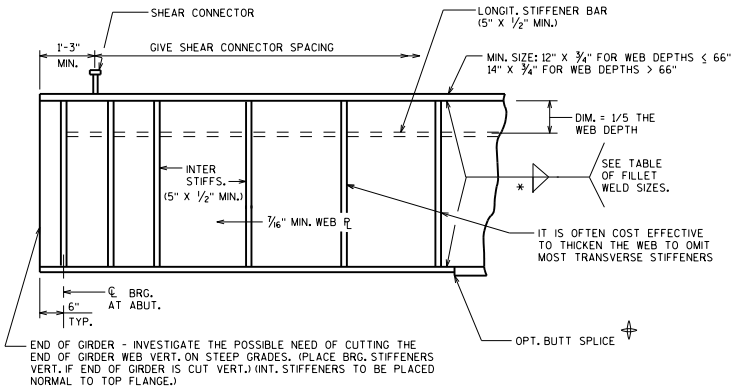
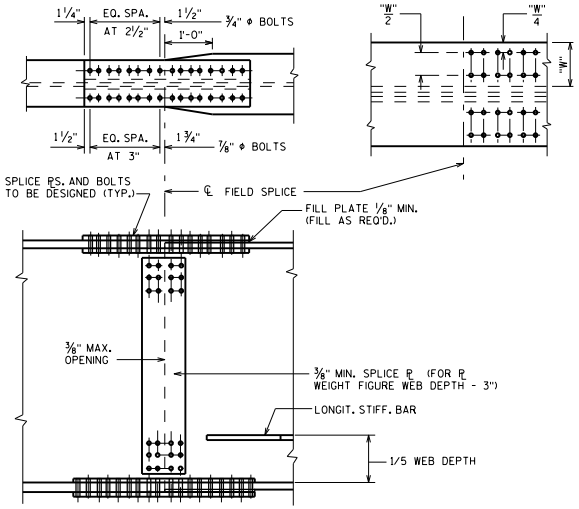


PART GIRDER ELEVATION



FIELD SPLICE DETAILS

NOTES

OPTIONAL WELDED SHOP SPLICES MAY BE USED FOR ALL FLANGE AND WEB PLATES OVER 60'-0" LONG. IF USED, THE LOCATION OF THE SPLICE SHALL BE SHOWN ON SHOP DRAWINGS AND WILL BE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION.

⏚ OPTIONAL FLANGE BUTT SPLICE. A FLANGE PLATE OF THE LARGER SIZE MAY BE FURNISHED FULL LENGTH, BUT PAY WEIGHT SHALL BE BASED ON SECTIONS AS DETAILED. IF A PERMANENT HOLD DOWN DEVICE IS USED AT THE ABUTMENT, THEN THE BUTT SPLICE SHALL NOT BE OPTIONAL.

PRIOR TO STEEL BLAST, ALL FLAME CUT EDGES OF PLATE THAT ARE TO BE PAINTED SHALL BE GROUND OR PLANED TO REMOVE THE HARDENED SURFACE CAUSE BY THE FLAME, AND CORNERS CHAMFERED 1/16" MINIMUM.

DESIGNER NOTES

BASE BEAM SEAT ELEVATIONS AT ABUTMENT ON THICKER FLANGE AND DETAIL SHIM PLATES TO ACCOMMODATED THINNER FLANGE.

AT EXTERIOR GIRDERS PLACE INTERMEDIATE TRANSVERSE STIFFENERS ON INTERIOR FACE OF GIRDER. PLACE LONGITUDINAL STIFFENERS ON THE OUTSIDE FACE.

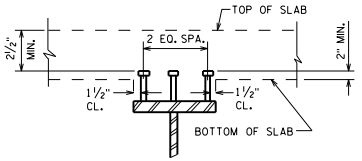
AT INTERIOR GIRDERS PLACE INTERMEDIATE TRANSVERSE STIFFENERS ON ONE SIDE OF GIRDER AND LONGITUDINAL STIFFENERS ON THE OPPOSITE SIDE OF GIRDER. KEEP INTERMEDIATE STIFFENERS ON ONE SIDE WHEN LONGITUDINAL STIFFENERS ARE NOT REQUIRED.

AVOID USE OF LONGITUDINAL STIFFENERS IF PRACTICAL BY THICKENING WEB. WHERE LONGITUDINAL STIFFENERS ARE USED, RUN THEM CONTINUOUS WITHOUT BREAKS AT CONNECTION STIFFENERS.

AT EXTERIOR GIRDER PLACE INTERMEDIATE STIFFENERS ALONG ENTIRE LENGTH OF GIRDER AT A MAX. SPACING EQUAL TO 1.5 X THE DEPTH OF WEB. SPACE EQUALLY BETWEEN DIAPHRAGM CONNECTION STIFFENER. THIS REQUIREMENT IS NECESSARY TO SUPPORT THE FALSEWORK FOR THE SLAB OVERHANG AND MAY BE DISREGARDED IF THE SLAB OVERHANG, MEASURED FROM ℄ WEB, IS 1'-6" OR LESS OR ANY OF THE FOLLOWING CRITERIA ARE SATISFIED:
...WEB THICKNESS > 5/8" AND WEB DEPTH < 48"
...WEB THICKNESS > 11/16" AND WEB DEPTH < 60"
...WEB THICKNESS > 3/4" AND WEB DEPTH < 66"

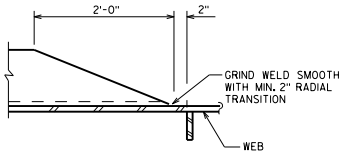
SEE STANDARD 40.07 FOR CONNECTING ANY NEW STIFFENERS TO EXISTING GIRDERS.

NOTE: USE THREE FIELD WELDED 7/8" DIA. X 5" LONG ⊖ STUDS EQUALLY SPACED WITH A MIN. OF 1 1/2" CL. FROM THE FLANGE EDGE. STUDS SHALL NOT BE PLACED OVER FIELD SPLICE PLATES.

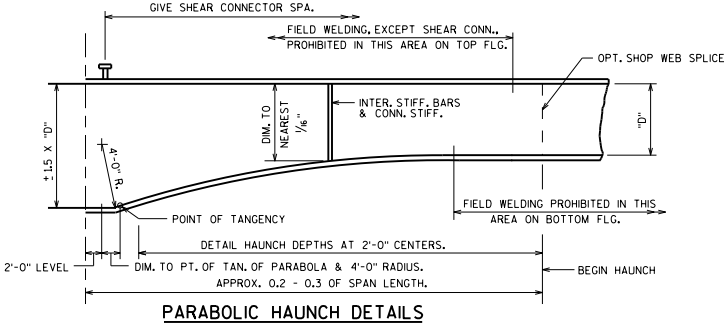


⊖ USE DIFFERENT LENGTH STUDS IF 2 1/2" MIN. CLEARANCE OR 2" EXTENSION CRITERIA IS VIOLATED.

