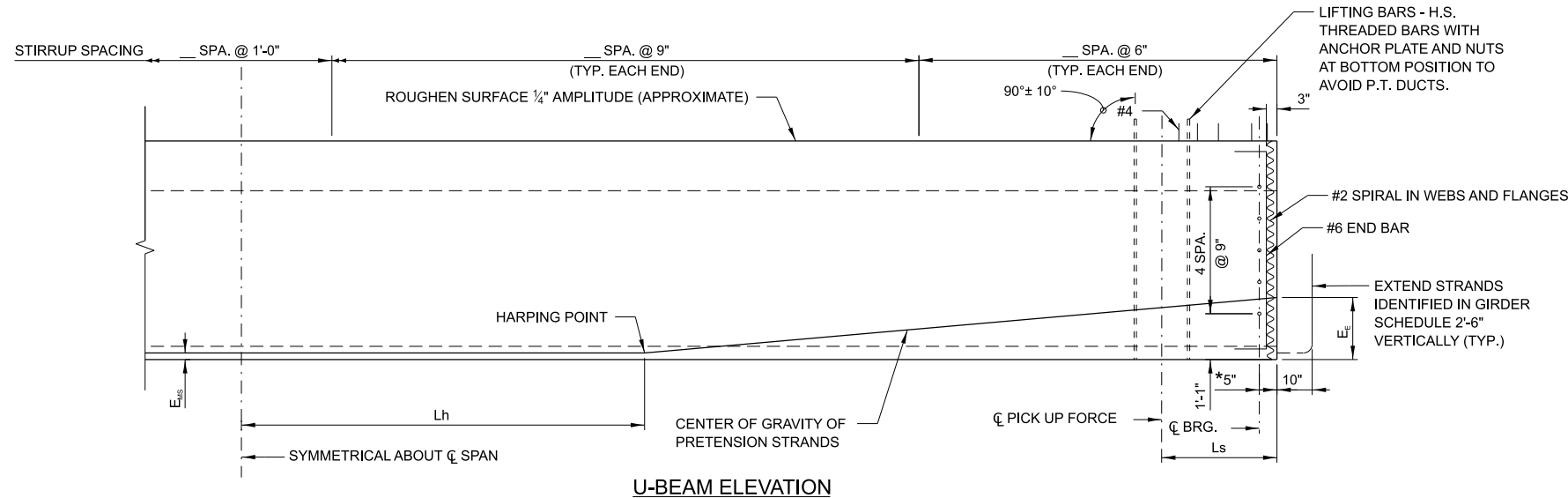
USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

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"Ø STRANDS IS 8.

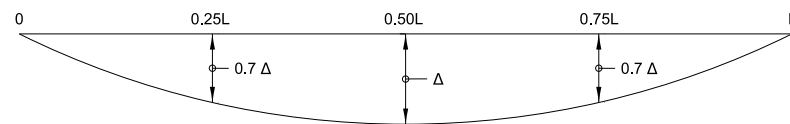
- A_s^* = MINIMUM AREA OF THE PRESTRESSING STEEL.
- d_s = NOMINAL STRAND DIAMETER.
- f_s = ULTIMATE STRENGTH OF THE PRESTRESSING STEEL.
- F_j = JACKING FORCE PER U-BEAM.
- F_r = FINAL FORCE PER U-BEAM AFTER ALL LOSSES.
- f_{ci} = REQUIRED CONCRETE STRENGTH AT RELEASE OF PRESTRESS FORCE.
- f_c = REQUIRED 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.



SHIPPING & HANDLING DETAILS		
L_s	k_g MIN. SHIPPING SUPPORT ROTATIONAL SPRING CONSTANT	w_{cc} MIN. SHIPPING SUPPORT ϕ TO ϕ 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_c (In.)	E_{ms} (In.)	F_j (kips)	F_r (kips)	CONCRETE STRENGTH		Δ (In.) @ 40 DAYS & @ 120 DAYS	PREDICTED CAMBER (in.)	STRANDS TO EXTEND				
															f_c (psi) @ RELEASE	f_s (psi) @ 28 DAYS			END 1	END 2			

NOTE TO DESIGNER

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

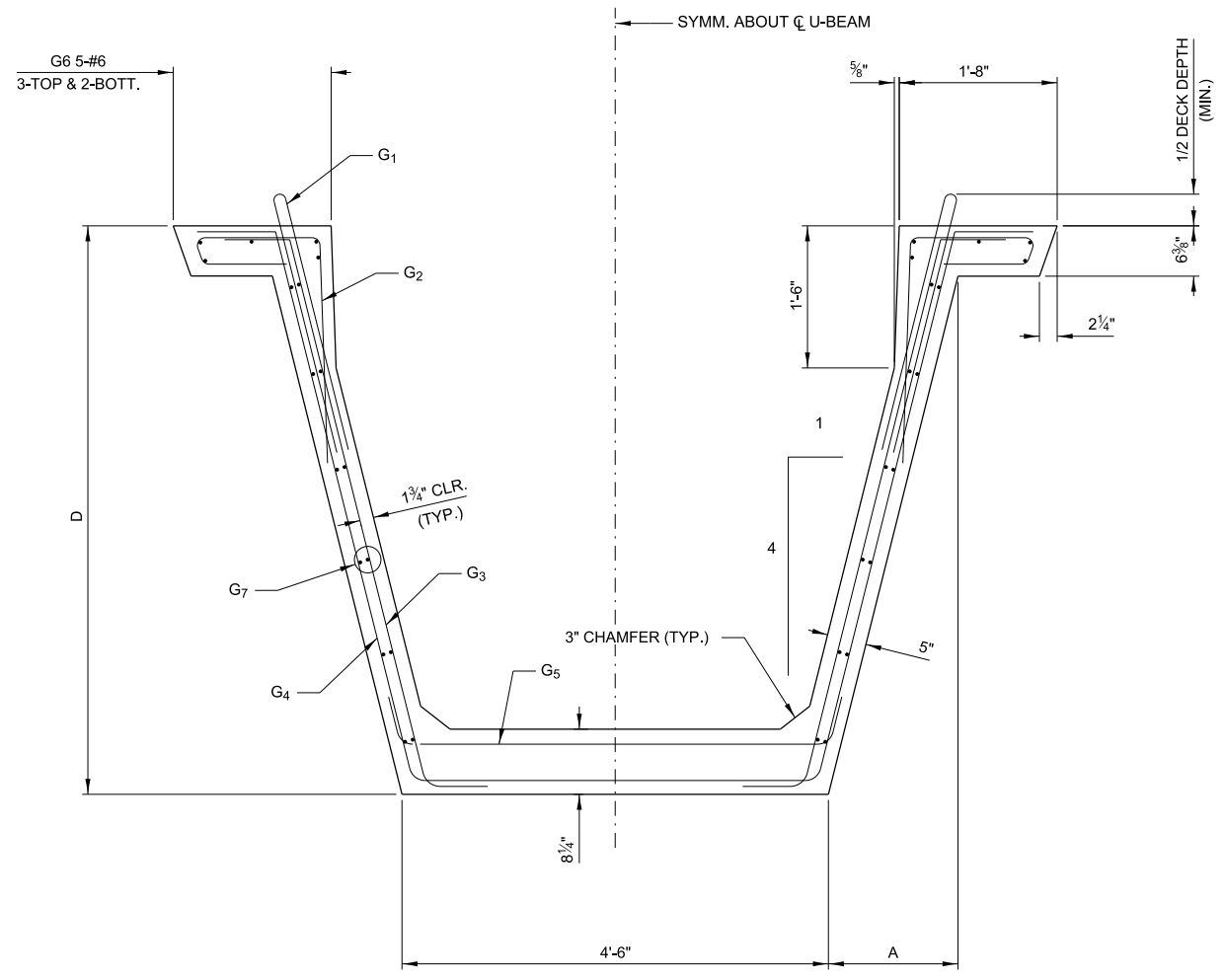
REINFORCEMENT IN STANDARD END SECTION OF THE BEAM IS BASED ON THE STRAND PATTERNS LISTED ON SHEET 2 OF 2 M-BRG-522. USING DIFFERENT STRAND PATTERNS WILL REQUIRE A COMPLETE DESIGN OF THIS REINFORCEMENT. PRIOR APPROVAL FROM THE ILLINOIS TOLLWAY IS REQUIRED IF DESIGN OF THE END REINFORCEMENT IS REQUIRED.

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 VALUE 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 $\pm 3/8"$ VARIANCE IN ACTUAL CAMBER VERSUS THE CALCULATED RESIDUAL CAMBER.

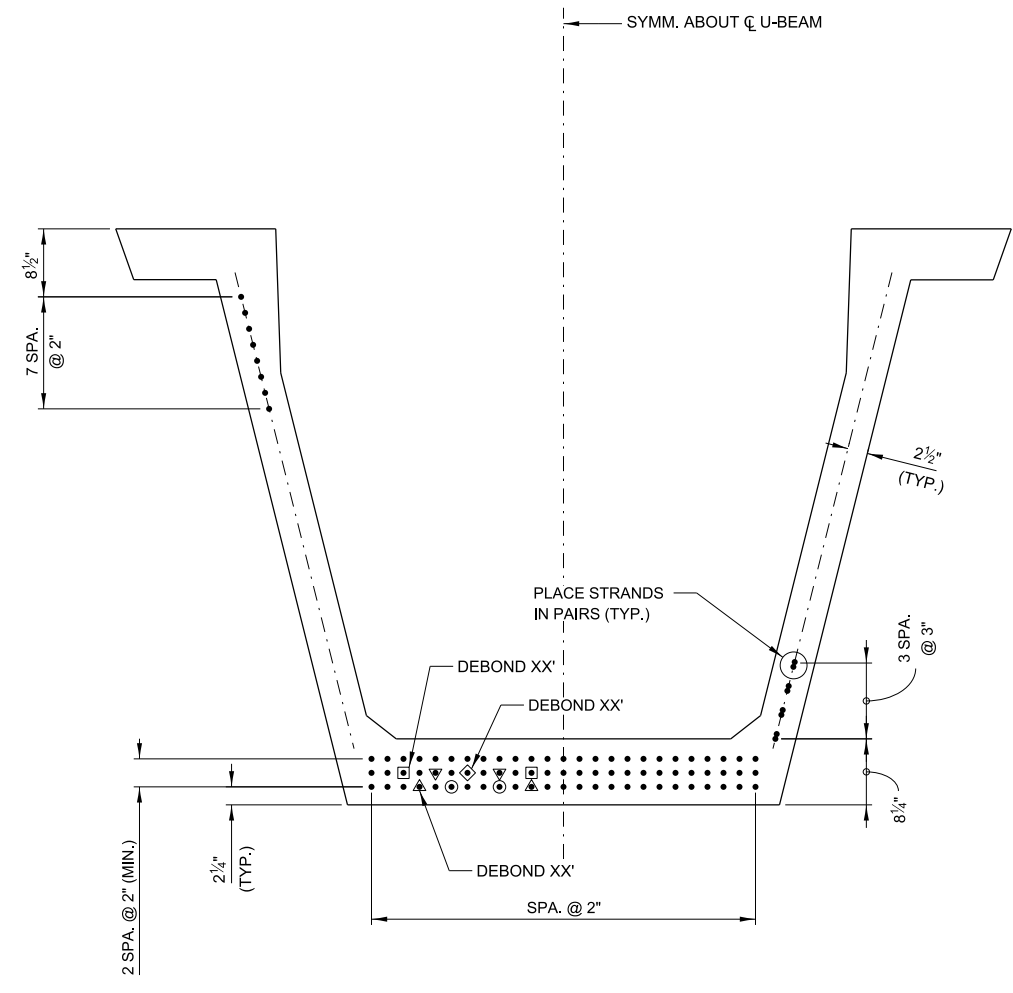
DIMENSIONS NOTED WITH (*) ARE A FUNCTION OF THE DESIGN REQUIREMENTS AND MAY VARY. DIMENSION IN THE GIRDER SCHEDULE SHALL BE SHOWN TO THE NEAREST 1/8".

NOTE TO DESIGNER

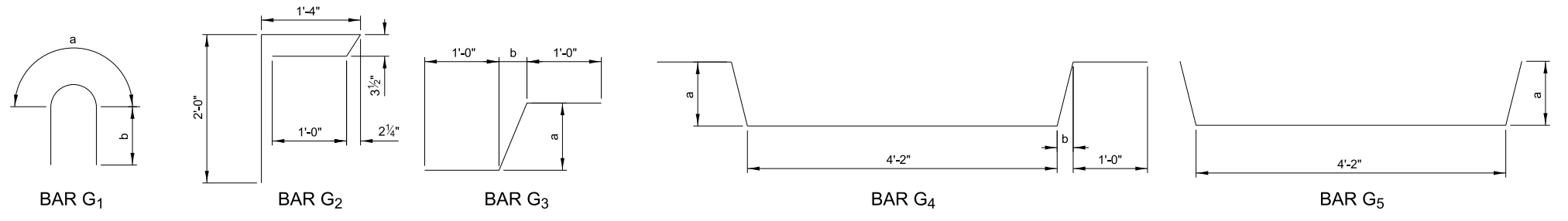
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE 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.



TYPICAL U-BEAM SECTION
(REINFORCEMENT SHOWN AT SPAN)



AT PIER AT MID-SPAN
TYPICAL U-BEAM PRESTRESSING
(PRETENSIONING)



BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
G1	0	#4	X'-X"	U
G2				┌
G3				└
G4				└
G5				┌
G6	10	#6		—
G7				—

VARIABLE DIMENSIONS

BAR	a	b
G1		
G2		
G3		
G4		
G5		

BEAM TABLE

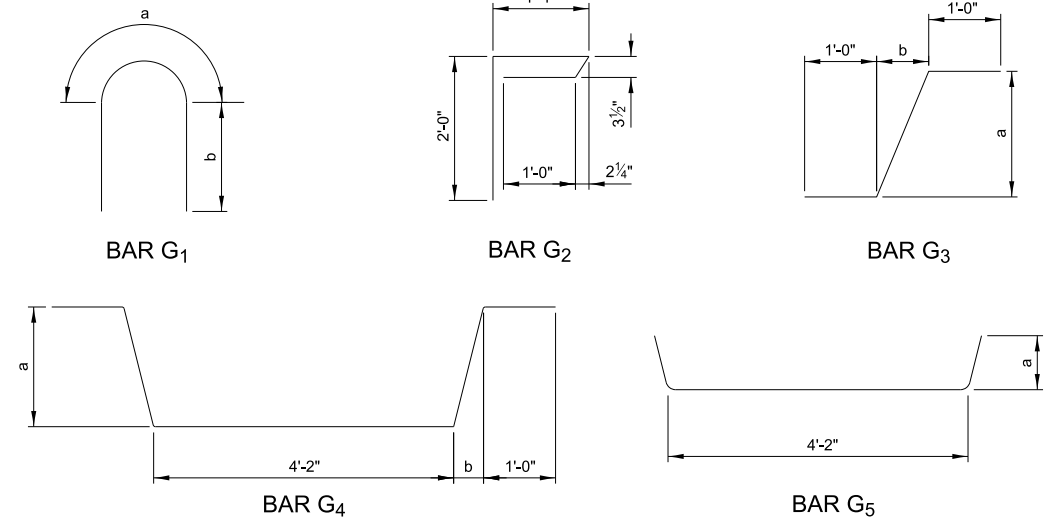
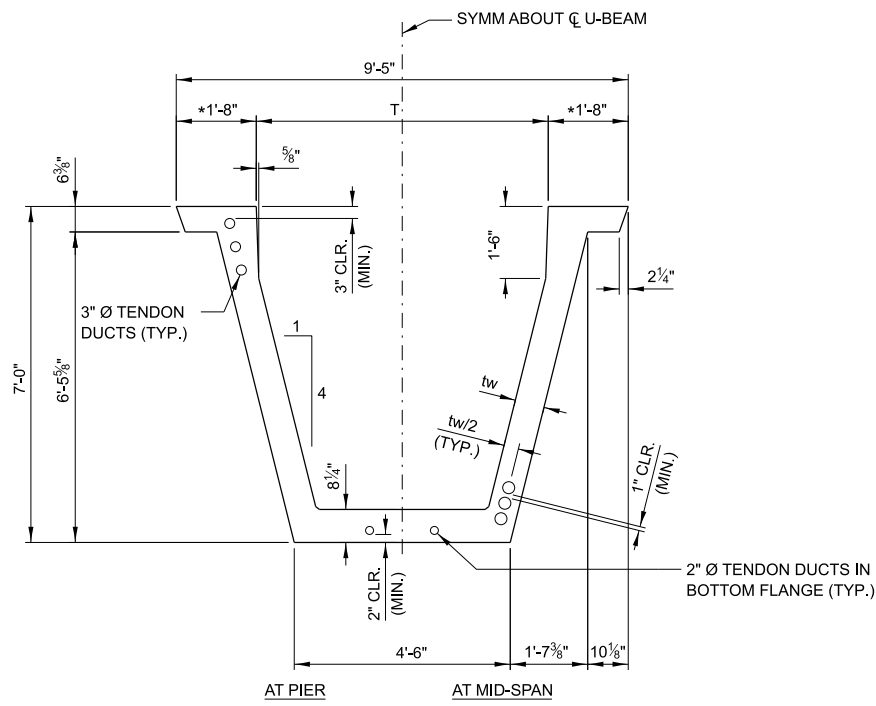
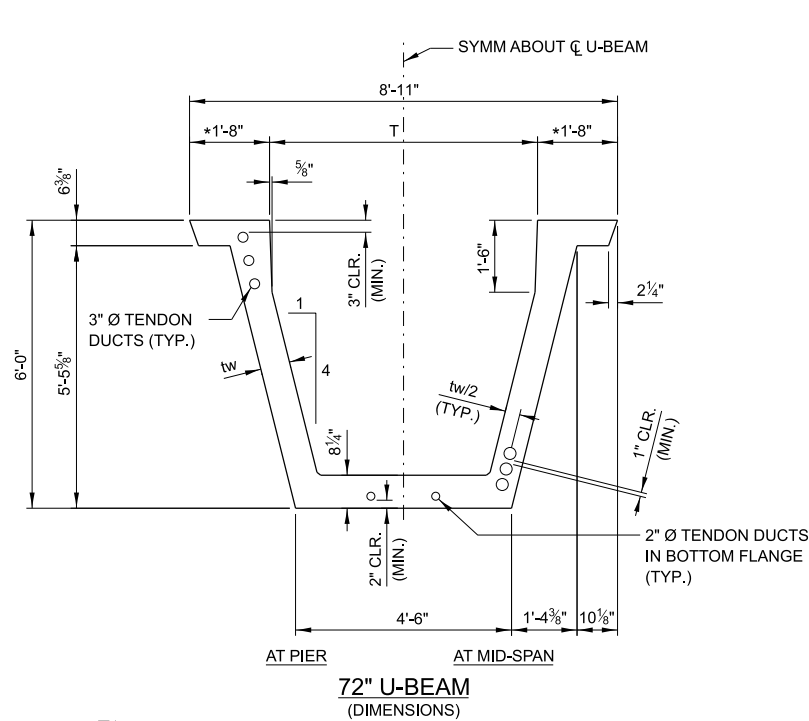
D	A
48"	10 3/8"
60"	1'-1 3/8"
72"	1'-4 3/8"

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PPC U-BEAM PRETENSIONED

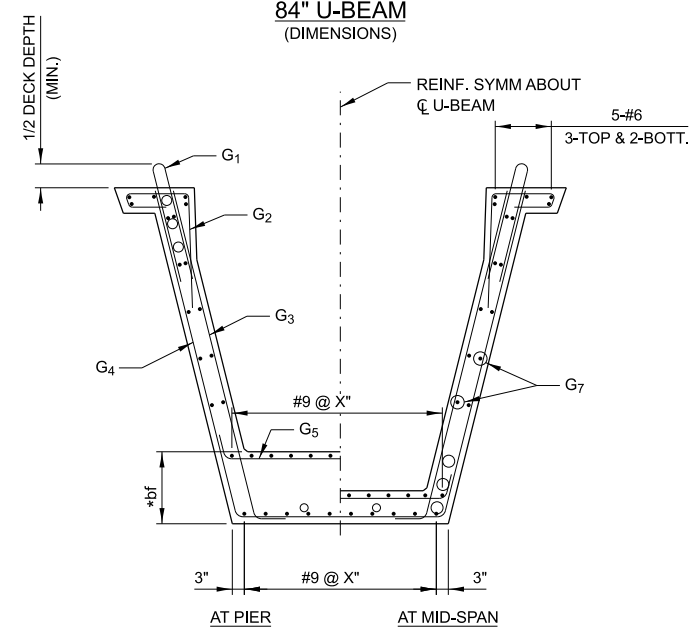
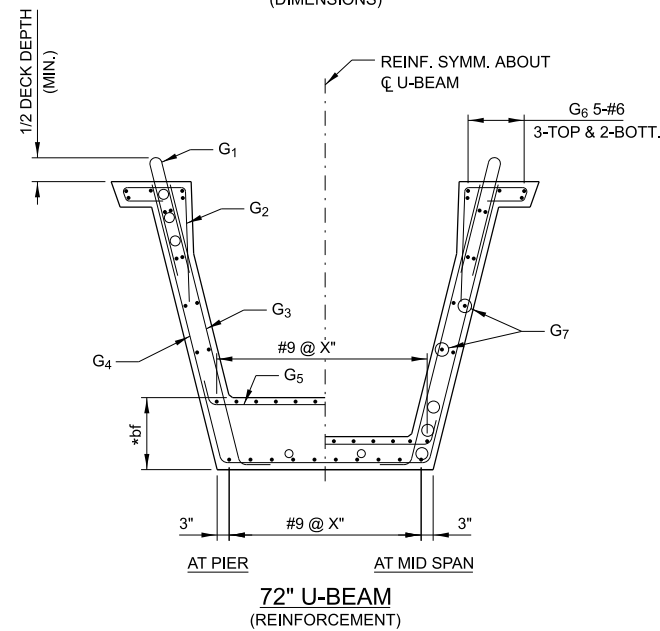
VERSION: 2019-03 BASE SHEET: M-BRG-522 SHEET: 2 OF 2



BAR	NO.	SIZE	LENGTH	SHAPE
G ₁	0	#4	X'-X"	
G ₂				
G ₃				
G ₄				
G ₅				
G ₆		#6		
G ₇				

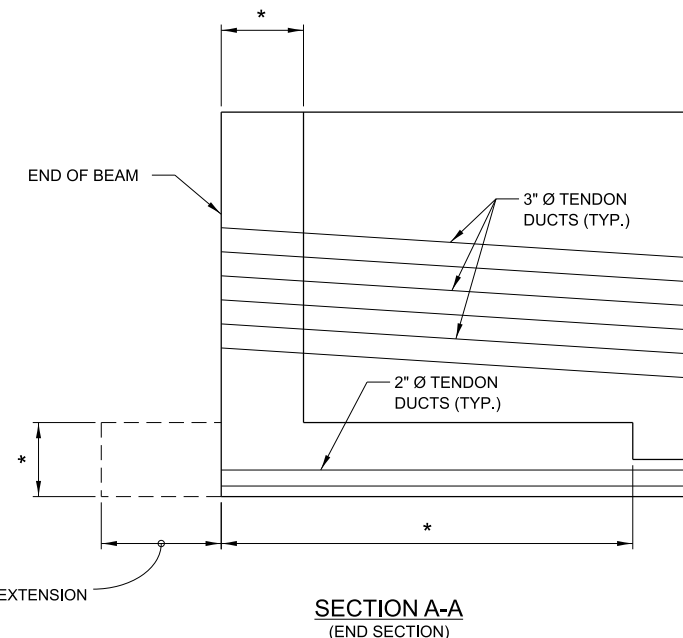
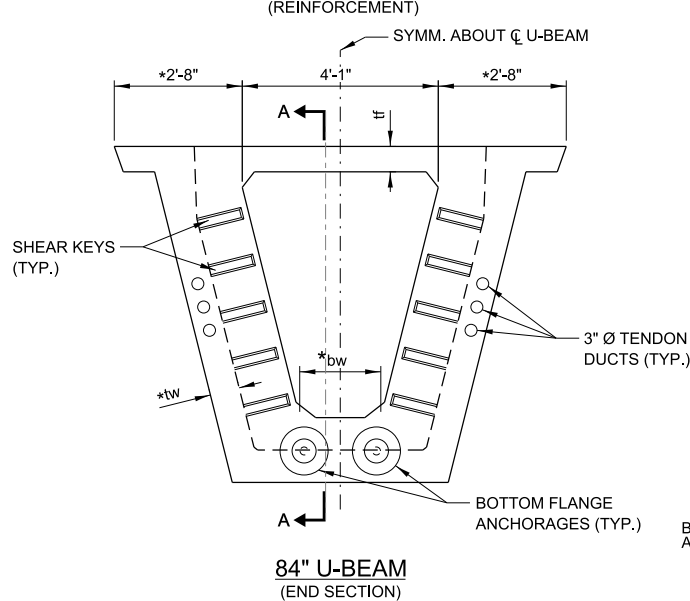
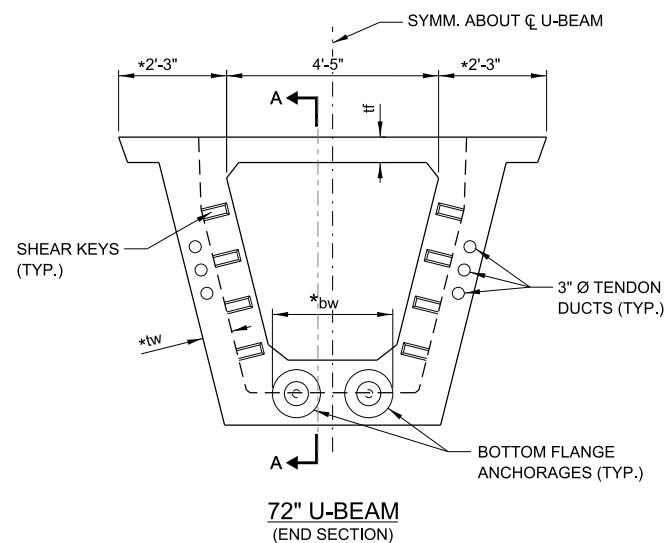
VARIABLE DIMENSIONS

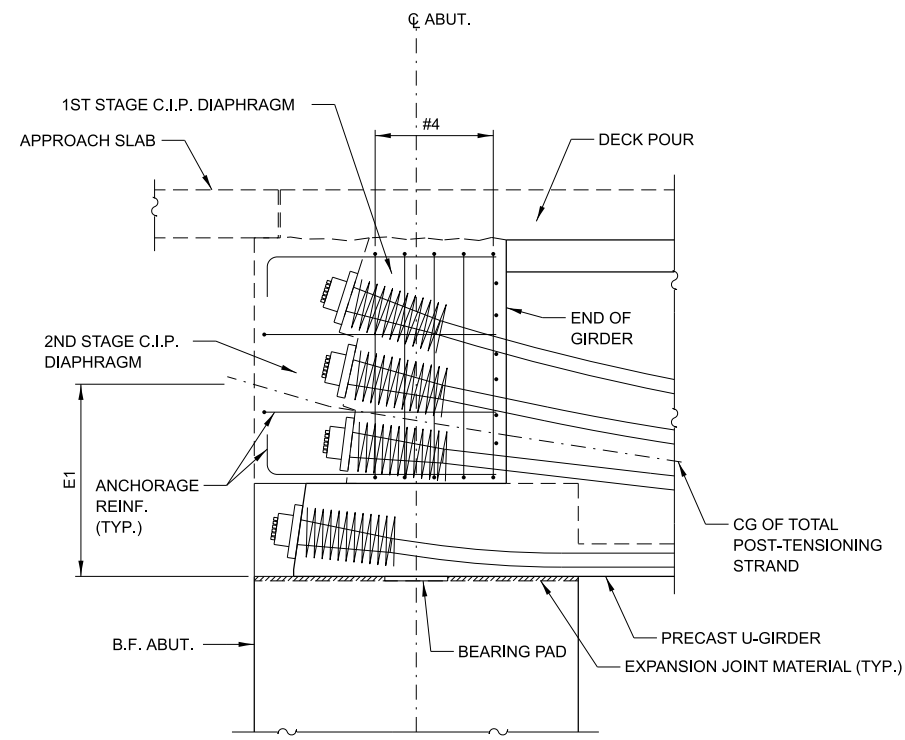
BAR	a	b
G ₁		
G ₂		
G ₃		
G ₄		
G ₅		
G ₆		
G ₇		



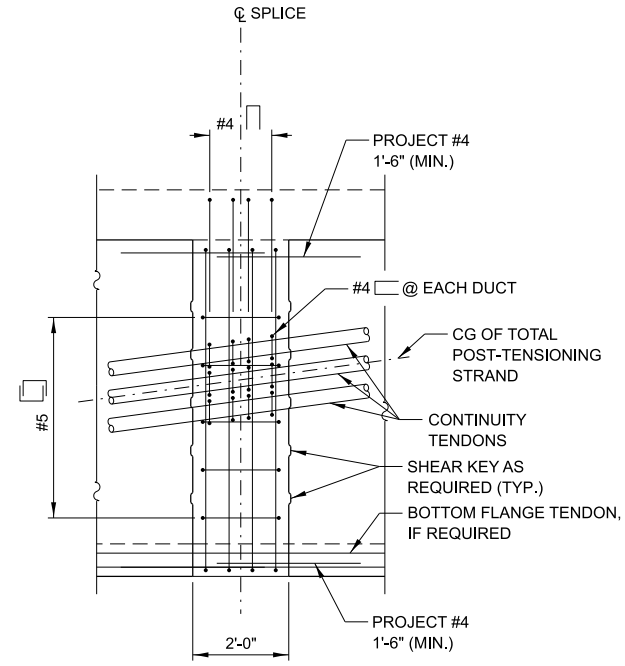
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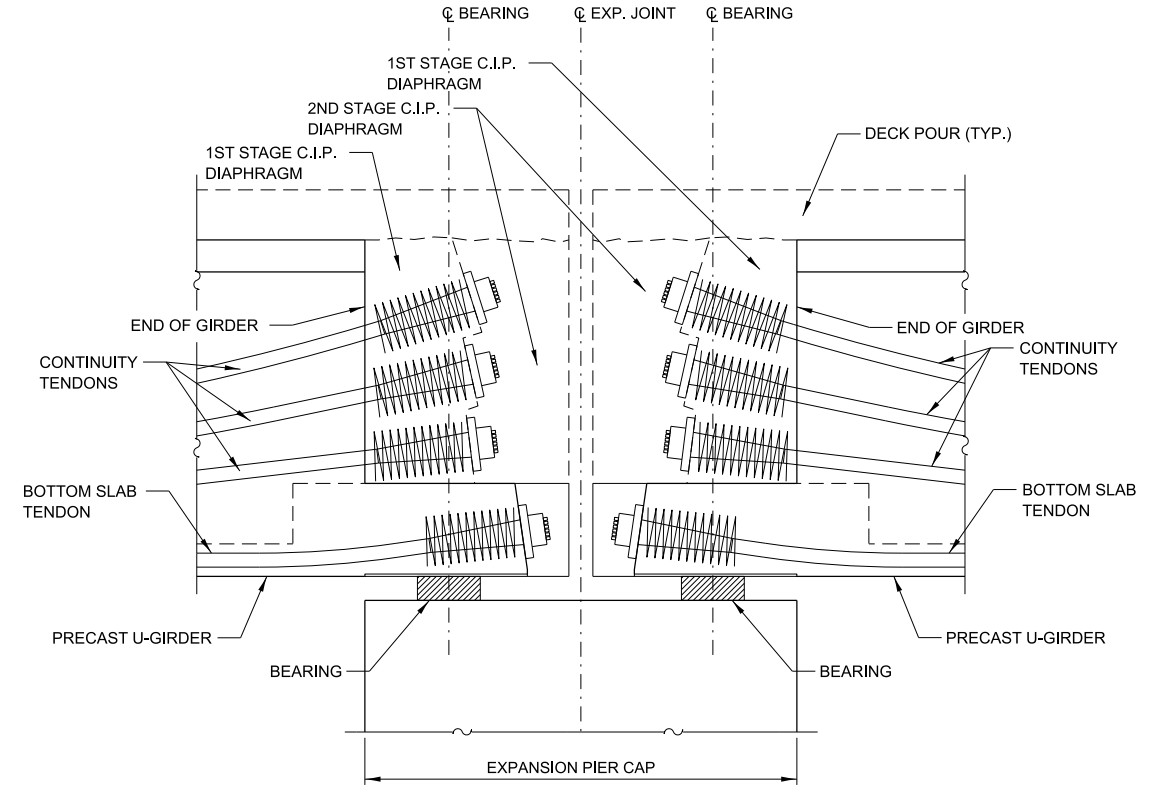




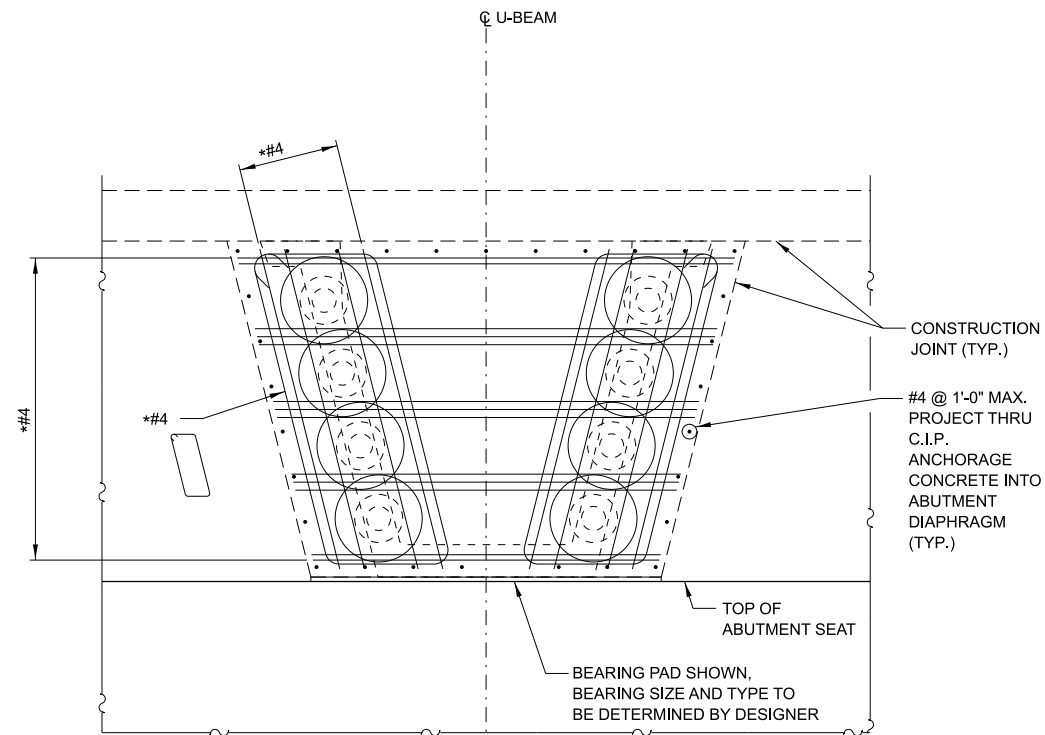
INTEGRAL ABUTMENT



SPLICE DETAIL



EXPANSION PIER



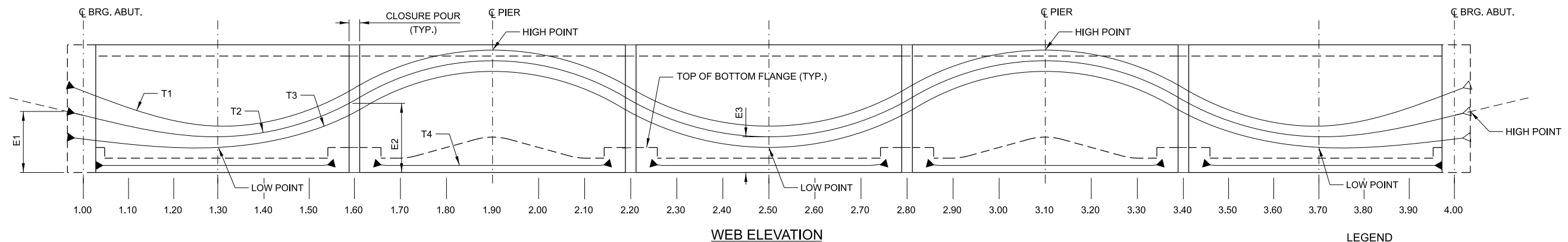
END VIEW
(INTEGRAL ABUTMENT)

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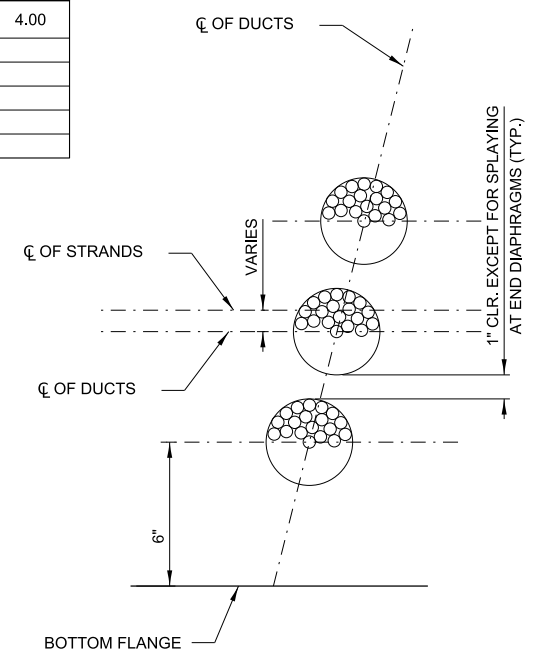
72IN. AND 84IN. PPC U-BEAM
POST-TENSIONED



		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. f _c	GIRDER NO. f _{ci}		JACKING	AFTER SEATING				



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 LOSSES DUE TO TENDON VERTICAL AND HORIZONTAL CURVATURES MUST BE INCLUDED IN ELONGATION CALCULATIONS. THE STRESSING SEQUENCE SHALL MEET THE FOLLOWING CRITERIA.
- TENDONS MAY BE JACKED FROM BOTH ENDS, EITHER SIMULTANEOUSLY OR SEQUENTIALLY, OR 1/2 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.
 - NO MORE THAN 1/2 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.
 - 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.
 - 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 3/8", 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.

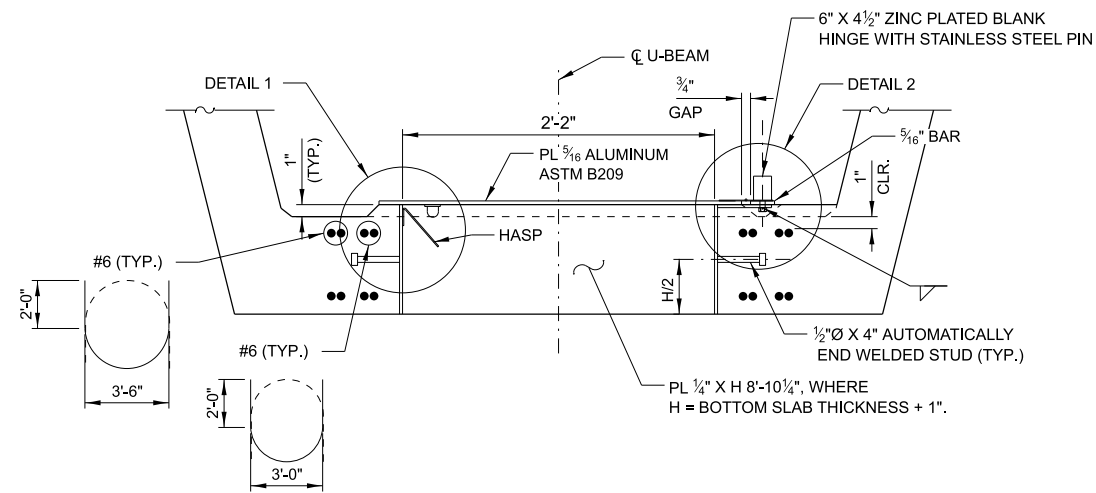
THE DESIGN IS BASED ON THE ESTIMATED PRESTRESS LOSS OF POST-TENSIONING STRANDS SHOWN IN THE POST-TENSIONING TABLE DUE TO STEEL RELAXATION, ELASTIC SHORTENING CREEP AND SHRINKAGE OF CONCRETE.

NOTE TO DESIGNER

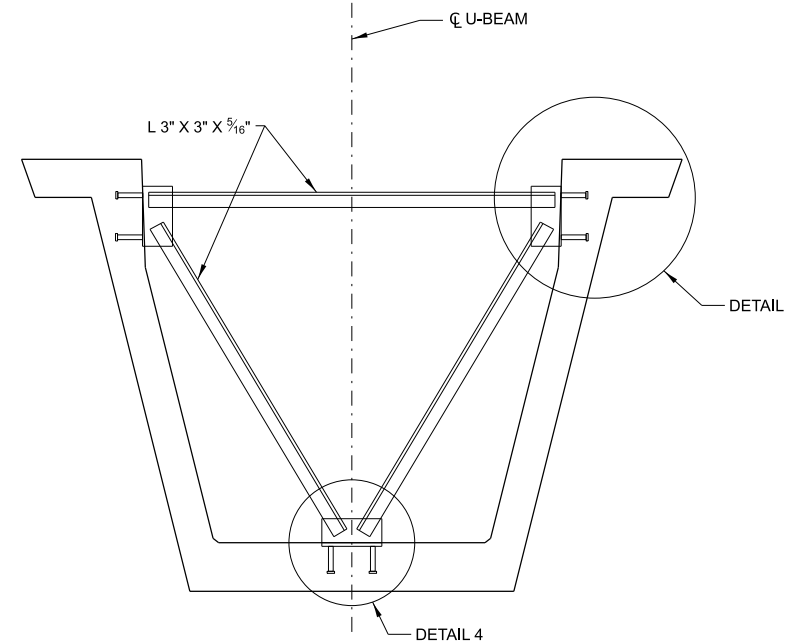
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72IN. AND 84IN. PPC U-BEAM POST-TENSIONED

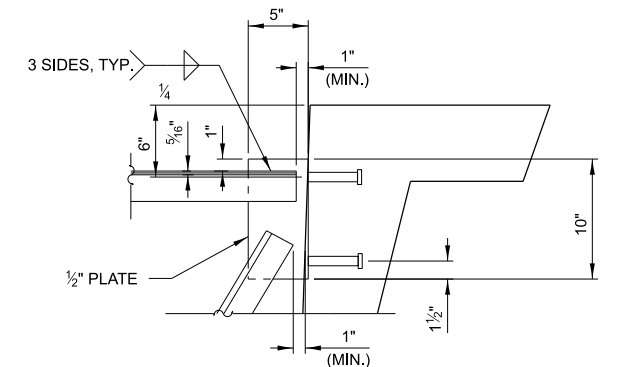
VERSION: 2019-03	BASE SHEET: M-BRG-523	SHEET: 3 OF 3
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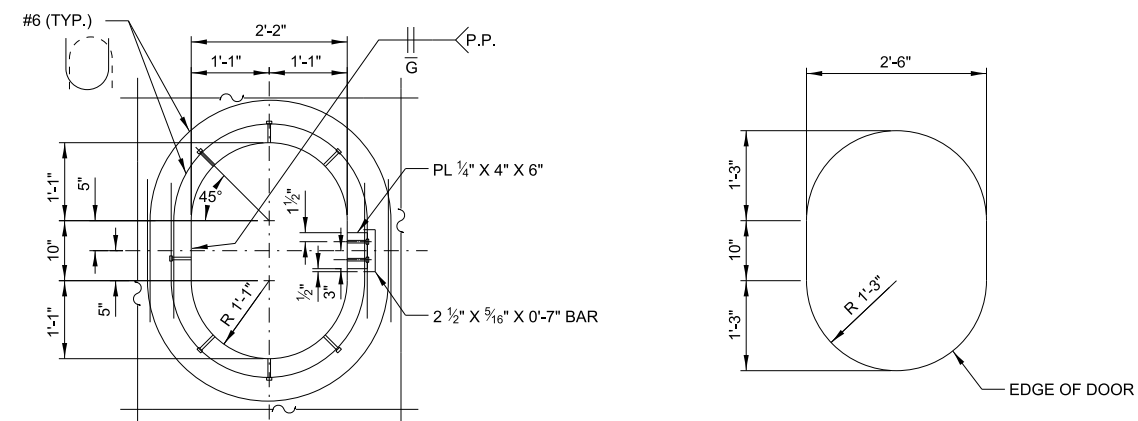
SECTION THROUGH ACCESS DOOR



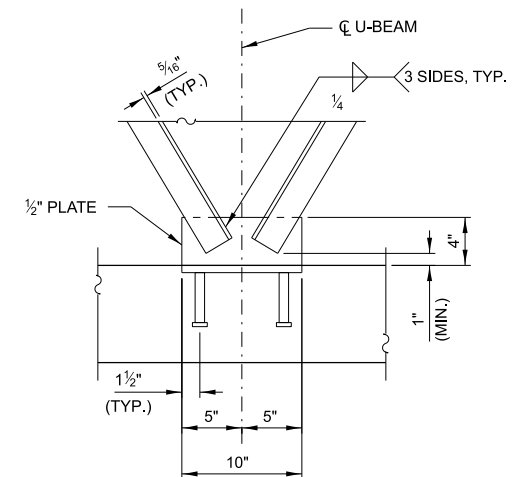
LIFTING DIAPHRAGM



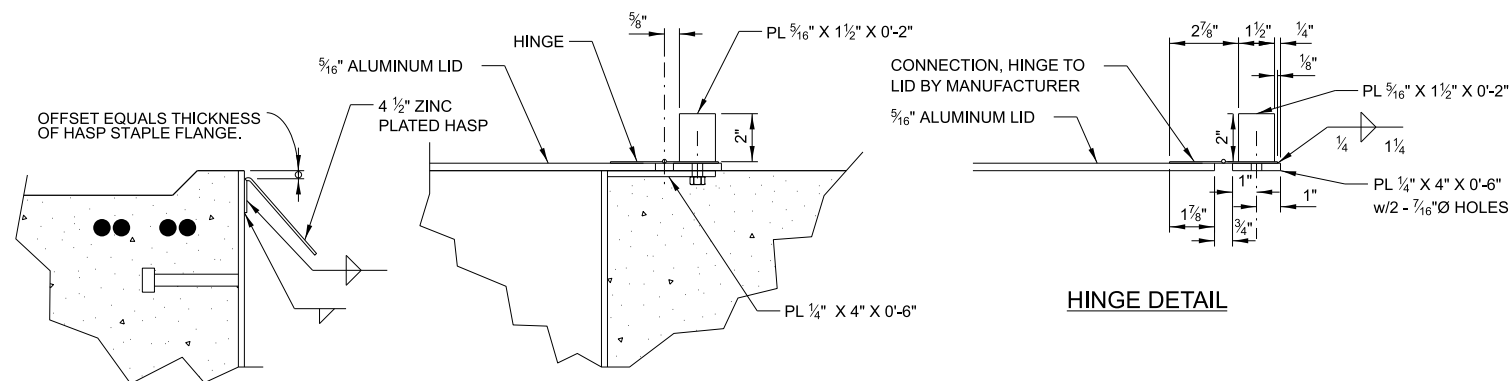
DETAIL 3



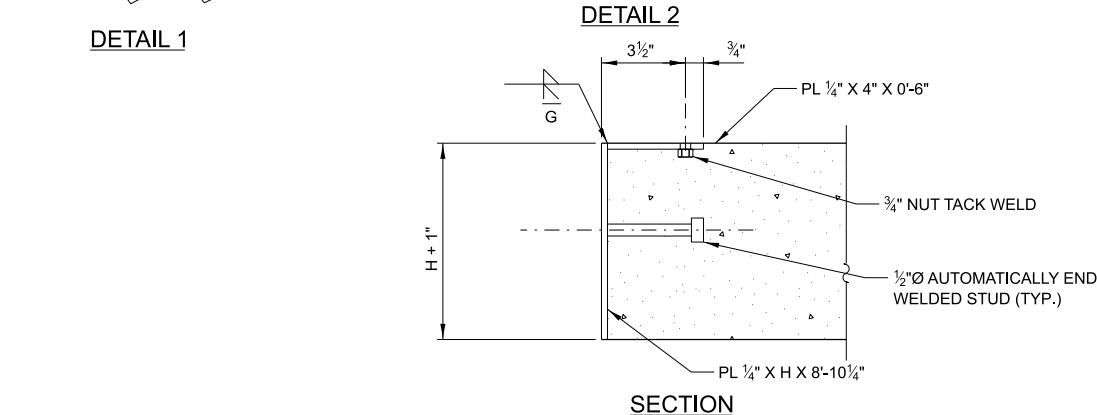
ACCESS DOOR DETAILS



DETAIL 4



HINGE DETAIL



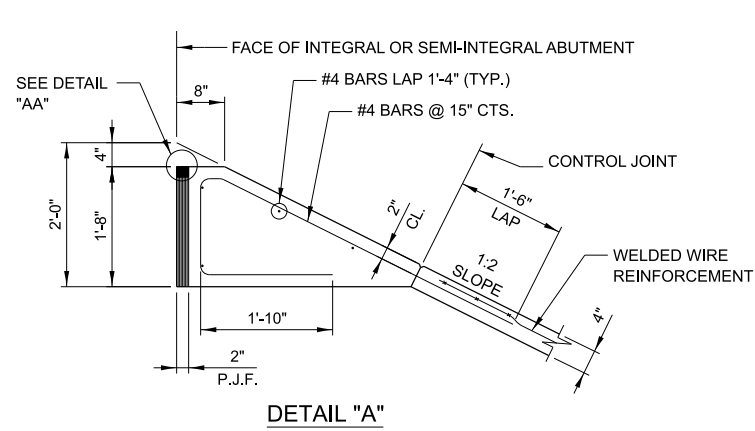
SECTION

NOTE TO DESIGNER

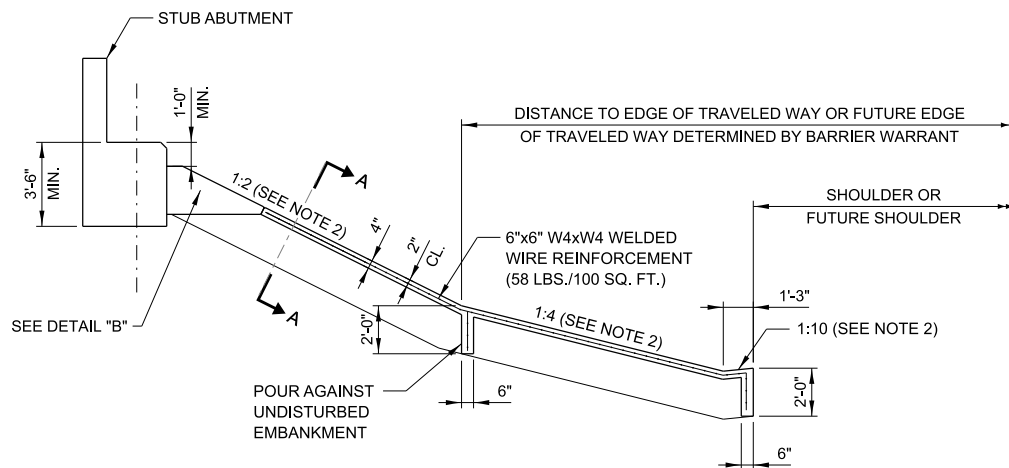
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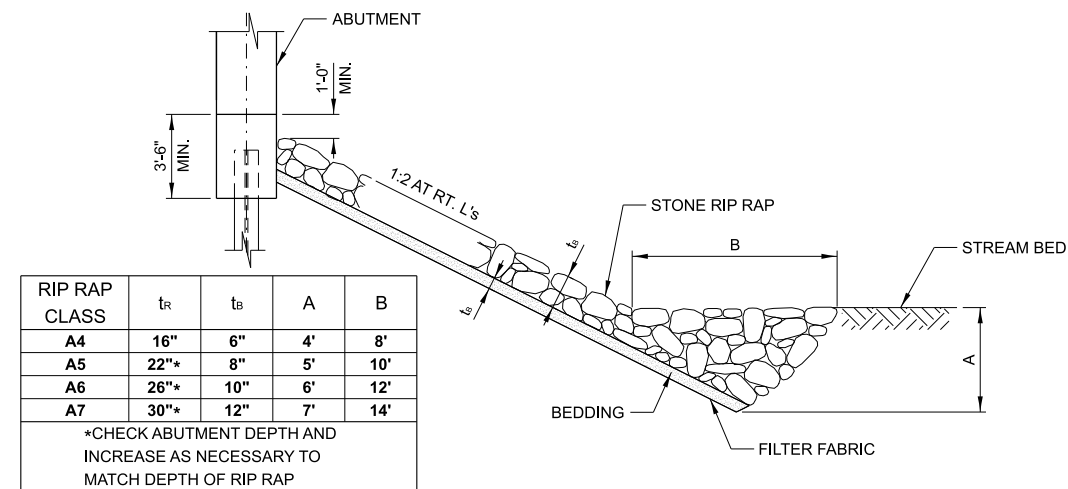
**PPC U-BEAM
MISCELLANEOUS DETAILS**



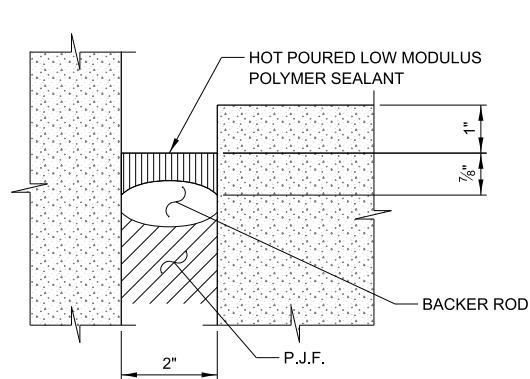
DETAIL "A"



SLOPE WALLS FOR BRIDGES OVER ILLINOIS TOLLWAY

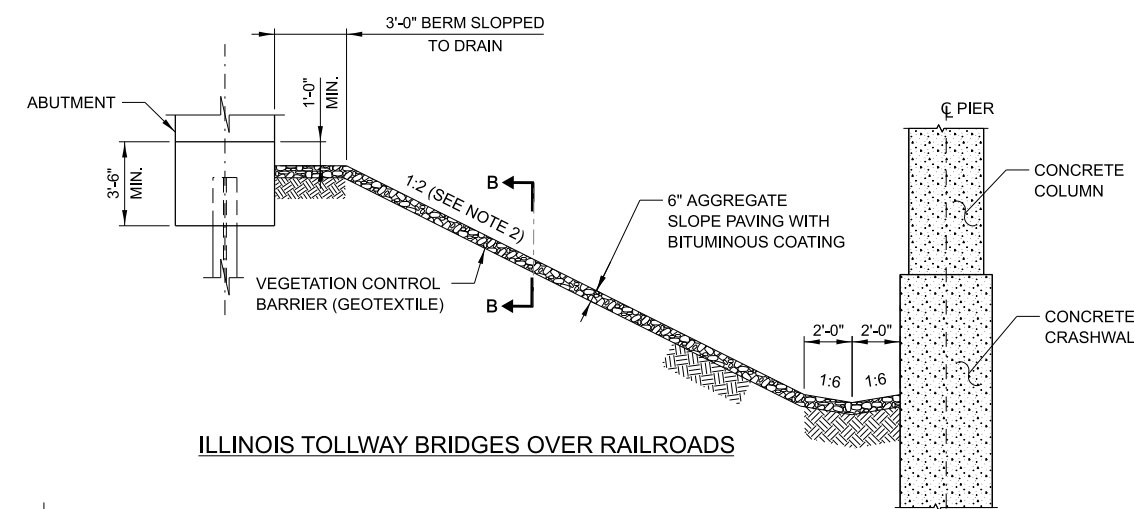
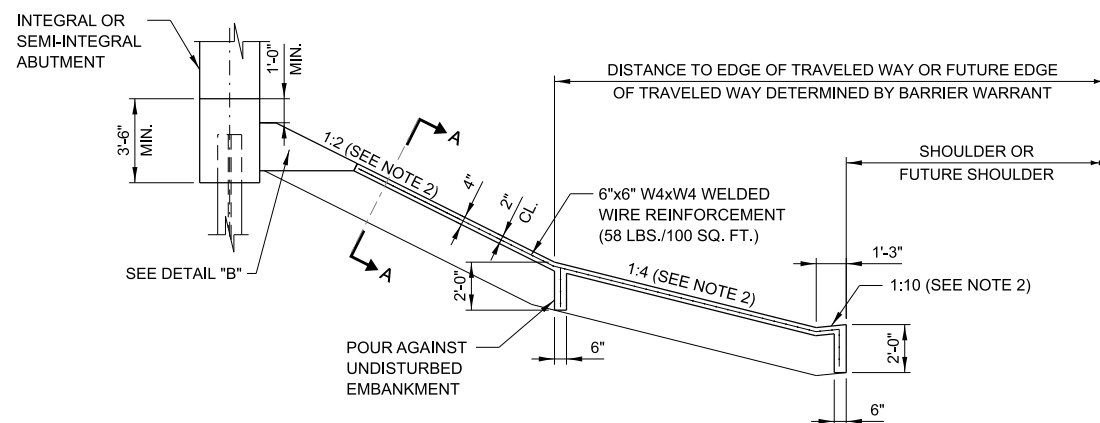


ILLINOIS TOLLWAY BRIDGES OVER WATERWAYS

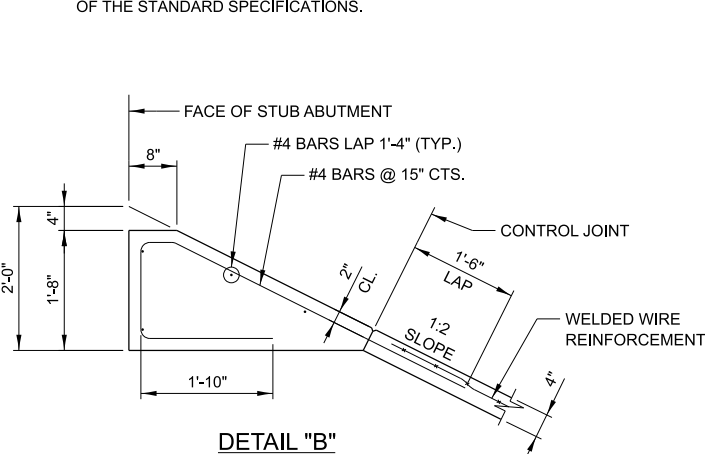


DETAIL "AA"

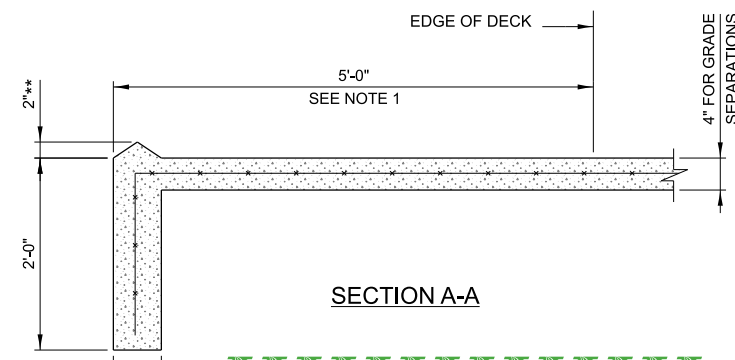
NOTE:
SEALANT, BACKER ROD AND P.J.F. SHALL MEET THE REQUIREMENTS OF SECTIONS 1050 AND 1051 OF THE STANDARD SPECIFICATIONS.



ILLINOIS TOLLWAY BRIDGES OVER RAILROADS

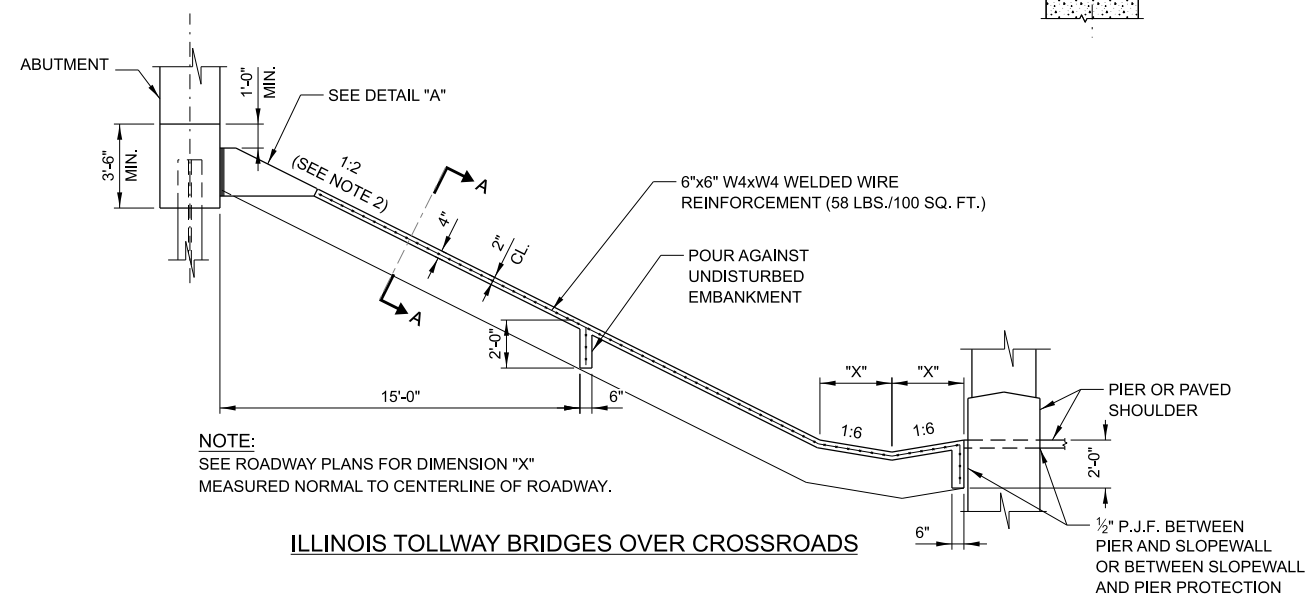


DETAIL "B"



SECTION A-A

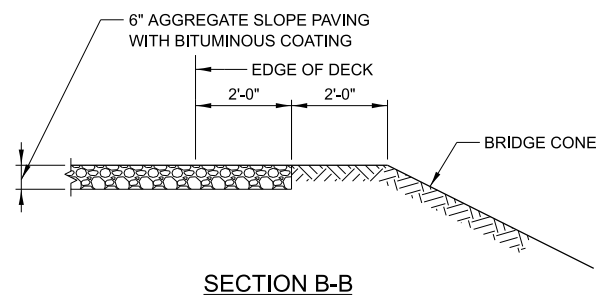
NOTE TO DESIGNER
**THIS DIMENSION SHALL BE INCREASED TO 4" FOR STRUCTURES WITH SKEWS OF 10° OR GREATER AND DRAINAGE ELEMENTS THAT OUTLET ONTO SLOPEWALL.



