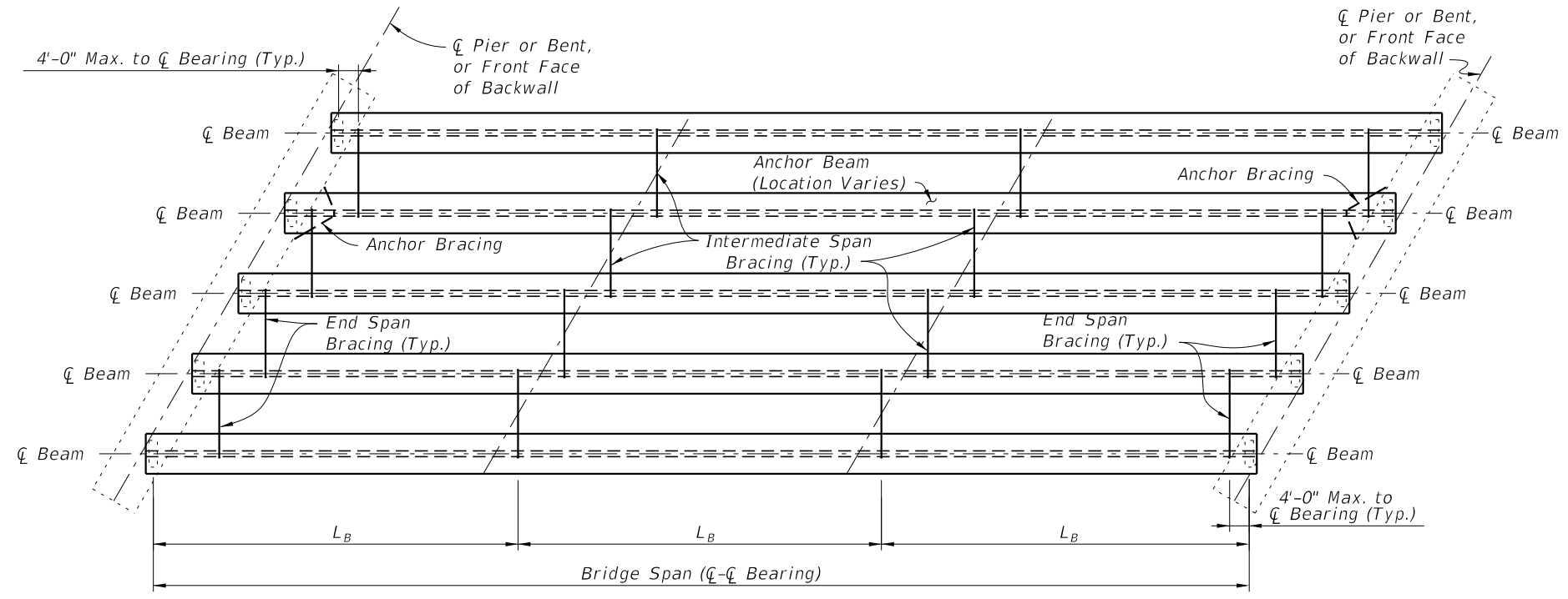
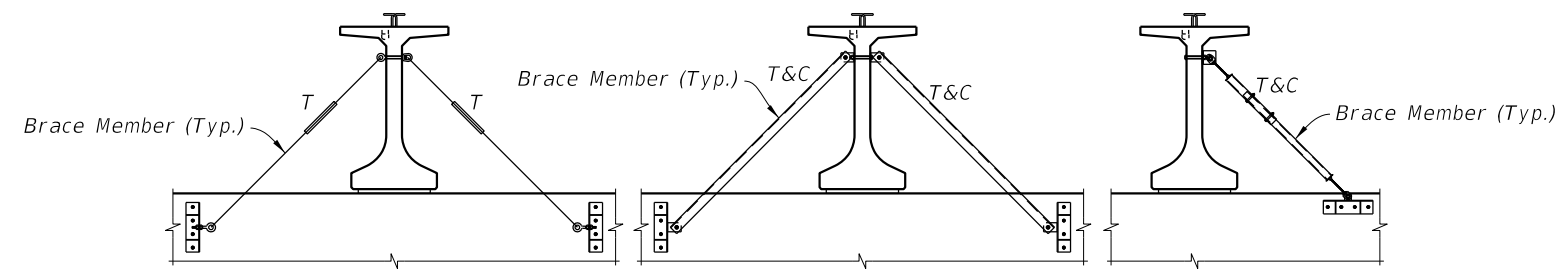


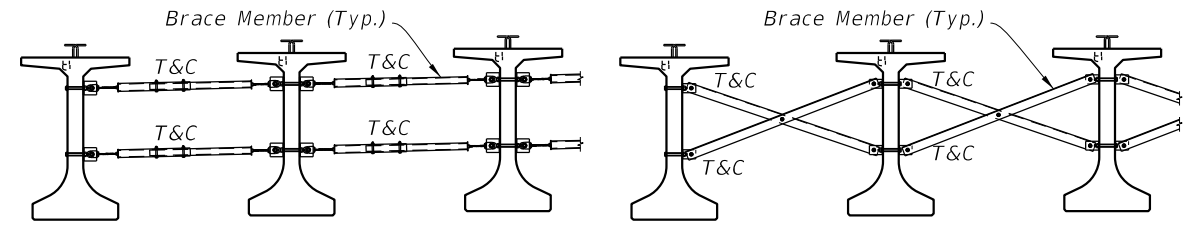
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PRESTRESSED BEAM TEMPORARY BRACING PLAN VIEW
(Skewed Condition Shown, Non-skewed Condition Similar)



EXAMPLE ANCHOR BRACING TYPICAL SECTIONS
(Beam Ends Only)



EXAMPLE END SPAN/INTERMEDIATE BRACING TYPICAL SECTIONS

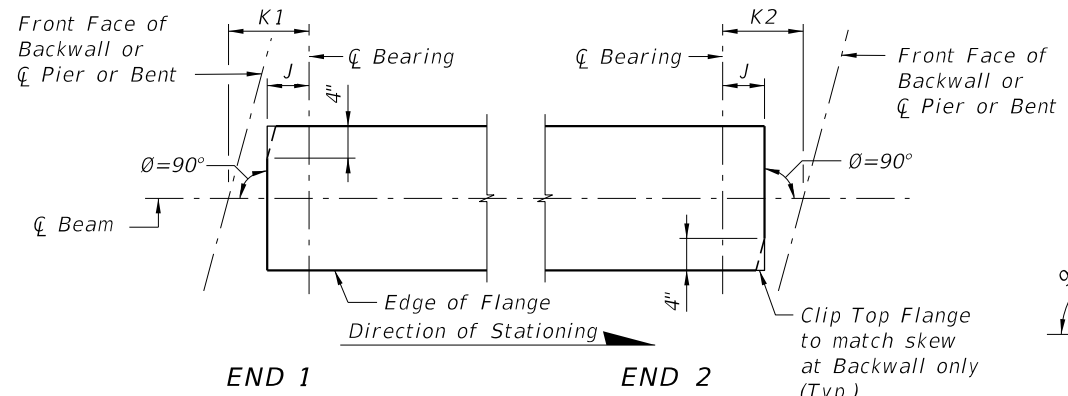
LEGEND:
 T = Tension Member
 T&C = Tension & Compression Member

NOTES:

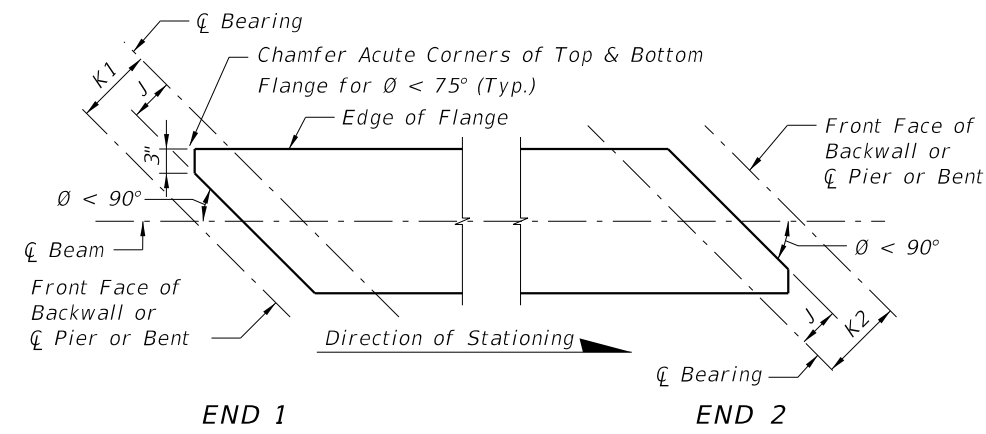
1. The 'PRESTRESSED BEAM TEMPORARY BRACING PLAN' is to be used in conjunction with the 'TABLE OF TEMPORARY BRACING VARIABLES' in the Structures Plans. The brace locations and quantities shown in the plan view are schematic only, and the actual brace locations and quantities should be determined from the 'TABLE OF TEMPORARY BRACING VARIABLES' in the Structures Plans.
2. The bracing members shown in the sections are schematic only, and are meant to show geometry in which bracing should be placed. The bracing members and connections shall be designed and detailed by the Contractor. Any of the geometric configurations shown in the bracing sections are acceptable. The bracing may be attached through the web or to the flanges of the beam, as necessary. The bracing shall be positively and securely connected to each beam, and shall not be designed to exert any vertical force on the outer edge of the top flange. All bolt holes in beams are to be preformed and filled after use. All bracing is to be placed perpendicular to beams.
3. The anchor beam is a beam which has anchor bracing at its support locations. It is to be set first, and its location may vary. All subsequent beams are to be braced against the Anchor Beam sequentially. The Anchor brace may be located at an exterior girder provided that all required bolt clear distances are met and overhang bracing is not impacted. Anchor bracing may be inclined, as shown in the plan view, or may be installed vertically.
4. Overhang bracing requirements are neither specified here nor in the 'TABLE OF TEMPORARY BRACING VARIABLES.' It is the Contractor's responsibility to design overhang bracing which does not cause excessive deflection or rotation of the exterior girder, or cause the girder stresses to exceed stress limits per the FDOT Structures Manual.
5. The Contractor shall submit documentation required by the Specifications for Road and Bridge Construction, Section 5 for 'Beam and Girder Temporary Bracing.' If the Contractor elects to use the bracing requirements shown in the 'TABLE OF TEMPORARY BRACING VARIABLES,' the documentation shall include signed and sealed certification that the construction loads do not exceed those shown in the 'TABLE OF ASSUMED CONSTRUCTION LOADS' and signed and sealed design of bracing members and connections. If the Contractor elects to use a bracing scheme different from those shown in the 'TABLE OF TEMPORARY BRACING VARIABLES,' the documentation shall include signed and sealed calculation of the bracing requirements and design of bracing members and connections.

LAST REVISION	01/01/12	DESCRIPTION:	FDOT DESIGN STANDARDS FY 2012/2013	PRESTRESSED I-BEAM TEMPORARY BRACING	INDEX NO.	SHEET NO.
					20005	1

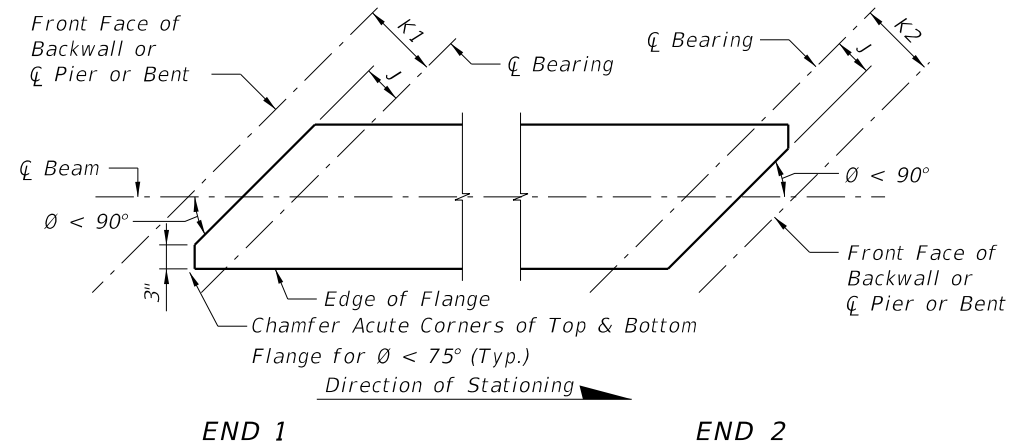
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CASE 1
(Standard Orientation for New Construction)

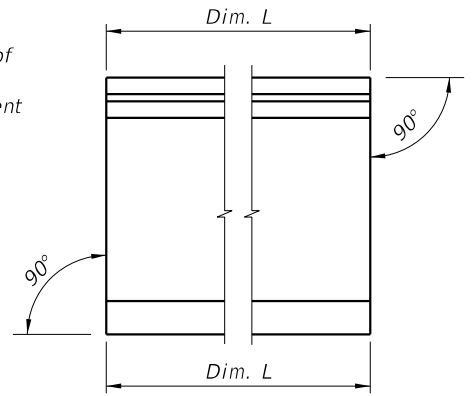


CASE 2
(Special Orientation for Widening)

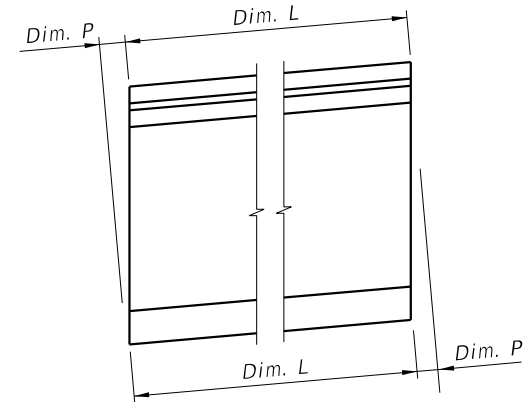


CASE 3
(Special Orientation for Widening)

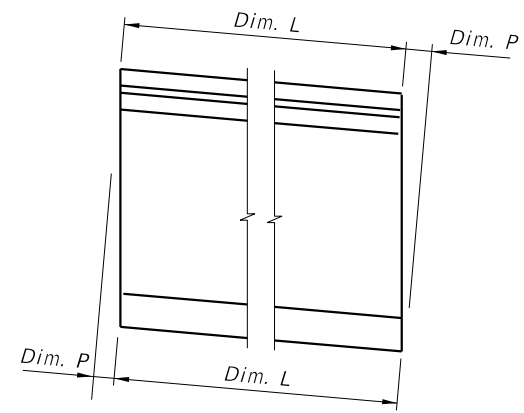
SCHEMATIC PLAN VIEWS AT BEAM ENDS



CONDITION 1
(Dim P = 0.0)



CONDITION 2



CONDITION 3

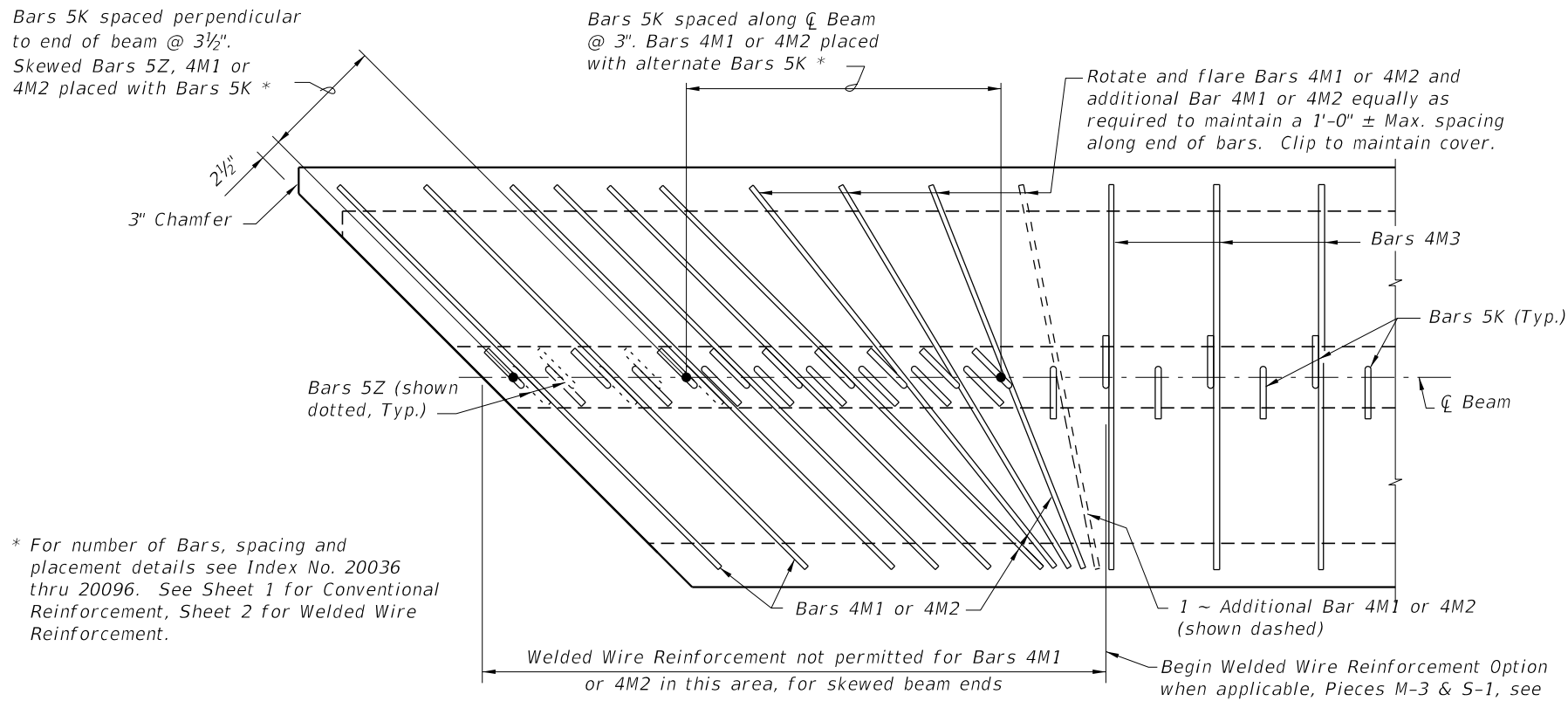
SCHEMATIC END ELEVATIONS OF BEAMS
(Showing Vertical Bevel of Beam End)

BEAM NOTES

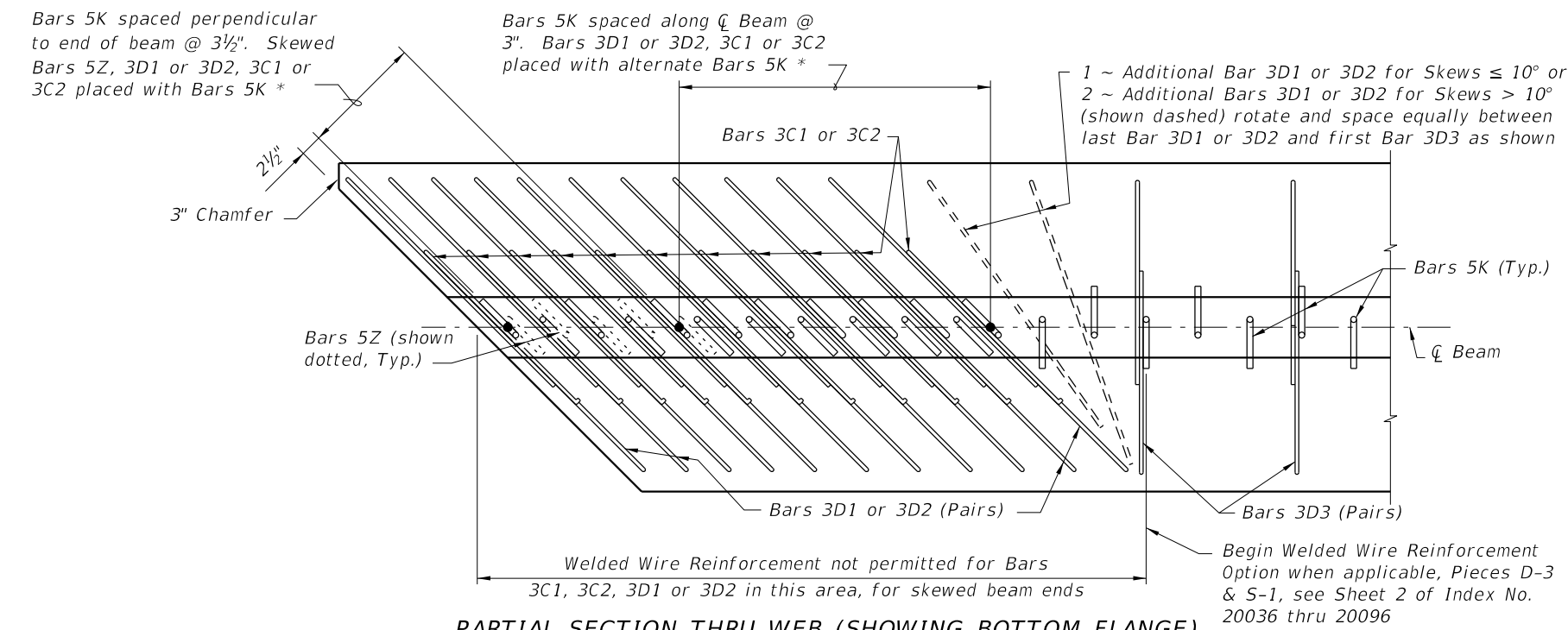
- All bar dimensions are out-to-out.
- Place one (1) Bar 5K or 5Z at each location as detailed alternating the direction of the ends for each bar (see "ELEVATION AT END OF BEAM", Index Nos. 20036, 20045, 20054, 20063, 20072, 20078, 20084 and 20096).
- Strands N shall be ASTM A416, Grade 270, seven-wire strands 3/8" Ø or larger, stressed to 10,000 lbs. each.
- Cut wedge to recess Prestressing Strands at the end of the beam after detensioning without damaging the surrounding concrete. See STRAND RECESS DETAIL on Sheet 2.
- Epoxy coat ends of beams, including clipped and chamfer surfaces, with two layers of Type F-1 epoxy compound within 7 days of detensioning. Prepare concrete surface and apply in accordance with the manufacturer's recommendations. The finish thickness of the epoxy coating must be a minimum 1/16".
- Unless otherwise noted, the minimum concrete cover for reinforcing steel shall be 2".
- At the Contractor's option, welded deformed wire reinforcement may be used in lieu of Bars 3D, 5K, 4M, and 5Z as shown on the Standard Details for each beam size. Welded deformed wire reinforcement shall conform to AASHTO M221, with a minimum yield strength of 75 ksi.
- Safety Sleeves or other Safety Line Anchorage Devices are permitted in the top flange. One Safety Sleeve alternative is provided herein as 2 1/2" NPS x 5" Sch. 40 PVC Pipe with Cap installed 2'-0" from ends of beams and spaced on 8'-0" (Max.) centers. Holes shall be free of debris and water prior to casting deck.
- For beams with skewed end conditions, the end reinforcement, defined as Bars 3C1, 3C2, 3D1, 3D2, 5K, 4M1, 4M2, 5Y and 5Z placed within the limits of the spacing for Bars 3C in "ELEVATION AT END OF BEAM", shall be placed parallel to the skewed end of the beam. Bars 3D3, 5K and 4M3 located beyond the limits of Bars 3C shall be placed perpendicular to the longitudinal axis of the beam. Fan Bars as needed to avoid overlapping bars at the transition to Bars 3D3 and 4M3, and field cut to maintain minimum cover. Provide additional Bars 4M1, 4M2, 3D1 and 3D2 as required; additional bars are not included in the Number Required on the "BILL OF REINFORCING STEEL". For placement locations, see "SKEWED BEAM END DETAILS". Adjust the dimensions of Bars 3C1, 3C2, 3D1, 3D2, 4M1 and 4M2 as shown on the "BENDING DIAGRAM" for skewed end conditions.
- Placement of Bars 3C1, 3D1 and 4M1 correspond to END 1, and Bars 3C2, 3D2 and 4M2 correspond to END 2. END 1 and END 2 are shown on the beam "ELEVATION".
- For Beams with vertically beveled end conditions, place first row of Bars 3C1, 3C2, 3D1, 3D2, 5K, 5Y and 5Z parallel to the end of the beam. Progressively rotate remaining bars within the limits of Bars 5Z until vertical by adjusting the spacing at the top of beam up to a maximum of 1". For welded deformed wire reinforcement, cut top cross wire and rotate bars as required or reduce end cover at top of the beam to minimum 1".
- For beams with skewed end conditions, welded deformed wire reinforcement shall not be used for end reinforcement (Bars 3D1, 3D2, 4M1 and 4M2).
- Bars 5K and 5Z shall be placed and tied to the fully bonded strands in the bottom or center row (see "STRAND PATTERN" on the Table of Beam Variables in Structures Plans). At the Contractor's option the length of the bottom legs of Bars 5K and 5Z may be extended to facilitate tying to the exterior strands. For welded deformed wire reinforcement, supplemental transverse #4 bars are permitted to support Pieces K & S under the cross wires on the bottom row of strands.
- At the Contractor's option, Bars 3D1, 3D2 and 3D3 may be fabricated as a single bar with a 1'-0" minimum lap splice of the top legs, or the length of the bottom legs may be extended to facilitate tying to the exterior strands.
- For referenced Dimensions, Angles and Case Numbers, see the Table of Beam Variables in Structures Plans.

LAST REVISION	REVISION	DESCRIPTION:		FDOT DESIGN STANDARDS FY 2012/2013	TYPICAL FLORIDA-I BEAM DETAILS AND NOTES	INDEX NO.	SHEET NO.
01/01/12						20010	1

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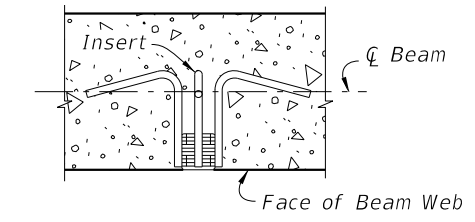


PARTIAL PLAN VIEW (SHOWING TOP FLANGE)
 (End 1 Shown, End 2 Similar)
 (Bars 5A, 4L, 5Y & Strands N not shown for clarity)



PARTIAL SECTION THRU WEB (SHOWING BOTTOM FLANGE)
 (End 1 Shown, End 2 Similar)
 (Bars 4L, Bars 5Y & Strands not shown for clarity)

SKewed BEAM END DETAILS FOR WIDENING EXISTING BRIDGES
 (Florida-I 36 Beam shown, others similar)

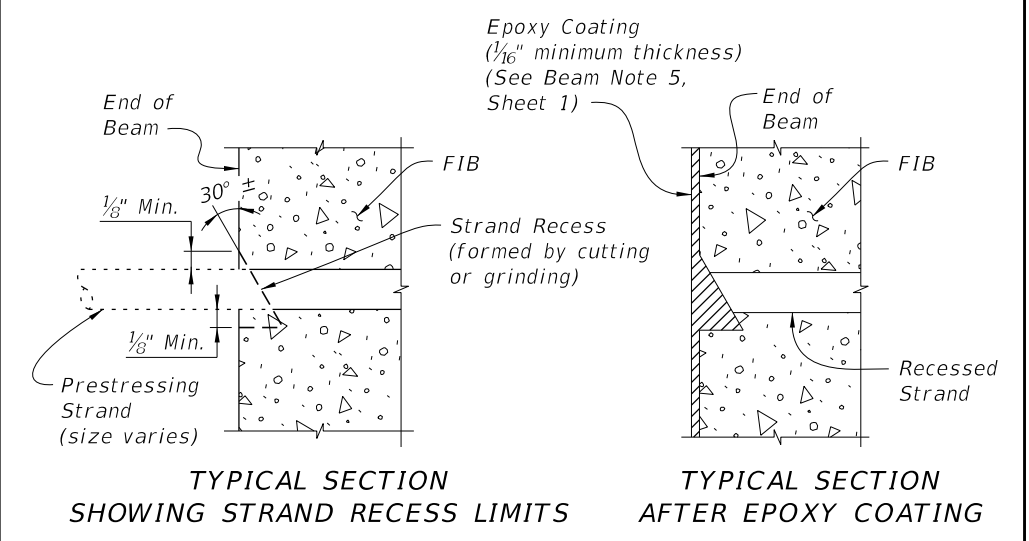


PLAN SECTION THRU BEAM WEB AT INSERT FOR DIAPHRAGM REINFORCING
 (When Intermediate Diaphragms are Required by Design)

INSERT NOTES


1. Provide 1" \varnothing , zinc-electroplated, ferrule wing nut or coil inserts, UNC threads, 1/0 minimum gage wire, not more than 4" in depth with a minimum ultimate tensile strength of 11,400 lbs. in 4,000 psi concrete.
2. If inserts are needed on both sides (faces) of beam webs, an assembly as long as the thickness of the beam web, consisting of two (2) ferrule or coil inserts attached by two (2) or more struts may be utilized. The connecting struts shall have a minimum ultimate tensile strength of 11,400 lbs.
3. Inserts for diaphragm reinforcing are required at each end of each intermediate diaphragm shown on the Beam Framing Plan and may be required at the end of the beams when end diaphragms are shown. See Superstructure and Beam Framing Plans for longitudinal location of inserts for each face of beam.

INSERT DETAIL

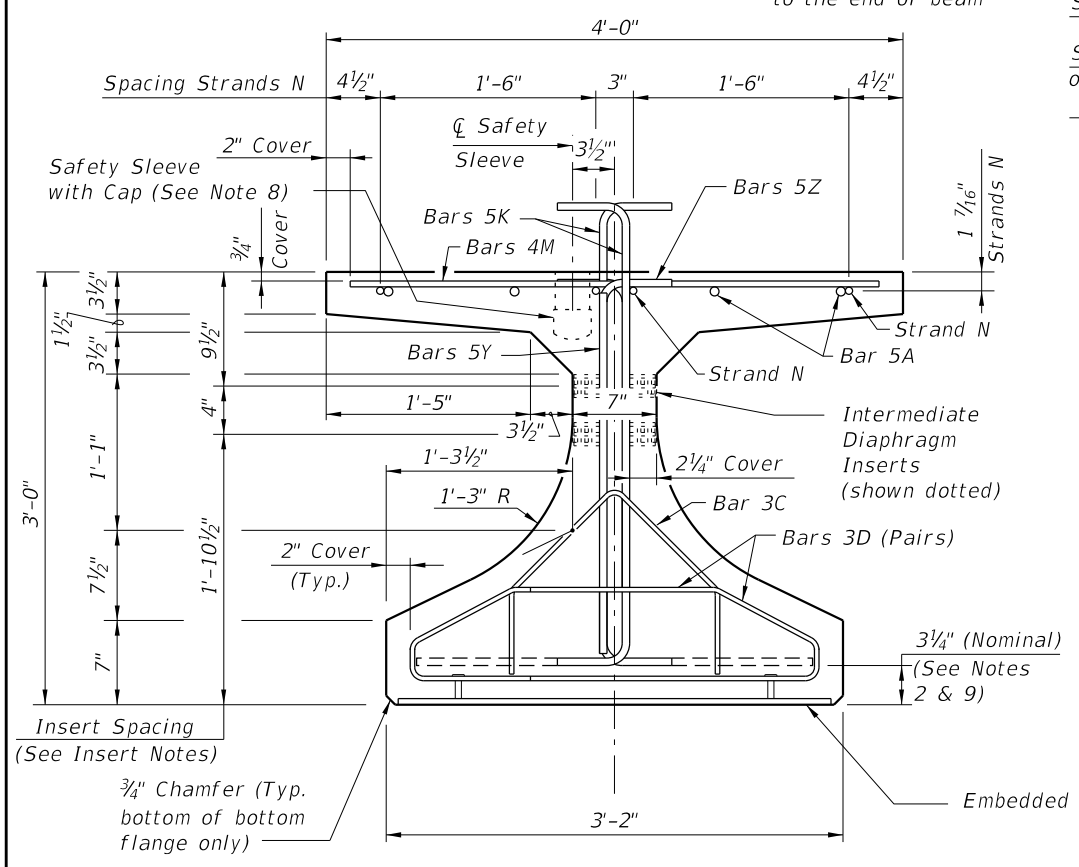


TYPICAL SECTION SHOWING STRAND RECESS LIMITS **TYPICAL SECTION AFTER EPOXY COATING**

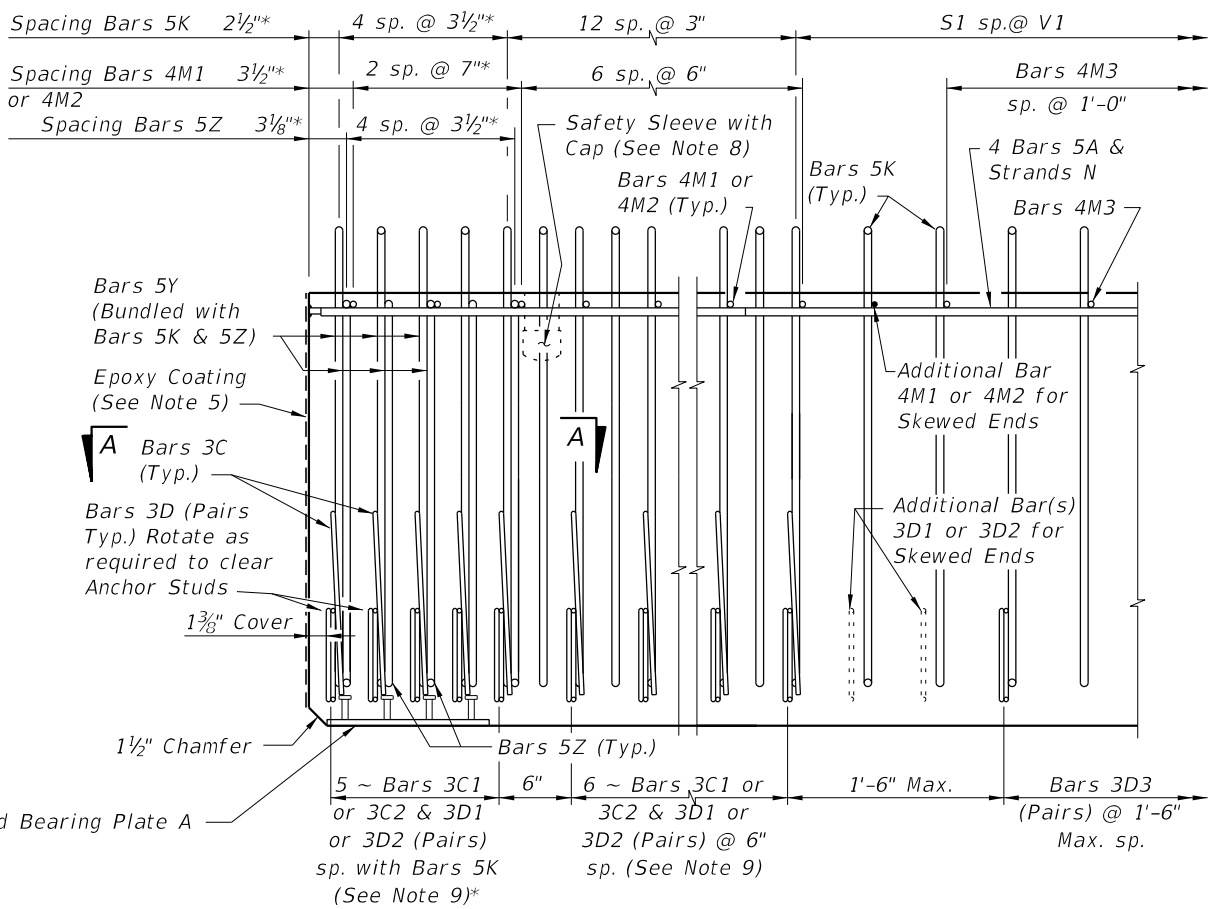
STRAND RECESS DETAIL

LAST REVISION	DESCRIPTION:	 FDOT DESIGN STANDARDS FY 2012/2013	TYPICAL FLORIDA-I BEAM DETAILS AND NOTES	INDEX NO.	SHEET NO.
01/01/12				20010	2

* These dimensions are measured perpendicular to the end of beam



END VIEW



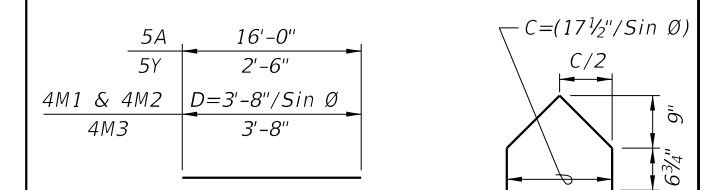
ELEVATION AT END OF BEAM
(Flanges Not Shown For Clarity)
(End 1 Shown, End 2 Similar)

CONVENTIONAL REINFORCING
BAR BENDING DETAILS

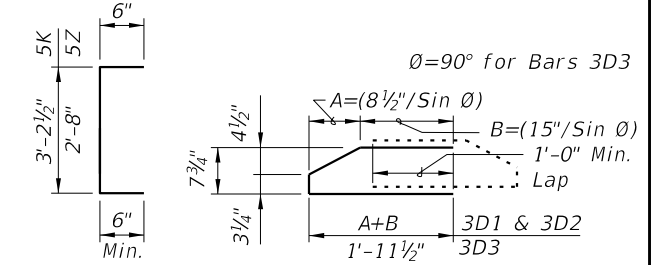
BILL OF REINFORCING STEEL

MARK	NOTE NUMBERS	SIZE	NUMBER REQUIRED	LENGTH (NOTE 1)
A	—	5	8	16'-0"
C1	9, 10 & 11	3	11 (End 1)	Varies
C2	9, 10 & 11	3	11 (End 2)	Varies
D1	9, 10, 11 & 14	3	22 (End 1)	Varies
D2	9, 10, 11 & 14	3	22 (End 2)	Varies
D3	9 & 14	3	See Table	4'-3"
K	2, 9, 11 & 13	5	See Table	4'-2"
M1	9 & 10	4	9 (End 1)	Varies
M2	9 & 10	4	9 (End 2)	Varies
M3	9	4	See Table	3'-8"
N	3 & 4	3/8" Ø Strand	4	Dim. L
Y	9 & 11	5	12	2'-6"
Z	2, 9, 11 & 13	5	10	3'-8"

BENDING DIAGRAMS (See Note 1)

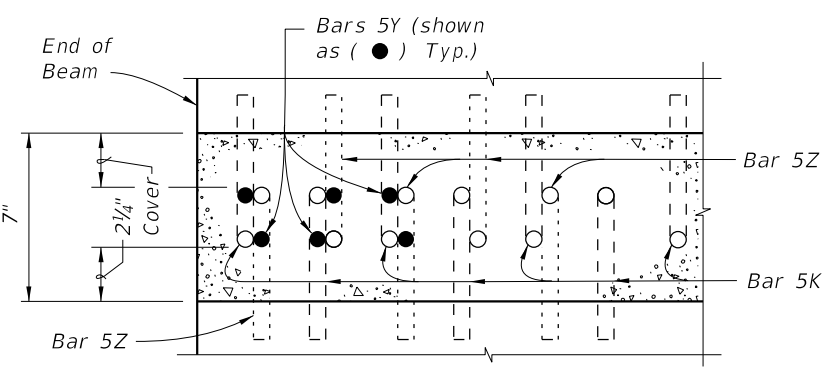


BARS 5A, 4M1, 4M2, BARS 3C1 & 3C2
4M3 & 5Y

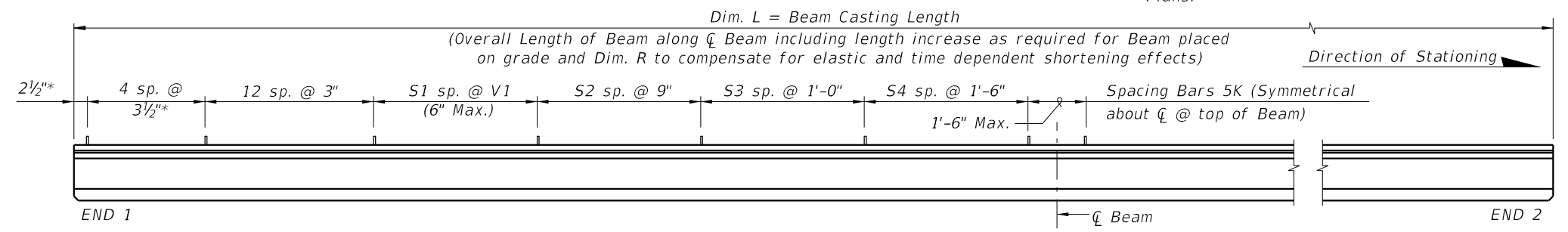


BARS 5K & 5Z BARS 3D1, 3D2 & 3D3

- NOTES:
- A. Work this Index with Index No. 20010 - Typical Florida-I Beam Details and Notes and the Florida-I Beam - Table of Beam Variables in Structures Plans.
 - B. For referenced notes, see Index No. 20010.
 - C. For Dimensions A, B, C, D, L, R & V1 and number of spaces S1 thru S4, see Florida-I Beam - Table of Beam Variables in Structures Plans.