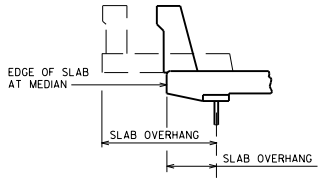
SHEAR CONN. DETAILS



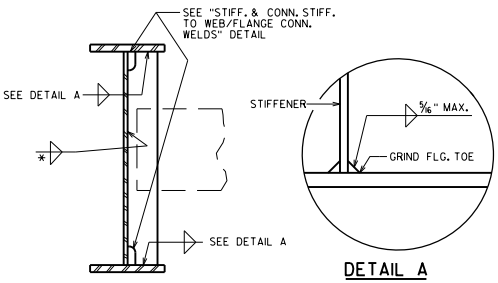
LONGIT. STIFF. TERMINATION



PARABOLIC HAUNCH DETAILS



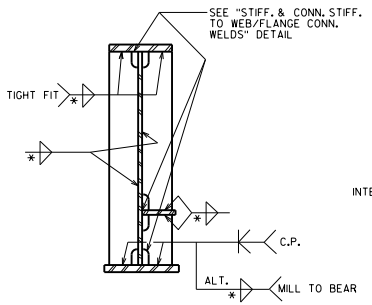
SLAB OVERHANG DEFINITION



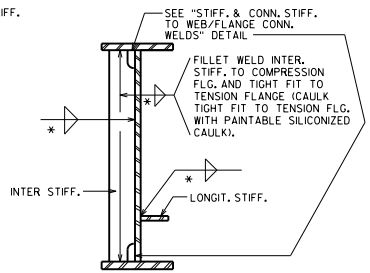
CONNECTION STIFF. DETAILS

DETAIL A

CONNECTION STIFFENER DETAIL ⊗ TENSION FLANGE



BRG. STIFF. DETAILS TYP. AT ABUT. & PIER



INTERMEDIATE & LONGITUDINAL STIFF. DETAILS

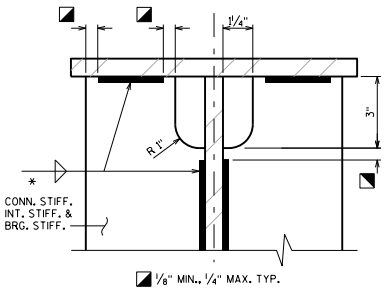
(ALL GIRDERS)

* TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	+ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	△ 5/16"
OVER 1 1/2"	△ 3/8"

+ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"



STIFF. & CONN. STIFF. TO WEB/FLANGE CONN. WELDS

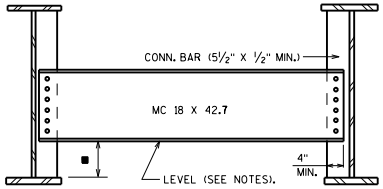
PLATE GIRDER DETAILS

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

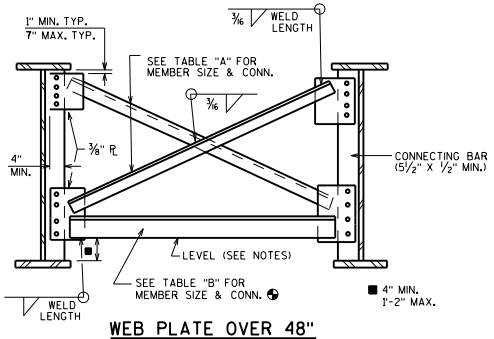
APPROVED: Bill Oliva

DATE: 1-19

STANDARD 24.02



WEB PLATE ≤ 48"
TYP. IN SPAN & AT PIER



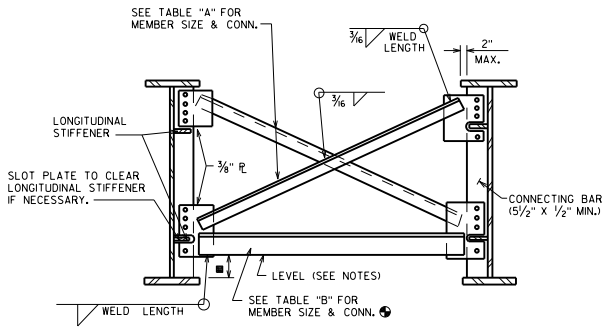
WEB PLATE OVER 48"
TYP. IN SPAN & AT PIER

TABLE "A"

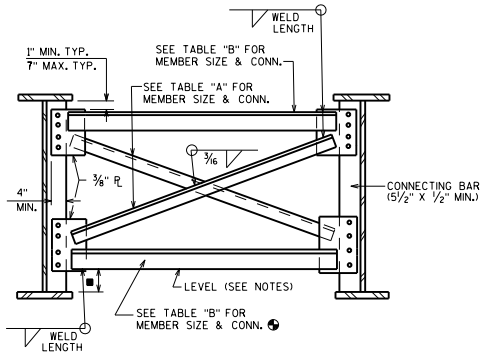
SIZE	MAX. LENGTH OF MEMBER	WELD LENGTH	NO. OF ¾" ø BOLTS	WEIGHT PER FT.
L 3½ X 3½ X 5/16	21'-6"	9"	4	7.2#
L 4 X 4 X 5/16	25'-0"	11"	4	8.2#
L 5 X 5 X 5/16	31'-0"	14"	5	10.3#

TABLE "B"

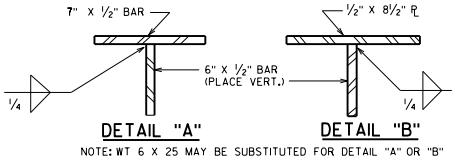
SIZE	MAX. LENGTH OF MEMBER	WELD SIZE	WELD LENGTH	NO. OF ¾" ø BOLTS	WEIGHT PER FT.
L 5 X 5 X 5/16	11'-6"	¼"	11"	4	10.3#
L 6 X 6 X ⅜	13'-6"	5/16"	13"	6	14.9#
½" T SECTION SEE DETAIL "A"	17'-6"	5/16"	14"	7	16.6#
½" T SECTION SEE DETAIL "B"	22'-0"	⅜"	13"	7	18.5#



WEB PLATE OVER 48" WITH LONGITUDINAL STIFFENERS
TYP. IN SPAN & AT PIER



TYP. CURVED GIRDER DIAPHRAGM
ALSO USE TOP HORIZONTAL MEMBER AT DIAPHRAGMS ADJACENT TO KINK POINTS OF KINKED GIRDERS



NOTE: WT 6 X 25 MAY BE SUBSTITUTED FOR DETAIL "A" OR "B"

NOTES

ALL BOLTED CONNECTIONS SHALL BE FRICTION TYPE USING ¾" ø HIGH STRENGTH ASTM A325 BOLTS WITH DOUBLE WASHERS.

DIAPHRAGMS OR LOWER CROSS FRAME MEMBERS ARE SLOPED WHEN DIFFERENCE IN ADJACENT BOTTOM FLANGE ELEVATIONS EXCEEDS 6". HOLD 8" FROM TOP OF ADJACENT FLANGES TO BOTTOM OF DIAPHRAGMS OR LOWER CROSS FRAME WHEN THESE MEMBERS ARE SLOPED.

DIAPHRAGMS OR LOWER CROSS FRAME MEMBERS THAT ARE LEVEL SHALL BE PLACED 4" ABOVE THE TOP OF THE HIGHER BOTTOM FLANGE OF ADJACENT GIRDERS.