ILLINOIS TOLLWAY BRIDGES OVER CROSSROADS

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

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SECTION B-B

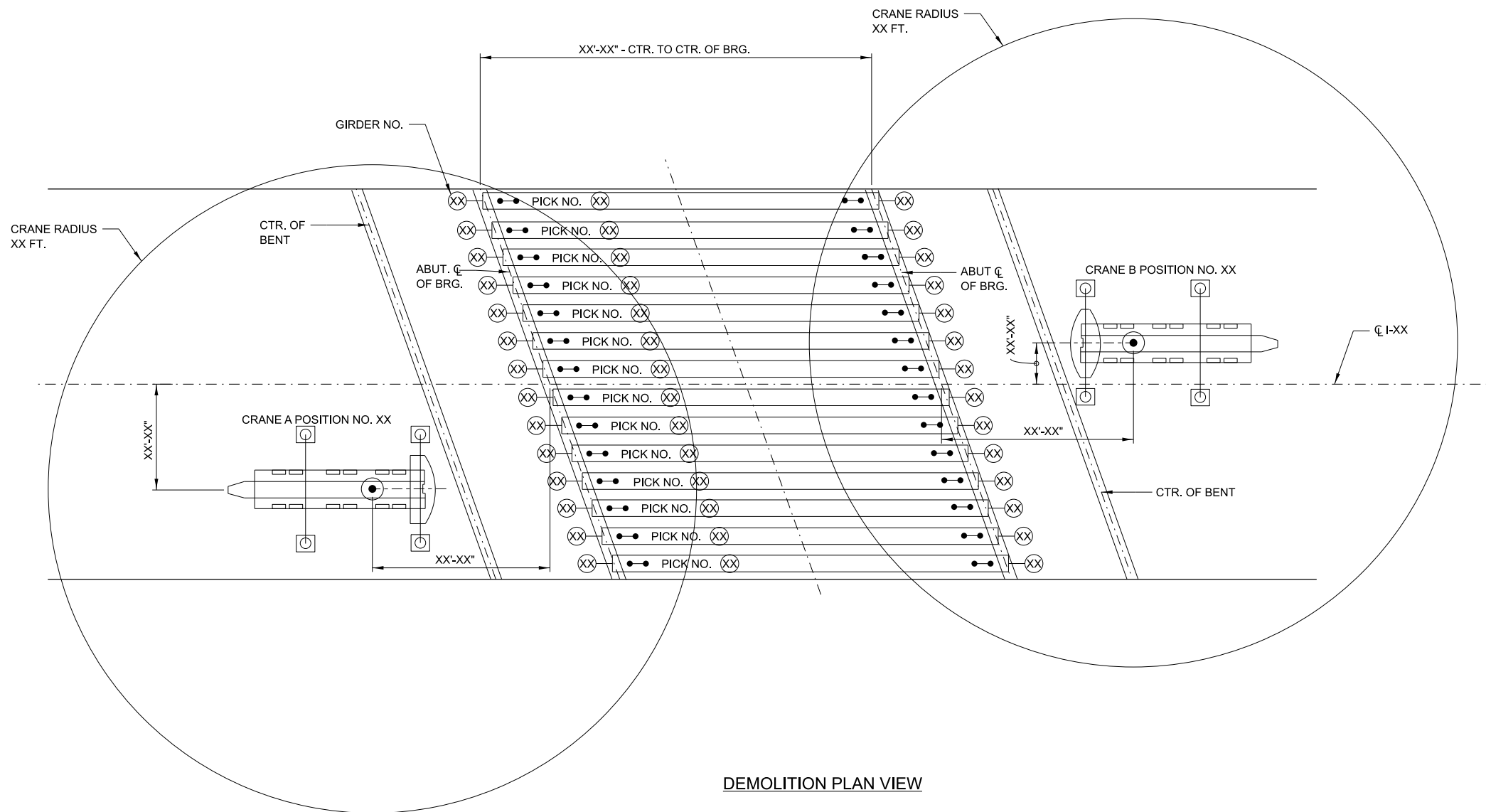
NOTE TO DESIGNER
DESIGNER TO REMOVE ALL DETAILS THAT DO NOT APPLY.

NOTES:

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



SLOPEWALL DETAILS



DEMOLITION PLAN VIEW

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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.

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. _____

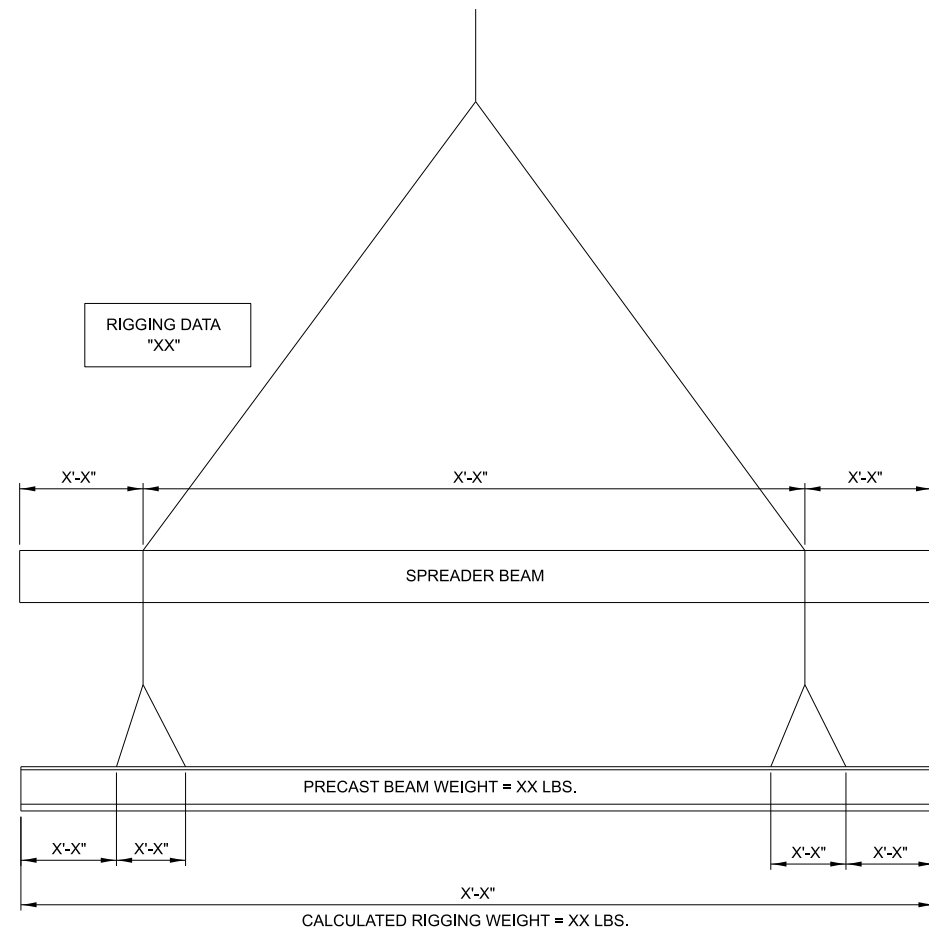
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2. "XX"
3. "XX"
4. "XX"

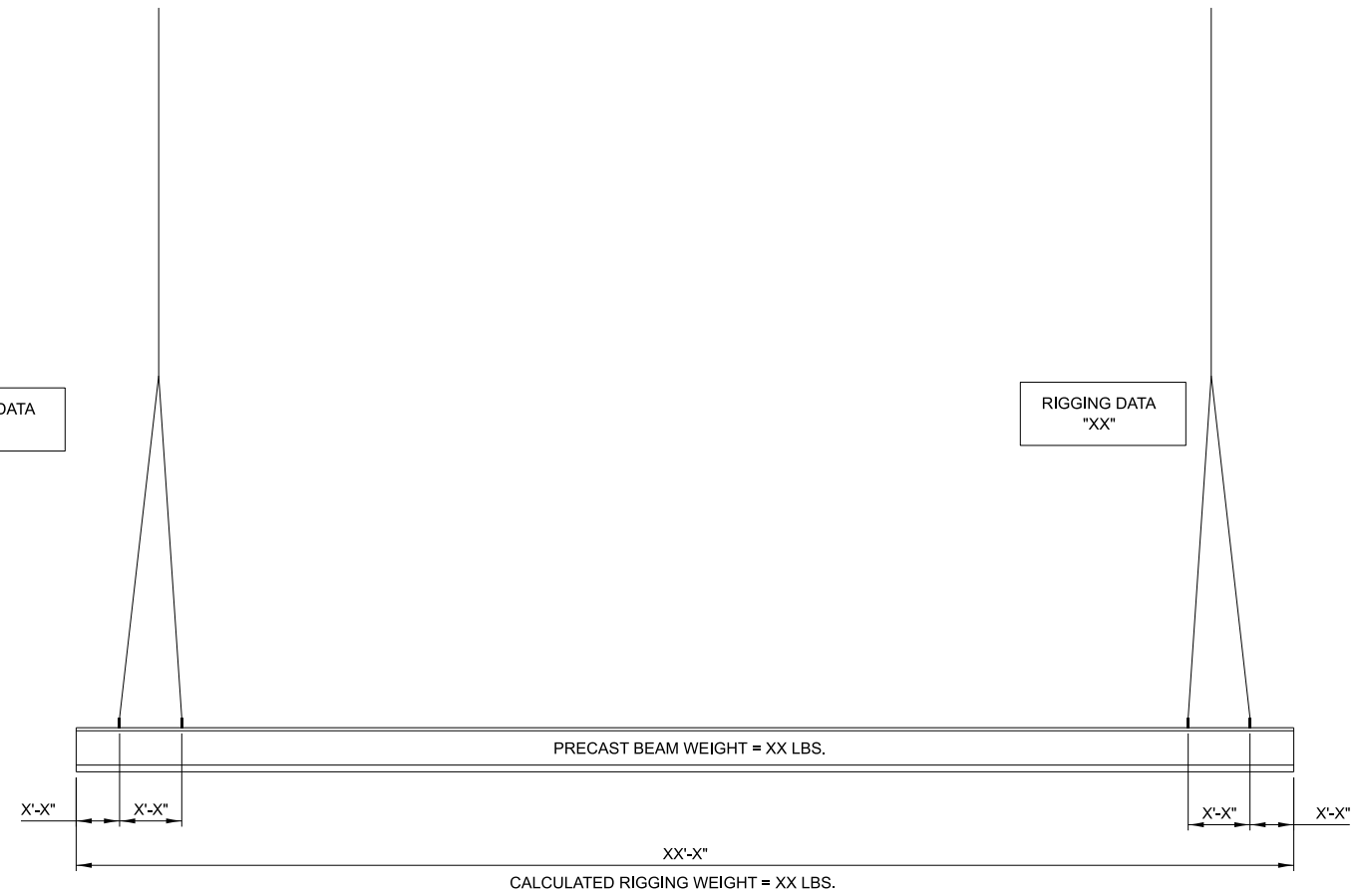
Illinois Tollway

DEMOLITION PLAN

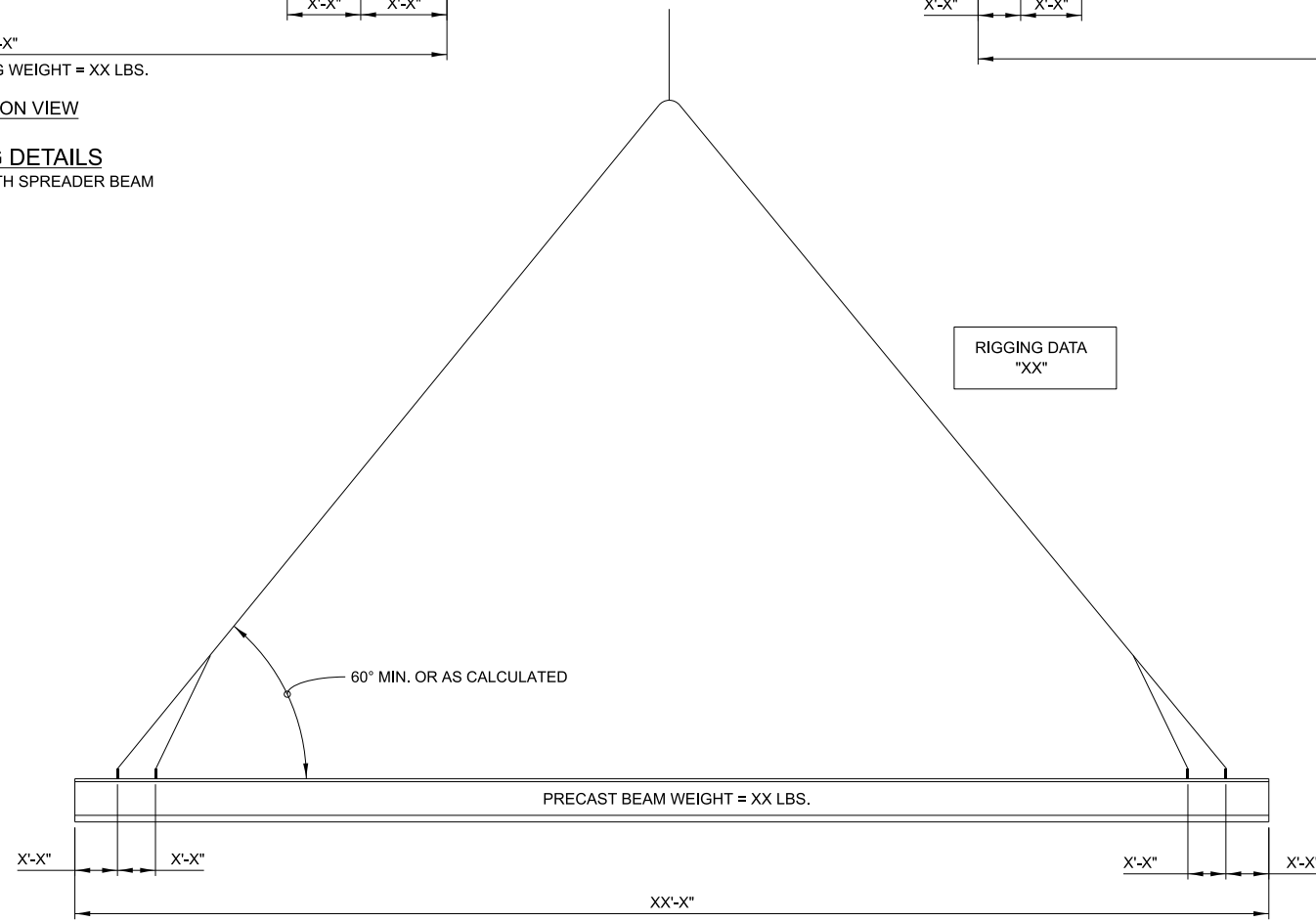
VERSION: 2021-03	BASE SHEET: M-BRG-526	SHEET: 1 OF 3
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ELEVATION VIEW
RIGGING DETAILS
 SINGLE CRANE WITH SPREADER BEAM



ELEVATION VIEW
RIGGING DETAILS
 TWO CRANE



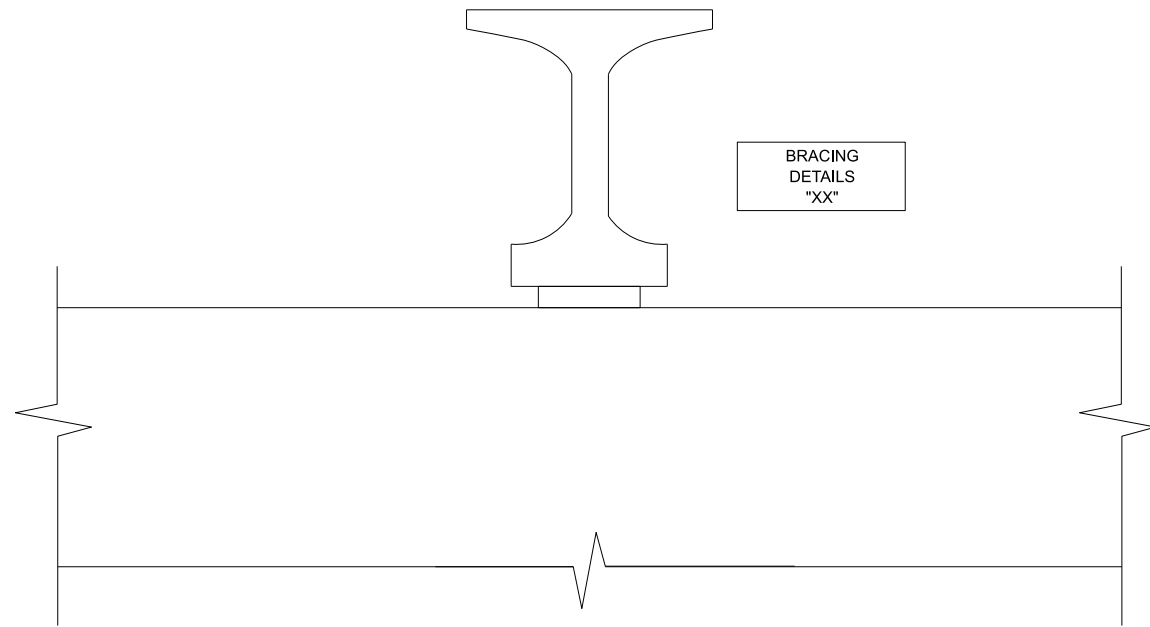
ELEVATION VIEW
RIGGING DETAILS
 SINGLE CRANE

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.

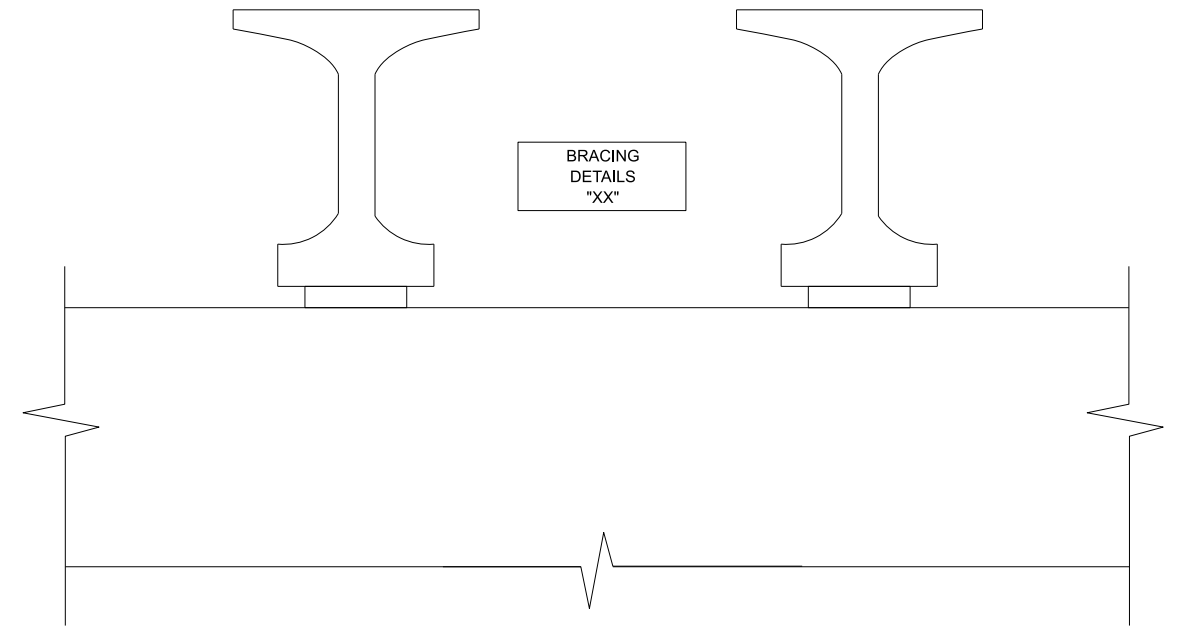
NOTE TO DESIGNER
 THIS BASE SHEET DEPICTS DEMOLITION OF CONCRETE GIRDERS, STEEL GIRDERS WOULD BE SIMILAR.
 "XX" DESIGNATES DIMENSION VALUES OR INPUT DATA TO BE PROVIDED ON SUBMITTED DRAWING.
 SPECIFY CENTER OF GRAVITY OF LOAD.




DEMOLITION PLAN



TEMPORARY DEMOLITION BRACING DETAIL





TEMPORARY DEMOLITION BRACING DETAIL



NOTE TO DESIGNER

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NOTE TO DESIGNER

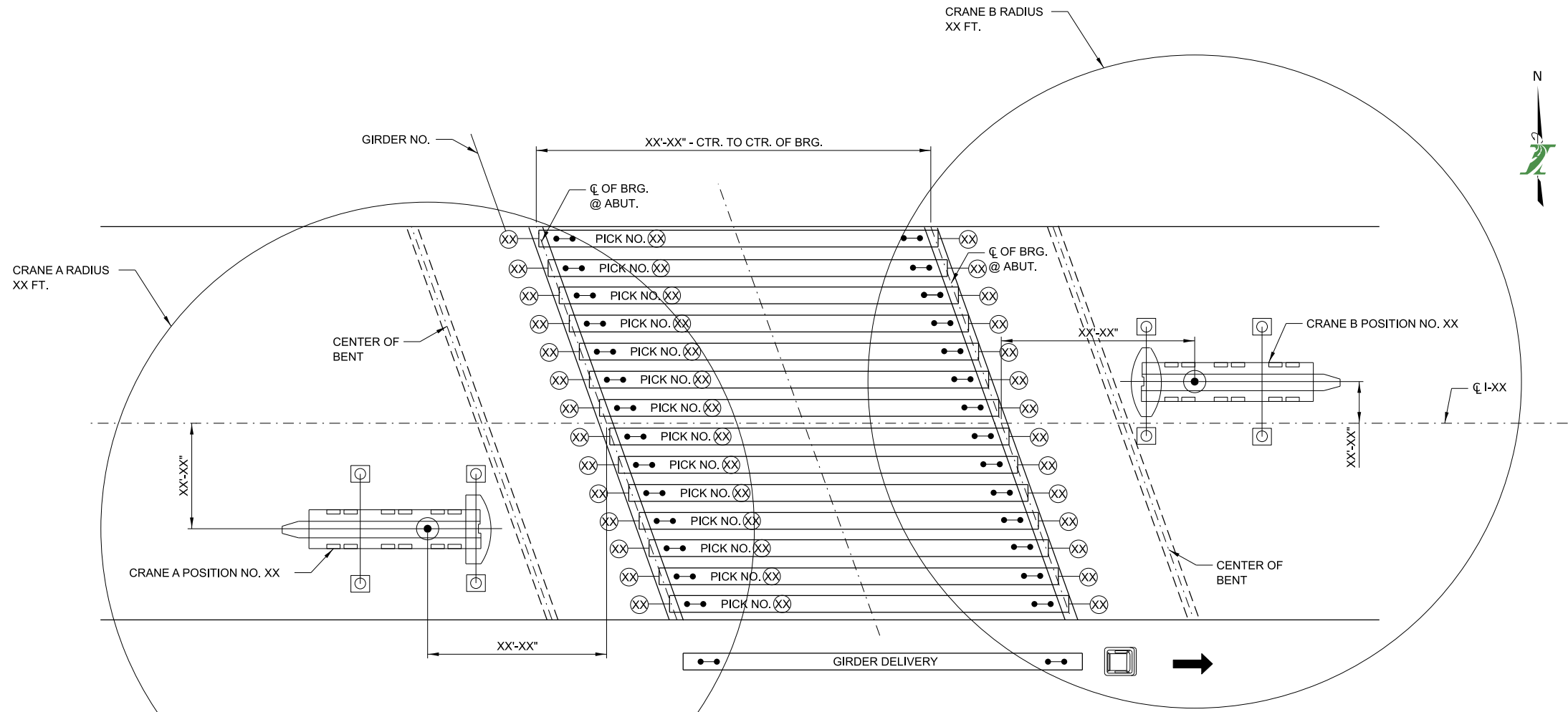
 THIS BASE SHEET DEPICTS DEMOLITION OF CONCRETE GIRDERS, STEEL GIRDERS WOULD BE SIMILAR.

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





DEMOLITION PLAN



NOTE TO DESIGNER / CONTRACTOR

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. THIS SHEET IS TO BE USED AS A GUIDE BY THE CONTRACTOR FOR PREPARATION OF AN ERECTION SUBMITTAL PER THE CONTRACT REQUIREMENTS. MICROSTATION FILES ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE.

- 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.

ERECTION 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 _____.
8. SPOTTER IS REQUIRED / NOT REQUIRED. PUBLIC UTILITY CONTACT REQUIRED (LIST CONTACT INFORMATION).
9. _____

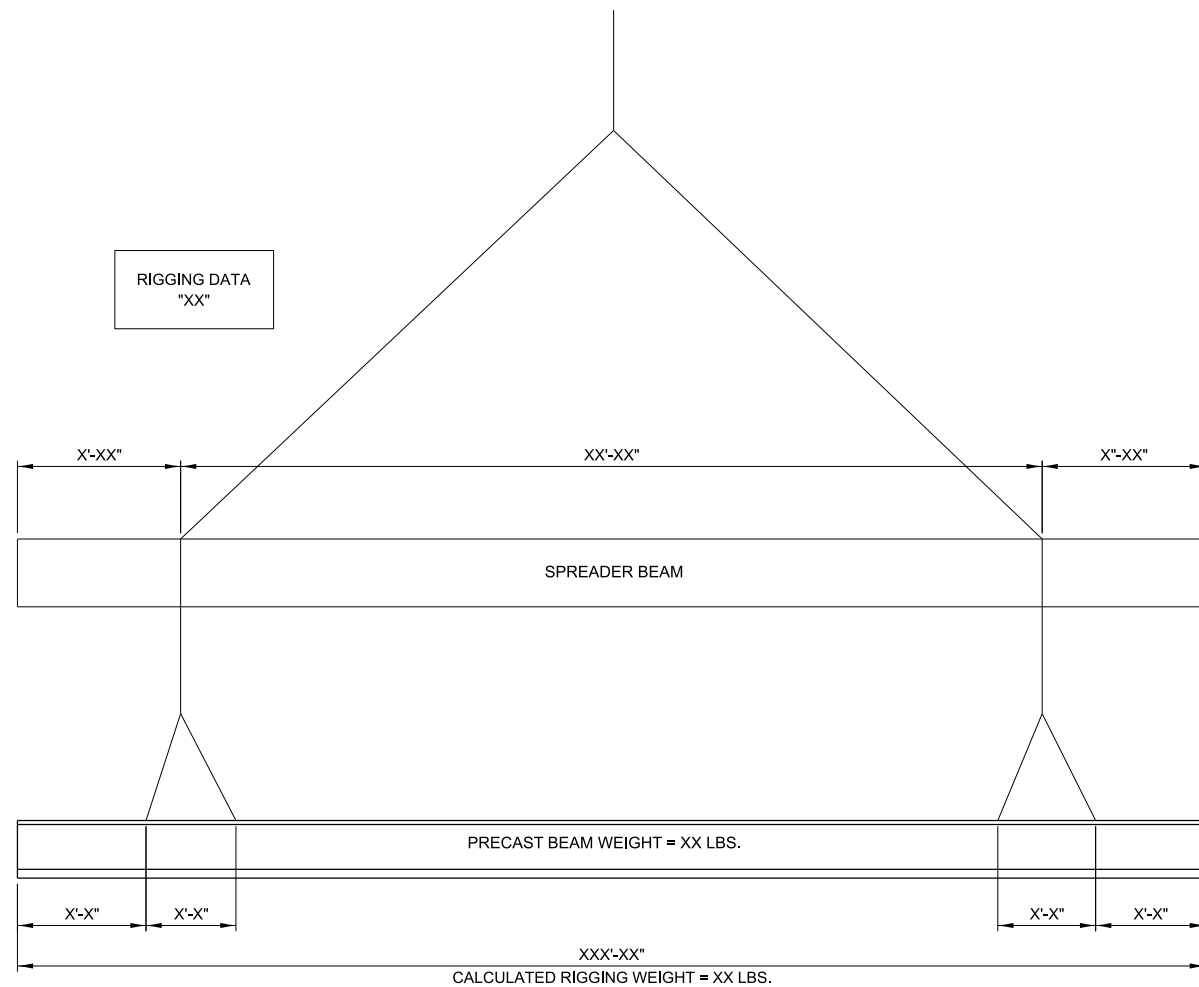
ERECTION SEQUENCE:

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

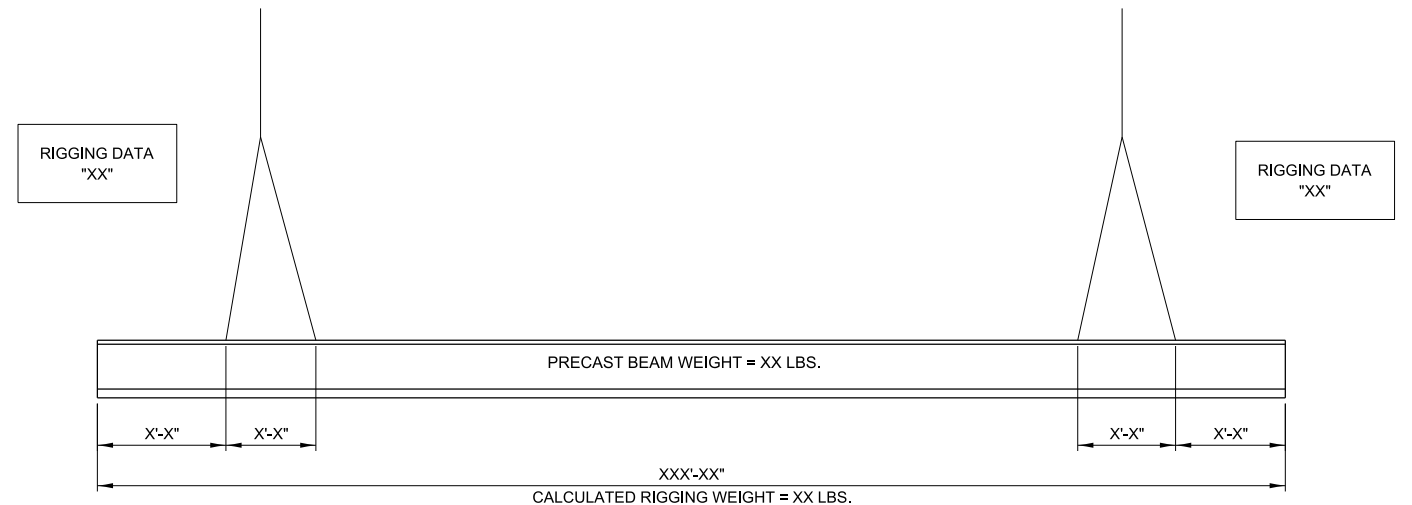


ERECTION PLAN - CONCRETE

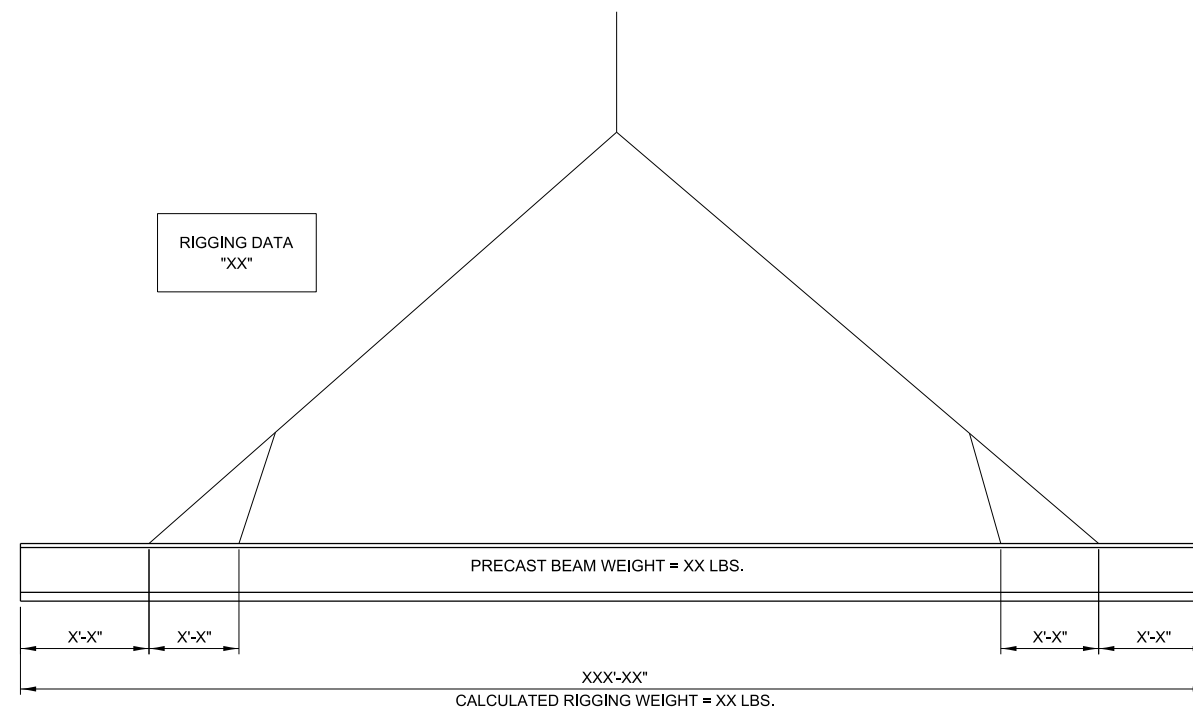
VERSION: 2021-03	BASE SHEET: M-BRG-527	SHEET: 1 OF 3
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ELEVATION VIEW
RIGGING DETAILS
SINGLE CRANE WITH SPREADER BEAM



ELEVATION VIEW
RIGGING DETAILS
TWO CRANE



ELEVATION VIEW
RIGGING DETAILS
SINGLE CRANE

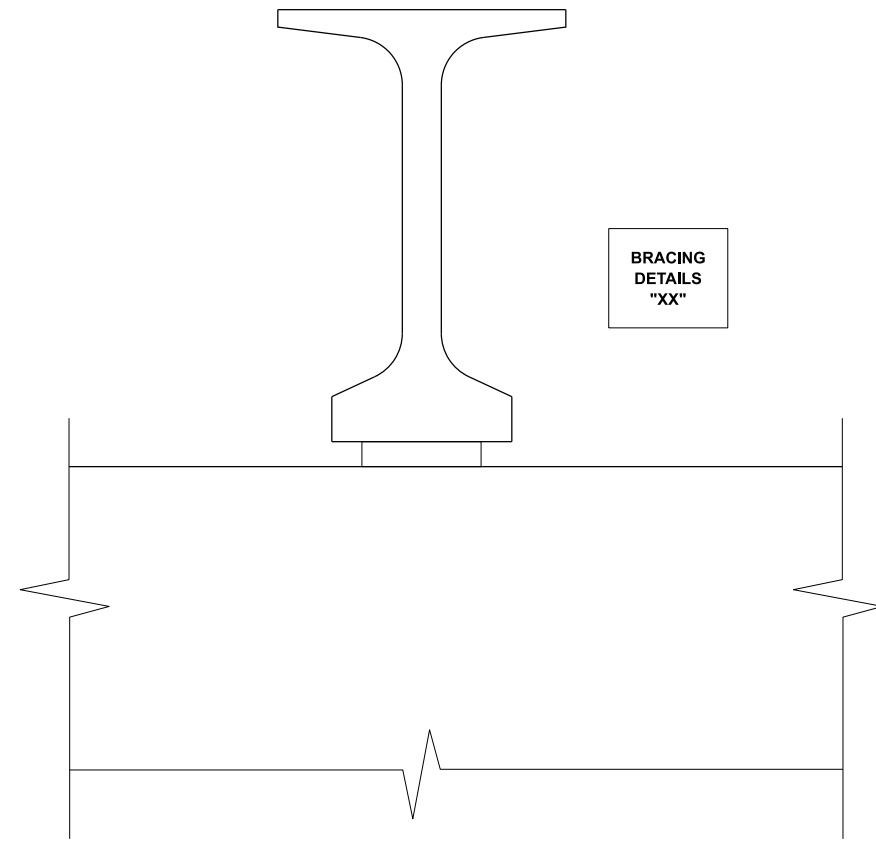
NOTE TO DESIGNER / CONTRACTOR

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. THIS SHEET IS TO BE USED AS A GUIDE BY THE CONTRACTOR FOR PREPARATION OF AN ERECTION SUBMITTAL PER THE CONTRACT REQUIREMENTS. MICROSTATION FILES ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE.

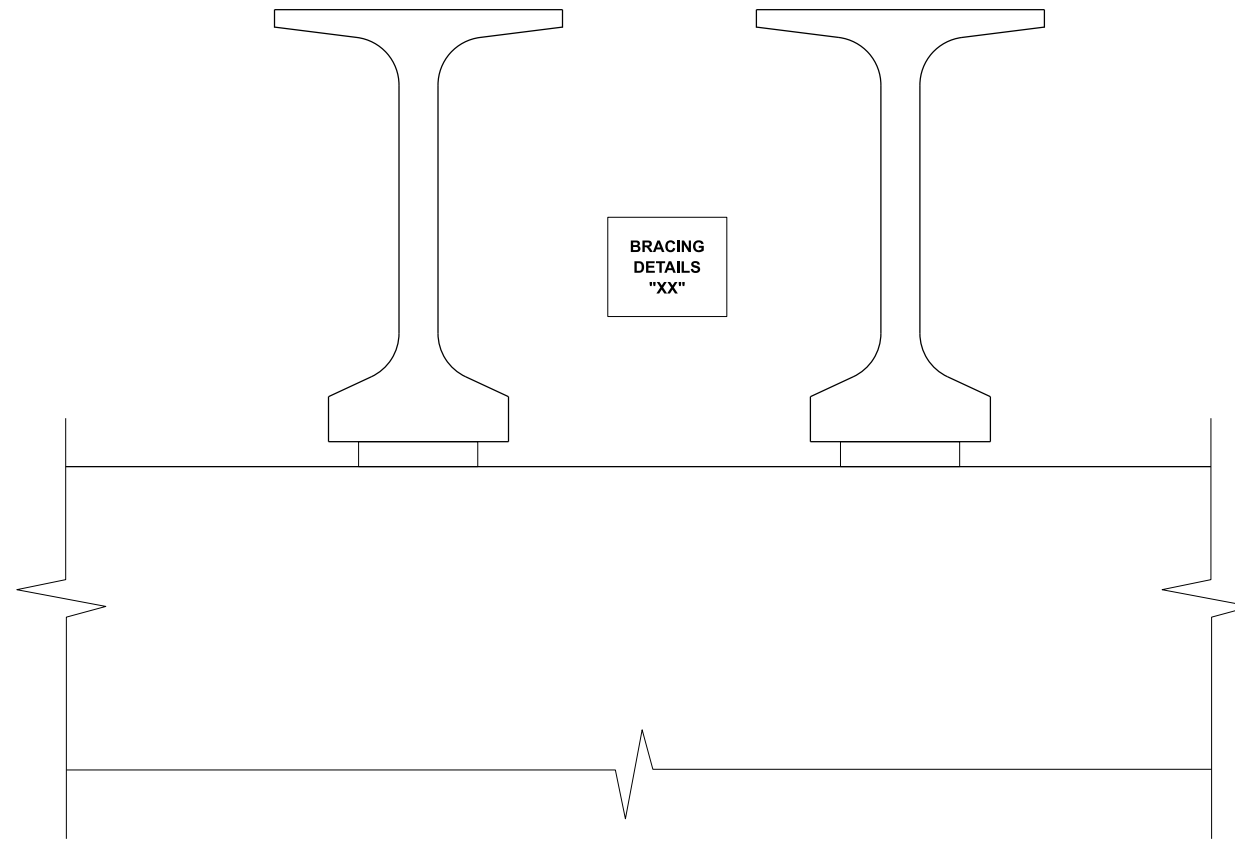
- "XX" DESIGNATES DIMENSION VALUES OR PROVIDED DATA TO BE PROVIDED ON SUBMITTED DRAWING.
- SPECIFY CENTER OF GRAVITY OF LOAD.




ERECTION PLAN - CONCRETE



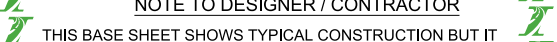
TEMPORARY ERECTION
BRACING DETAIL

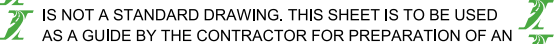



TEMPORARY ERECTION
BRACING DETAIL





NOTE TO DESIGNER / CONTRACTOR



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IS NOT A STANDARD DRAWING. THIS SHEET IS TO BE USED



AS A GUIDE BY THE CONTRACTOR FOR PREPARATION OF AN



ERECTION SUBMITTAL PER THE CONTRACT REQUIREMENTS.


MICROSTATION FILES ARE AVAILABLE ON THE ILLINOIS


TOLLWAY WEBSITE.

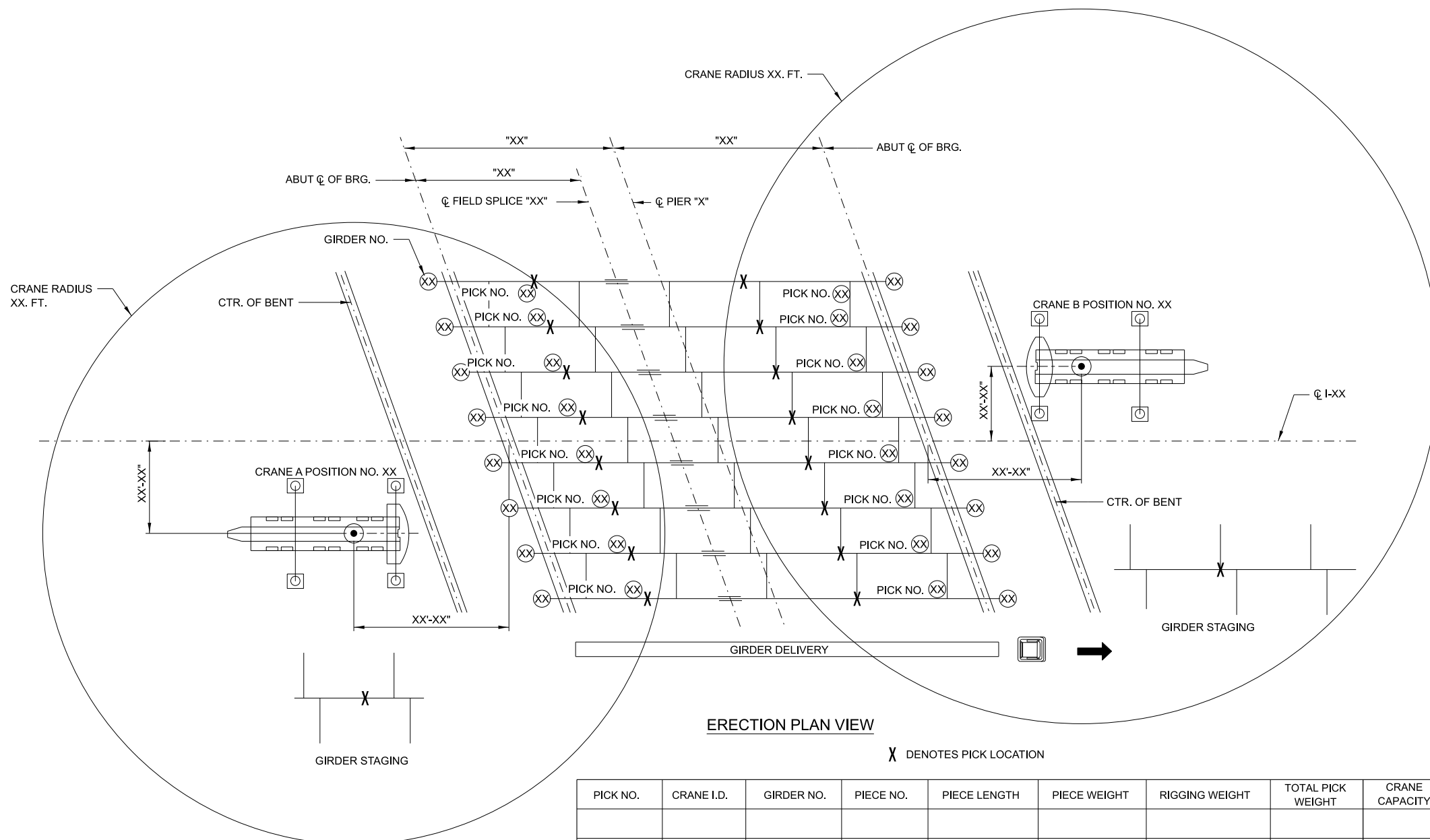

• "XX" DESIGNATES DIMENSION VALUES OR PROVIDED DATA


TO BE PROVIDED ON SUBMITTED DRAWING.





ERECTION PLAN - CONCRETE



ERECTION PLAN VIEW

X DENOTES PICK LOCATION

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

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.

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:

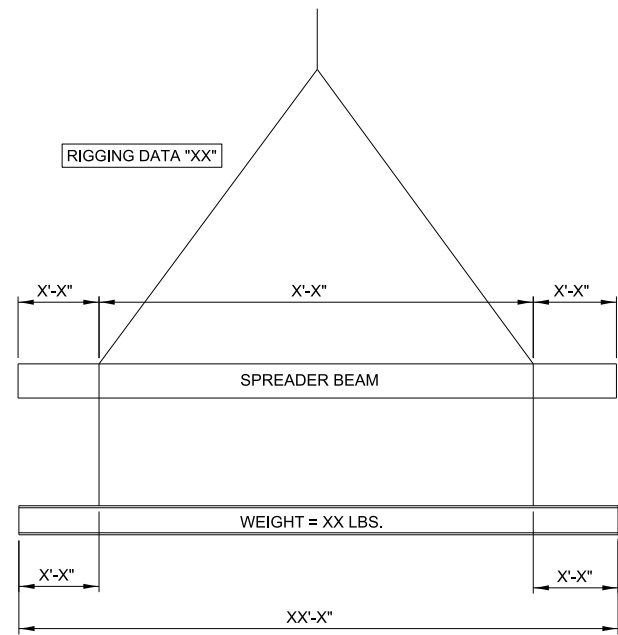
1. ACCESS AND EGRESS FOR THE ASSEMBLY AND DISASSEMBLY OF THE CRANE AND THE MATERIALS TO BE LIFTED WILL BE _____.
2. FEDERAL AVIATION ADMINISTRATION (FAA) RESTRICTIONS _____.
3. CRANE REACTIONS _____ SITE GROUND IS SUITABLE / NON SUITABLE FOR CRANE OPERATION. PAD SIZE _____.
4. CRANE'S SUPERSTRUCTURE 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"



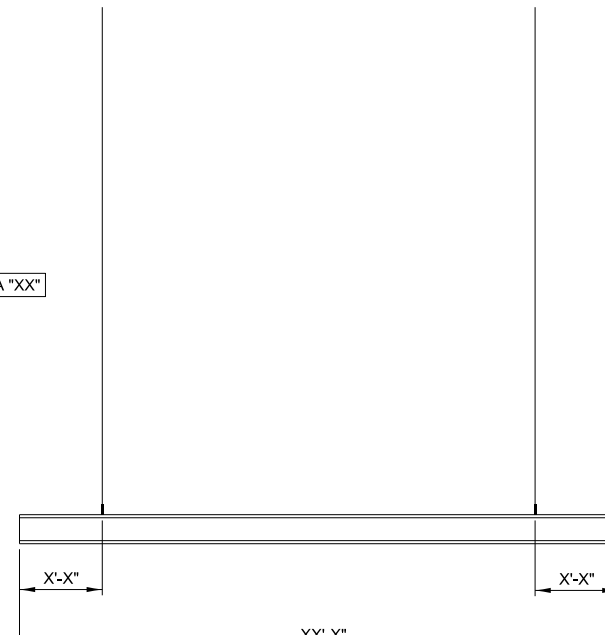
ERECTION PLAN - STEEL



CALCULATED RIGGING WEIGHT = XX LBS.

ELEVATION VIEW

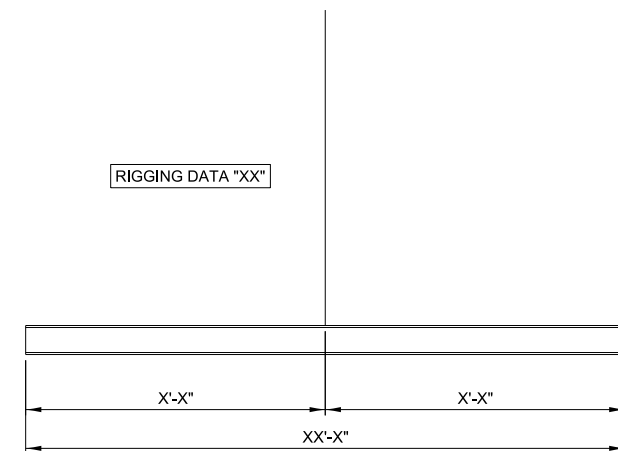
RIGGING DETAILS
SINGLE CRANE WITH SPREADER BEAM



CALCULATED RIGGING WEIGHT = XX LBS.

ELEVATION VIEW

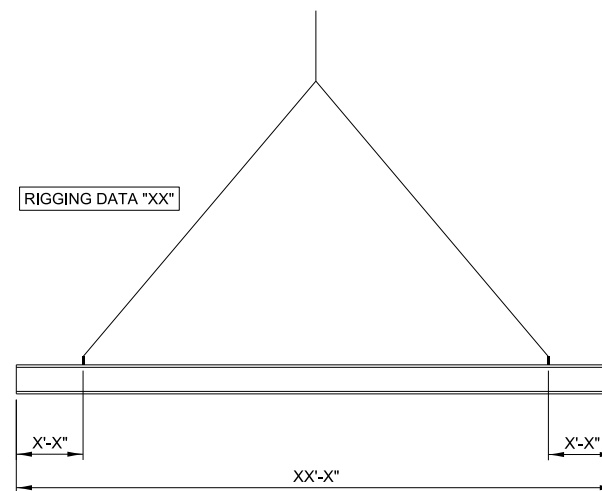
RIGGING DETAILS
TWO CRANE



CALCULATED RIGGING WEIGHT = XX LBS.

ELEVATION VIEW

RIGGING DETAILS
SINGLE CRANE



CALCULATED RIGGING WEIGHT = XX LBS.

ELEVATION VIEW

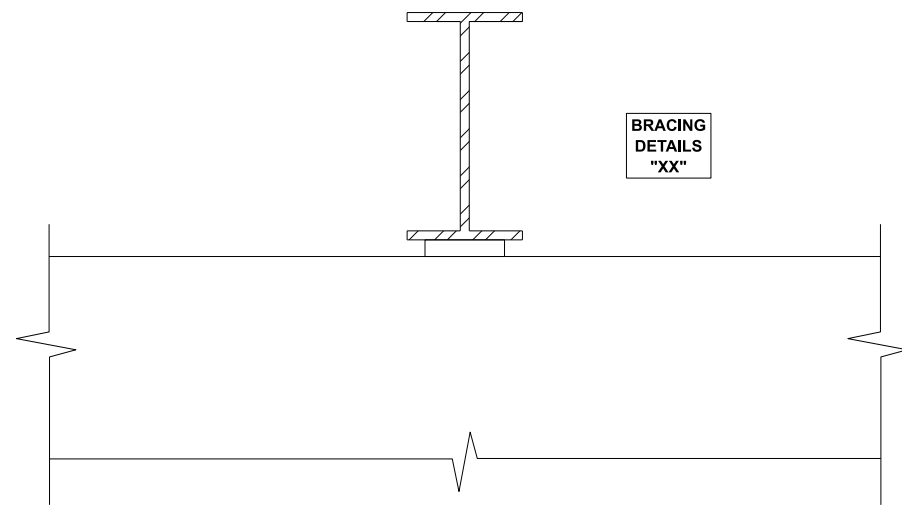
RIGGING DETAILS
SINGLE CRANE

|||||
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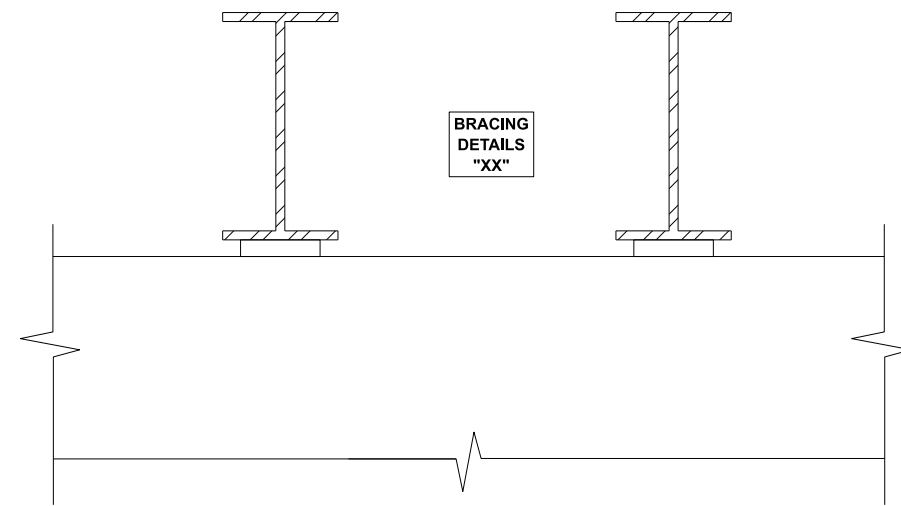
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NOTE TO DESIGNER
"XX" DESIGNATES DIMENSION VALUES OR INPUT DATA TO BE PROVIDED ON SUBMITTED DRAWING.
SPECIFY CENTER OF GRAVITY OF LOAD.



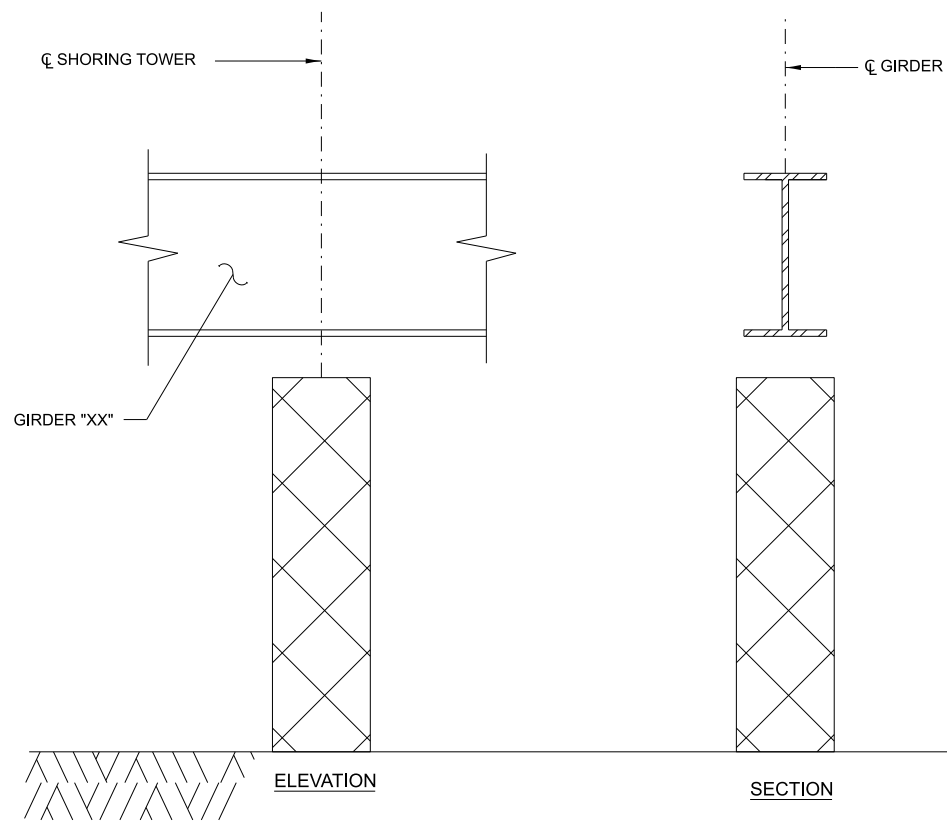
ERECTION PLAN - STEEL



TEMPORARY ERECTION BRACING DETAIL



TEMPORARY ERECTION BRACING DETAIL



TEMPORARY SHORING DETAILS

NOTE TO DESIGNER
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NOTE TO DESIGNER
 "XX" DESIGNATES DIMENSION VALUES OR INPUT DATA TO BE PROVIDED ON SUBMITTED DRAWING.
 PROPOSED TEMPORARY SHORING AND DETAILS SHALL BE SHOWN.



ERECTION PLAN - STEEL

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.

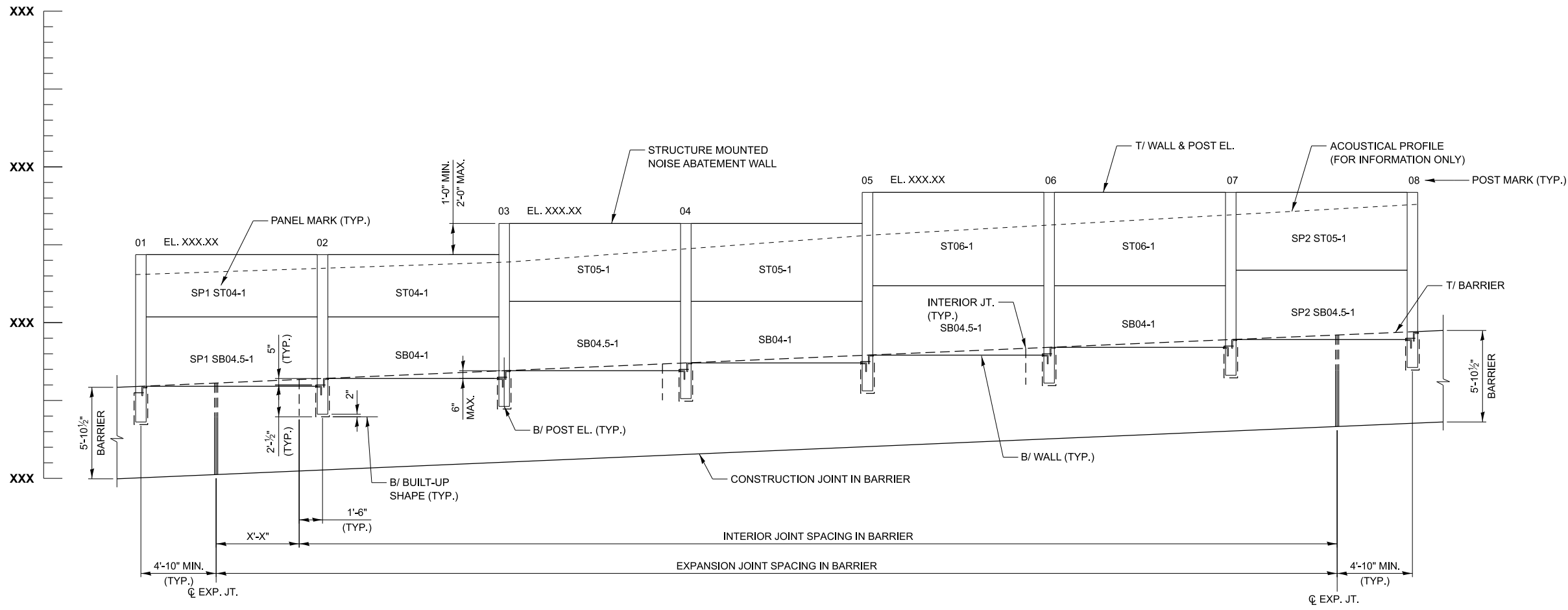
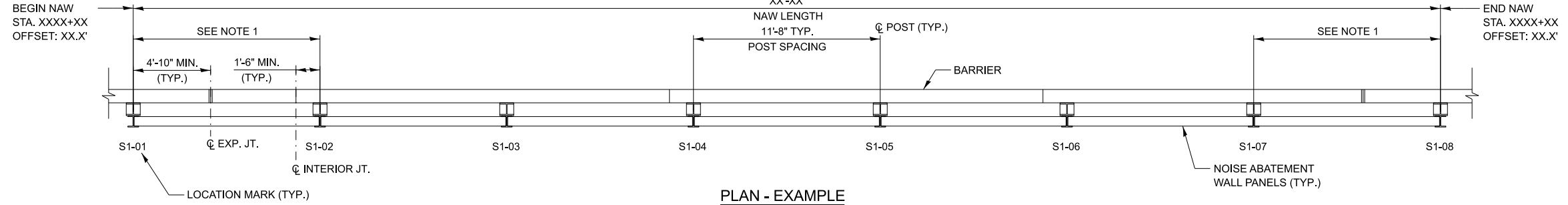
THE PLAN AND ELEVATION ON THIS COVER SHEET REPRESENTS ADDITIONAL INFORMATION TO SHOW ON THE GP&E SHEET. THE GP&E SHEET AND REMAINING NAW PLANS SHALL BE IN ACCORDANCE WITH ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ARTICLES 6.2.5 AND 23.3.

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
 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 1/4" GAP BETWEEN PANELS.

NOTE TO DESIGNER
 INCLUDE ACOUSTICAL PROFILE FOR INFORMATION ONLY.



STRUCTURE MOUNTED NOISE ABATEMENT WALL COVER SHEET

VERSION: 2025-03	BASE SHEET: M-BRG-529	SHEET: 1 OF 3
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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"	5 1/2"	X
*SB04.5-1	4'-6"	11'-6"	5 1/2"	X
SC04-1	4'-0"	11'-6"	5 1/2"	X
ST04-1	4'-0"	11'-6"	5 1/2"	X
ST05-1	5'-0"	11'-6"	5 1/2"	X
ST06-1	6'-0"	11'-6"	5 1/2"	X
ST07-1	7'-0"	11'-6"	5 1/2"	X
ST08-1	8'-0"	11'-6"	5 1/2"	X
STF04-1	4'-0"	11'-6"	5 1/2"	X
STF04.5-1	4'-6"	11'-6"	5 1/2"	X
STF05-1	5'-0"	11'-6"	5 1/2"	X
STF05.5-1	5'-6"	11'-6"	5 1/2"	X
STF06-1	6'-0"	11'-6"	5 1/2"	X
STF06.5-1	6'-6"	11'-6"	5 1/2"	X
STF07-1	7'-0"	11'-6"	5 1/2"	X
STF07.5-1	7'-6"	11'-6"	5 1/2"	X
STF08-1	8'-0"	11'-6"	5 1/2"	X
*SPX SB04-1	4'-0"	XX'-X"	5 1/2"	X
*SPX SB04.5-1	4'-6"	XX'-X"	5 1/2"	X
SPX SC04-1	4'-0"	XX'-X"	5 1/2"	X
SPX ST04-1	4'-0"	XX'-X"	5 1/2"	X
SPX ST05-1	5'-0"	XX'-X"	5 1/2"	X
SPX ST06-1	6'-0"	XX'-X"	5 1/2"	X
SPX ST07-1	7'-0"	XX'-X"	5 1/2"	X
SPX ST08-1	8'-0"	XX'-X"	5 1/2"	X
SPX STF04-1	4'-0"	XX'-X"	5 1/2"	X
SPX STF04.5-1	4'-6"	XX'-X"	5 1/2"	X
SPX STF05-1	5'-0"	XX'-X"	5 1/2"	X
SPX STF05.5-1	5'-6"	XX'-X"	5 1/2"	X
SPX STF06-1	6'-0"	XX'-X"	5 1/2"	X
SPX STF06.5-1	6'-6"	XX'-X"	5 1/2"	X
SPX STF07-1	7'-0"	XX'-X"	5 1/2"	X
SPX STF07.5-1	7'-6"	XX'-X"	5 1/2"	X
SPX STF08-1	8'-0"	XX'-X"	5 1/2"	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, XXXXXXXX

ILLINOIS TOLLWAY GEOTECHNICAL MANUAL, XXXXXXXX

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, XTH EDITION DATED XXXXXXXX

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 ISSUED XXXXXXXX

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED XXXXXXXX

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED XXXXXXXX

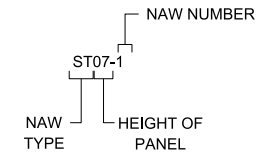
GENERAL NOTES

- CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.
- NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS SHALL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- 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.
- NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- 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.
- 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."
- 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.

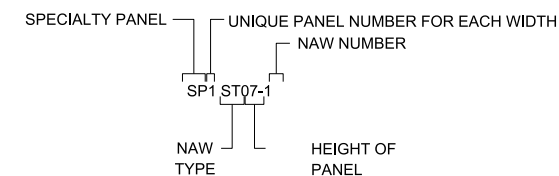
NOTE TO DESIGNER
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY 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
REPLACE XXXXXXXXXXXX WITH THE LATEST DATE

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

LIST OF ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABUT.	ABUTMENT
BK.	BACK
B.F.	BACK FACE
℄	BASILINE
BRG.	BEARING
BOTT.	BOTTOM
B/	BOTTOM OF
BM	BRIDGE MOUNTED
℄	CENTERLINE
CLR.	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
℄	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.

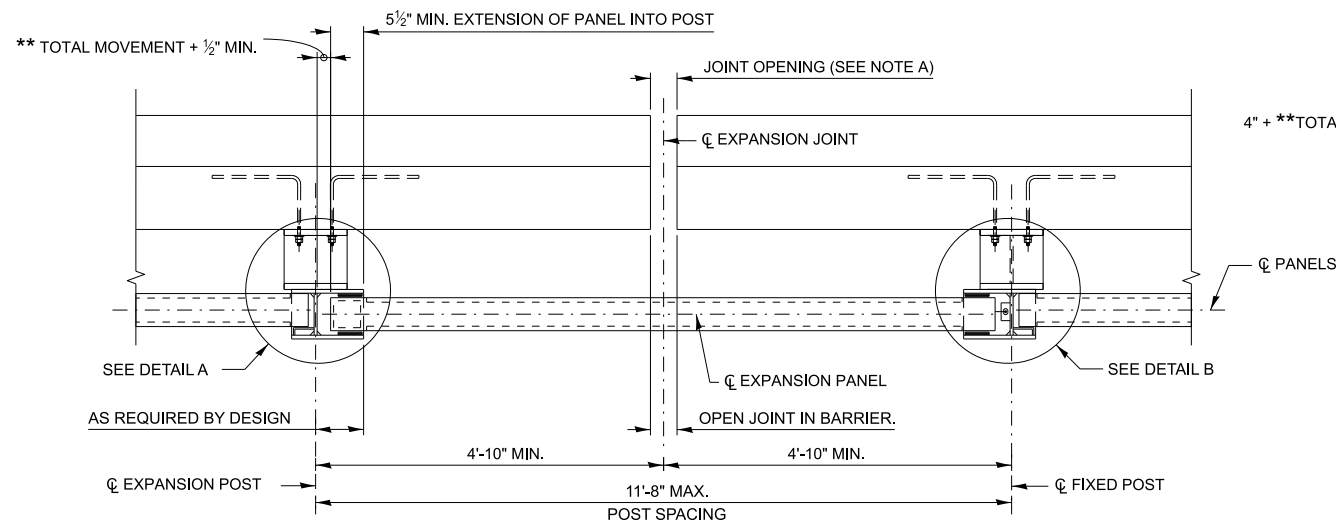
NOTE TO DESIGNER
FOR PROJECTS UTILIZING BUMP-OUTS. SEE M-BRG-531 SHEET 3 OF 4.