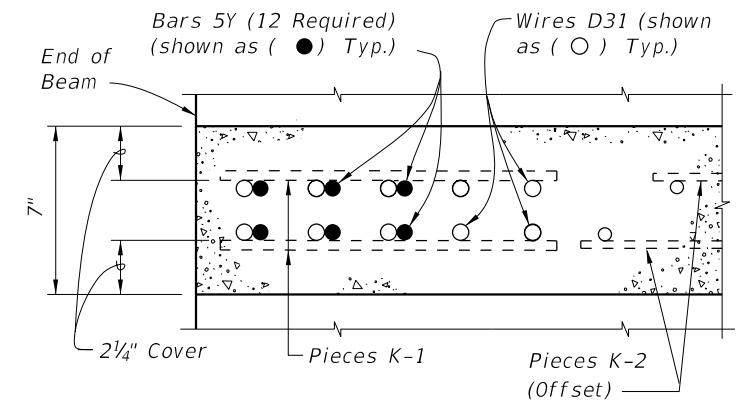
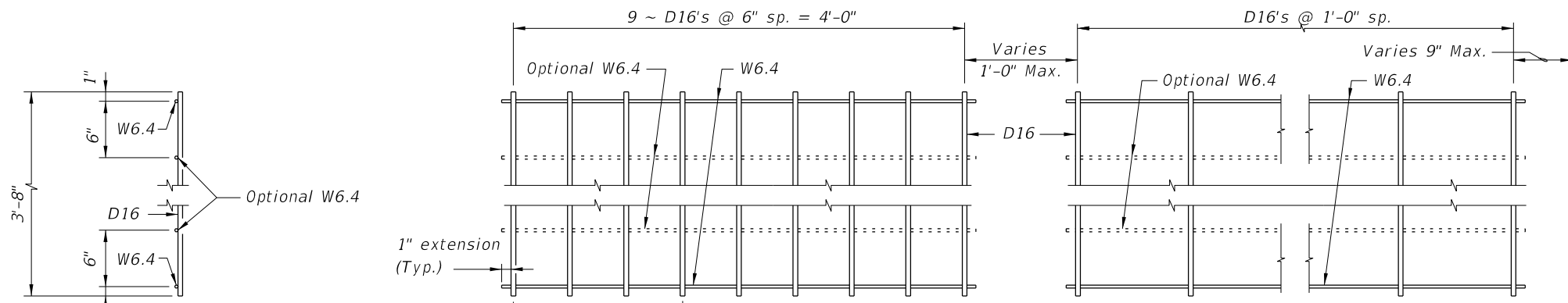
SECTION A-A FOR CONVENTIONAL REINFORCING
(Showing Bars 5K, 5Y & 5Z Only)



ELEVATION

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ALTERNATE REINFORCING STEEL (WELDED WIRE REINFORCEMENT) DETAILS

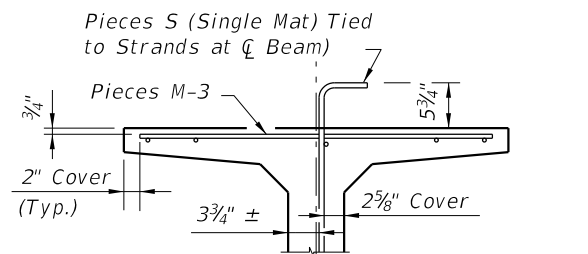
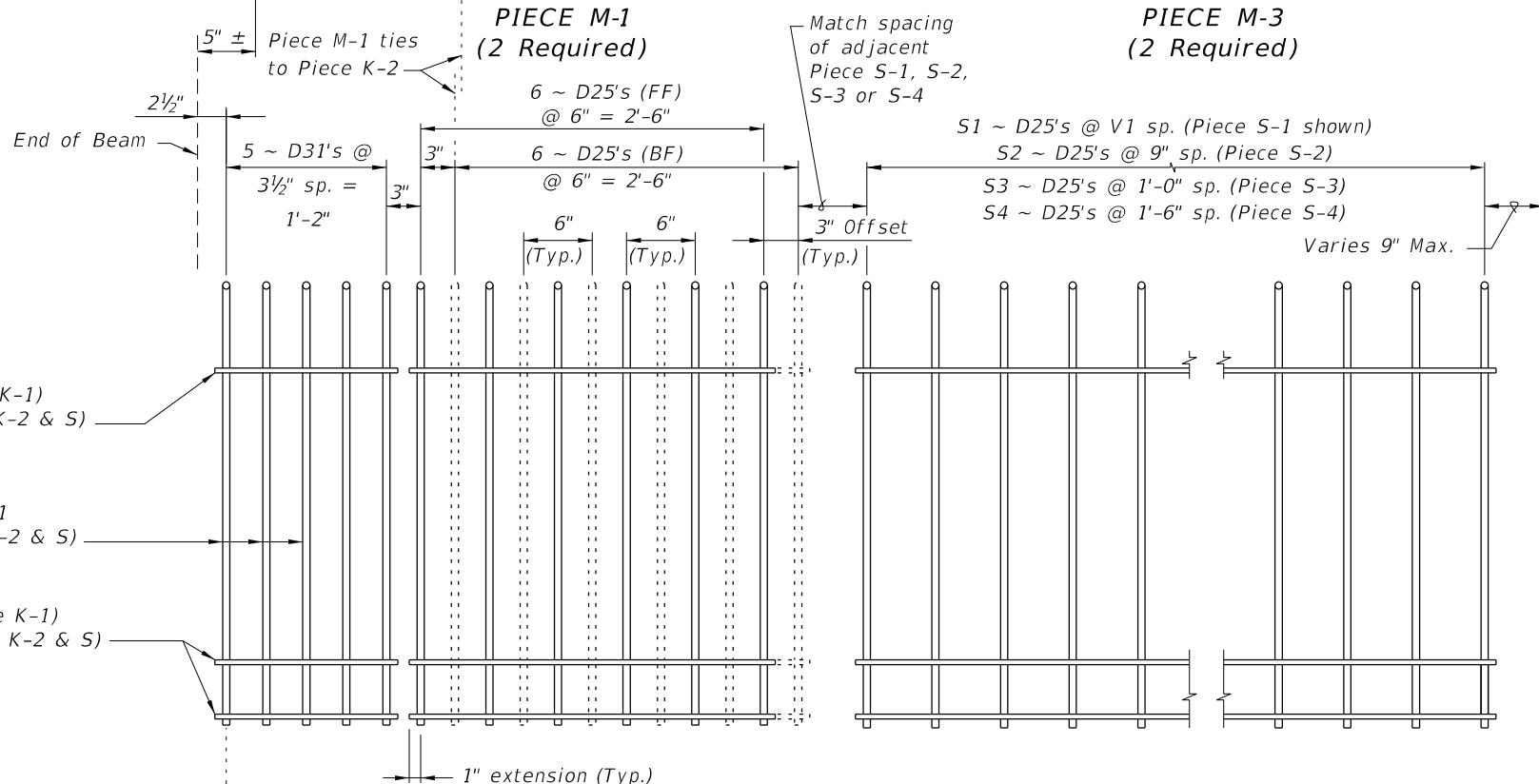


PIECES M END VIEW

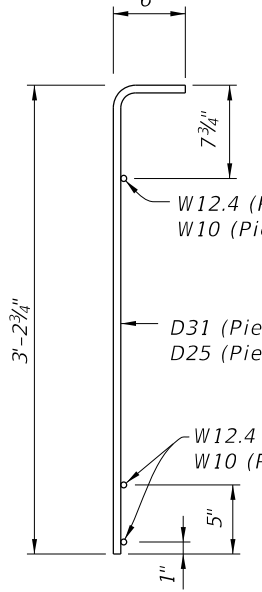
PLAN VIEW PIECE M-1 (2 Required)

PLAN VIEW PIECE M-3 (2 Required)

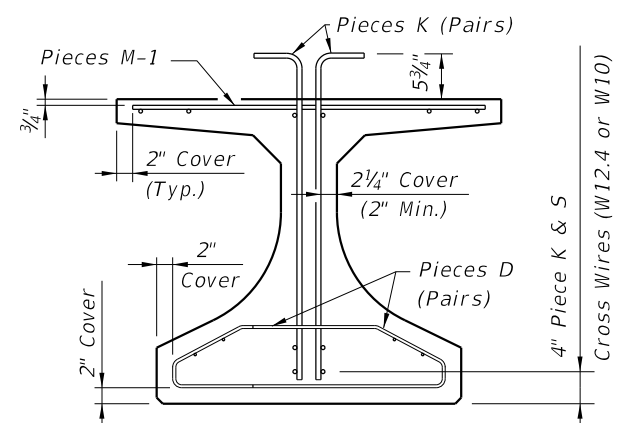
SECTION A-A FOR WELDED WIRE REINFORCEMENT



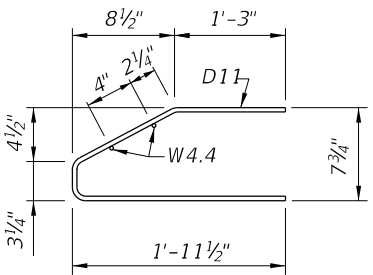
PARTIAL SECTION AT CENTER BEAM



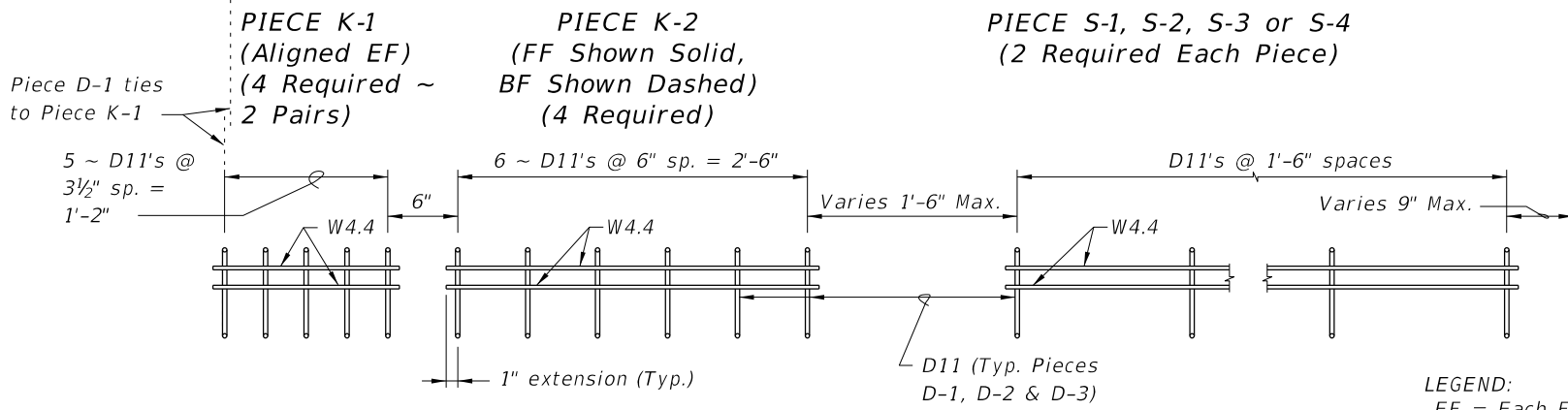
PIECES K & S END VIEW



PARTIAL BEAM END VIEW (Conventional Reinforcing Bars A, C, Y and Strands not Shown for Clarity)



PIECES D END VIEW



PIECE D-1 (4 Required ~ 2 Pairs)


PIECE D-2 (4 Required ~ 2 Pairs)

PIECE D-3 (4 Required ~ 2 Pairs)

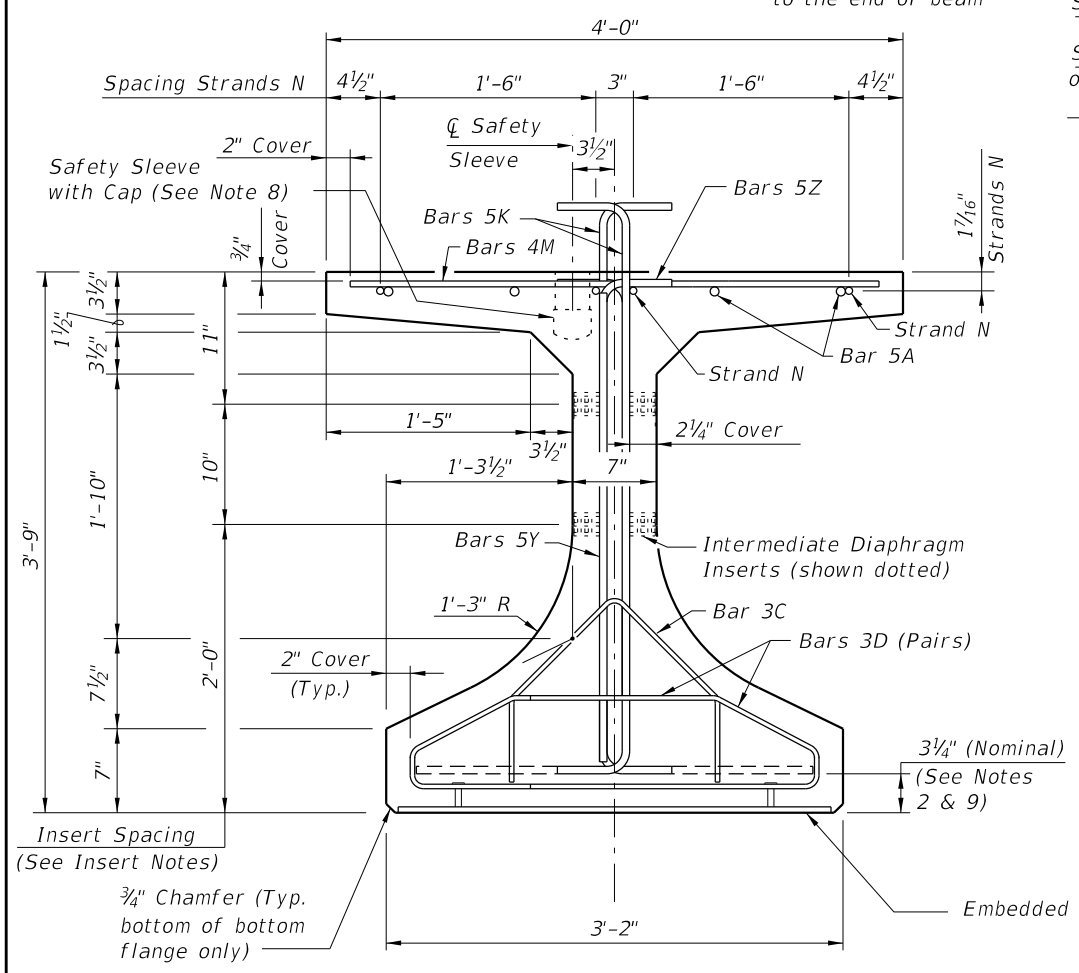
LEGEND:
EF = Each Face
FF = Front Face
BF = Back Face

- NOTES:
- See Sheet 1 for placement details & Table of Beam Variables in Structures Plans for variables S1, S2, S3, S4 & V1.
 - Place Conventional Reinforcement Bars 5A & 3C as shown on Sheet 1. Place additional Bars 5Y as shown in Section A-A for Welded Wire Reinforcement. Bars 5Z will not be used with the WWR Option.
 - Pieces may be fabricated in multiple length sections.
 - For beams with skewed end conditions, Pieces D-1, D-2 & M-1 shall not be used; Conventional Reinforcement Bars D1, D2, C1, C2, M1 & M2 shall be used. See Index No. 20010 Skew Details and Note 9 for placement details. Shift Pieces K & Bars 5Y to accommodate skewed end conditions and align with Bars C and D.

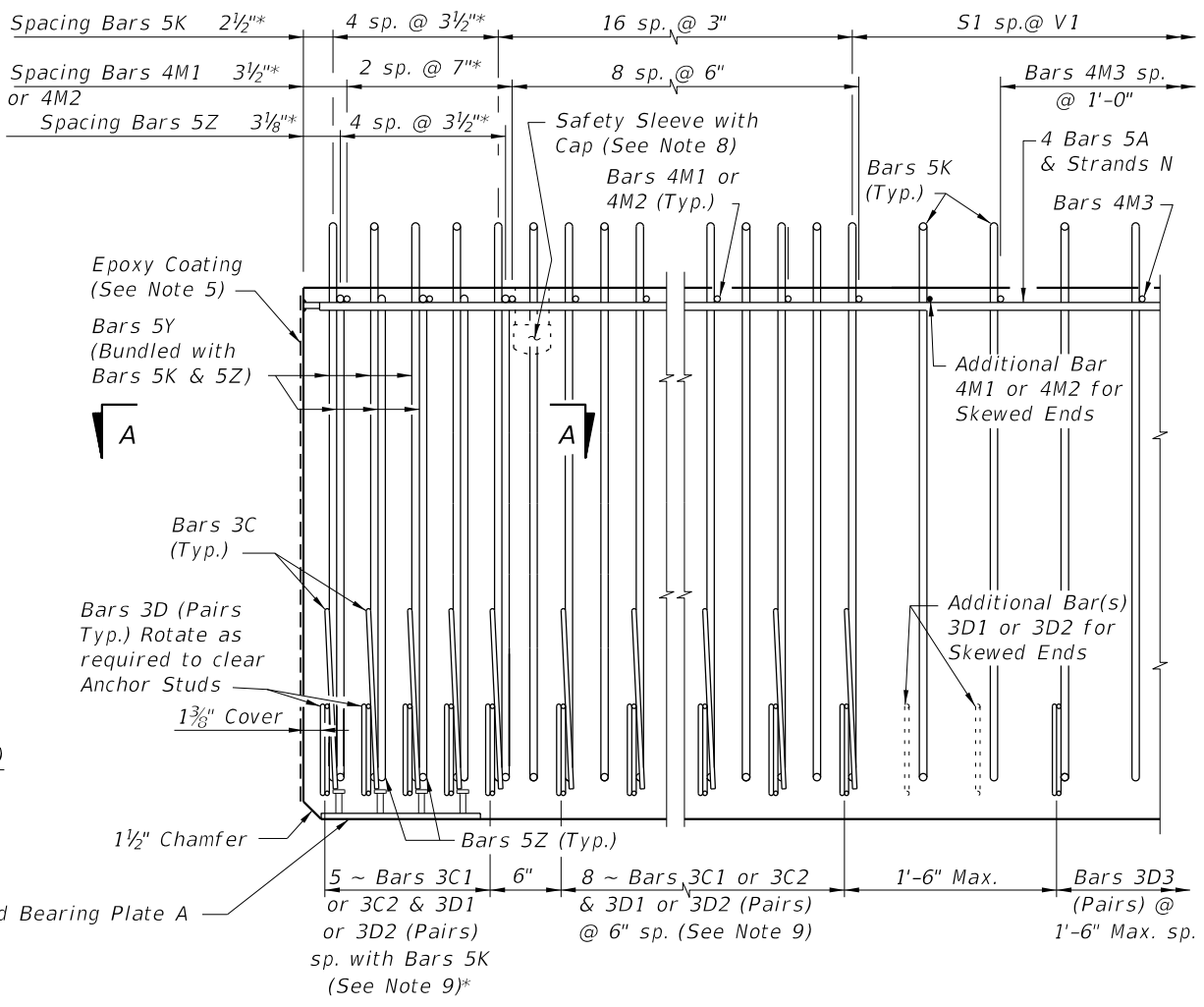
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LAST REVISION 07/01/10	DESCRIPTION:	 FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA-I 36 BEAM - STANDARD DETAILS		INDEX NO. 20036	SHEET NO. 2
REVISION						

* These dimensions are measured perpendicular to the end of beam



END VIEW



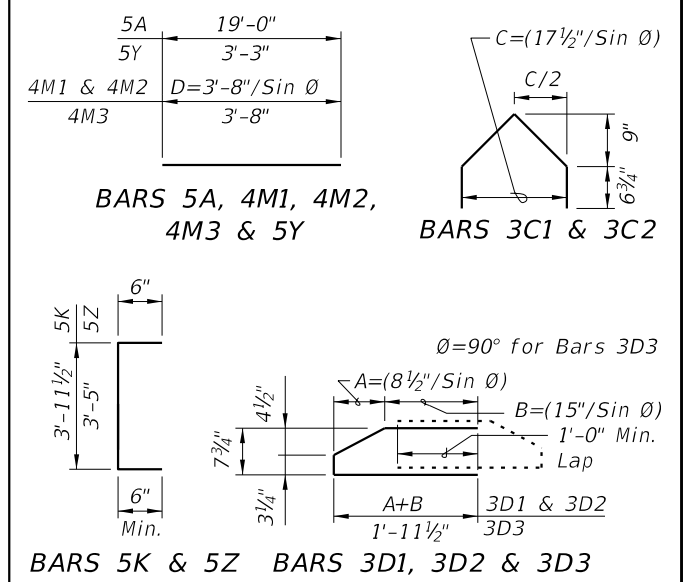
ELEVATION AT END OF BEAM
(Flanges Not Shown For Clarity)
(End 1 Shown, End 2 Similar)

CONVENTIONAL REINFORCING BAR BENDING DETAILS

BILL OF REINFORCING STEEL

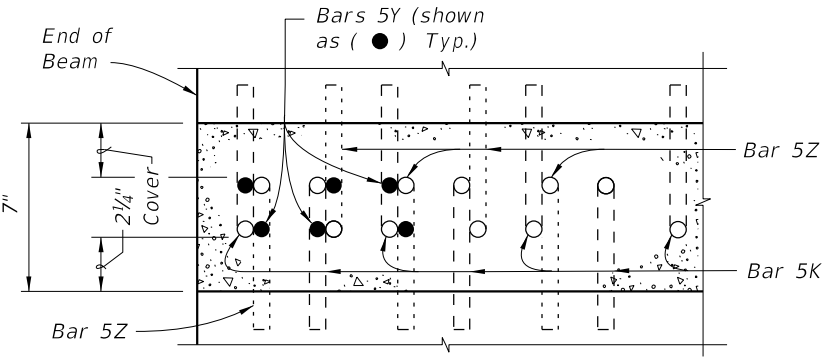
MARK	NOTE NUMBERS	SIZE	NUMBER REQUIRED	LENGTH (NOTE 1)
A	—	5	8	19'-0"
C1	9, 10 & 11	3	13 (End 1)	Varies
C2	9, 10 & 11	3	13 (End 2)	Varies
D1	9, 10, 11 & 14	3	26 (End 1)	Varies
D2	9, 10, 11 & 14	3	26 (End 2)	Varies
D3	9 & 14	3	See Table	4'-3"
K	2, 9, 11 & 13	5	See Table	4'-11"
M1	9 & 10	4	11 (End 1)	Varies
M2	9 & 10	4	11 (End 2)	Varies
M3	9	4	See Table	3'-8"
N	3 & 4	3/8" Ø Strand	4	Dim. L
Y	9 & 11	5	12	3'-3"
Z	2, 9, 11 & 13	5	10	4'-5"

BENDING DIAGRAMS (See Note 1)

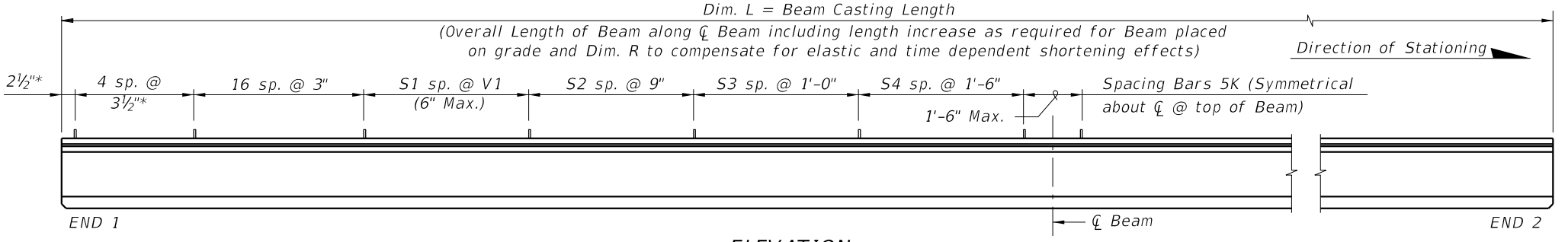


BARS 5K & 5Z BARS 3D1, 3D2 & 3D3

- NOTES:
- A. Work this Index with Index No. 20010 - Typical Florida-I Beam Details and Notes and the Florida-I Beam - Table of Beam Variables in Structures Plans.
 - B. For referenced notes, see Index No. 20010.
 - C. For Dimensions A, B, C, D, L, R & V1 and number of spaces S1 thru S4, see Florida-I Beam - Table of Beam Variables in Structures Plans.



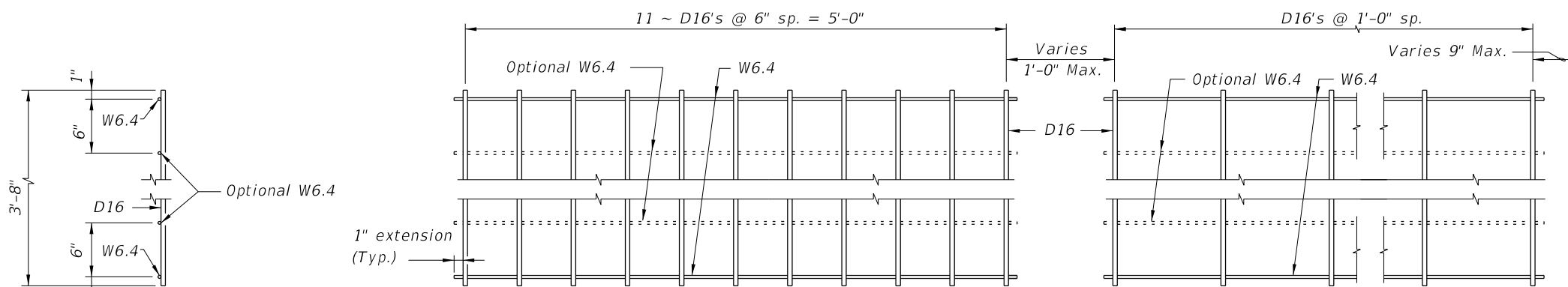
SECTION A-A FOR CONVENTIONAL REINFORCING
(Showing Bars 5K, 5Y & 5Z Only)



ELEVATION

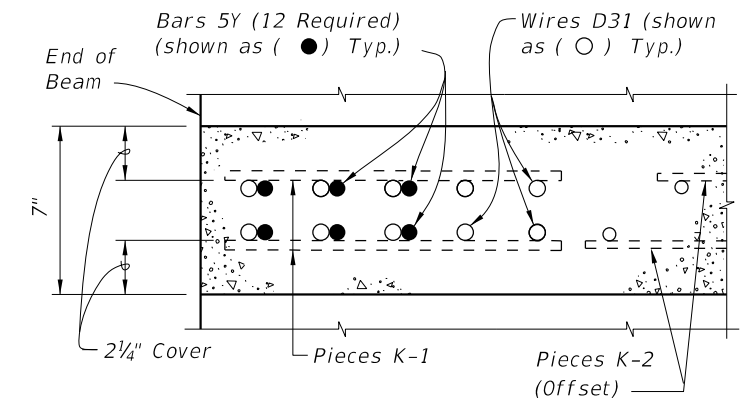
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ALTERNATE REINFORCING STEEL (WELDED WIRE REINFORCEMENT) DETAILS

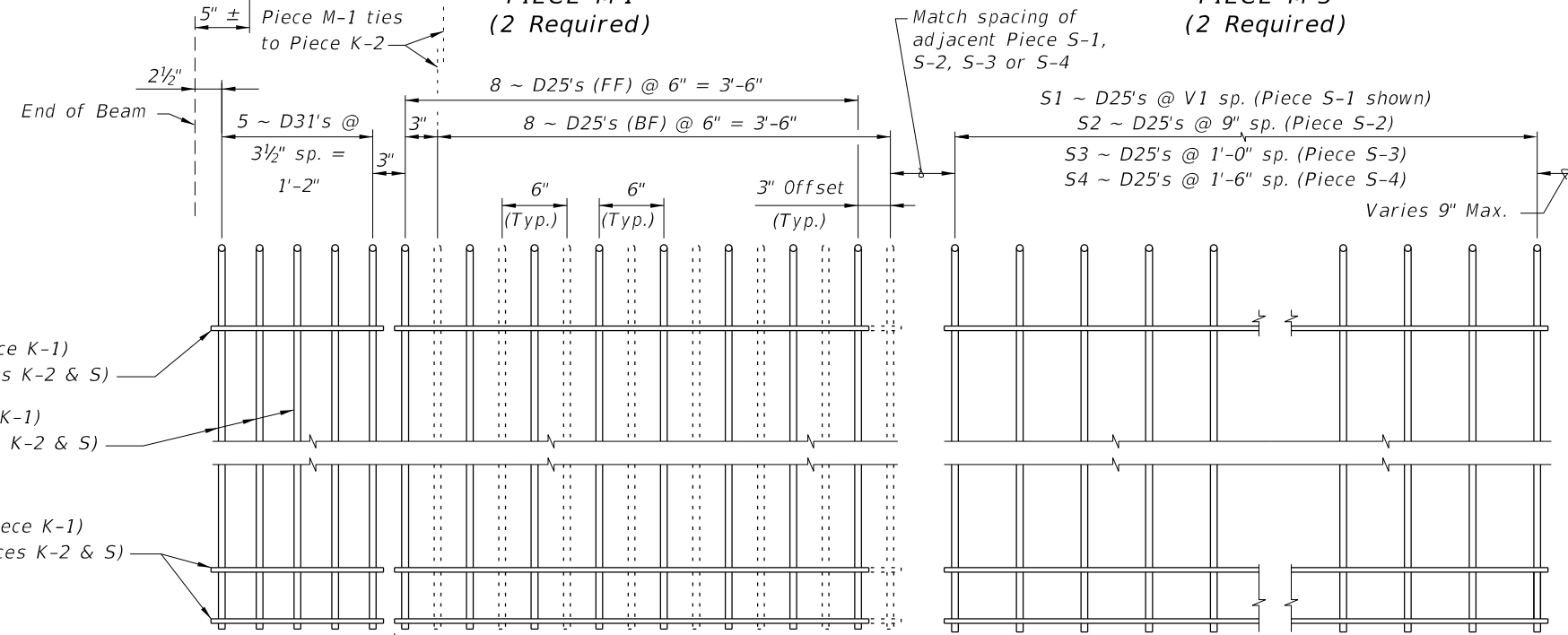


PLAN VIEW
PIECE M-1
(2 Required)

PLAN VIEW
PIECE M-3
(2 Required)