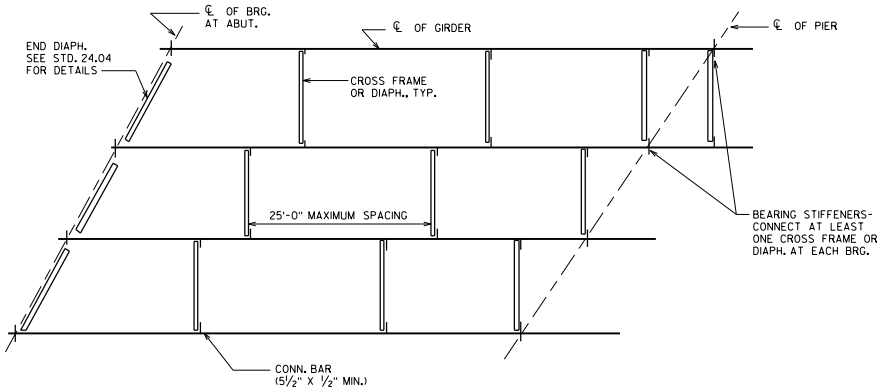
HOLES IN CROSS FRAME CONNECTIONS MAY BE OVERSIZED ø 15/16" DIA. IN 1 PLY.

DESIGNER NOTES

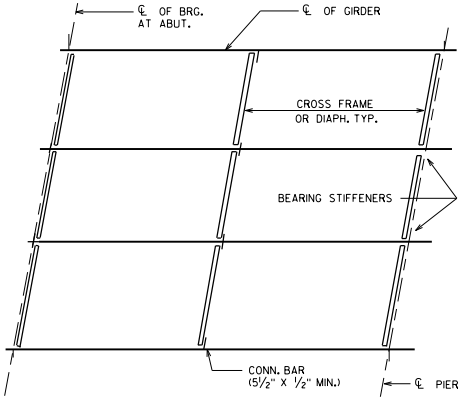
SEE STD. 24.02 FOR CONNECTION BAR CORNER COPE & WELD DETAILS.

FOR SPANS OVER 200', THE CROSS FRAMES AT THE PIERS SHALL BE DESIGNED TO RESIST THE LATERAL LOADS THAT ARE TRANSFERRED TO THE PIERS.

◐ HORIZONTAL CROSSFRAME MEMBER TO HAVE HORIZONTAL LEG TOP (AS SHOWN) WHEN NO LOWER LATERALS ARE USED. WHEN LOWER LATERALS ARE USED THE HORIZONTAL LEG SHALL BE ON THE BOTTOM, THIS IS TO ALLOW FRAMING INTO THE LOWER LATERAL GUSSET. CURRENT PRACTICE IS TO AVOID THE USE OF LOWER LATERALS, HOWEVER.



FRAMING PLAN FOR SKEW > 15°



FRAMING PLAN FOR SKEW ≤ 15°

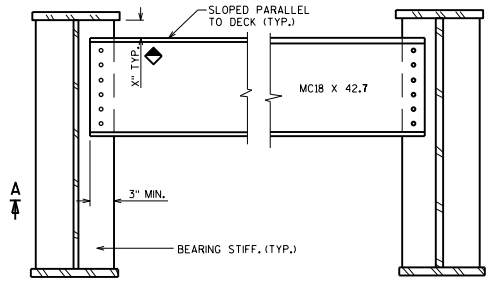
PLATE GIRDER DIAPHRAGMS AND CROSS FRAMES

BUREAU OF STRUCTURES

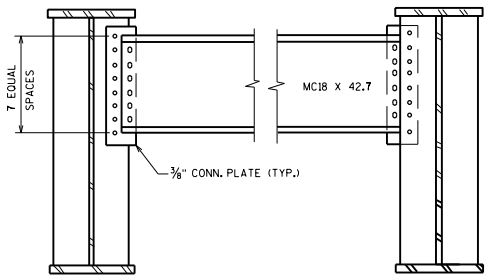
APPROVED: Bill Oliva

DATE: 7-15

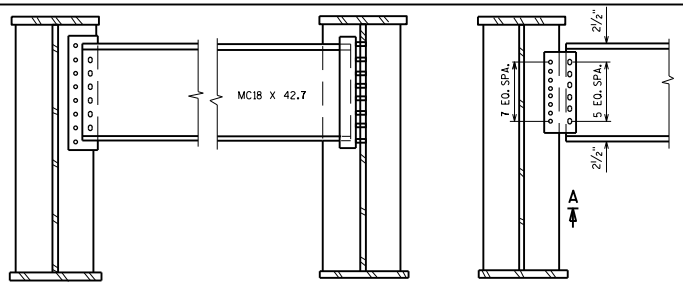
STANDARD 24.03



SKEWS 0° - 15°



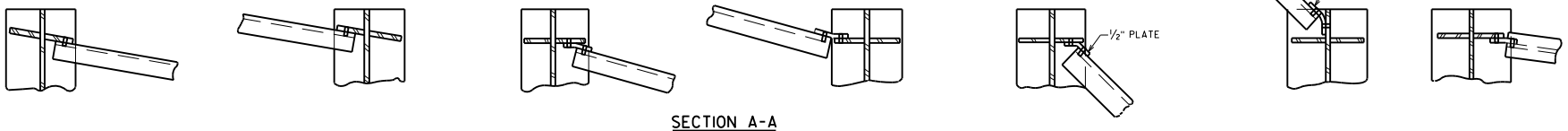
SKEWS > 15° ≤ 30°



SKEW > 30°

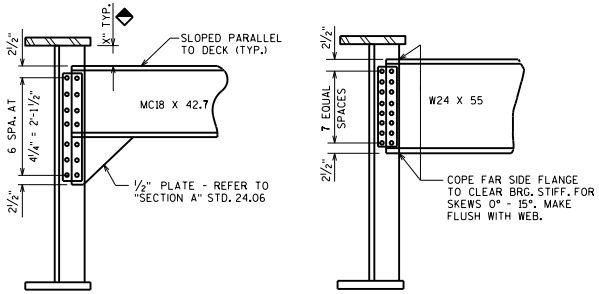
W24 X 55 TYPICAL CONN.

USE W24x55 IN PLACE OF MC18x42.7 WHEN LENGTH OF DIAPHRAGM EXCEEDS 13'-6" BUT < 22'-0". (SKEW > 15° ≤ 30° SHOWN.)



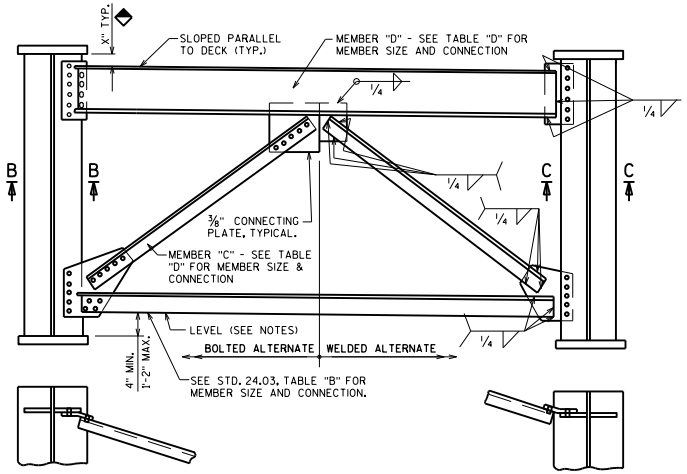
SECTION A-A

END DIAPHRAGM CONNECTIONS - WEB DEPTHS ≤ 48"



TYPICAL CONNECTION FOR MC18 X 42.7 AND W24 X 55. USE MC18 X 42.7 WHEN DIAPHRAGM LENGTH IS ≤ 13'-6". USE W24 X 55 FOR LENGTHS > 13'-6" < 22'-0". (SKEW > 15° ≤ 30° SHOWN)

END DIAPHRAGM CONNECTIONS - WEB DEPTHS > 48" ≤ 60"



SECTION B-B

SECTION C-C

END DIAPHRAGM CONNECTIONS - WEB DEPTHS > 60"

SKEWS > 15° ≤ 30° SHOWN

NOTES

ALL BOLTED CONNECTIONS SHALL BE FRICTION TYPE USING ¾" DIA. HIGH STRENGTH ASTM A325 BOLTS WITH DOUBLE WASHERS.