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

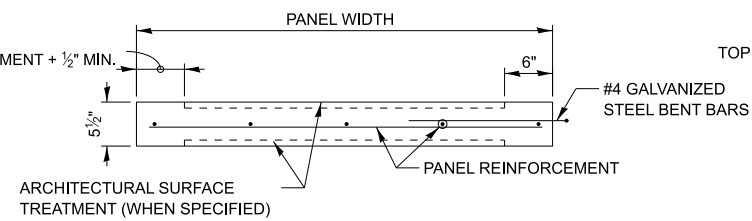


STRUCTURE MOUNTED NOISE ABATEMENT WALL SCHEDULE

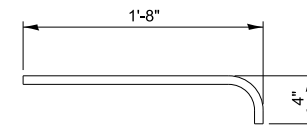


PLAN

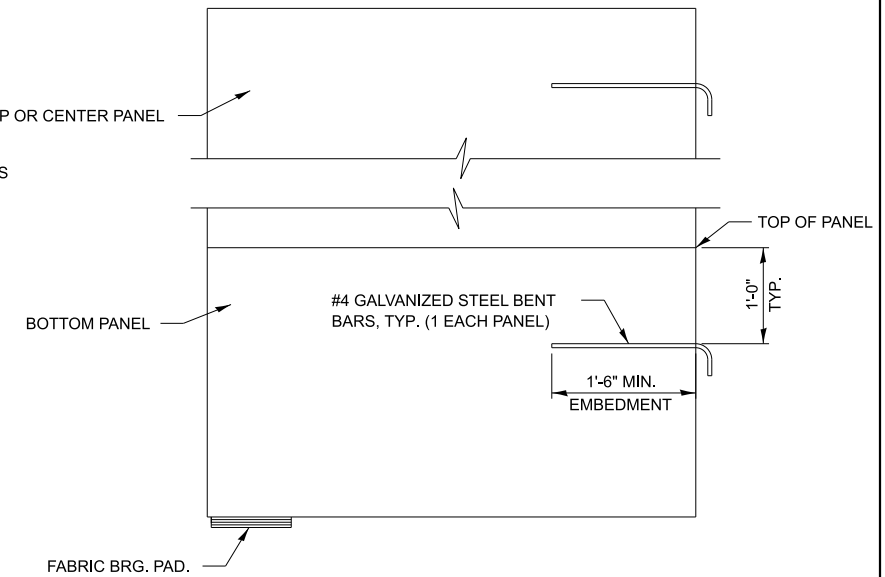
NOTE A
JOINT OPENING AS REQUIRED FOR BRIDGE
EXPANSION AND CONTRACTION AT 50°F.



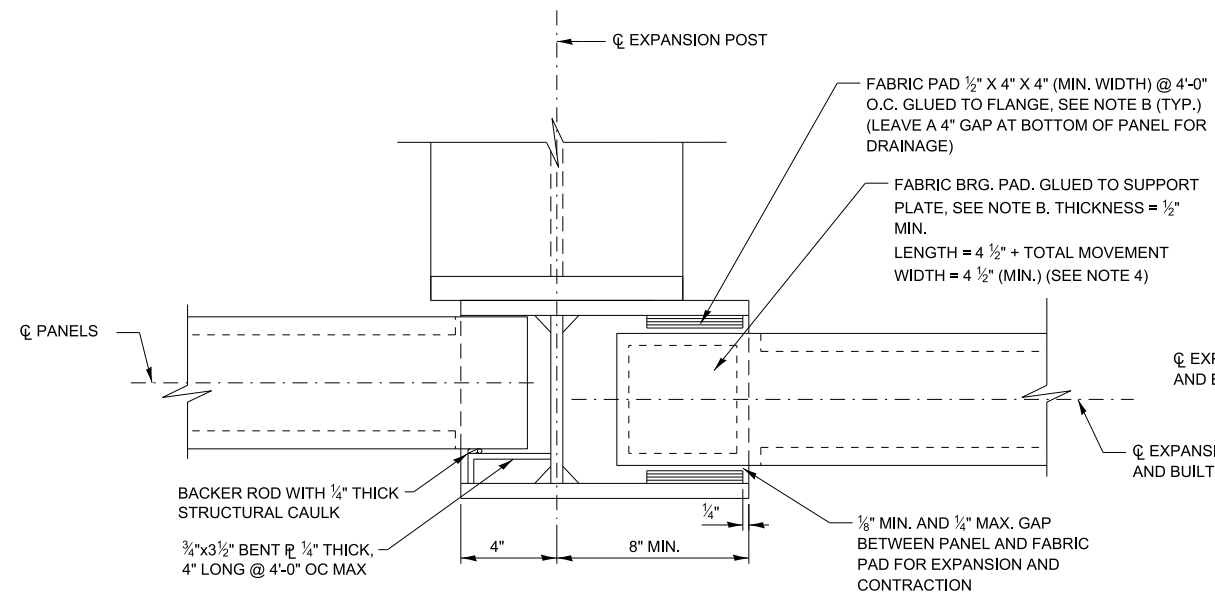
PRECAST CONCRETE EXPANSION PANEL



STEEL BENT BARS DETAIL

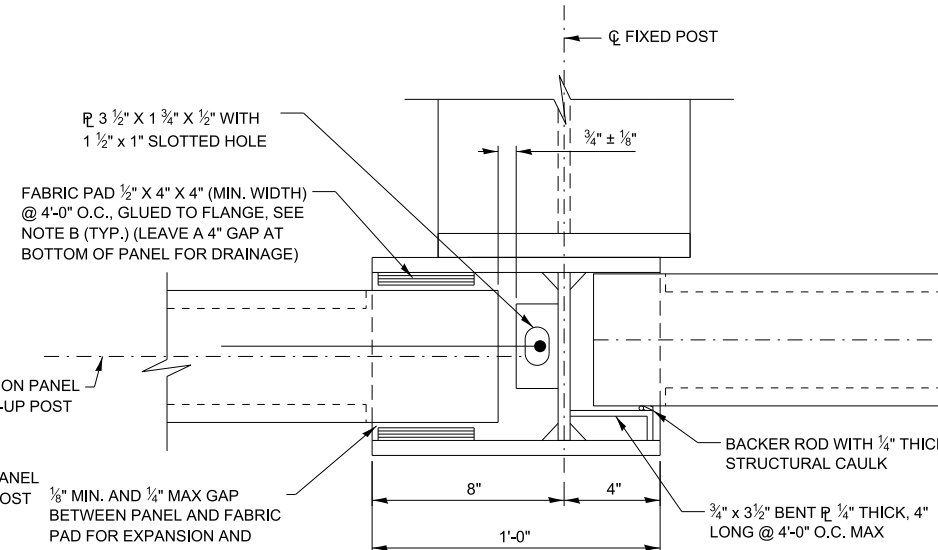


EXPANSION PANEL ELEVATION

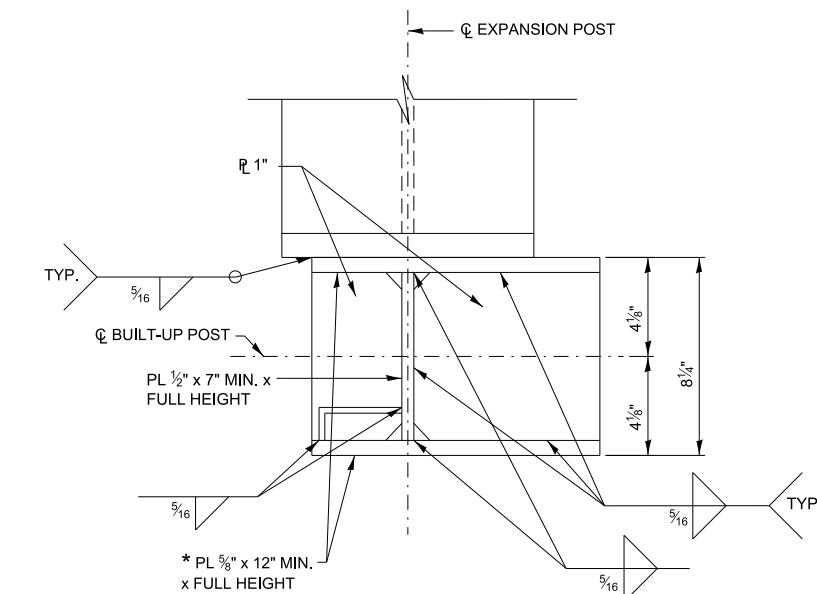


DETAIL A
(EXPANSION POST)

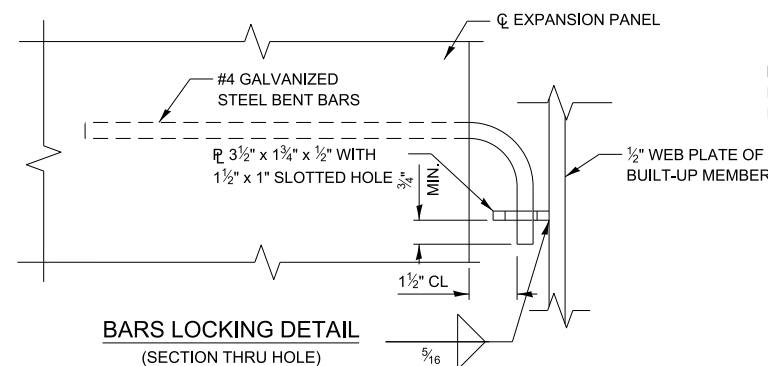
NOTE B
ADHESION OF THE PAD TO THE STEEL SHALL
BE PER SECTION 1083.02 OF THE STANDARD
SPECIFICATION.



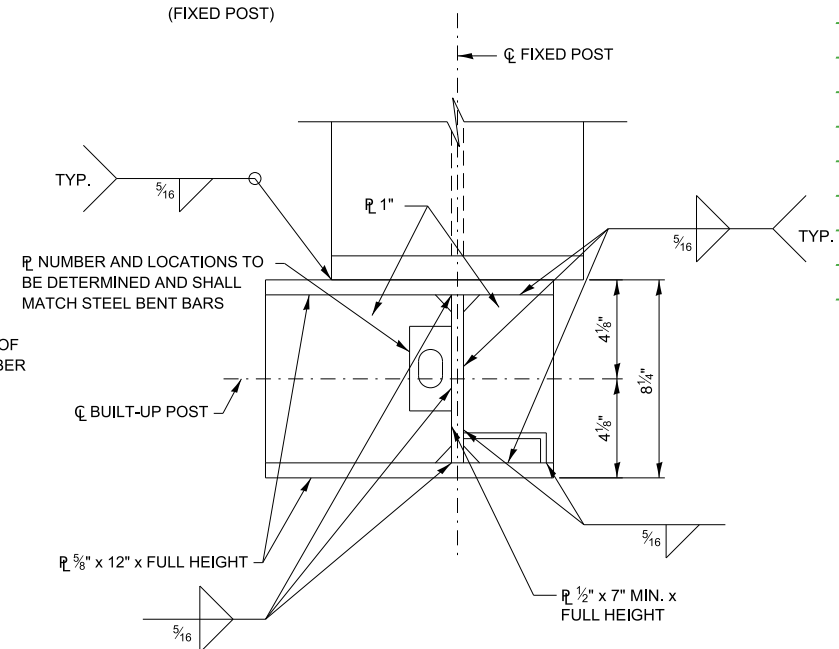
DETAIL B
(FIXED POST)



BUILT UP SHAPE
(AT EXPANSION POINT)



BARS LOCKING DETAIL
(SECTION THRU HOLE)



BUILT UP SHAPE
(AT 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.

- 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.



STRUCTURE MOUNTED NOISE
ABATEMENT WALL
EXPANSION DETAILS

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
 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.

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.

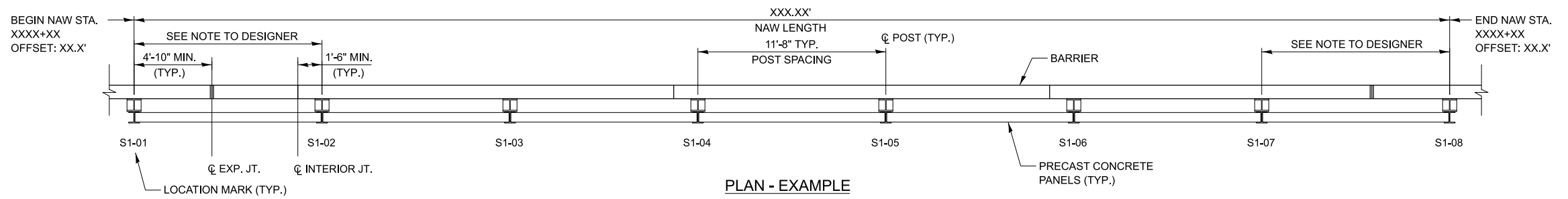
NOTE TO DESIGNER
 ELEVATIONS SHOULD ACCOUNT FOR 1/4" GAP BETWEEN PANELS.

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.

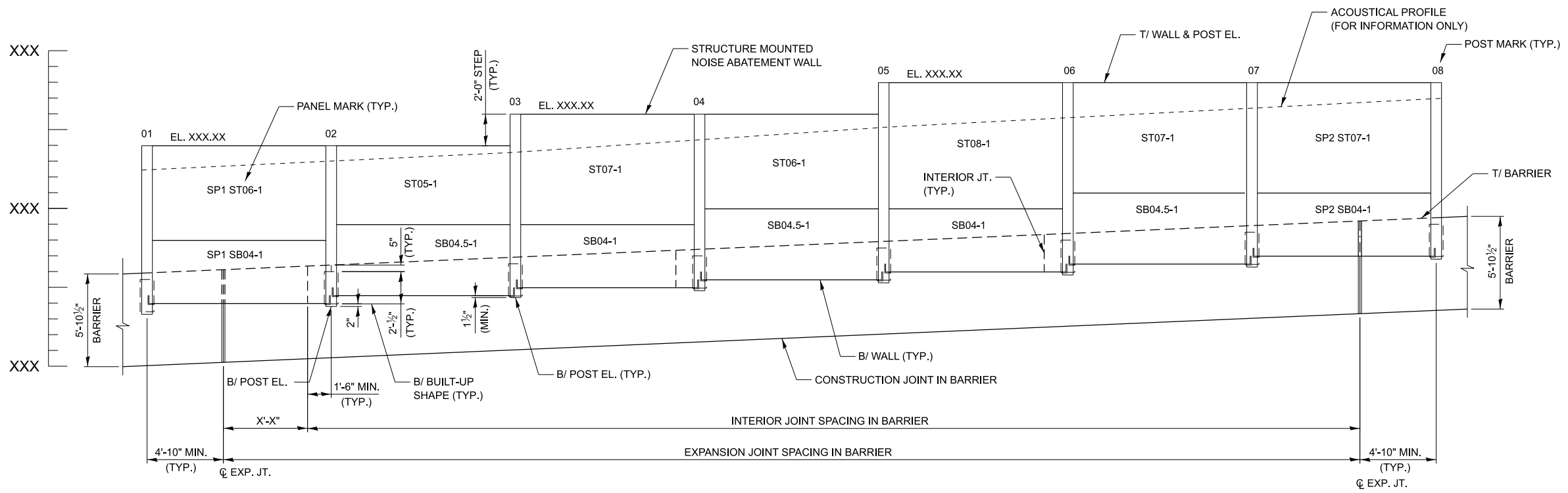
THIS BASE SHEET REPRESENTS THE TYPICAL DETAILS FOR STRUCTURE MOUNTED, NOISE ABATEMENT WALLS. THE DSE IS RESPONSIBLE FOR COMPLETING THE TABLES AND INCLUDE IN THEIR CONTRACT PLANS. IF ANY OF THE DESIGN PARAMETERS IN THE ILLINOIS TOLLWAY STANDARD ARE EXCEEDED, THE DSE WILL BE RESPONSIBLE FOR DESIGN CALCULATIONS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

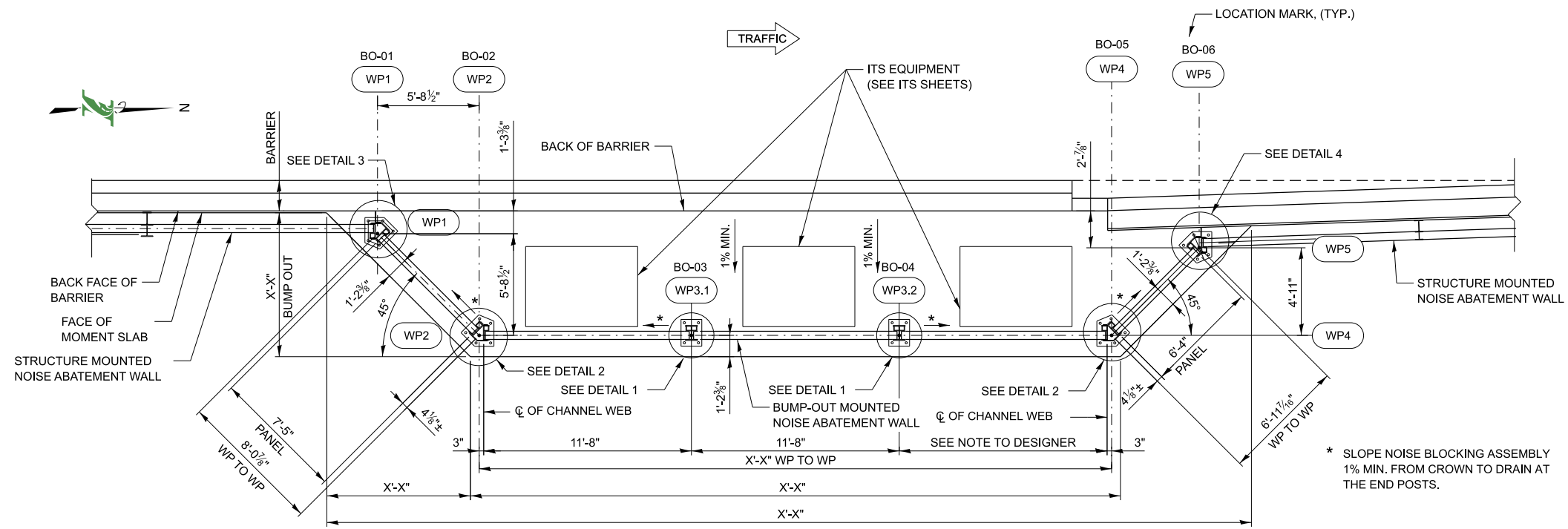


ELEVATION - EXAMPLE

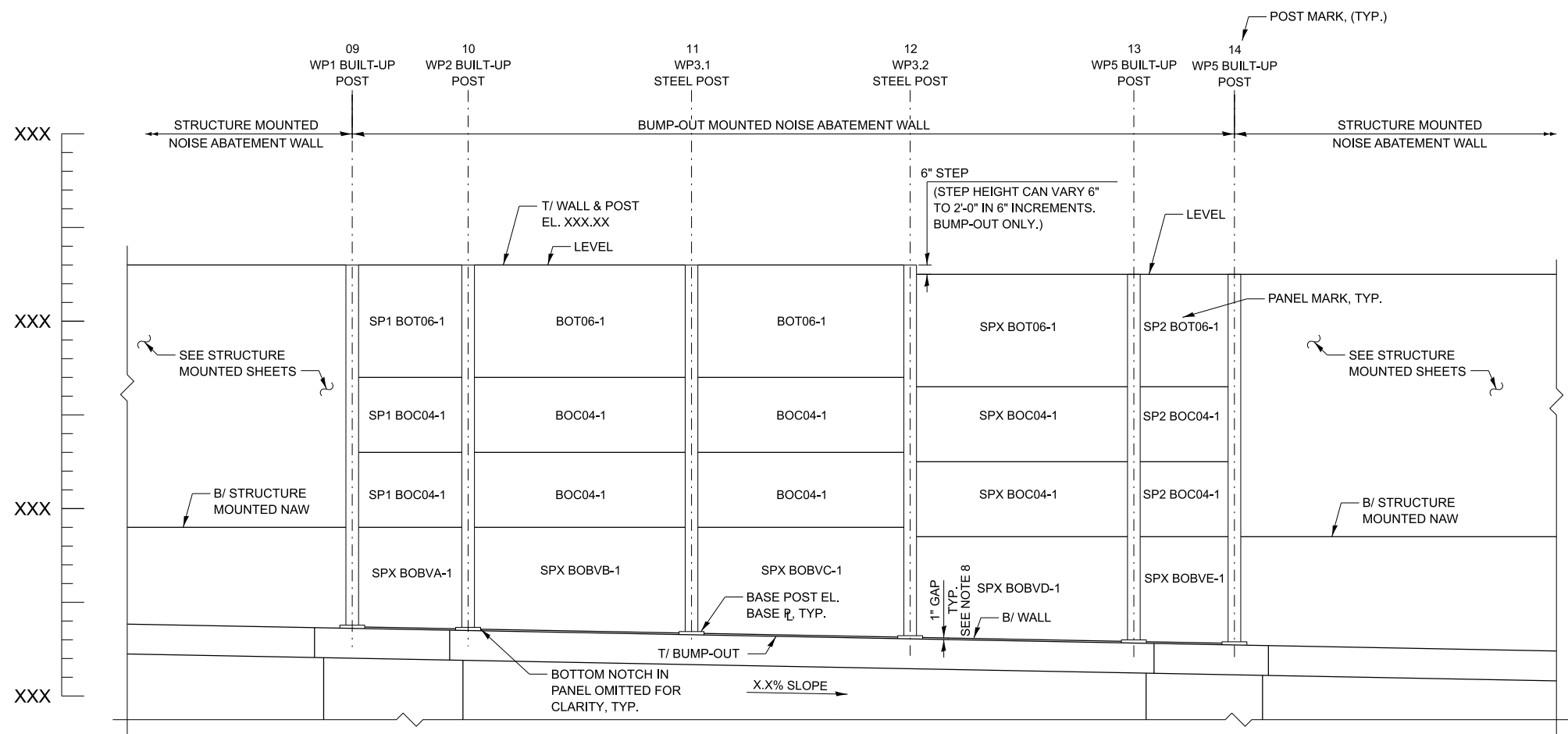


STRUCTURE MOUNTED NOISE ABATEMENT WALL COVER SHEET

VERSION: 2026-03	BASE SHEET: M-BRG-531	SHEET: 1 OF 4
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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
 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 THROUGH DETAIL 4.



BUMP-OUT MOUNTED NOISE ABATEMENT WALL COVER SHEET

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:**
- 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, XXXXXXXX

ILLINOIS TOLLWAY GEOTECHNICAL MANUAL, XXXXXXXX

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, XTH EDITION DATED XXXXXXXX

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 ISSUED XXXXXXXX

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED XXXXXXXX

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED XXXXXXXX



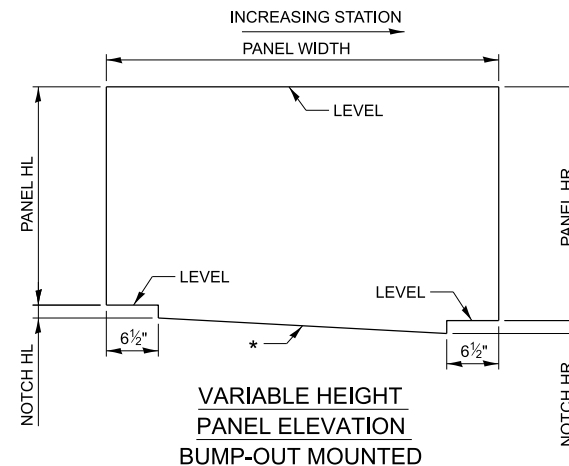
BUMP-OUT STRUCTURE MOUNTED PANEL SCHEDULE				
PANEL MARK	PANEL HEIGHT	PANEL WIDTH	TOTAL PANEL THICKNESS	NUMBER OF PANELS
**BOC04-1	4'-0"	11'-6"	5½"	X
**BOC04.5-1	4'-6"	11'-6"	5½"	X
BOT04-1	4'-0"	11'-6"	5½"	X
BOT05-1	5'-0"	11'-6"	5½"	X
BOT06-1	6'-0"	11'-6"	5½"	X
BOT07-1	7'-0"	11'-6"	5½"	X
BOT08-1	8'-0"	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:**
- 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.

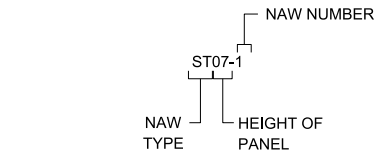
GENERAL NOTES

- CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.
- NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS SHALL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- 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.
- NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- 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.
- 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."
- 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.
- 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.

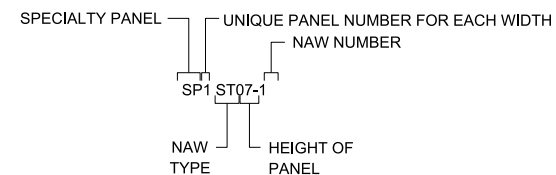
BUMP-OUT STRUCTURE MOUNTED VARIABLE HEIGHT PANEL SCHEDULE							
PANEL MARK	PANEL HL	NOTCH HL	PANEL HR	NOTCH HR	PANEL WIDTH	TOTAL PANEL THICKNESS	NUMBER OF PANELS
SPX BOBVA-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOBVB-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOBVC-1	X'-X"	X"	X'-X"	X"	X'-X"	5½"	X
SPX BOBVD-1	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



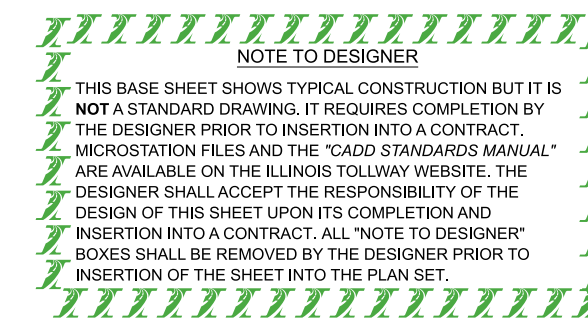
- NAW TYPE**
- STF = STRUCTURE MOUNTED FULL HEIGHT PANEL
 - ST = STRUCTURE MOUNTED TOP PANEL
 - SC = STRUCTURE MOUNTED CENTER PANEL
 - SB = STRUCTURE MOUNTED BOTTOM PANEL
 - BOTFV = BUMP-OUT STRUCTURE MOUNTED FULL HEIGHT PANEL (VARIABLE HEIGHT)
 - BOT = BUMP-OUT STRUCTURE MOUNTED TOP PANEL
 - BOC = BUMP-OUT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



TYPICAL PANEL NAMING CONVENTION



SPECIALTY PANEL NAMING CONVENTION



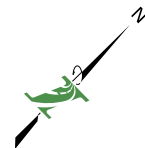
LIST OF ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABUT.	ABUTMENT
BK.	BACK
B.F.	BACK FACE
B	BASELINE
BRG.	BEARING
BOTT.	BOTTOM
B/	BOTTOM OF
BM	BRIDGE MOUNTED
CL	CENTERLINE
CLR.	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
PL	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



STRUCTURE MOUNTED NOISE ABATEMENT WALL SCHEDULE

VERSION: 2026-03	BASE SHEET: M-BRG-531	SHEET: 3 OF 4
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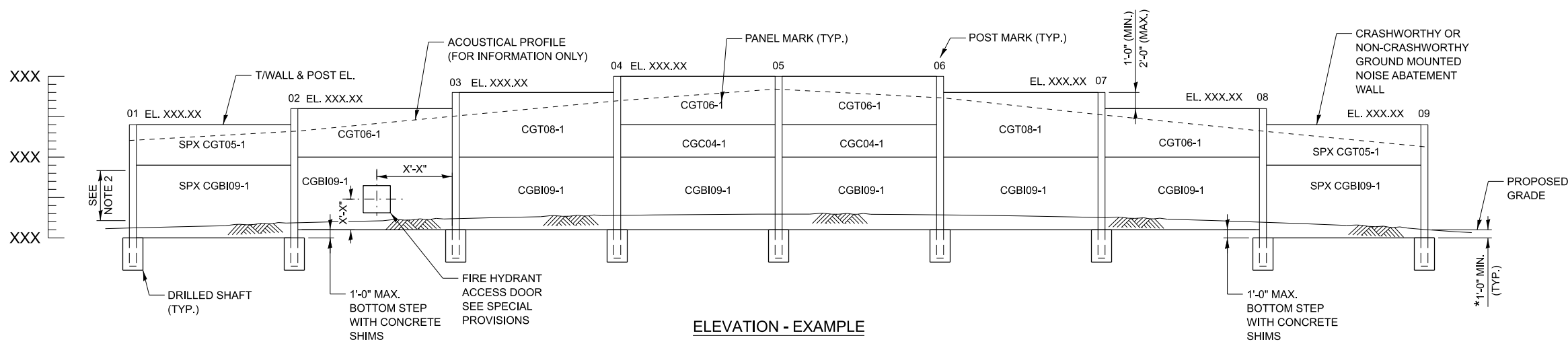
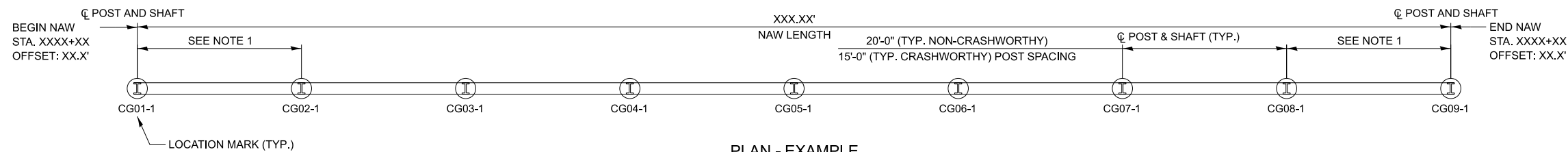


NOTE TO DESIGNER

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:

- 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.
- FOR CRASHWORTHY NAW, PANELS WITHIN 6FT ABOVE FACE OF ROADWAY PAVEMENT SHALL BE THE TL-4 IMPACT PANELS.

NOTE TO DESIGNER

* INCREASE TO ACCOMMODATE 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

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

INCLUDE ACOUSTICAL PROFILE FOR INFORMATION ONLY.

NOTE TO DESIGNER

ELEVATIONS SHOULD ACCOUNT FOR 1/4" GAP BETWEEN PANELS.



GROUND MOUNTED NOISE ABATEMENT WALL COVER SHEET

VERSION: 2025-03	BASE SHEET: M-BRG-532	SHEET: 1 OF 4
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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

- CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.
- NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS SHALL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- 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.
- NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- 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.
- 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."
- 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.
- 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
- CLR. 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
- ℄ 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
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

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, XXXXXXXX

ILLINOIS TOLLWAY GEOTECHNICAL MANUAL, XXXXXXXX

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, XTH EDITION DATED XXXXXXXX.

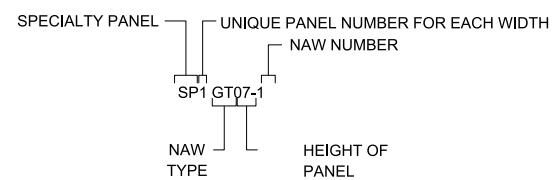
CONSTRUCTION SPECIFICATIONS

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

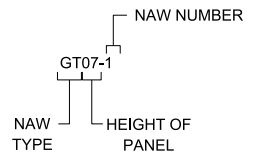
ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ISSUED XXXXXXXX

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED XXXXXXXX

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED XXXXXXXX



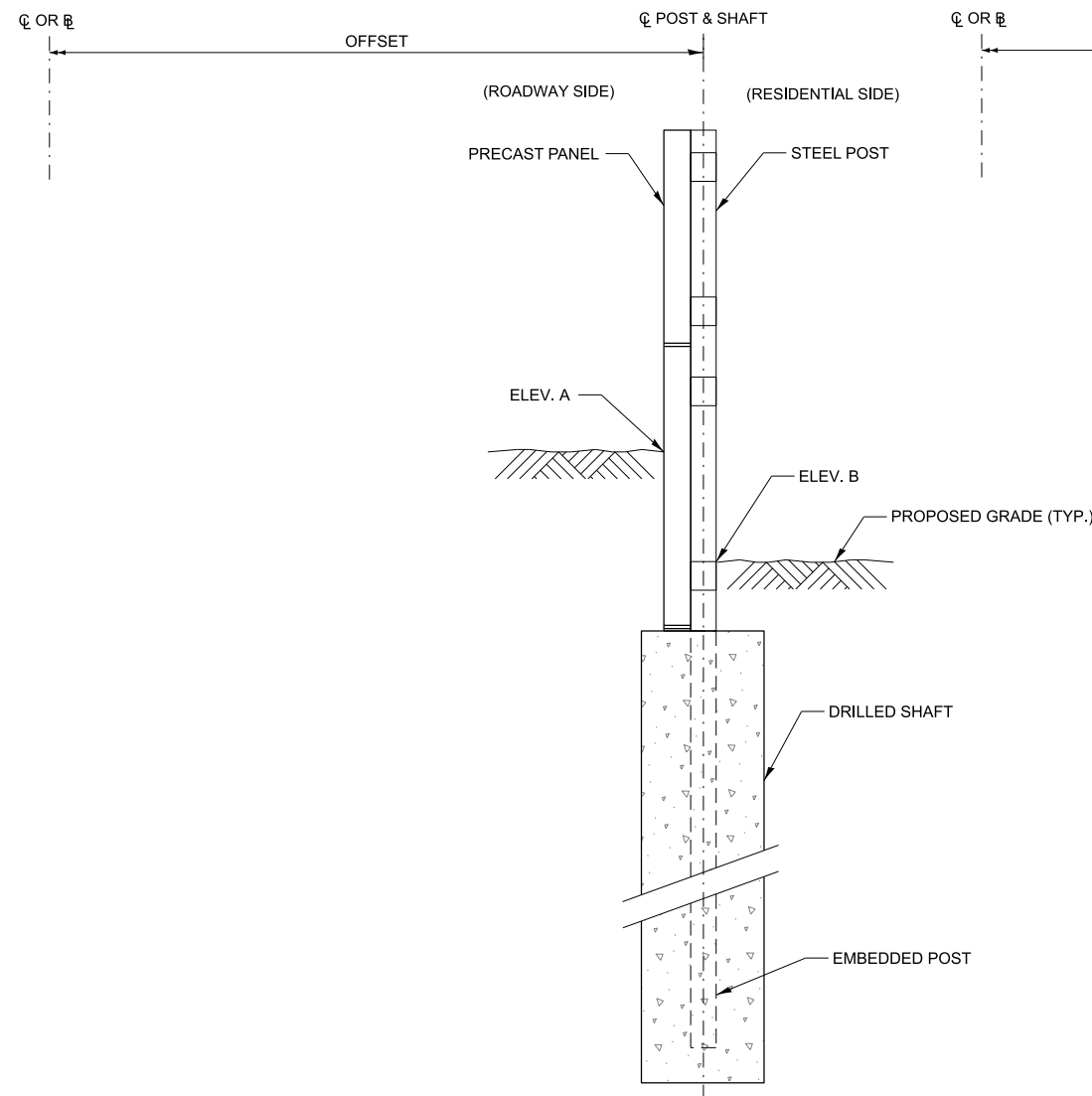
SPECIALTY PANEL NAMING CONVENTION



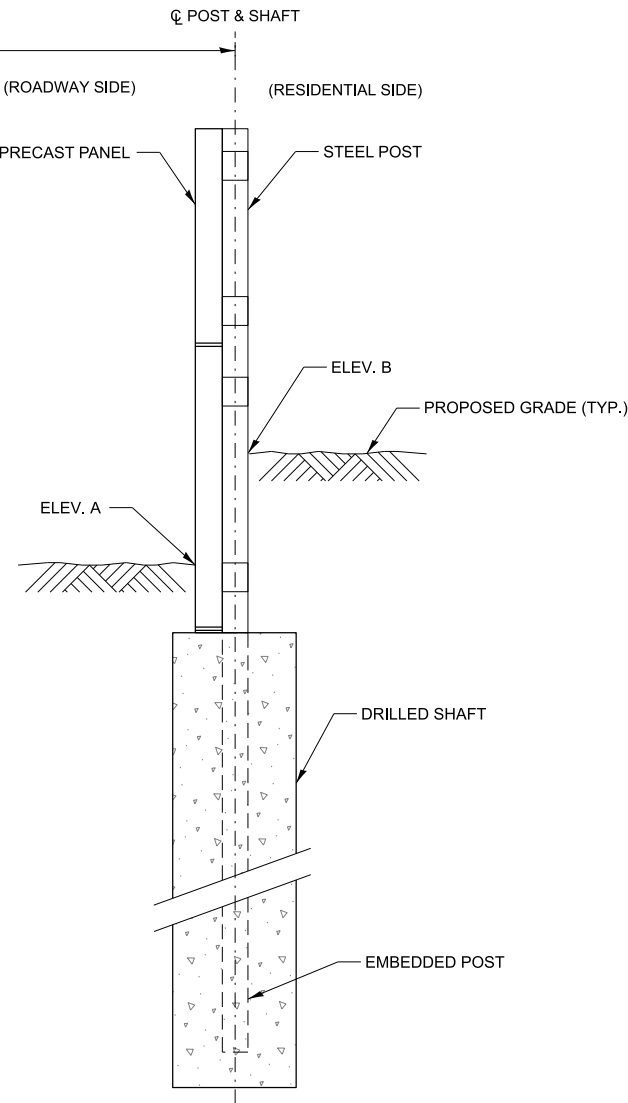
TYPICAL PANEL NAMING CONVENTION

GROUND MOUNTED NOISE ABATEMENT WALL SCHEDULE

VERSION: 2025-03 BASE SHEET: M-BRG-532 SHEET: 2 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
 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 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



GROUND MOUNTED NOISE ABATEMENT WALL DETAILS

BASE SHEETS



SERIES 600 (DRN)

DRAINAGE

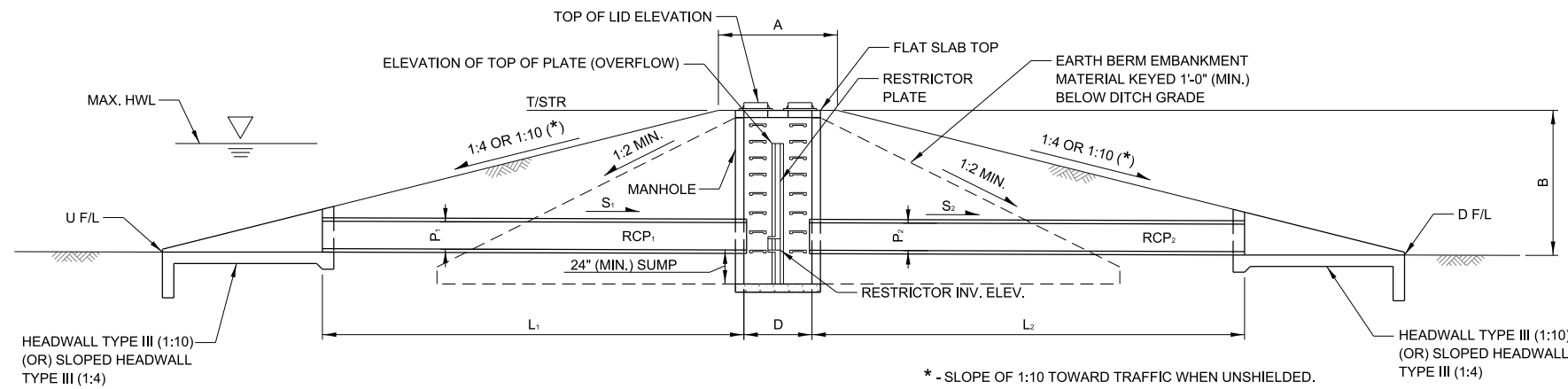
MARCH 2026

Illinois Tollway Base Sheet Revisions
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Section M	Base Sheet Drawings	
	Drawing	Modification Summary Effective: 03-01-2026
	Drainage (DRN)-Series 600	
	M-DRN-602	BIOSWALE
	Sheet 1	Added Note to Designer 3.
	M-DRN-607	NOISE ABATEMENT WALL DRAINAGE DETAILS (ROADWAY SIDE)
	Sheet 1	Added a 1'-0" minimum clearance between the drilled shaft and the edge of trench for concrete pipe in plan view.
		Changed drainage structures to Catch Basin, Type G-3, Modified.
		Added Note to Designer 3.
	M-DRN-609	STATION AND OFFSET FOR DRAINAGE STRUCTURES
	M-DRN-610	SINGLE FACE CONCRETE BARRIER WITH DRAINAGE STRUCTURE

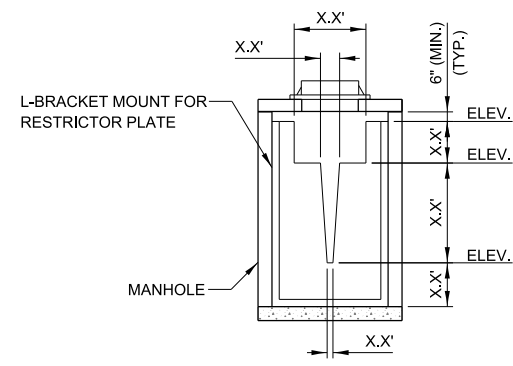
 **New Sheet**

 **Retired Standard**

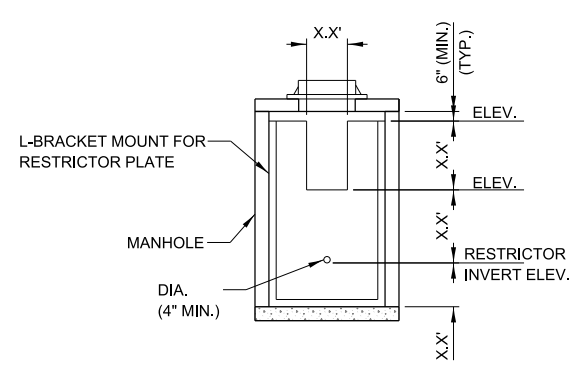


PROFILE VIEW

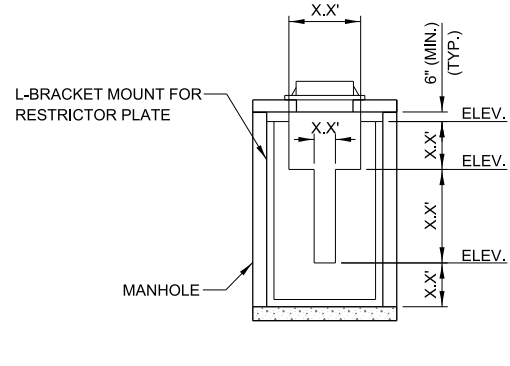
DESIGN ELEMENTS	UNITS	VALUES
DRAINAGE AREA	X (ACRES)	
STORAGE VOLUME	V (CU. YD.)	
CHECK DAM TOP WIDTH	A (FEET)	
CHECK DAM HEIGHT	B (FEET)	
MANHOLE	D (DIAMETER)	
MANHOLE-GRATE	TYPE	
HORIZONTAL PIPE (RCP) ₁	P ₁ (DIAMETER)	
HORIZONTAL PIPE (RCP) ₁	L ₁ (FEET)	
HORIZONTAL PIPE (RCP) ₁	S ₁ (SLOPE)	
HORIZONTAL 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)	



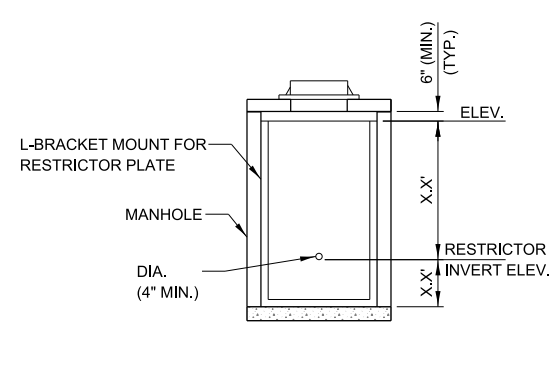
RESTRICTOR PLATE DETAIL



RESTRICTOR PLATE DETAIL



RESTRICTOR PLATE DETAIL



RESTRICTOR PLATE DETAIL

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.

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



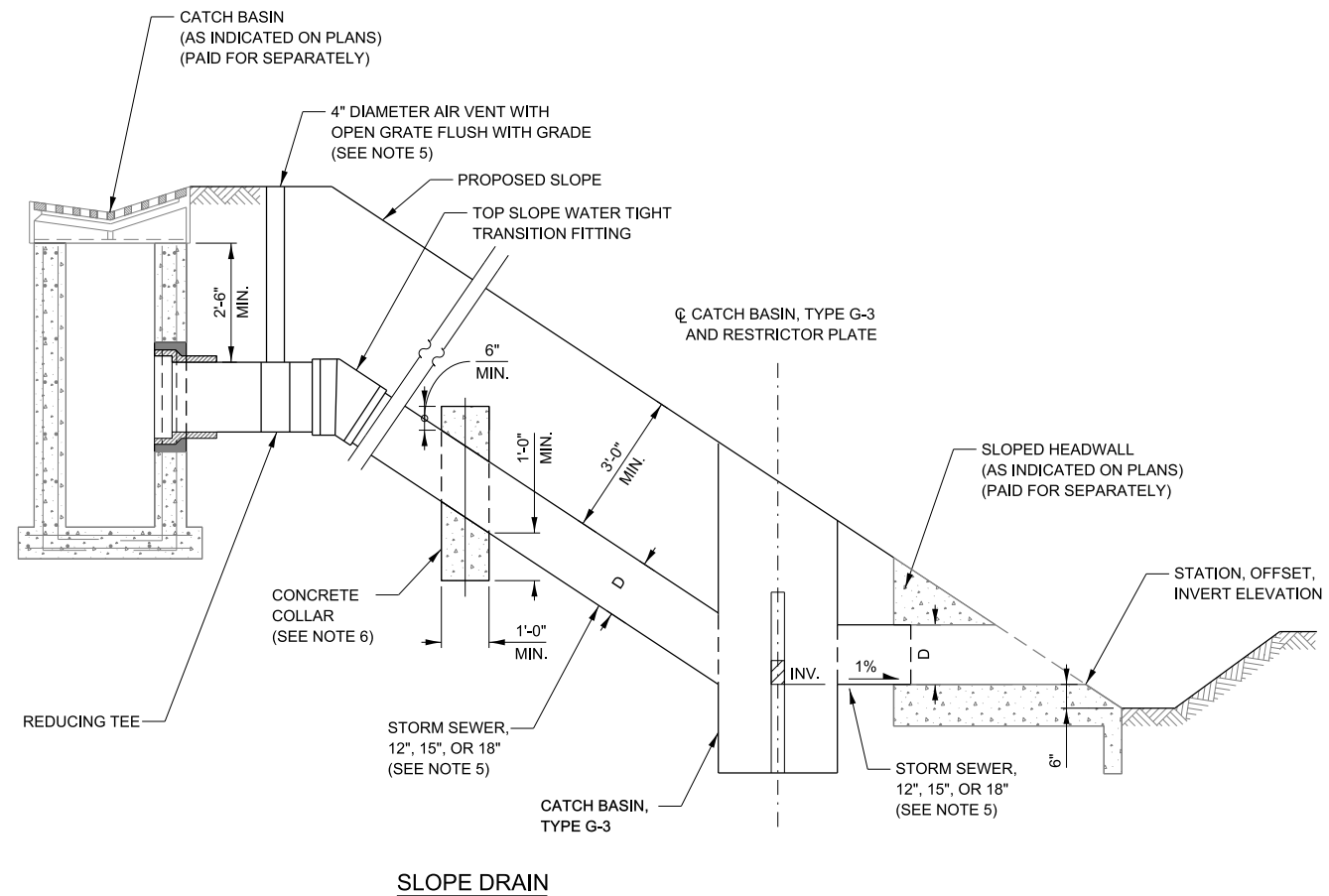
OUTLET CONTROL STRUCTURE CHECK DAM DETAILS

NOTE TO DESIGNER

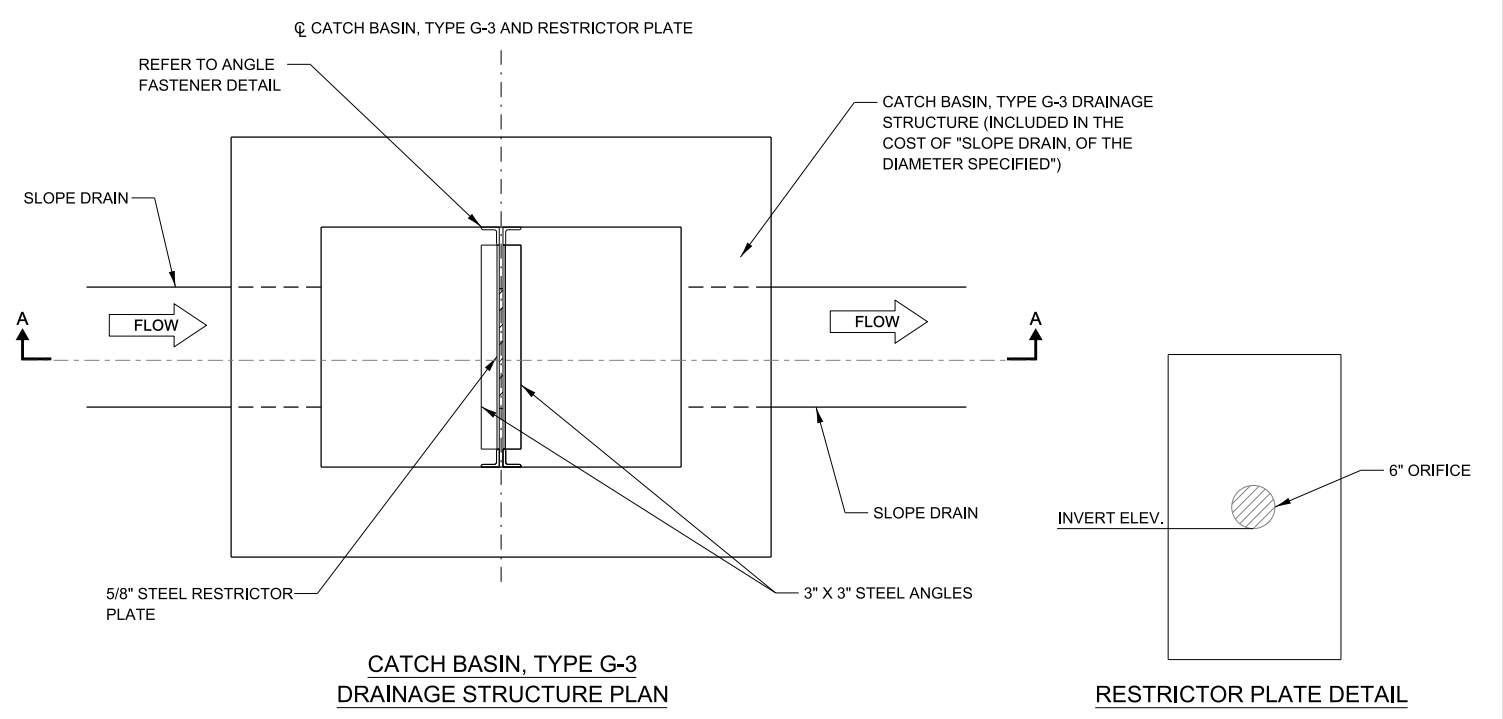
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE 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.

NOTES TO DESIGNER

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

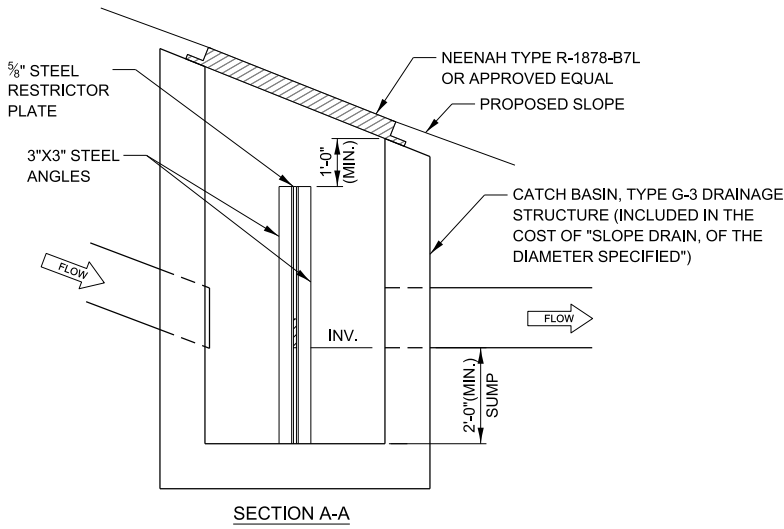


SLOPE DRAIN



CATCH BASIN, TYPE G-3 DRAINAGE STRUCTURE PLAN

RESTRICTOR PLATE DETAIL

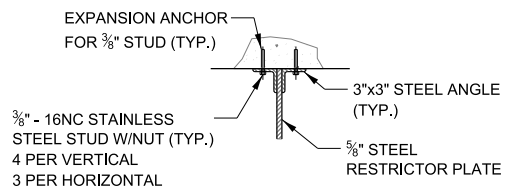


SECTION A-A

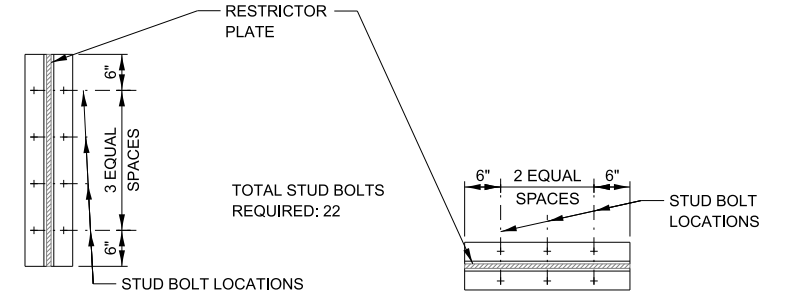
NOTES:

- 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.
- SEE ILLINOIS TOLLWAY STANDARD B8 FOR DIMENSION OF CATCH BASIN, TYPE G-3 STRUCTURE.
- THE TOP OF THE CATCH BASIN, TYPE G-3 SHALL BE CUT IN THE FIELD TO MATCH THE PROPOSED EMBANKMENT SLOPE.
- THE CONTRACTOR HAS THE OPTION TO USE A CONCRETE RESTRICTOR PLATE THAT IS PRECAST WITHIN THE DRAINAGE STRUCTURE.
- PIPE MATERIAL SHALL BE HDPE WITH SMOOTH INTERIOR OR EPOXY COATED CORRUGATED GALVANIZED STEEL PIPE OF THE SIZE SPECIFIED.
- THE MINIMUM CONCRETE COLLAR WIDTH SHALL BE $D + 24"$.
- ALL STEEL ANGLES AND PLATES SHALL BE GALVANIZED AFTER FABRICATION.
- STEEL PLATE AND ANGLES SHALL BE IN ACCORDANCE WITH AASHTO M 270 GRADE 36.
- ANGLES SHALL BE 3" X 3" X 3/8".
- VERTICAL ANGLES SHALL EXTEND FROM THE BOTTOM OF THE CATCH BASIN TO THE TOP OF THE RESTRICTOR PLATE.
- 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)					



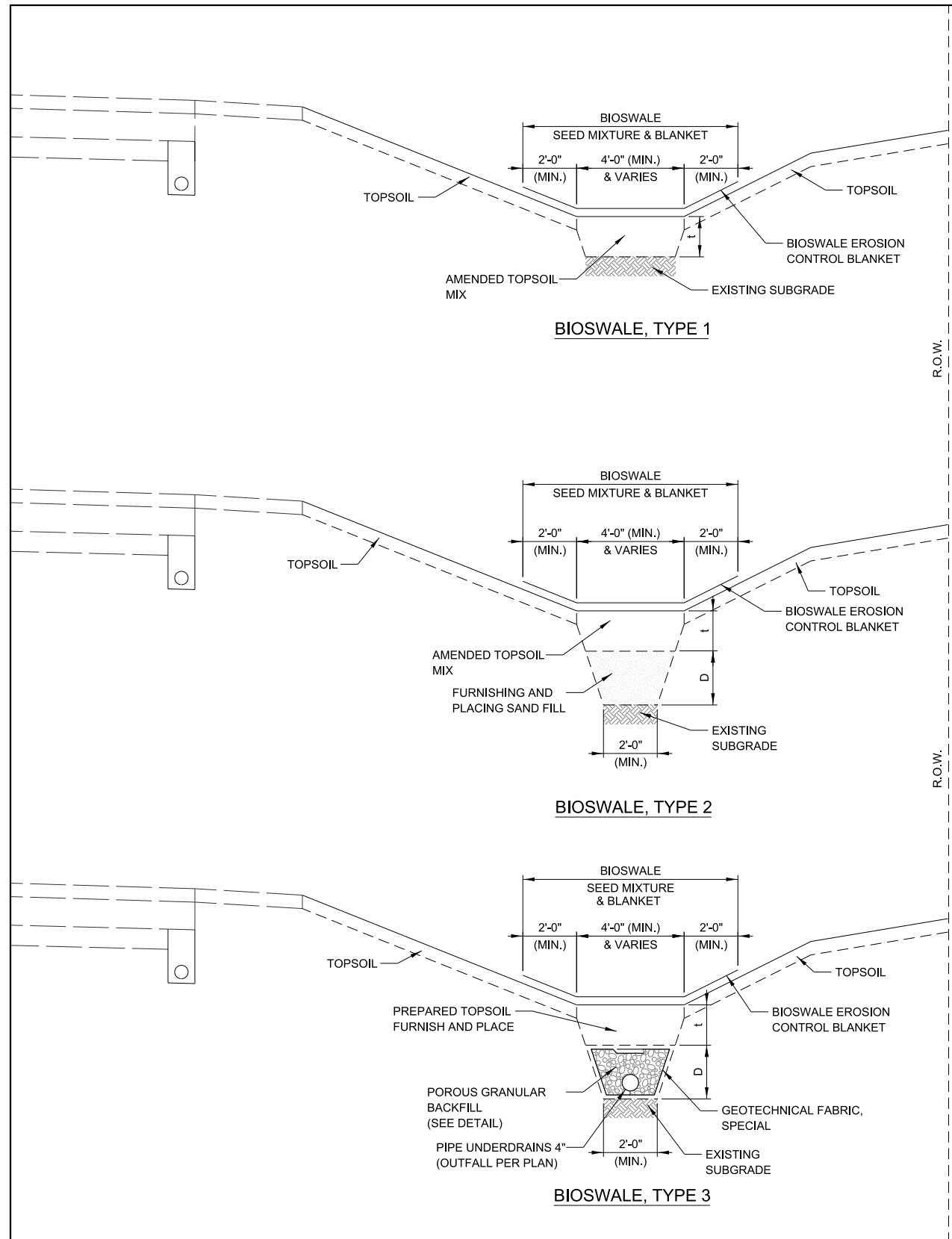
ANGLE FASTENER DETAIL



STEEL ANGLE BOLTING DETAILS



SLOPE DRAIN



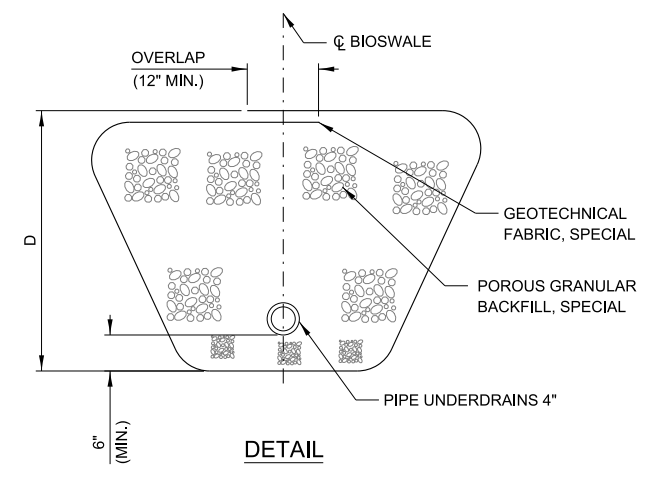
BIOSWALE NO.	BIOSWALE TYPE	BEGIN STATION	END STATION	PREP/AMENDED TOPSOIL THICKNESS (t)	BIOSWALE BASE (D)

NOTE TO DESIGNER

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NOTES TO DESIGNER

- ALL PIPE UNDERDRAINS SHALL EITHER OUTLET AT GRADE OR TO A DRAINAGE STRUCTURE AND GRAVITY DRAIN.
- ALL PIPE UNDERDRAINS SHALL HAVE AN INLET ON THE UPSTREAM END AND EVERY 500' MINIMUM TO SERVE AS A CLEAN-OUT.
- ARTICULATED CONCRETE BLOCK REVETMENT SYSTEM (ACBRS) SHALL NOT BE PLACED WITHIN BIOSWALES UNLESS USED FOR MAINTENANCE ACCESS CROSSINGS PER DDM ARTICLE 6.3.2.