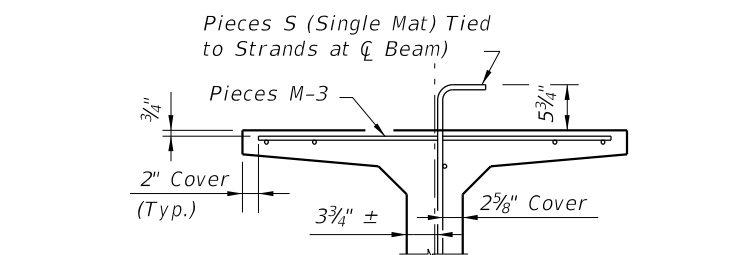
SECTION A-A
FOR WELDED WIRE REINFORCEMENT



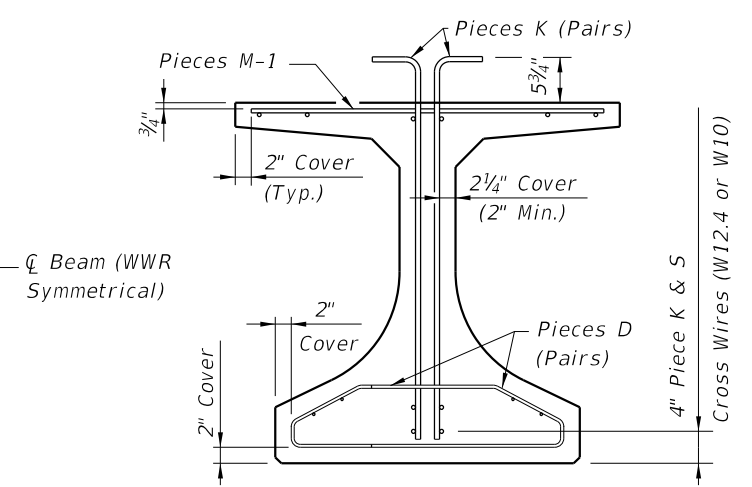
PIECE K-1
(Aligned EF)
(4 Required ~ 2 Pairs)

PIECE K-2
(FF Shown Solid, BF Shown Dashed)
(4 Required)

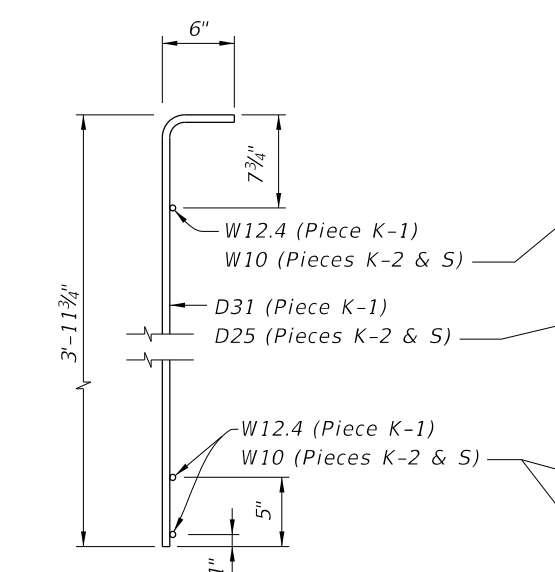
PIECE S-1, S-2, S-3 or S-4
(2 Required Each Piece)



PARTIAL SECTION AT CENTER BEAM



PARTIAL BEAM END VIEW
(Conventional Reinforcing Bars A, C, Y and Strands not Shown for Clarity)



PIECES K & S
END VIEW

PIECES D
END VIEW

PIECE D-1
(4 Required ~ 2 Pairs)


PIECE D-2
(4 Required ~ 2 Pairs)

PIECE D-3
(4 Required ~ 2 Pairs)

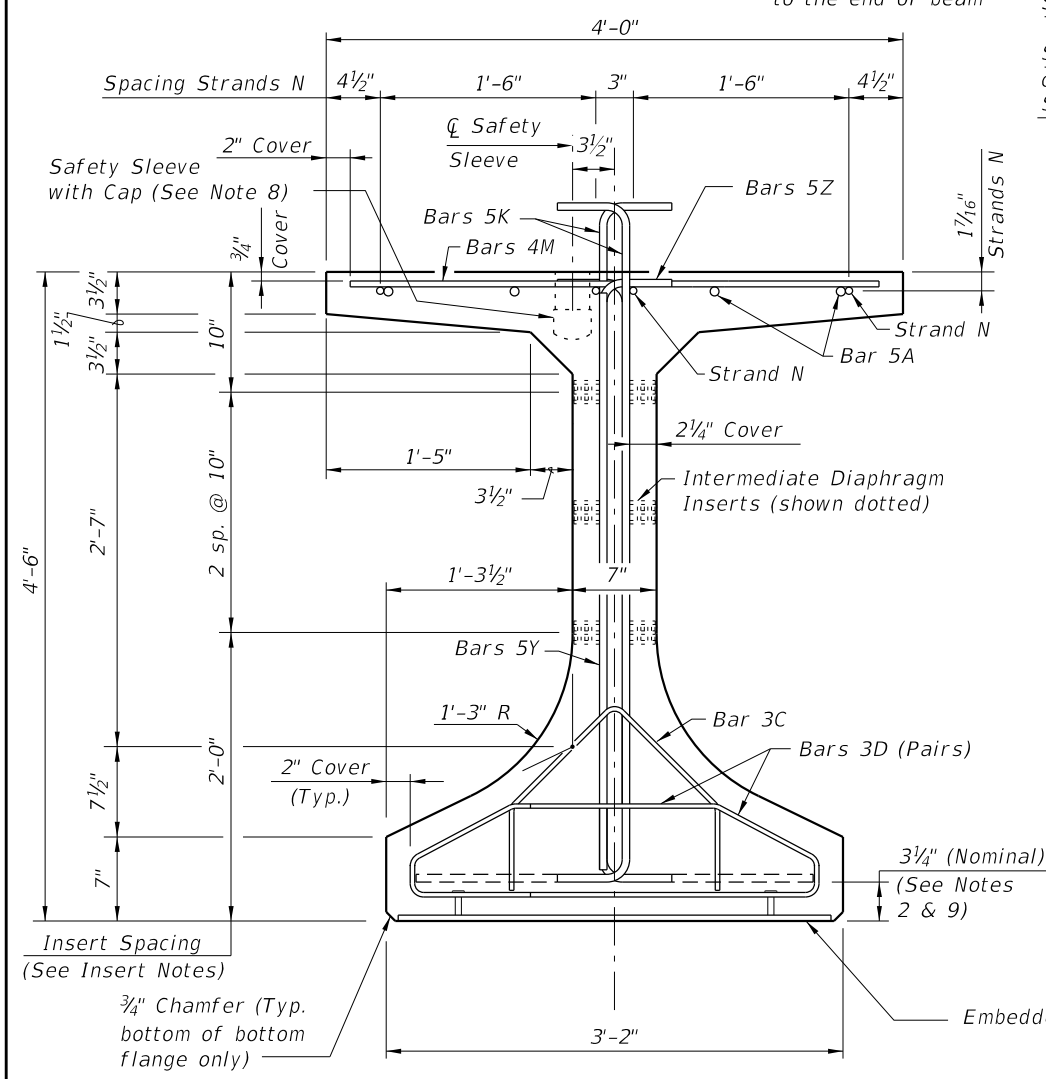
- NOTES:
- See Sheet 1 for placement details & Table of Beam Variables in Structures Plans for variables S1, S2, S3, S4 & V1.
 - Place Conventional Reinforcing Bars 5A & 3C as shown on Sheet 1. Place additional Bars 5Y as shown in Section A-A for Welded Wire Reinforcement. Bars 5Z will not be used with the WWR Option.
 - Pieces may be fabricated in multiple length sections.
 - For beams with skewed end conditions, Pieces D-1, D-2 & M-1 shall not be used; Conventional Reinforcing Bars D1, D2, C1, C2, M1 & M2 shall be used. See Index No. 20010 Skew Details and Note 9 for placement details. Shift Pieces K & Bars 5Y to accommodate skewed end conditions and align with Bars C and D.

LEGEND:
EF = Each Face
FF = Front Face
BF = Back Face

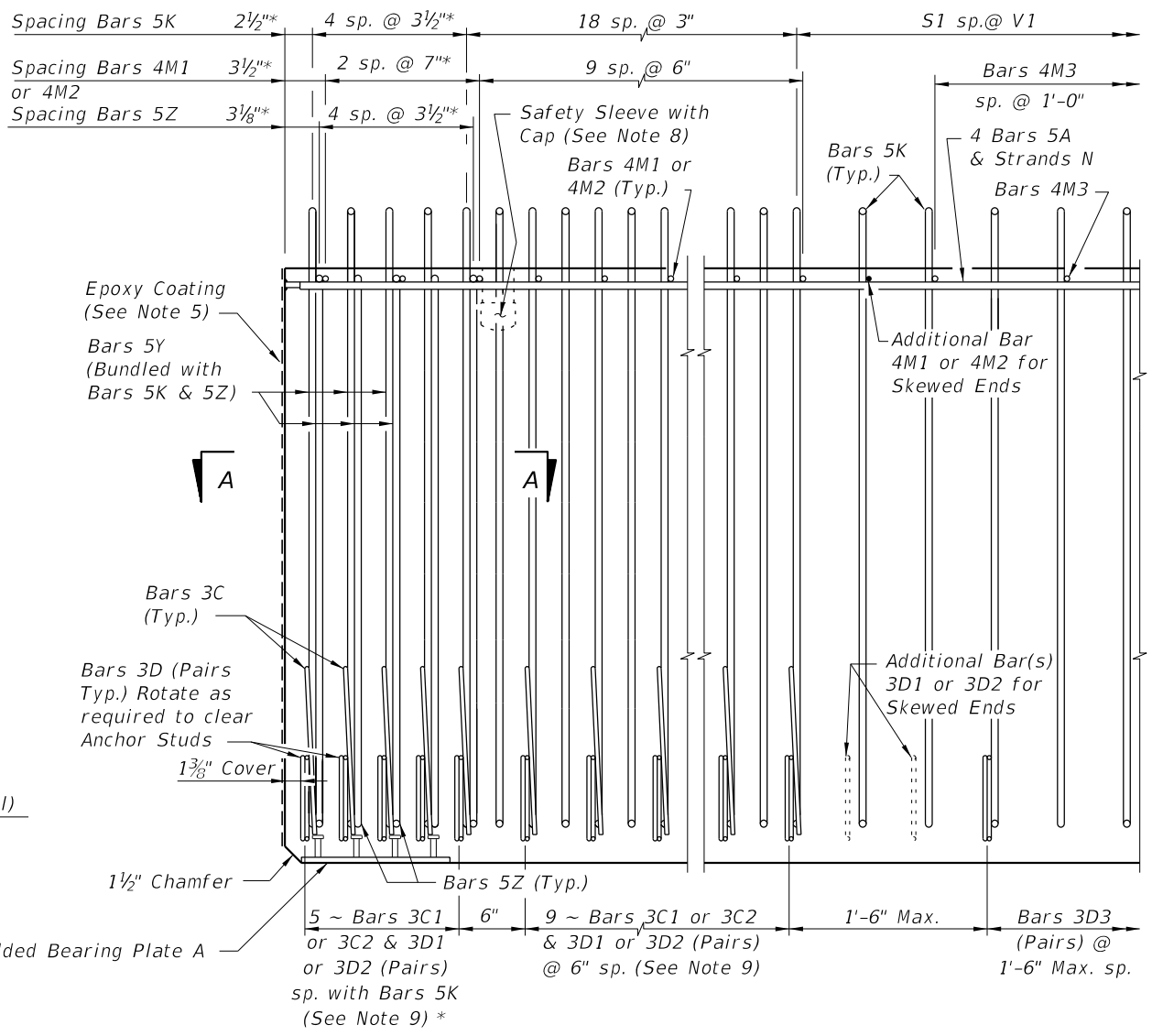
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LAST REVISION 07/01/10	DESCRIPTION: REVISION	 FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA-I 45 BEAM - STANDARD DETAILS	INDEX NO. 20045	SHEET NO. 2
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* These dimensions are measured perpendicular to the end of beam



END VIEW



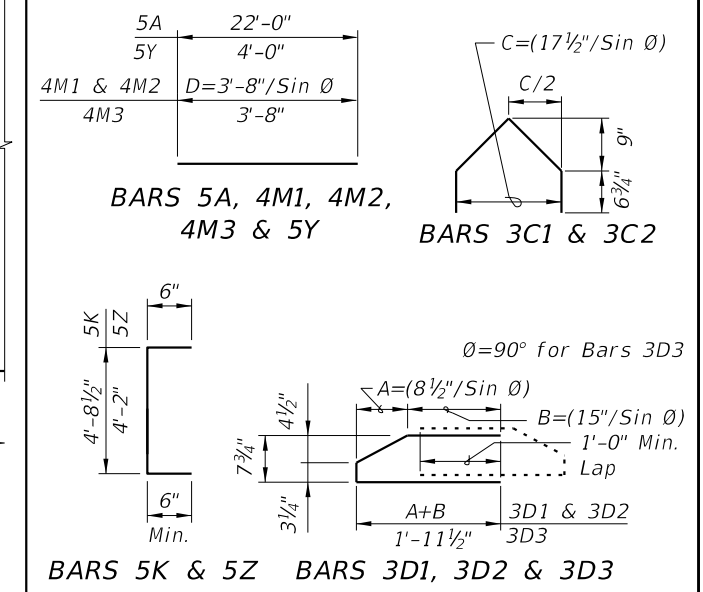
ELEVATION AT END OF BEAM
(Flanges Not Shown For Clarity)
(End 1 Shown, End 2 Similar)

CONVENTIONAL REINFORCING
BAR BENDING DETAILS

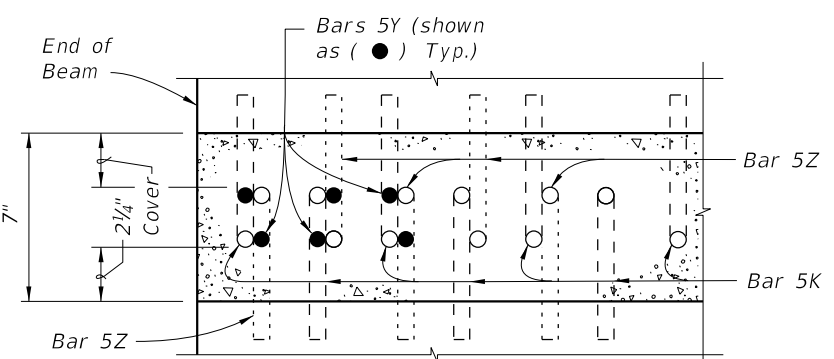
BILL OF REINFORCING STEEL

MARK	NOTE NUMBERS	SIZE	NUMBER REQUIRED	LENGTH (NOTE 1)
A	—	5	8	22'-0"
C1	9, 10 & 11	3	14 (End 1)	Varies
C2	9, 10 & 11	3	14 (End 2)	Varies
D1	9, 10, 11 & 14	3	28 (End 1)	Varies
D2	9, 10, 11 & 14	3	28 (End 2)	Varies
D3	9 & 14	3	See Table	4'-3"
K	2, 9, 11 & 13	5	See Table	5'-8"
M1	9 & 10	4	12 (End 1)	Varies
M2	9 & 10	4	12 (End 2)	Varies
M3	9	4	See Table	3'-8"
N	3 & 4	3/8" Ø Strand	4	Dim. L
Y	9 & 11	5	12	4'-0"
Z	2, 9, 11 & 13	5	10	5'-2"

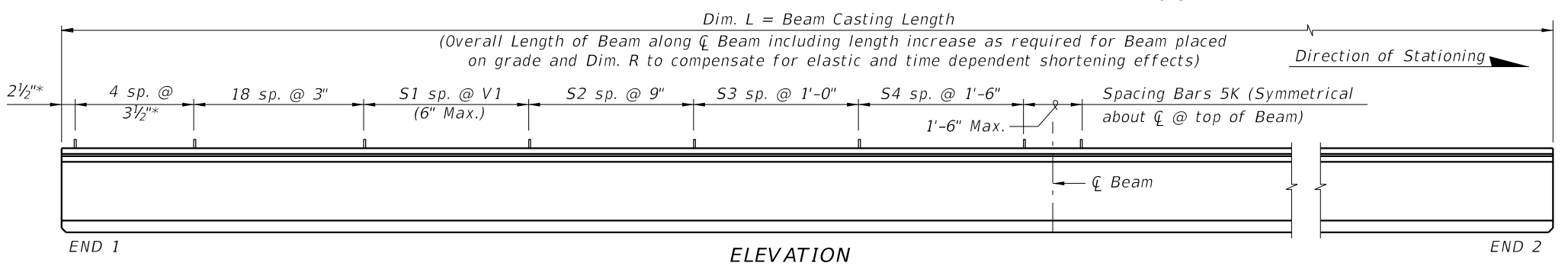
BENDING DIAGRAMS (See Note 1)



- NOTES:
- A. Work this Index with Index No. 20010 - Typical Florida-I Beam Details and Notes and the Florida-I Beam - Table of Beam Variables in Structures Plans.
 - B. For referenced notes, see Index No. 20010.
 - C. For Dimensions A, B, C, D, L, R & V1 and number of spaces S1 thru S4, see Florida-I Beam - Table of Beam Variables in Structures Plans.



SECTION A-A FOR CONVENTIONAL REINFORCING
(Showing Bars 5K, 5Y & 5Z Only)



END 1

ELEVATION

END 2

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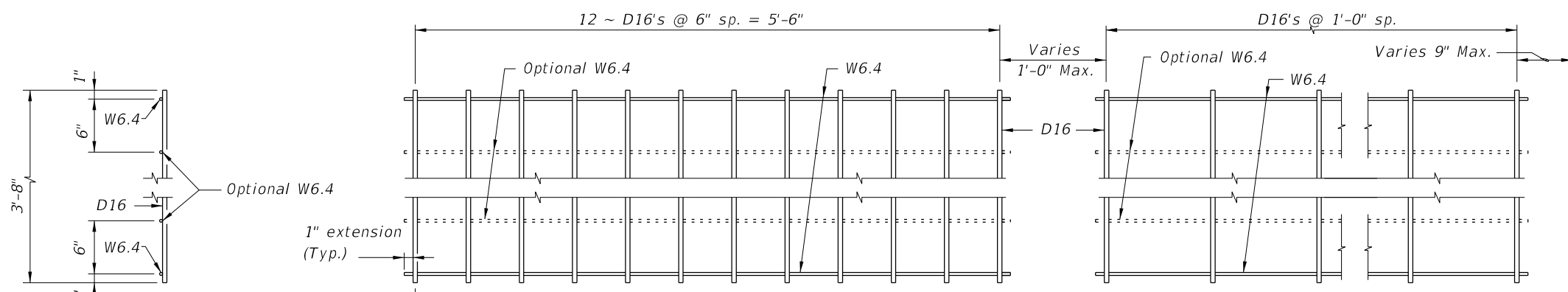
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01/01/12	

FDOT DESIGN STANDARDS
 FY 2012/2013

FLORIDA-I 54 BEAM - STANDARD DETAILS

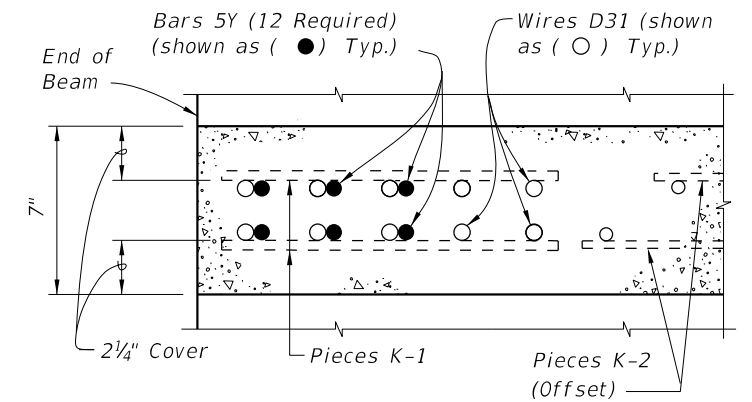
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20054	1

ALTERNATE REINFORCING STEEL (WELDED WIRE REINFORCEMENT) DETAILS

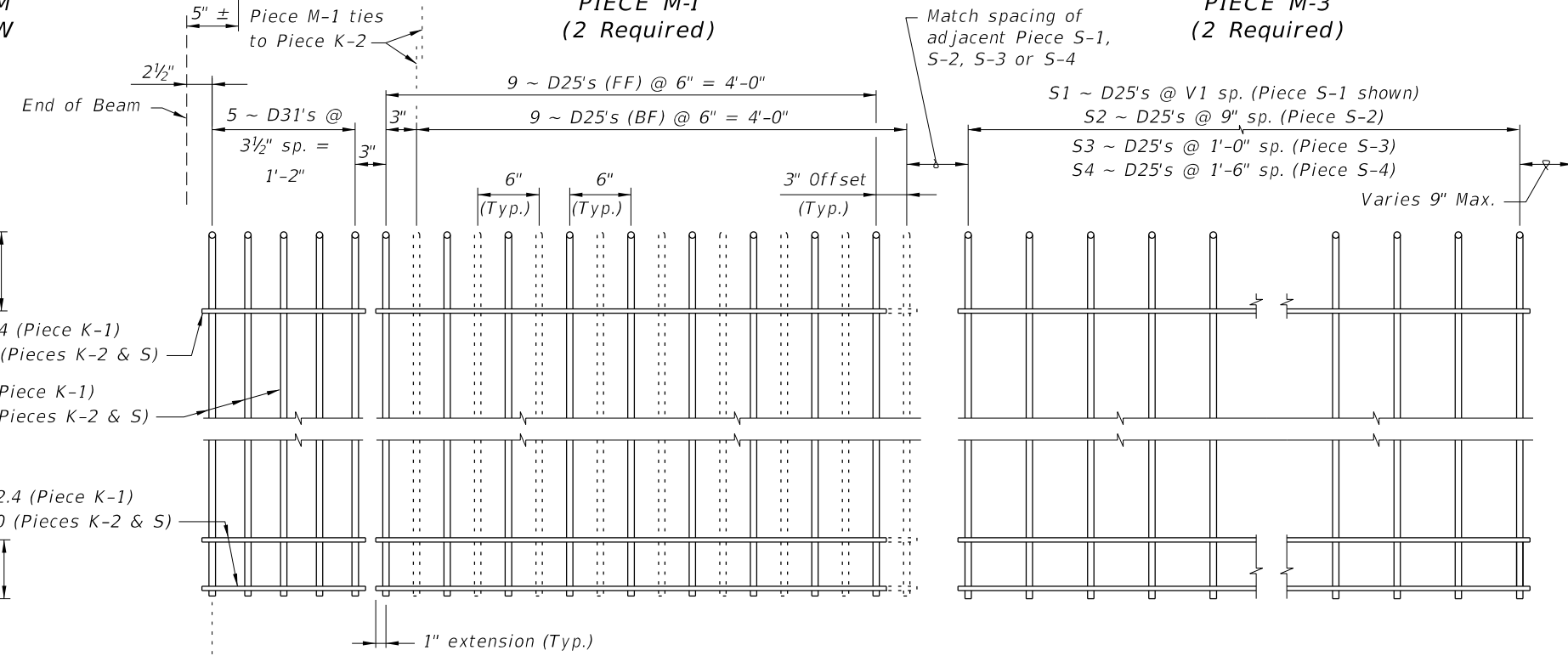


PLAN VIEW
PIECE M-1
(2 Required)

PLAN VIEW
PIECE M-3
(2 Required)



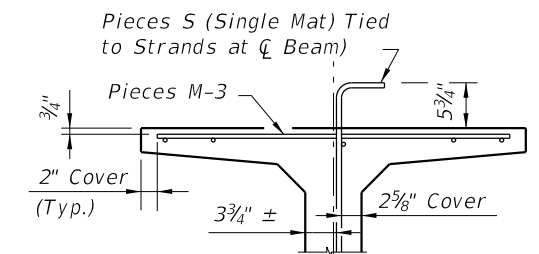
SECTION A-A
FOR WELDED WIRE REINFORCEMENT



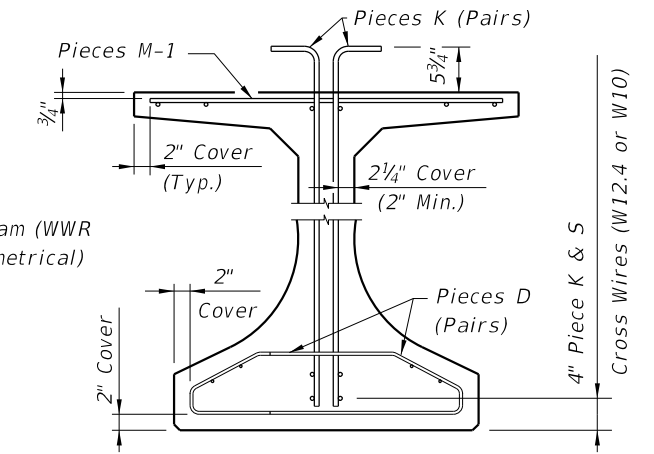
PIECE K-1
(Aligned EF)
(4 Required ~ 2 Pairs)

PIECE K-2
(FF Shown Solid, BF Shown Dashed)
(4 Required)

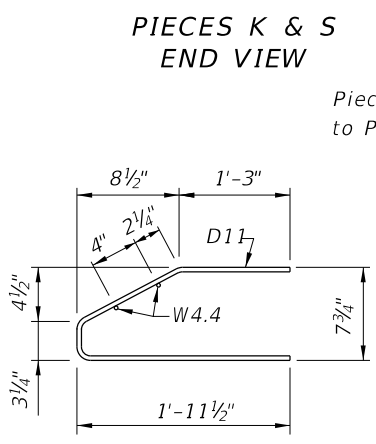
PIECE S-1, S-2, S-3 or S-4
(2 Required Each Piece)



PARTIAL SECTION AT CENTER BEAM



PARTIAL BEAM END VIEW
(Conventional Reinforcing Bars A, C, Y and Strands not Shown for Clarity)



PIECES D
END VIEW

PIECE D-1
(4 Required ~ 2 Pairs)

PIECE D-2
(4 Required ~ 2 Pairs)

PIECE D-3
(4 Required ~ 2 Pairs)

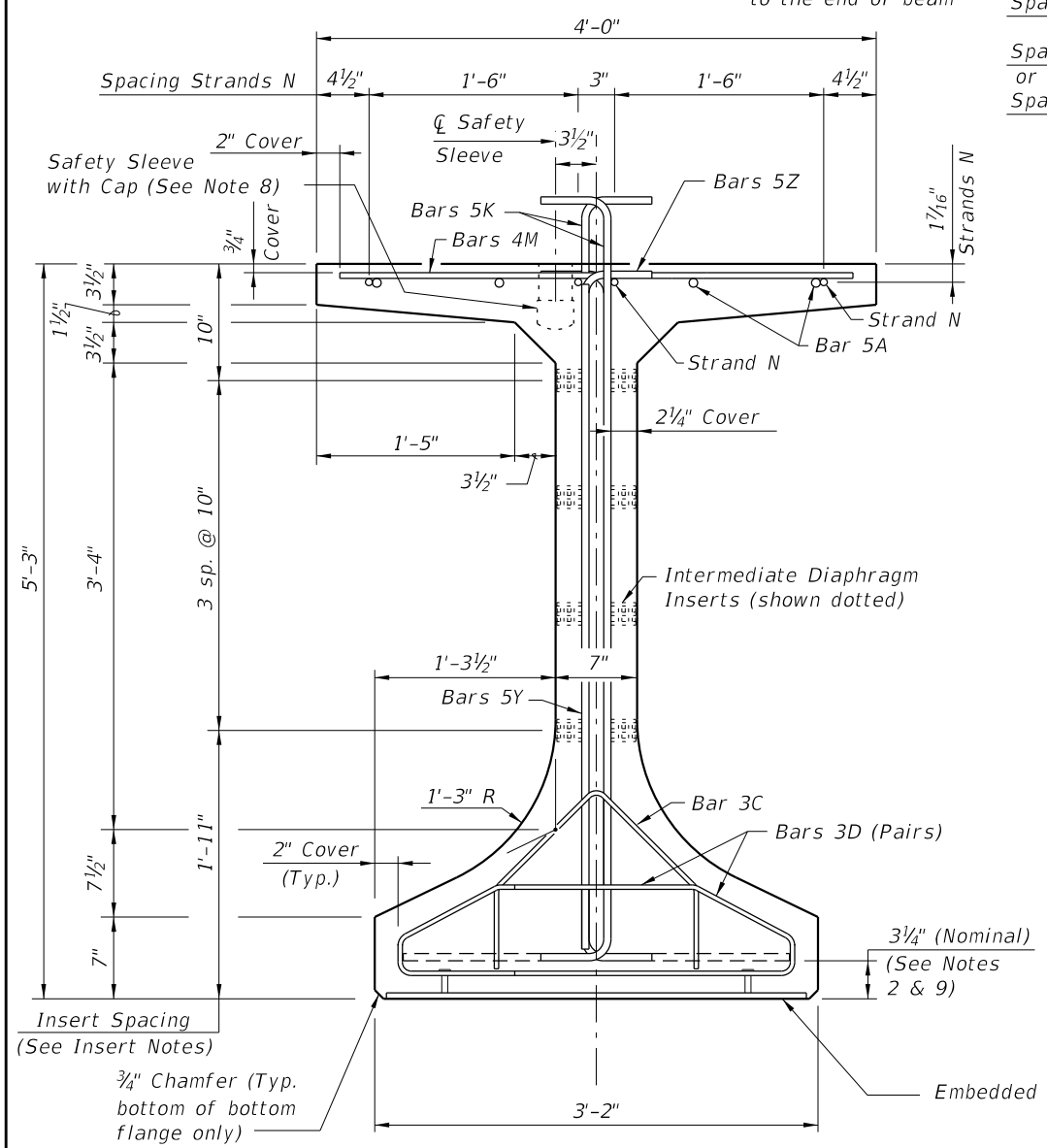
- NOTES:
- See Sheet 1 for placement details & Table of Beam Variables in Structures Plans for variables S1, S2, S3, S4 & V1.
 - Place Conventional Reinforcement Bars 5A & 3C as shown on Sheet 1. Place additional Bars 5Y as shown in Section A-A for Welded Wire Reinforcement. Bars 5Z will not be used with the WWR Option.
 - Pieces may be fabricated in multiple length sections.
 - For beams with skewed end conditions, Pieces D-1, D-2 & M-1 shall not be used; Conventional Reinforcement Bars D1, D2, C1, C2, M1 & M2 shall be used. See Index No. 20010 Skew Details and Note 9 for placement details. Shift Pieces K & Bars 5Y to accommodate skewed end conditions and align with Bars C and D.

LEGEND:
EF = Each Face
FF = Front Face
BF = Back Face

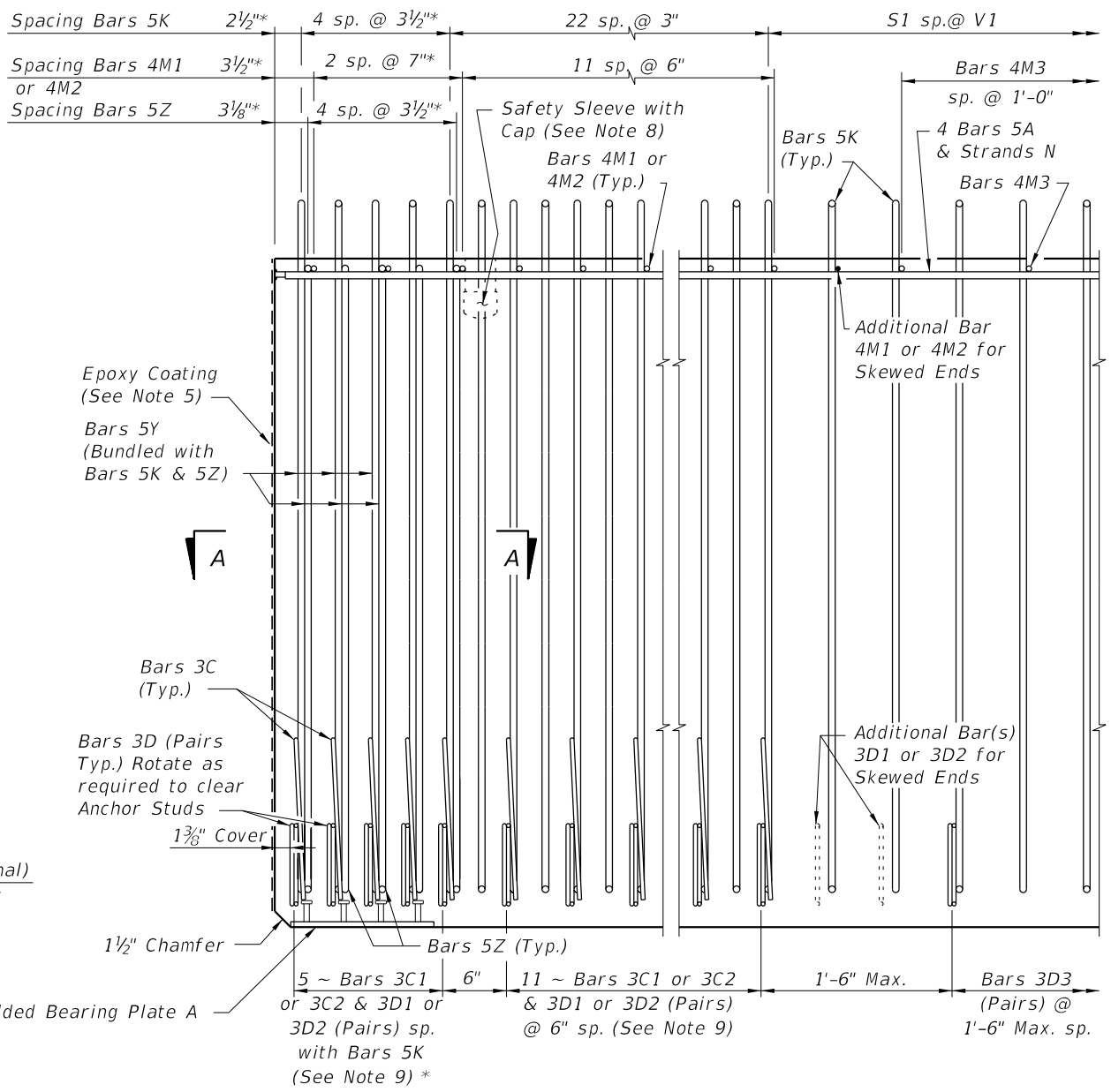
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LAST REVISION 07/01/10	DESCRIPTION:		FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA-I 54 BEAM - STANDARD DETAILS	INDEX NO. 20054	SHEET NO. 2
REVISION						

* These dimensions are measured perpendicular to the end of beam



END VIEW

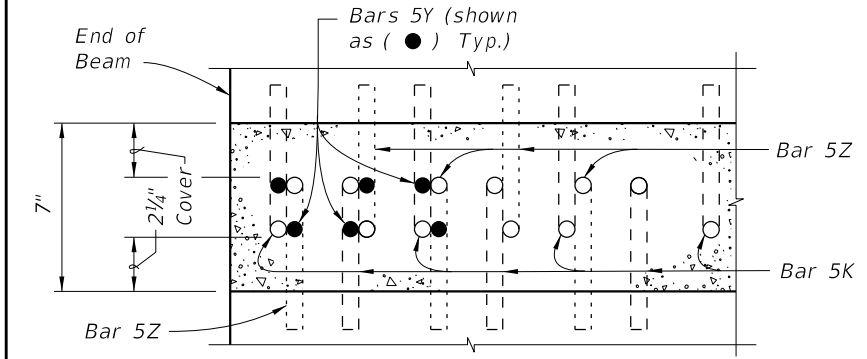


ELEVATION AT END OF BEAM
(Flanges Not Shown For Clarity)
(End 1 Shown, End 2 Similar)

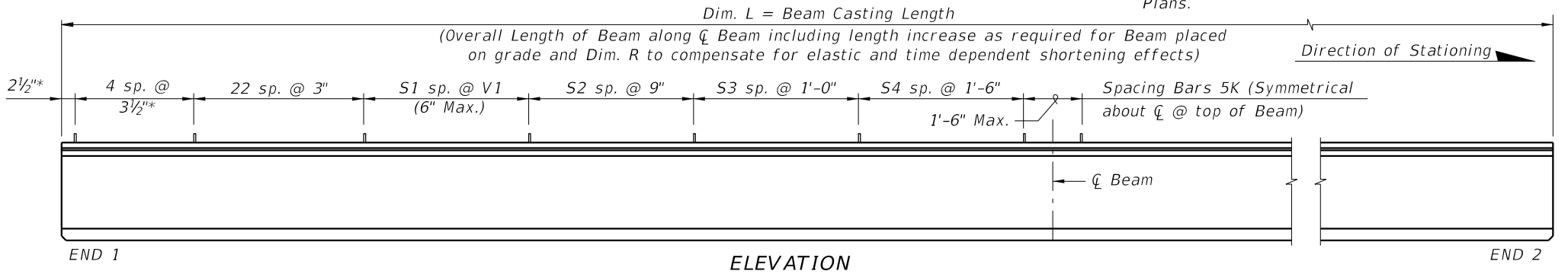
CONVENTIONAL REINFORCING BAR BENDING DETAILS				
BILL OF REINFORCING STEEL				
MARK	NOTE NUMBERS	SIZE	NUMBER REQUIRED	LENGTH (NOTE 1)
A	—	5	8	24'-0"
C1	9, 10 & 11	3	16 (End 1)	Varies
C2	9, 10 & 11	3	16 (End 2)	Varies
D1	9, 10, 11 & 14	3	32 (End 1)	Varies
D2	9, 10, 11 & 14	3	32 (End 2)	Varies
D3	9 & 14	3	See Table	4'-3"
K	2, 9, 11 & 13	5	See Table	6'-5"
M1	9 & 10	4	14 (End 1)	Varies
M2	9 & 10	4	14 (End 2)	Varies
M3	9	4	See Table	3'-8"
N	3 & 4	3/8" Ø Strand	4	Dim. L
Y	9 & 11	5	12	4'-9"
Z	2, 9, 11 & 13	5	10	5'-11"

BENDING DIAGRAMS (See Note 1)

NOTES:
 A. Work this Index with Index No. 20010 - Typical Florida-I Beam Details and Notes and the Florida-I Beam - Table of Beam Variables in Structures Plans.
 B. For referenced notes, see Index No. 20010.
 C. For Dimensions A, B, C, D, L, R & V1 and number of spaces S1 thru S4, see Florida-I Beam - Table of Beam Variables in Structures Plans.