LOWER CROSS FRAME MEMBERS ARE SLOPED WHEN DIFFERENCE IN ADJACENT BOTTOM FLANGE ELEVATIONS EXCEEDS 6". HOLD 8" FROM TOP OF ADJACENT FLANGES TO BOTTOM OF DIAPHRAGMS OR LOWER CROSS FRAME WHEN THESE MEMBERS ARE SLOPED.

LOWER CROSS FRAME MEMBERS THAT ARE LEVEL SHALL BE PLACED 4" ABOVE THE TOP OF THE HIGHER BOTTOM FLANGE OF ADJACENT GIRDERS.

DESIGNER NOTES

SEE STANDARD 24.02 FOR BEARING STIFFENER COPE & WELD DETAILS.

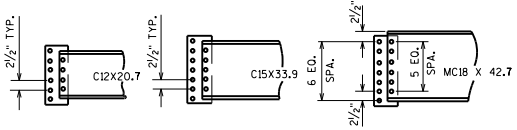
FOR WEB DEPTHS GREATER THAN 60", THE NUMBER OF BOLTS REQUIRED BETWEEN BEARING STIFFENERS AND LOWER CONNECTING PLATES EQUALS THE NUMBER OF BOLTS REQUIRED IN MEMBER "C" OR THE NUMBER REQUIRED IN THE LOWER HORIZONTAL MEMBER, WHICHEVER IS GREATER.

◆ 3" MINIMUM. USE 3" UNLESS INCREASED TO ACCOMMADATE LARGE EXPANSION DEVICES.

TABLE "D"

MEMBER "C" MAXIMUM LENGTH	WEB DEPTH 5'-0" - 6'-6"			WEB DEPTH 6'-6" - 7'-6"			WEB DEPTH 7'-6" - 8'-9"			MEMBER "D" SIZE	MEMBER "D" CONN. NO. OF ¾" DIA. BOLTS	
	MEMBER "C" SIZE	NO. OF ¾" DIA. BOLTS	LENGTH OF ¼" WELD	MEMBER "C" SIZE	NO. OF ¾" DIA. BOLTS	LENGTH OF ¼" WELD	MEMBER "C" SIZE	NO. OF ¾" DIA. BOLTS	LENGTH OF ¼" WELD		CONN. PLATE TO BRG. STIFF.	MEMBER "D"
11'-6"	4 X 4 X 5/16	5	13	4 X 4 X 5/16	5	12	4 X 4 X 5/16	5	11	C12 X 20.7	6 @ 2½"	4 @ 2½"
13'-6"	5 X 5 X 5/16	6	17	5 X 5 X 5/16	6	16	5 X 5 X 5/16	6	15	C12 X 20.7	6 @ 2½"	4 @ 2½"
17'-6"	6 X 6 X 5/16	8	20	5 X 5 X 5/16	7	18	5 X 5 X 5/16	6	16	C15 X 33.9	7 @ 2½"	5 @ 2½"
22'-0"	6 X 6 X 5/16	9	23	6 X 6 X 5/16	8	21	6 X 6 X 5/16	7	19	MC18 X 42.7	7 @ 2½"	6 @ 2½"

NOTE: ALL MEMBER "C" SIZES REPRESENT ANGLES.



MEMBER "D" END CONNECTIONS

OMIT END CONNECTING PLATE FOR SKEWS 0° - 15°

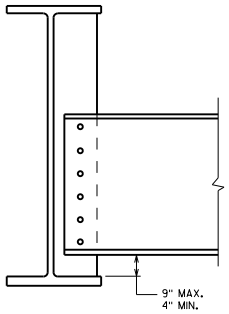
END DIAPHRAGMS

BUREAU OF STRUCTURES

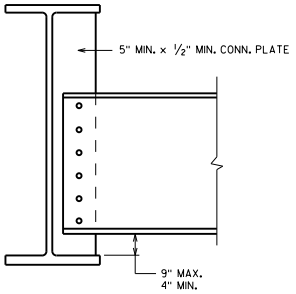
APPROVED: Bill Oliva

DATE: 7-21

STANDARD 24.04



36" W. GIRDER



33" W. GIRDER

INTERMEDIATE DIAPHRAGM SIZES

ALL INTERMEDIATE CONNECTIONS	
GIRDER DEPTH	INTERMEDIATE DIAPHRAGMS
36"	MC18 X 42.7
33"	MC18 X 42.7
30"	C15 X 33.9
27"	C15 X 33.9
24"	C12 X 20.7
21"	C10 X 15.3
18"	C8 X 11.5

NOTES

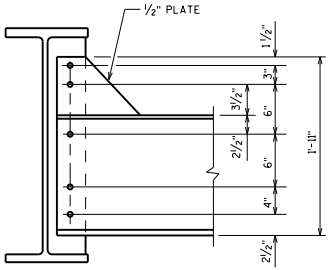
DIAPHRAGMS SHALL BE HORIZONTAL EXCEPT WHEN THE DIFFERENCE IN ADJACENT GIRDER ELEVATIONS IS OF A MAGNITUDE THAT NECESSITATES SLOPING THE DIAPHRAGMS.

WHEN DIAPHRAGMS ARE SLOPED, PLACE CENTER OF DIAPHRAGM AT MID-DEPTH OF GIRDER.

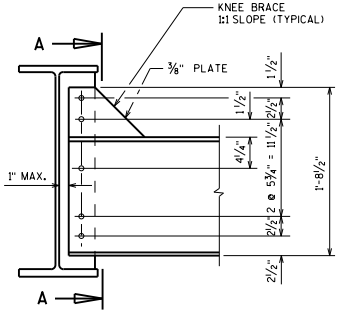
ALL BOLTED CONNECTIONS SHALL BE MADE WITH ¾" ø HIGH STRENGTH ASTM A325 BOLTS.

DESIGNER NOTES

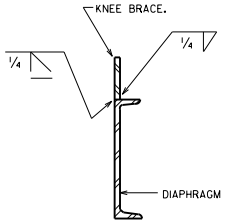
SEE STANDARD 24.02 FOR CONNECTION BAR CORNER COPE & WELD DETAILS.