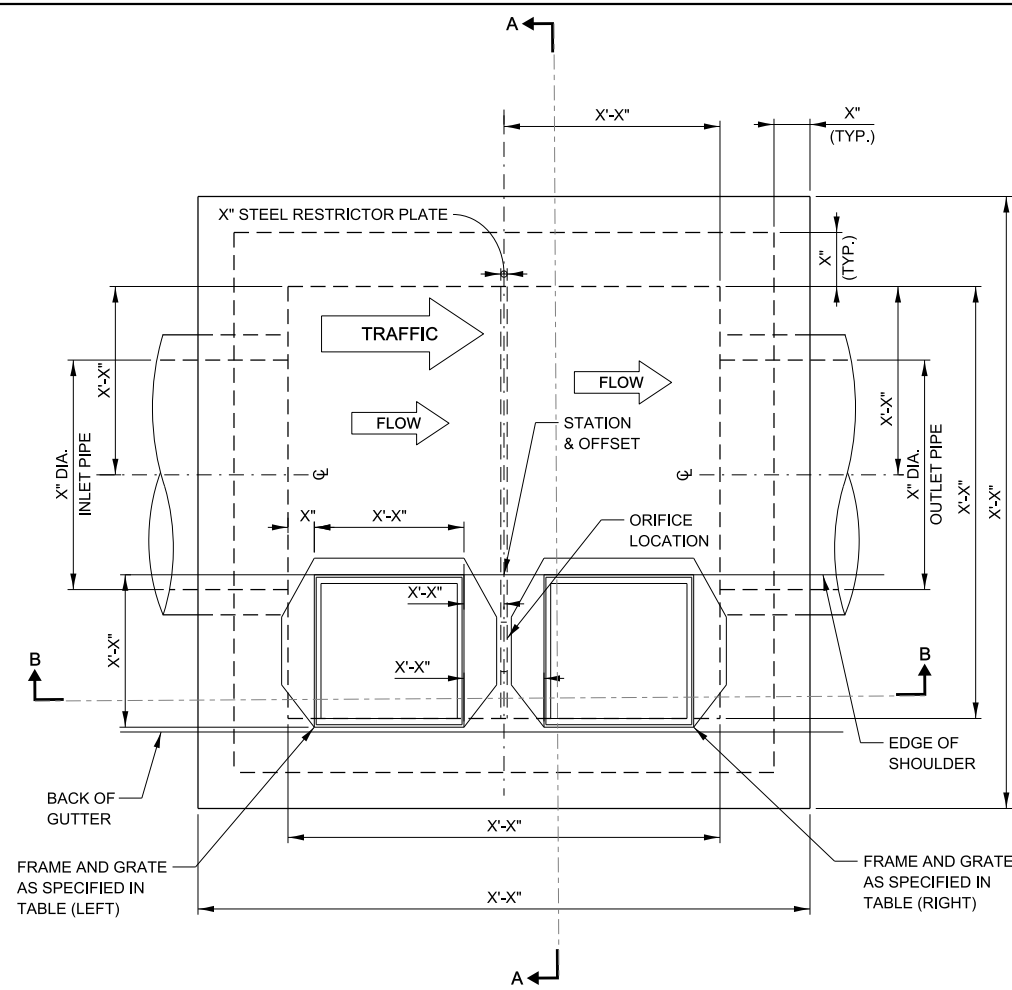
NOTES:

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

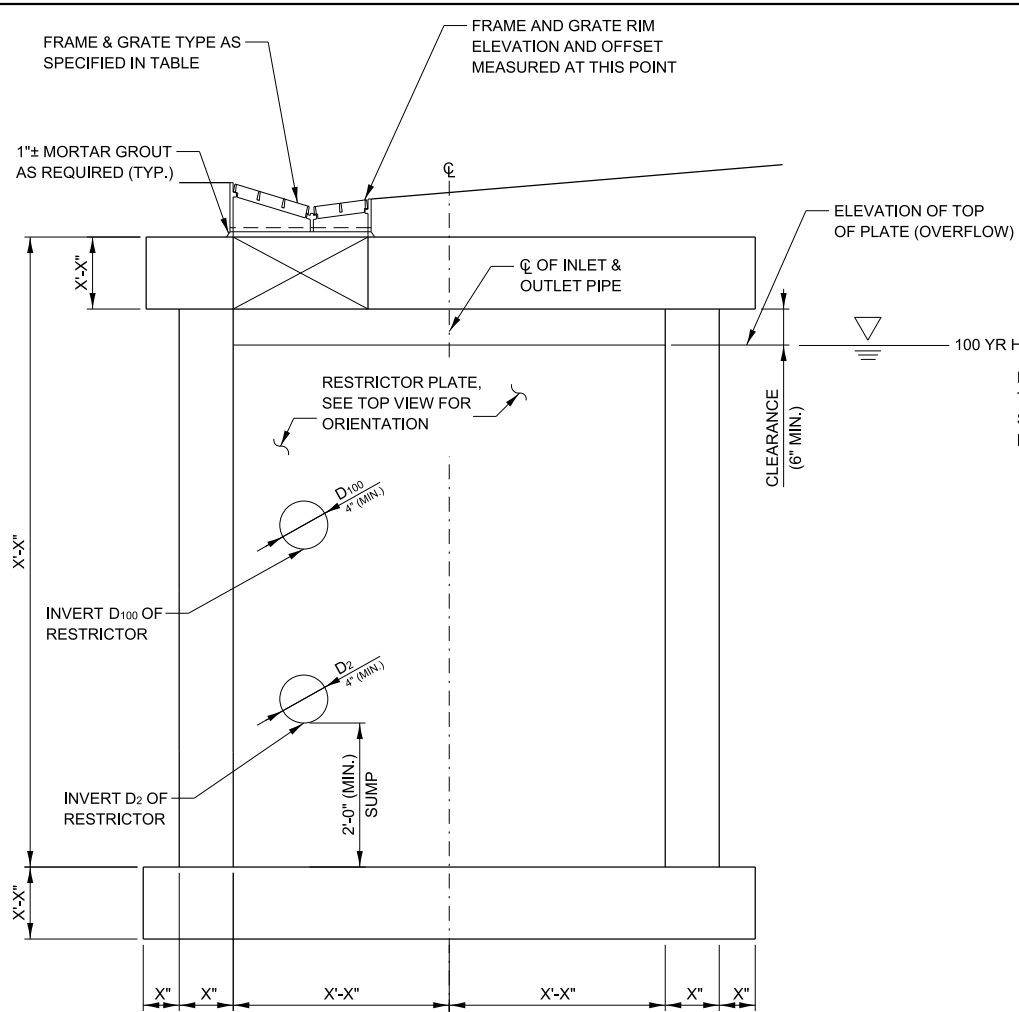
Illinois Tollway

BIOSWALE

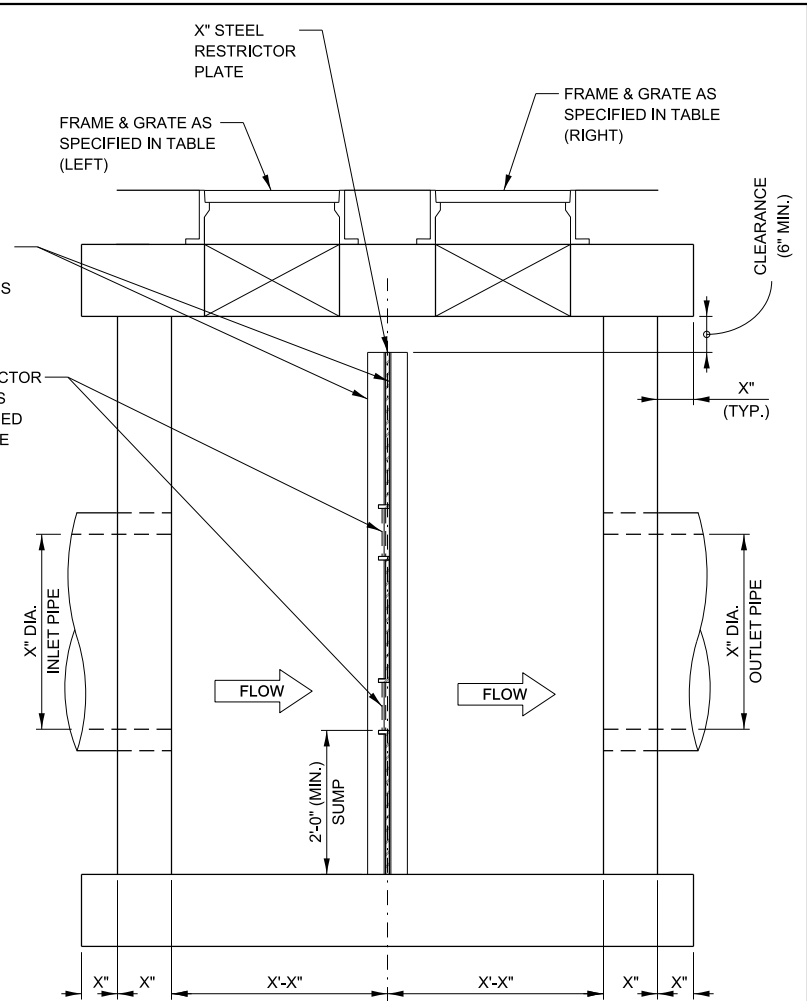
VERSION: 2026-03	BASE SHEET: M-DRN-602	SHEET: 1 OF 1
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TOP VIEW



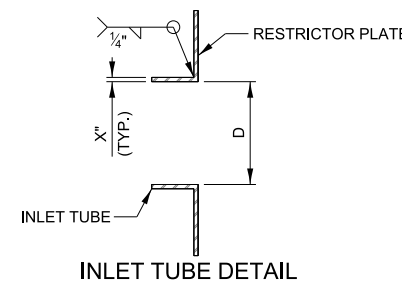
SECTION A-A



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 1/2 TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-1/2 DIA.	LENGTH: 2-1/2 DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

RESTRICTOR TYPES
VALUES OF "C" FOR CIRCULAR
AND SQUARE ORIFICES



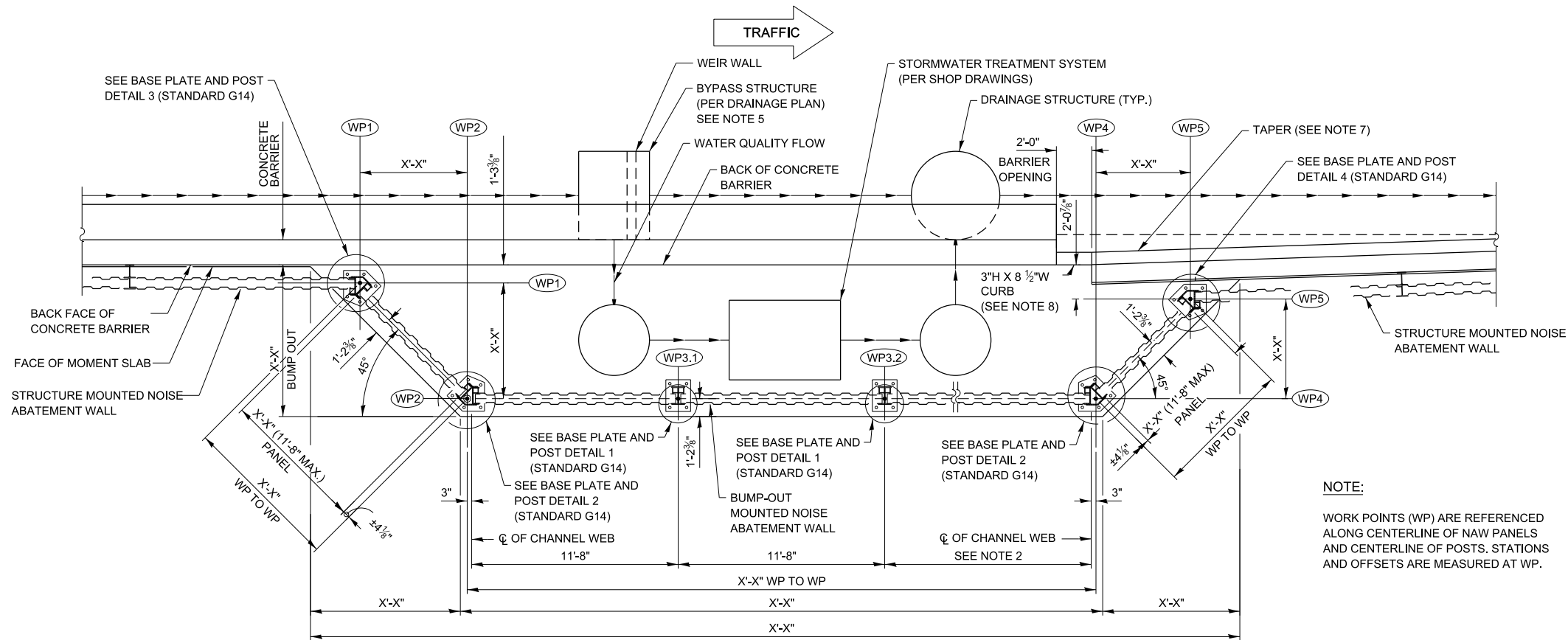
- NOTES TO DESIGNER**
- DSE SHALL DESIGN STEEL ANGLE BOLTS AND FASTENERS FOR THE RESTRICTOR PLATES. DETAILS ARE TO BE PROVIDED ON THIS SHEET.
 - DSE SHALL PROVIDE REINFORCEMENT DETAILS. DESIGN SHALL BE IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, LATEST EDITION, WITH IL-120 OR HL-93 LOADING REQUIREMENTS, WHICHEVER GOVERNS (REFER TO STRUCTURE DESIGN MANUAL).
 - 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											

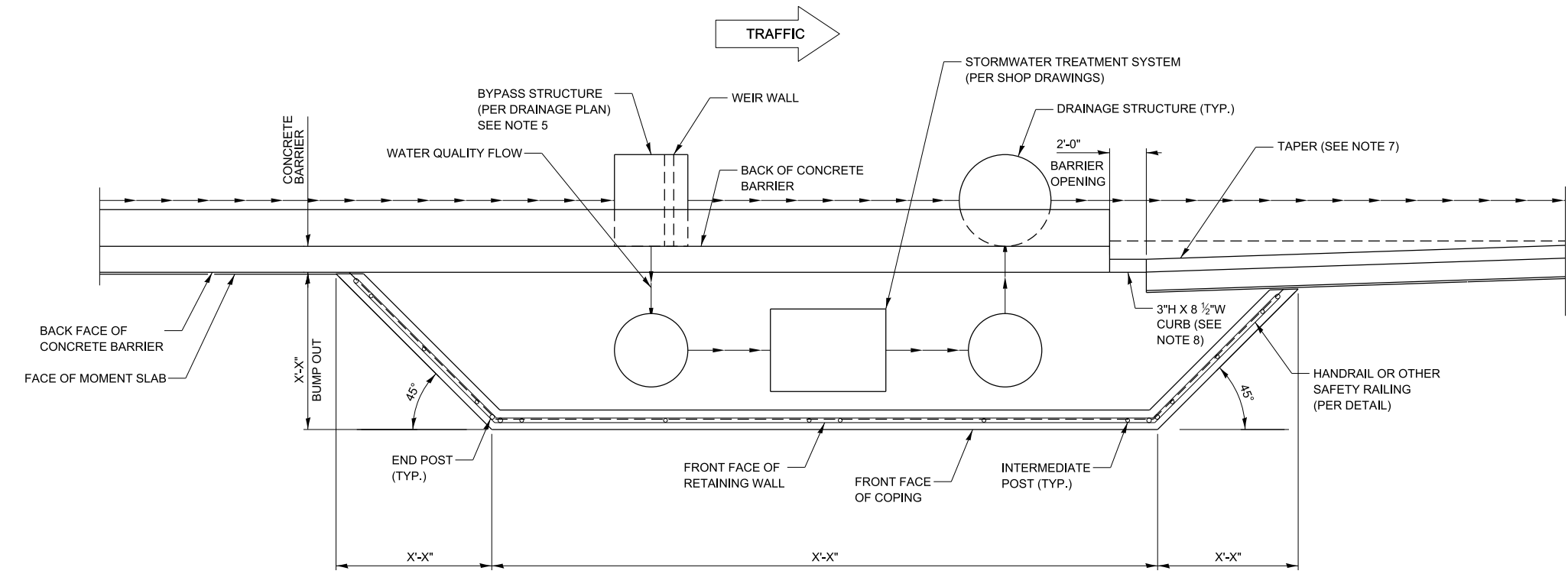
* SEE TOP VIEW FOR STRUCTURE STATION AND OFFSET



CATCH BASIN TYPE G (SPECIAL) WITH RESTRICTOR



PLAN - STRUCTURE MOUNTED NOISE ABATEMENT WALL EXAMPLE



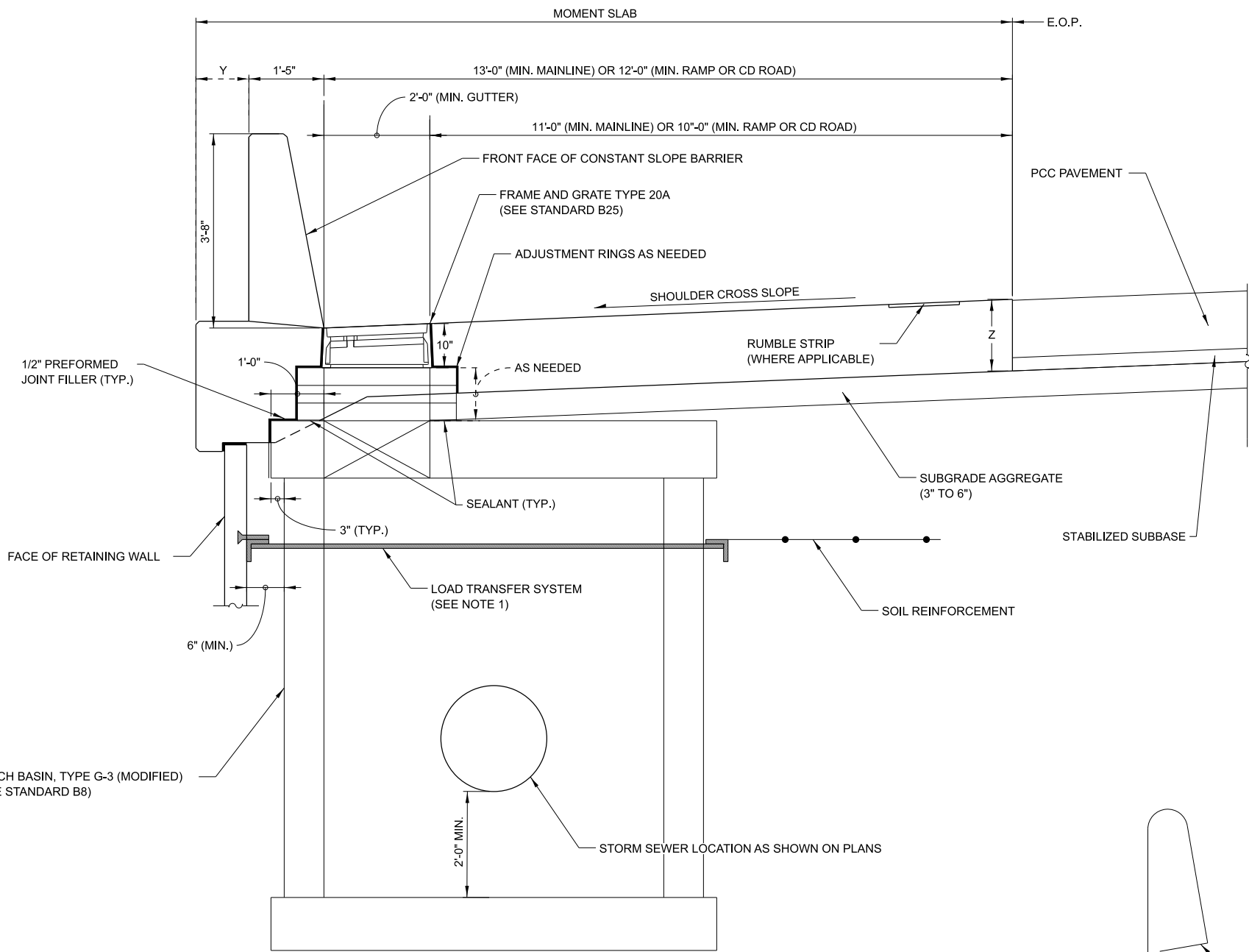
PLAN - RETAINING WALL EXAMPLE

NOTE TO DESIGNER

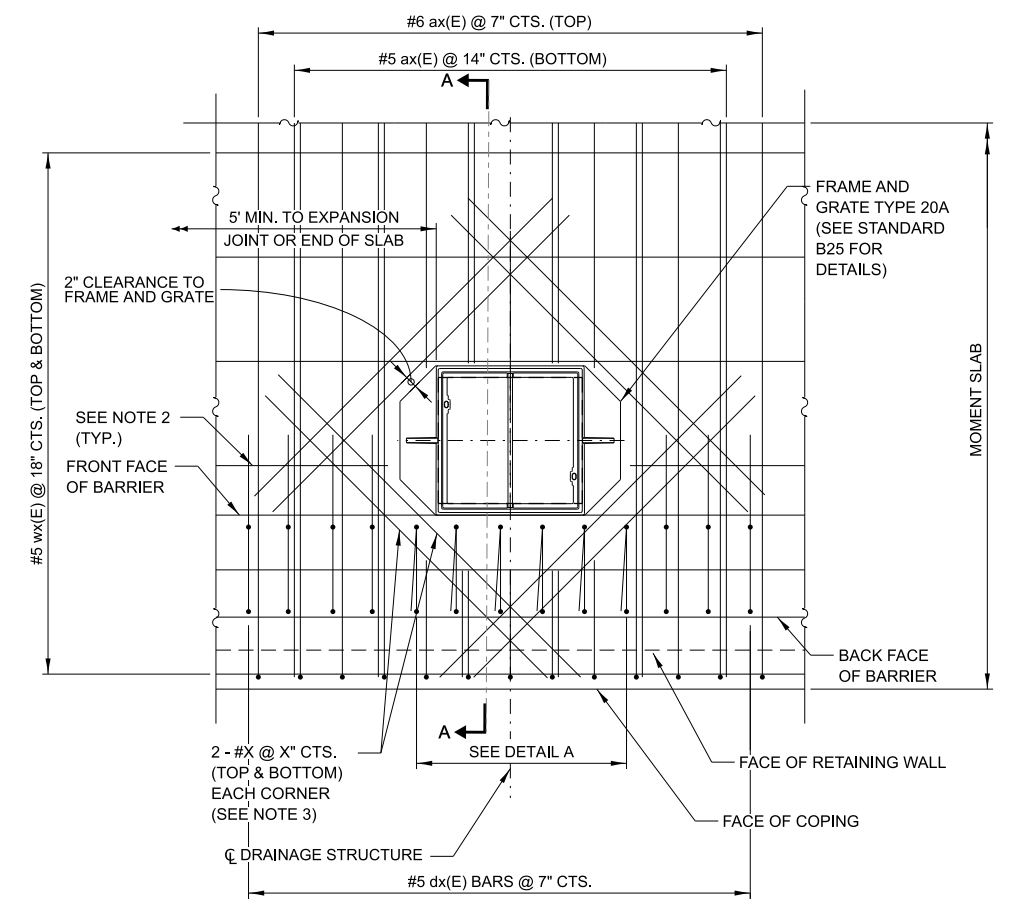
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE 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**
- 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.
 - 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.
 - 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.
 - THIS SHEET IS NOT TO SCALE. DESIGNER TO DETERMINE APPROPRIATE SCALE ON GENERAL PLAN AND ELEVATION SHEET TO ACCURATELY REPRESENT REQUIRED INFORMATION.
 - 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.
 - ALL DIMENSIONS DESIGNATED "X" ARE REQUIRED AND SHALL BE UPDATED BY THE DSE.
 - TAPER RATE FOR MAINLINE INSTALLATIONS SHALL BE 30:1. TAPER RATE FOR RAMP AND C-D ROADWAYS SHALL NOT EXCEED THE RATES SHOWN IN AASHTO RDG TABLE 5-9.
 - THE CURB SHALL BE PAID FOR AS CONCRETE SUPERSTRUCTURE.

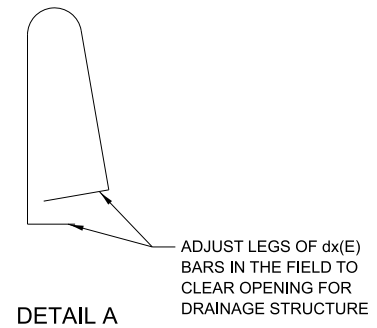
NOTE:
WORK POINTS (WP) ARE REFERENCED ALONG CENTERLINE OF NAW PANELS AND CENTERLINE OF POSTS. STATIONS AND OFFSETS ARE MEASURED AT WP.



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:

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

NOTE TO DESIGNER

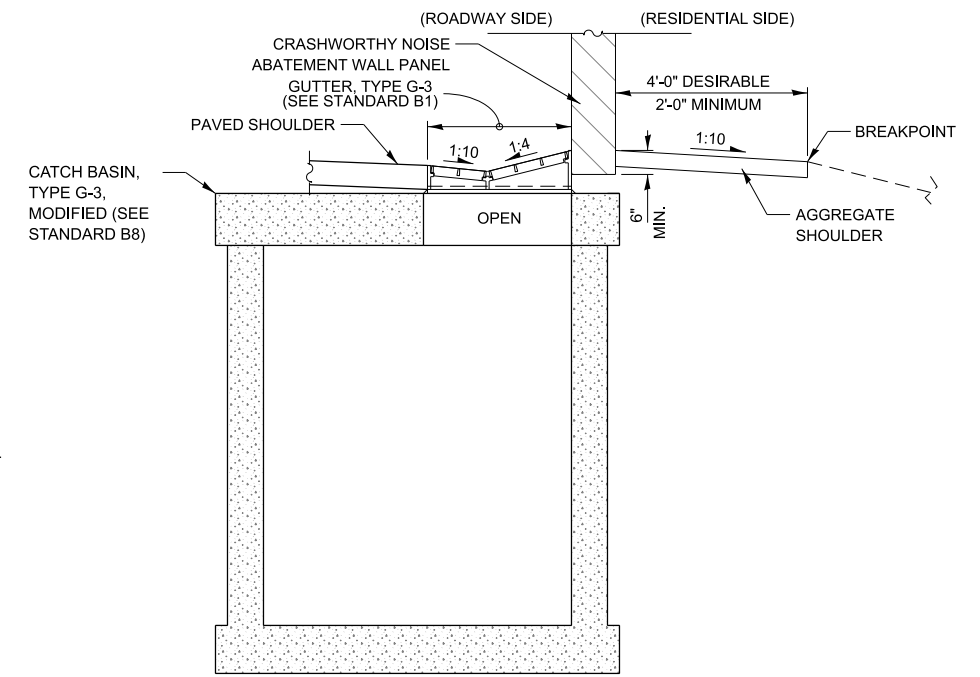
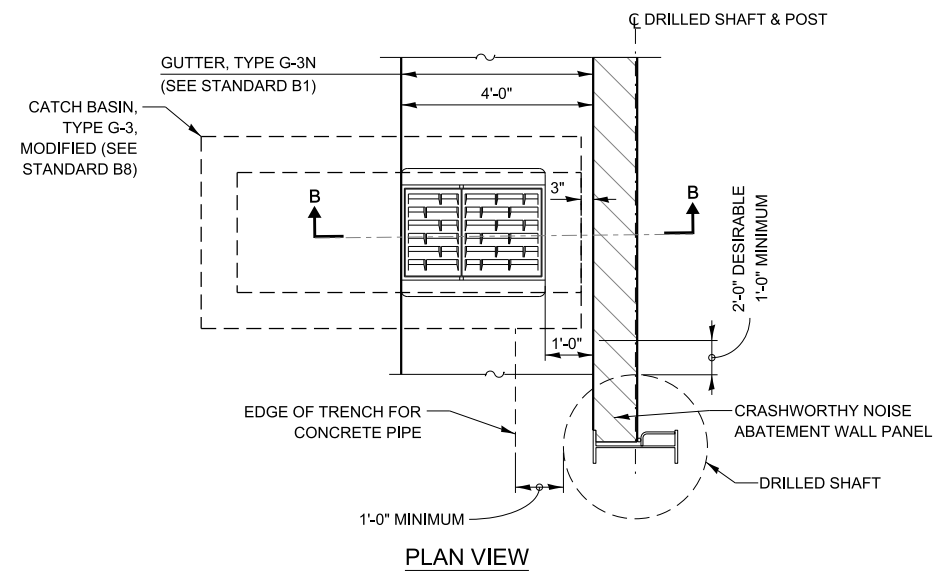
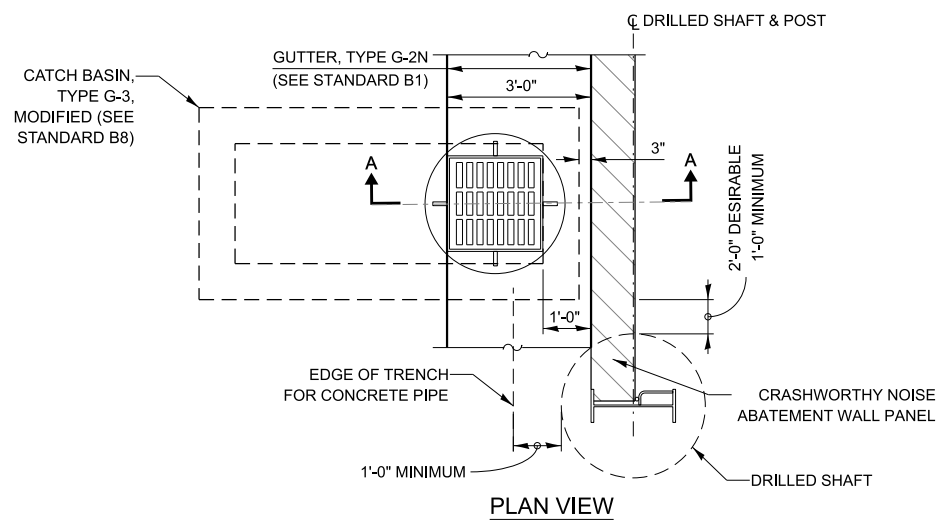
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- NOTES TO DESIGNER**
- THE PURPOSE OF THIS BASE SHEET IS TO SHOW THE PLACEMENT OF THE DRAINAGE STRUCTURE. DSE SHALL REFER TO THE STRUCTURE DESIGN MANUAL FOR THE DESIGN OF ALL STRUCTURAL ELEMENTS.
 - ALL VALUES DESIGNATED "X" ARE REQUIRED AND SHALL BE PROVIDED BY THE DSE.
 - USE 1'-0" MAXIMUM FOR DIMENSION Y TO ENSURE DRAINAGE STRUCTURE CAN BE LOCATED AT THE FRONT FACE OF BARRIER WALL.
 - USE 1'-4" MINIMUM FOR DIMENSION Z. THICKNESS MAY BE MODIFIED TO ACCOMMODATE ADJACENT PAVEMENT.
 - 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.
 - DESIGNER SHALL REPLACE BAR MARK CALLOUTS DESIGNATED a(E) THROUGH w(E) WITH ACTUAL BAR MARKS.

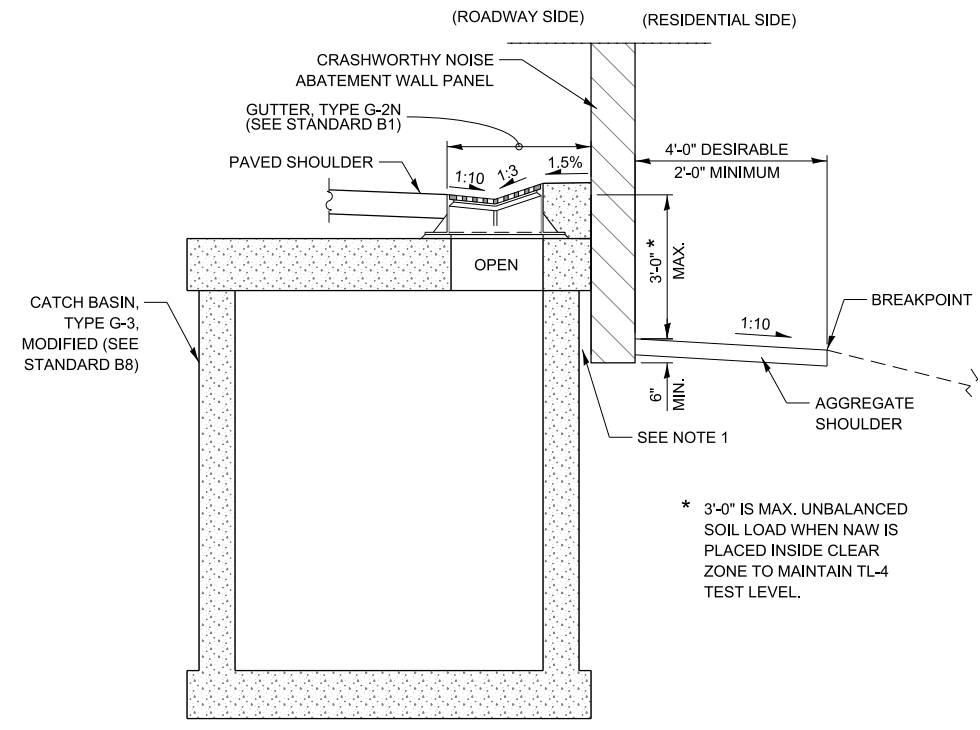
PLOT TIME: 10/32/17 AM



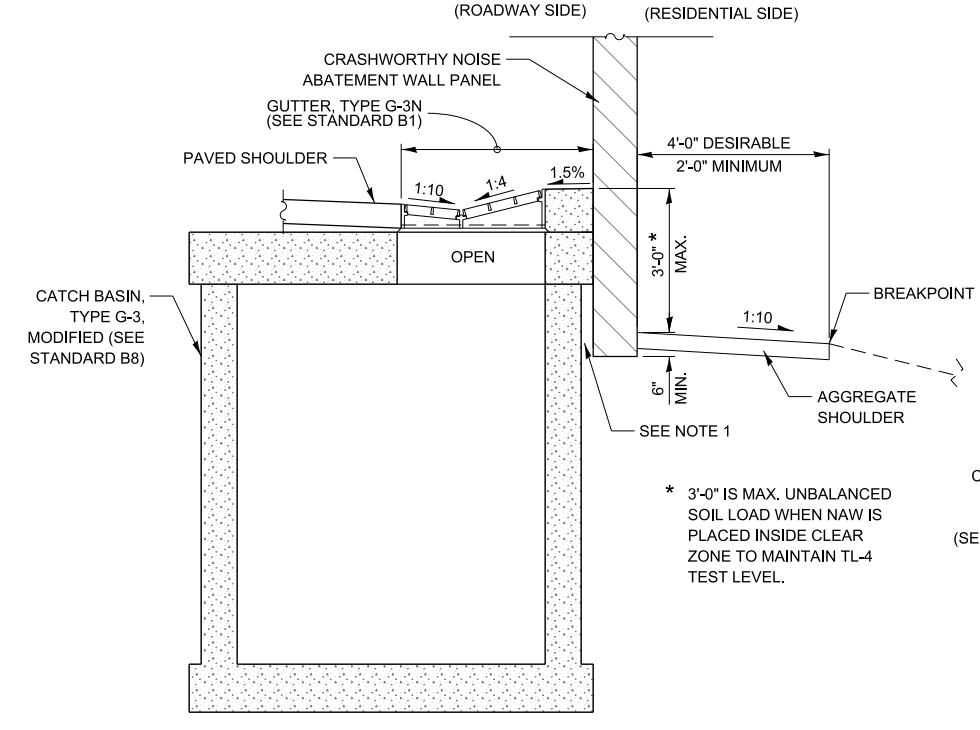
EXPOSED MOMENT SLAB WITH DRAINAGE STRUCTURE



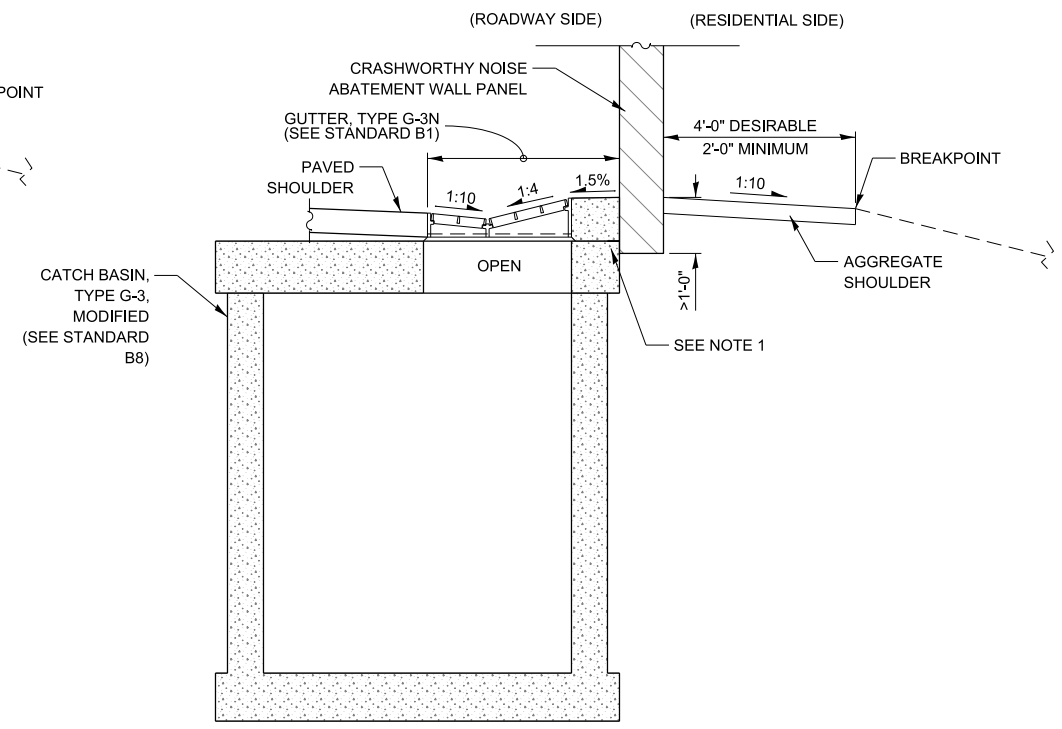
TYPICAL SECTION - GUTTER, TYPE G-3 OR GUTTER, TYPE G-2
(GUTTER, TYPE G-3 SHOWN)
(BALANCED SOIL LOAD, WHEN PANEL EMBEDMENT DEPTH IS ≤ 1 FT)



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



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

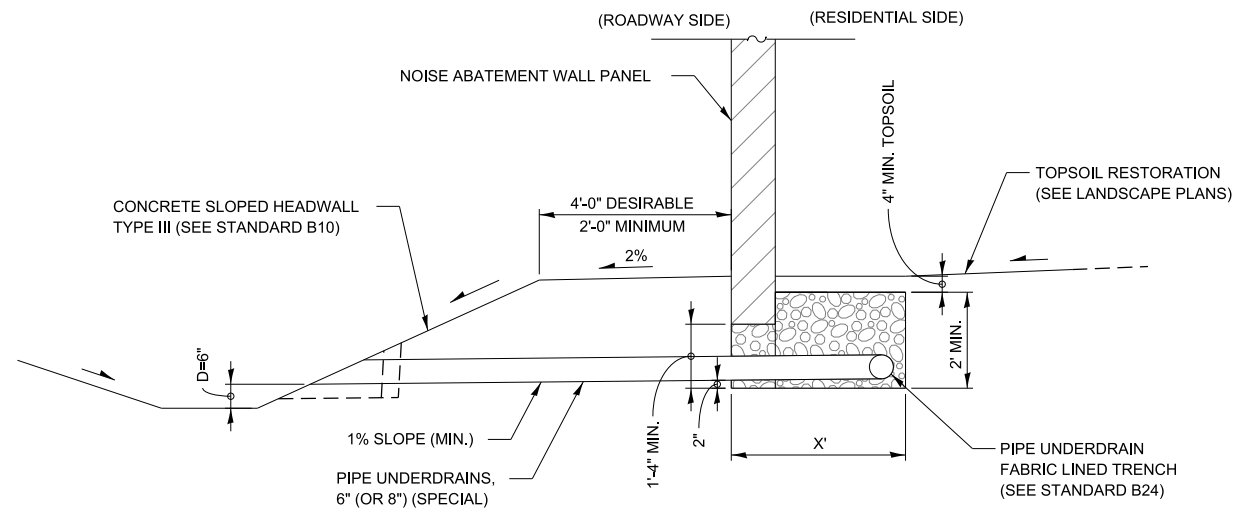


TYPICAL SECTION - GUTTER, TYPE G-3N OR GUTTER, TYPE G-2N
(GUTTER TYPE G-3N SHOWN)
(BALANCED SOIL LOAD, WHEN PANEL EMBEDMENT DEPTH IS > 1 FT.)

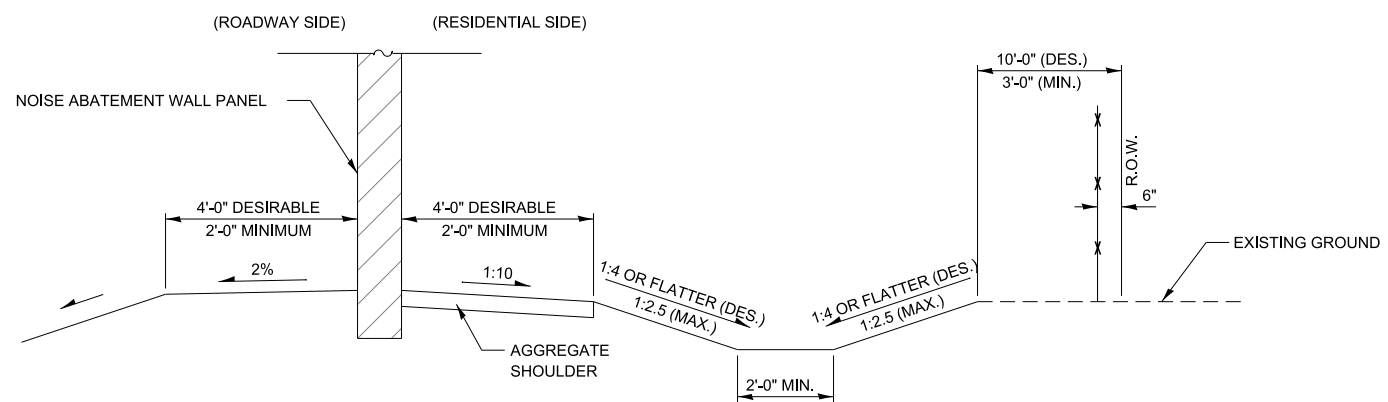
NOTE TO DESIGNER

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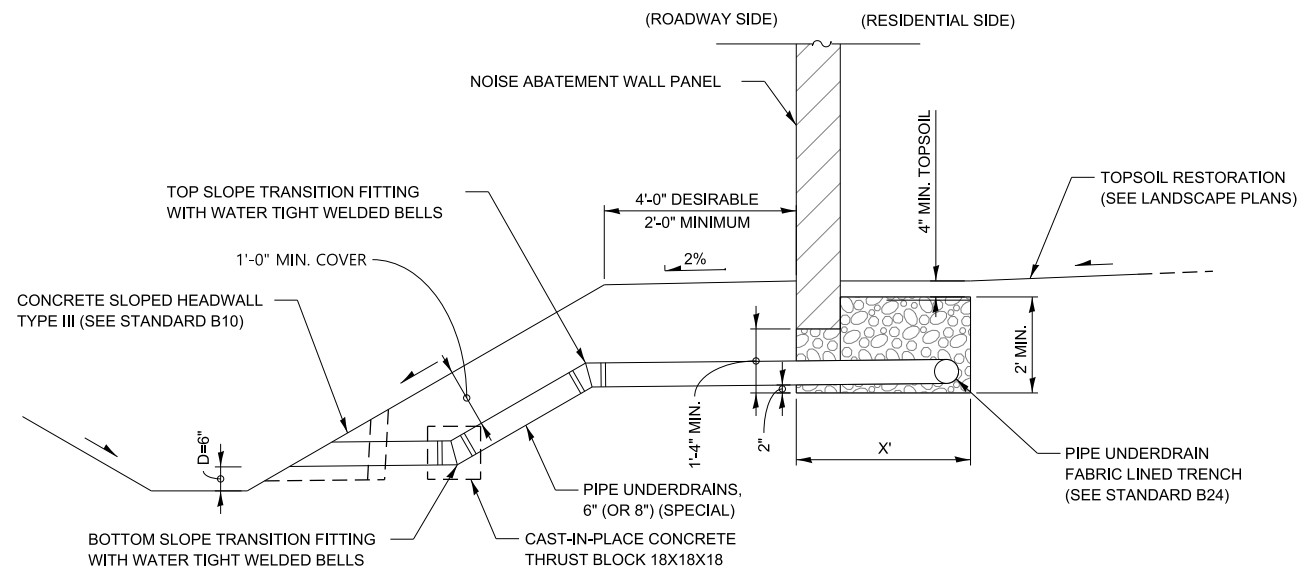
- NOTES TO DESIGNER**
- FOR NOISE ABATEMENT WALL DETAILS, REFER TO ILLINOIS TOLLWAY STANDARD DRAWINGS G15 AND G16.
 - FOR THE SELECTION OF GUTTER TYPE, REFER TO ROADWAY DESIGN CRITERIA MANUAL, ARTICLE 2.6.6.
 - DESIGNER SHALL VERIFY SUFFICIENT CLEARANCE IS PROVIDED BETWEEN STORM SEWERS AND DRAINAGE STRUCTURES RELATIVE TO THE DRILLED SHAFTS. DRAINAGE STRUCTURE SHALL BE SIZED TO ACCOMMODATE STORM SEWER WALL PENETRATION.



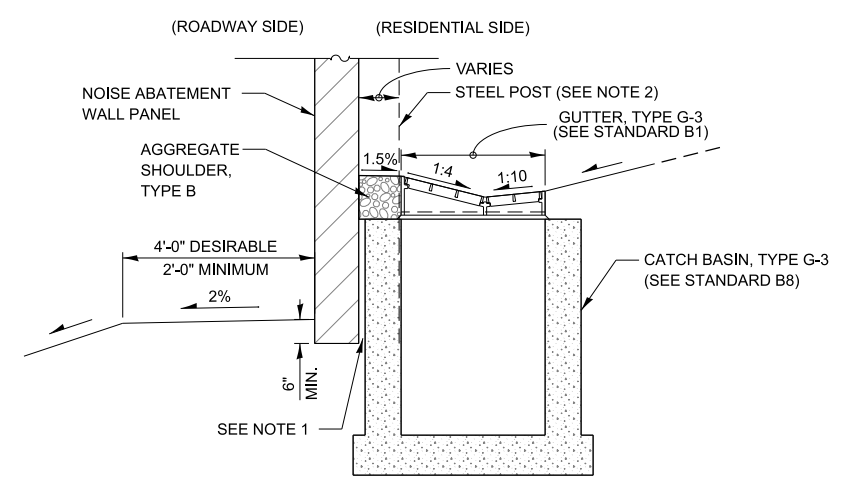
TYPICAL SECTION - PIPE UNDERDRAIN



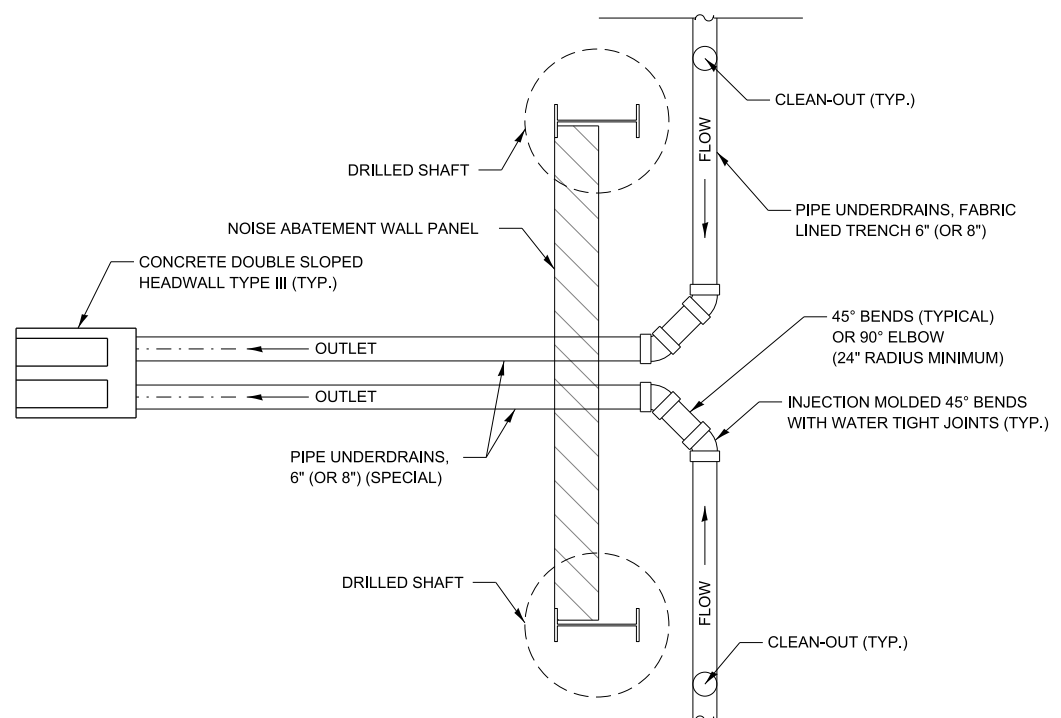
TYPICAL SECTION - DITCH AT THE TOP OF BACKSLOPE



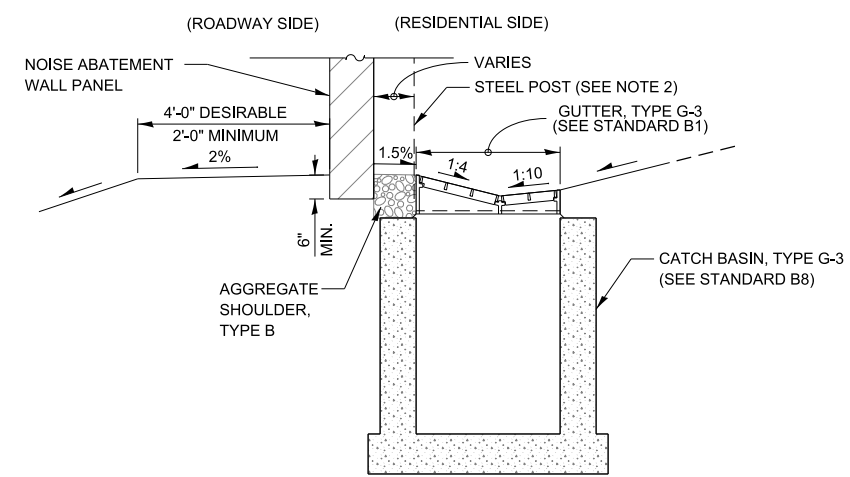
TYPICAL SECTION - PIPE UNDERDRAIN ON HIGH FILL SLOPE



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)



PLAN VIEW - PIPE UNDERDRAIN (AT SAG SHOWN)



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

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NOTES TO DESIGNER

- 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.
- DETERMINE DIMENSION X TO OFFSET PIPE UNDERDRAIN TO AVOID CONFLICT WITH THE DRILLED SHAFTS.
- PIPE UNDERDRAINS SHALL MEET THE REQUIREMENTS OF DDM ARTICLE 9.7.2, DDM TABLE 9.3 AND STANDARD B24.
- FOR NOISE ABATEMENT WALL DETAILS, REFER TO ILLINOIS TOLLWAY STANDARD DRAWINGS G15 AND G16.

NOTES:

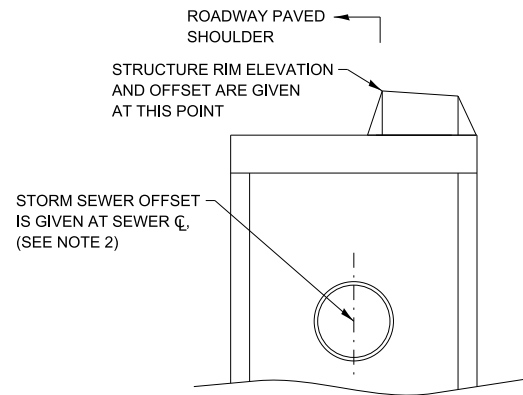
- FILL GAP WITH CLSM, GROUT OR CLASS SI CONCRETE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- PROVIDE JOINT FILLER BETWEEN THE STEEL POST AND GUTTER.



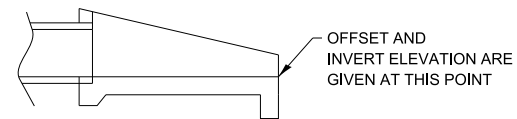
NOISE ABATEMENT WALL DRAINAGE DETAILS (RESIDENTIAL SIDE)

NOTES:

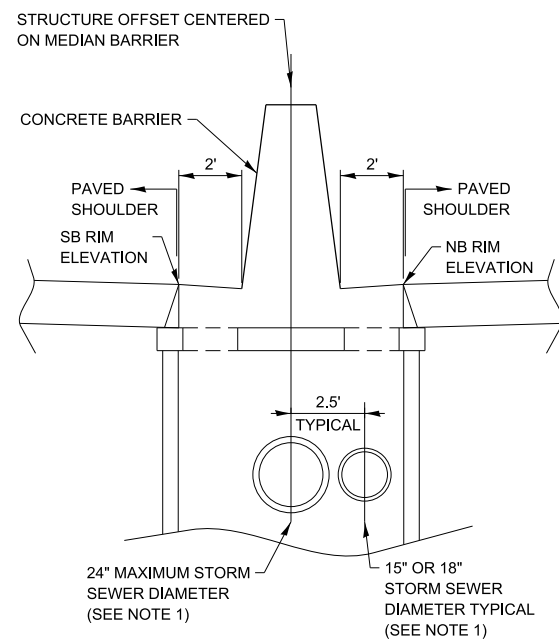
- FOR DRAINAGE STRUCTURES TYPE 4 OR TYPE 5, THE STORM SEWER SHALL BE TYPICALLY OFFSET 2.5' FROM THE CENTERLINE OF THE STRUCTURE FOR 15" OR 18" STORM SEWERS IN ORDER TO AVOID LIGHT POLE FOUNDATION CONFLICTS. 24" (MAXIMUM) STORM SEWERS SHALL BE CENTERED ON THE DRAINAGE STRUCTURE, UNLESS OTHERWISE NOTED IN THE DRAINAGE STRUCTURE SCHEDULE. STORM SEWER OFFSETS MAY VARY. STORM SEWER OFFSETS LISTED IN THE DRAINAGE STRUCTURE SCHEDULE "LT" AND "RT" ARE INTENDED AS MEANING RELATIVE TO THE DIRECTION OF THE ROADWAY ALIGNMENT. REFER TO STANDARD H1.
- UNLESS OTHERWISE INDICATED ON THE PLANS, THE PROPOSED STORM SEWER IS TO BE INSTALLED AT THE STRUCTURE CENTERLINE.



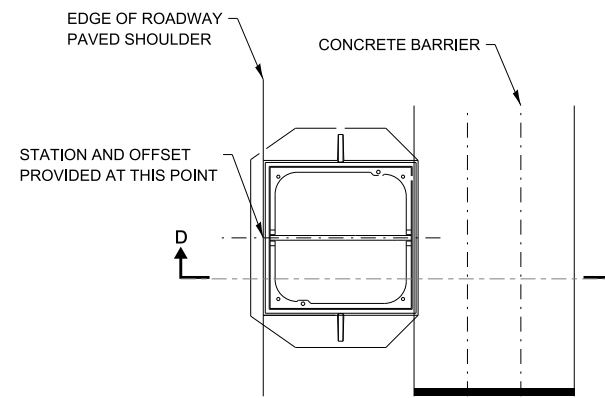
CATCH BASIN, TYPE G-3, MODIFIED WITH TYPE 20A FRAME AND GRATE



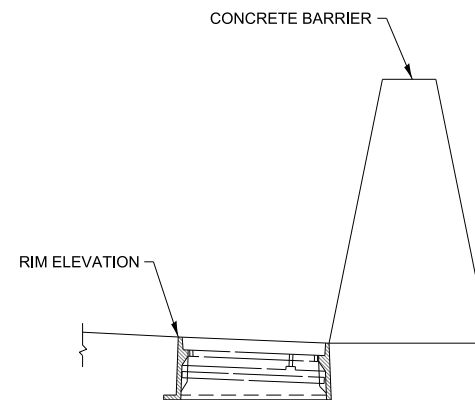
HEADWALL OR SLOPED HEADWALL



DRAINAGE STRUCTURES, TYPE 4 OR TYPE 5

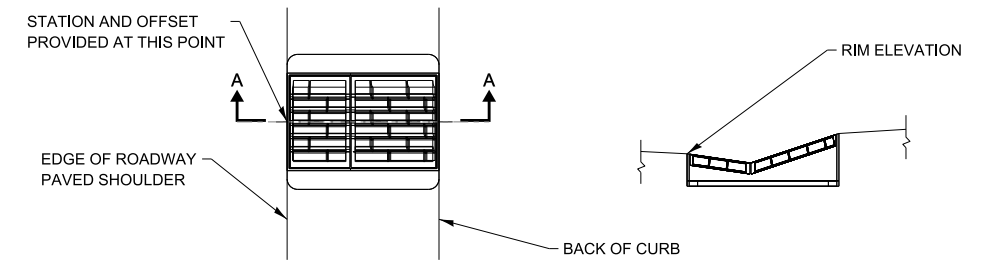


PLAN VIEW



SECTION D-D

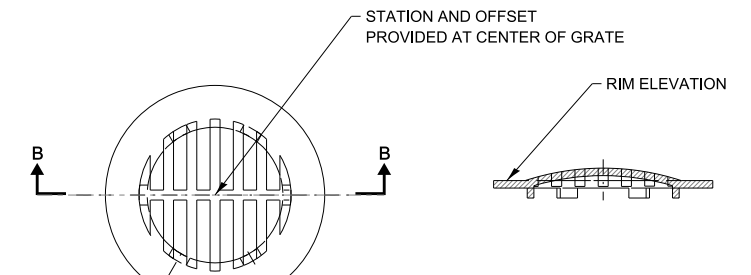
TYPE 20A, TYPE 22A FRAME & GRATE



PLAN VIEW
FRAME AND GRATE TYPE G-3 (CATCH BASINS TYPE G-2, G-3, G-3(M), G-4 AND G-5 ALL FOLLOW THE SAME DETAIL)

SECTION A-A

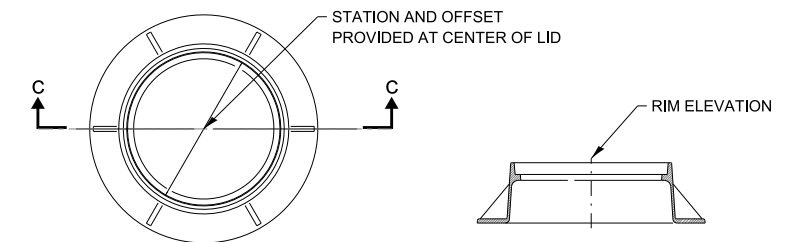
TYPE G-SERIES FRAME AND GRATE



PLAN VIEW

SECTION B-B

TYPE 8 GRATE



PLAN VIEW

SECTION C-C

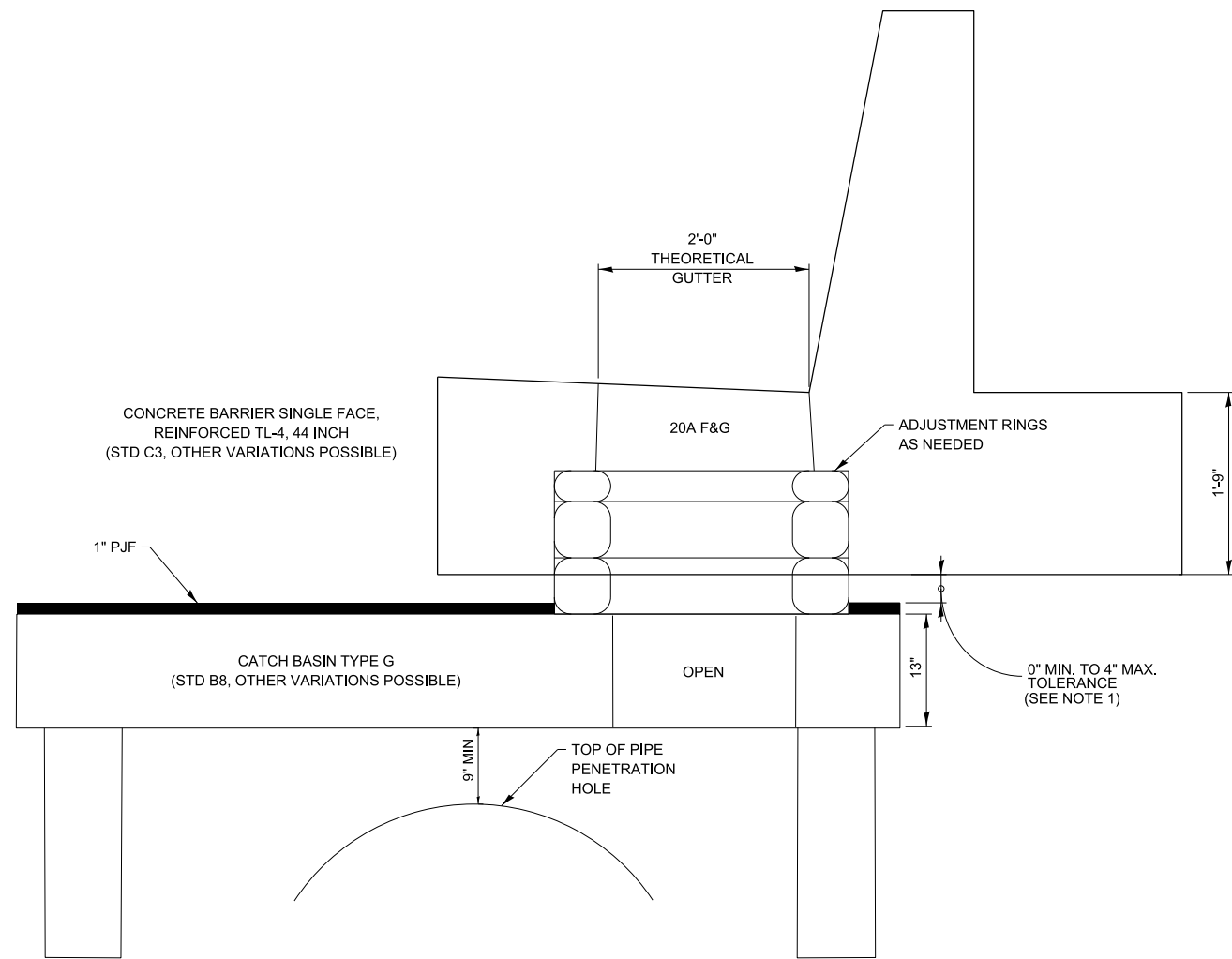
TYPE 1 LID

CATCH BASINS AND MANHOLES WITH TYPE 8 GRATES AND CIRCULAR LIDS

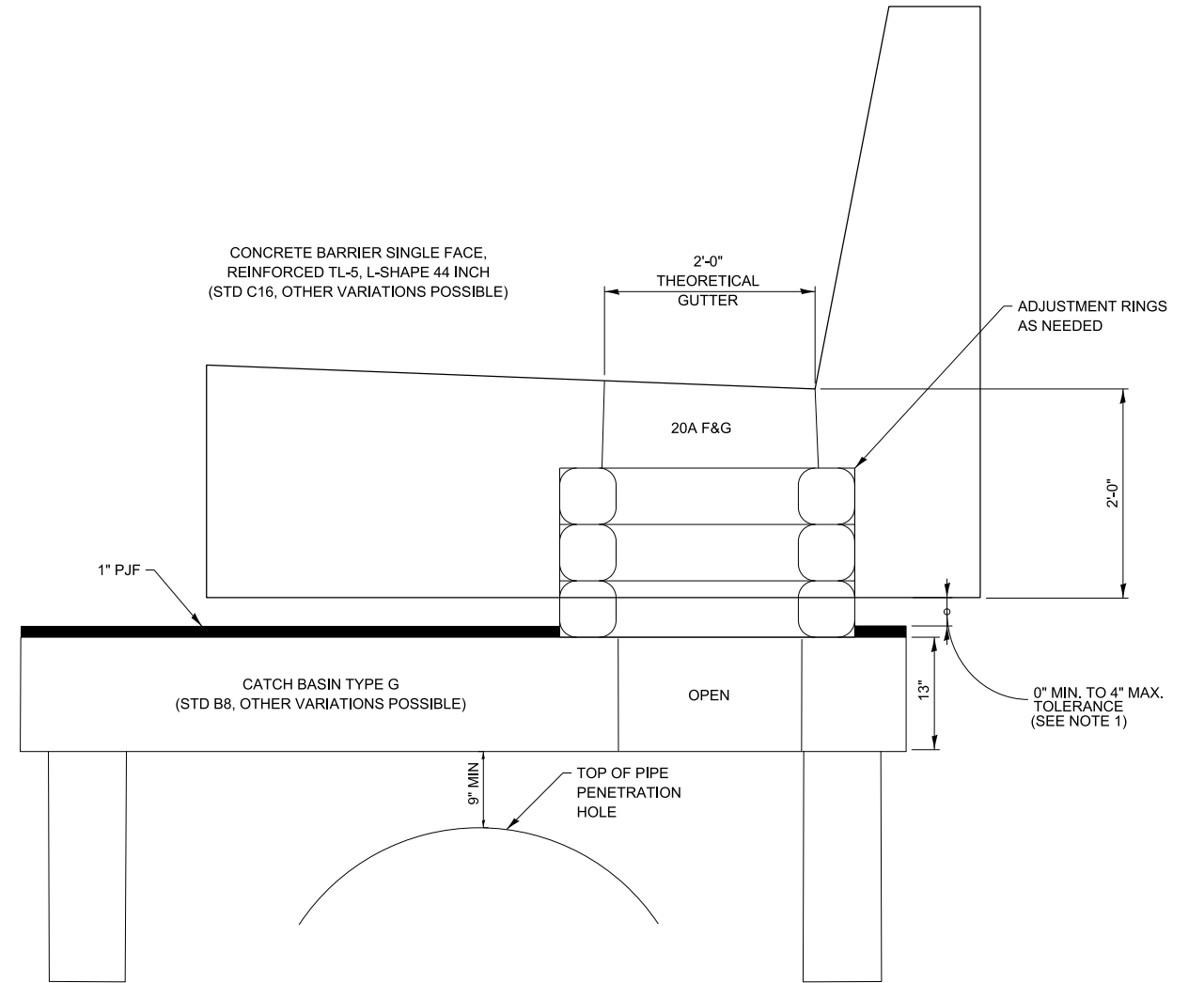
NOTE TO DESIGNER
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY 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.