SECTION A-A FOR CONVENTIONAL REINFORCING
(Showing Bars 5K, 5Y & 5Z Only)



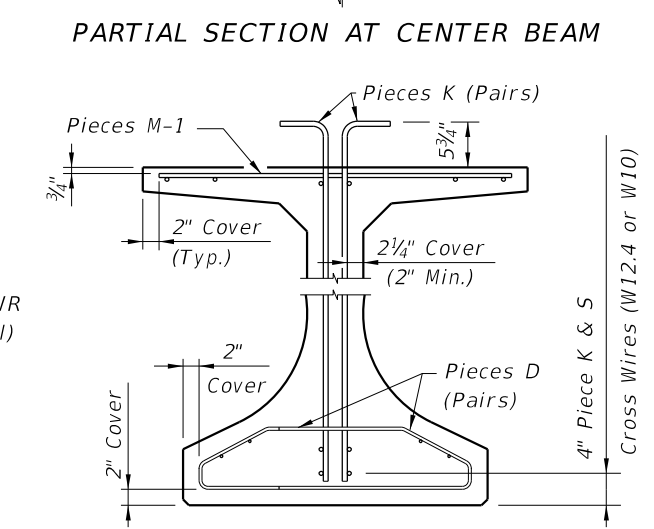
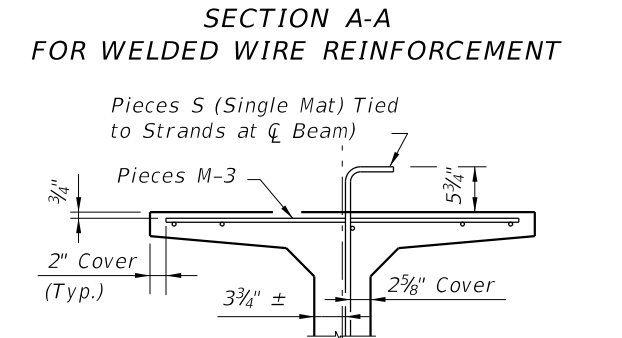
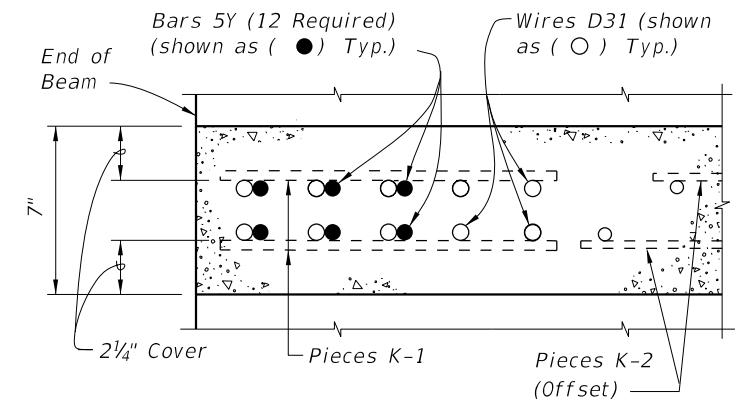
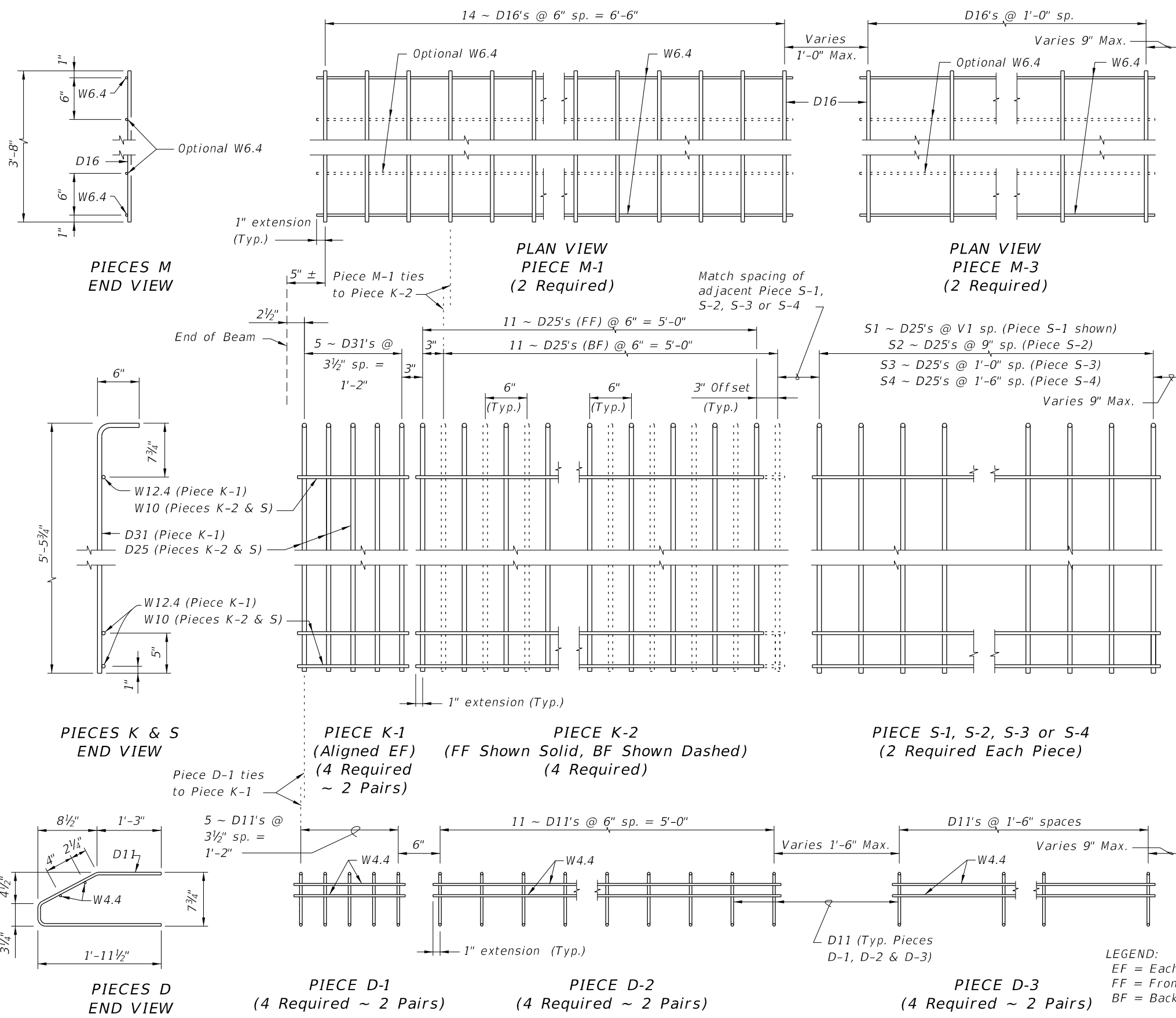
END 1

ELEVATION

END 2

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ALTERNATE REINFORCING STEEL (WELDED WIRE REINFORCEMENT) DETAILS



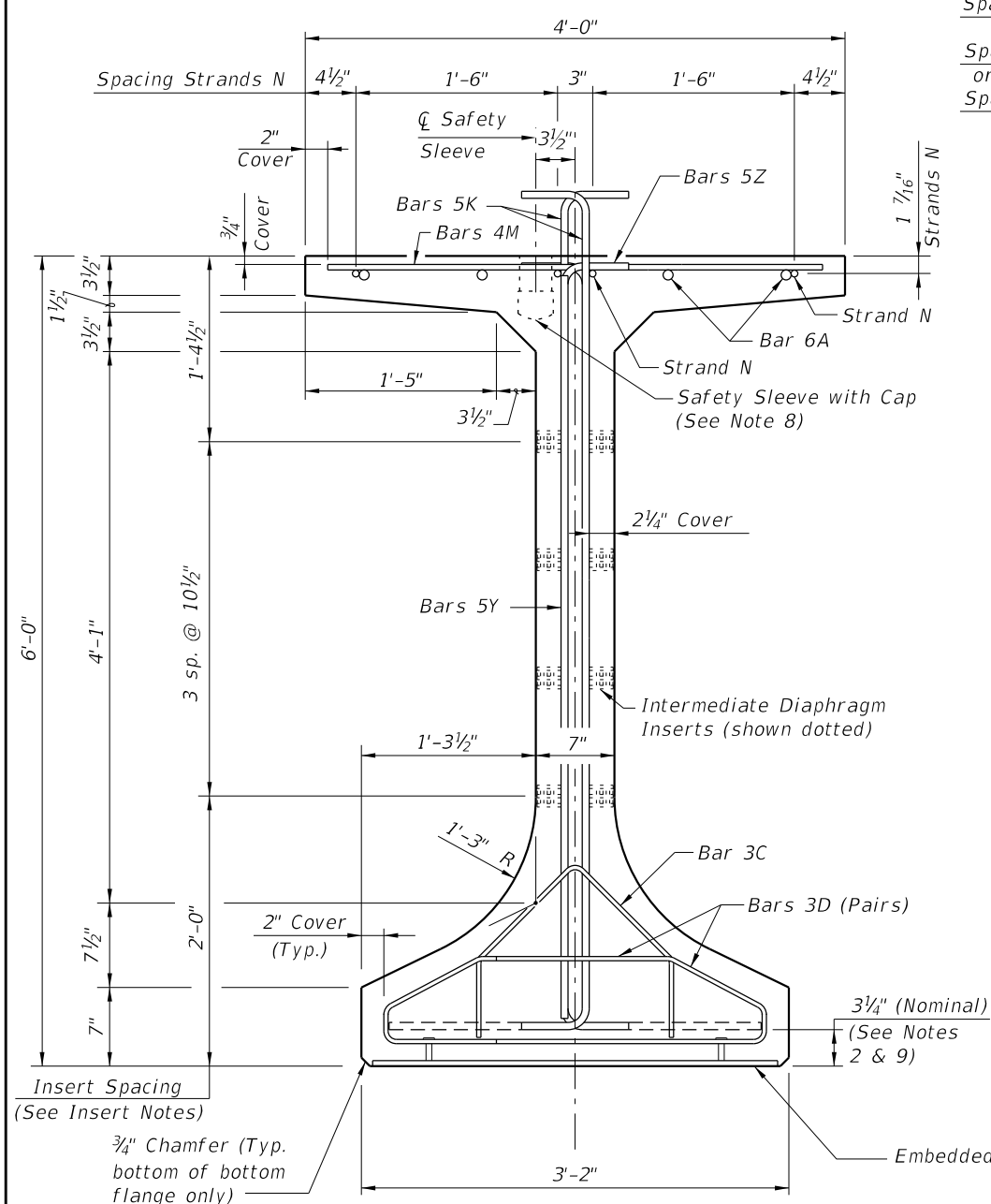
NOTES:
 a. See Sheet 1 for placement details & Table of Beam Variables in Structures Plans for variables S1, S2, S3, S4 & V1.
 b. Place Conventional Reinforcement Bars 5A & 3C as shown on Sheet 1. Place additional Bars 5Y as shown in Section A-A for Welded Wire Reinforcement. Bars 5Z will not be used with the WWR Option.
 c. Pieces may be fabricated in multiple length sections.
 d. For beams with skewed end conditions, Pieces D-1, D-2 & M-1 shall not be used; Conventional Reinforcement Bars D1, D2, C1, C2, M1 & M2 shall be used. See Index No. 20010 Skew Details and Note 9 for placement details. Shift Pieces K & Bars 5Y to accommodate skewed end conditions and align with Bars C and D.

LEGEND:
 EF = Each Face
 FF = Front Face
 BF = Back Face

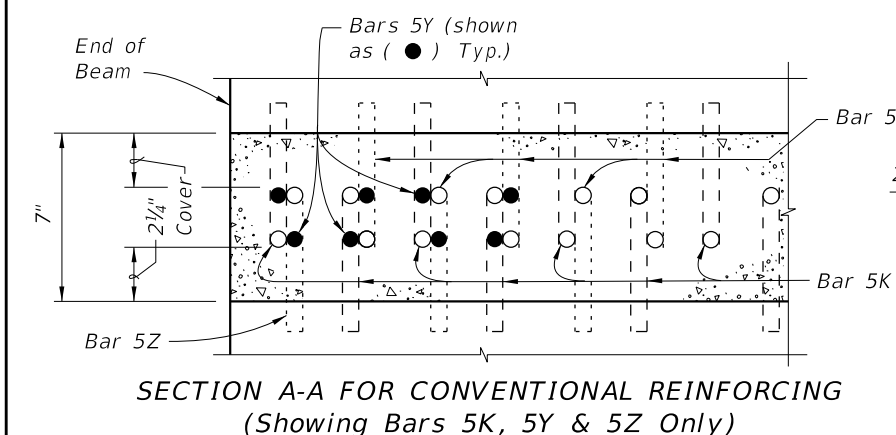
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LAST REVISION 07/01/10	DESCRIPTION:	 FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA-I 63 BEAM - STANDARD DETAILS	INDEX NO. 20063	SHEET NO. 2
REVISION					

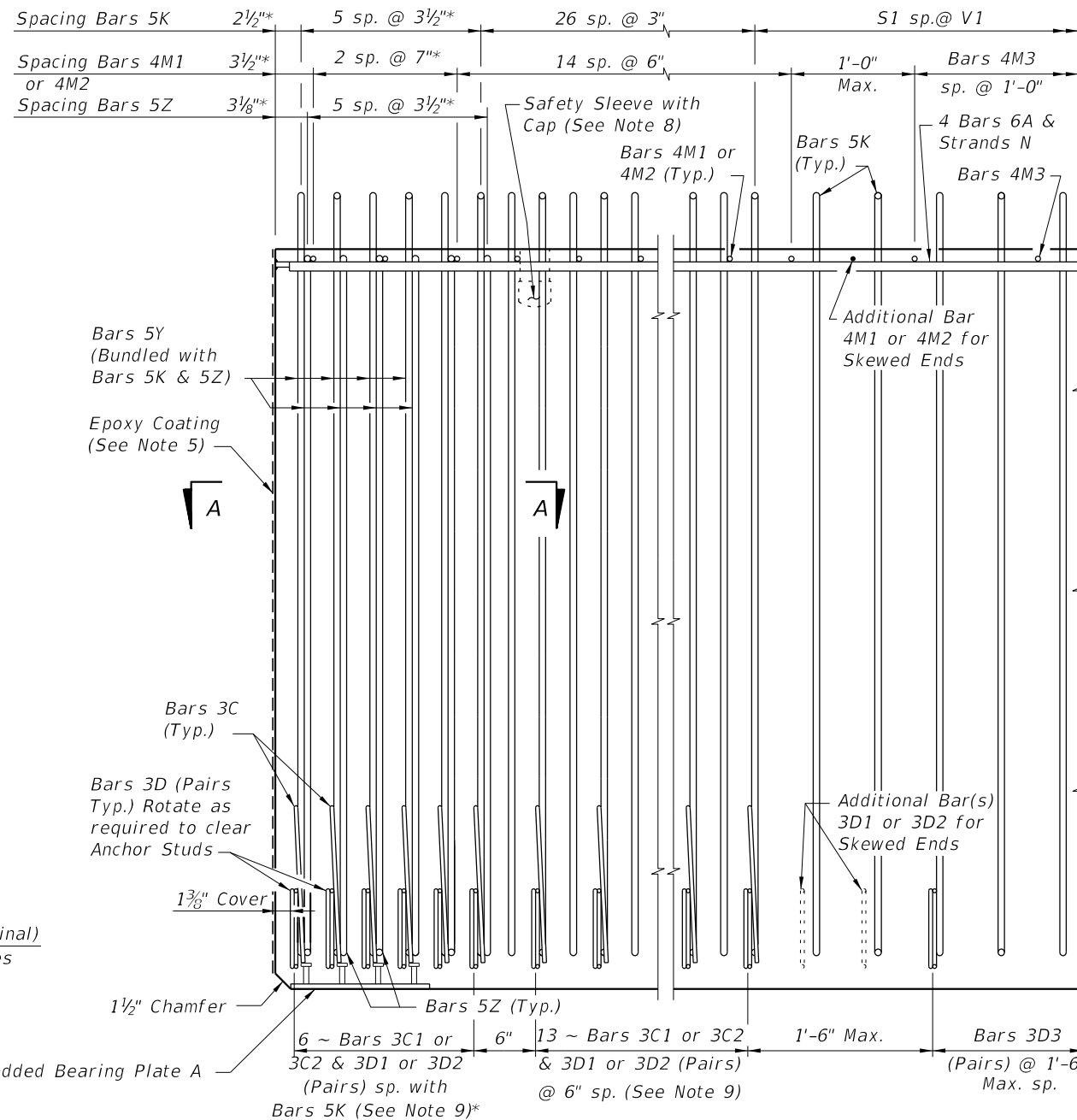
* These dimensions are measured perpendicular to the end of beam



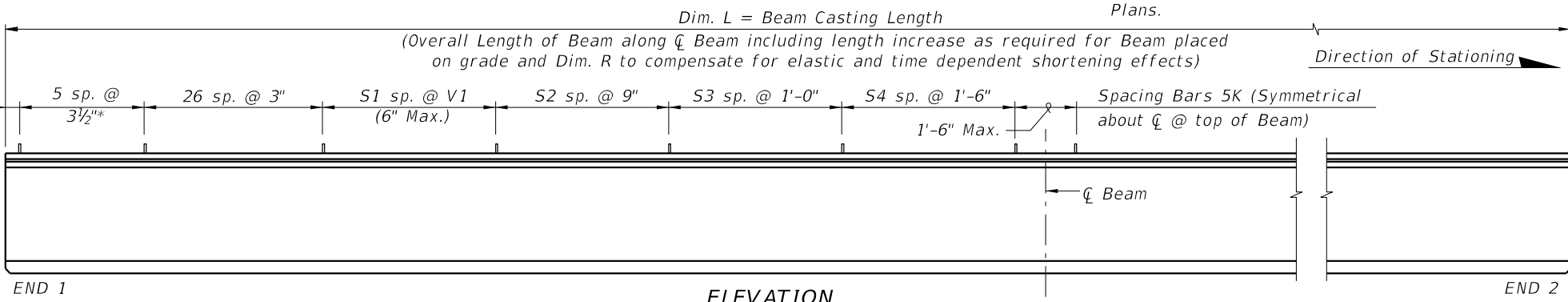
END VIEW



SECTION A-A FOR CONVENTIONAL REINFORCING (Showing Bars 5K, 5Y & 5Z Only)



ELEVATION AT END OF BEAM (Flanges Not Shown For Clarity) (End 1 Shown, End 2 Similar)



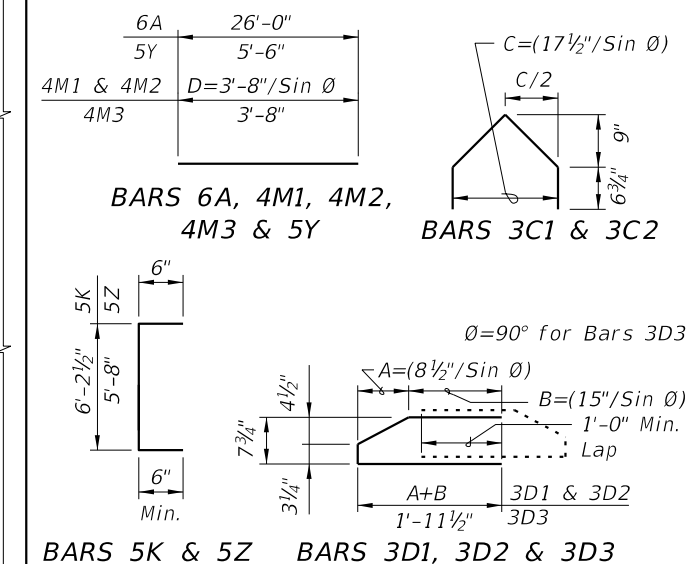
ELEVATION

CONVENTIONAL REINFORCING BAR BENDING DETAILS

BILL OF REINFORCING STEEL

MARK	NOTE NUMBERS	SIZE	NUMBER REQUIRED	LENGTH (NOTE 1)
A	—	6	8	26'-0"
C1	9, 10 & 11	3	19 (End 1)	Varies
C2	9, 10 & 11	3	19 (End 2)	Varies
D1	9, 10, 11 & 14	3	38 (End 1)	Varies
D2	9, 10, 11 & 14	3	38 (End 2)	Varies
D3	9 & 14	3	See Table	4'-3"
K	2, 9, 11 & 13	5	See Table	7'-2"
M1	9 & 10	4	17 (End 1)	Varies
M2	9 & 10	4	17 (End 2)	Varies
M3	9	4	See Table	3'-8"
N	3 & 4	3/8" Ø Strand	4	Dim. L
Y	9 & 11	5	16	5'-6"
Z	2, 9, 11 & 13	5	12	6'-8"

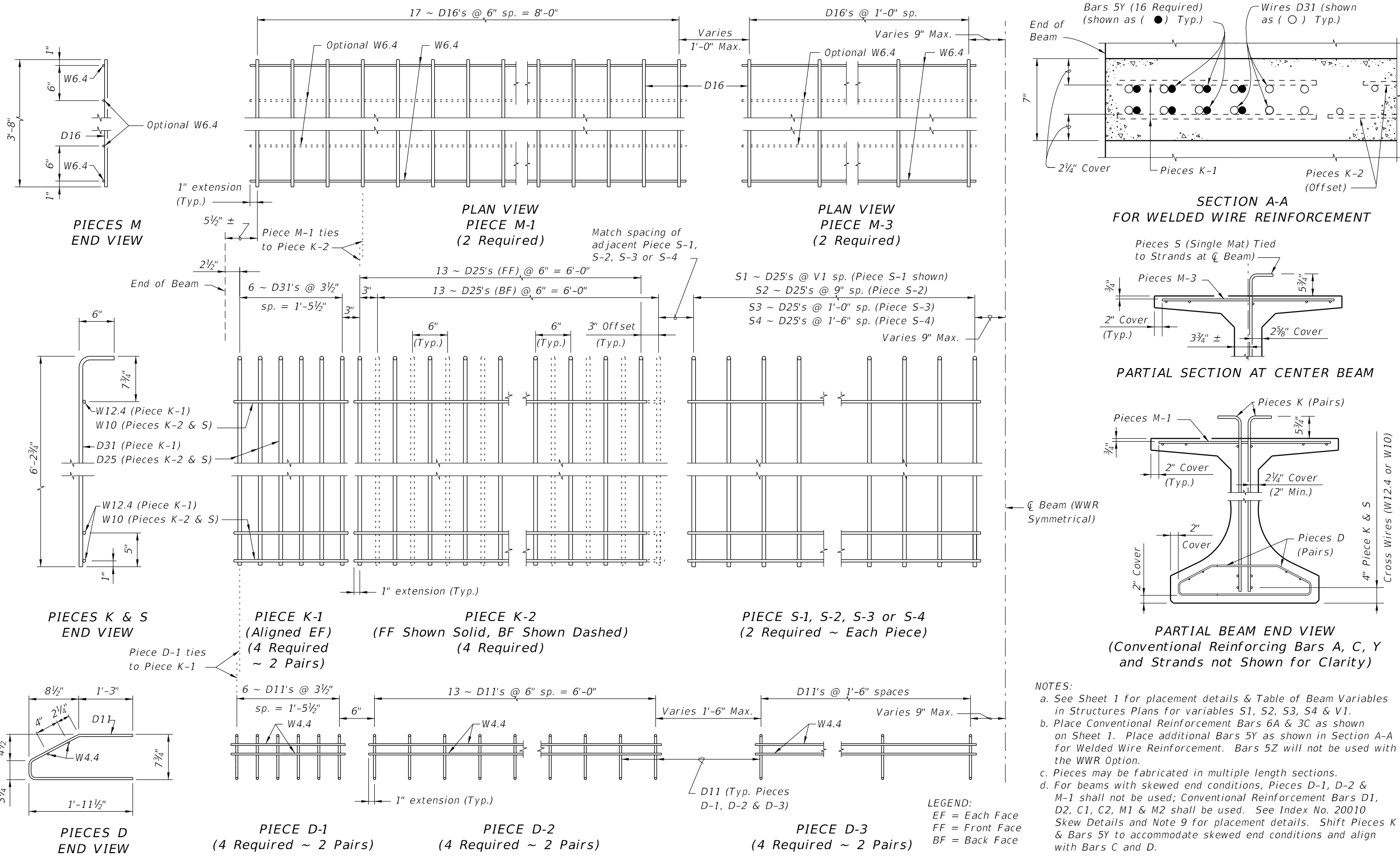
BENDING DIAGRAMS (See Note 1)




- NOTES:
- A. Work this Index with Index No. 20010 - Typical Florida-I Beam Details and Notes and the Florida-I Beam - Table of Beam Variables in Structures Plans.
 - B. For referenced notes, see Index No. 20010.
 - C. For Dimensions A, B, C, D, L, R & V1 and number of spaces S1 thru S4, see Florida-I Beam - Table of Beam Variables in Structures Plans.

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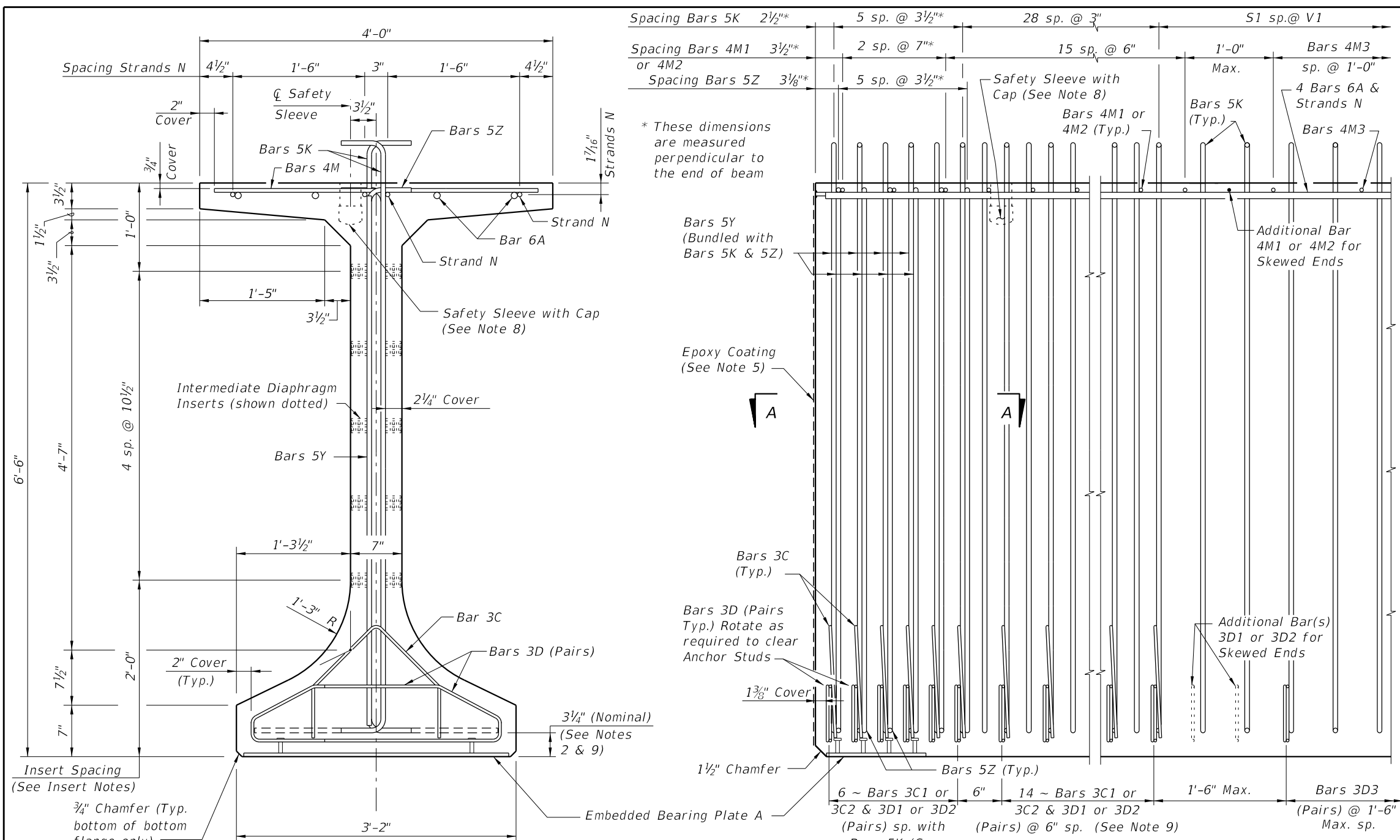
ALTERNATE REINFORCING STEEL (WELDED WIRE REINFORCEMENT) DETAILS



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LAST REVISION 07/01/10	DESCRIPTION:	 FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA-I 72 BEAM - STANDARD DETAILS	INDEX NO. 20072	SHEET NO. 2
REVISION					

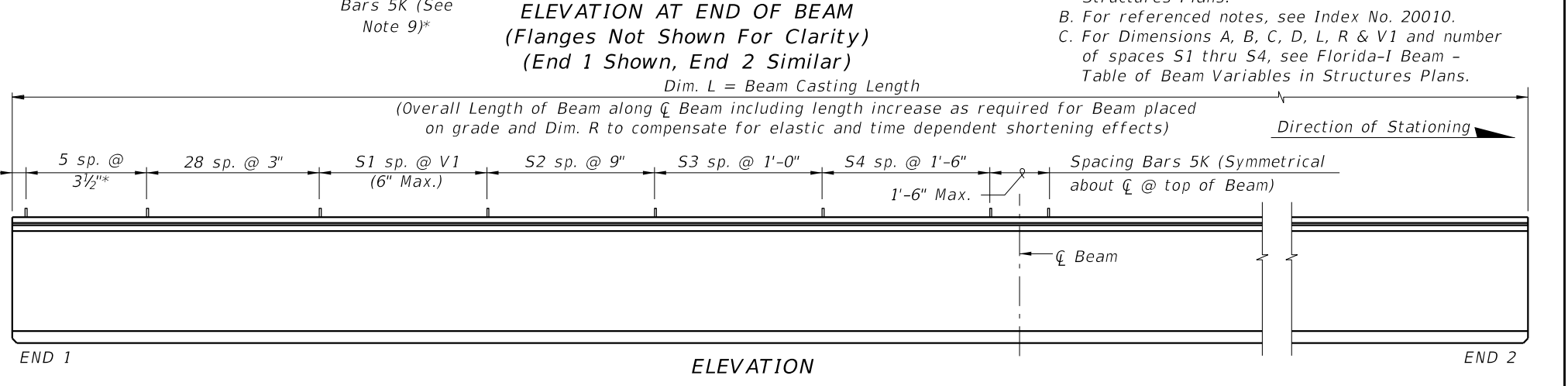
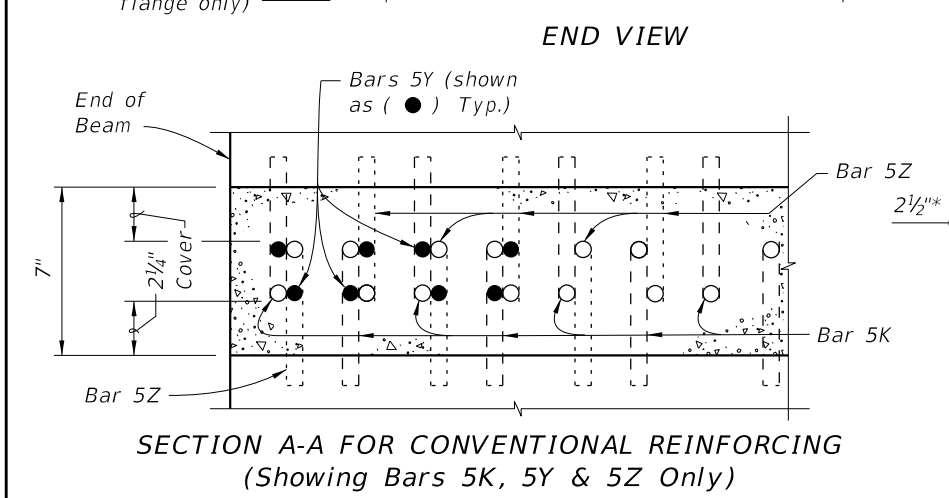
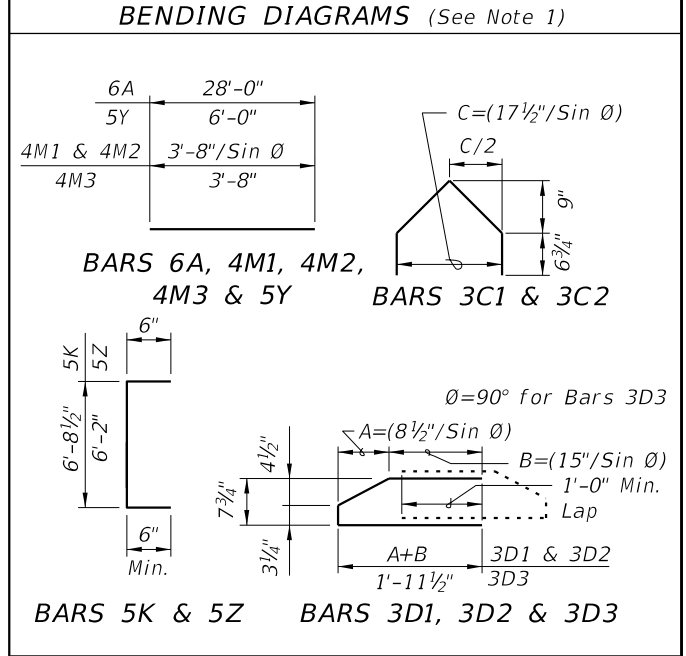
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CONVENTIONAL REINFORCING BAR BENDING DETAILS