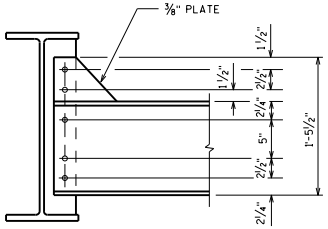
30" W. GIRDER



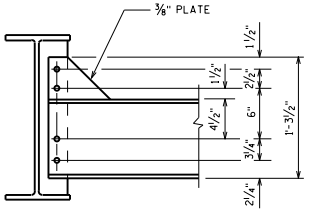
27" W. GIRDER



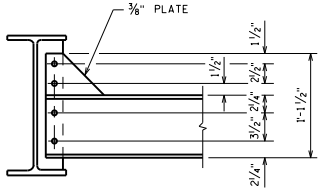
SECTION A



24" W. GIRDER



21" W. GIRDER



18" W. GIRDER

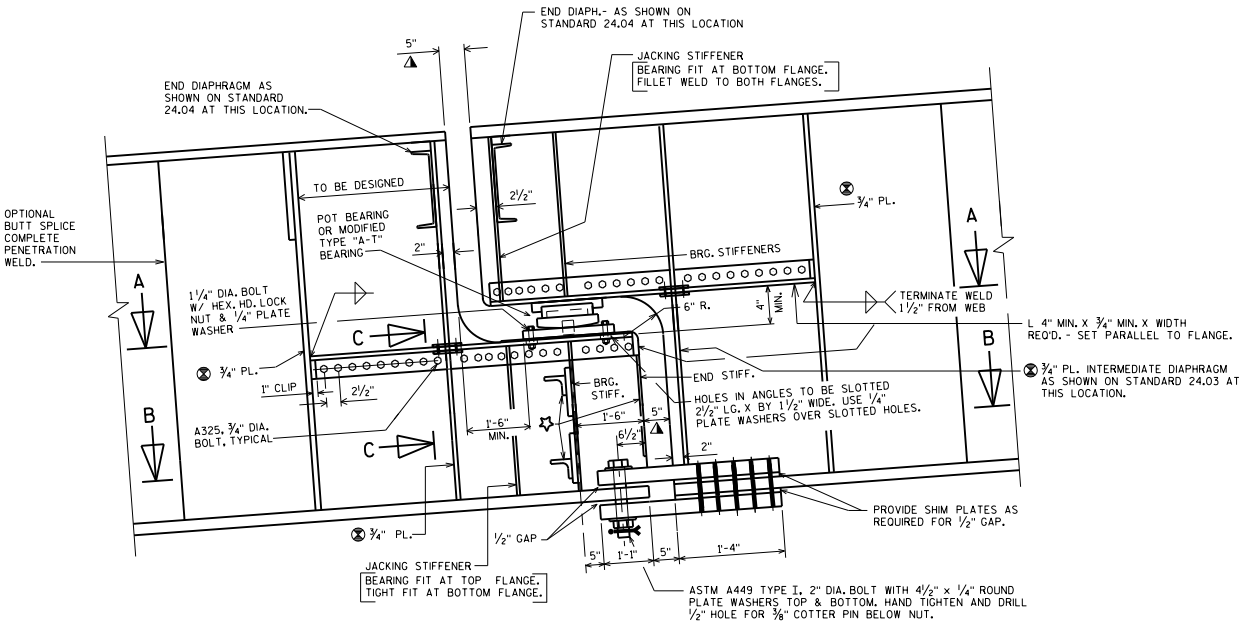
ROLLED GIRDER DIAPHRAGMS

BUREAU OF STRUCTURES

APPROVED: Bill Oliva

DATE: 7-15

STANDARD 24.06



ELEVATION

NOTES

⊗ FOR WELDING DETAILS SEE "CONNECTION STIFFENER DETAILS" ON STANDARD 24.02 MINIMUM PLATE SIZE SHOWN. DESIGN ACTUAL SIZE REQUIRED.

STIFFENERS AND BEARING PLATES ARE ALL PERPENDICULAR TO FLANGES. ANGLES ARE PARALLEL TO FLANGES.

DESIGNER NOTES

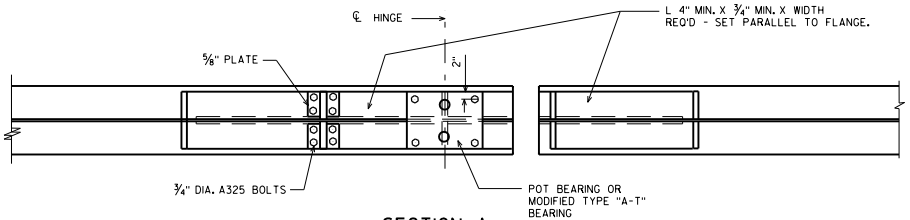
SIZE AND LENGTH OF ANGLES, NUMBER OF BOLTS THRU ANGLES, THICKNESS OF WEB PLATE, AND SIZE OF BEARING STIFFENERS AND JACKING STIFFENERS SHALL BE DETERMINED FROM AN ANALYSIS USING THE VERTICAL AND HORIZONTAL FORCES ACTING AT THE HINGE.

⚠ THE 5" OPENING BETWEEN GIRDER WEB AND FLANGE PLATES IS FOR FABRICATION ACTUAL OPENING IS BASED ON EXPANSION LENGTH AND TEMPERATURE.

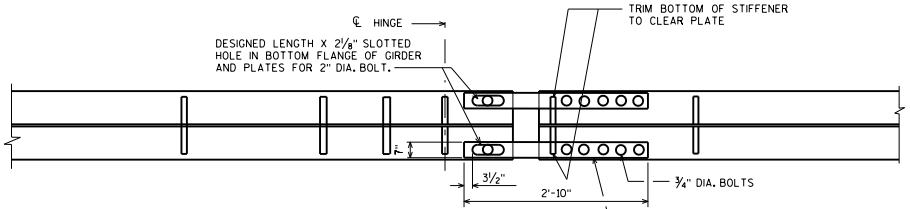
SLOTTED HOLES OF 6" IN THE FLANGES AND CONNECTING BARS WILL ACCOMMODATE A TOTAL TEMPERATURE MOVEMENT OF 8" (± 4" FROM 45° F). THE DESIGNER MAY NEED TO INCREASE OR DECREASE THE LENGTH OF THE SLOT TO MEET SPECIFIC JOB REQUIREMENTS.

✡ CROSS FRAME UNDER BRG. AND END STIFFENER IS ONLY REQ'D. IF TOTAL WEB HEIGHT EXCEEDS 8'-0".

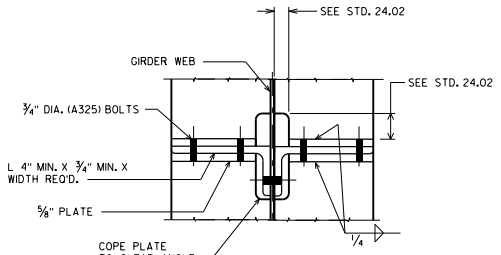
SEE BRIDGE MANUAL, SECTION 24.1 FOR CRITERIA FOR LOCATING HINGE JOINTS.



SECTION A



SECTION B



SECTION C

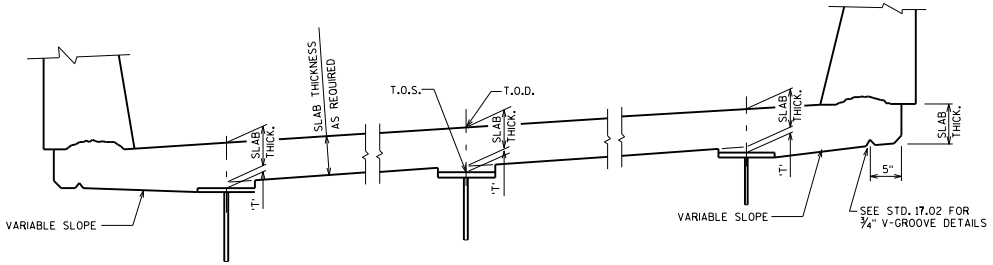
EXPANSION HINGE JOINT DETAILS

BUREAU OF STRUCTURES

APPROVED: Bill Oliva

DATE: 7-16

STANDARD 24.08



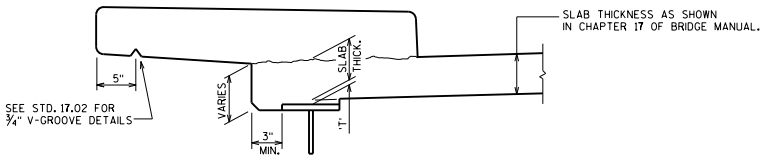
SECTION THRU SLAB

DESIGNER NOTES

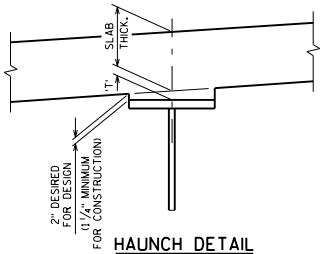
HAUNCH HEIGHTS WILL NORMALLY BE MADE 2" AT EDGE OF GIRDER, AT ABUTMENTS, HINGES, AND FIELD SPLICES.