STATION AND OFFSET FOR DRAINAGE STRUCTURES




CATCH BASIN TYPE G
ADJACENT TO TL-4 BARRIER



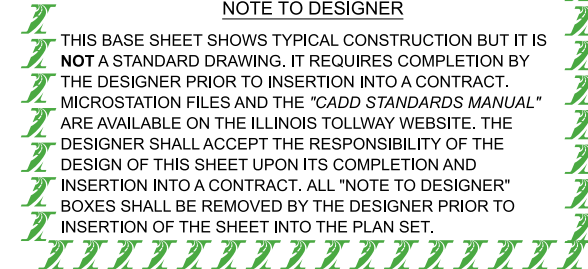
CATCH BASIN TYPE G
ADJACENT TO TL-5 BARRIER

NOTE:

1. IF THE ACTUAL TOLERANCE IS LESS THAN 2". THE CONTRACTOR SHALL POUR ADDITIONAL CONCRETE TO FILL THIS GAP. IF A GREATER THAN 2" GAP REMAINS, THE CONTRACTOR MAY USE CONCRETE OR GRANULAR BACKFILL. IN NO CASE SHALL ADDITIONAL PAYMENT BE MADE FOR THIS MATERIAL.



NOTE TO DESIGNER



		
SINGLE FACE CONCRETE BARRIER WITH DRAINAGE STRUCTURE		
VERSION: 2026-03	BASE SHEET: M-DRN-610	SHEET: 1 OF 1

BASE SHEETS



SERIES 700 (MOT) ***MAINTENANCE OF TRAFFIC***

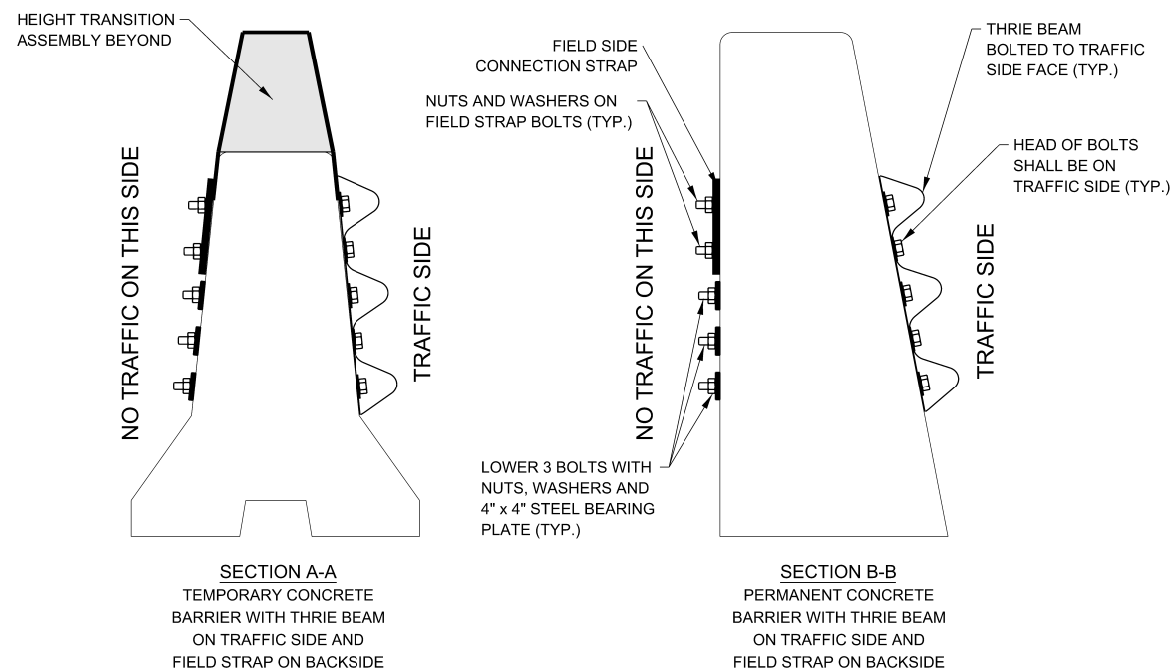
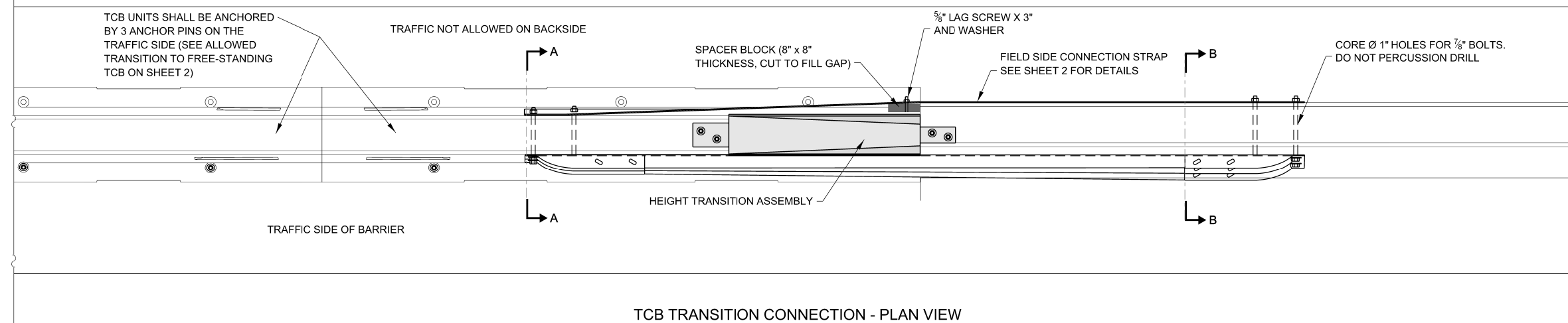
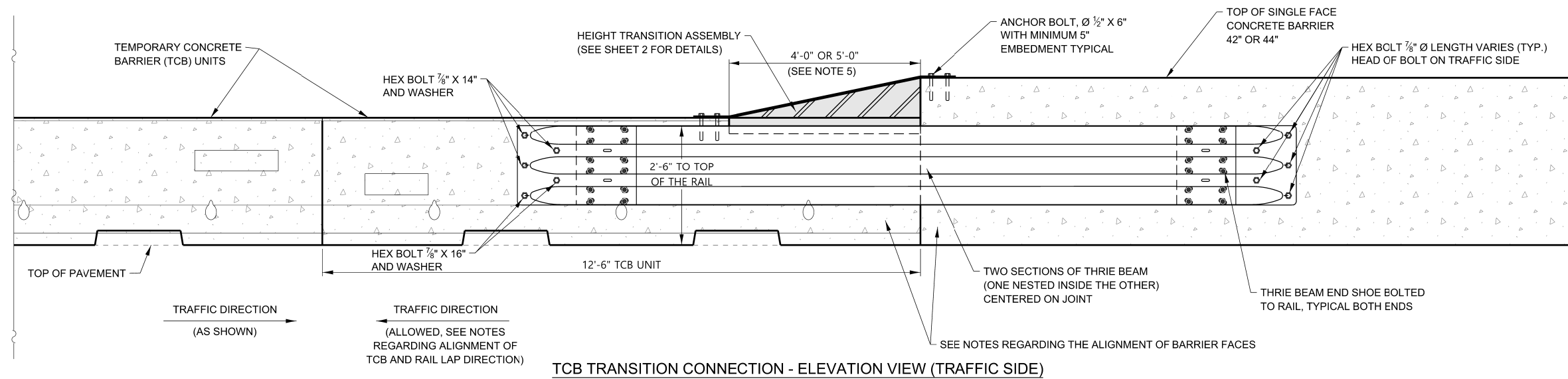
MARCH 2026

Illinois Tollway Base Sheet Revisions

Section M	Base Sheet Drawings	
	Drawing	Modification Summary Effective: 03-01-2026
	Maintenance of Traffic (MOT) - Series 700	
	NOTE	NO CHANGES

 **New Sheet**

 **Retired Standard**



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 CONTINUOUSLY WELDED.

NOTE TO DESIGNER

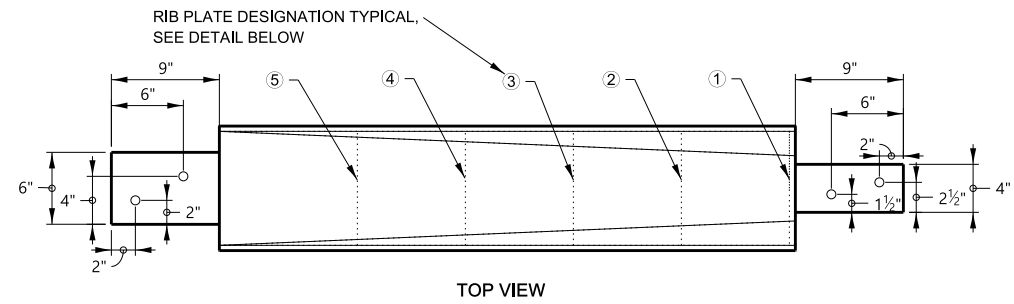
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF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

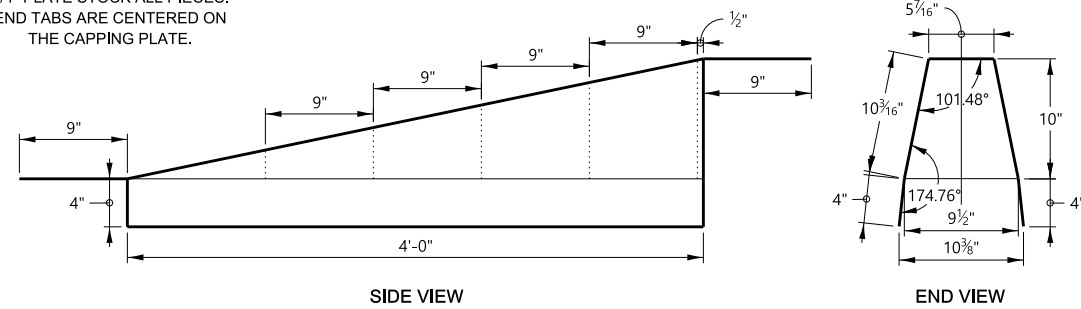
TCB CONNECTION TO SINGLE FACE CONCRETE BARRIER



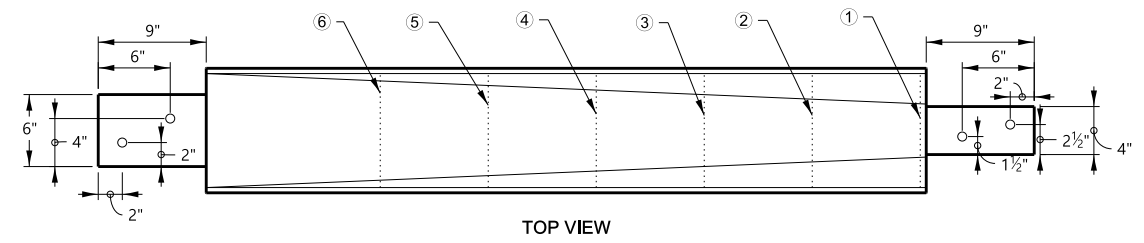
TCB CONNECTION TO SINGLE FACE CONCRETE BARRIER



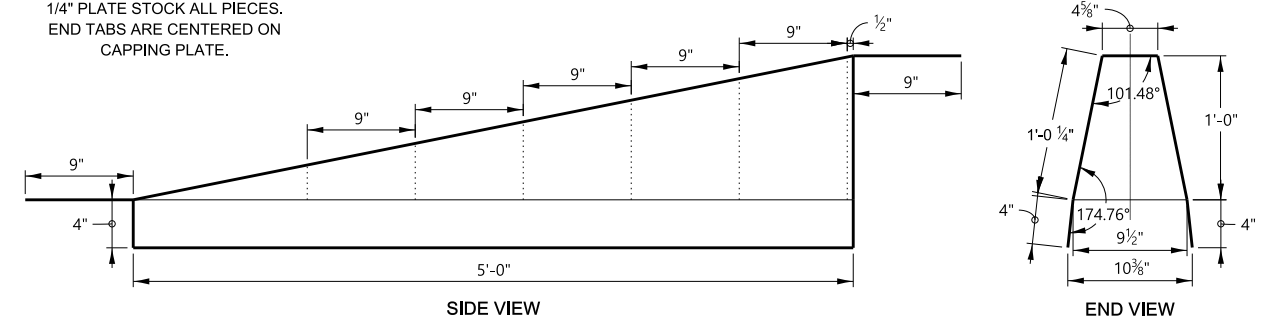
1/4" PLATE STOCK ALL PIECES.
END TABS ARE CENTERED ON
THE CAPPING PLATE.



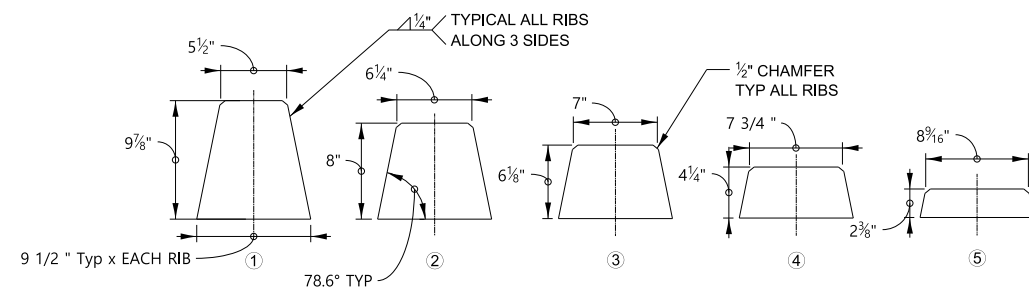
TCB TO 42 INCH SFCB HEIGHT TRANSITION ASSEMBLY



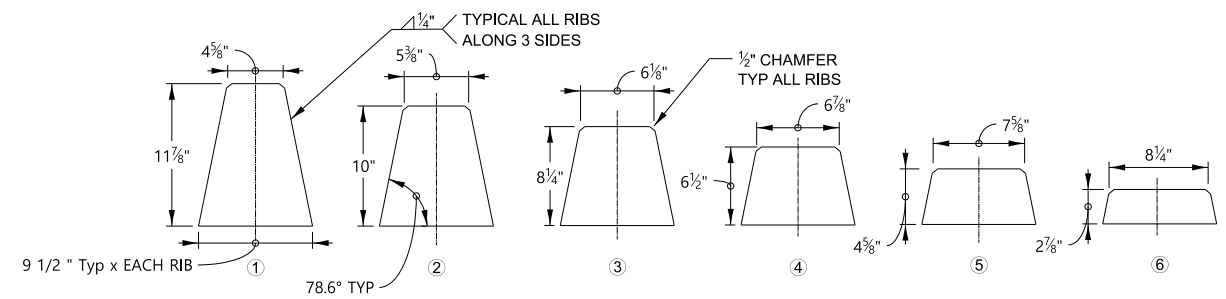
1/4" PLATE STOCK ALL PIECES.
END TABS ARE CENTERED ON
CAPPING PLATE.



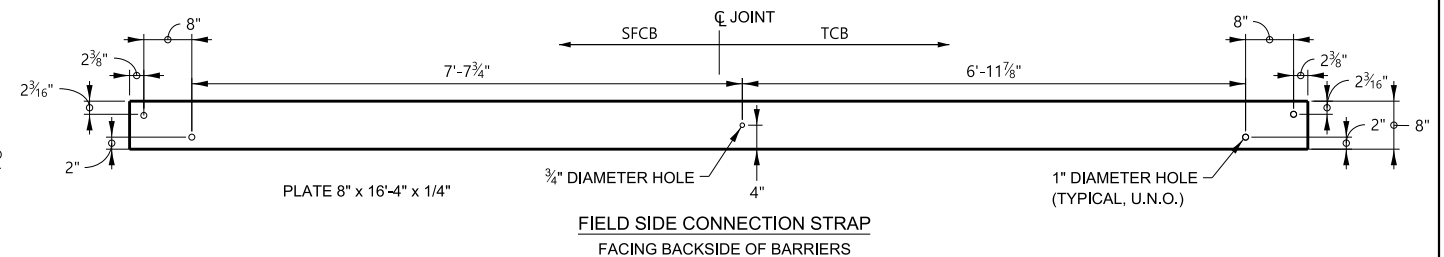
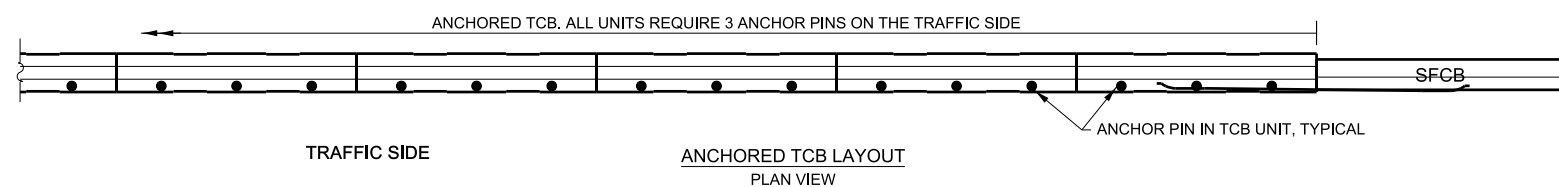
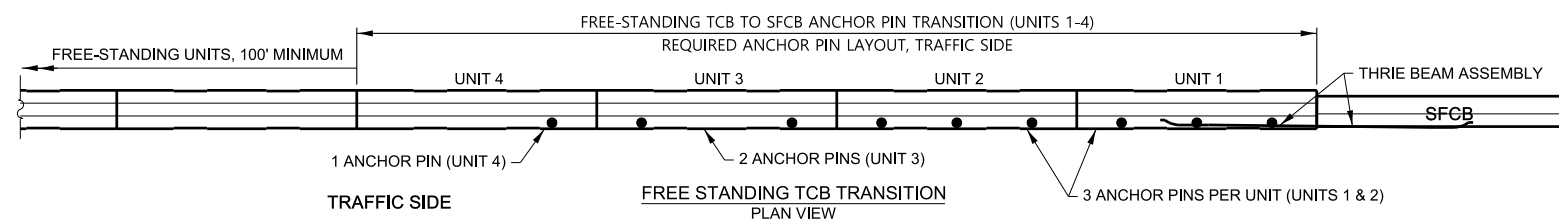
TCB TO 44 INCH SFCB HEIGHT TRANSITION ASSEMBLY



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



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



NOTE TO DESIGNER

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TCB CONNECTION TO SINGLE
FACE CONCRETE BARRIER

BASE SHEETS



SERIES 720 (OHS)

OVERHEAD SIGN

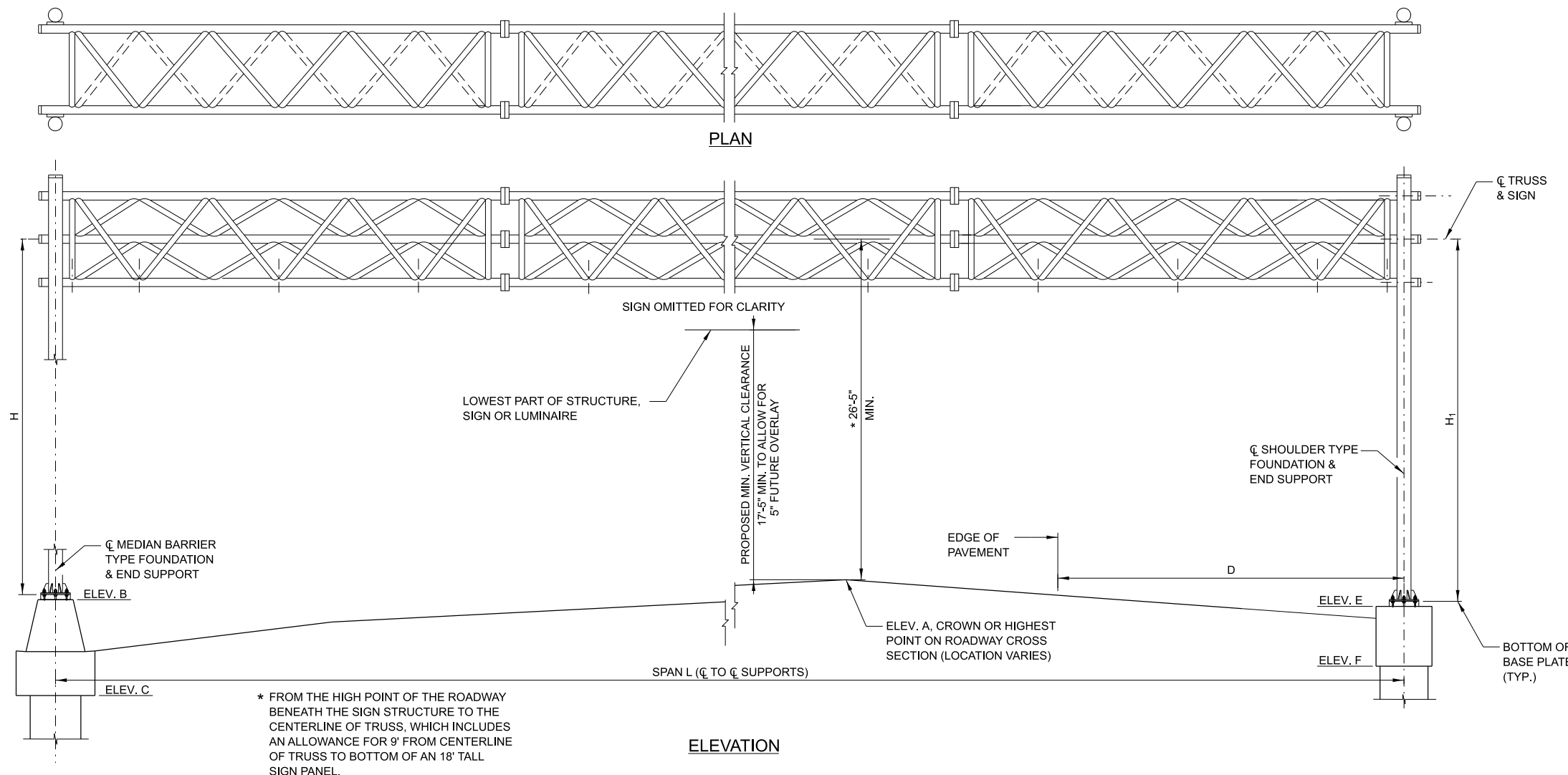
MARCH 2026

Illinois Tollway Base Sheet Revisions
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Section M	Base Sheet Drawings	
	Drawing	Modification Summary Effective: 03-01-2026
	Overhead Sign (OHS)-Series 720	
	M-OHS-729	OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS
	Sheet 3	Backgouge weld option included in Detail A.
	M-OHS-730	OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS
	Sheet 3	Backgouge weld option included in Detail A.

 **New Sheet**

 **Retired Standard**



NOTE TO DESIGNER

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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.

* 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.

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
* 51604000	DRILLED SHAFT IN ROCK	CU YD	XXX.X

NOTE TO DESIGNER

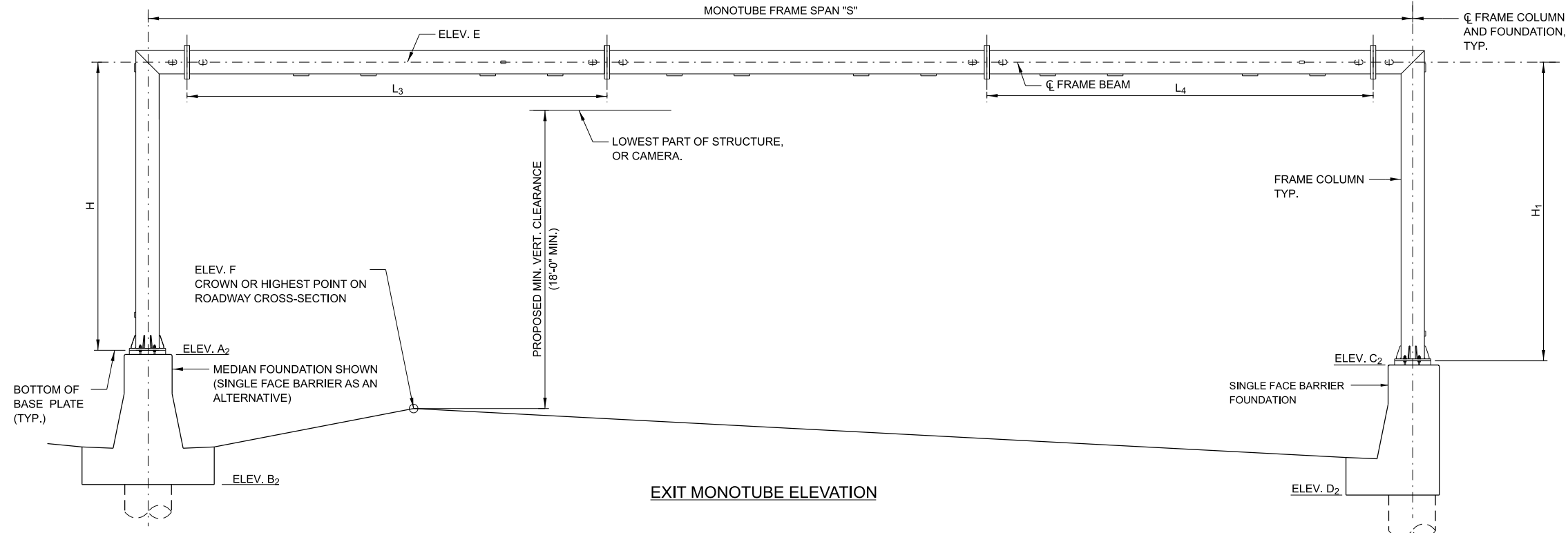
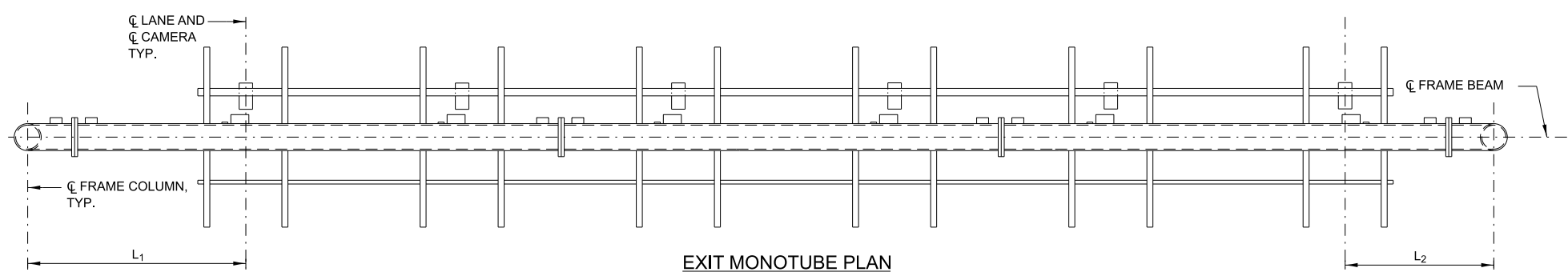
* INCLUDE THIS PAY ITEM IF ROCK IS ENCOUNTERED. QUANTITY OF DRILLED SHAFT IN ROCK IS NOT INCLUDED IN THE PAY ITEM JS734A10.

NOTE: WORK THIS SHEET WITH STANDARD F1



OVERHEAD SIGN STRUCTURE SPAN TYPE SUMMARY AND BILL OF MATERIAL

VERSION: 2025-03 BASE SHEET: M-OHS-720 SHEET: 1 OF 1



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							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 ₂	B ₂	C ₂	D ₂	E	F		L _S	L ₁	L ₂	L ₃	L ₄	H	H ₁			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"
* 51604000	DRILLED SHAFT IN ROCK	CU YD	XXX.X

NOTE TO DESIGNER

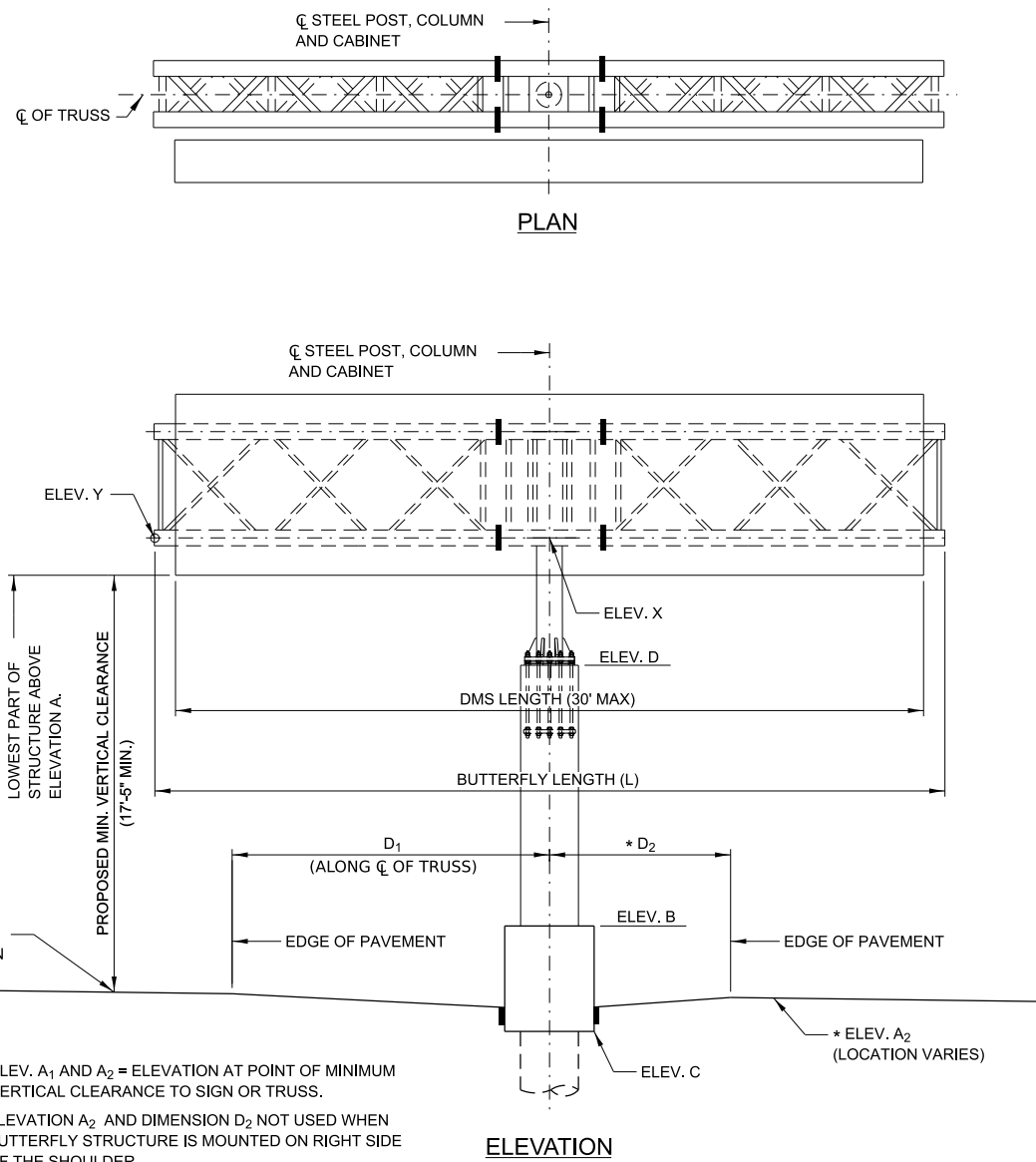
* INCLUDE THIS PAY ITEM IF ROCK IS ENCOUNTERED. QUANTITY OF DRILLED SHAFT IN ROCK IS NOT INCLUDED IN THE PAY ITEM JS734E10.

Illinois Tollway

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

VERSION: 2025-03 BASE SHEET: M-OHS-723 SHEET: 1 OF 1

NOTE:
WORK THIS SHEET WITH STANDARD F13



ELEV. A₁ AND A₂ = ELEVATION AT POINT OF MINIMUM VERTICAL CLEARANCE TO SIGN OR TRUSS.
 * ELEVATION A₂ AND DIMENSION D₂ NOT USED WHEN BUTTERFLY STRUCTURE IS MOUNTED ON RIGHT SIDE OF THE SHOULDER.

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)

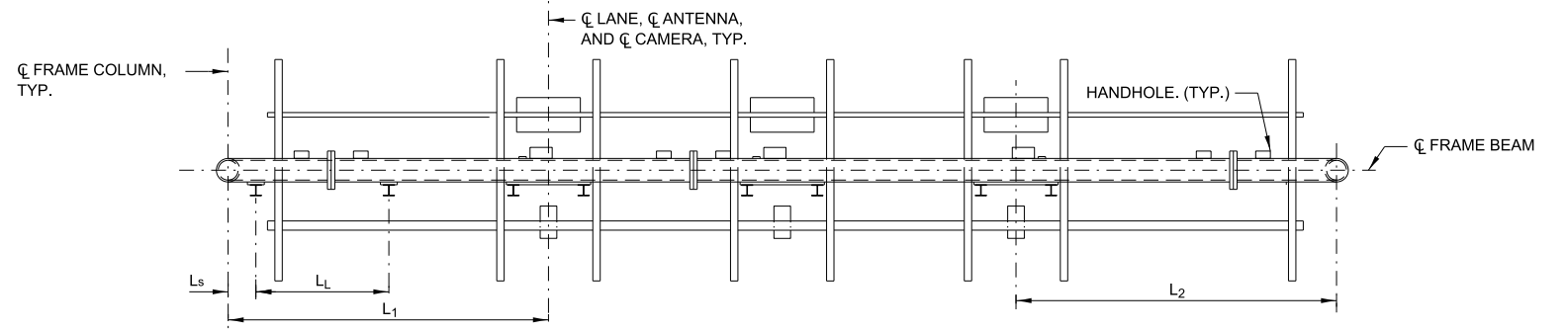
SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

NOTE TO DESIGNER

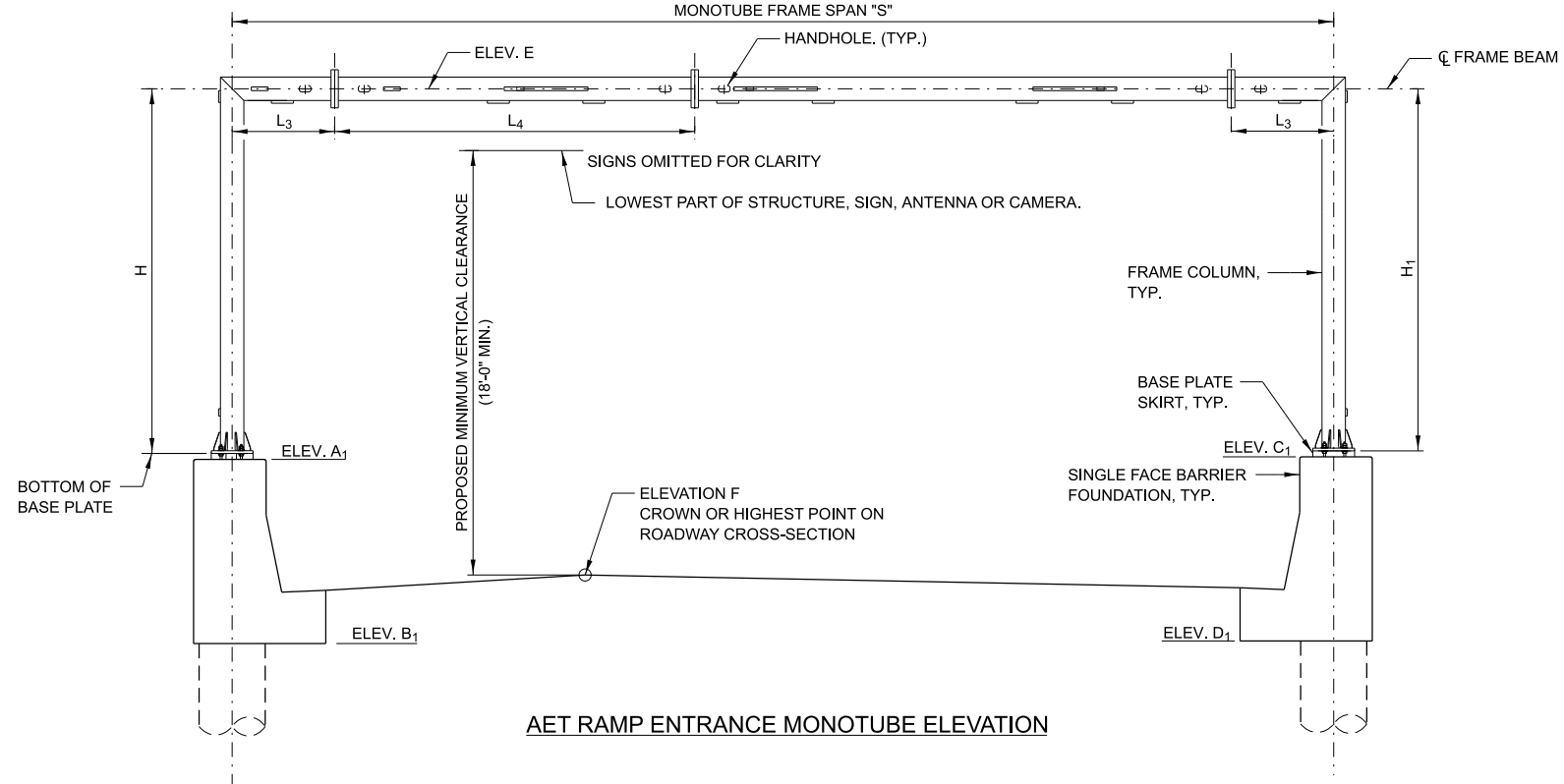
* INCLUDE THIS PAY ITEM IF ROCK IS ENCOUNTERED. QUANTITY OF DRILLED SHAFT IN ROCK IS NOT INCLUDED IN THE PAY ITEM JS734C10.

TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733460	OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE	FOOT	XXX'-XX"
JS734C10	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE	CU YD	XXX.XX
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX.XX
50300300	PROTECTIVE COAT	SQ YD	X,XXX.XX
* 51604000	DRILLED SHAFT IN ROCK	CU 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'	X'-XX"	X'-XX"	X,XXX.XX	X,XXX	XXX.XX	XXX.XX	X,XXX	XXX.XX		
					</																					



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-TS-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								FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ YD)																					
			A ₁	B ₁	C ₁	D ₁	E	F		L _s	L _L	L ₁	L ₂	L ₃	L ₄	H	H ₁	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
* 51604000	DRILLED SHAFT IN ROCK	CU YD	XXX.X

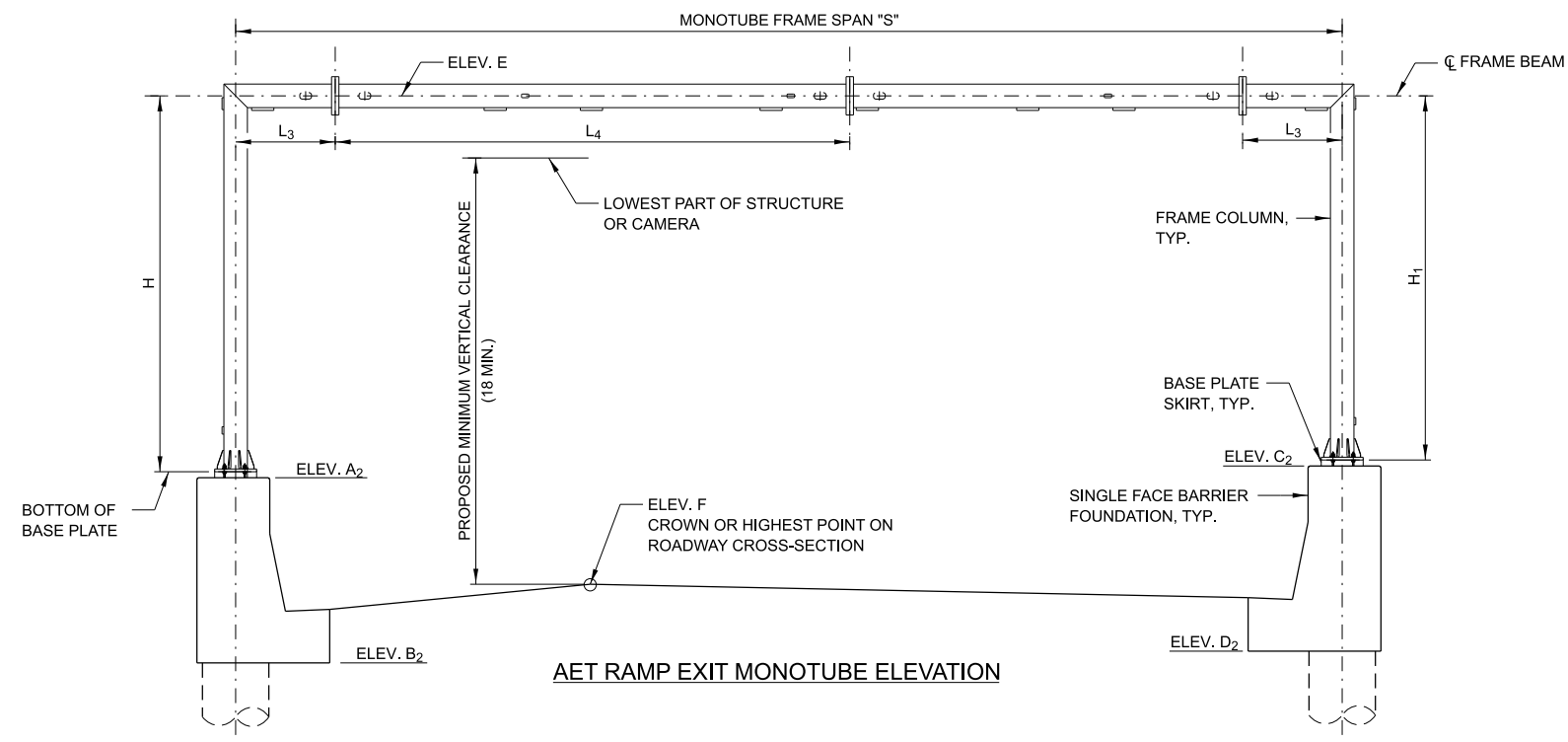
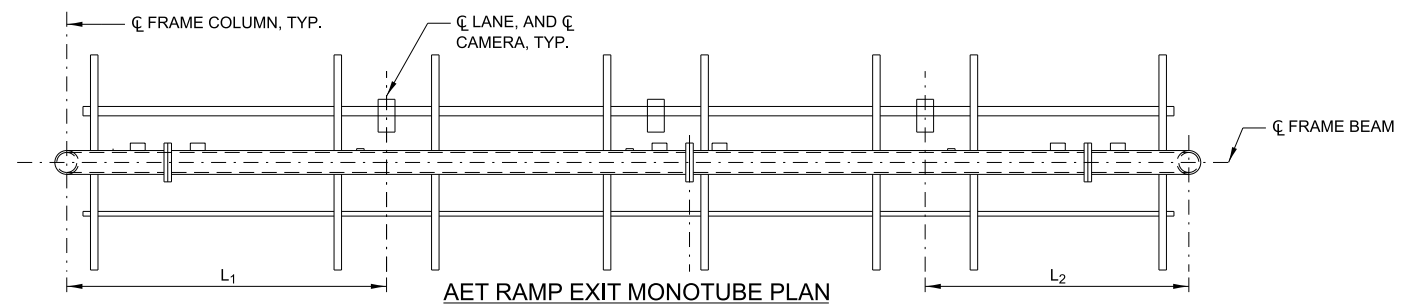
NOTE TO DESIGNER

* INCLUDE THIS PAY ITEM IF ROCK IS ENCOUNTERED. QUANTITY OF DRILLED SHAFT IN ROCK IS NOT INCLUDED IN THE PAY ITEM JS734F10.

NOTE:
WORK THIS SHEET WITH STANDARD F15

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

VERSION: 2025-03 BASE SHEET: M-OHS-725 SHEET: 1 OF 1



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						FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER CONCRETE STRUCTURES (CU YD)	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ YD)	
			A ₂	B ₂	C ₂	D ₂	E		F	L ₁	L ₂	L ₃	L ₄	H	H ₁	CLASS SI CONCRETE (CU YD)				CLASS DS CONCRETE (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.XX
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX.XX
50300300	PROTECTIVE COAT	SQ YD	X,XXX.XX
* 51604000	DRILLED SHAFT IN ROCK	CU YD	XXX.X

NOTE TO DESIGNER
 * INCLUDE THIS PAY ITEM IF ROCK IS ENCOUNTERED. QUANTITY OF DRILLED SHAFT IN ROCK IS NOT INCLUDED IN THE PAY ITEM JS734F10.

NOTE:
 WORK THIS SHEET WITH STANDARD F15

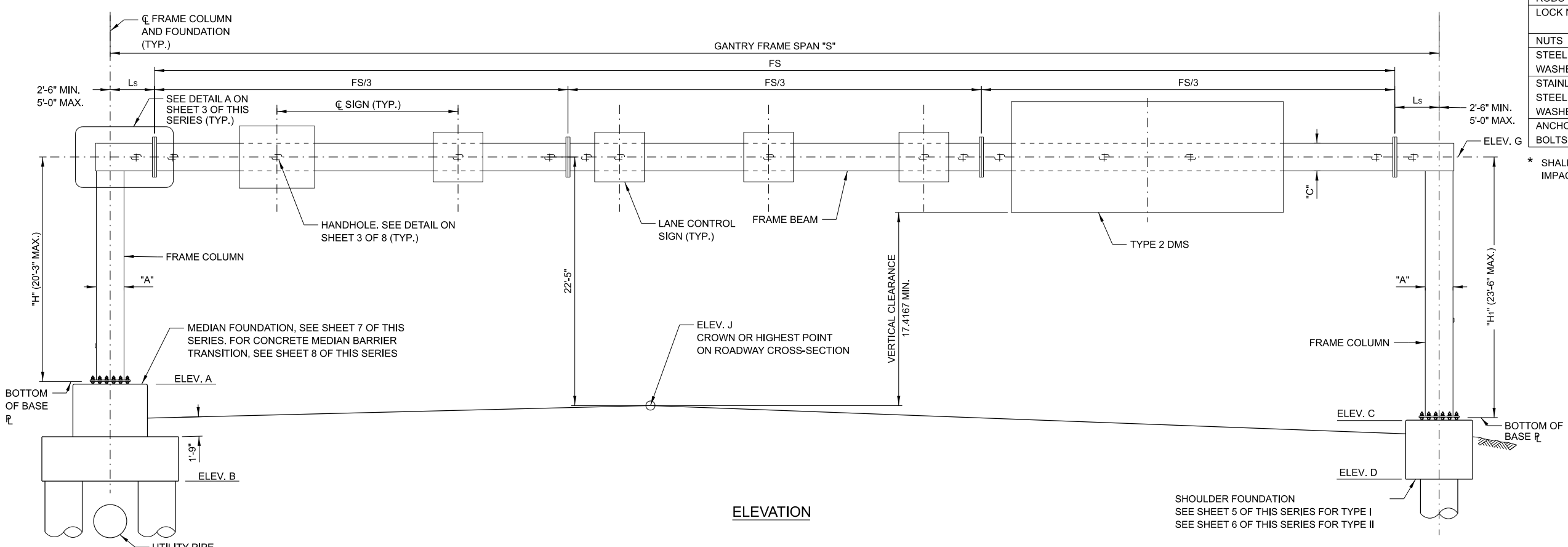
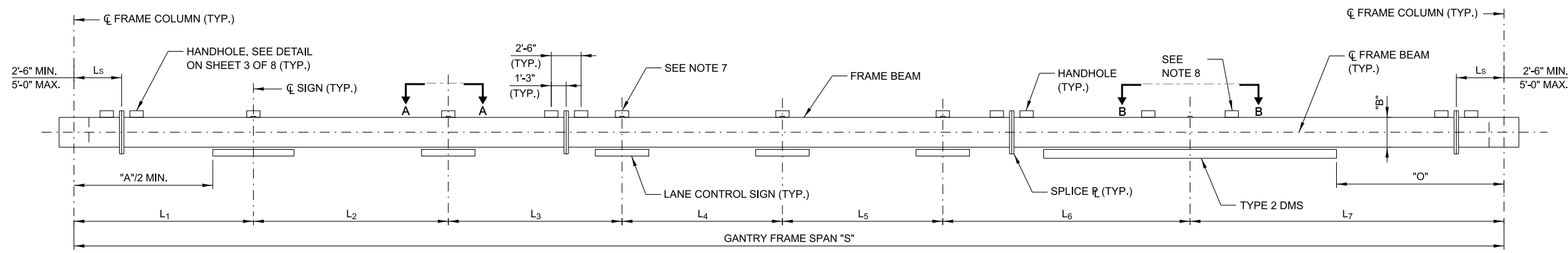


OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF MATERIAL

VERSION: 2025-03	BASE SHEET: M-OHS-726	SHEET: 1 OF 1
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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	62
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:
- SEE SHEET 2 OF THIS SERIES FOR VIEW A-A, VIEW B-B AND DESIGN SUMMARY TABLE.
 - CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
 - PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L₁ THROUGH L₇)
 - FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 2 COLUMNS AND 3 FIELD SECTIONS.
 - 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.
 - WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO 1/4" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.
 - IF THE DISTANCE BETWEEN AN LCS TYPE 1 OR LCS TYPE 2 CENTERLINE HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SPLICE HANDHOLE SHALL BE ELIMINATED.
 - IF THE DISTANCE BETWEEN A TYPE 2 DMS SIGN HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SIGN HANDHOLE 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.
 - 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 II 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".

NOTE TO DESIGNER

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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.

TOTAL BILL OF MATERIAL			
PAY ITEM	ITEM	UNIT	TOTAL
JS734G10	FOUNDATION FOR ITS GANTRY FRAME	CU YD	XXX.X
JS710110	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
* 51604000	DRILLED SHAFT IN ROCK	CU YD	XXX.X

NOTE TO DESIGNER

* INCLUDE THIS PAY ITEM IF ROCK IS ENCOUNTERED. QUANTITY OF DRILLED SHAFT IN ROCK IS NOT INCLUDED IN THE PAY ITEM JS734G10.

STRUCTURAL STEEL TUBE (HSS) FRAME TABLE							
SPAN "S"	FRAME COLUMN	FRAME BEAM	CAMBER	"A"	"B"	"C"	"O"
<=110'	HSS 28x24x0.625	HSS 28x24x0.500	3/2"	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	5 1/2"	2'-6"	2'-6"	2'-6"	1'-3"

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

VERSION: 2026-03 BASE SHEET: M-OHS-729 SHEET: 1 OF 9

GENERAL NOTES:

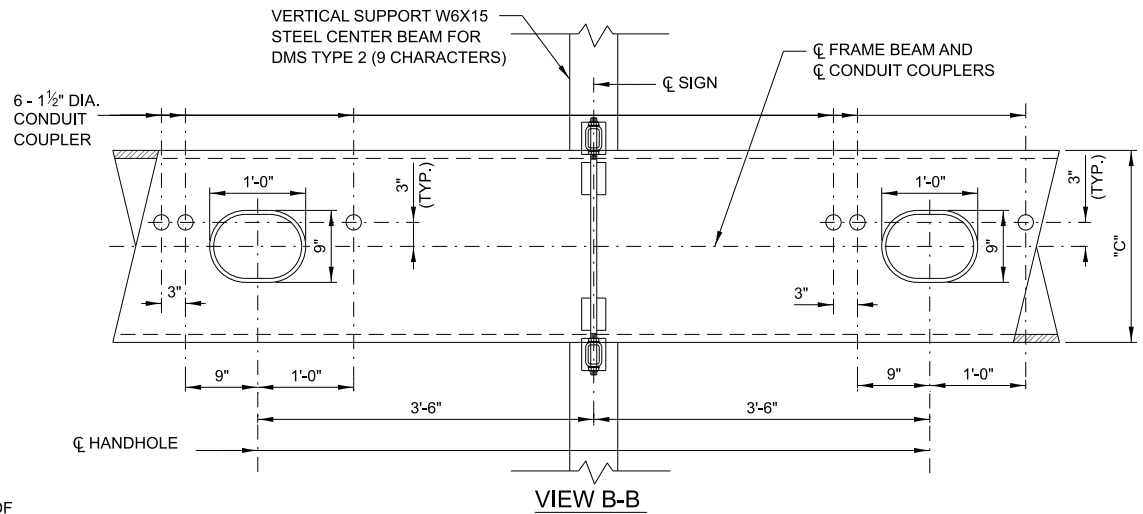
- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS:

- REINFORCEMENT BARS, INCLUDING REINFORCEMENT BARS, EPOXY-COATED SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS SECTION 508 AND ARTICLE 1006.10.
- REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
- REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.
- 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:

- ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS ISSUED XXXXXX TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED XXXXXX.
- ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED XXXXXX.



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.)

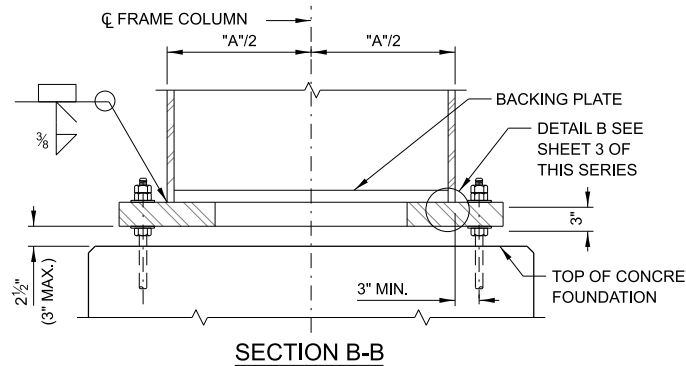
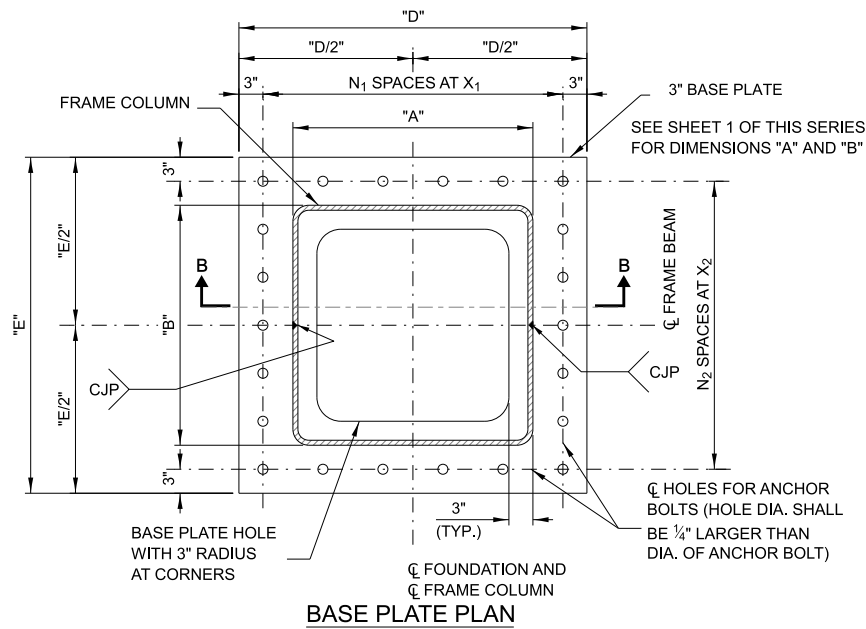
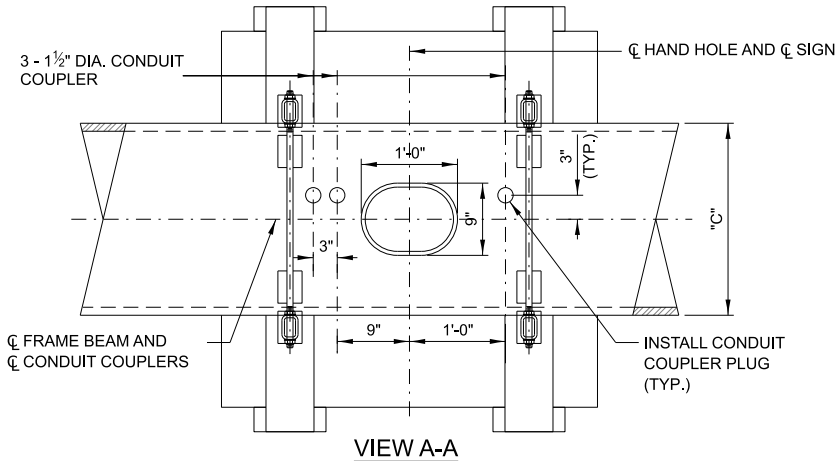
ITS GANTRY FRAMES AND FOUNDATIONS ARE DESIGNED FOR MAX. LOADING OF 2-TYPE 2 DMS (ONE OVER EACH SHOULDER) AND 1-LANE CONTROL SIGN IN EACH ADDITIONAL 12' LANE.

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.
f _y = YIELD STRENGTH OF REINFORCEMENT BARS (GRADE 60)	= 60,000 P.S.I.

DESIGN SPECIFICATIONS:

- ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, LATEST EDITION.
- AASHTO LRFD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION WITH CURRENT INTERIMS
- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, LATEST EDITION.
- ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, LATEST EDITION.
- ILLINOIS TOLLWAY GEOTECHNICAL ENGINEER MANUAL, LATEST EDITION.



DESIGN SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT)	ELEVATIONS						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		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)	
			A	B	C	D	J	G														CLASS BS 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	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"	XXX.X	XXX.X	X,XXX	XXX.X	
TOTAL																										

NOTE TO DESIGNER

- A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
- 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.
- 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.
- DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
- DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.

NOTE TO DESIGNER

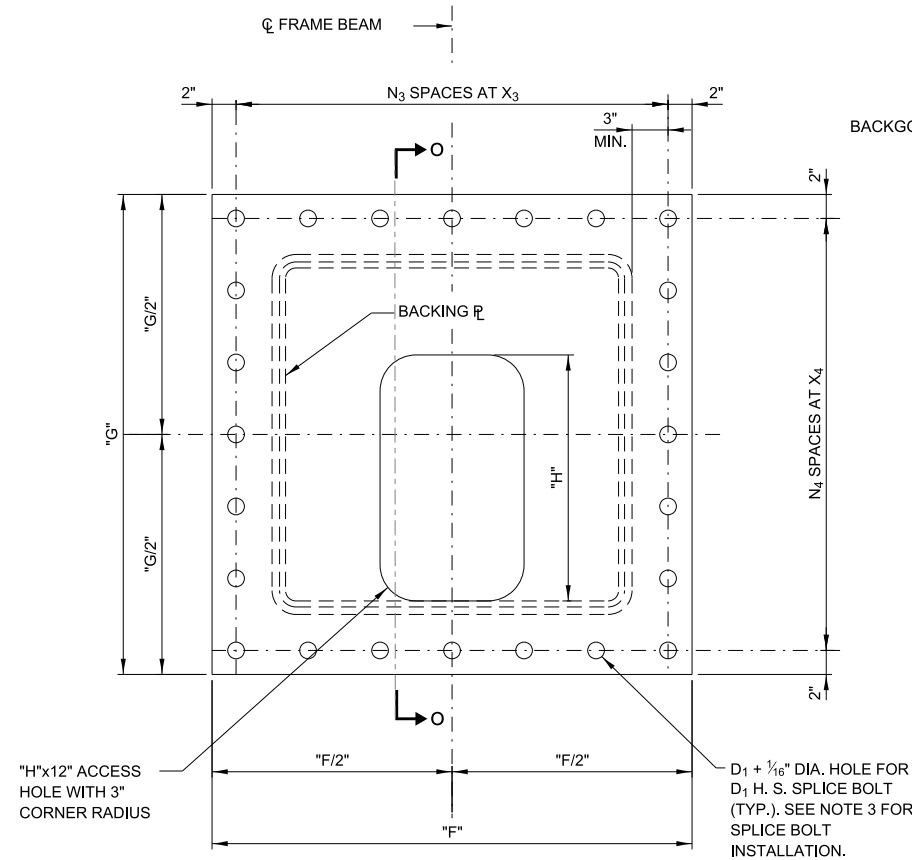
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BASE PLATE TABLE - TYPE N

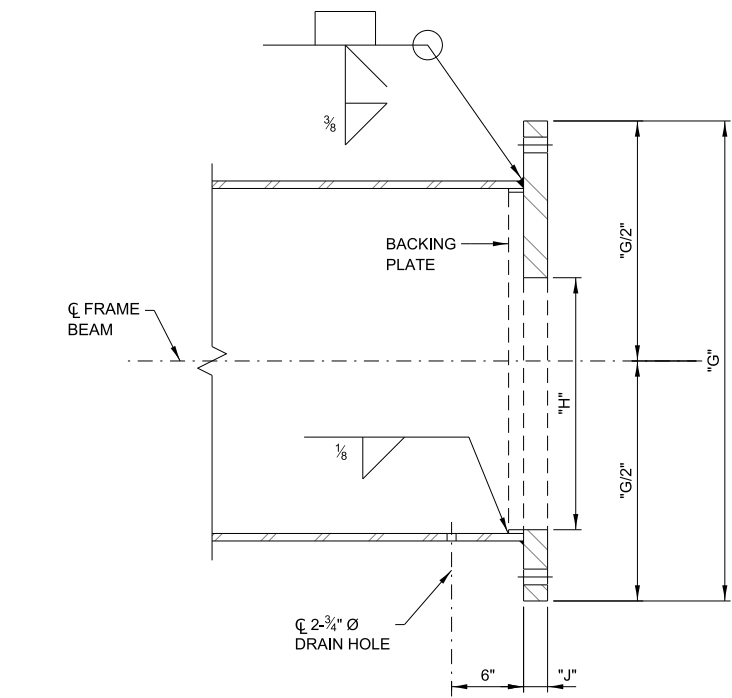
SPAN "S"	"D"	"E"	N ₁	X ₁	N ₂	X ₂	ANCHOR BOLT DIAMETER	NO. ANCHOR BOLT
<=110'	3'-2"	3'-5"	4	8"	5	7"	1 3/4"	18
110'<"S"<=130'	3'-5"	3'-6"	5	7"	6	6"	1 3/4"	22
130'<"S"<=150'	3'-7 1/2"	3'-6"	5	7 1/2"	6	6"	1 3/4"	22



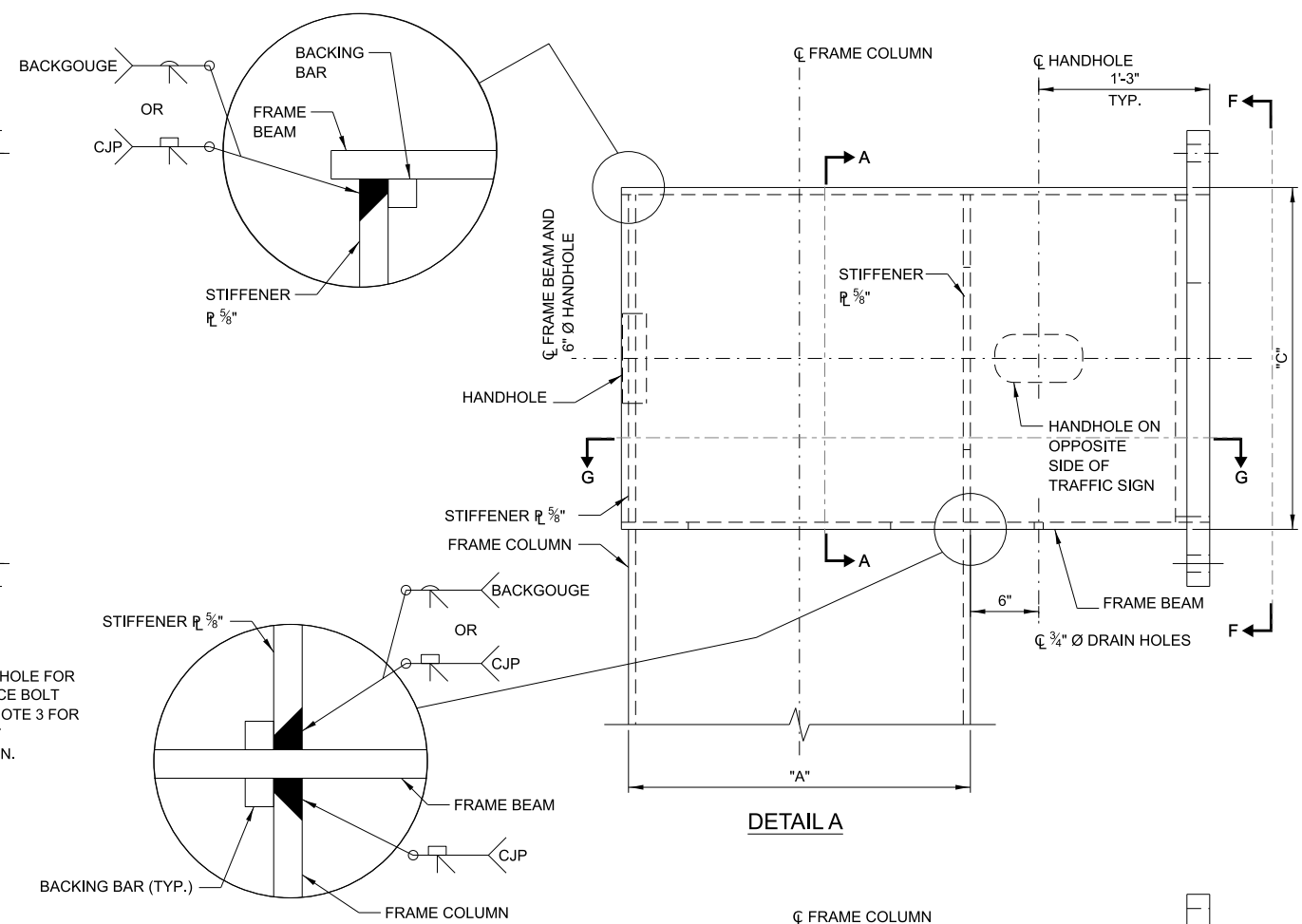
OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS



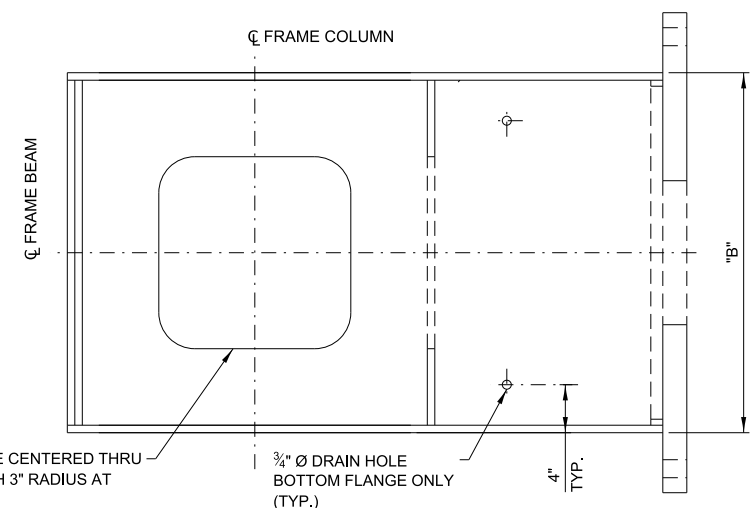
VIEW F-F



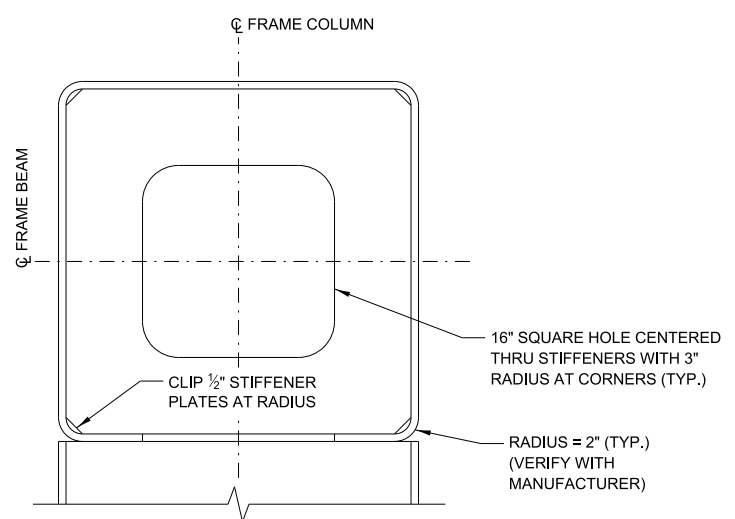
SECTION O-O
SPLICE PLATE DETAIL



DETAIL A



SECTION G-G



SECTION A-A

16" SQUARE HOLE CENTERED THRU STIFFENERS WITH 3" RADIUS AT CORNERS (TYP.)