BILL OF REINFORCING STEEL

MARK	NOTE NUMBERS	SIZE	NUMBER REQUIRED	LENGTH (NOTE 1)
A	—	6	8	28'-0"
C1	9, 10 & 11	3	20 (End 1)	Varies
C2	9, 10 & 11	3	20 (End 2)	Varies
D1	9, 10, 11 & 14	3	40 (End 1)	Varies
D2	9, 10, 11 & 14	3	40 (End 2)	Varies
D3	9 & 14	3	See Table	4'-3"
K	2, 9, 11 & 13	5	See Table	7'-8"
M1	9 & 10	4	18 (End 1)	Varies
M2	9 & 10	4	18 (End 2)	Varies
M3	9	4	See Table	3'-8"
N	3 & 4	$\frac{3}{8}'' \text{ } \emptyset$ Strand	4	Dim. L
Y	9 & 11	5	16	6'-0"
Z	2, 9, 11 & 13	5	12	7'-2"



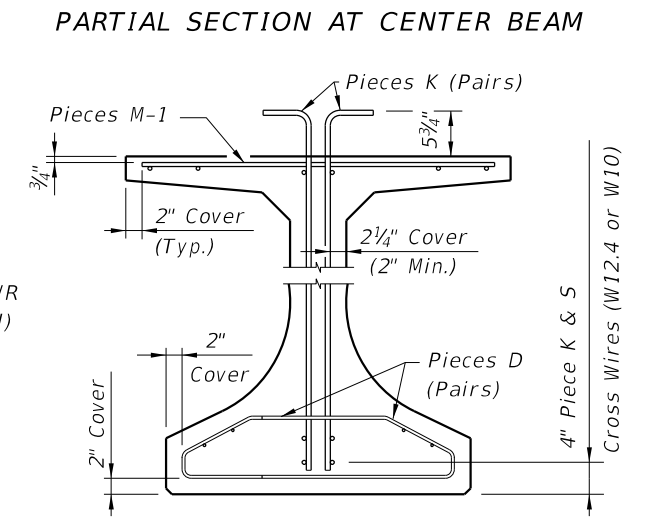
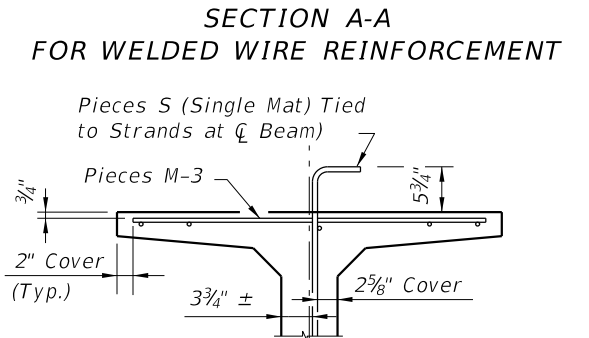
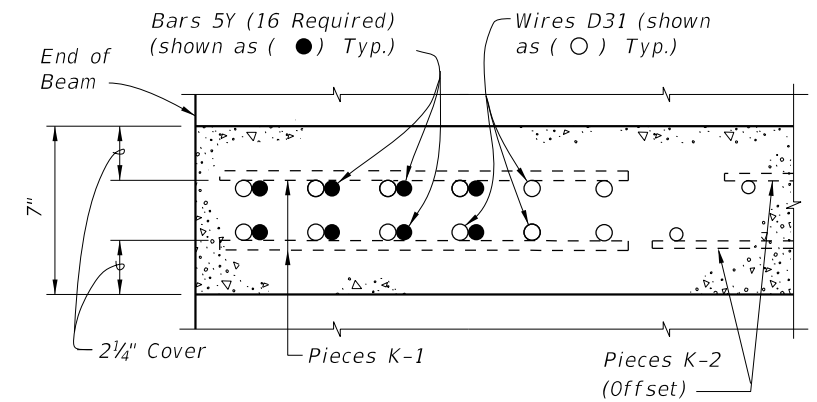
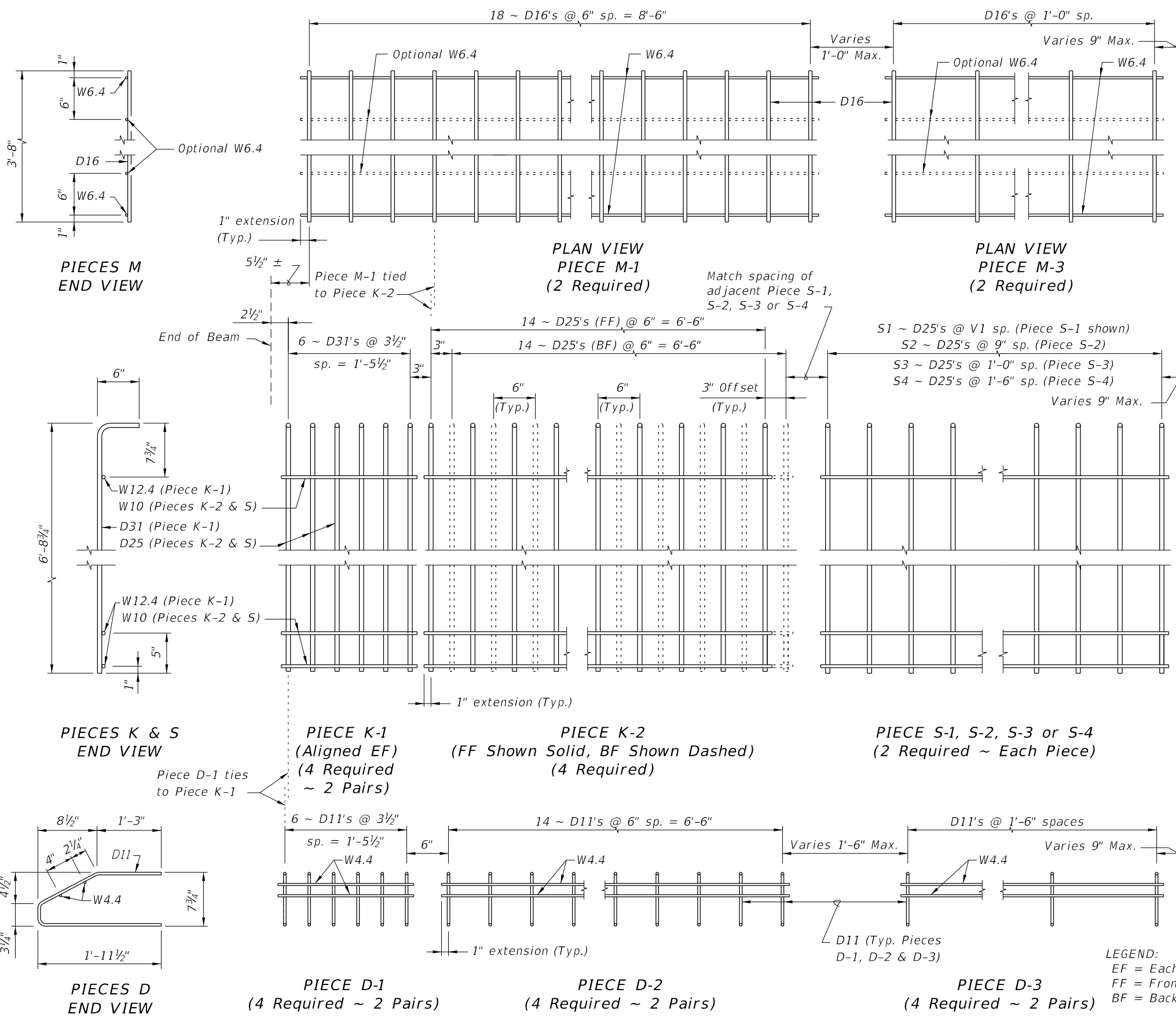
NOTES:

A. Work this Index with Index No. 20010 - Typical Florida-I Beam Details and Notes and the Florida-I Beam - Table of Beam Variables in Structures Plans.

B. For referenced notes, see Index No. 20010.

C. For Dimensions A, B, C, D, L, R & V1 and number of spaces S1 thru S4, see Florida-I Beam - Table of Beam Variables in Structures Plans.

ALTERNATE REINFORCING STEEL (WELDED WIRE REINFORCEMENT) DETAILS



- NOTES:
- See Sheet 1 for placement details & Table of Beam Variables in Structures Plans for variables S1, S2, S3, S4 & V1.
 - Place Conventional Reinforcement Bars 6A & 3C as shown on Sheet 1. Place additional Bars 5Y as shown in Section A-A for Welded Wire Reinforcement. Bars 5Z will not be used with the WWR Option.
 - Pieces may be fabricated in multiple length sections.
 - For beams with skewed end conditions, Pieces D-1, D-2 & M-1 shall not be used; Conventional Reinforcement Bars D1, D2, C1, C2, M1 & M2 shall be used. See Index No. 20010 Skew Details and Note 9 for placement details. Shift Pieces K & Bars 5Y to accommodate skewed end conditions and align with Bars C and D.

LEGEND:
 EF = Each Face
 FF = Front Face
 BF = Back Face

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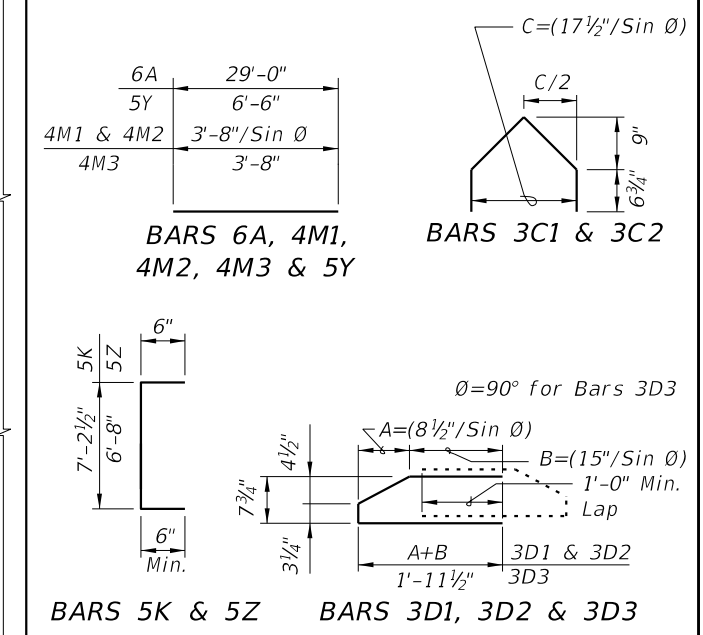
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CONVENTIONAL REINFORCING BAR BENDING DETAILS

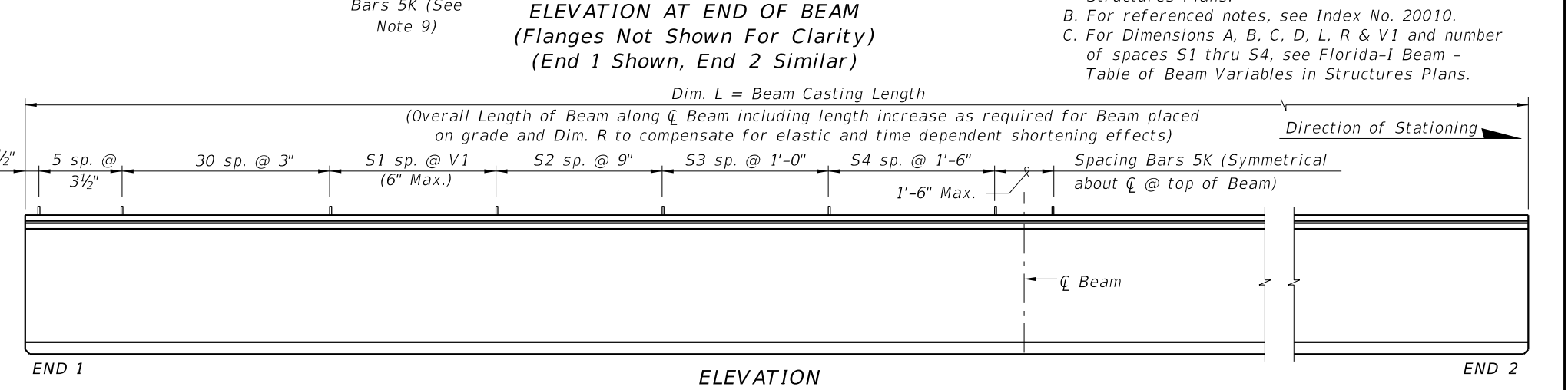
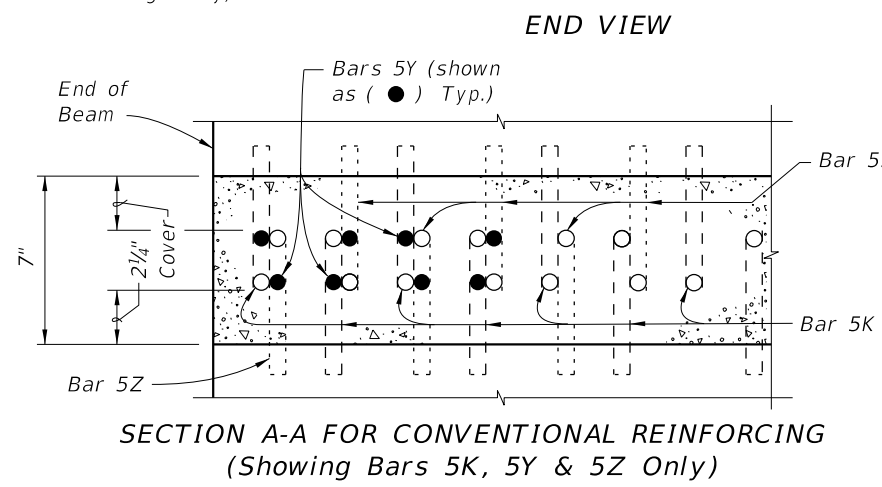
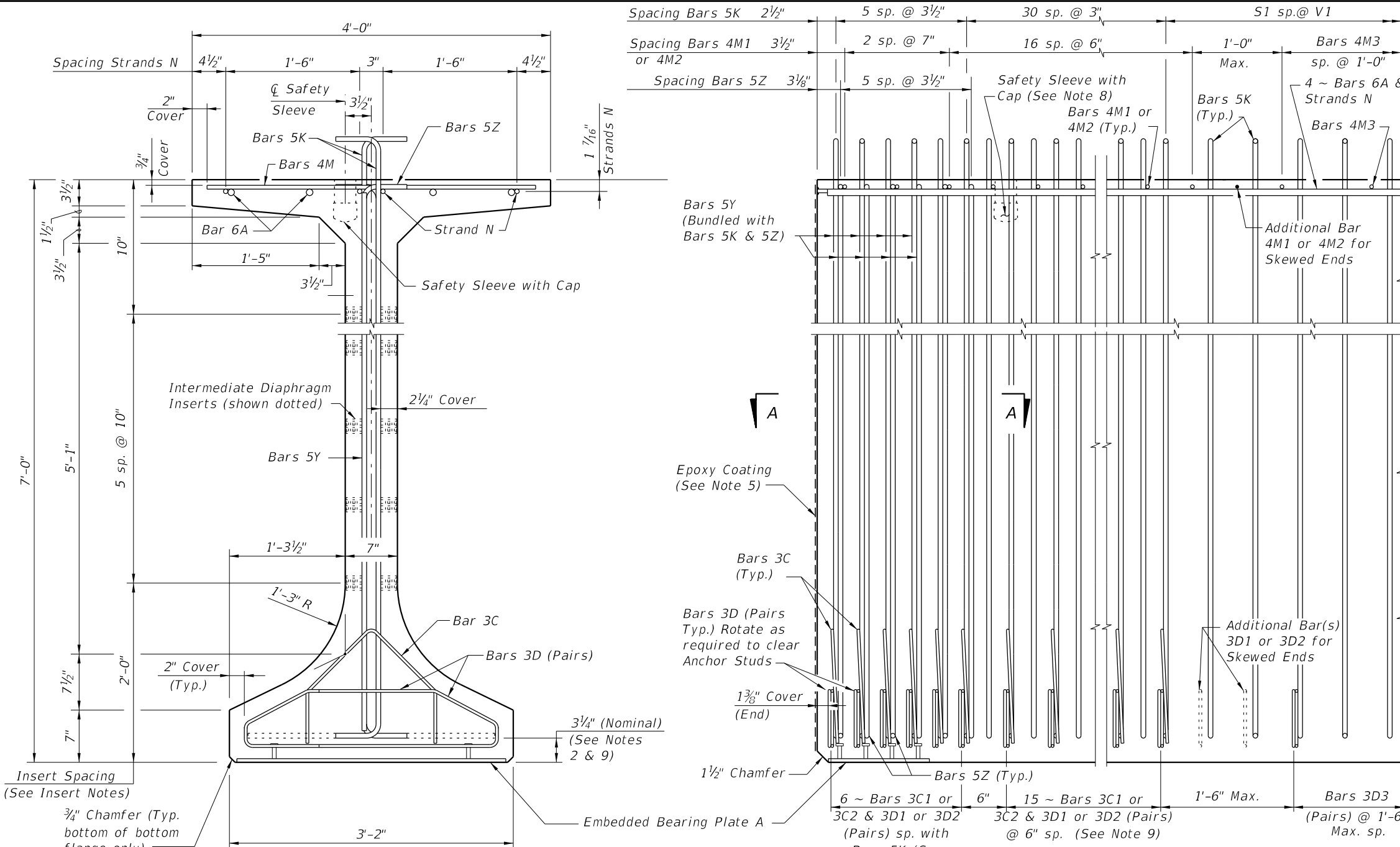
BILL OF REINFORCING STEEL

MARK	NOTE NUMBERS	SIZE	NUMBER REQUIRED	LENGTH (NOTE 1)
A	—	6	8	29'-0"
C1	9, 10 & 11	3	21 (End 1)	Varies
C2	9, 10 & 11	3	21 (End 2)	Varies
D1	9, 10, 11 & 14	3	42 (End 1)	Varies
D2	9, 10, 11 & 14	3	42 (End 2)	Varies
D3	9 & 14	3	See Table	4'-3"
K	2, 9, 11 & 13	5	See Table	8'-2"
M1	9 & 10	4	19 (End 1)	Varies
M2	9 & 10	4	19 (End 2)	Varies
M3	9	4	See Table	3'-8"
N	3 & 4	1/2" Ø Strand	4	Dim. L
Y	9 & 11	5	16	6'-6"
Z	2, 9, 11 & 13	5	12	7'-8"

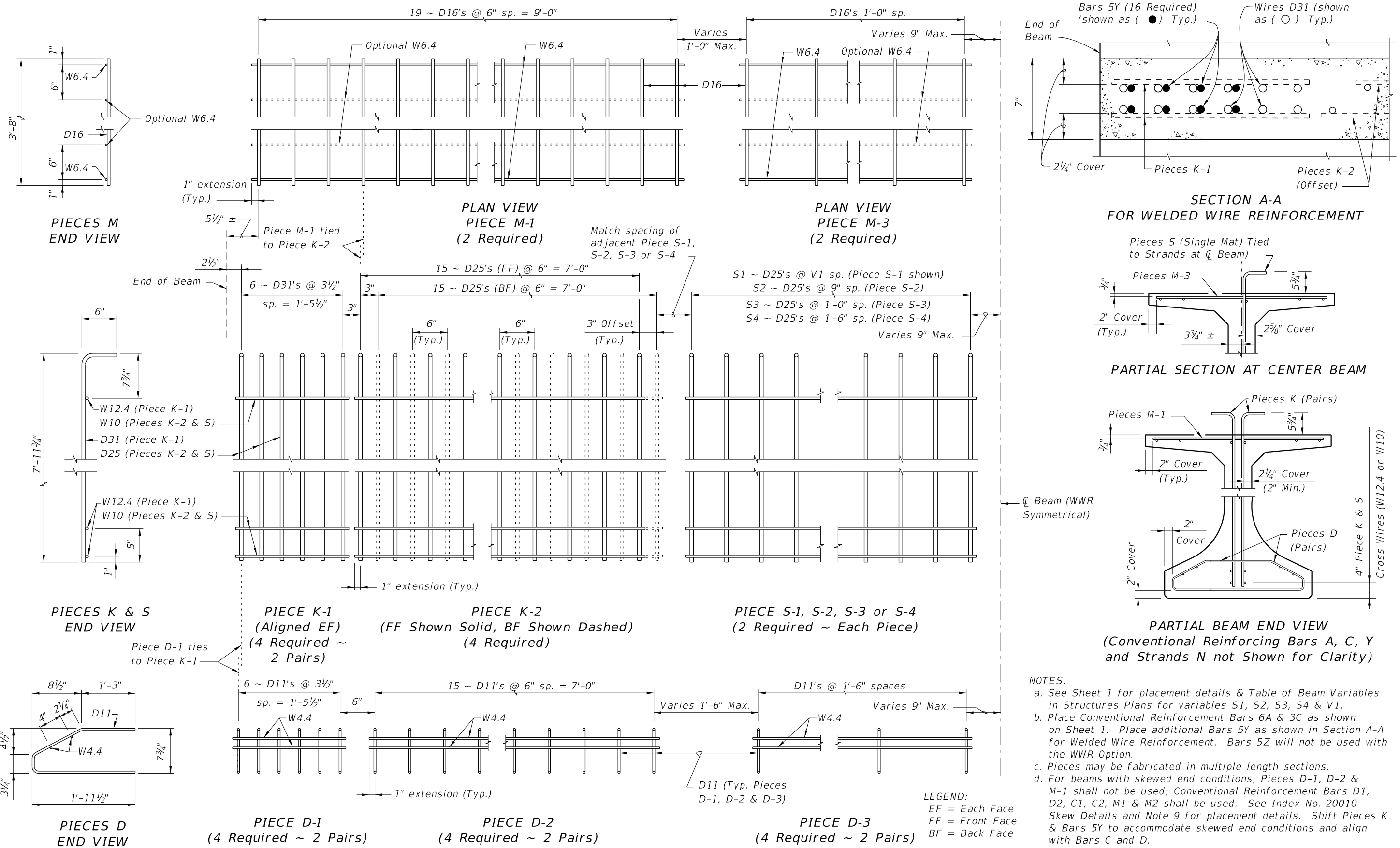
BENDING DIAGRAMS (See Note 1)



NOTES:
 A. Work this Index with Index No. 20010 - Typical Florida-I Beam Details and Notes and the Florida-I Beam - Table of Beam Variables in Structures Plans.
 B. For referenced notes, see Index No. 20010.
 C. For Dimensions A, B, C, D, L, R & V1 and number of spaces S1 thru S4, see Florida-I Beam - Table of Beam Variables in Structures Plans.




ALTERNATE REINFORCING STEEL (WELDED WIRE REINFORCEMENT) DETAILS



- NOTES:**
- See Sheet 1 for placement details & Table of Beam Variables in Structures Plans for variables S1, S2, S3, S4 & V1.
 - Place Conventional Reinforcing Bars 6A & 3C as shown on Sheet 1. Place additional Bars 5Y as shown in Section A-A for Welded Wire Reinforcement. Bars 5Z will not be used with the WWR Option.
 - Pieces may be fabricated in multiple length sections.
 - For beams with skewed end conditions, Pieces D-1, D-2 & M-1 shall not be used; Conventional Reinforcing Bars D1, D2, C1, C2, M1 & M2 shall be used. See Index No. 20010 Skew Details and Note 9 for placement details. Shift Pieces K & Bars 5Y to accommodate skewed end conditions and align with Bars C and D.

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LAST REVISION 07/01/10	DESCRIPTION:	 FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA-I 84 BEAM - STANDARD DETAILS	INDEX NO. 20084	SHEET NO. 2

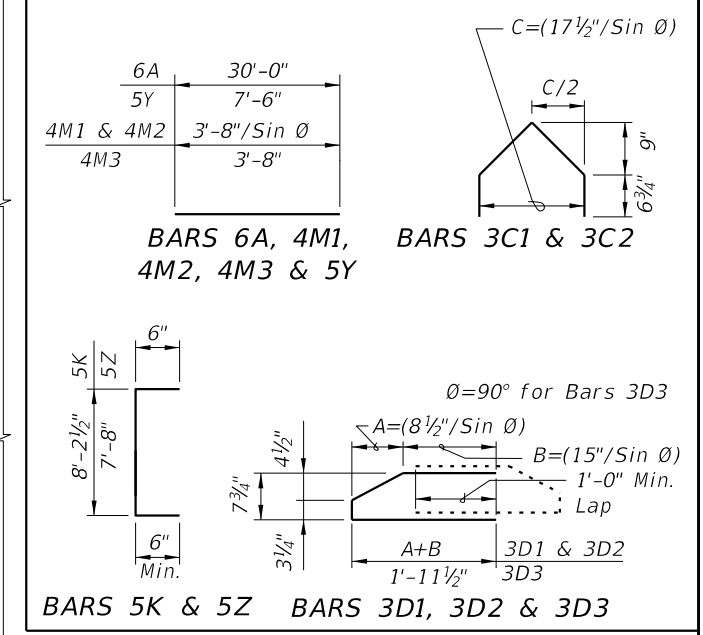
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CONVENTIONAL REINFORCING BAR BENDING DETAILS

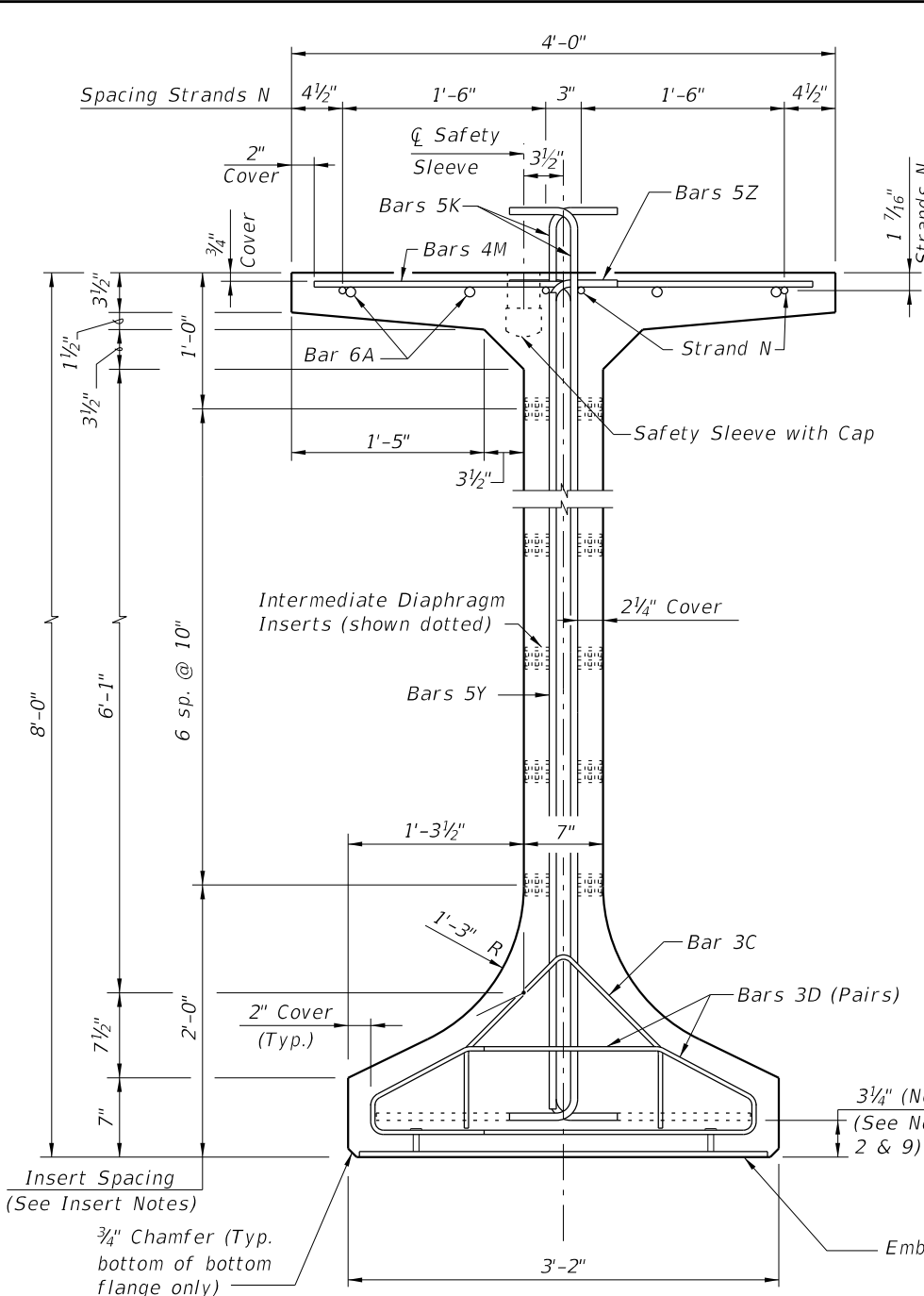
BILL OF REINFORCING STEEL

MARK	NOTE NUMBERS	SIZE	NUMBER REQUIRED	LENGTH (NOTE 1)
A	—	6	8	30'-0"
C1	9, 10 & 11	3	23 (End 1)	Varies
C2	9, 10 & 11	3	23 (End 2)	Varies
D1	9, 10, 11 & 14	3	46 (End 1)	Varies
D2	9, 10, 11 & 14	3	46 (End 2)	Varies
D3	9 & 14	3	See Table	4'-3"
K	2, 9, 11 & 13	5	See Table	9'-2"
M1	9 & 10	4	21 (End 1)	Varies
M2	9 & 10	4	21 (End 2)	Varies
M3	9	4	See Table	3'-8"
N	3 & 4	1/2" Ø Strand	4	Dim. L
Y	9 & 11	5	16	7'-6"
Z	2, 9, 11 & 13	5	12	8'-8"

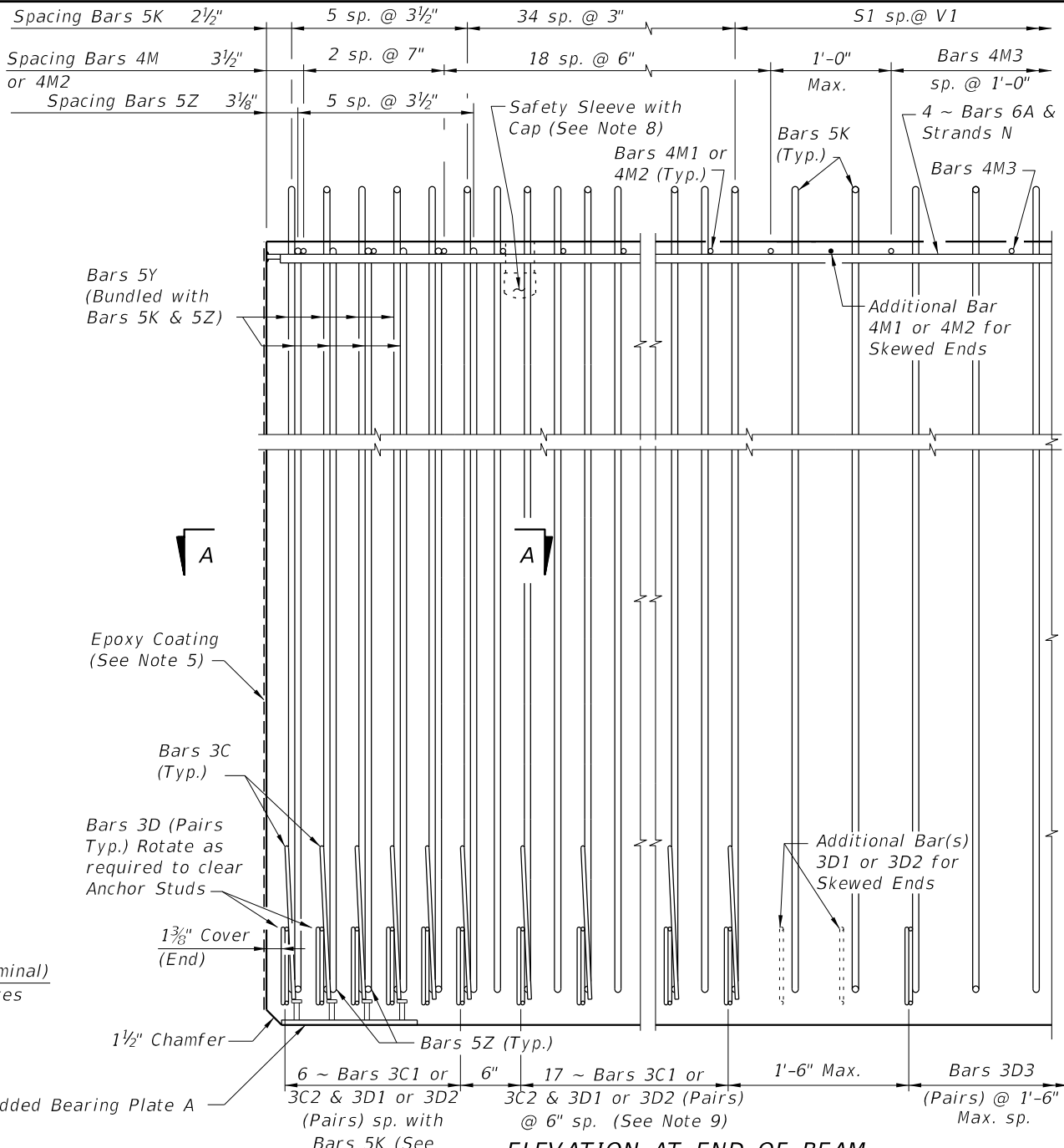
BENDING DIAGRAMS (See Note 1)



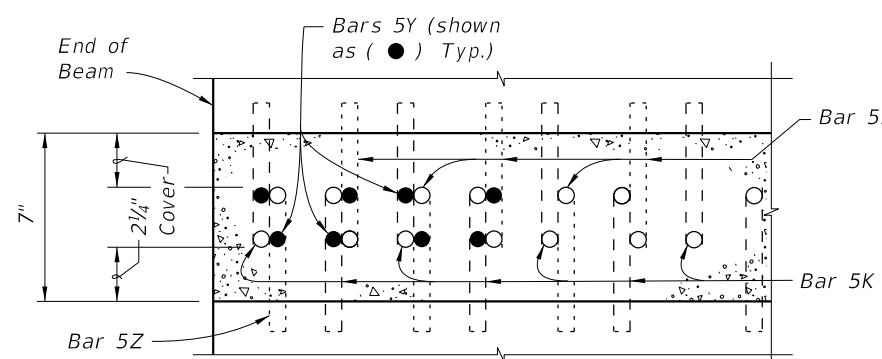
- NOTES:**
- A. Work this Index with Index No. 20010 - Typical Florida-I Beam Details and Notes and the Florida-I Beam - Table of Beam Variables in Structures Plans.
 - B. For referenced notes, see Index No. 20010.
 - C. For Dimensions A, B, C, D, L, R & V1 and number of spaces S1 thru S4, see Florida-I Beam - Table of Beam Variables in Structures Plans.