HAUNCH DEPTH VARIATIONS NEED NOT BE SHOWN ON THE PLANS.

IF HAUNCH VARIATIONS EXCEED ¾", THE GIRDER SHALL BE CAMBERED TO REDUCE THE VARIATIONS IN HAUNCH THICKNESS.



TREATMENT OF EXTERIOR GIRDER AT SIDEWALK OVERHANG



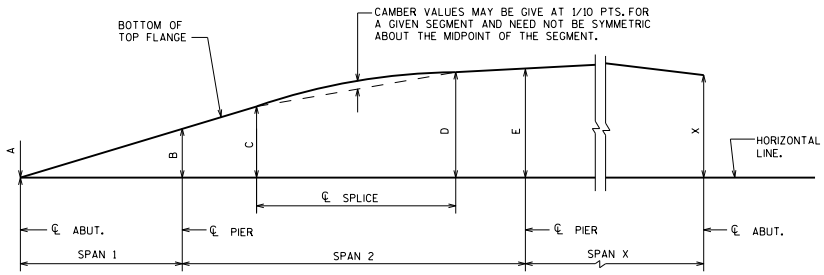
HAUNCH DETAIL

NOTES

'T' = HAUNCH HEIGHT AT CENTERLINE OF GIRDER.

TO DETERMINE 'T': AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES SHALL BE TAKEN AT CENTERLINE OF BEARINGS AND AT 0.1 POINTS.

TOP OF DECK ELEVATION AT FINAL GRADE
- TOP OF STEEL ELEVATION AFTER STEEL ERECTION
+ CONC. ONLY DEFLECTION; DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED
- SLAB THICKNESS
= 'T' VALUE FOR SETTING HAUNCH



BLOCKING DIAGRAM

ELEVATIONS AT TOP OF DECK (T.O.D.) & TOP OF STEEL (T.O.S.)

		W. ABUT.	0.1 SPAN	0.2 SPAN	0.3 SPAN	℄ PIER	℄ SPLICE		℄ ABUT.
GIRDER 1	T.O.D.	861.17	861.13	861.08	861.04	860.99			860.69
	T.O.S.	860.48				860.35	860.35		860.00
GIRDER 2	T.O.D.	860.62	860.58	860.53	860.49	860.45			860.16
	T.O.S.	859.93				859.80	859.80		859.59
GIRDER X	T.O.D.								
	T.O.S.								

THESE ELEVATIONS ARE TO TOP OF STEEL (SPLICE AND COVER PLATE THICKNESS, IF APPLICABLE, ARE ACCOUNTED FOR) AND THEY ARE FOR THE MATERIAL AS ERECTED. THE ELEVATION OF THE TOP STEEL AT THE FIELD SPLICE POINTS SHALL BE CHECKED, AND CORRECTED, IF POSSIBLE, AFTER ERECTION AND BEFORE PERMANENTLY BOLTING THE DIAPHRAGMS IN PLACE.

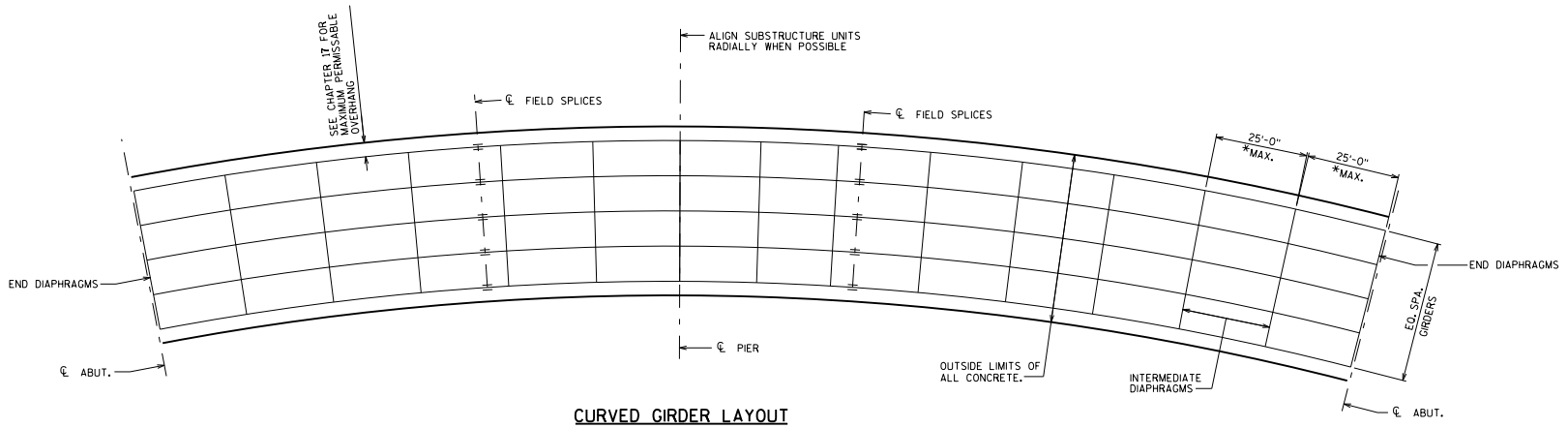
BLOCKING & SLAB HAUNCH DETAILS

BUREAU OF STRUCTURES

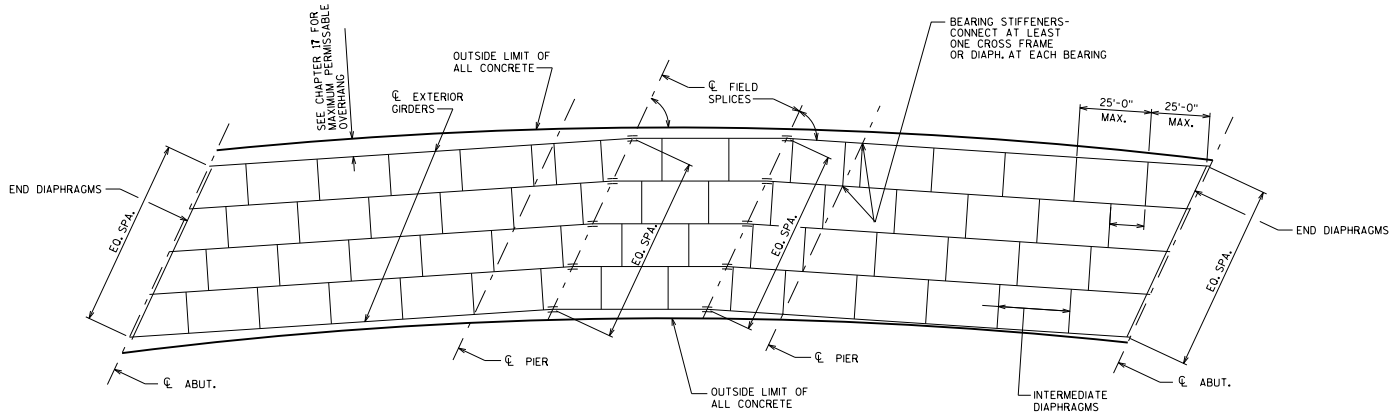
APPROVED: Bill Oliva

DATE: 1-12

STANDARD 24.09



CURVED GIRDER LAYOUT



KINKED GIRDER LAYOUT

GENERAL NOTES

SKETCHES AND NOTES APPLY TO ANY NUMBER OF SPANS.