3/4" Ø DRAIN HOLE BOTTOM FLANGE ONLY (TYP.)

NOTES:

- SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
- SEE SHEET 2 OF THIS SERIES FOR DIMENSIONS "D" AND "E".
- INSTALLATION AND INSPECTION OF SPLICE BOLTS AND ANCHOR BOLTS SHALL COMPLY WITH ILLINOIS TOLLWAY SPECIAL PROVISION "INTELLIGENT TRANSPORTATION SYSTEMS GANTRY FRAME (STEEL)".
- SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.

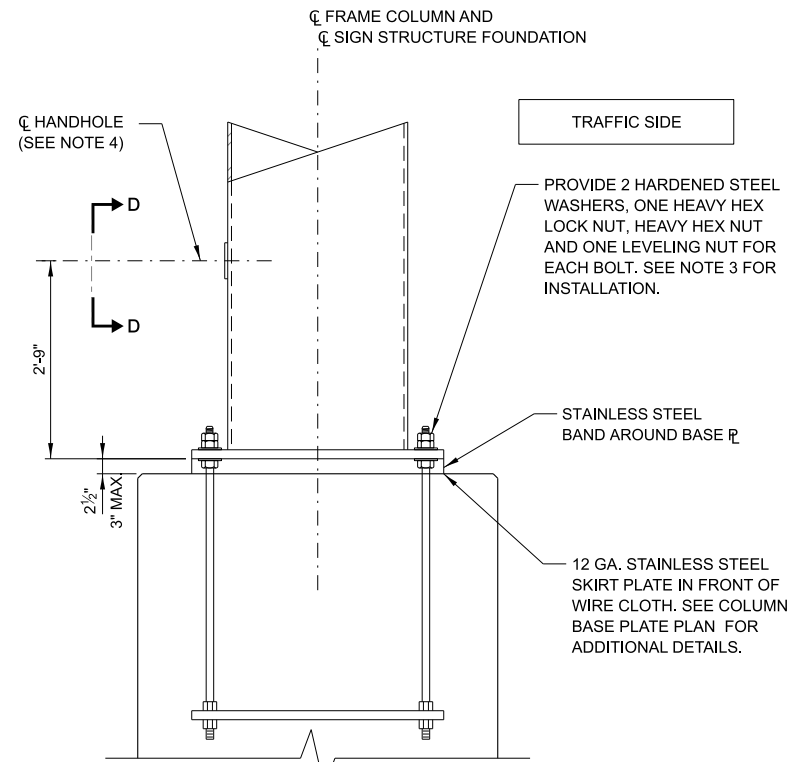
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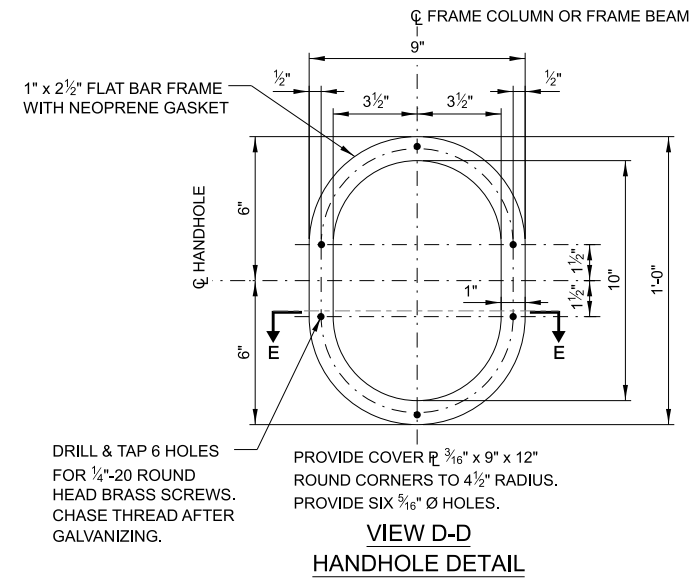
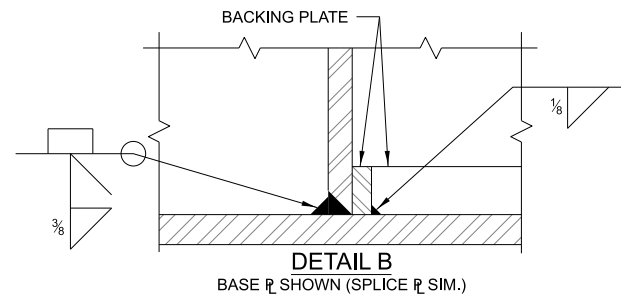
SPLICE PLATE TABLE										
SPAN "S"	F	G	H	J	N ₃	X ₃	N ₄	X ₄	SPLICE BOLT DIAMETER (D ₁)	NO. SPLICE BOLT
≤110'	3'-1"	2'-8 1/2"	1'-6"	2 1/4"	6	5 1/2"	6	4 3/4"	1"	24
110' < "S" ≤ 130'	3'-0 1/2"	2'-10"	1'-6"	2 1/4"	5	6 1/2"	5	6"	1 1/4"	20
130' < "S" ≤ 150'	3'-4"	3'-4"	1'-9"	2 3/8"	6	6"	6	6"	1 1/4"	24



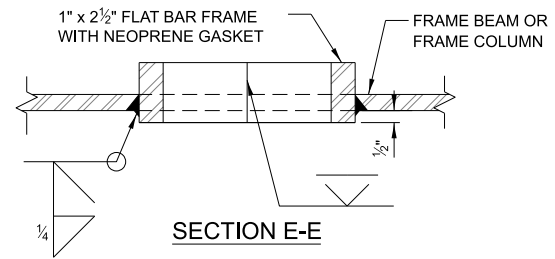
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN STRUCTURE
DETAILS



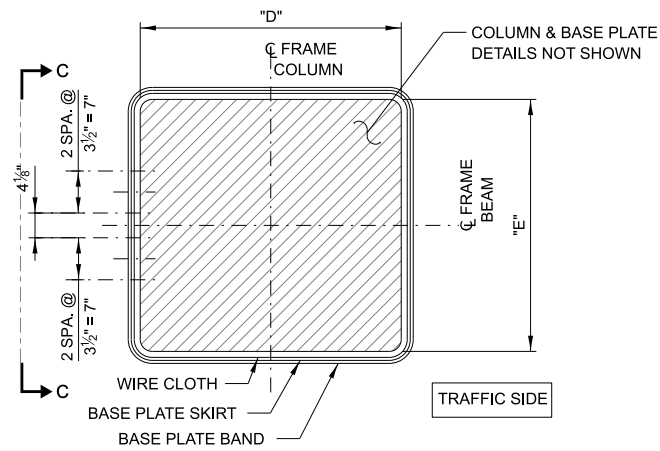
COLUMN BASE
REINFORCING NOT SHOWN



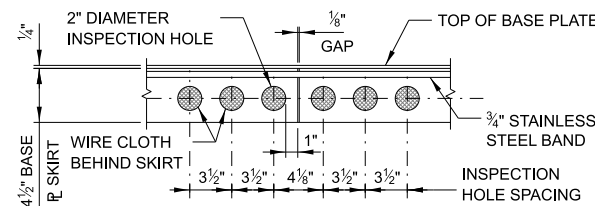
VIEW D-D
HANDHOLE DETAIL



SECTION E-E



COLUMN BASE PLATE PLAN



VIEW C-C (BASE PLATE SKIRT)

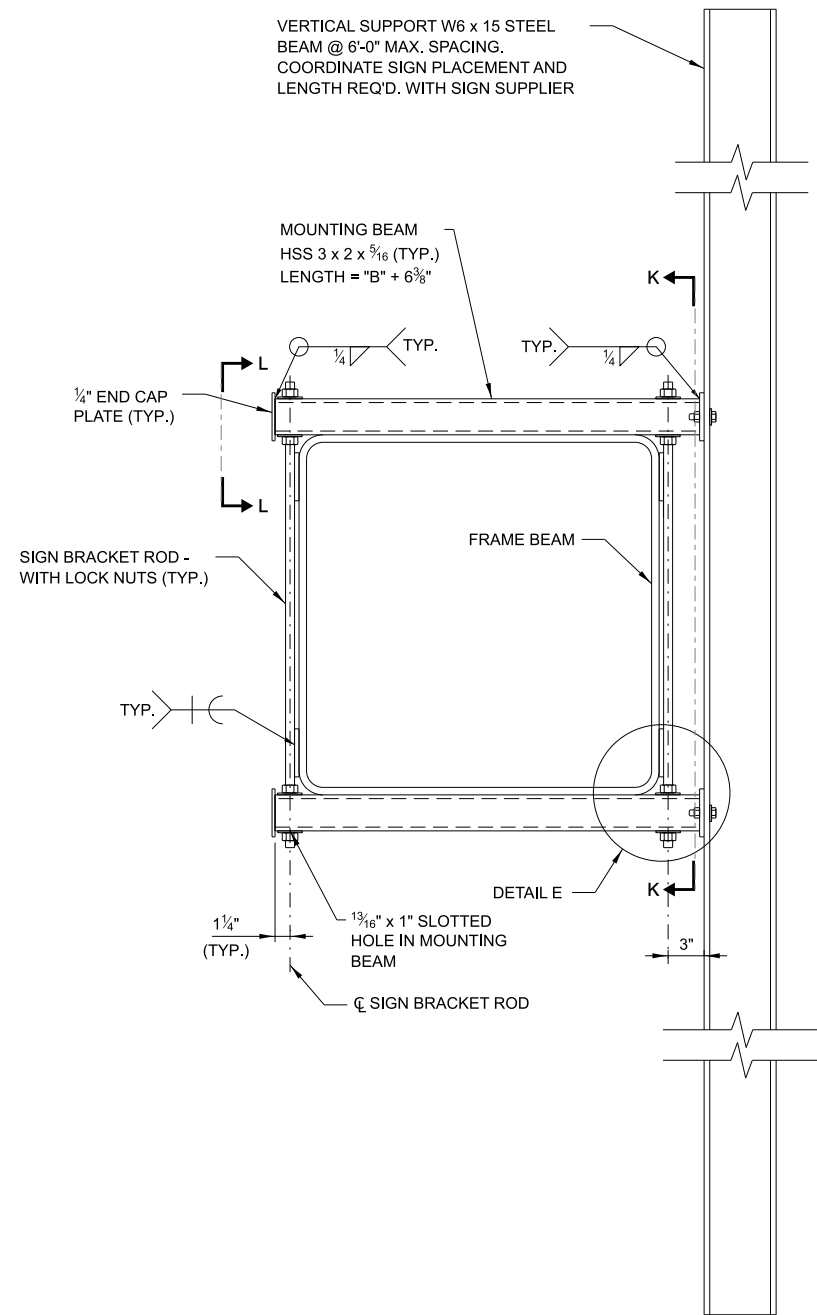
NOTE TO DESIGNER

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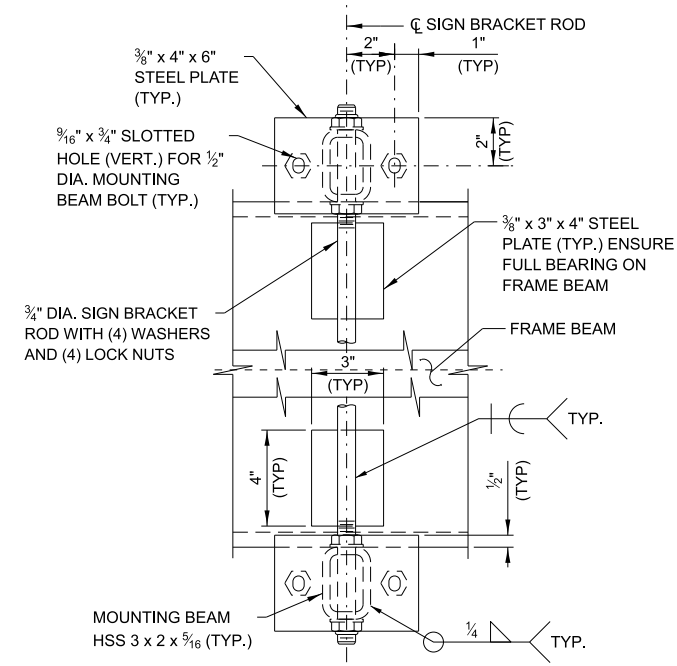
VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.



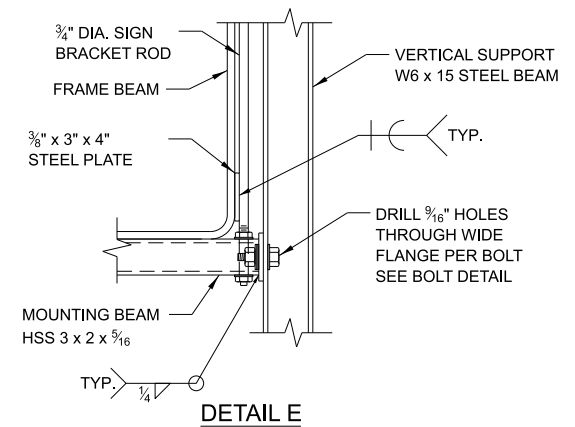
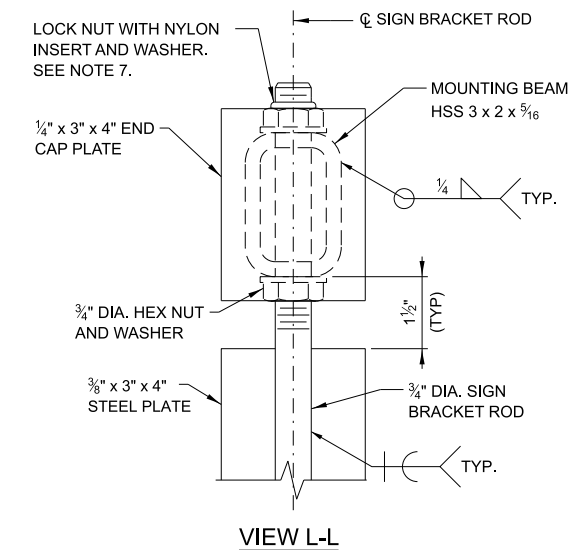
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN STRUCTURE
DETAILS



CONNECTION SIDE VIEW



SECTION K-K

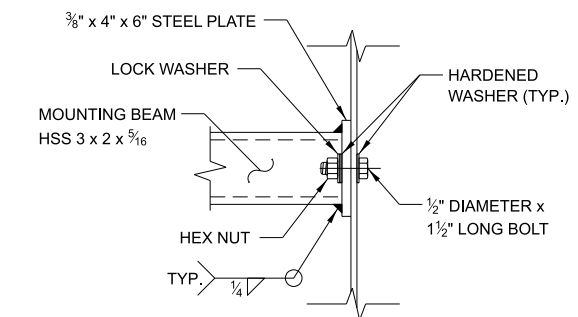


DETAIL E

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

NOTES:

- CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
- VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
- 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.
- PROVIDE HIGH STRENGTH BOLTS WITH WASHERS AND LOCK NUTS TO FASTEN DMS AND LANE CONTROL SIGN TO VERTICAL SUPPORT MEMBERS.
- GALVANIZE ALL NON-STAINLESS STEEL PARTS.
- SIGN BRACKET RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307.
- LOCK NUTS SHALL BE EITHER STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A194 GRADE 8F OR ASTM A194 GRADE 2H OR CARBON STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A307 AND HOT DIP GALVANIZED AS PER AASHTO M232.
- STAINLESS STEEL NUTS/LOCKNUTS SHALL BE USED WITH STAINLESS BOLTS AND RODS AND GALVANIZED NUTS/LOCKNUTS SHALL BE USED WITH GALVANIZED THREADED BOLTS AND RODS.



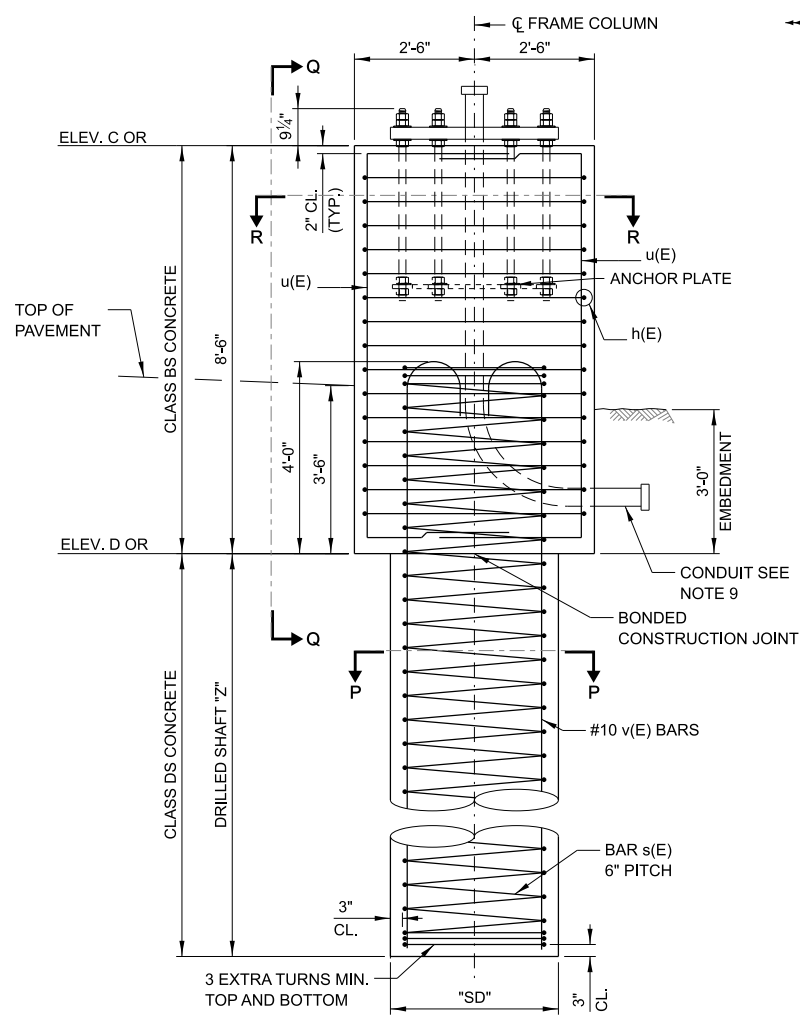
SIGN BRACKET ROD NOT SHOWN FOR CLARITY

NOTE TO DESIGNER

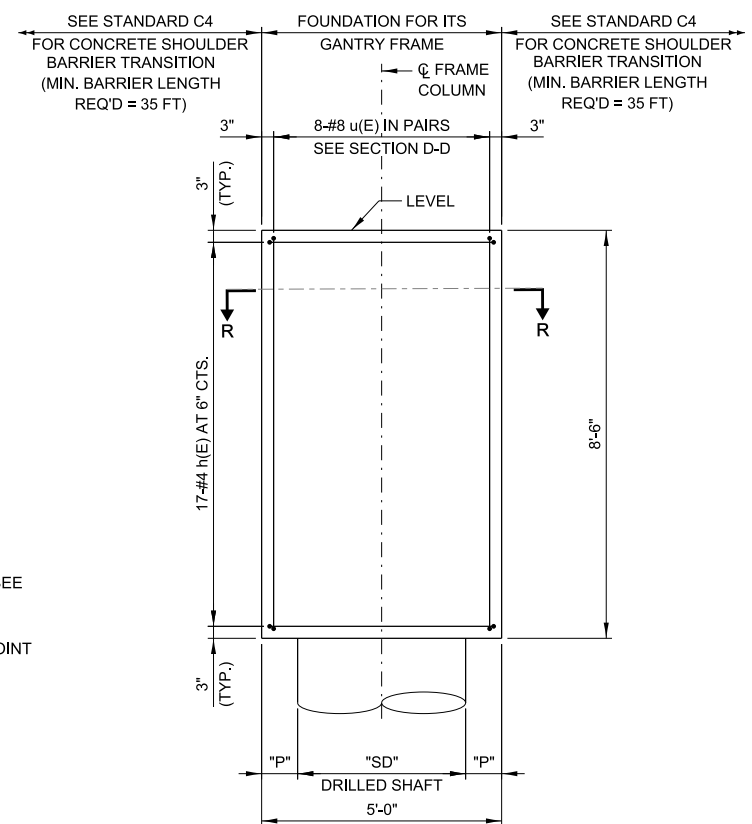
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE 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.



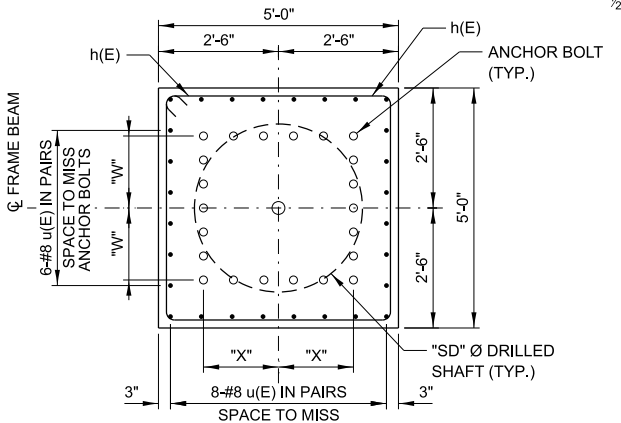
OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS



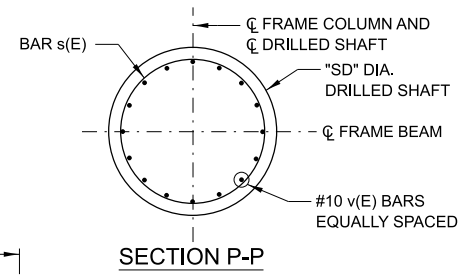
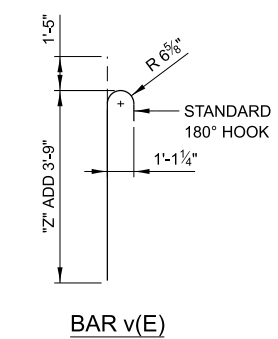
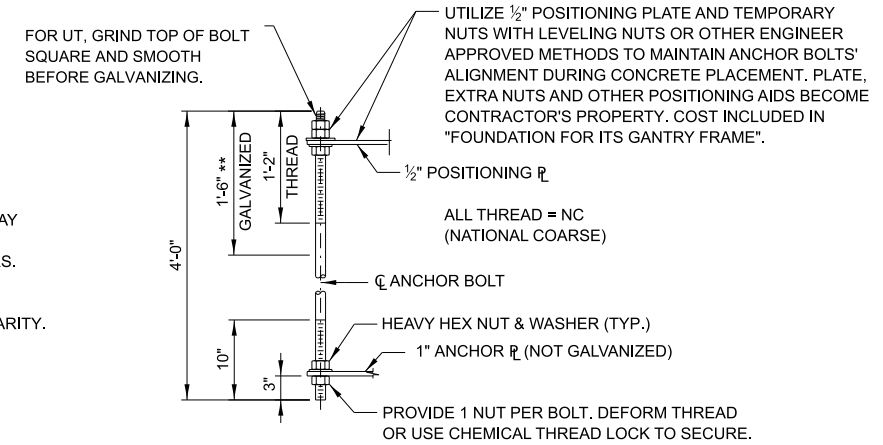
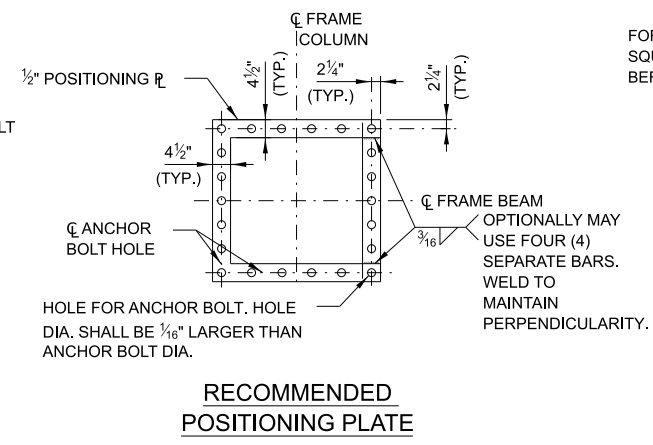
**ELEVATION
SHOULDER FOUNDATION TYPE I**



VIEW Q-Q



SECTION R-R



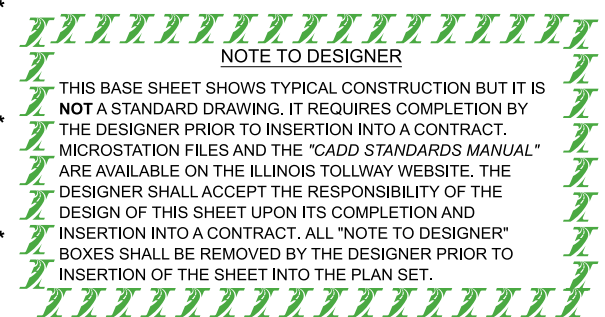
SHOULDER FOUNDATION TYPE I SCHEDULE

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

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"	MWW
	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"	MWW
	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"	MWW
	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 TABLE

SPAN "S"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5 1/2"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"<=130'	1'-6"	1'-5 1/2"	32'-0"	3'-6"	9"	6"	22
130'<"S"<=150'	1'-6"	1'-6 3/4"	35'-0"	4'-0"	6"	6"	22

NOTES:

- 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.
- ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
- CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
- BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
- 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".
- 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.
- FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
- 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.
- 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.

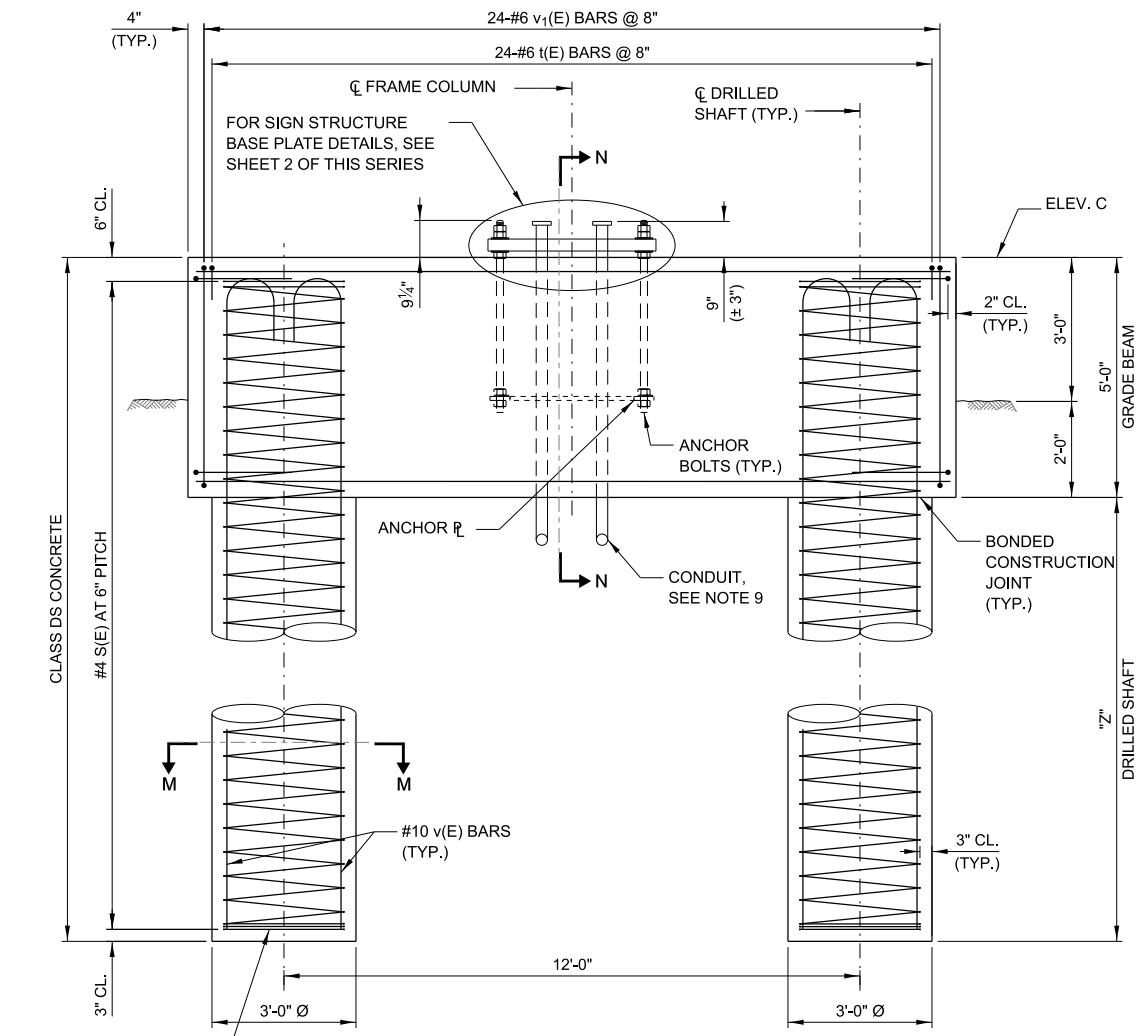


ANCHOR BOLTS SHALL CONFORM TO AASHTO M314 OR ASTM F1554 GRADE 55 AND MEET CHARPY V-NOTCH (CVN) ENERGY OF 15 LB.-FT. AT 40° F. GALVANIZE UPPER 18" PER AASHTO M 232. NO WELDING SHALL BE PERMITTED ON ANCHOR BOLTS.

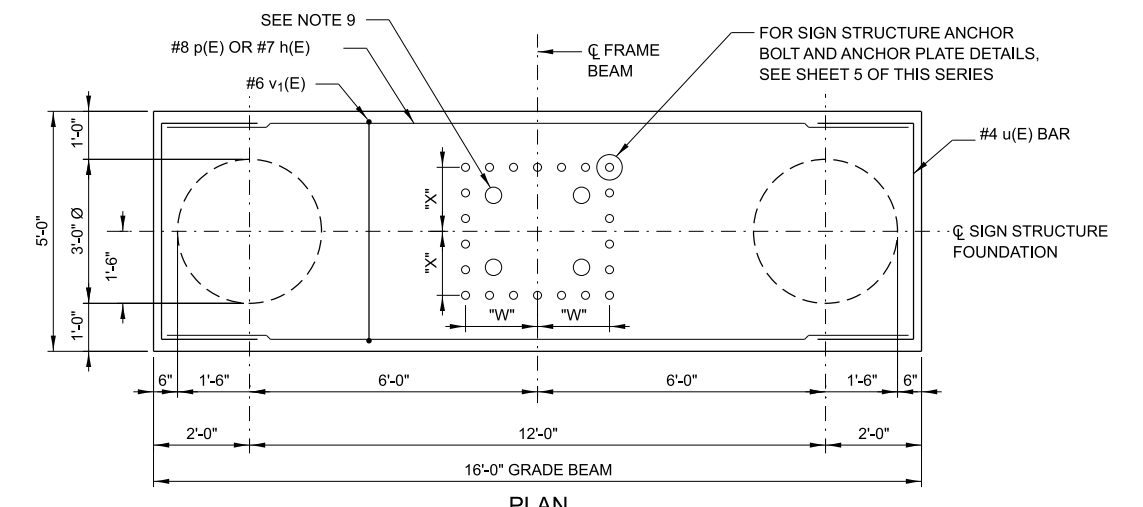
** 18" IS MINIMUM TO BE GALVANIZED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPTION.

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

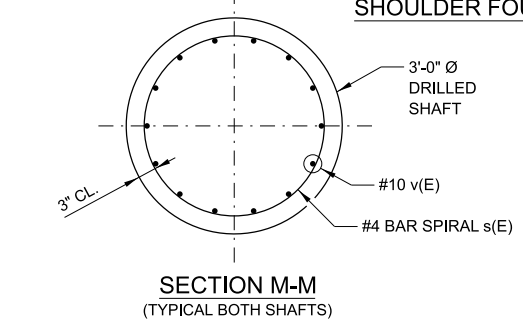
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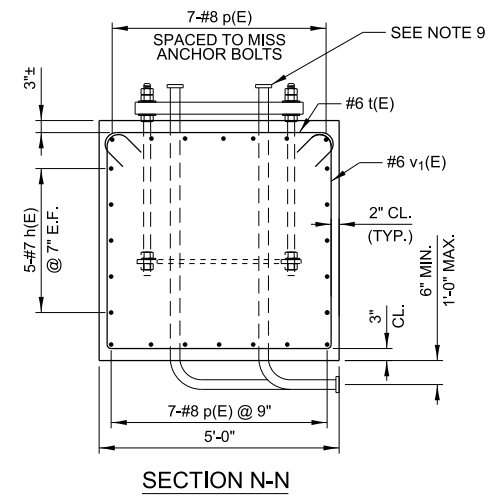
ELEVATION
SHOULDER FOUNDATION TYPE II



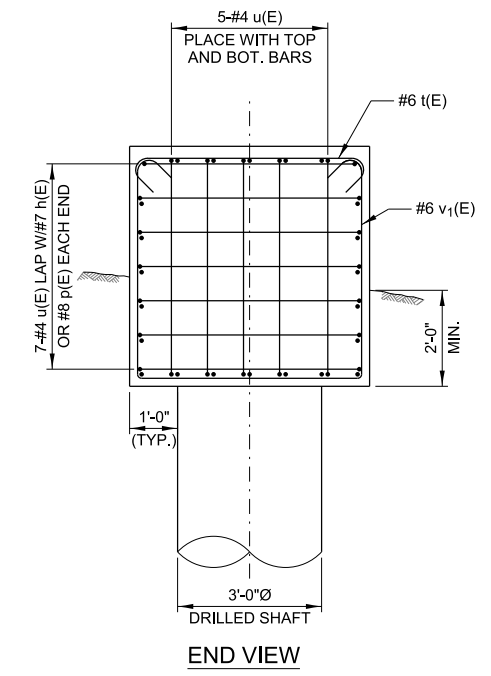
PLAN
SHOULDER FOUNDATION TYPE II



SECTION M-M
(TYPICAL BOTH SHAFTS)

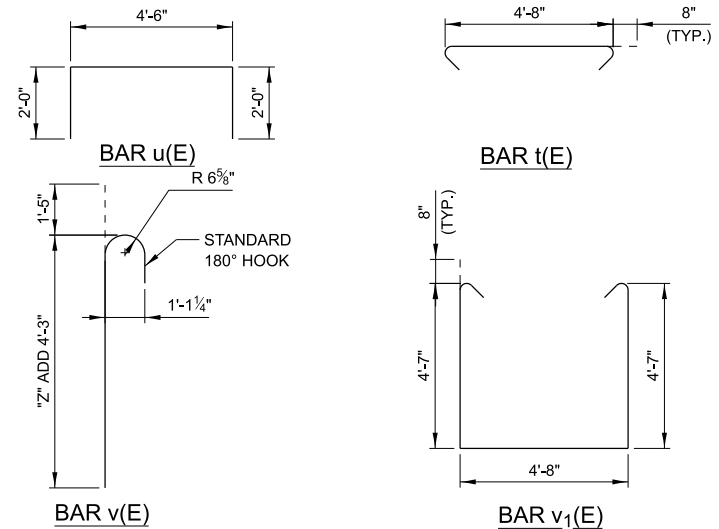


SECTION N-N



END VIEW

SHOULDER FOUNDATION TYPE II SCHEDULE					
SPAN "S"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5 1/2"	1'-4"	35.0	8,020
110'<"S"<=130'	42'-0"	1'-6"	1'-5 1/2"	37.0	8,590
130'<"S"<=150'	46'-0"	1'-6"	1'-6 3/4"	39.0	9,150



NOTES:

- 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.
- ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
- CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
- BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
- 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".
- 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.
- FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
- 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.
- 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.

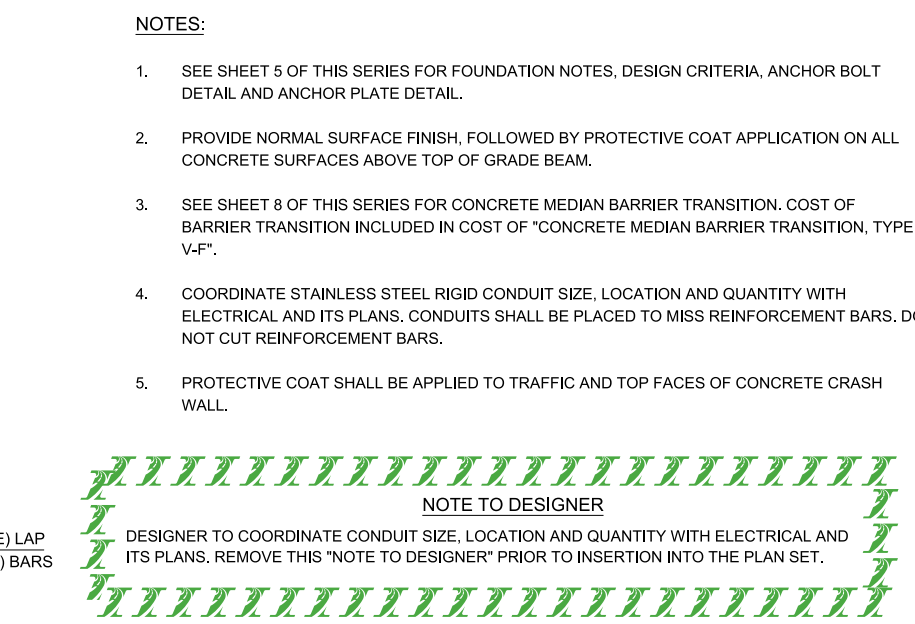
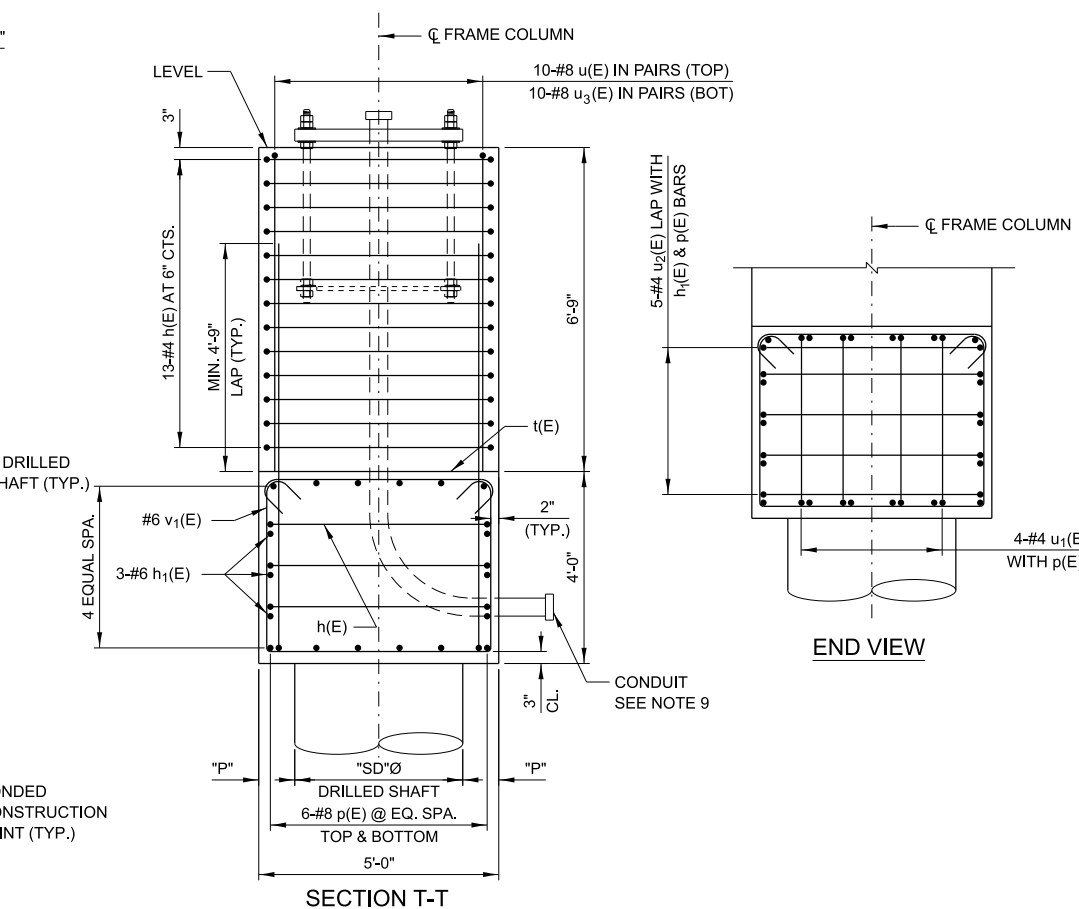
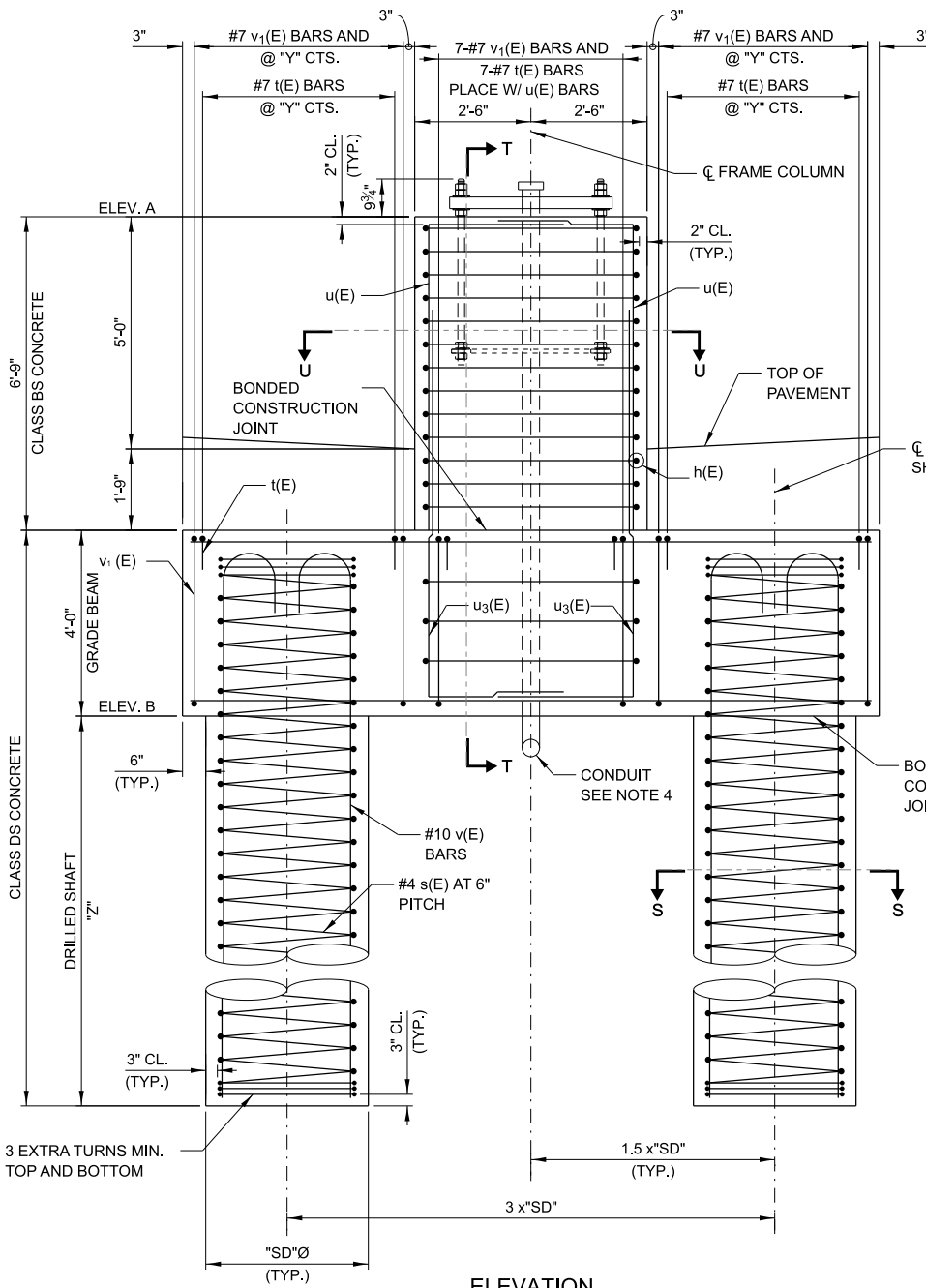
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REINFORCEMENT BAR SCHEDULE (2 DRILLED SHAFTS AND 1 GRADE BEAM)					
SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
"S" <= 110'	h(E)	10	#7	15'-8"	—
	p(E)	14	#8	15'-8"	—
	t(E)	24	#6	6'-0"	∩
	s(E)	2	#4	42'-3"	MWW
	v(E)	28	#10	43'-8"	∩
	v1(E)	24	#6	15'-2"	∩
110' < "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"	MWW
	v(E)	28	#10	47'-8"	∩
	v1(E)	24	#6	15'-2"	∩
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"	MWW
	v(E)	28	#10	51'-8"	∩
	v1(E)	24	#6	15'-2"	∩
u(E)	24	#4	8'-6"	∩	

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

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

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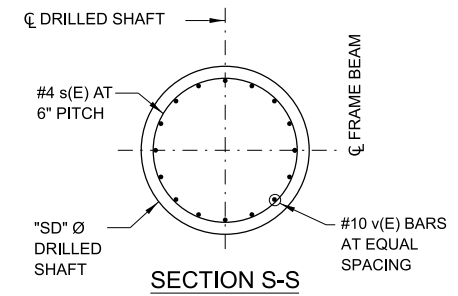


ELEVATION
MEDIAN FOUNDATION

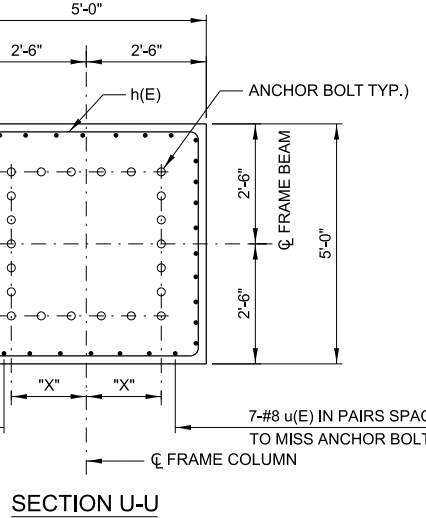
SECTION T-T

END VIEW

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"	WWW *
	v(E)	28	#10	34'-8"	C
110' < "S" <= 130'	v ₁ (E)	23	#7	13'-4"	↵
	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"	WWW *
130' < "S" <= 150'	v(E)	32	#10	32'-8"	C
	v ₁ (E)	27	#7	13'-4"	↵
	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"	WWW *
	v(E)	34	#10	32'-8"	C
	v ₁ (E)	31	#7	13'-4"	↵



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"	↵



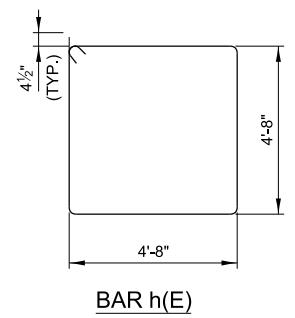
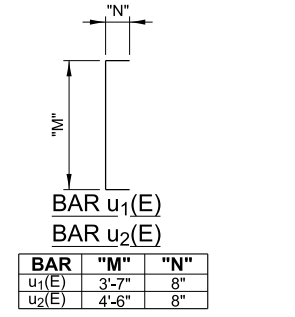
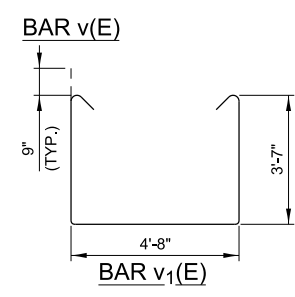
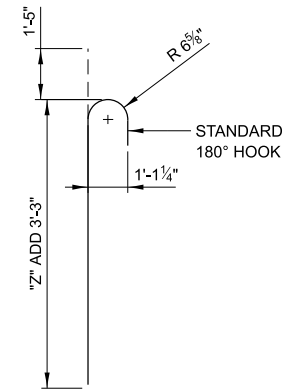
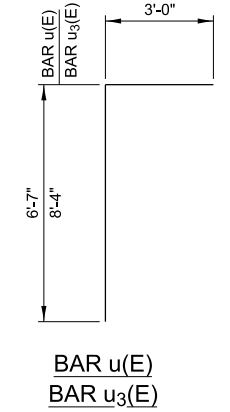
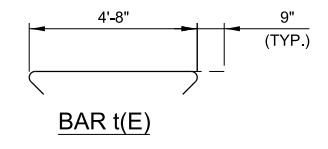
SECTION U-U

* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

- NOTES:
- SEE SHEET 5 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
 - PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE TOP OF GRADE BEAM.
 - 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".
 - 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.
 - PROTECTIVE COAT SHALL BE APPLIED TO TRAFFIC AND TOP FACES OF CONCRETE CRASH WALL.

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'-5 1/2"	1'-4"	6"	18
110' < "S" <= 130'	28'-0"	3'-6"	9"	1'-6"	1'-5 1/2"	6"	22
130' < "S" <= 150'	28'-0"	3'-6"	9"	1'-6"	1'-6 3/4"	5"	22

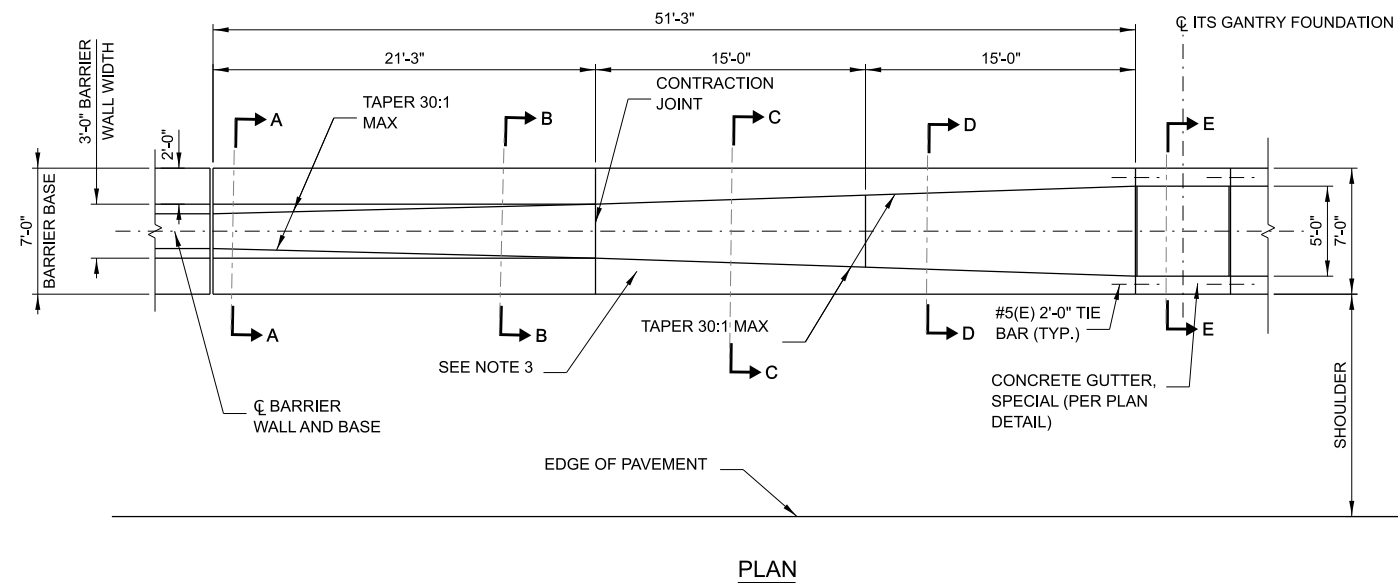


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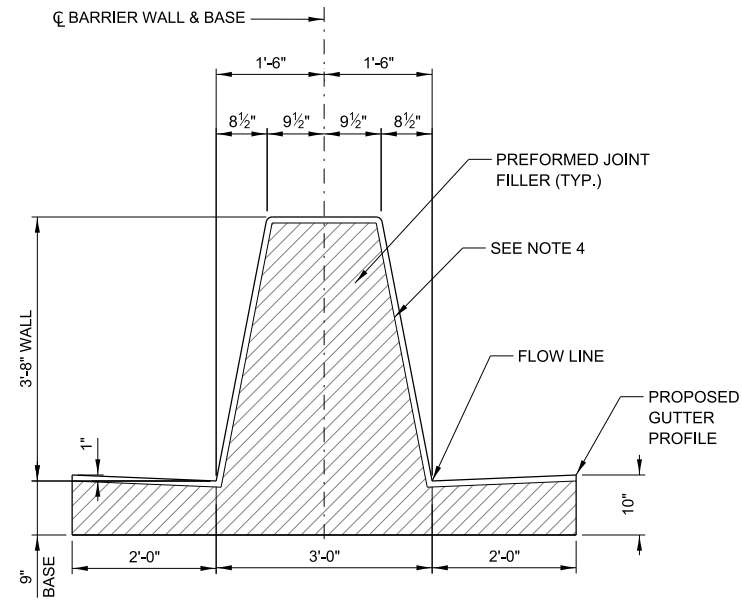
MEDIAN FOUNDATION SCHEDULE				
SPAN "S"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)	PROTECTIVE COAT (SQ YD)
<= 110'	6.3	25.3	8,540	8.3
110' < "S" <= 130'	6.3	31.1	9,220	8.3
130' < "S" <= 150'	6.3	31.1	9,650	8.3

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

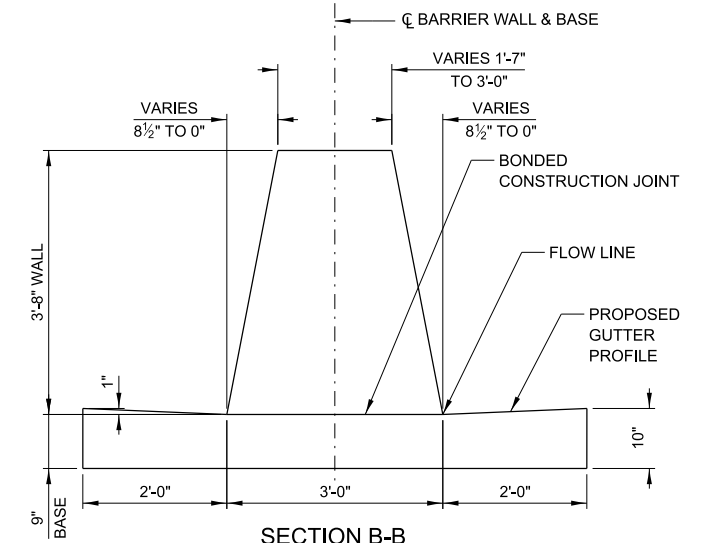
VERSION: 2026-03 BASE SHEET: M-OHS-729 SHEET: 8 OF 9



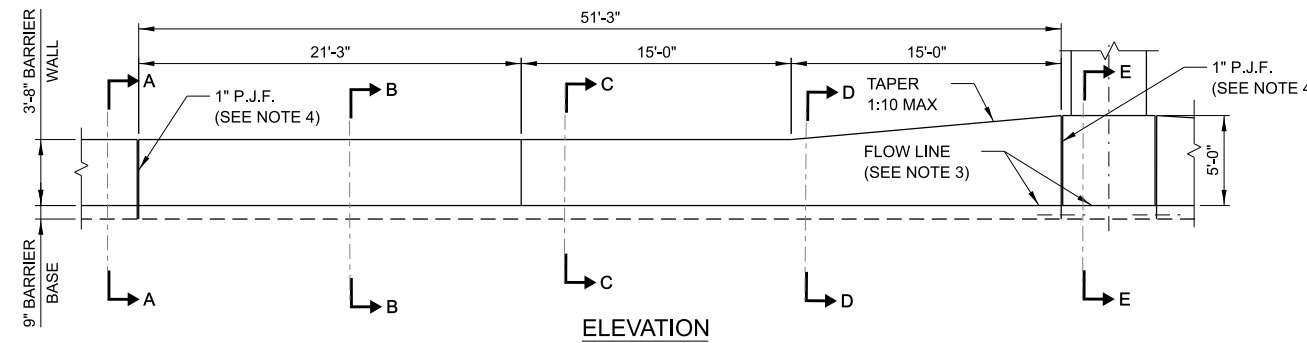
PLAN



SECTION A-A



SECTION B-B



ELEVATION

CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY

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.

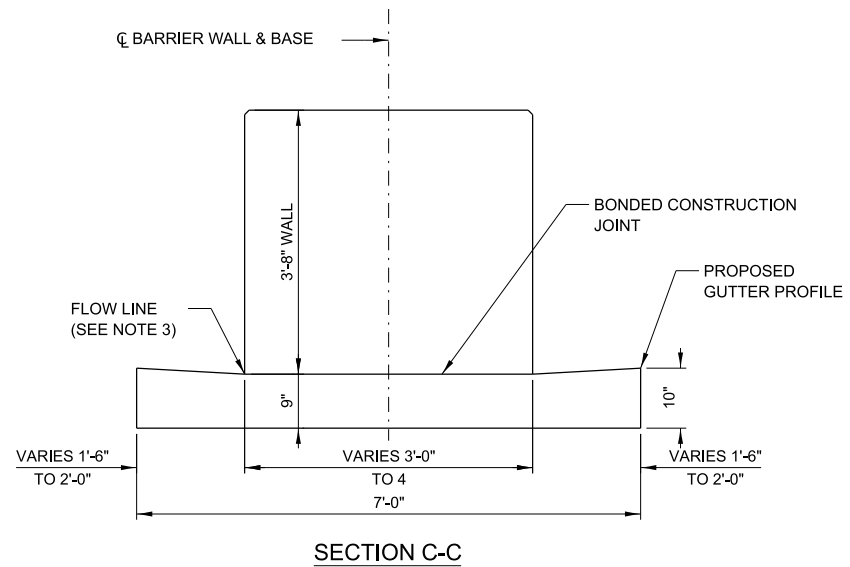
NOTES:

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.

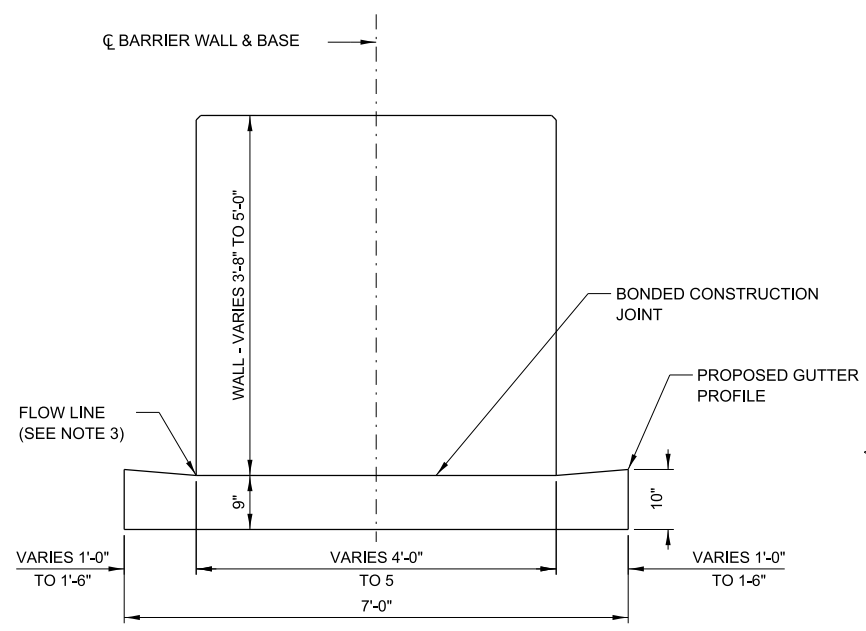
NOTE TO DESIGNER

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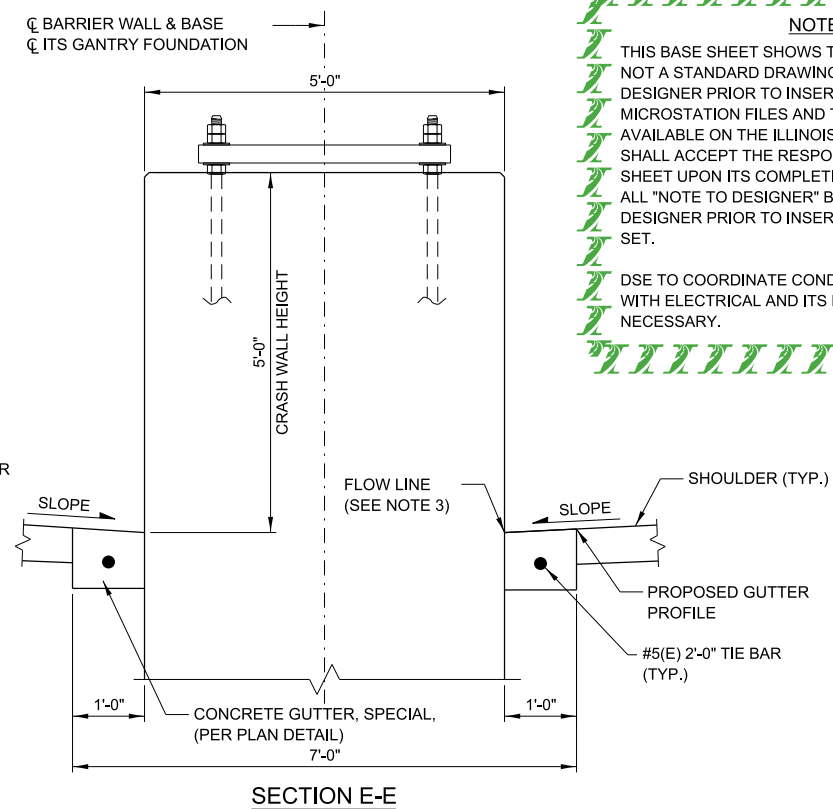
DSE TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. MODIFY DRAWING AS NECESSARY.