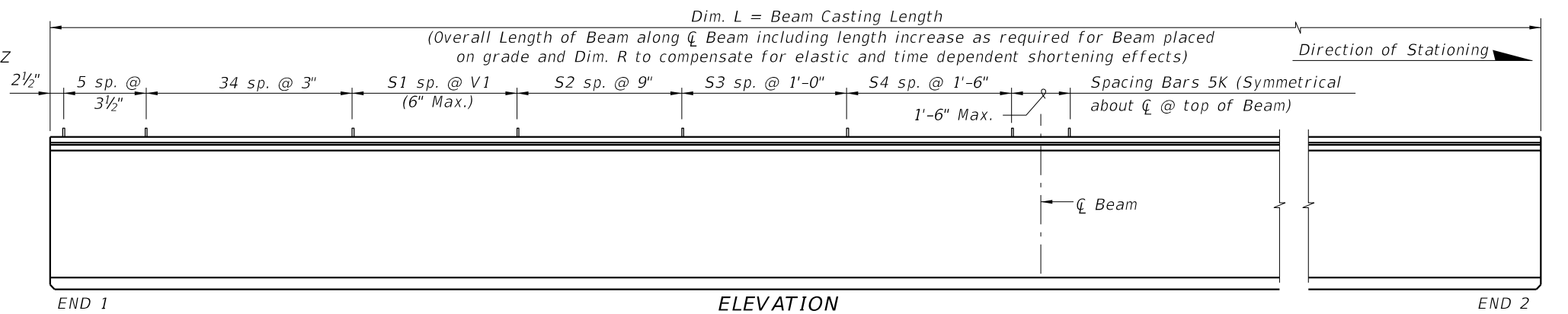
END VIEW



ELEVATION AT END OF BEAM (Flanges Not Shown For Clarity) (End 1 Shown, End 2 Similar)

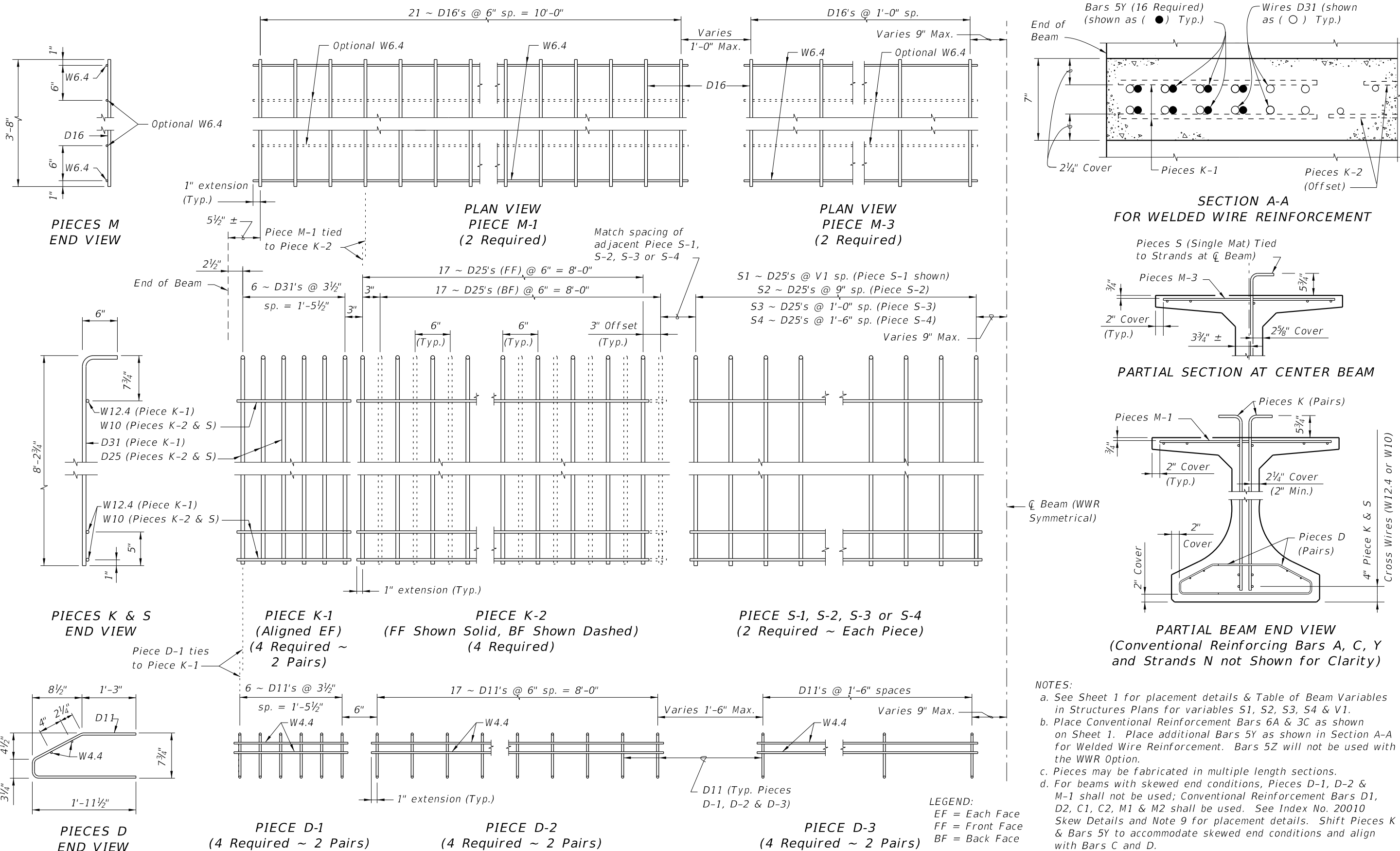


SECTION A-A FOR CONVENTIONAL REINFORCING (Showing Bars 5K, 5Y & 5Z Only)




ELEVATION

ALTERNATE REINFORCING STEEL (WELDED WIRE REINFORCEMENT) DETAILS

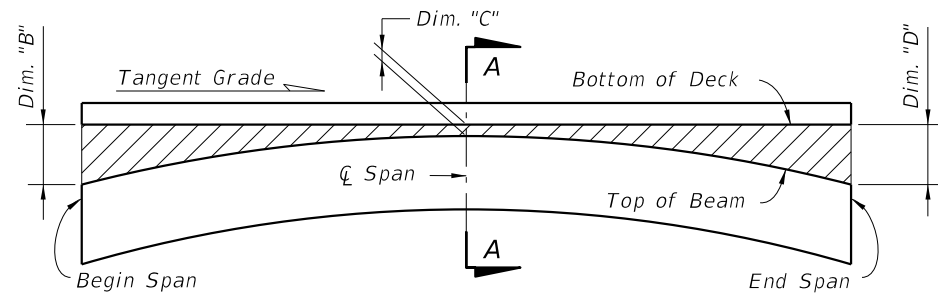


- NOTES:**
- See Sheet 1 for placement details & Table of Beam Variables in Structures Plans for variables S1, S2, S3, S4 & V1.
 - Place Conventional Reinforcing Bars 6A & 3C as shown on Sheet 1. Place additional Bars 5Y as shown in Section A-A for Welded Wire Reinforcement. Bars 5Z will not be used with the WWR Option.
 - Pieces may be fabricated in multiple length sections.
 - For beams with skewed end conditions, Pieces D-1, D-2 & M-1 shall not be used; Conventional Reinforcing Bars D1, D2, C1, C2, M1 & M2 shall be used. See Index No. 20010 Skew Details and Note 9 for placement details. Shift Pieces K & Bars 5Y to accommodate skewed end conditions and align with Bars C and D.

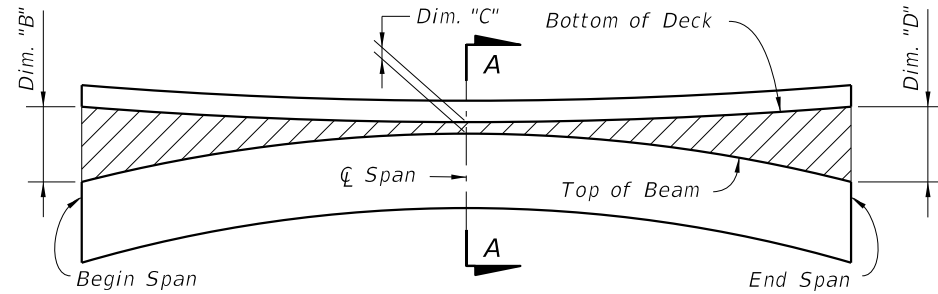
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LAST REVISION 07/01/10	DESCRIPTION:	 FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA-I 96 BEAM - STANDARD DETAILS	INDEX NO. 20096	SHEET NO. 2
REVISION					

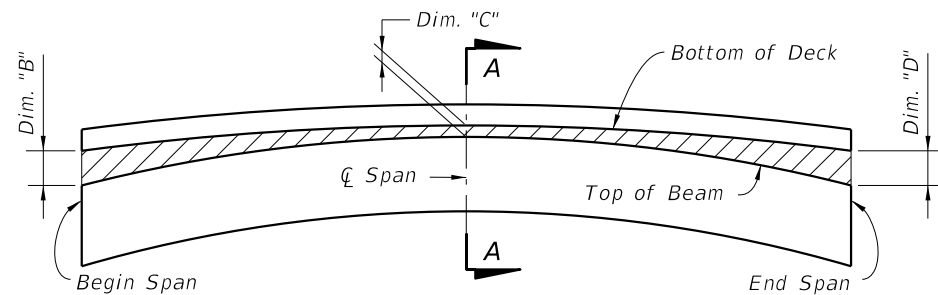
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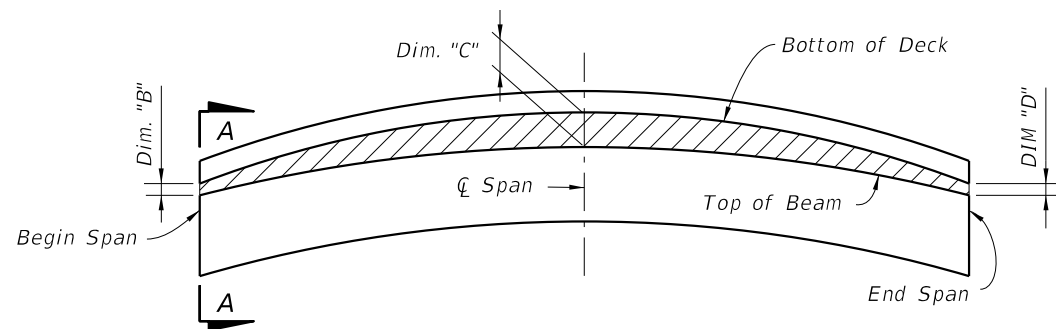
**BUILD-UP DIAGRAM FOR TANGENT SPANS
(ALONG ζ BEAM) (CASE 1)**



**BUILD-UP DIAGRAM FOR SAG VERTICAL CURVE SPANS
(ALONG ζ BEAM) (CASE 2)**



**BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT ζ SPAN
(ALONG ζ BEAM) (CASE 3)**

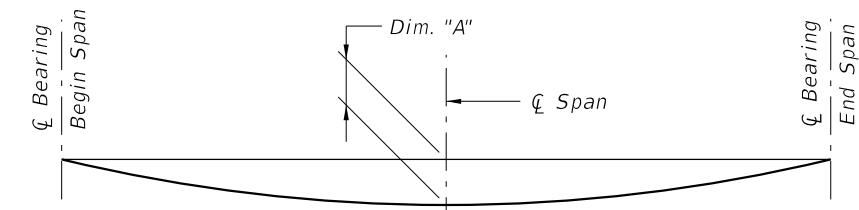


**BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT BEGIN OR END SPAN
(ALONG ζ BEAM) (CASE 4)**

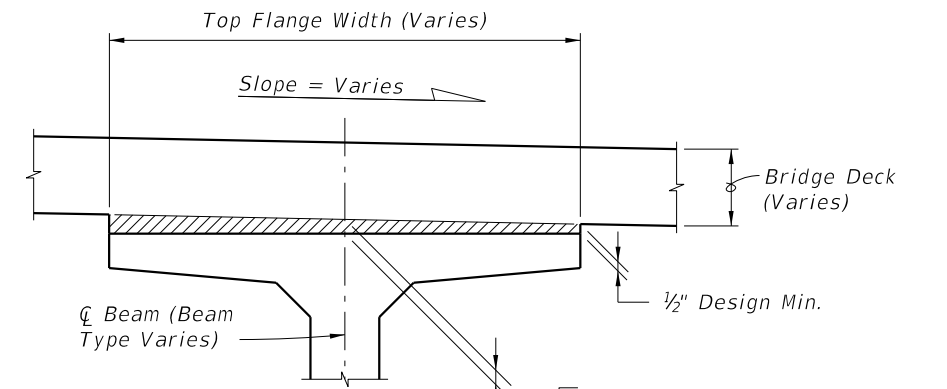
BEAM CAMBER AND BUILD-UP NOTES:

The build-up values given in the Data Table* are based on theoretical beam cambers. The Contractor shall monitor beam cambers for the purpose of predicting camber values at the time of the deck pour. If the predicted cambers based on field measurements differ more than $\pm 1/2$ " from the theoretical "Net Beam Camber @ 120 Days" shown in the Data Table*, obtain approval from the Engineer to modify the build-up dimensions as required. When the measured beam cambers create a conflict with the bottom mat of deck steel, notify the Engineer a minimum of 21 days prior to casting.

Dim. "A" includes the weight of the Stay-In-Place Formwork.



DEAD LOAD DEFLECTION DIAGRAM



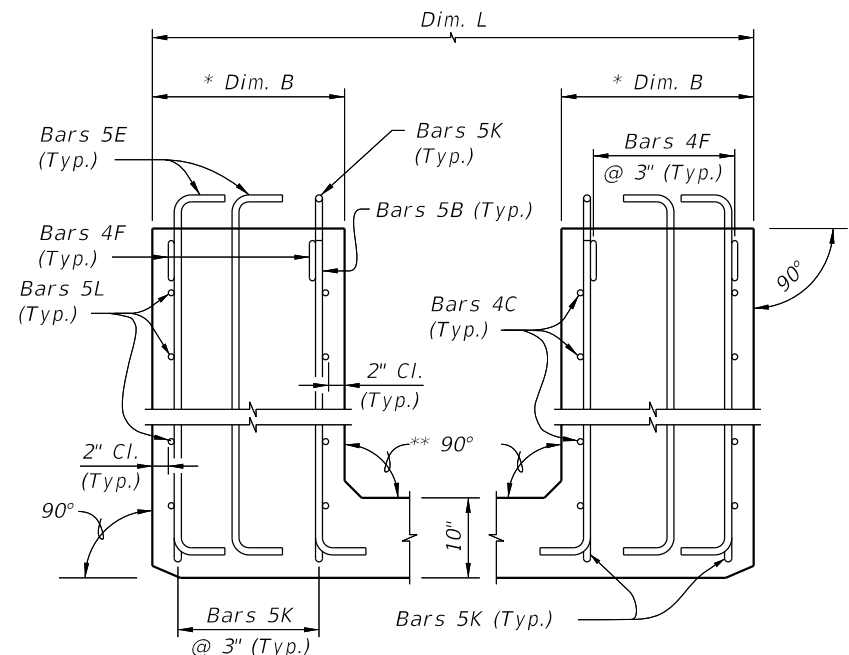
**SECTION A-A
BUILD-UP OVER BEAMS**

For Cases 1, 2 & 3 = DIM "C"
For Case 4 = DIM "B" or DIM "D"

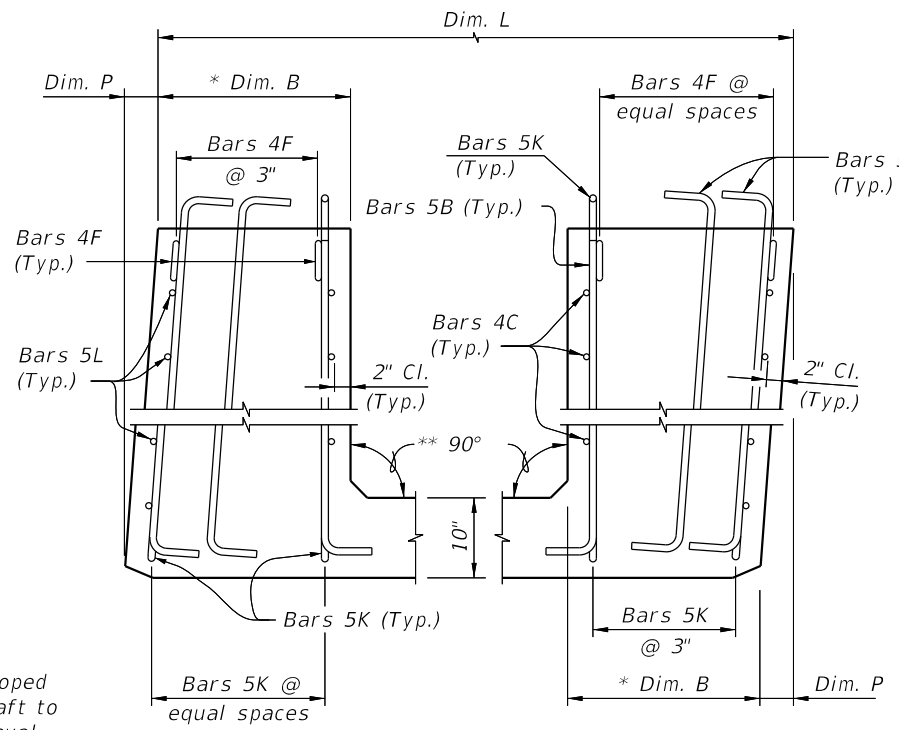
* NOTE:
Work this Index with the Build-up and Deflection Data Table for Florida-I Beams in Structures Plans.

LAST REVISION	REVISION	DESCRIPTION:		FDOT DESIGN STANDARDS FY 2012/2013	BUILD-UP & DEFLECTION DATA FOR FLORIDA-I BEAMS	INDEX NO.	SHEET NO.
01/01/12						20199	1

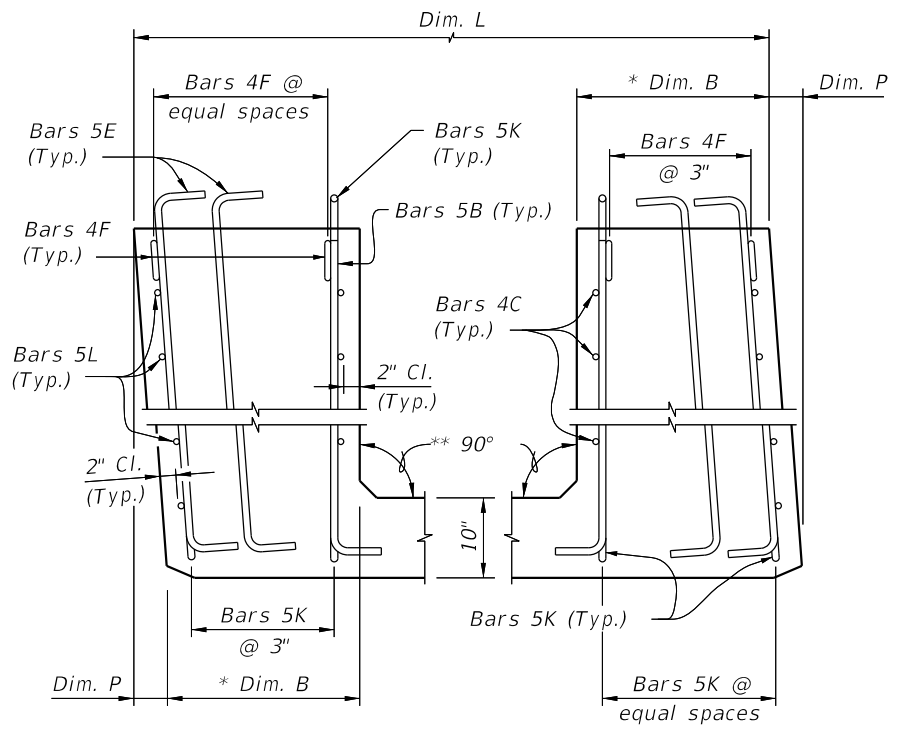
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 12/30/2011



CONDITION 1
(P = 0.0)

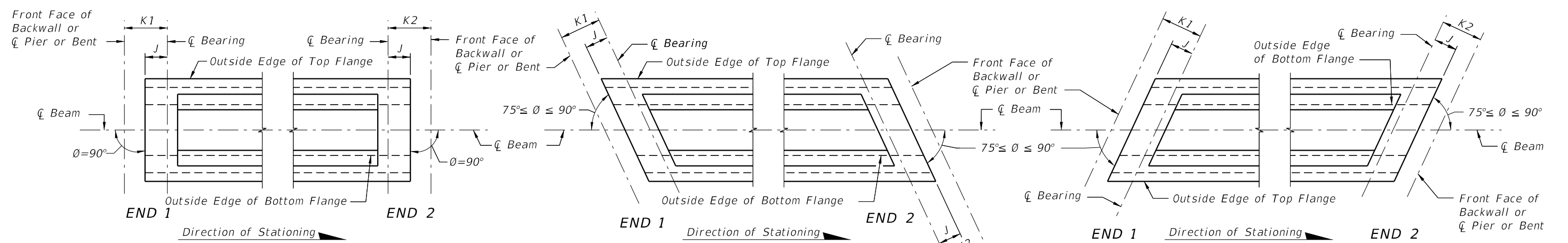


CONDITION 2



CONDITION 3

SCHEMATIC END ELEVATIONS OF BEAMS
(Showing Vertical Bevel of Beam End)




CASE 1

CASE 2

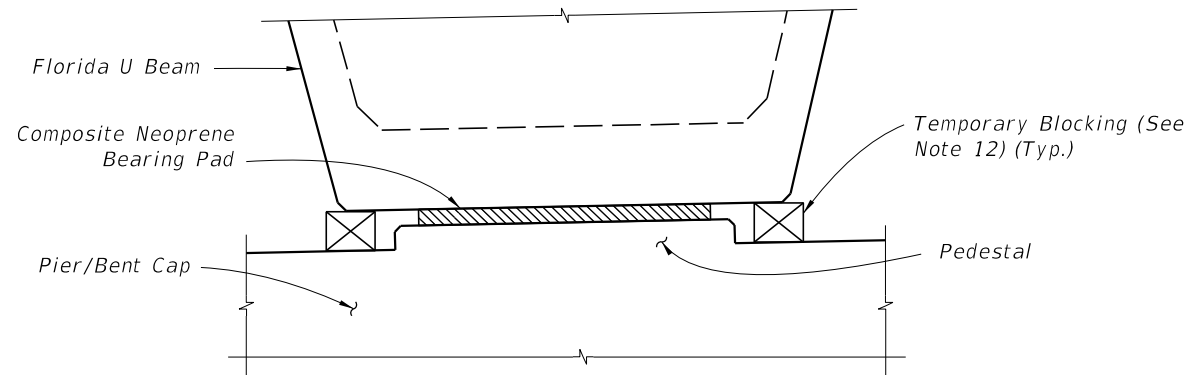
CASE 3

SCHEMATIC PLAN VIEWS AT BEAM ENDS

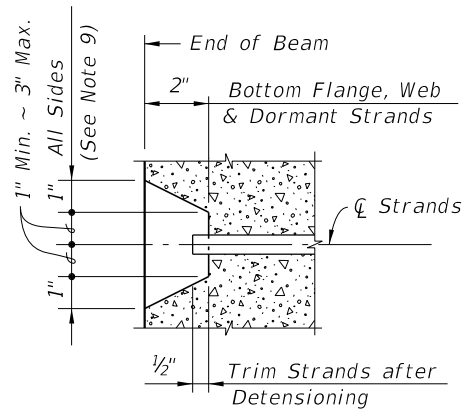
NOTE:
Work this Index with Florida U Beam - Table of Beam Variables in Structures Plans.

LAST REVISION	01/01/12	DESCRIPTION:	 FDOT DESIGN STANDARDS FY 2012/2013	TYPICAL FLORIDA U BEAM DETAILS AND NOTES	INDEX NO.	20210	SHEET NO.	1
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TEMPORARY BLOCKING OF BEAM ENDS



TYPICAL STRAND BLOCKOUT DETAIL

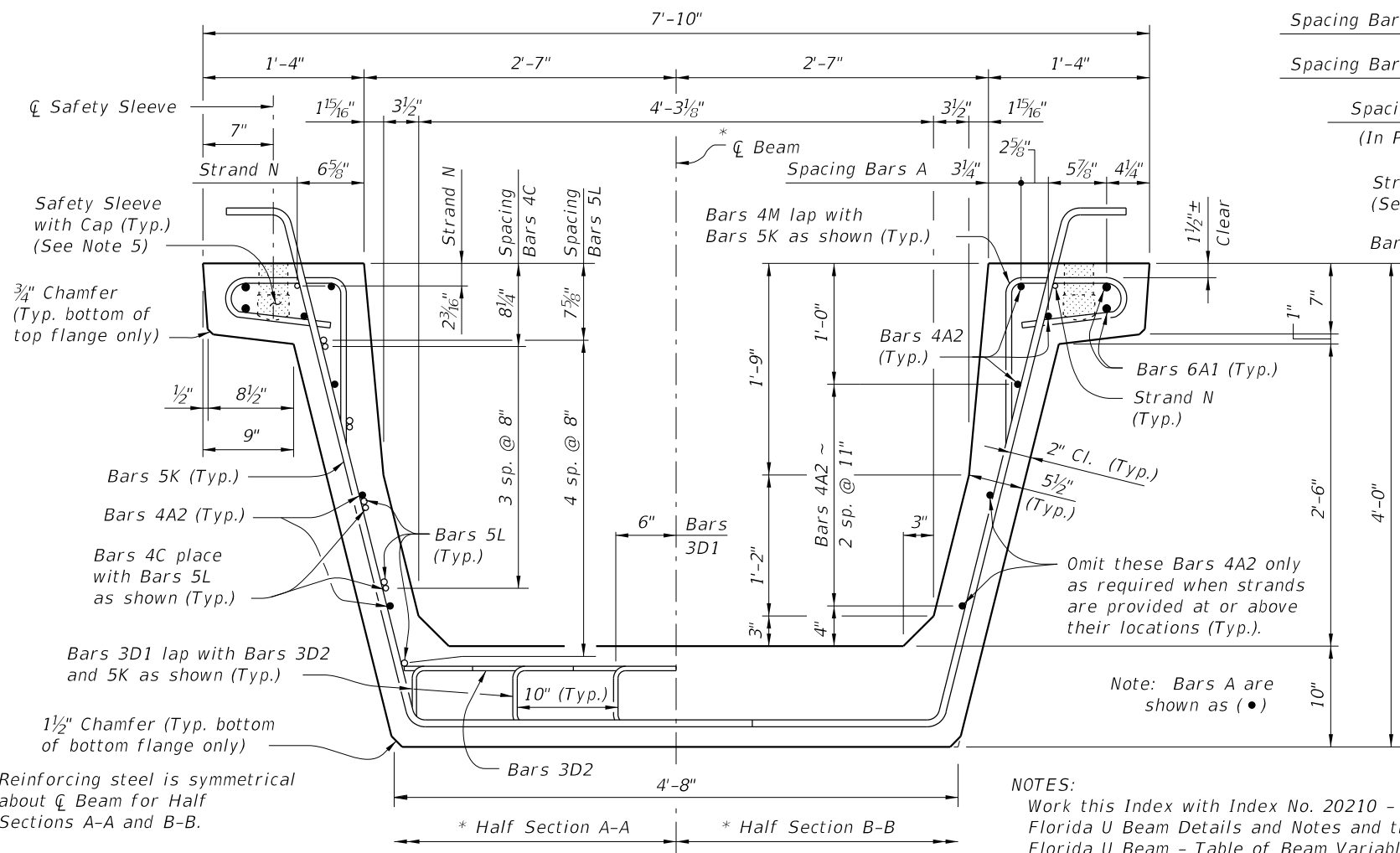
BEAM NOTES

1. All bar dimensions are out-to-out.
2. Strands N (Dormant Strands) shall be ASTM A416, Grade 270, seven-wire strands $\frac{3}{8}$ " \emptyset or larger, stressed to 10,000 lbs. each.
3. Unless otherwise noted in Structures Plans, the minimum concrete cover for reinforcing steel shall be 2".
4. At the option of the Contractor and with the Engineer's Approval, deformed welded wire reinforcement may be used in lieu of Bars 6A1, 4A2, 5B, 4C, 3D, 5E, 4F, 4G, 4H, 5K, 5L and 4M except as noted below in note 7, provided the wire sizes and spacing match those shown on the Standard Beam Detail sheets for these bars. Welded wire reinforcement shall conform to ASTM A497.
5. Safety Sleeves or other Safety Line Anchorage Devices are permitted in the top flange. One Safety Sleeve alternative is provided herein as $2\frac{1}{2}$ " NPS x 5" PVC Sch. 40 Pipe with Cap in both top flanges spaced on 8'-0" (Max.) centers. Shift Bars 5K & 4M locally to allow placement. Holes shall be free of debris and water prior to casting deck.
6. For Beams with vertically beveled end conditions when "Dim. P" exceeds 1", Bars 5E and the first Bars 4F and 5K shall be placed parallel to the end of the beam. The remaining Bars 4F and 5K within the limits of "Dim. B" shall be fanned at equal spaces.
7. Welded deformed wire reinforcement shall not be used for the end reinforcement (Bars 5B, 4C, 3D, 5E, 4F, 5K, and 5L) for beams with skewed end conditions or vertically beveled end conditions when "Dim. P" exceeds 1".
8. Bars 5K shall be placed and tied to the fully bonded strands in the bottom row (see "STRAND PATTERN" in Structures Plans).
9. Strand Protection at beam ends shall consist of a 2" deep recess formed around all strands (including dormant) or strand groups. Extend recess to face of web and bottom of flange for bottom row of strands. After detensioning, cut strands $\frac{1}{2}$ " from recessed surface and fill the recess with a Type F-2 or Q Epoxy Compound in accordance with Section 926 of the Specifications.
10. Use Size No. 67 maximum sized aggregate.
11. Use Stay-in-Place metal deck forms inside the beams.
12. Prior to deck placement, based on the deck forming system and deck placement sequence, evaluate and provide, if necessary, temporary bracing between the U Beams. Also, prior to deck placement, provide temporary blocking under each web at both ends of every beam. Ensure the temporary blocking is adequate to resist movements and rotations that occur during placement of the deck. Leave temporary blocking and bracing in place for a minimum of four days after the deck placement.
13. For referenced Dimensions, Angles and Case Numbers see Table of Beam Variables in Structures Plans.

NOTE:
Work this Index with Florida U Beam - Table of Beam Variables in Structures Plans.

LAST REVISION	01/01/12	DESCRIPTION:		FDOT DESIGN STANDARDS FY 2012/2013	TYPICAL FLORIDA U BEAM DETAILS AND NOTES	INDEX NO. 20210	SHEET NO. 2
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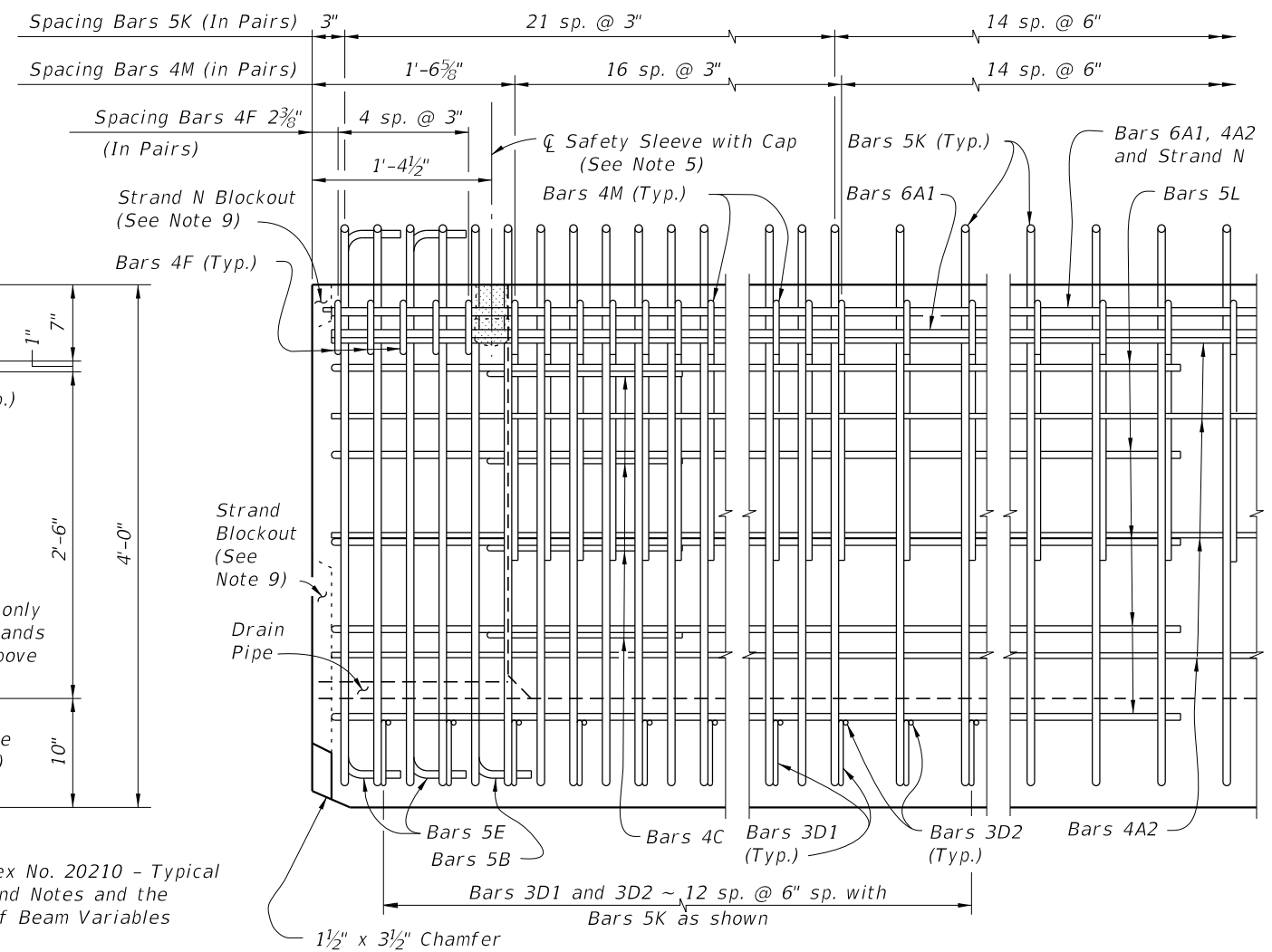
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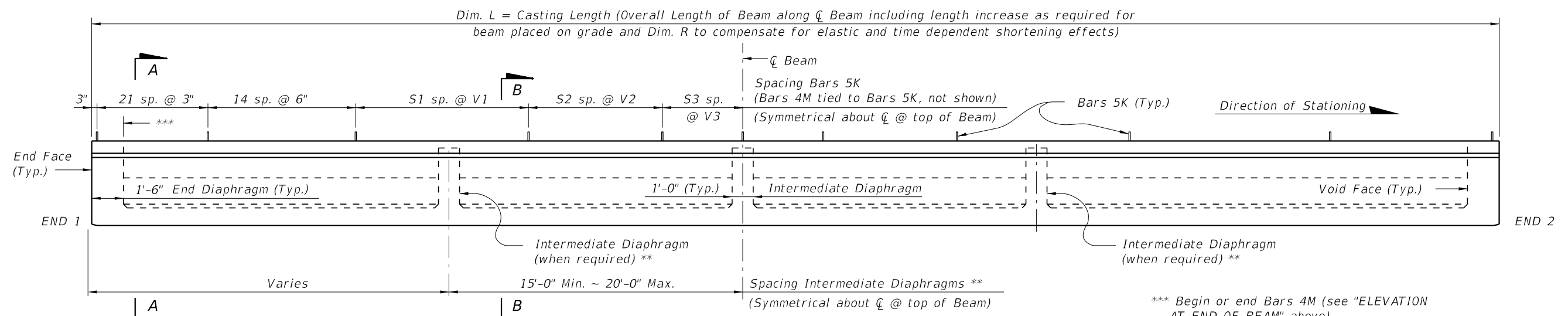
TYPICAL SECTION

- * Reinforcing steel is symmetrical about \bar{C} Beam for Half Sections A-A and B-B.
- ** Intermediate Diaphragms shall be provided:
 - (1) - At midspan.
 - (2) - At 20'-0" Max. from midspan when beam length (L) exceeds 60 Ft.