NUMBER AND SIZE OF GIRDERS AND LOCATION OF FIELD SPLICES TO BE DETERMINED BY DESIGN.

FOR HORIZONTAL CURVES WITH A RADIUS OF LESS THAN 1400 FT., THE GIRDERS SHALL BE FABRICATED ALONG THE CURVE. FOR A RADIUS GREATER THAN 1400 FT., CONSIDERATION SHALL BE GIVEN TO KINKING GIRDERS AT FIELD SPLICE LOCATIONS.

FOR KINKED GIRDER LAYOUT:
HOLD ℄ OF SUBSTRUCTURE UNITS AND ℄ OF SPLICES PARALLEL TO EACH OTHER WHEN POSSIBLE.

GIRDERS ARE TO BE HELD PARALLEL TO EACH OTHER BETWEEN FIELD SPLICES.

FOR CURVED GIRDER LAYOUT:
PLACE SUBSTRUCTURE UNITS ON RADIAL LINES WHEN POSSIBLE.

*TIGHTER SPACING MAY BE REQ'D. FOR MORE SEVERE CURVATURES

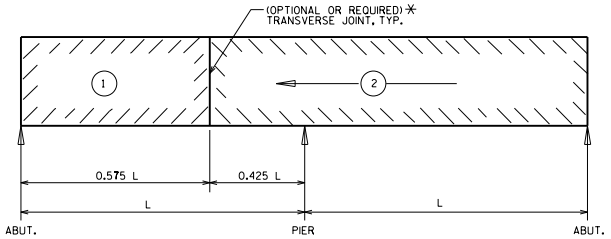
GIRDER LAYOUT ON CURVE

BUREAU OF STRUCTURES

APPROVED: Scot Becker

DATE: 7-10

STANDARD 24.10



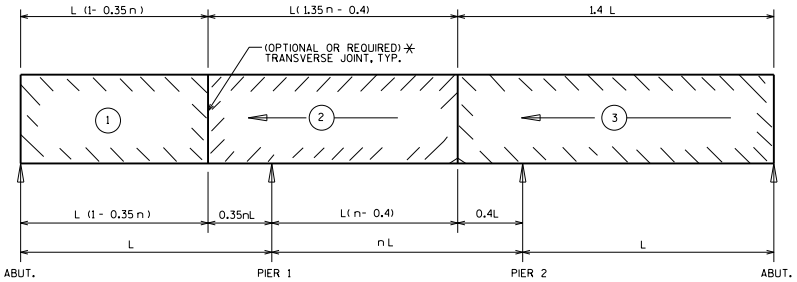
IDEAL DECK POUR SEQUENCE

(CONTINOUS STEEL GIRDER - 2 SPANS SHOWN)

S = TOTAL NUMBER OF SPANS

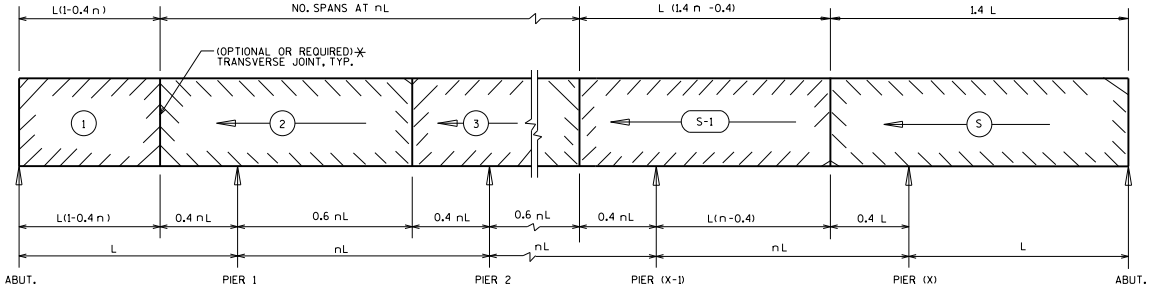
L = LENGTH OF END SPAN

$n = \frac{\text{INTERIOR SPAN}}{\text{END SPAN}}$



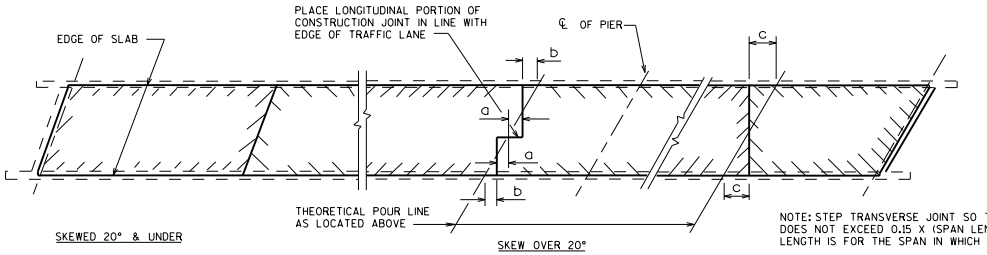
IDEAL DECK POUR SEQUENCE

(CONTINOUS STEEL GIRDER - 3 SPANS SHOWN)



IDEAL DECK POUR SEQUENCE

(CONTINOUS STEEL GIRDER - ANY NUMBER OF SPANS SHOWN)



PLAN VIEW - SHOWING PLACEMENT OF TRANSVERSE CONSTRUCTION JOINTS

NOTES

THE RATE OF PLACING CONCRETE SHALL EQUAL OR EXCEED ½ SPAN LENGTH PER HOUR BUT NEED NOT EXCEED 100 CU. YDS. PER HOUR. (REQUIRED ONLY FOR CONTINUOUS STEEL GIRDERS.)

IF OPTIONAL JOINTS ARE PROVIDED, TWO OR MORE SEQUENTIAL POURS MAY BE COMBINED AND PLACED IN ONE CONTINUOUS OPERATION. TWO OR MORE ALTERNATE DECK POURS (E.G. 1 & 3) MAY BE PLACED ON THE SAME DAY.

THE NEXT DECK POUR CAN BE MADE NO LESS THAN 72 HOURS AFTER THE PREVIOUS POUR.

THE CONTRACTOR MAY SUBMIT AN ALTERNATE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION.
(NOTE: APPLICABLE WHEN OPTIONAL TRANSVERSE CONTRUCTION JOINTS ARE SHOWN)

THE CONTRACTOR SHALL POUR THE ENTIRE DECK PER THE DECK POUR SEQUENCE IF REQUIRED TRANSVERSE CONSTRUCTION JOINTS ARE SHOWN ON THE PLANS. THE CONTRACTOR MAY SUBMIT AN ALTERNATE POURING SEQUENCE SUBJECT TO THE APPROVAL OF THE STRUCTURES DESIGN SECTION.
(NOTE: REQUIRED WHEN REQUIRED TRANSVERSE CONTRUCTION JOINTS ARE SHOWN)

DESIGNER NOTES

✳ THE DESIGNER SHALL DETERMINE IF TRANSVERSE JOINTS ARE OPTIONAL OR REQUIRED.