SECTION C-C



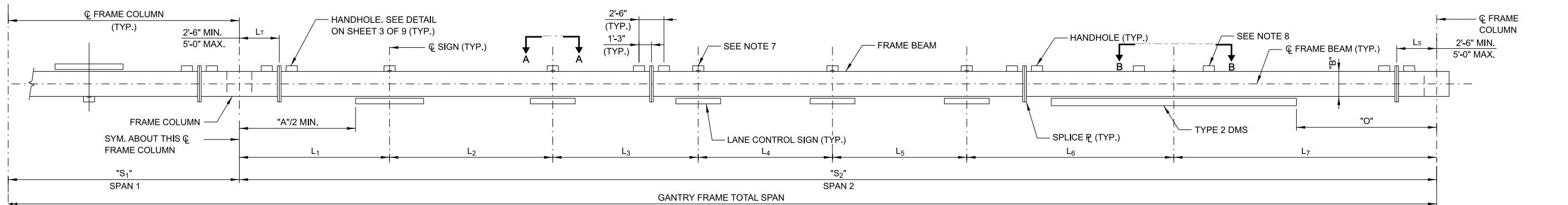
SECTION D-D



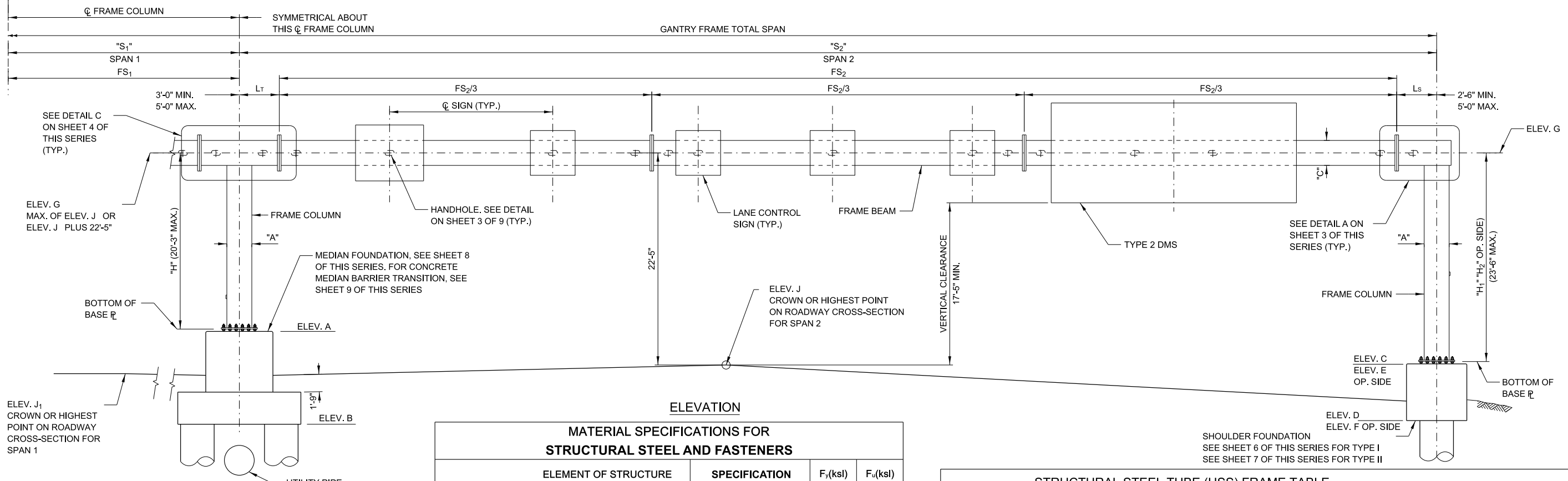
SECTION E-E



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



PLAN



ELEVATION

- NOTES:**
- SEE SHEET 2 OF THIS SERIES FOR VIEW A-A, VIEW B-B AND DESIGN SUMMARY TABLE.
 - CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
 - PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L THROUGH L)
 - FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 3 COLUMNS AND 6 FIELD SECTIONS.
 - 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.
 - WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO 1/4" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.
 - IF THE DISTANCE BETWEEN AN LCS TYPE 1 OR LCS TYPE 2 CENTERLINE HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SPLICE HANDHOLE SHALL BE ELIMINATED.
 - IF THE DISTANCE BETWEEN A TYPE 2 DMS SIGN HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SIGN HANDHOLE 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.
 - 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.

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

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

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 "S ₁ " OR "S ₂ "	FRAME COLUMN	FRAME BEAM	"A"	"B"	"C"	"O"	SPAN "S ₁ " OR "S ₂ "	CAMBER
<=110'	HSS 28x24x0.625	HSS 28x24x0.500	2'-0"	2'-4"	2'-0"	1'-0"	<=110'	3 1/2"
110'<"S"<=130'	HSS 28x28x0.625	HSS 28x24x0.625	2'-4"	2'-4"	2'-0"	1'-2"	110'<"S"<=130'	4 1/2"
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
* 51604000	DRILLED SHAFT IN ROCK	CU YD	XXX.X

NOTE TO DESIGNER

* INCLUDE THIS PAY ITEM IF ROCK IS ENCOUNTERED. QUANTITY OF DRILLED SHAFT IN ROCK IS NOT INCLUDED IN THE PAY ITEM JS734G10.
 THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT 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 PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

VERSION: 2026-03 BASE SHEET: M-OHS-730 SHEET: 1 OF 10

GENERAL NOTES:

- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" 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:

- REINFORCEMENT BARS, INCLUDING REINFORCEMENT BARS, EPOXY-COATED SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS SECTION 508 AND ARTICLE 1006.10.
- REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
- REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.
- 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:

- ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS ISSUED XXXXXXXX TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED XXXXXXXX.
- ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED XXXXXXXX.

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.)

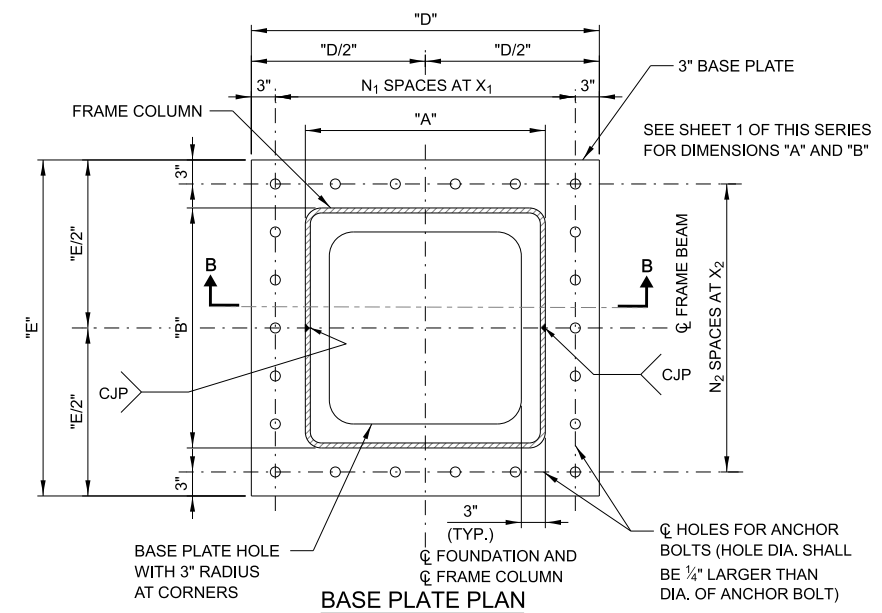
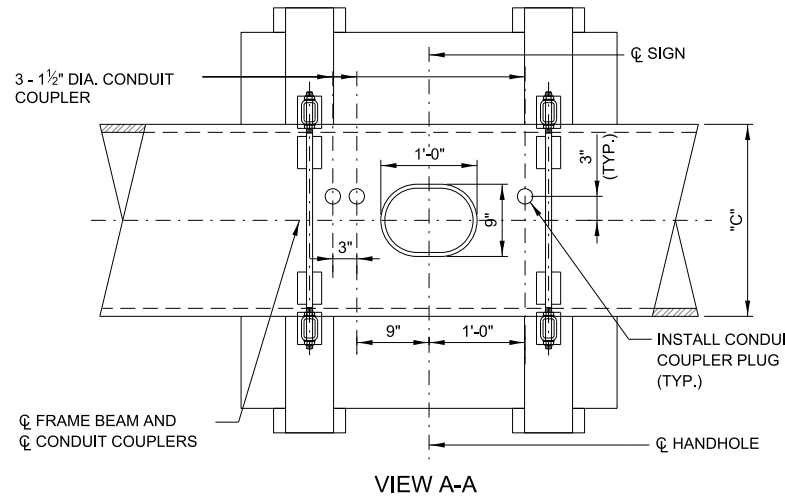
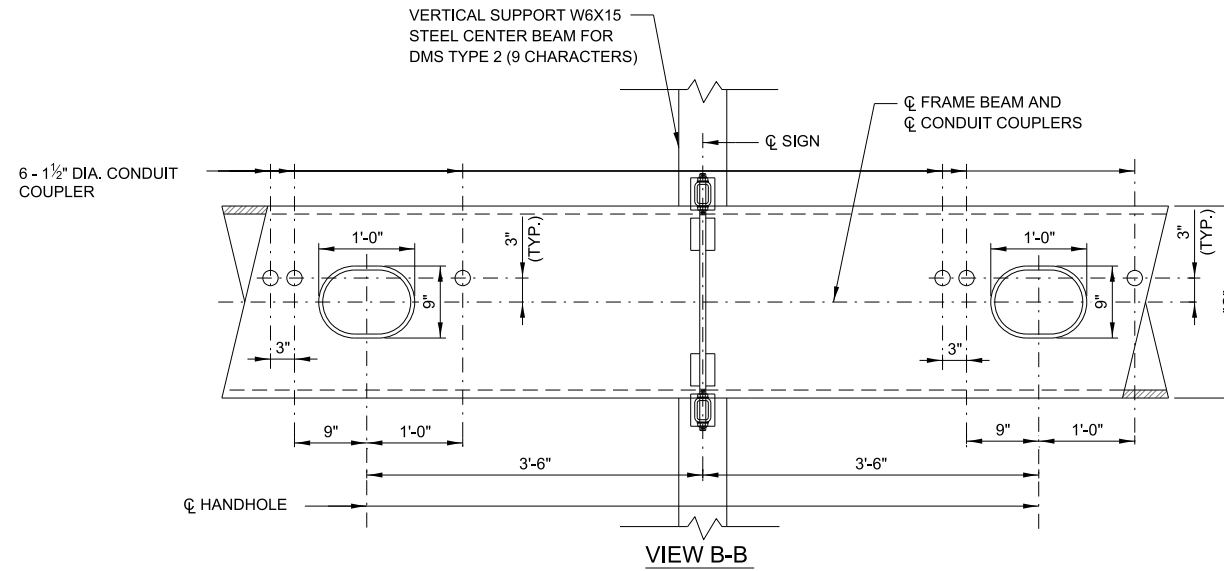
ITS GANTRY FRAMES AND FOUNDATIONS ARE DESIGNED FOR MAX. LOADING OF 2-TYPE 2 DMS PER SPAN (ONE OVER EACH SHOULDER) AND 1-LANE CONTROL SIGN IN EACH ADDITIONAL 12' LANE.

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:

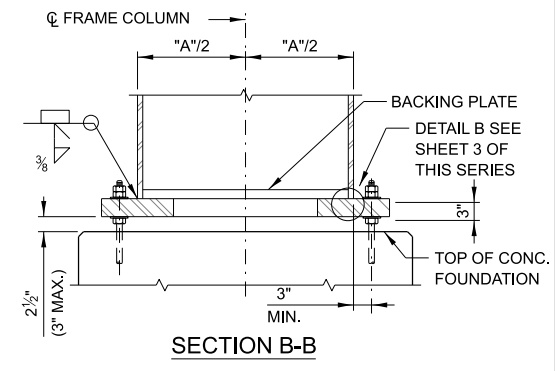
- ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, LATEST EDITION.
- AASHTO LRFD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS, FIRST EDITION WITH CURRENT INTERIMS
- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION, XXXXXXXX.
- ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, XXXXXXXX.
- ILLINOIS TOLLWAY GEOTECHNICAL ENGINEER MANUAL, LATEST EDITION.



MAX. SPAN "S" OR "S "	"D"	"E"	N	X	N	X	ANCHOR BOLT DIAMETER	NO. ANCHOR BOLT
≤110'	3'-2"	3'-5"	4	8"	5	7"	1 1/2"	18
110' < "S" ≤ 130'	3'-5"	3'-6"	5	7"	6	6"	1 1/2"	22
130' < "S" ≤ 150'	3'-7 1/2"	3'-6"	5	7 1/2"	6	6"	1 1/2"	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.

STRUCTURE NUMBER	STATION	SPANS		TOTAL SPAN (FT)	ELEVATIONS								FOUNDATION TYPE	PROPOSED MINIMUM VERTICAL CLEARANCE	FS ₁	FS ₂	L _S	L _T	H	H ₁	H ₂	FOUNDATION		REINF. BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
		"S ₁ " (FT)	"S ₂ " (FT)		A	B	C	D	E	F	G	J ₁										J ₂	CLASS BS CONCRETE (CU YD)		
XXX-XXXX	XXXXX-XX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXXX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXXX-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

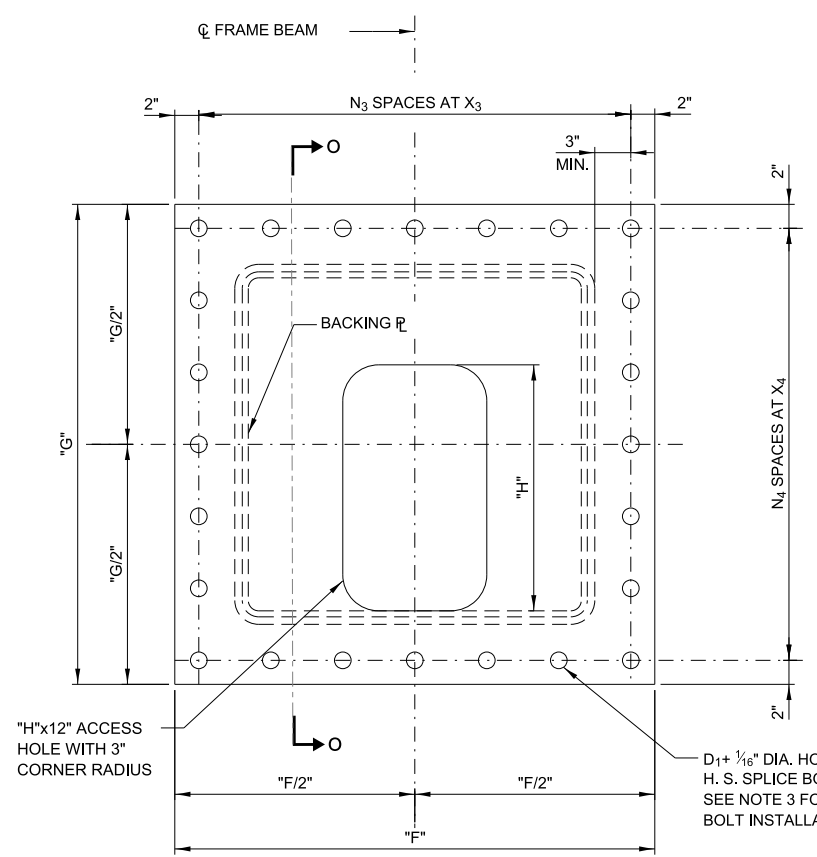
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- A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
- NO STANDARD DRILLED SHAFT FOUNDATIONS WERE DESIGNED OR DETAILED FOR COHESION LESS SOIL CONDITIONS. REGARDLESS, THE DESIGNER MUST CONDUCT A SUBSURFACE INVESTIGATION AT EACH OVERHEAD SIGN STRUCTURE 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.
- 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.
- DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
- DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.

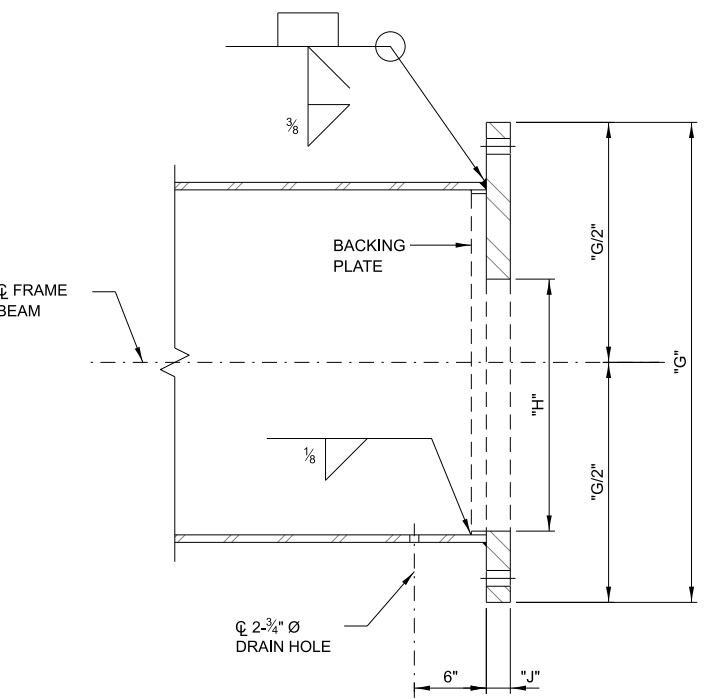
STRUCTURE NUMBER	STATION	SPAN 1							SPAN 2						
		L ₇	L ₆	L ₅	L ₄	L ₃	L ₂	L ₁	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇
XXX-XXXX	XXXXX+XX.XX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

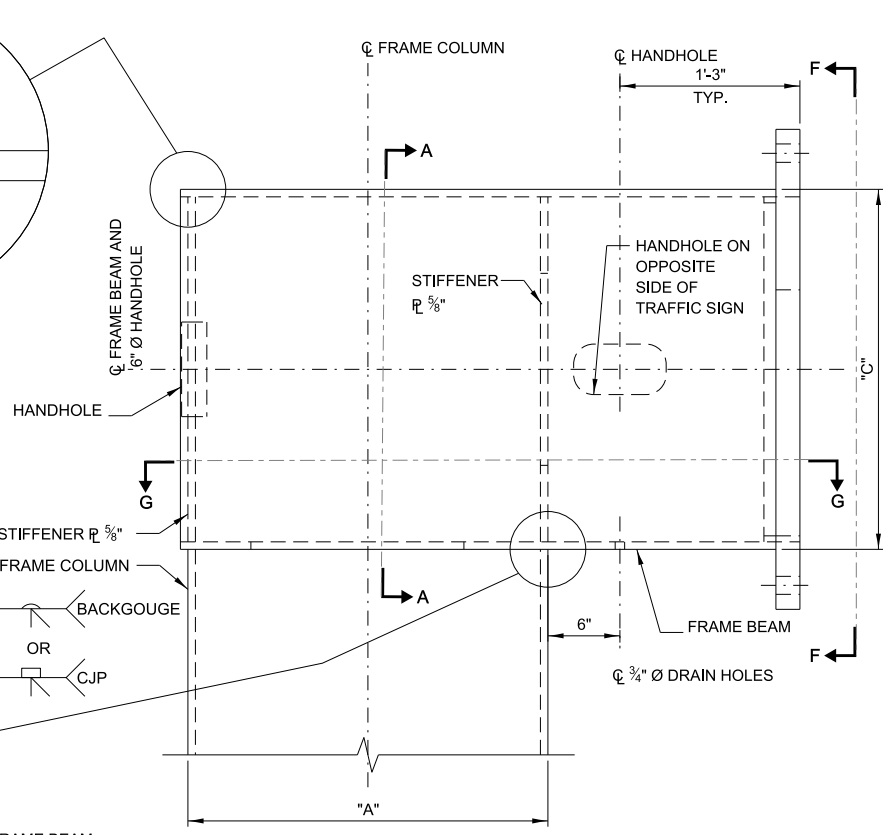
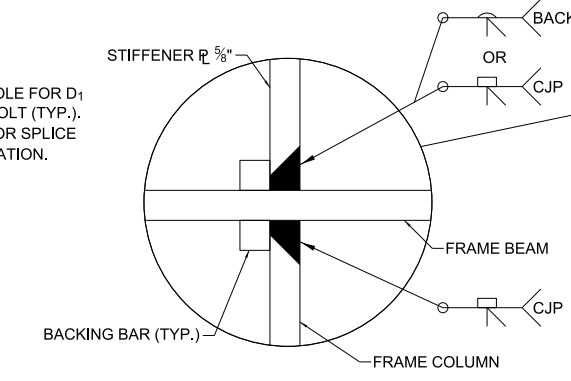
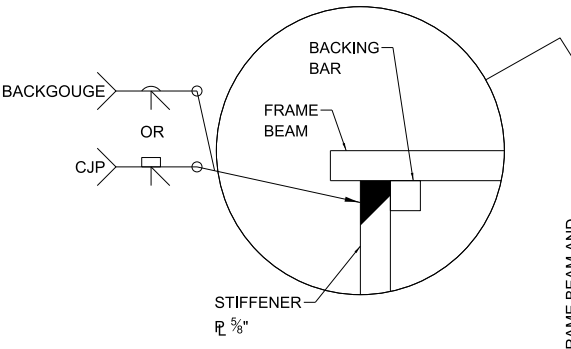
VERSION: 2026-03 BASE SHEET: M-OHS-730 SHEET: 2 OF 10



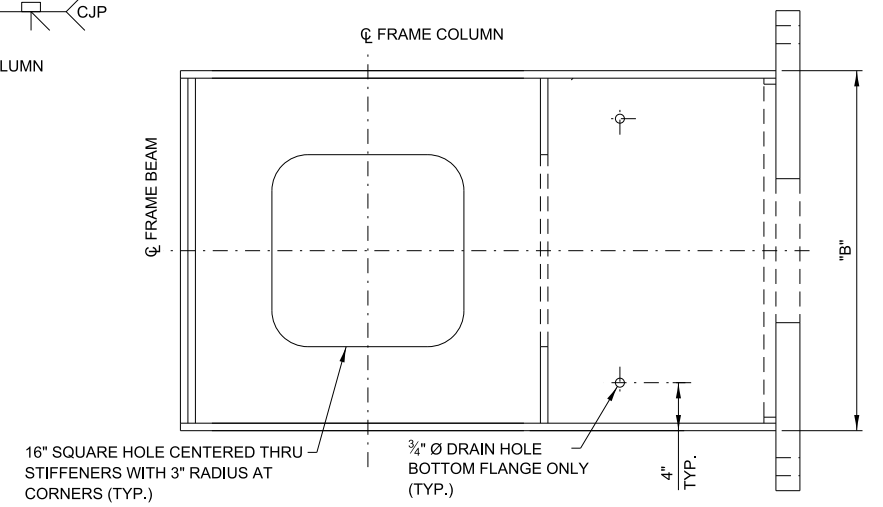
VIEW F-F



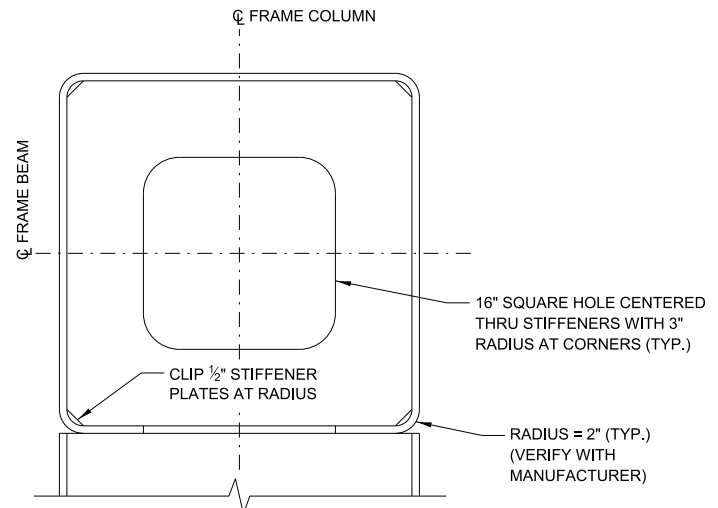
SECTION O-O
SPLICE PLATE DETAIL



DETAIL A



SECTION G-G



SECTION A-A

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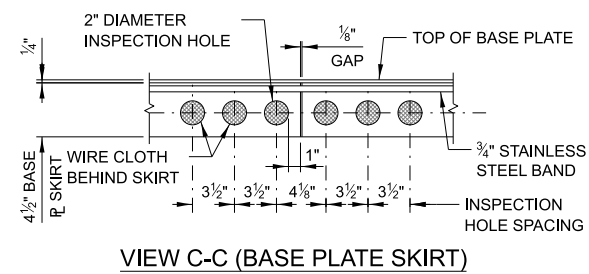
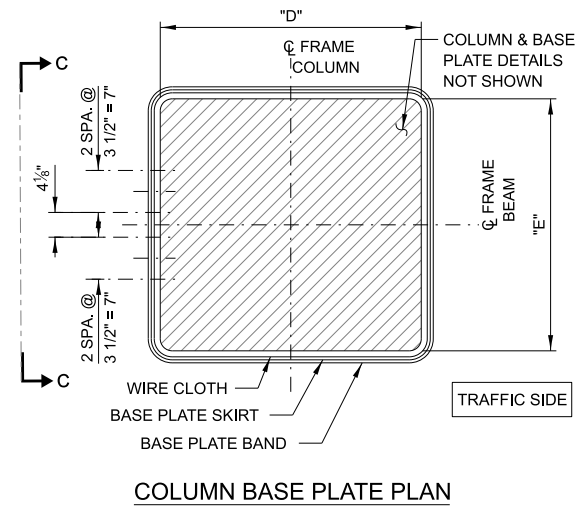
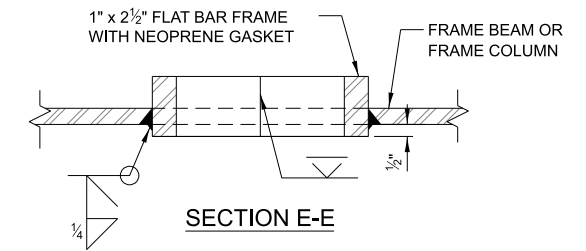
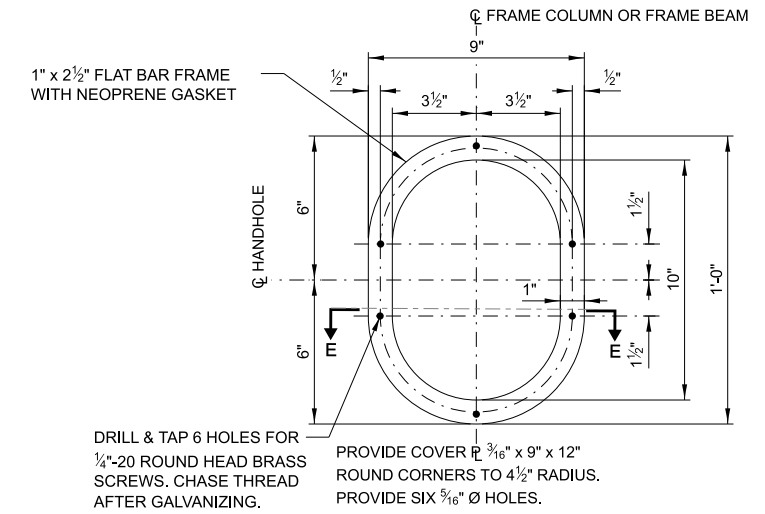
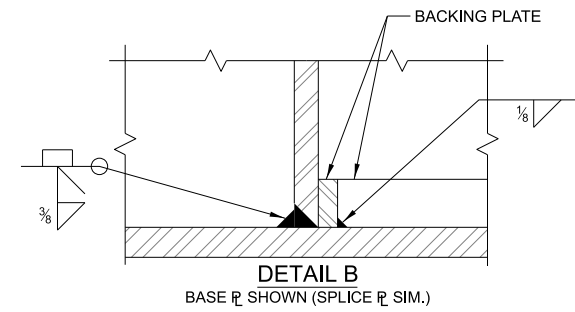
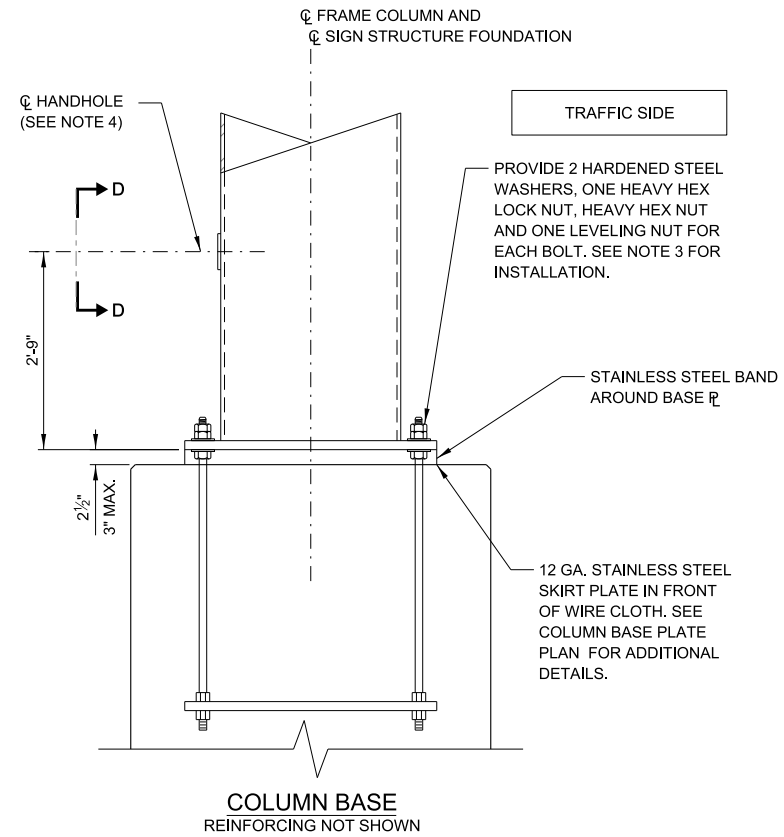
NOTES:

- SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
- SEE SHEET 2 OF THIS SERIES FOR DIMENSIONS "D" AND "E".
- INSTALLATION AND INSPECTION OF SPLICE BOLTS AND ANCHOR BOLTS SHALL COMPLY WITH ILLINOIS TOLLWAY SPECIAL PROVISION "INTELLIGENT TRANSPORTATION SYSTEMS GANTRY FRAME (STEEL)".
- 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 (D1)	NO. SPLICE BOLT
<=110'	3'-1"	2'-8 1/2"	1'-6"	2 1/4"	6	5 1/2"	6	4 3/4"	1"	24
110' < "S" <= 130'	3'-0 1/2"	2'-10"	1'-6"	2 1/4"	5	6 1/2"	5	6"	1 1/4"	20
130' < "S" <= 150'	3'-4"	3'-4"	1'-9"	2 3/8"	6	6"	6	6"	1 1/4"	24

**OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN STRUCTURE
DETAILS**

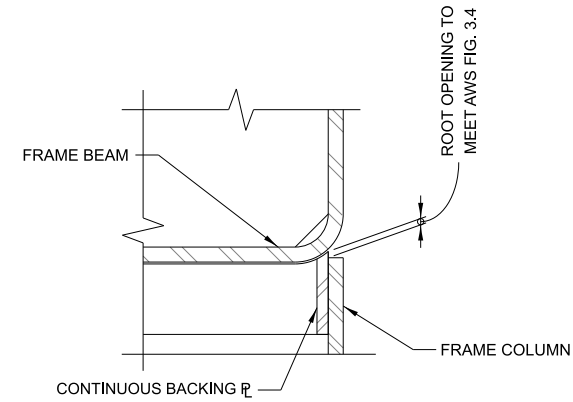
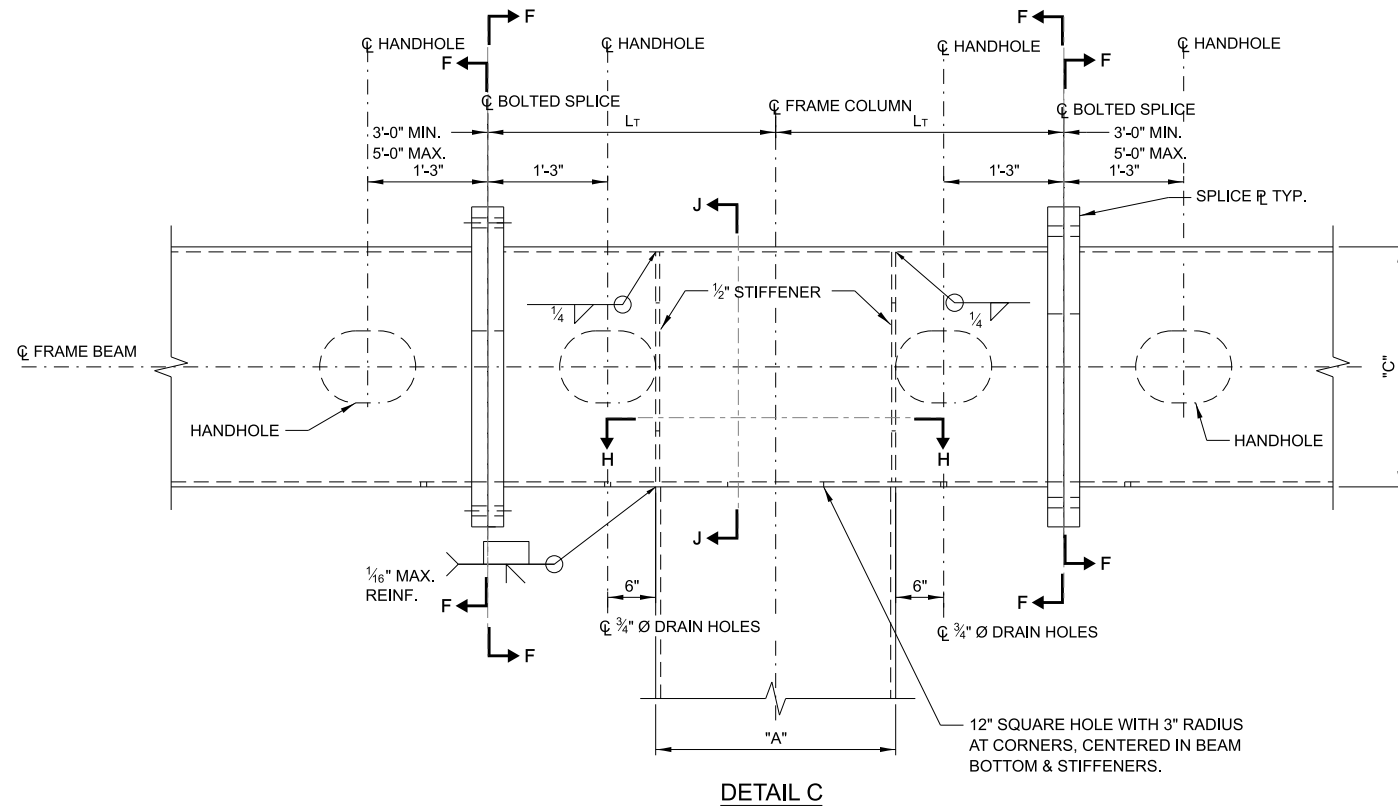
VERSION: 2026-03 BASE SHEET: M-OHS-730 SHEET: 3 OF 10



NOTE TO DESIGNER
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 VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.

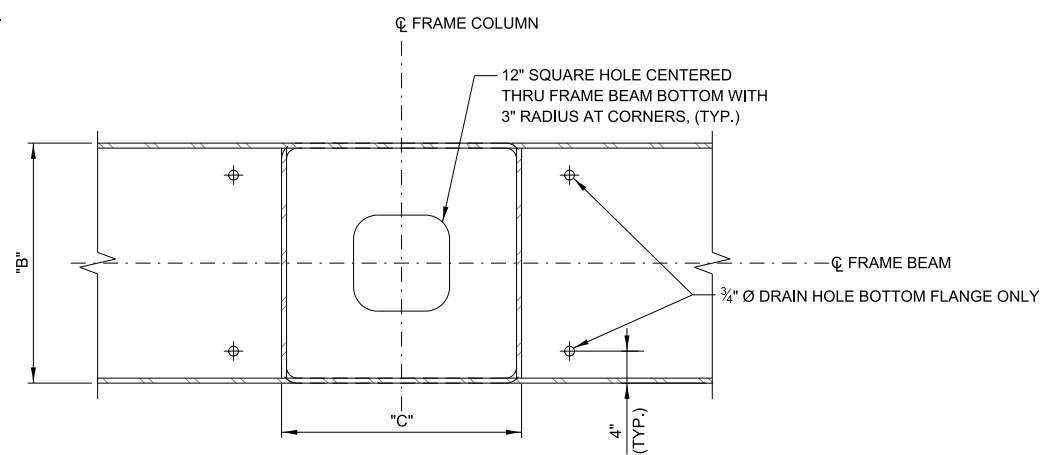


OVERHEAD SIGN STRUCTURE
 ITS GANTRY FRAME (STEEL)
 TWO-SPAN STRUCTURE
 DETAILS

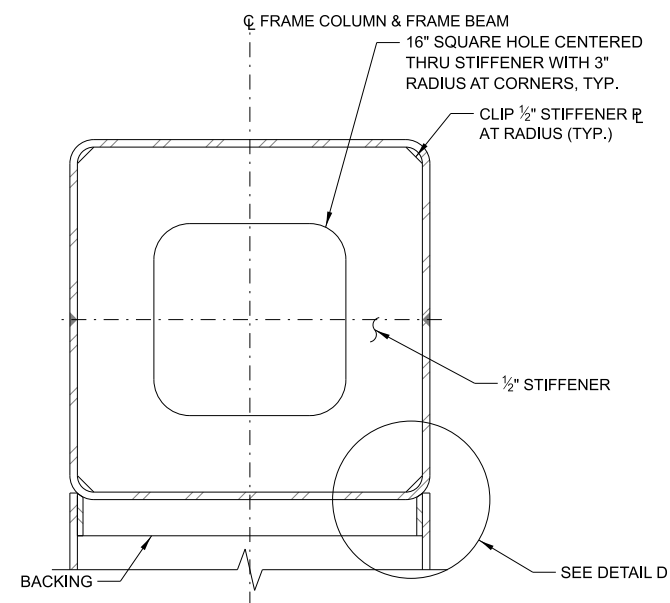


DETAIL D

- NOTES:**
- HANDHOLE FOR INSPECTION ACCESS ALLOWED ON ONE SIDE OF WEB ONLY. PLACE HANDHOLE ON SAME SIDE AS OTHER HANDHOLES.
 - SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
 - SEE SHEET 3 OF THIS SERIES FOR SECTION F-F.



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.

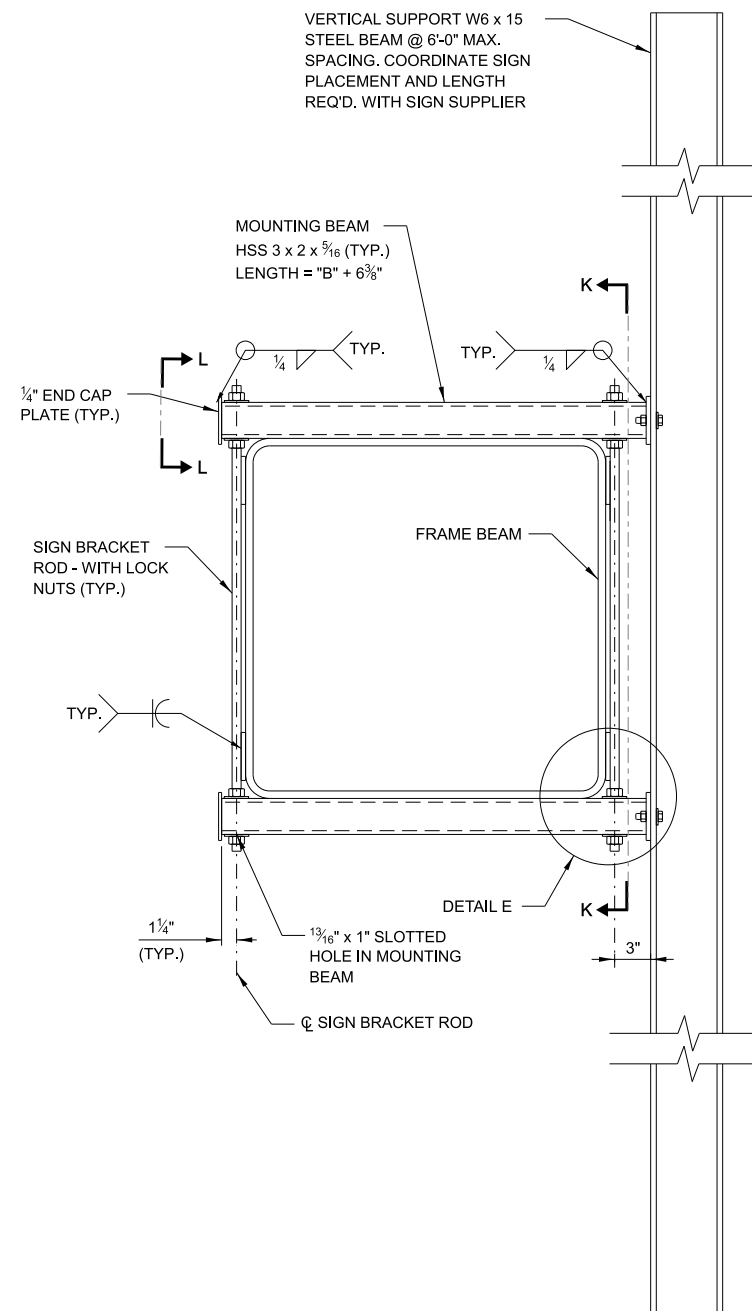
NOTE TO DESIGNER

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.

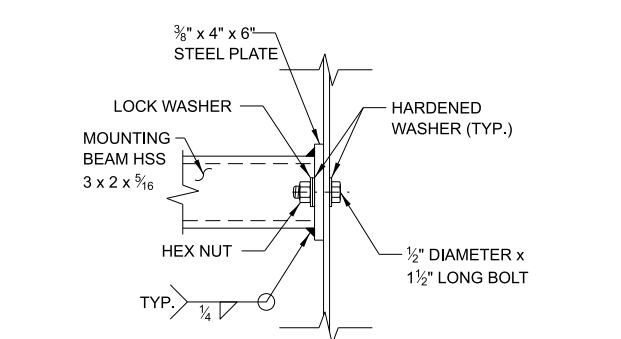
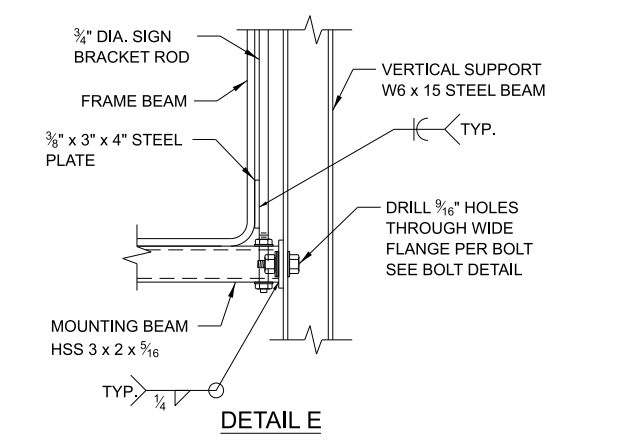
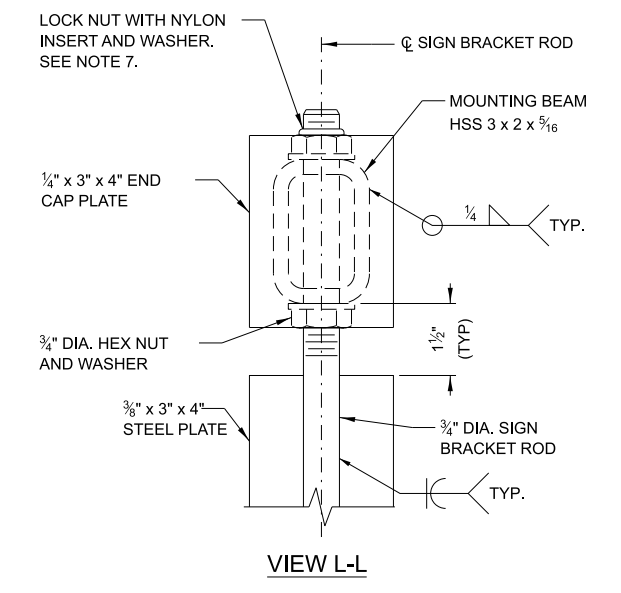
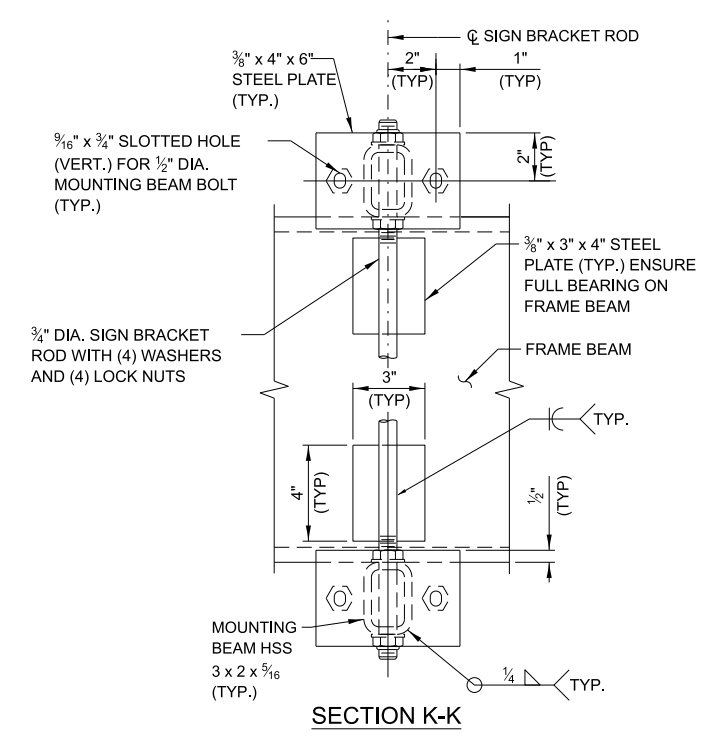


**OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN STRUCTURE
DETAILS**

VERSION: 2026-03	BASE SHEET: M-OHS-730	SHEET: 5 OF 10
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CONNECTION SIDE VIEW



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:

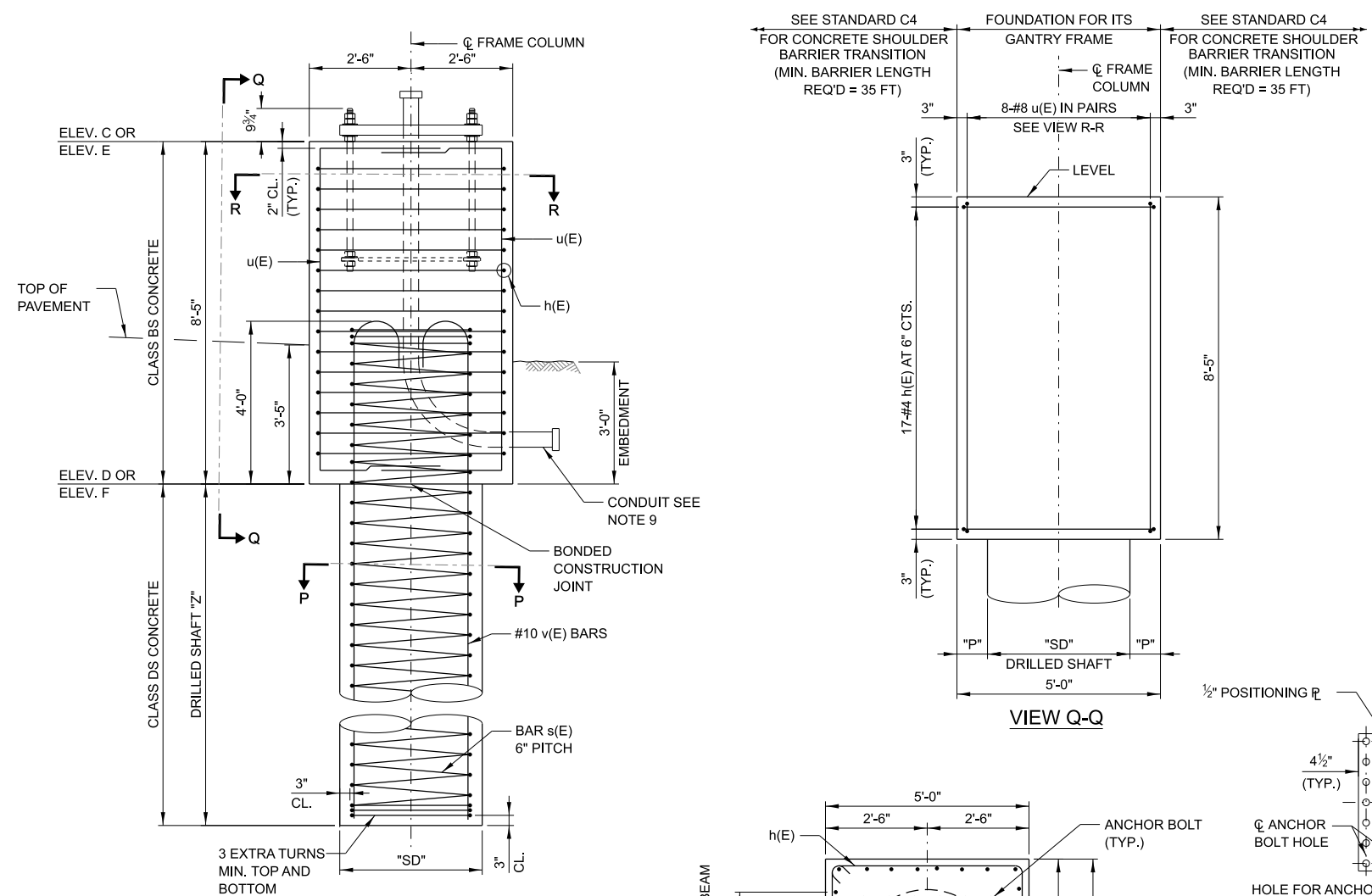
1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED 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 EITHER STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A194 GRADE 8F OR ASTM A194 GRADE 2H OR CARBON STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A307 AND HOT DIP GALVANIZED AS PER AASHTO M232.
8. STAINLESS STEEL NUTS/LOCKNUTS SHALL BE USED WITH STAINLESS BOLTS AND RODS AND GALVANIZED NUTS/LOCKNUTS SHALL BE USED WITH GALVANIZED THREADED BOLTS AND RODS.

NOTE TO DESIGNER

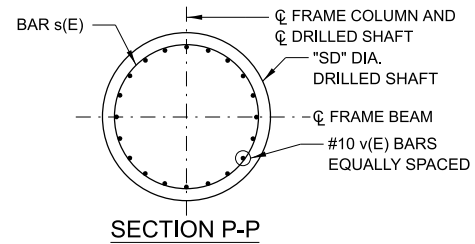
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**OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN STRUCTURE
DETAILS**

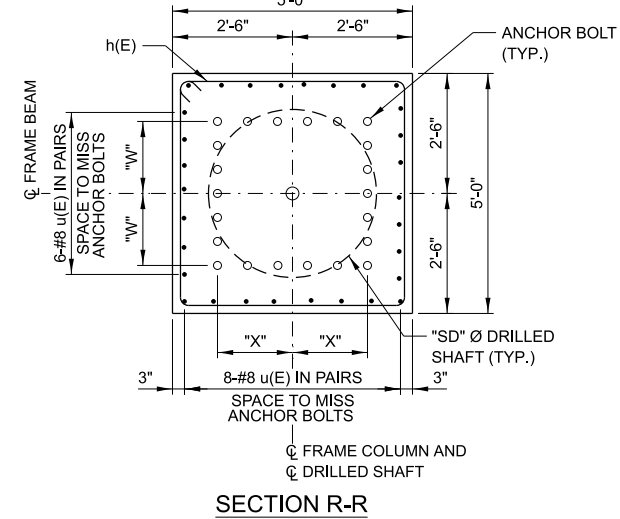
VERSION: 2026-03 BASE SHEET: M-OHS-730 SHEET: 6 OF 10



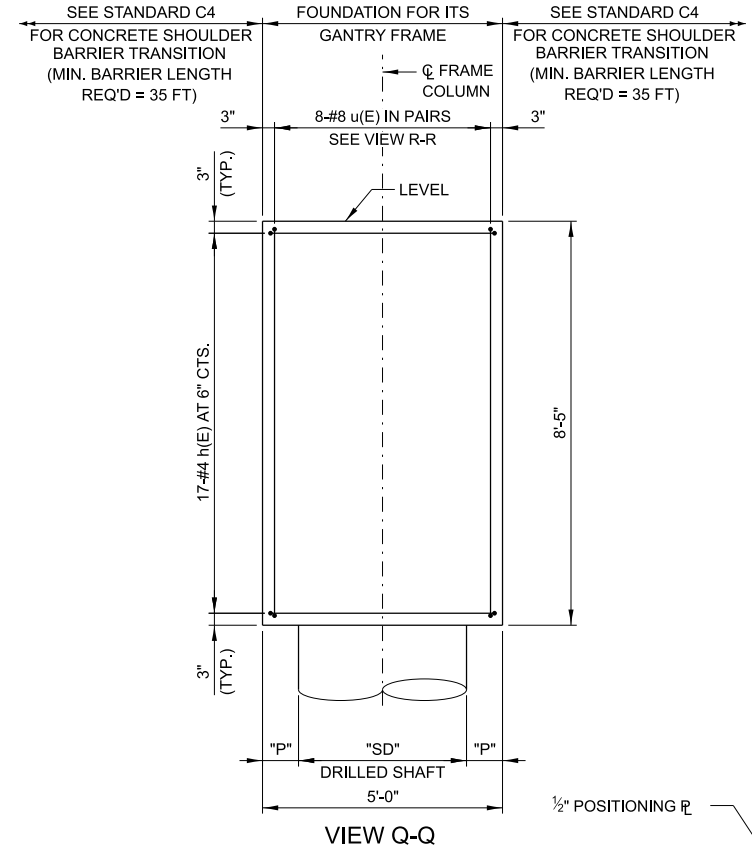
**ELEVATION
SHOULDER FOUNDATION TYPE I**



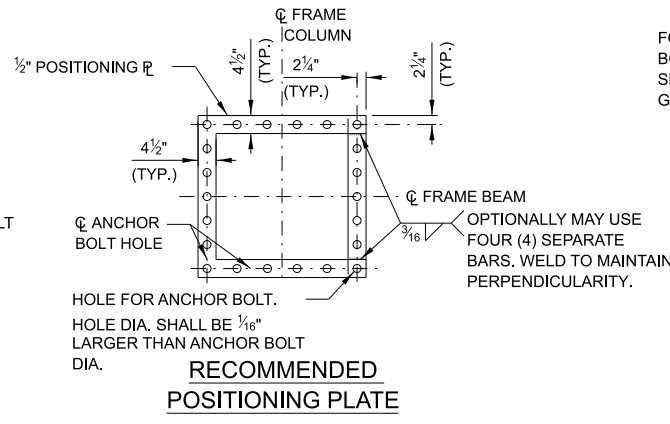
SECTION P-P



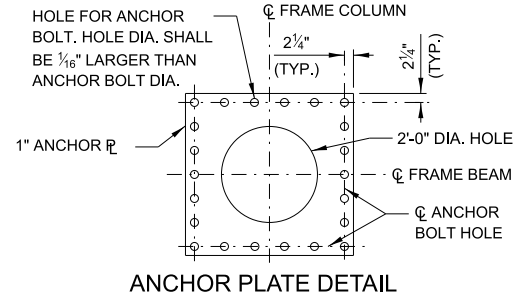
SECTION R-R



VIEW Q-Q



ANCHOR BOLT DETAIL

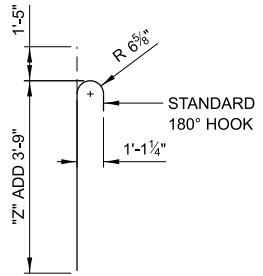


ANCHOR PLATE DETAIL

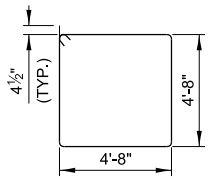
NOTES:

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.

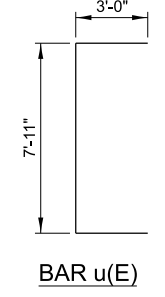
NOTE TO DESIGNER
DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.



BAR v(E)



BAR h(E)



BAR u(E)

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

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.

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.

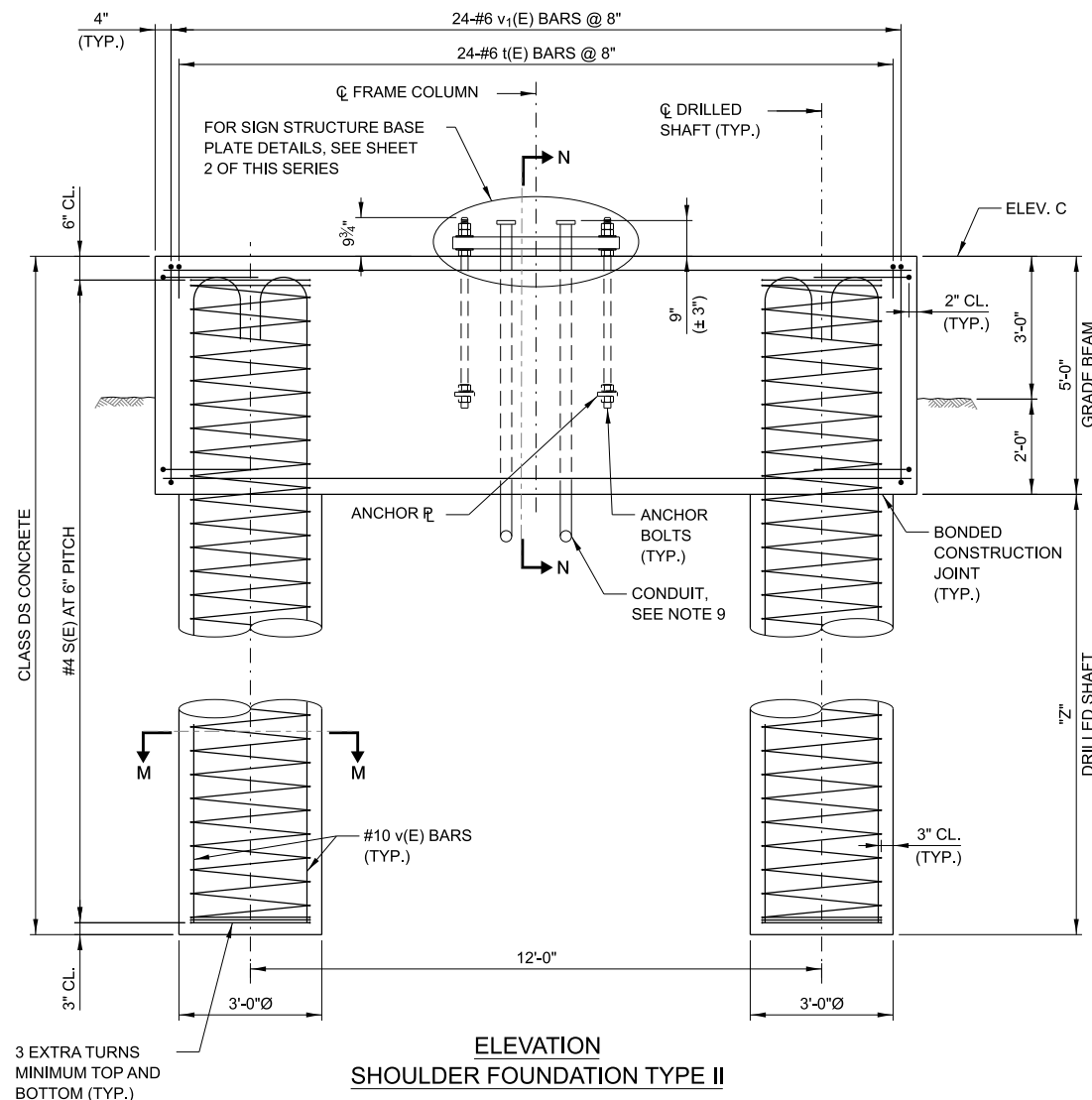
** 18" IS MINIMUM TO BE GALVANIZED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPINION.

MAX. SPAN "S ₁ " OR "S ₂ "	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5 1/2"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"≤130'	1'-6"	1'-5 1/2"	28'-0"	3'-6"	9"	5"	22
130'<"S"≤150'	1'-6"	1'-6 3/4"	35'-0"	4'-0"	6"	5"	22

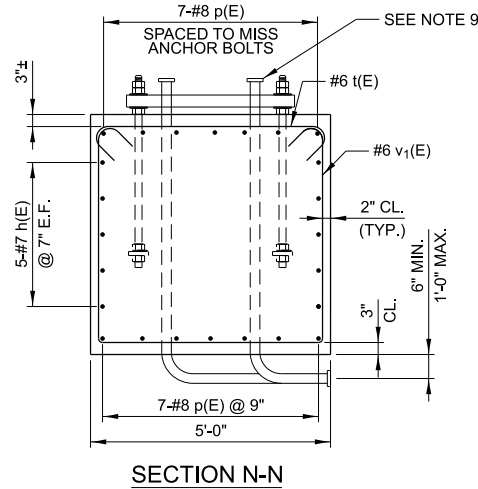
NOTE TO DESIGNER
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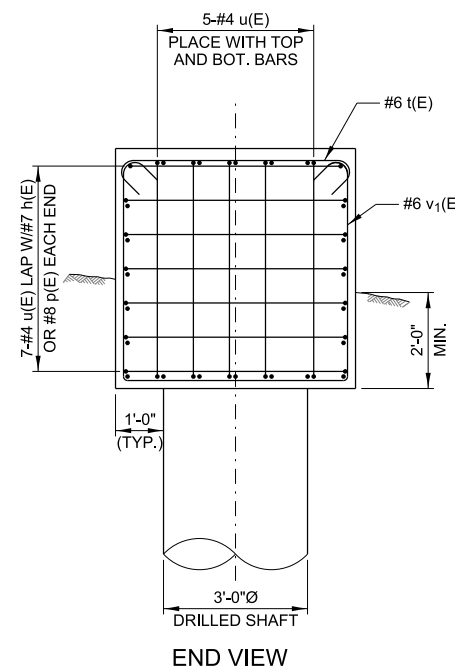
OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS



ELEVATION
SHOULDER FOUNDATION TYPE II



SECTION N-N



END VIEW

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.

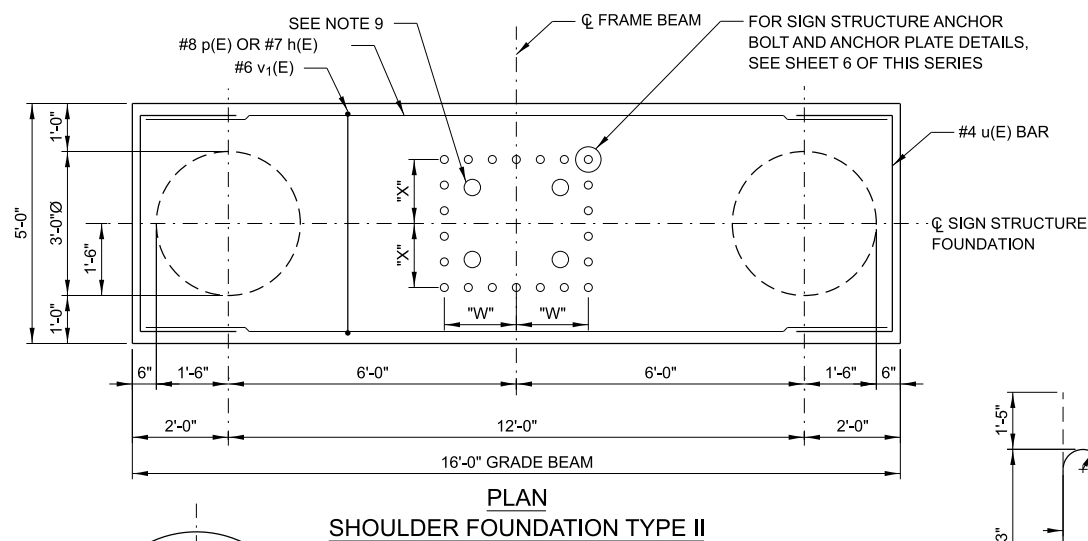
NOTE TO DESIGNER

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.