NOTES:
 Work this Index with Index No. 20210 - Typical Florida U Beam Details and Notes and the Florida U Beam - Table of Beam Variables in Structures Plans.
 For referenced notes see Index No. 20210.



ELEVATION AT END OF BEAM

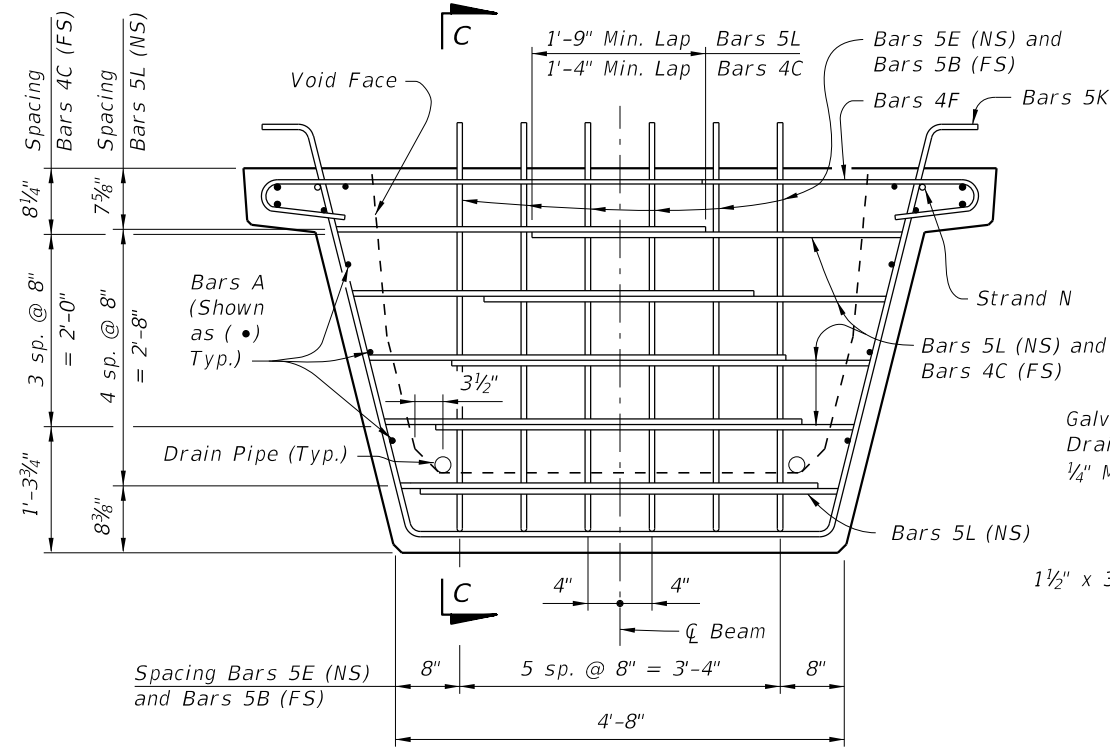


ELEVATION

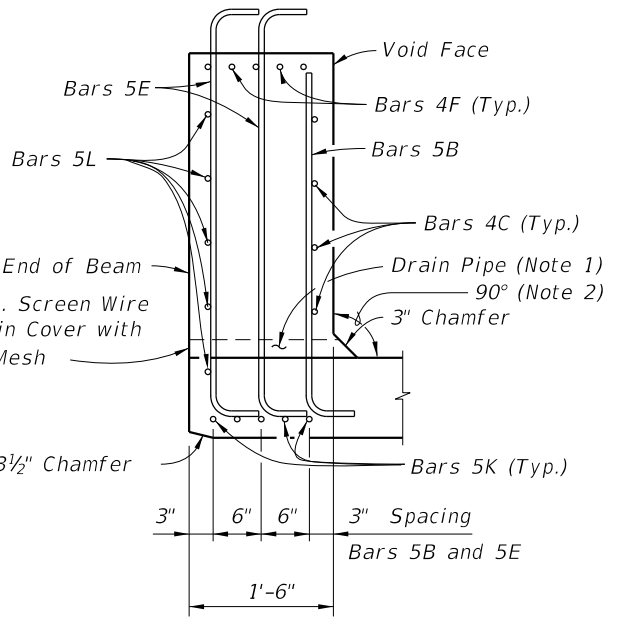
*** Begin or end Bars 4M (see "ELEVATION AT END OF BEAM" above)

LAST REVISION	DESCRIPTION:	FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA U 48 BEAM - STANDARD DETAILS		INDEX NO.	SHEET NO.
07/01/05			20248			1

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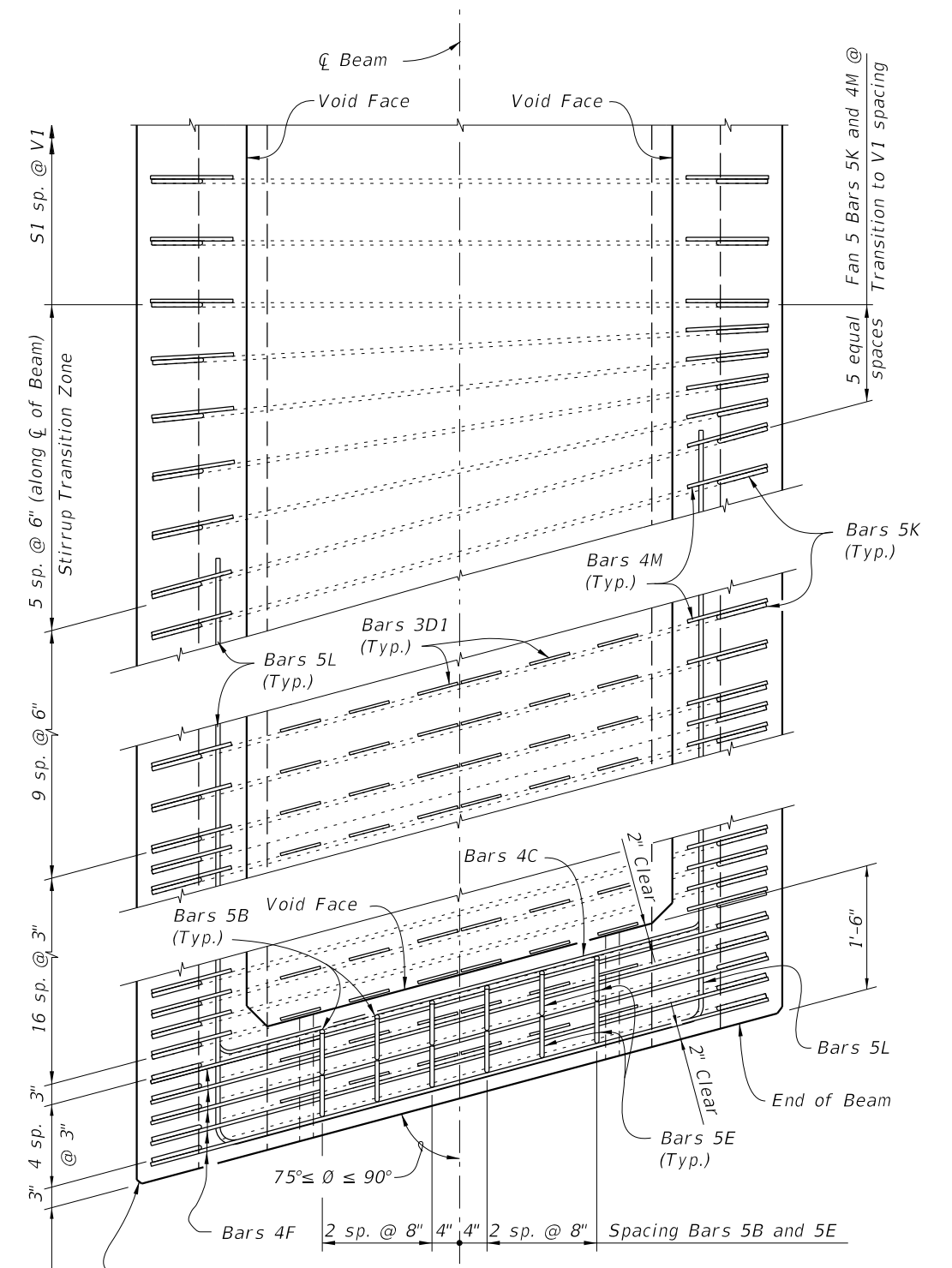
END VIEW AT END DIAPHRAGM



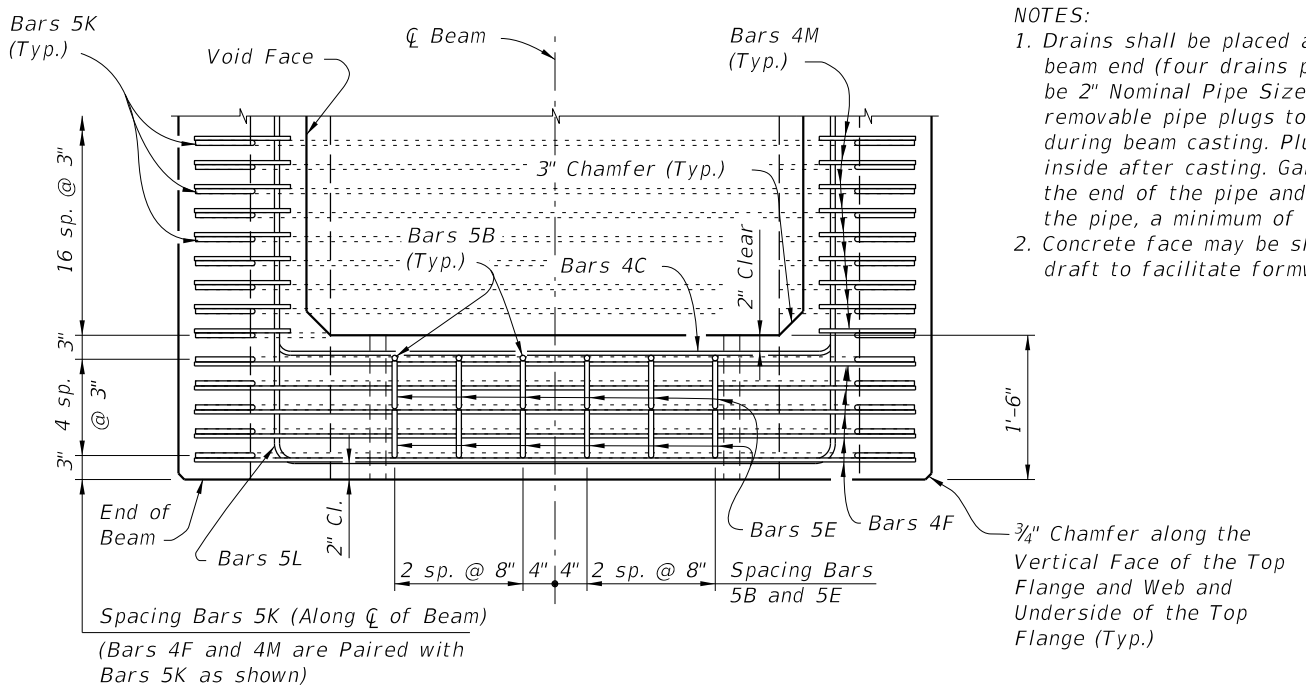
SECTION C-C

NOTES:


1. Drains shall be placed adjacent to each web at each beam end (four drains per beam). Drain Pipe shall be 2" Nominal Pipe Size, Schedule 80 PVC. Provide removable pipe plugs to prevent concrete entrance during beam casting. Plugs to be removed from the inside after casting. Galvanized screen wire shall cover the end of the pipe and bent down around the sides of the pipe, a minimum of 1" and secured prior to casting.
2. Concrete face may be sloped with a maximum 1:24 draft to facilitate formwork removal.



TOP VIEW OF SKEWED END DIAPHRAGM AND STIRRUP TRANSITION ZONE (Bars 3D2 Not Shown For Clarity)



TOP VIEW OF END DIAPHRAGM (Bars 3D1 And 3D2 Not Shown For Clarity)

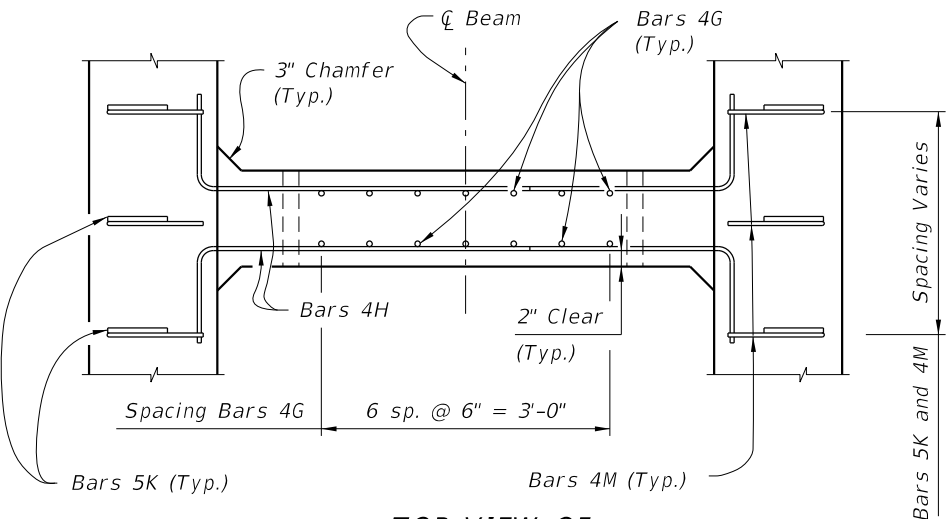
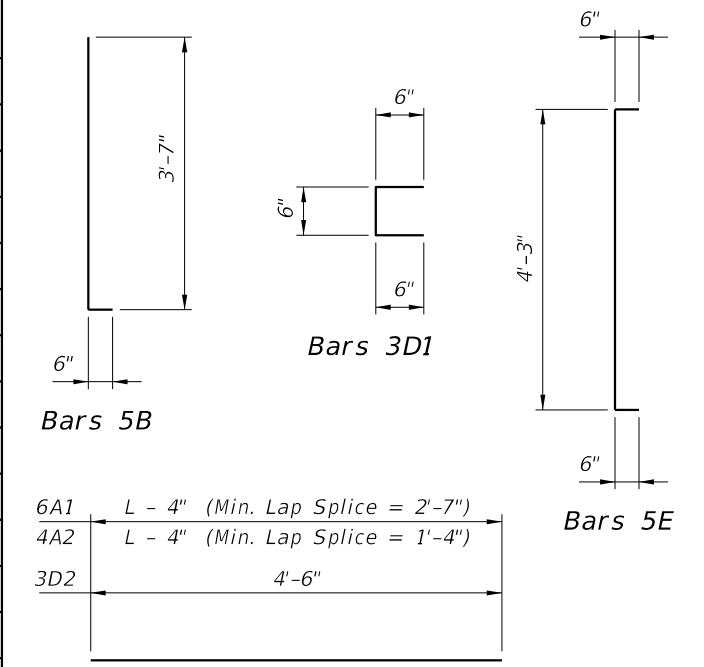
LAST REVISION 07/01/05	DESCRIPTION:  FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA U 48 BEAM - STANDARD DETAILS	INDEX NO. 20248	SHEET NO. 2
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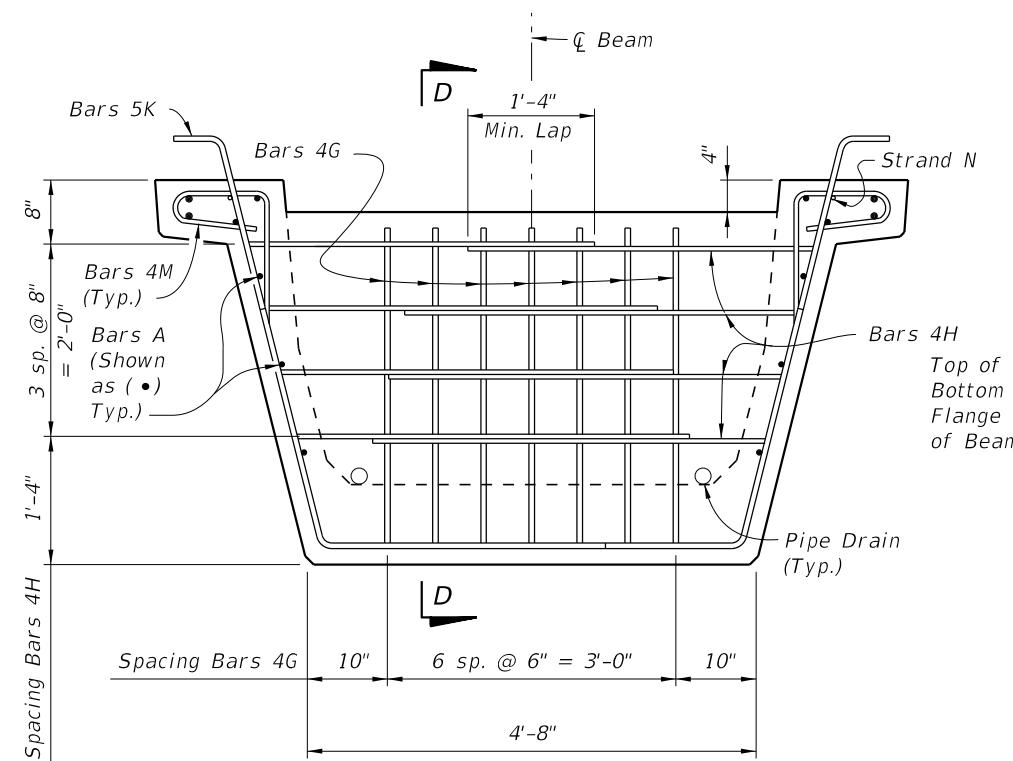
CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL FOR ONE BEAM ONLY

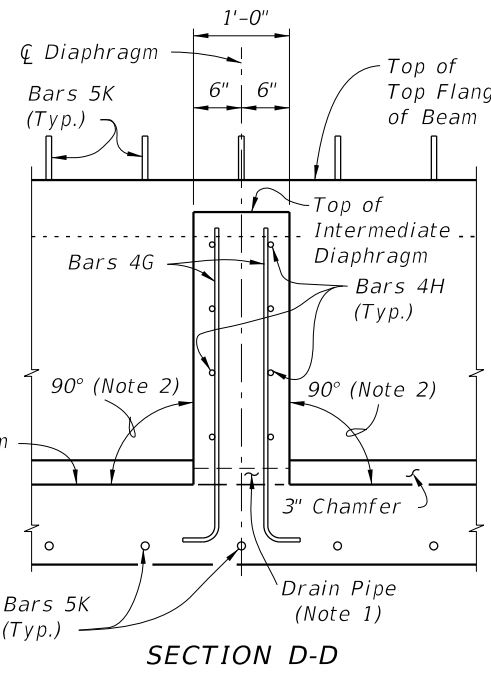
MARK	SIZE	NO. REQD.	LENGTH
A1	6	4	Dim. L - 4"
A2	4	10	Dim. L - 4"
B	5	12	4'-1"
C	4	16	5'-1"
D1	3	156	1'-6"
D2	3	26	4'-6"
E	5	24	5'-3"
F	4	20	6'-2"
G	4	See Table	4'-0"
H	4	See Table	4'-7"
K	5	See Table	8'-0"
L	5	20	14'-0"
M	4	See Table	3'-11"
N	3/8" Ø Strand	2	Dim. L - 3"



TOP VIEW OF INTERMEDIATE DIAPHRAGM

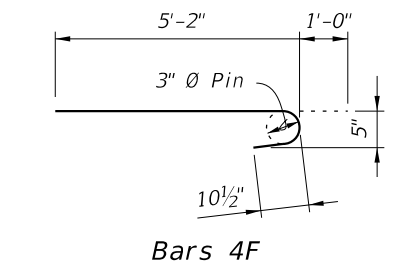


SECTION AT INTERMEDIATE DIAPHRAGM

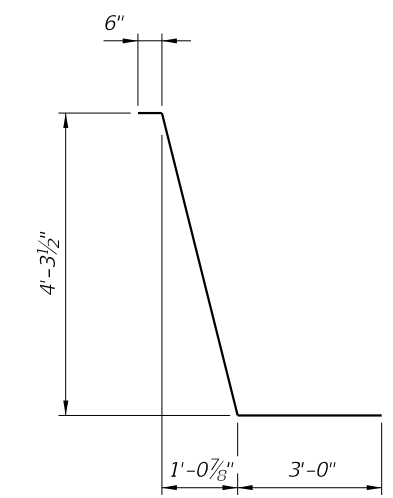


SECTION D-D

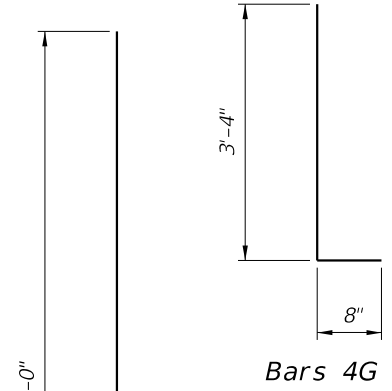
- NOTES:
- Drains shall be placed adjacent to each web at each intermediate diaphragm (two drains per intermediate diaphragm). Drain Pipe shall be 2" Nominal Pipe Size, Schedule 80 PVC. Provide removable pipe plugs to prevent concrete entrance during beam casting. Plugs to be removed from the inside after casting.
 - Concrete face may be sloped with a maximum 1:24 draft to facilitate formwork removal.
 - Intermediate diaphragms must be cast and concrete release strength obtained prior to removing beam from casting bed.



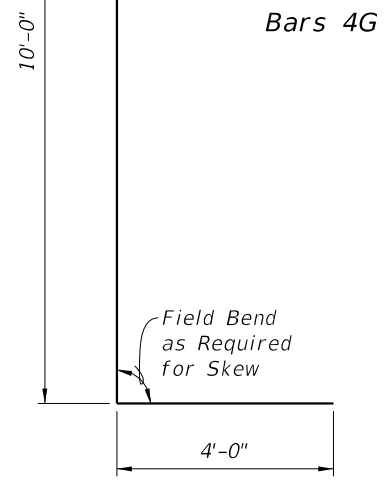
Bars 4F



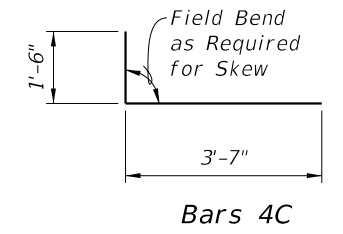
Bars 5K



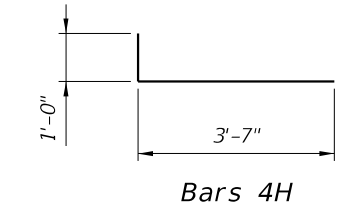
Bars 4G



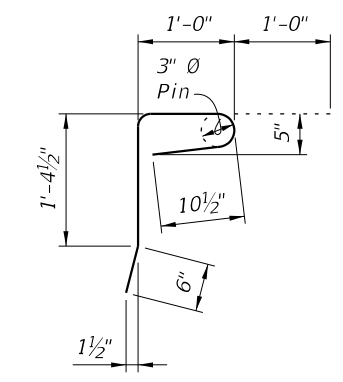
Bars 5L



Bars 4C



Bars 4H



Bars 4M

LAST REVISION	DESCRIPTION:
01/01/11	

REVISION	DESCRIPTION:

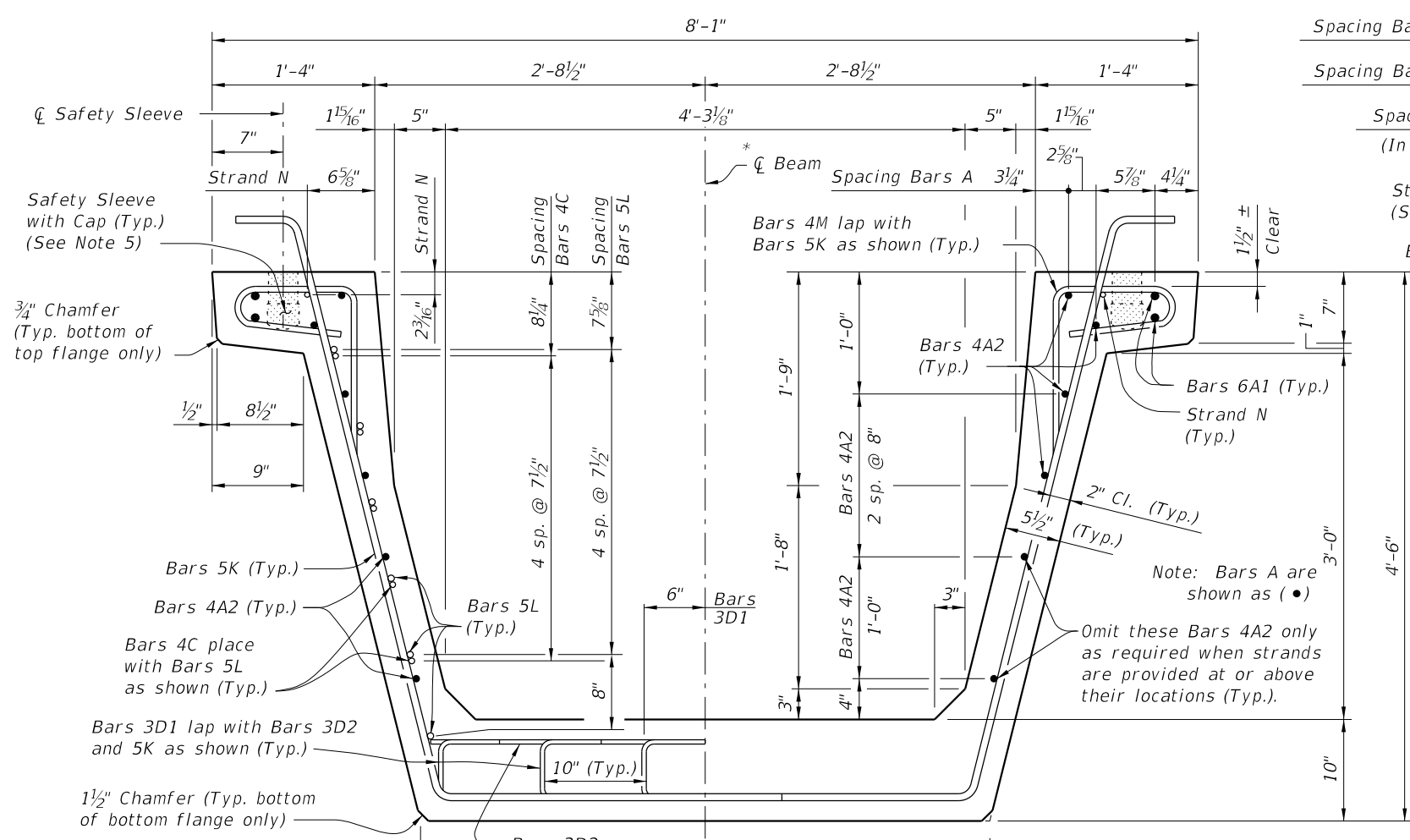


FDOT DESIGN STANDARDS
FY 2012/2013

FLORIDA U 48 BEAM - STANDARD DETAILS

INDEX NO.	SHEET NO.
20248	3

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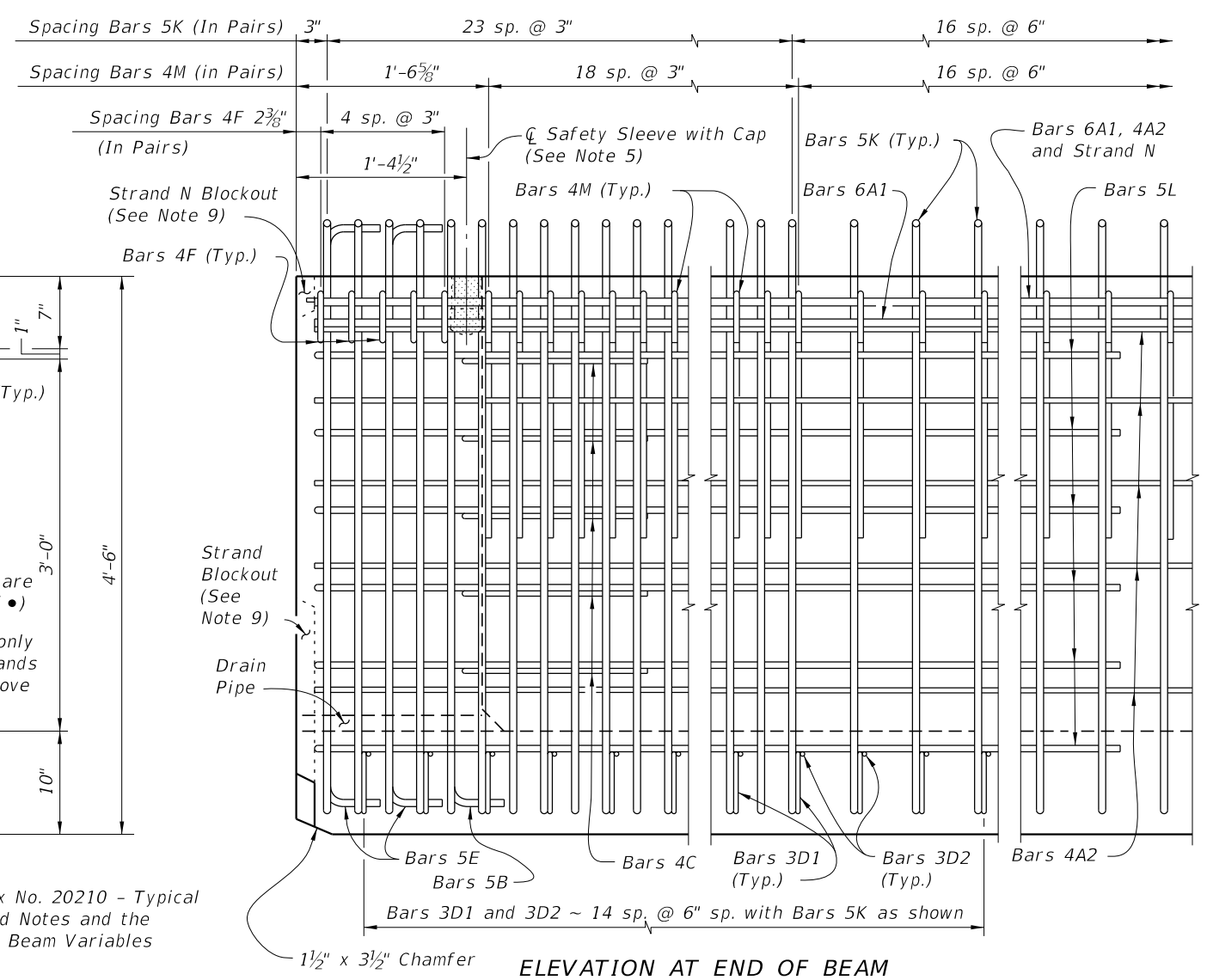


* Reinforcing steel is symmetrical about \bar{C} Beam for Half Sections A-A and B-B.

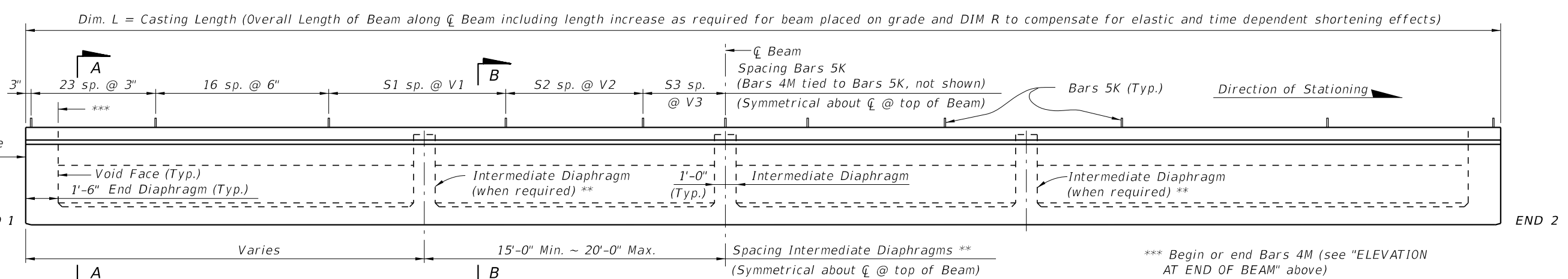
** Intermediate Diaphragms shall be provided:
 (1) - At midspan.
 (2) - At 20'-0" Max. from midspan when beam length (L) exceeds 60 Ft.

TYPICAL SECTION

NOTES:
 Work this Index with Index No. 20210 - Typical Florida U Beam Details and Notes and the Florida U Beam - Table of Beam Variables in Structures Plans.
 For referenced notes see Index No. 20210.