OPTIONAL TRANSVERSE CONSTRUCTION JOINTS SHALL BE DETAILED ON THE PLANS TO LIMIT THE VOLUME OF POUR TO < 600 CU. YDS. IN URBAN AREAS AND < 300 CU. YDS. IN OTHER AREAS. GENERALLY FOR STEEL GIRDER SUPERSTRUCTURES LOCATE THE TRANSVERSE JOINTS AT THE 0.6 POINT (CONCRETE IN 60% OF SPAN) AND FOR PRESTRESS GIRDER SUPERSTRUCTURES LOCATE JOINTS NEAR THE 0.75 POINT. (CONCRETE IN 75% OF SPAN) CONSIDER CUT-OFF POINTS OF CONTINUITY REINFORCING STEEL WHEN LOCATING JOINTS FOR PRESTRESS GIRDER SUPERSTRUCTURES. LOCATION OF JOINTS IN STEEL GIRDER SUPERSTRUCTURES MAY VARY IF DEFLECTIONS ARE INFLUENCED BY IN SPAN HINGES OR UNUSUAL SPAN LENGTH RATIOS. CHECK WITH THE STRUCTURES DEVELOPMENT SECTION FOR ADDITIONAL INFORMATION.

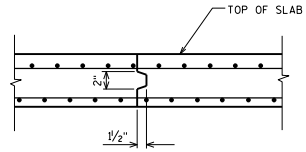
REQUIRED TRANSVERSE CONSTRUCTION JOINTS SHALL BE DETAILED ON THE PLANS ONLY WHEN REQUIRED BY DESIGN. SEQUENTAIL STAGES ARE DISCUSSED IN SECTION 24.12.2. ALL PLACEMENT REQUIREMENTS SHALL BE NOTED ON THE PLANS.

DETAIL TRANSVERSE CONSTRUCTION JOINTS 5'-0" FROM ℄ OF IN SPAN HINGES. (ONE ON EACH SIDE OF HINGE) THE CONCRETE BETWEEN THESE JOINTS SHOULD BE THE LAST POUR PLACED.

WHEN THE WIDTH OF THE DECK IS GREATER THAN 120 FEET, A LONGITUDINAL CONSTRUCTION JOINT SHALL BE DETAILED. FOR DECK WIDTHS BETWEEN 90 AND 120 FEET, AND OPTIONAL LONGITUDINAL JOINT SHALL BE DETAILED. LOCATE LONGITUDINAL CONSTRUCTION JOINT ALONG EDGE OF LANE LINE AND AT LEAST 6 INCHES FROM EDGE OF TOP FLANGE OF GIRDER.

FOR GRADES OVER 3% THE PREFERRED DIRECTION OF POUR IS UPHILL.

AN ALTERNATE POURING SEQUENCE IS TO POUR THE DL POSITIVE MOMENT AREAS AND THEN THE DL NEGATIVE MOMENT AREAS. THE SEQUENCE MAY BE STARTED ANYWHERE ON THE BRIDGE.



SECTION THRU TRANSVERSE
OR LONGITUDINAL JOINT

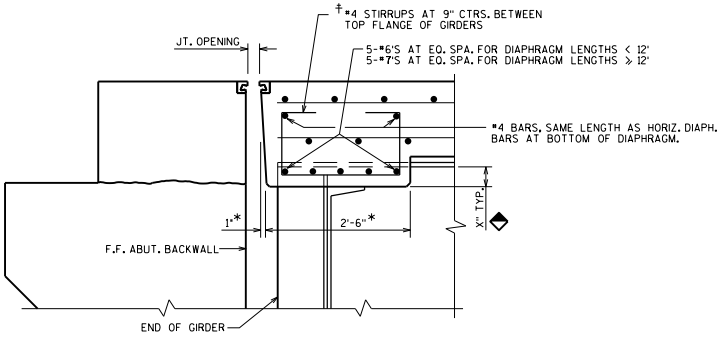
SLAB POURING SEQUENCE

BUREAU OF STRUCTURES

APPROVED: Bill Oliva

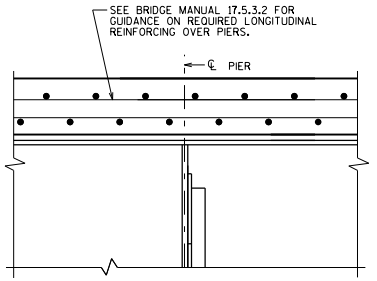
DATE: 7-19

STANDARD 24.11

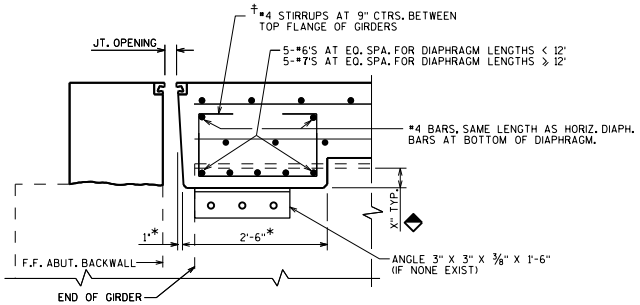


SECTION THRU EXPANSION END

DIAPHRAGM TO EXTEND TO GIRDER WEB
(SEE PART TRANSVERSE SECTION AT DIAPHRAGM EXPANSION END FOR TYPICAL EXTENTS)

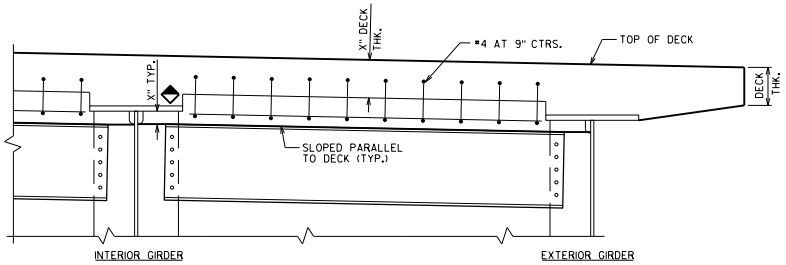


SECTION AT PIER



SECTION THRU EXPANSION END OF NEW DECK SHOWING EXISTING STEEL GIRDER WITHOUT EXISTING STEEL DIAPHRAGM

(SEE STD. 40.04 FOR ADDITIONAL DETAILS)



PART TRANSVERSE SECTION AT DIAPHRAGM EXPANSION END

NOTES

FOR REHABILITATION PROJECTS:

DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36. BOLTS ARE ¾" DIA. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL SUPPORT ANGLES SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

ALL DIAPHRAGM SUPPORT HARDWARE SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

ALL REPLACEMENT PAVING BLOCK DIMENSIONS SHALL MATCH EXISTING PLAN DIMENSIONS UNLESS DESIGNER DETERMINES OTHERWISE.

DESIGNER NOTE

◆ 3" MINIMUM. USE 3" UNLESS INCREASED TO ACCOMMODATE LARGE EXPANSION DEVICES.

LEGEND

† BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ GIRDERS.

* DIMENSION IS TAKEN NORMAL TO ℄ ABUTMENT

STEEL GIRDER SLAB & SUPERSTRUCTURE DETAILS

BUREAU OF STRUCTURES

APPROVED: Bill Oliva

DATE: 1-18

STANDARD 24.12