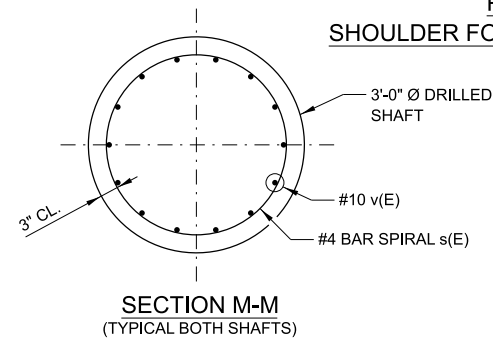
SHOULDER FOUNDATION TYPE II SCHEDULE					
MAX. SPAN "S1" OR "S2"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5 1/2"	1'-4"	34.7	7,990
110'<"S"<=130'	42'-0"	1'-6"	1'-5 1/2"	36.8	8,570
130'<"S"<=150'	46'-0"	1'-6"	1'-6 3/4"	39.0	9,130

NOTE TO DESIGNER

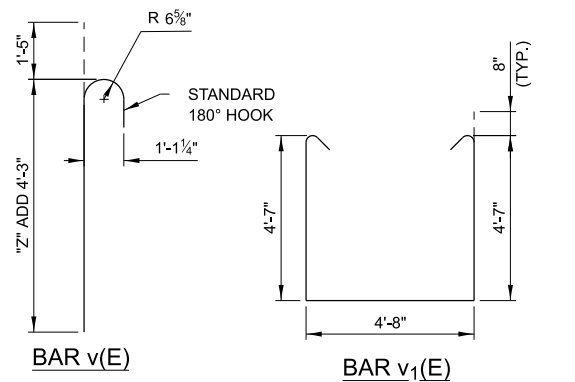
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PLAN
SHOULDER FOUNDATION TYPE II

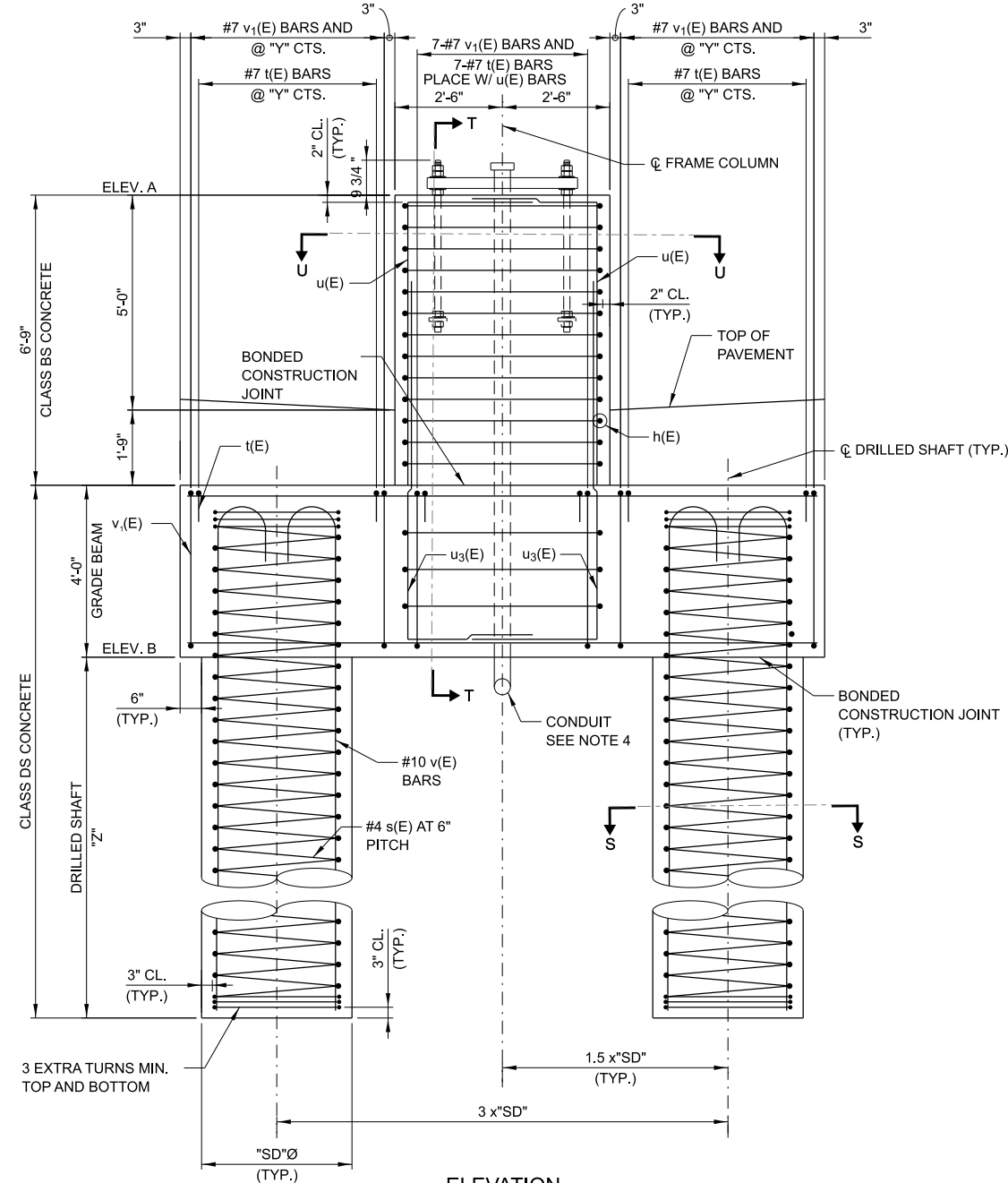


SECTION M-M
(TYPICAL BOTH SHAFTS)



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"	MMW*
	v(E)	28	#10	43'-8"	—
	v1(E)	24	#6	15'-2"	—
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"	MMW*
	v(E)	28	#10	47'-8"	—
	v1(E)	24	#6	15'-2"	—
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"	MMW*
	v(E)	28	#10	51'-8"	—
	v1(E)	24	#6	15'-2"	—

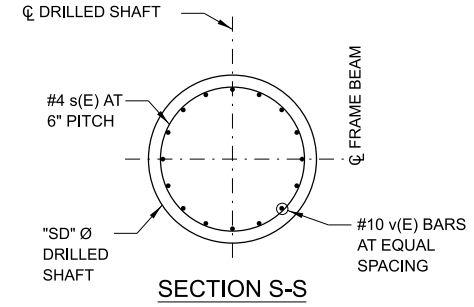
* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.



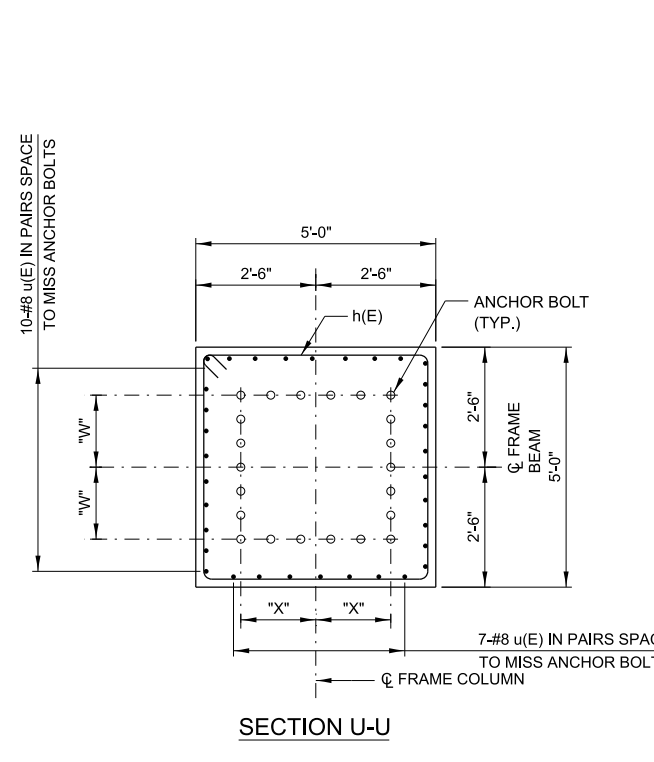
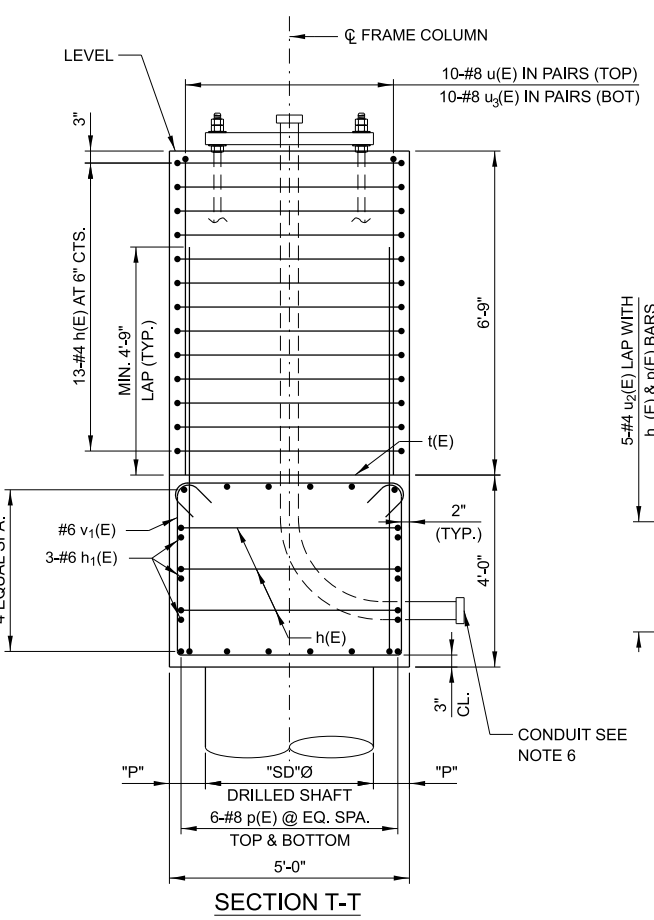
ELEVATION
MEDIAN FOUNDATION

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION					
MAX. SPAN "S ₁ " OR "S ₂ "	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"	⌋
110' < "S" <= 130'	v ₁ (E)	23	#7	13'-4"	⌋
	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"	
130' < "S" <= 150'	v(E)	32	#10	32'-8"	⌋
	v ₁ (E)	27	#7	13'-4"	⌋
	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"	⌋

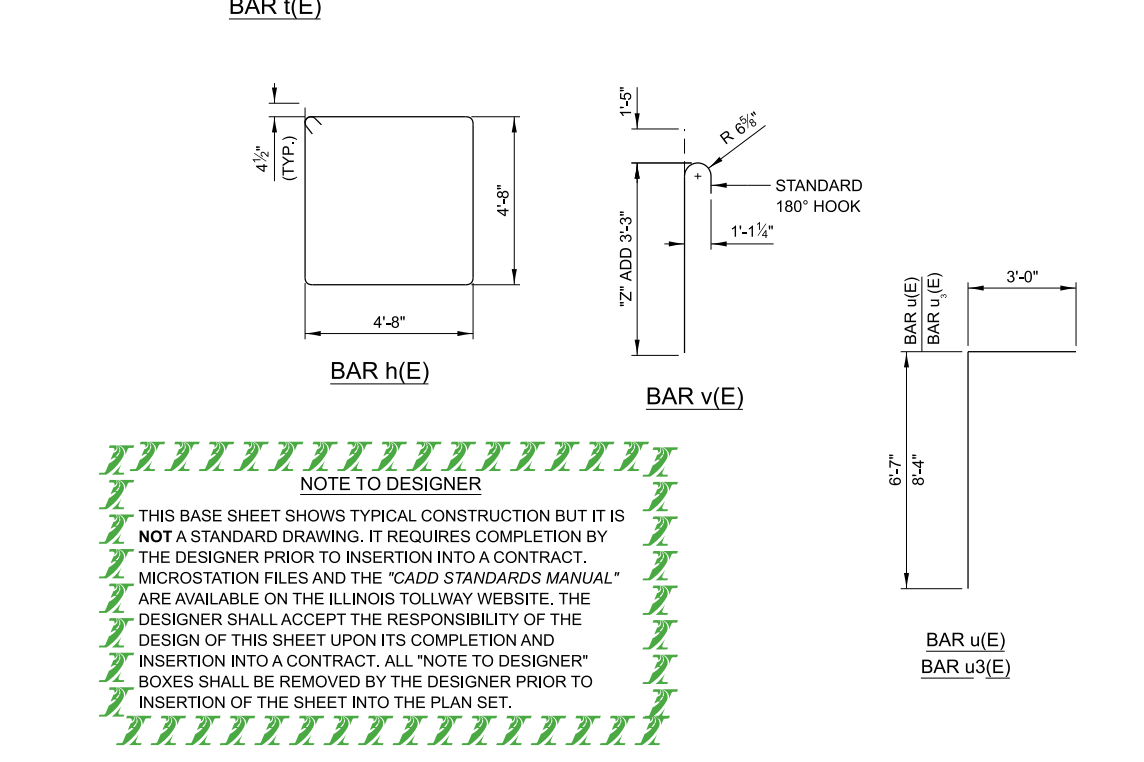
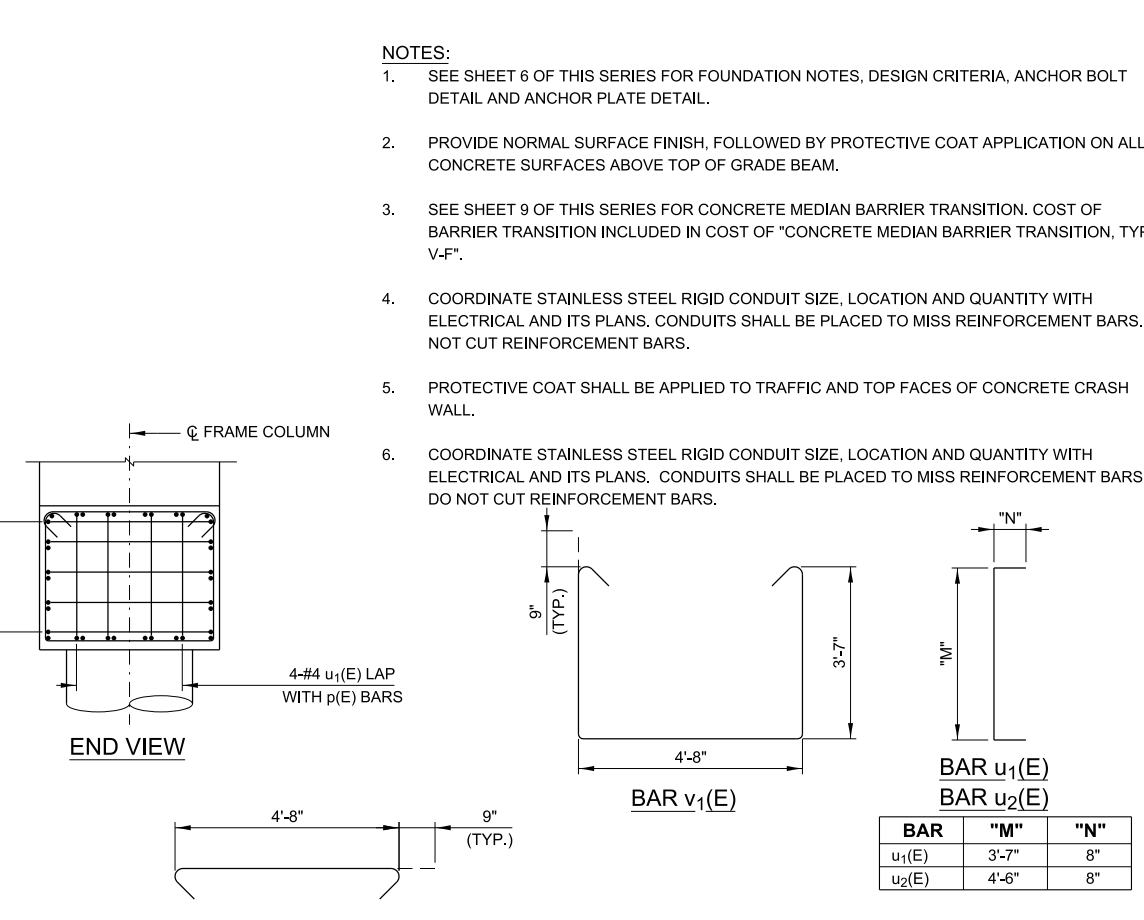
* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.



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"	⌋



MEDIAN FOUNDATION SCHEDULE				
MAX. SPAN "S ₁ " OR "S ₂ "	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

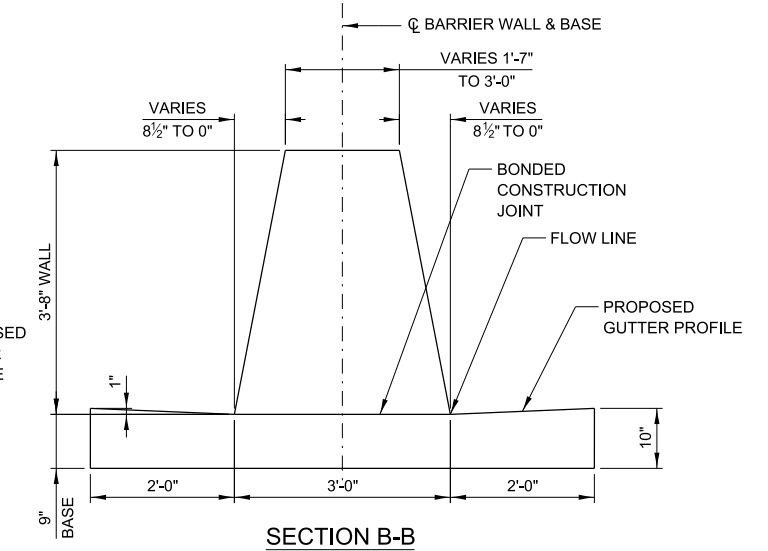
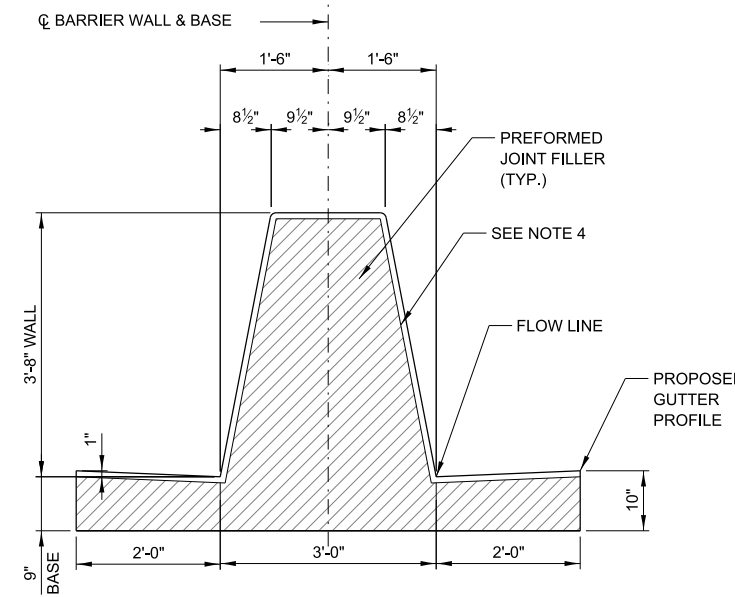
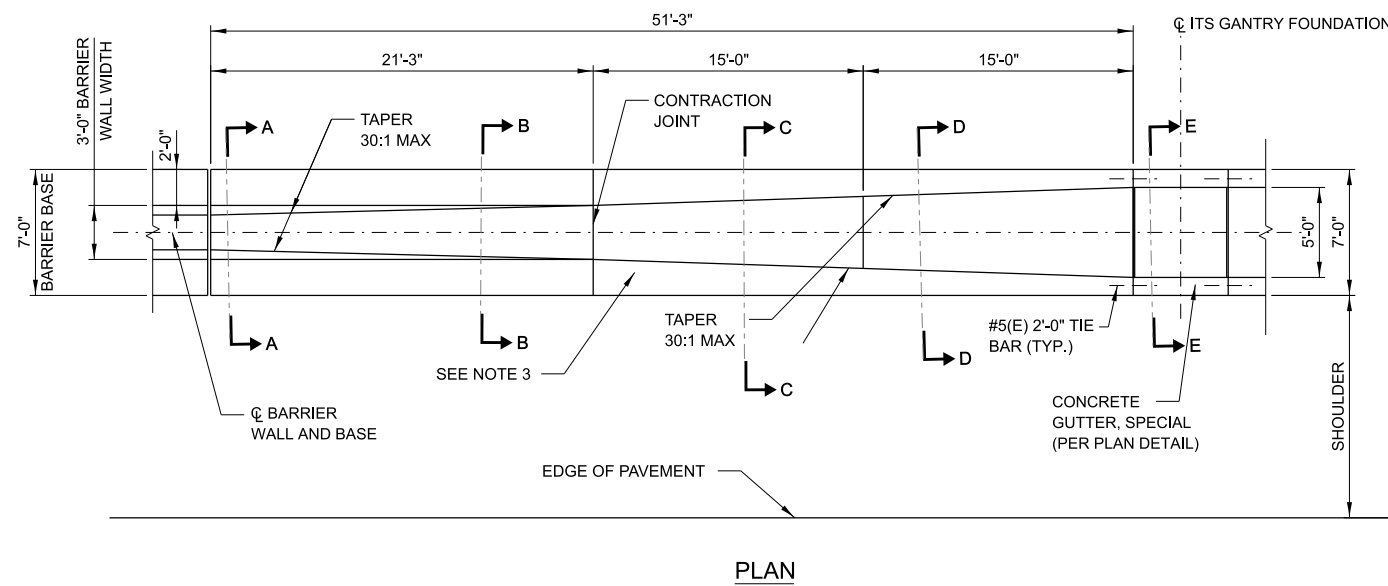


MEDIAN FOUNDATION TABLE							
MAX. SPAN "S ₁ " OR "S ₂ "	"Z"	"SD"	"P"	"W"	"X"	"Y"	NO. ANCHOR BOLT
<= 110'	30'-0"	3'-0"	1'-0"	1'-5 1/2"	1'-4"	6"	18
110' < "S" <= 130'	28'-0"	3'-6"	9"	1'-6"	1'-5 1/2"	6"	22
130' < "S" <= 150'	28'-0"	3'-6"	9"	1'-6"	1'-6 3/4"	5"	22

- NOTES:
- SEE SHEET 6 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
 - PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE TOP OF GRADE BEAM.
 - 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".
 - 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.
 - PROTECTIVE COAT SHALL BE APPLIED TO TRAFFIC AND TOP FACES OF CONCRETE CRASH WALL.
 - 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.

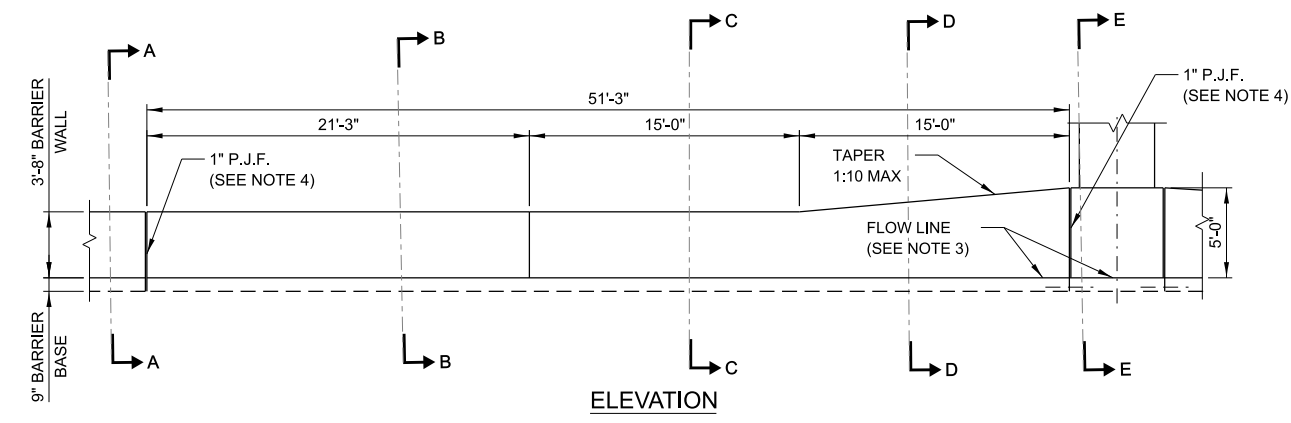
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN STRUCTURE
DETAILS

VERSION: 2026-03 BASE SHEET: M-OHS-730 SHEET: 9 OF 10



SECTION A-A

SECTION B-B



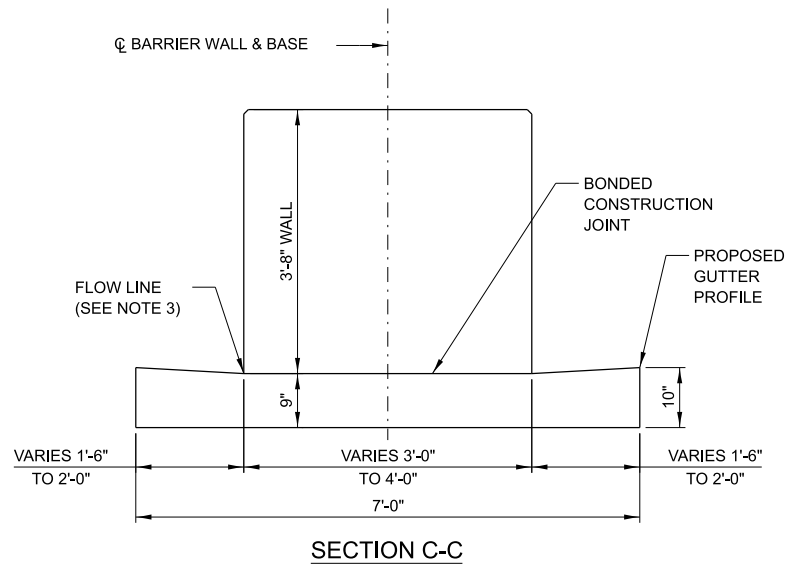
ELEVATION

- NOTES 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.

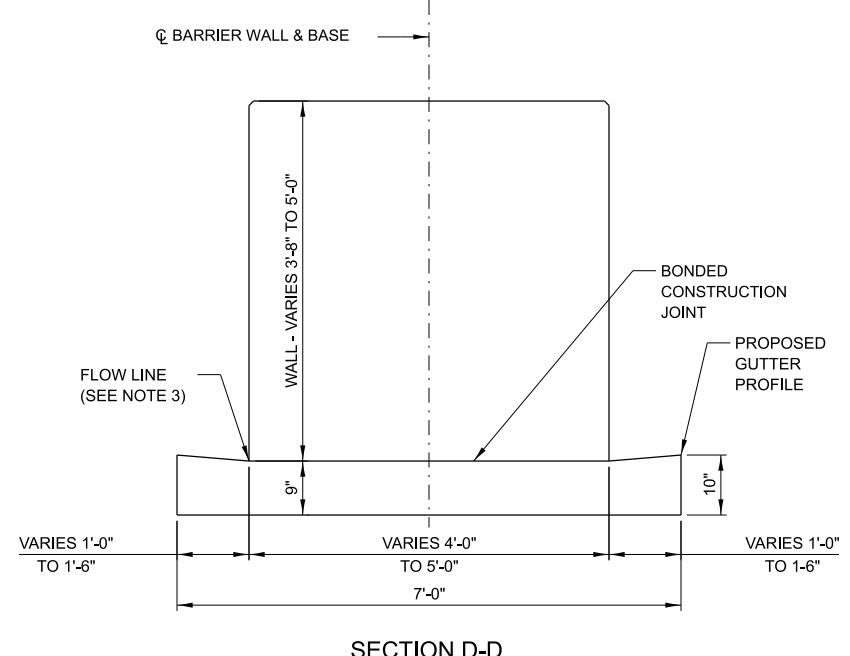
NOTES:

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.

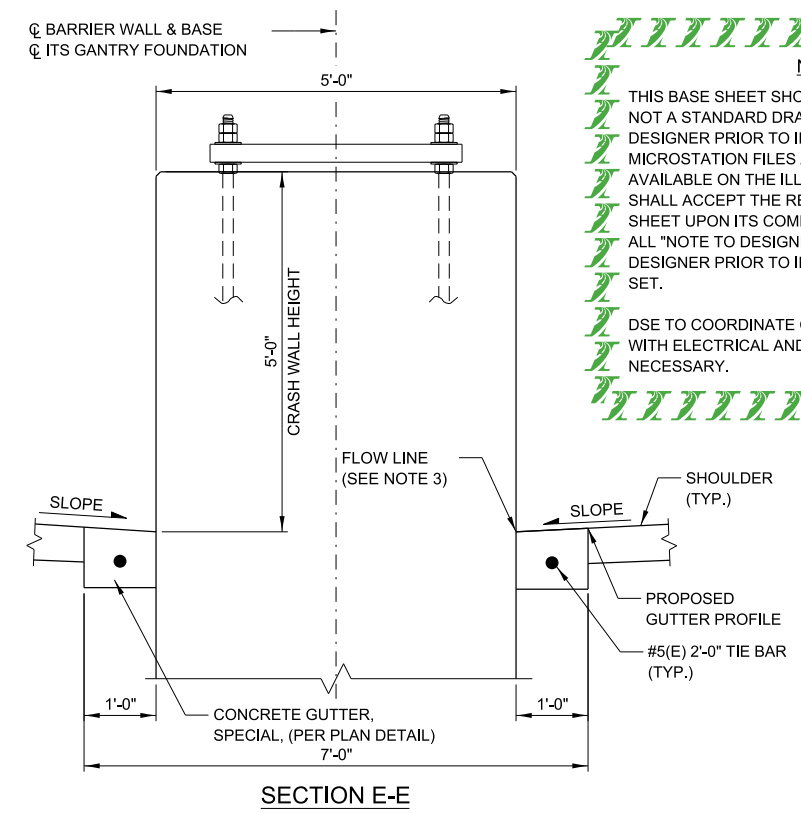
CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY



SECTION C-C



SECTION D-D

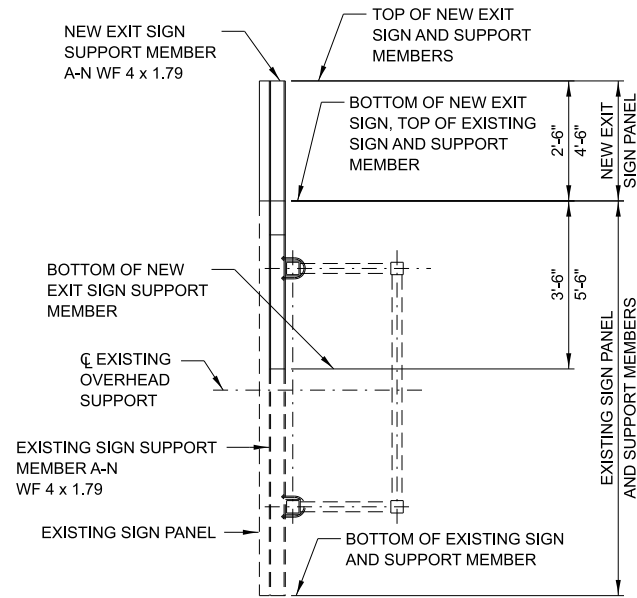
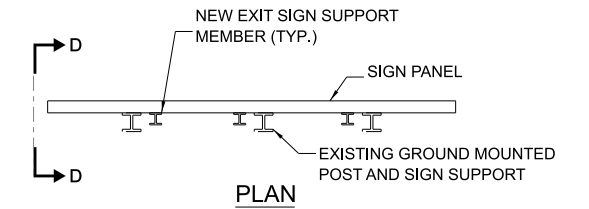
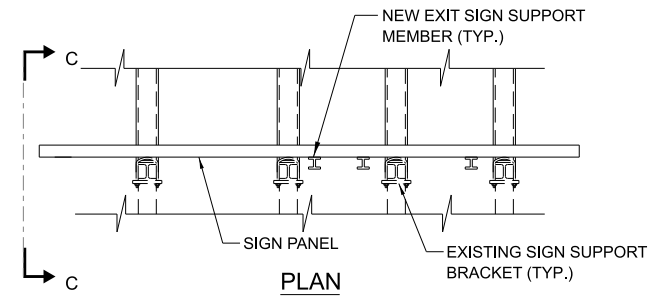
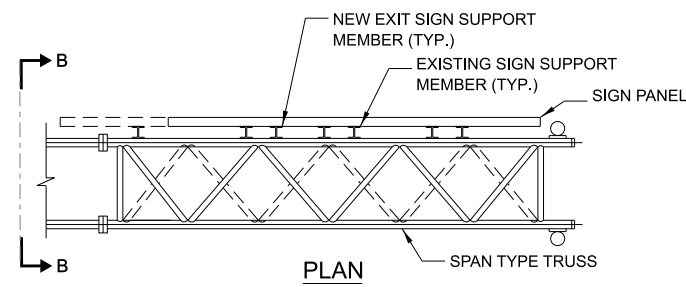
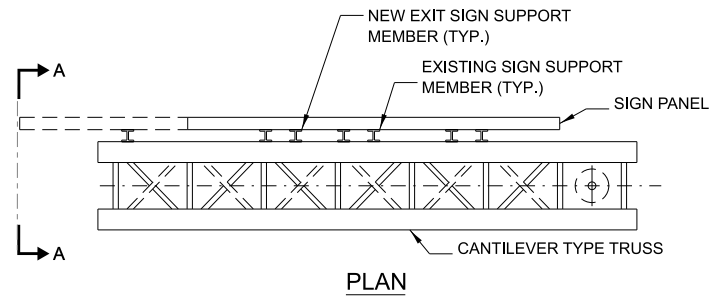


SECTION E-E

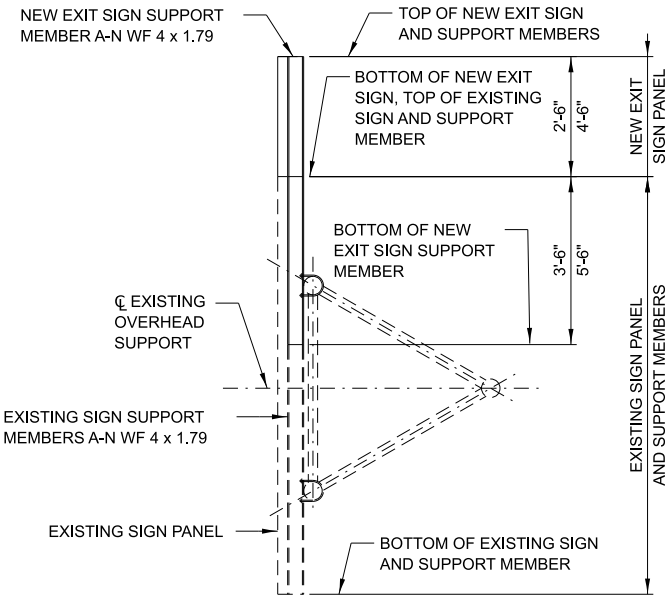
- NOTE TO DESIGNER**
- THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT 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.

OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

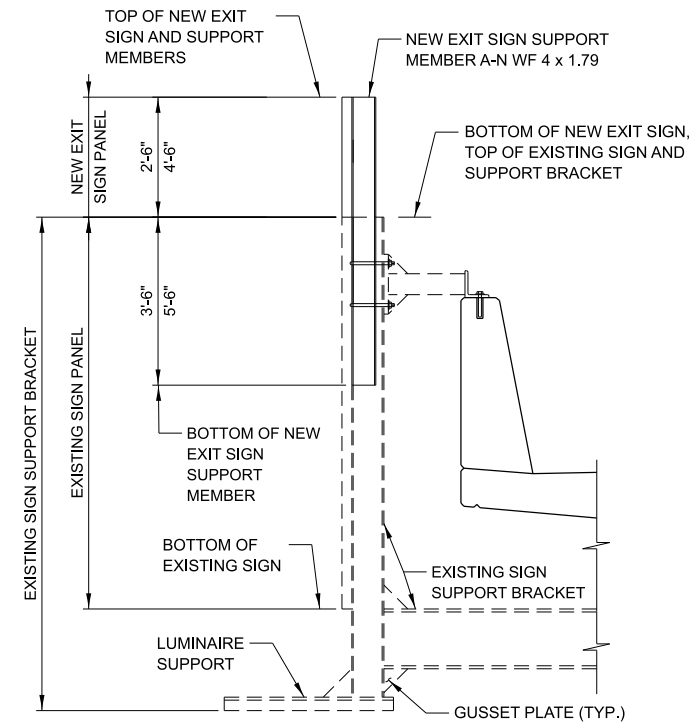
VERSION: 2026-03 BASE SHEET: M-OHS-730 SHEET: 10 OF 10



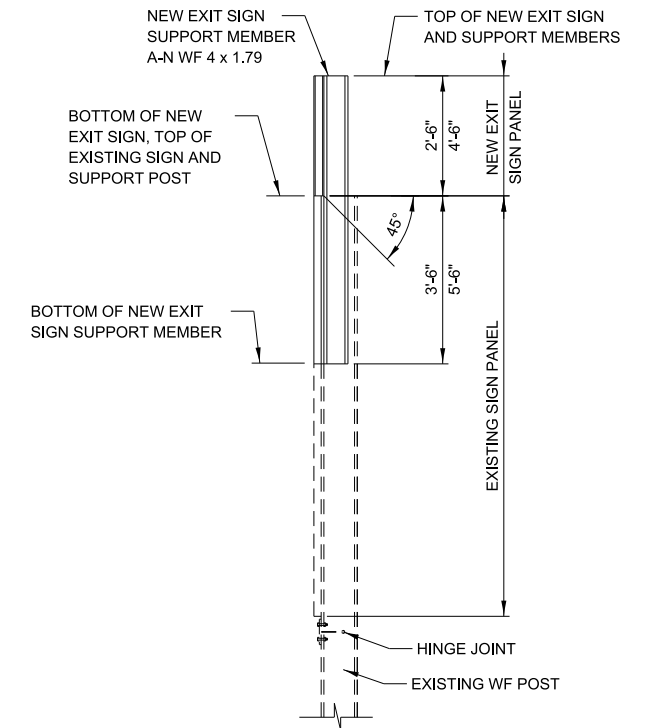
SECTION A-A
OVERHEAD CANTILEVER TYPE SIGN SUPPORT



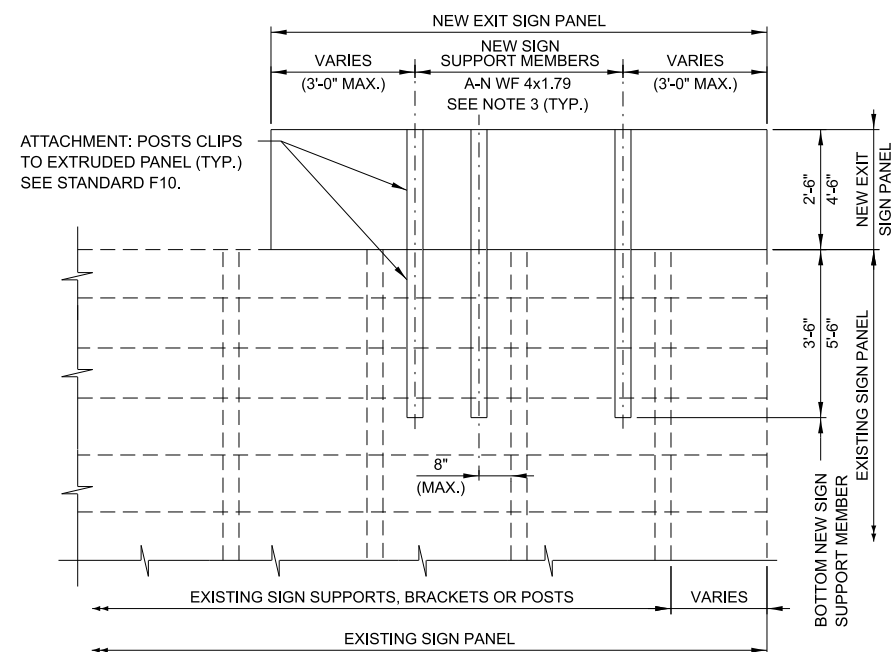
SECTION B-B
OVERHEAD SPAN TYPE SIGN SUPPORT



SECTION C-C
BRIDGE MOUNTED SIGN SUPPORT



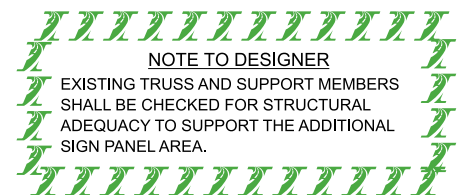
SECTION D-D
GROUND MOUNTED SIGN SUPPORT



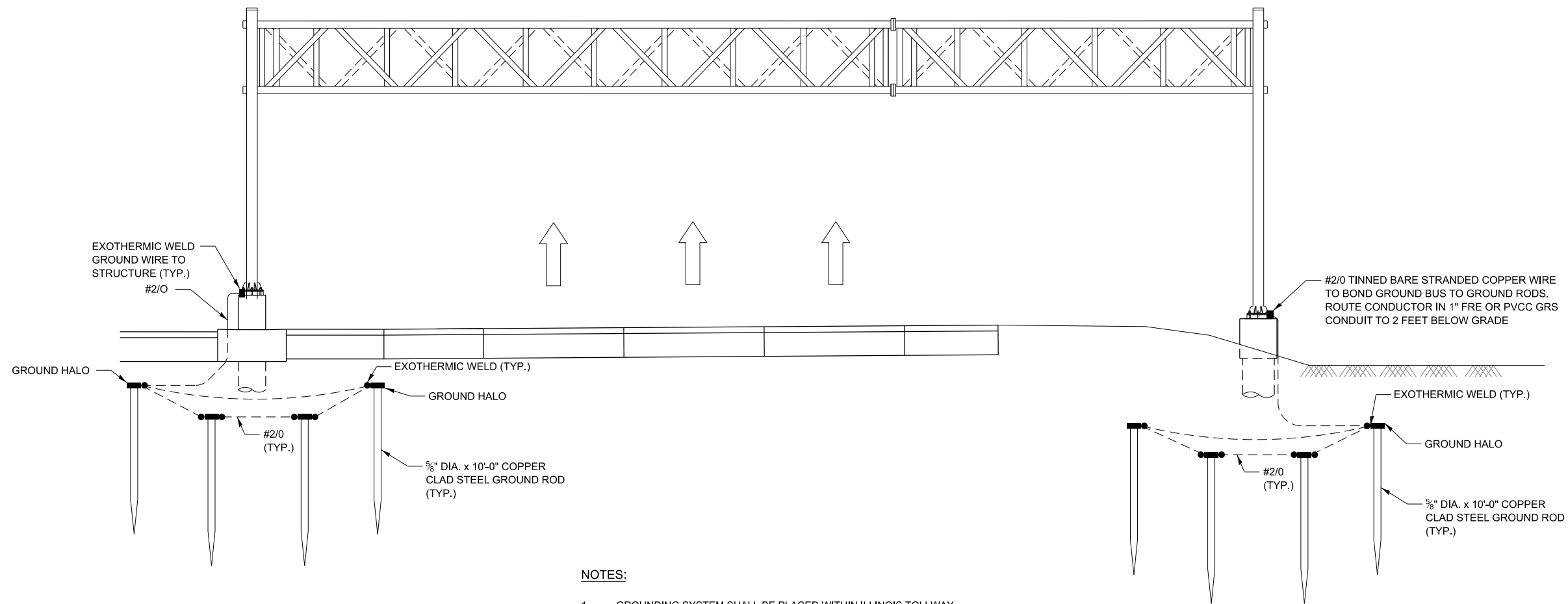
PARTIAL REAR ELEVATION OF SIGN PANELS AND SUPPORT MEMBERS

NOTES:

- ALL MATERIAL IS ALUMINUM IN ACCORDANCE WITH SECTION 733 OF THE LATEST IDOT STANDARD SPECIFICATIONS. (UNLESS OTHERWISE NOTED).
- NEW SIGN SUPPORT MEMBERS SHALL BE SPACED WITH EXISTING SIGN SUPPORTS. SPACING SHALL NOT EXCEED 6'-0".
- 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.

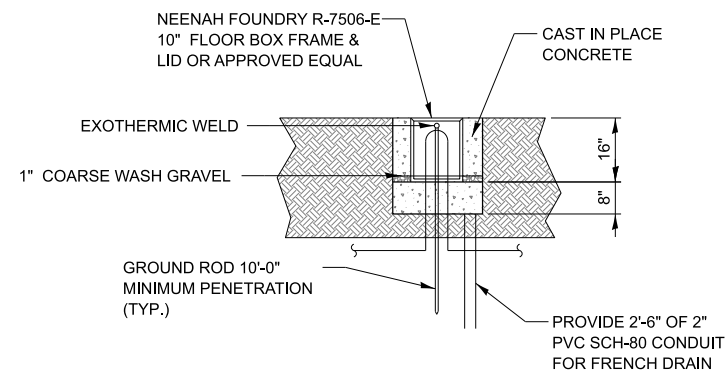


MOUNTING DETAILS FOR
RETROFITTING NEW EXIT
SIGN PANELS

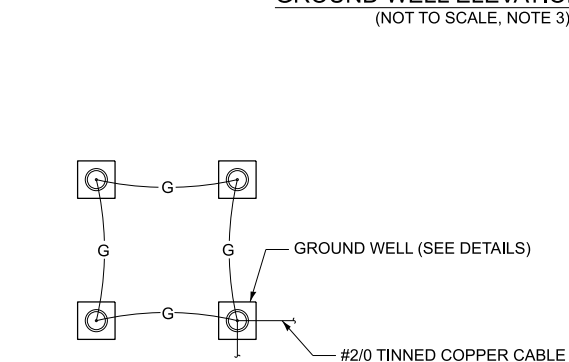


NOTES:

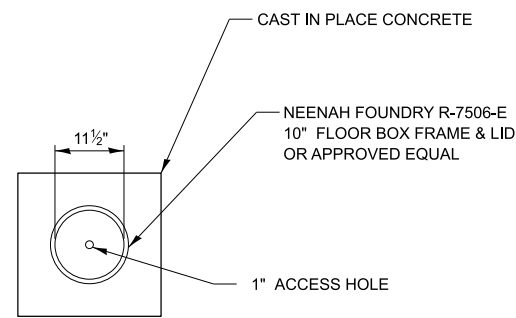
1. GROUNDING SYSTEM SHALL BE PLACED WITHIN ILLINOIS TOLLWAY RIGHT-OF-WAY.
2. INSTALL MARKER TAPE DIRECTLY ABOVE GROUNDING ELECTRODE CONDUCTORS.
3. THE COST OF ALL MATERIALS, EXOTHERMIC WELDING, GROUND WELL, GROUND RODS AND ALL OTHER ITEMS TO COMPLETE THE GROUNDING ELECTRODE SYSTEM SHALL BE INCLUDED IN 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.



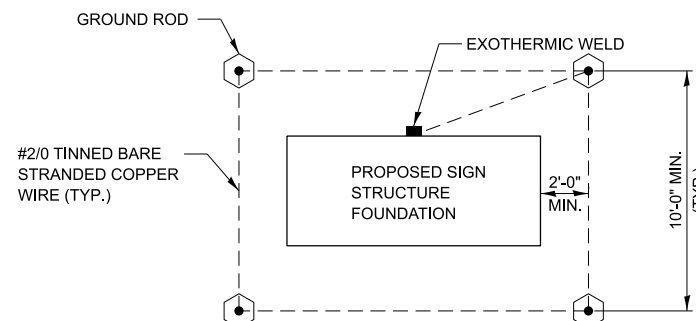
GROUND WELL ELEVATION DETAIL
(NOT TO SCALE, NOTE 3)



GROUND HALO DETAIL
(NOT TO SCALE)



GROUND WELL PLAN DETAIL
(NOT TO SCALE, NOTE 3)



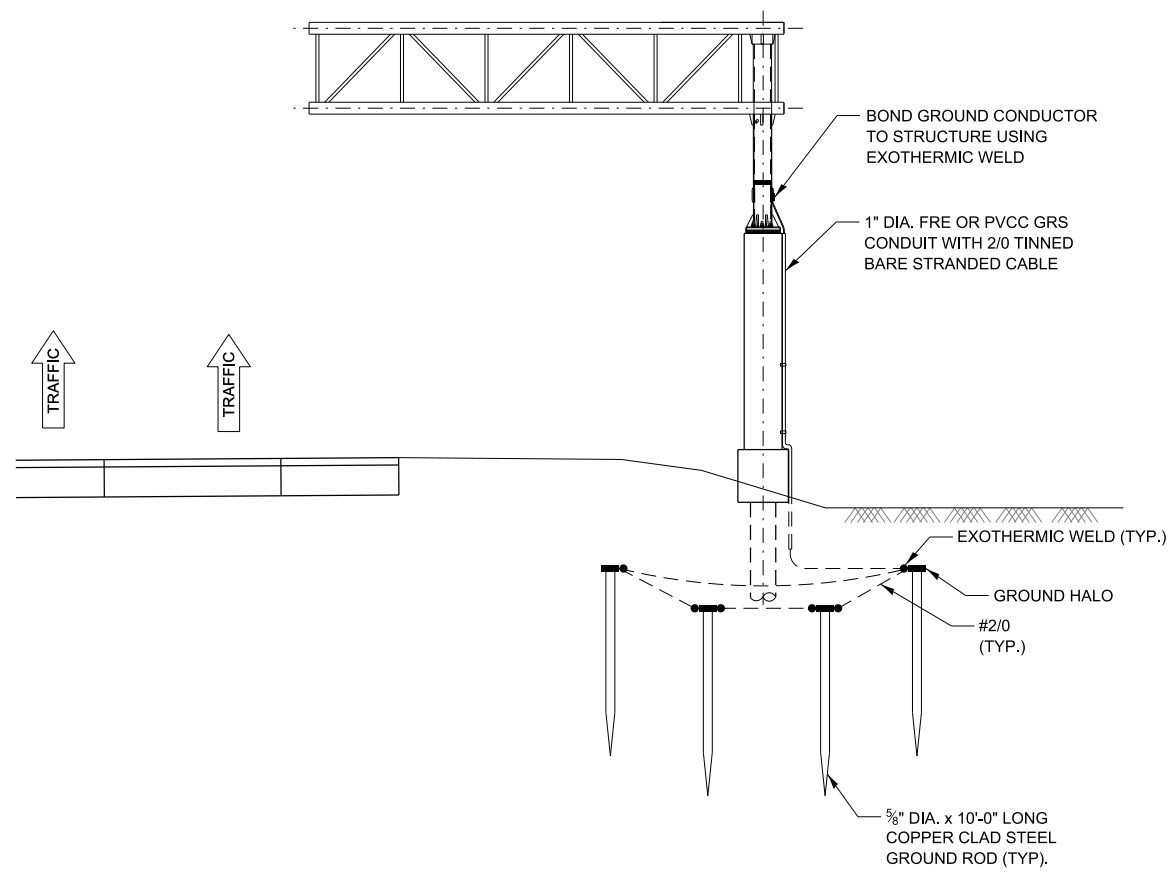
GROUNDING SCHEMATIC
(NOT TO SCALE)

NOTE TO DESIGNER

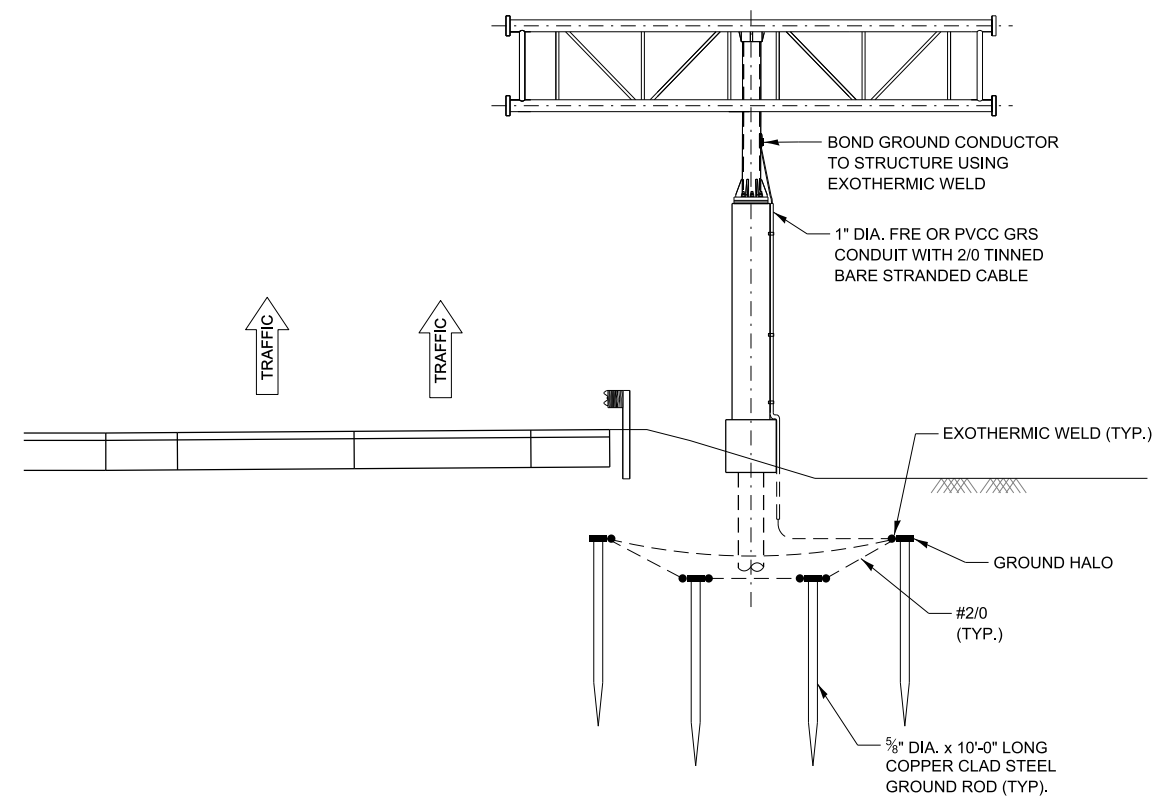
THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE 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 STRUCTURE SPAN SITE GROUNDING PLAN



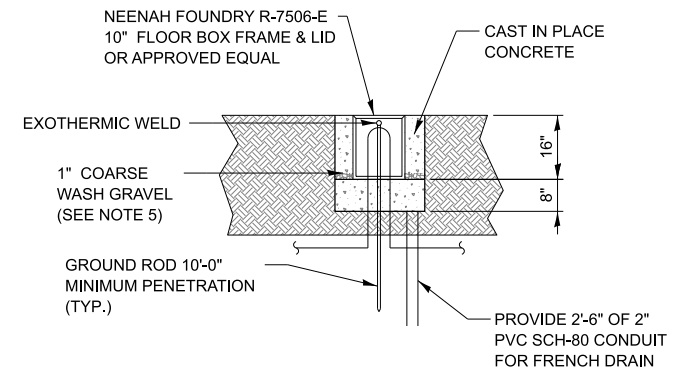
CANTILEVER ELEVATION



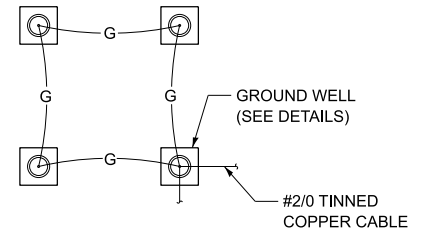
BUTTERFLY ELEVATION

NOTES:

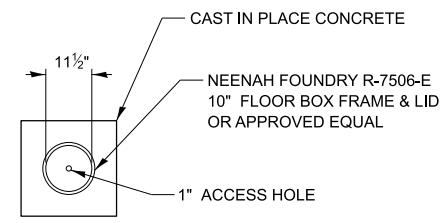
1. GROUNDING SYSTEM SHALL BE PLACED WITHIN ILLINOIS TOLLWAY RIGHT-OF-WAY.
2. INSTALL MARKER TAPE DIRECTLY ABOVE GROUNDING ELECTRODE CONDUCTORS.
3. THE COST OF ALL MATERIALS, EXOTHERMIC WELDING, GROUND WELL, GROUND RODS AND ALL OTHER ITEMS TO COMPLETE THE GROUNDING ELECTRODE SYSTEM SHALL BE INCLUDED IN 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.



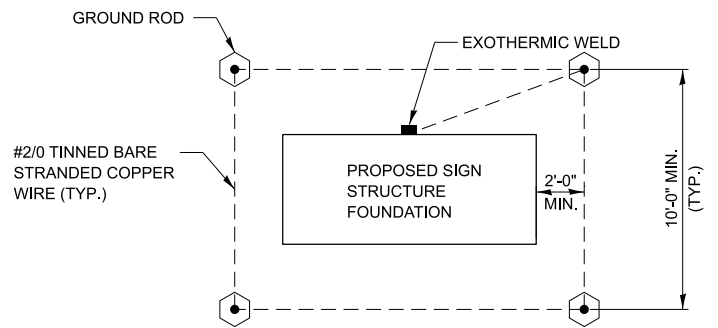
GROUND WELL ELEVATION DETAIL
(NOT TO SCALE, NOTE 3)



GROUND HALO DETAIL
(NOT TO SCALE)



GROUND WELL PLAN DETAIL
(NOT TO SCALE, NOTE 3)



GROUNDING SCHEMATIC
(NOT TO SCALE)

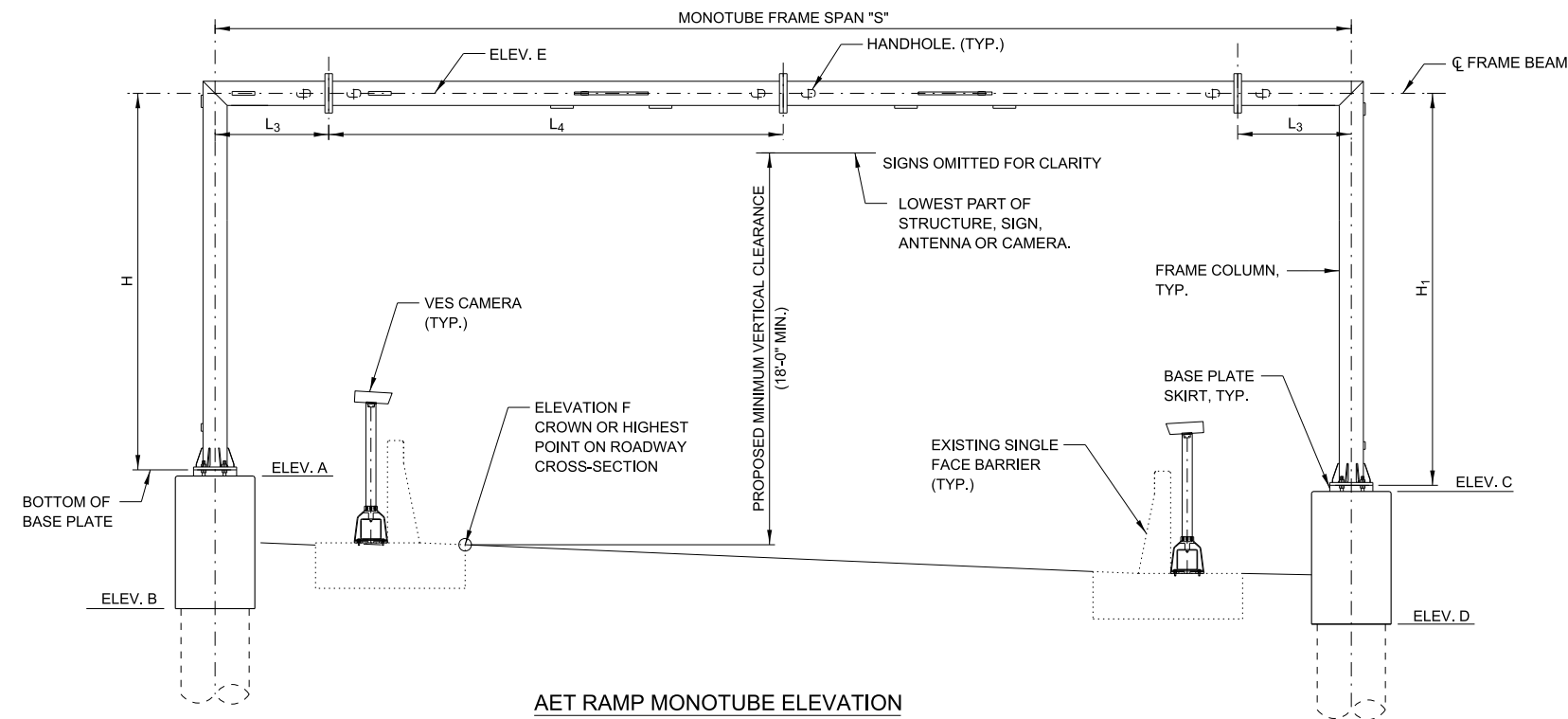
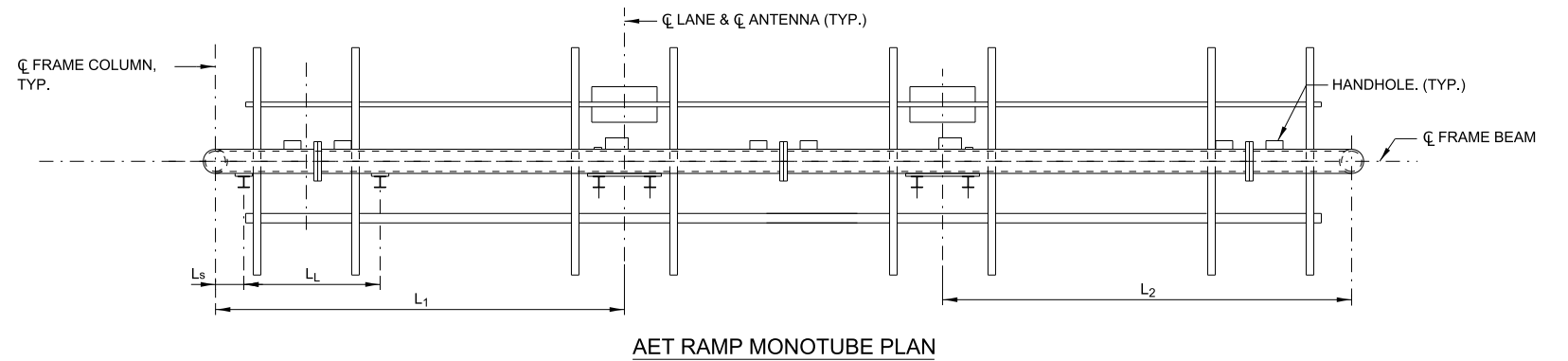
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**SIGN STRUCTURE
CANTILEVER AND BUTTERFLY
SITE GROUNDING PLANS**

VERSION: 2021-03	BASE SHEET: M-OHS-733	SHEET: 1 OF 1
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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-TS-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 F21								FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ YD)				
			A	B	C	D	E	F		Ls	Ll	L1	L2	L3	L4	H	H1	CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)						
TOTAL																									

TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL
JS733640	OVERHEAD SIGN STRUCTURE, AET RAMP SINGLE 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
* 51604000	DRILLED SHAFT IN ROCK	CU YD	XXX.X

NOTE TO DESIGNER

* INCLUDE THIS PAY ITEM IF ROCK IS ENCOUNTERED. QUANTITY OF DRILLED SHAFT IN ROCK IS NOT INCLUDED IN THE PAY ITEM JS734F10.

NOTE:

WORK THIS SHEET WITH STANDARD F21

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

VERSION: 2025-03	BASE SHEET: M-OHS-734	SHEET: 1 OF 1
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