ELEVATION AT END OF BEAM

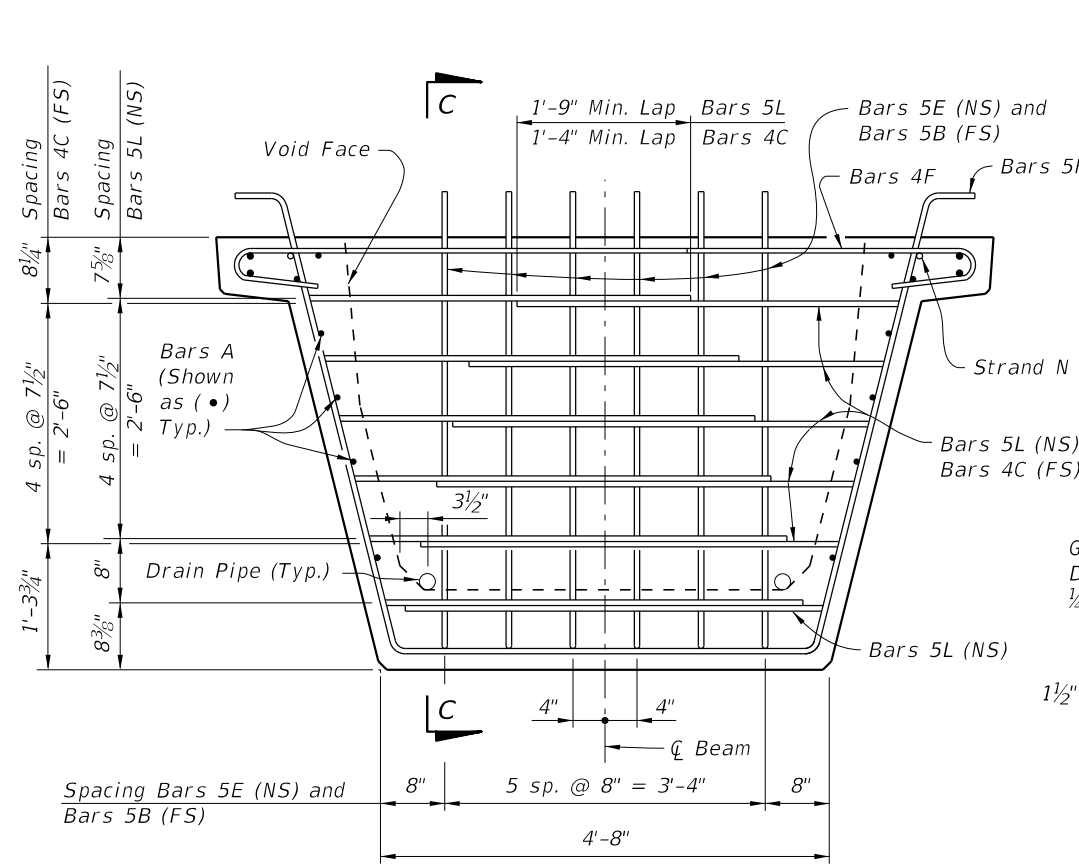


ELEVATION

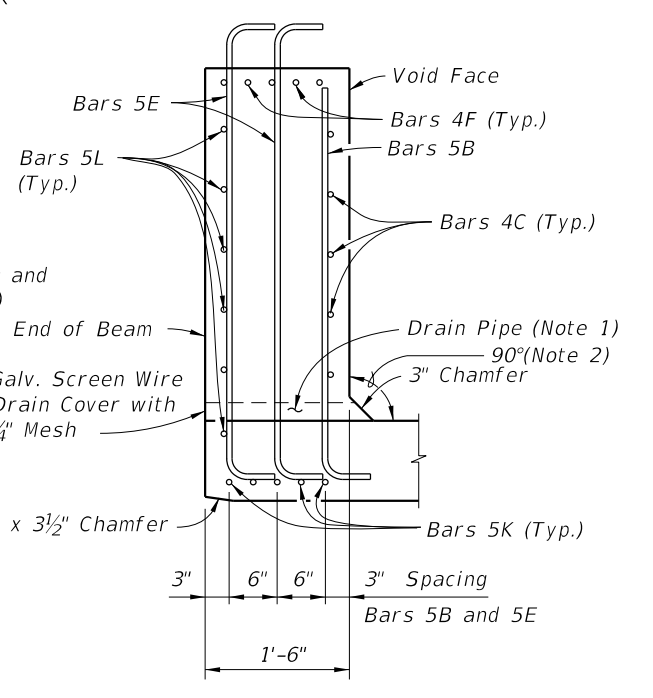
*** Begin or end Bars 4M (see "ELEVATION AT END OF BEAM" above)

LAST REVISION	DESCRIPTION:	FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA U 54 BEAM - STANDARD DETAILS		INDEX NO.	SHEET NO.
07/01/05			20254	1		

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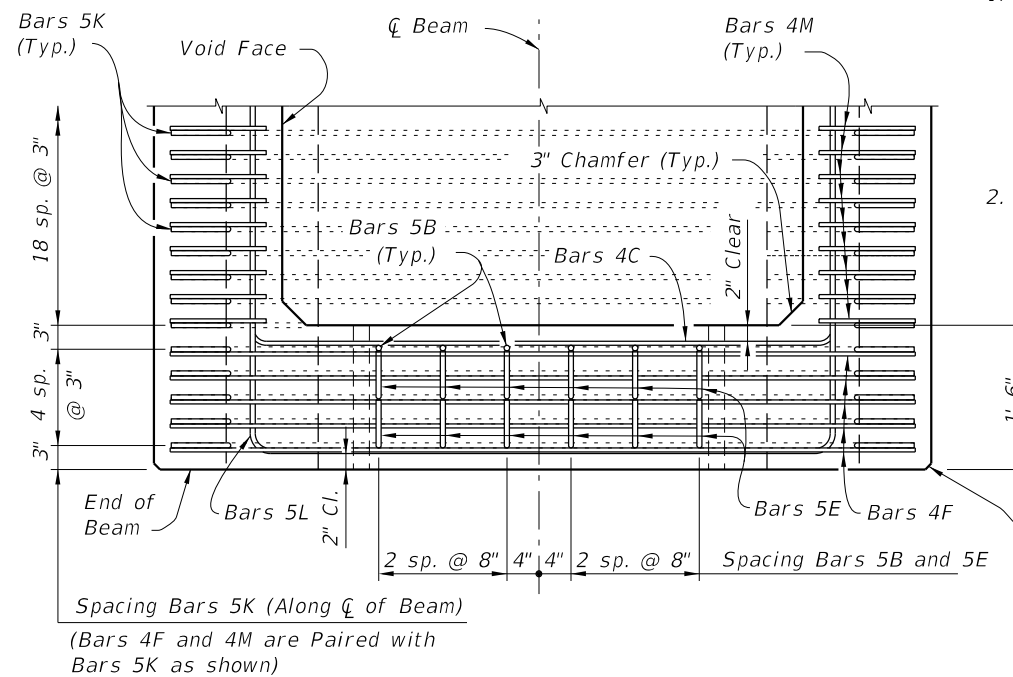


END VIEW AT END DIAPHRAGM

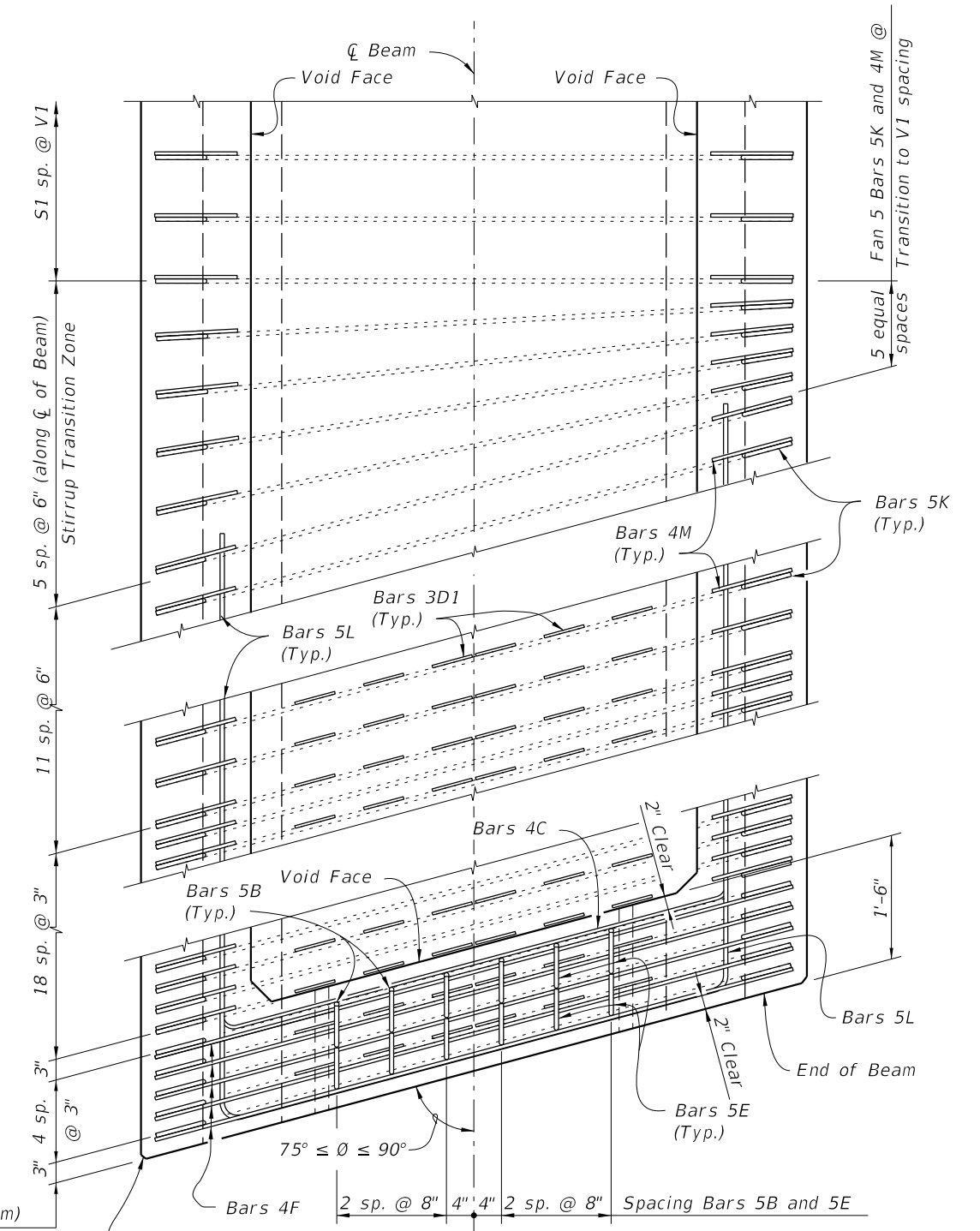


SECTION C-C

- NOTES:
- Drains shall be placed adjacent to each web at each beam end (four drains per beam). Drain Pipe shall be 2" Nominal Pipe Size, Schedule 80 PVC. Provide removable pipe plugs to prevent concrete entrance during beam casting. Plugs to be removed from the inside after casting. Galvanized screen wire shall cover the end of the pipe and bent down around the sides of the pipe, a minimum of 1" and secured prior to casting.
 - Concrete face may be sloped with a maximum 1:24 draft to facilitate formwork removal.



TOP VIEW OF END DIAPHRAGM
(Bars 3D1 And 3D2 Not Shown For Clarity)



TOP VIEW OF SKEWED END DIAPHRAGM AND STIRRUP TRANSITION ZONE
(Bars 3D2 Not Shown For Clarity)

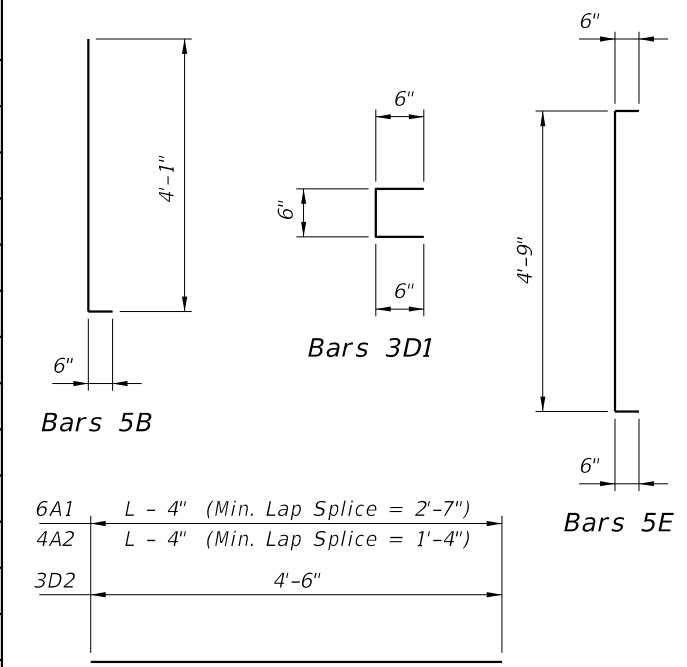
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07/01/05						20254	2

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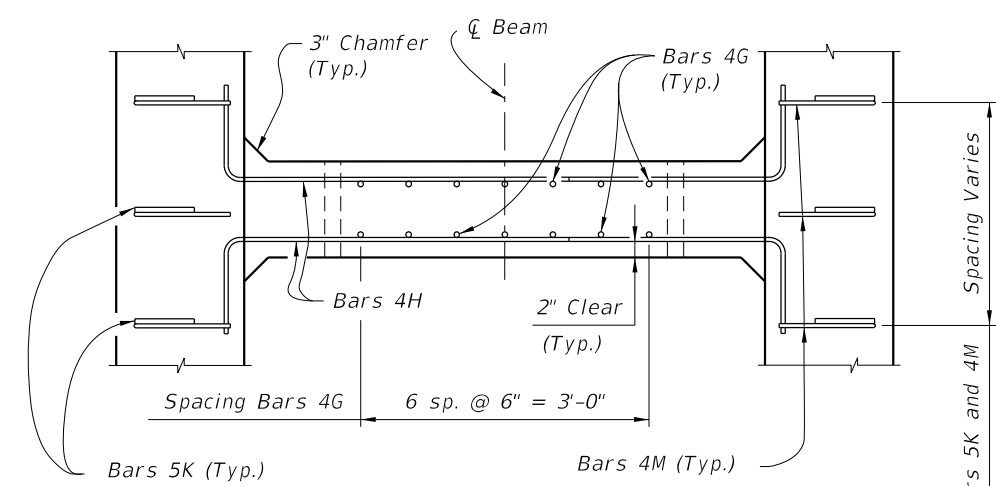
CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL FOR ONE BEAM ONLY

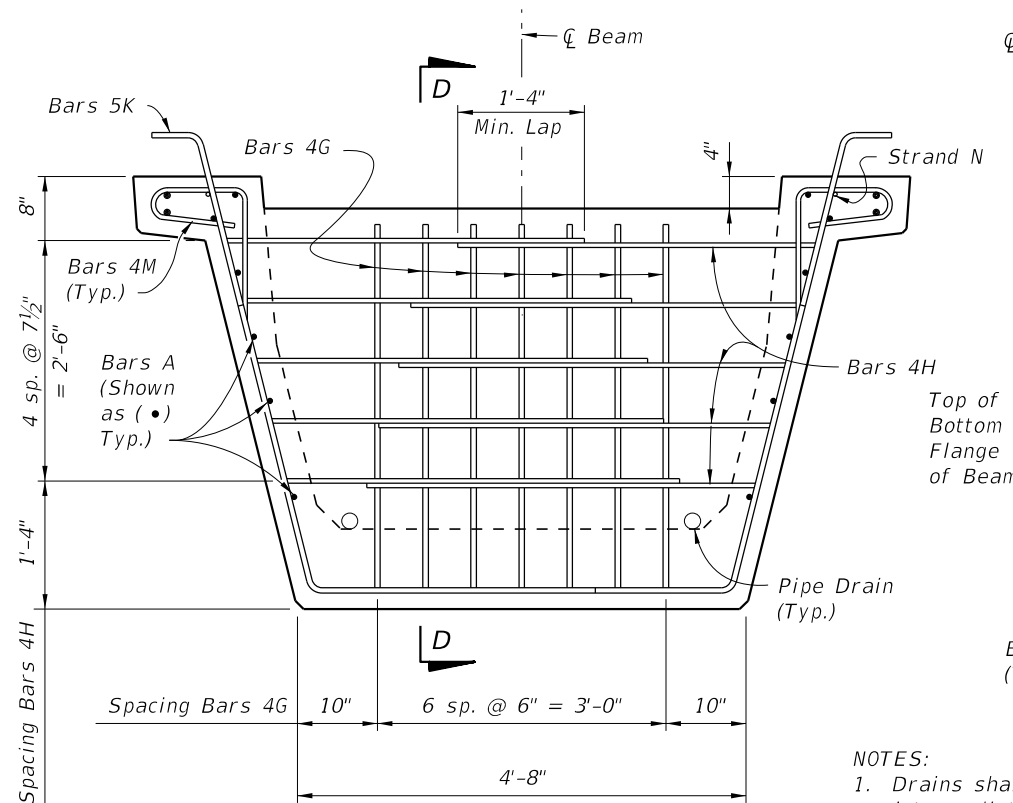
MARK	SIZE	NO. REQD.	LENGTH
A1	6	4	Dim. L - 4"
A2	4	12	Dim. L - 4"
B	5	12	4'-7"
C	4	20	5'-3"
D1	3	180	1'-6"
D2	3	30	4'-6"
E	5	24	5'-9"
F	4	20	6'-4"
G	4	See Table	4'-6"
H	4	See Table	4'-9"
K	5	See Table	8'-6"
L	5	24	16'-2"
M	4	See Table	3'-11"
N	3/8" Ø Strand	2	Dim. L - 3"



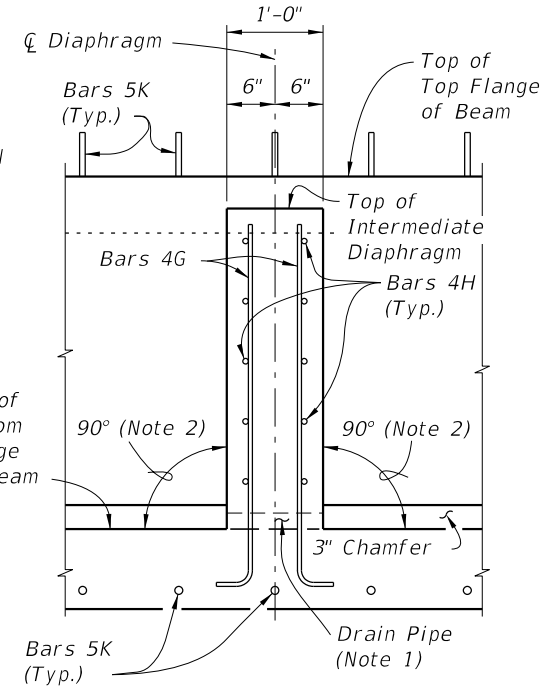
Bars 6A1, 4A2 and 3D2



TOP VIEW OF INTERMEDIATE DIAPHRAGM

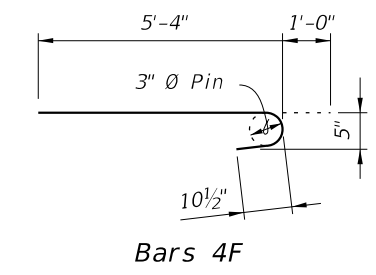


SECTION AT INTERMEDIATE DIAPHRAGM

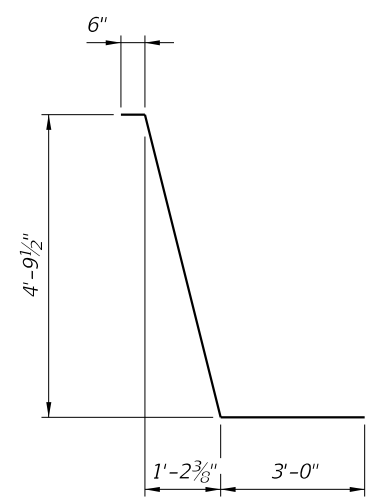


SECTION D-D

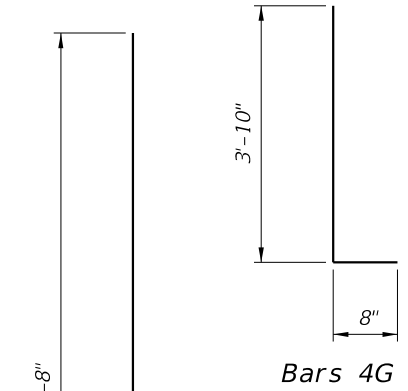
- NOTES:
1. Drains shall be placed adjacent to each web at each intermediate diaphragm (two drains per intermediate diaphragm). Drain Pipe shall be 2" Nominal Pipe Size, Schedule 80 PVC. Provide removable pipe plugs to prevent concrete entrance during beam casting. Plugs to be removed from the inside after casting.
 2. Concrete face may be sloped with a maximum 1:24 draft to facilitate formwork removal.
 3. Intermediate diaphragms must be cast and concrete release strength obtained prior to removing beam from casting bed.



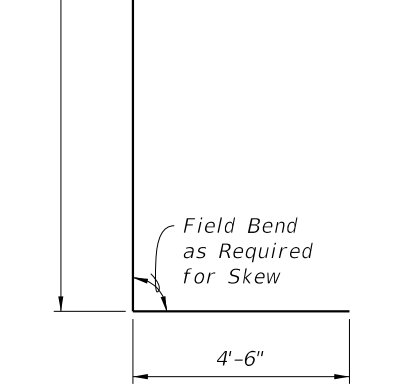
Bars 4F



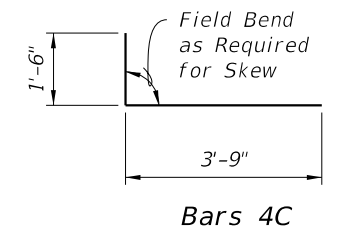
Bars 5K



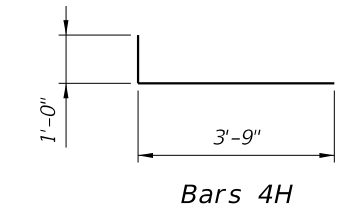
Bars 4G



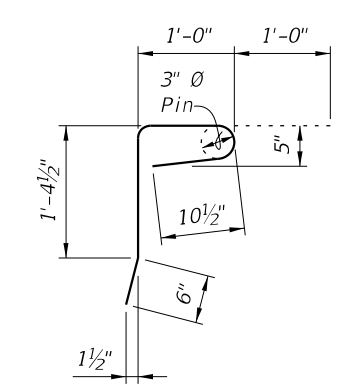
Bars 5L



Bars 4C



Bars 4H



Bars 4M

LAST REVISION	DESCRIPTION:
01/01/11	REVISION

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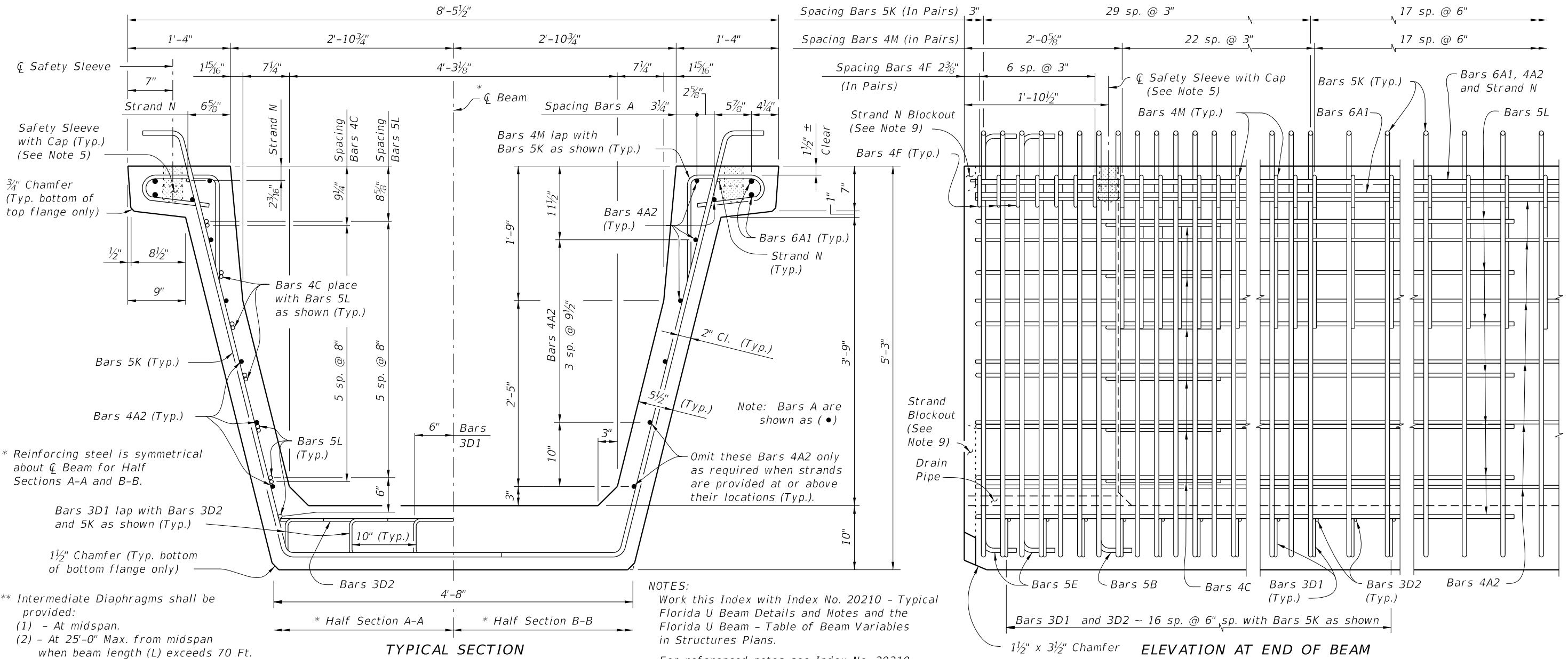


FDOT DESIGN STANDARDS
FY 2012/2013

FLORIDA U 54 BEAM - STANDARD DETAILS

INDEX NO.	SHEET NO.
20254	3

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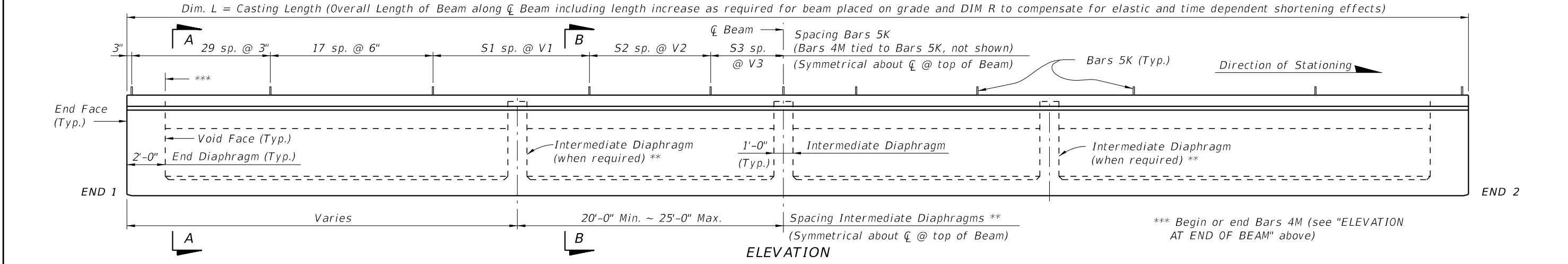
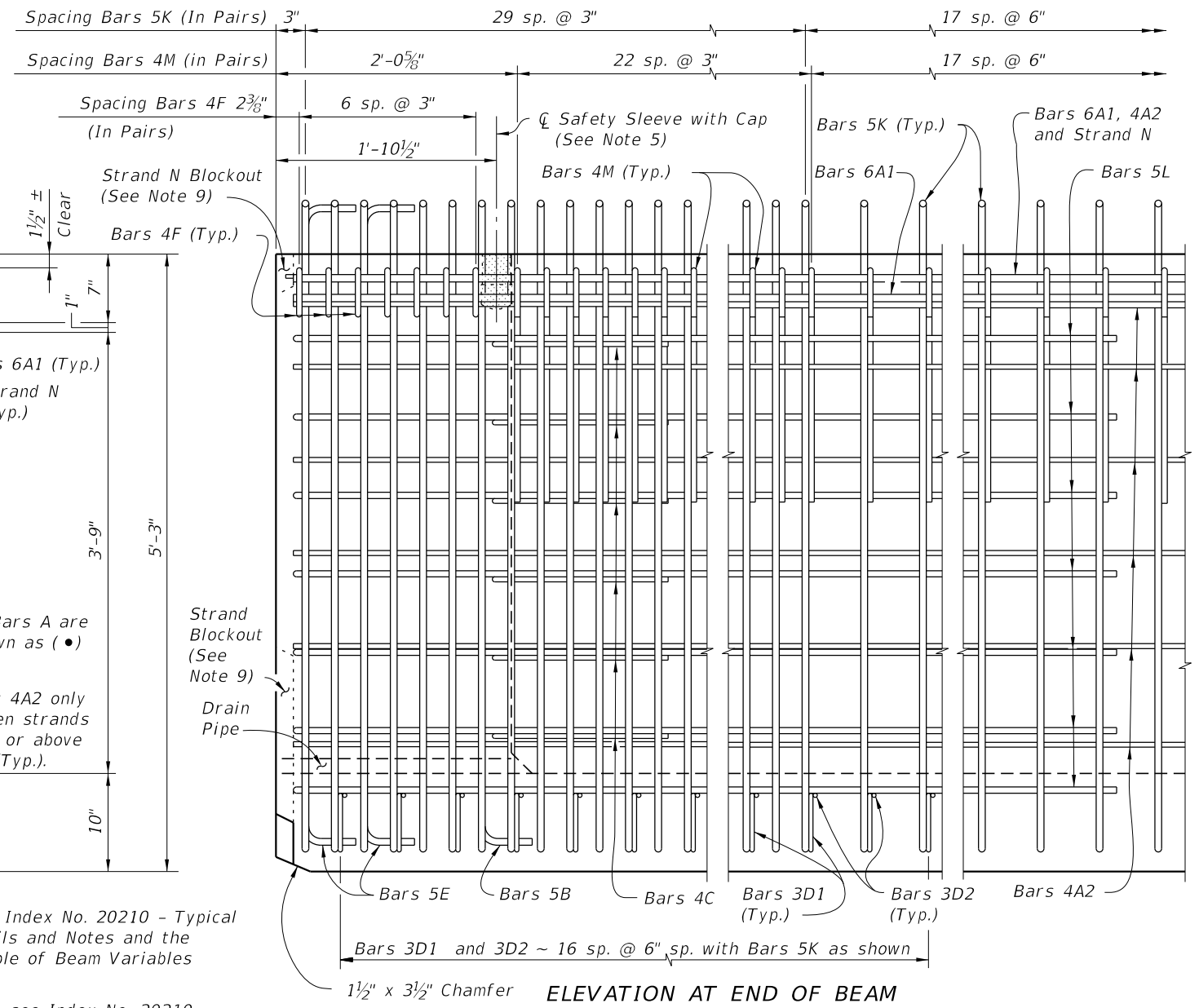
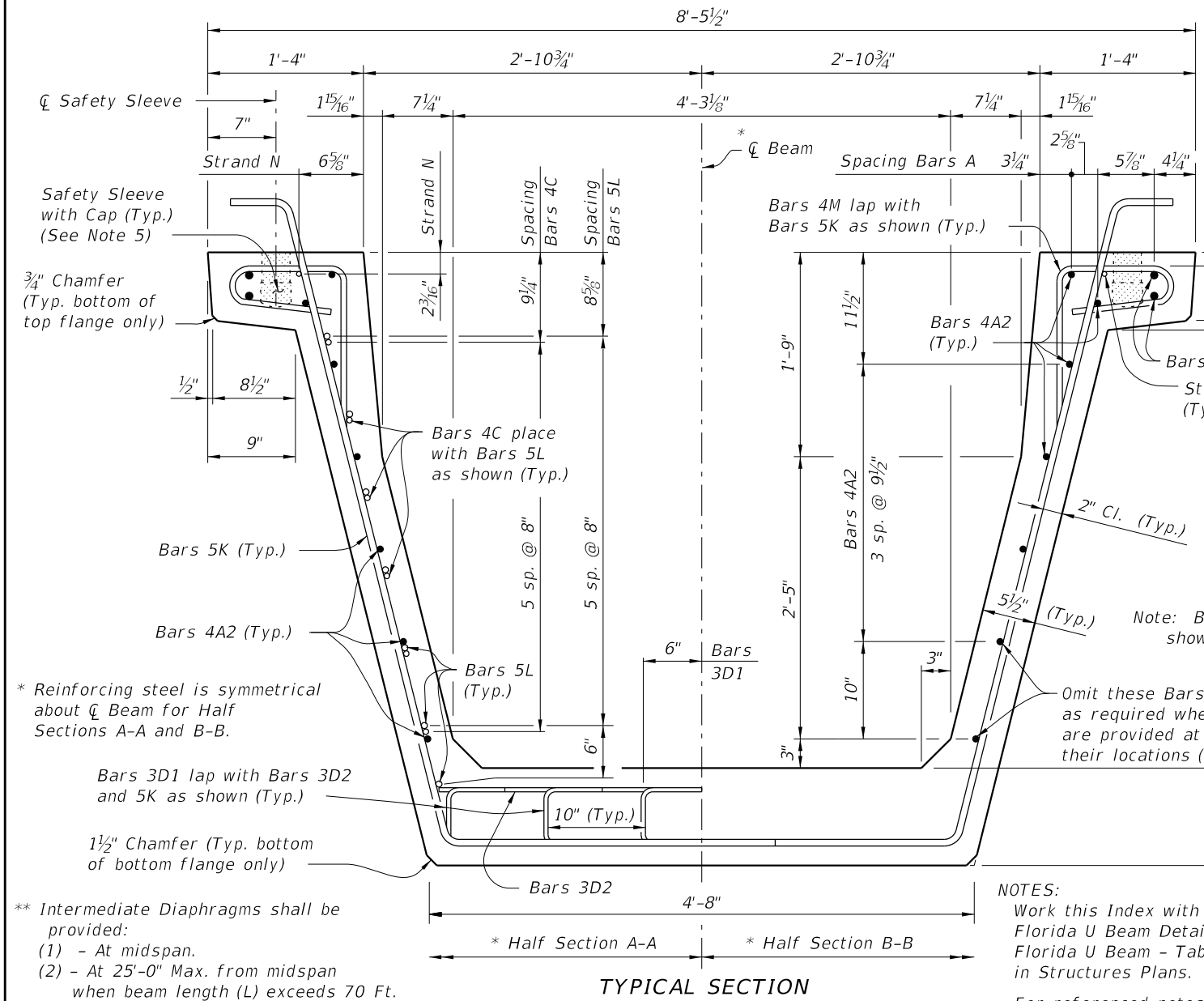
NOTES:
 Work this Index with Index No. 20210 - Typical Florida U Beam Details and Notes and the Florida U Beam - Table of Beam Variables in Structures Plans.
 For referenced notes see Index No. 20210.

**** Intermediate Diaphragms shall be provided:**
 (1) - At midspan.
 (2) - At 25'-0" Max. from midspan when beam length (L) exceeds 70 Ft.

* Reinforcing steel is symmetrical about centerline for Half Sections A-A and B-B.

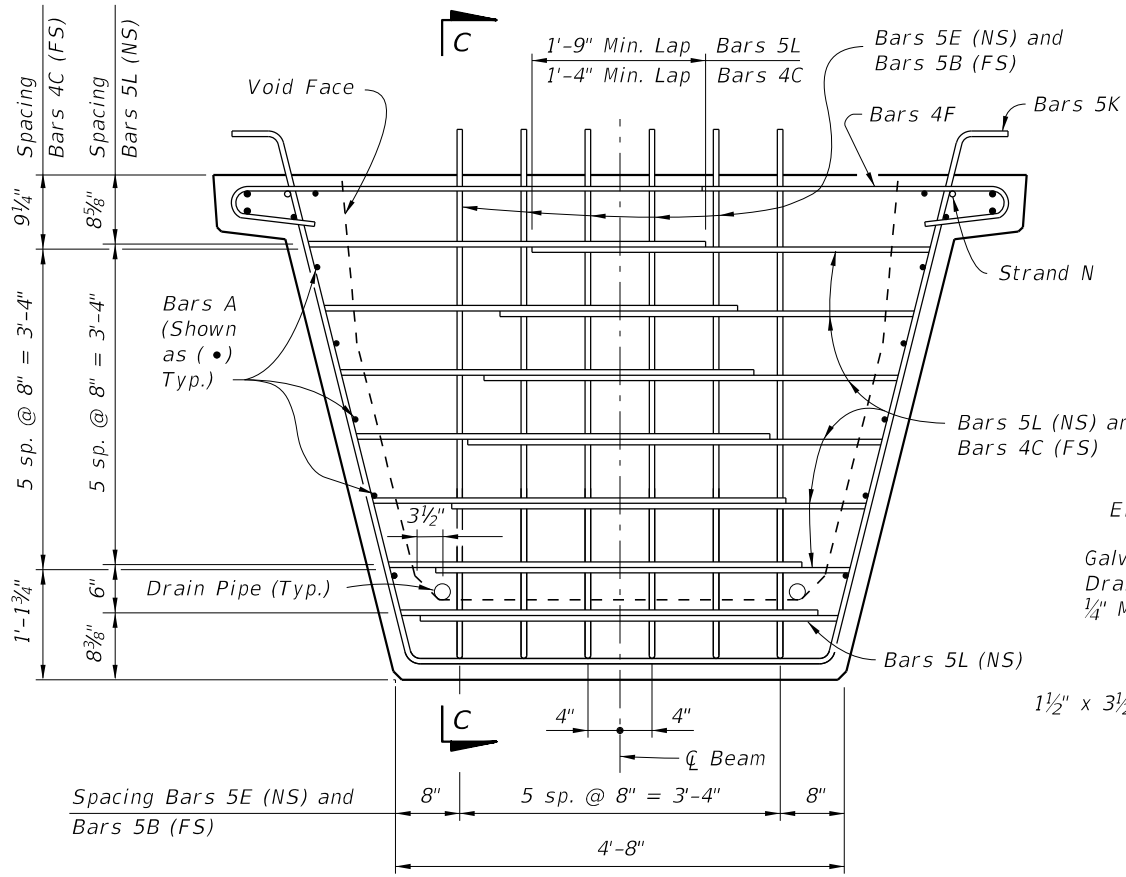
Bars 3D1 lap with Bars 3D2 and 5K as shown (Typ.)
 1 1/2" Chamfer (Typ. bottom of bottom flange only)

Safety Sleeve with Cap (Typ.) (See Note 5)
 3/4" Chamfer (Typ. bottom of top flange only)

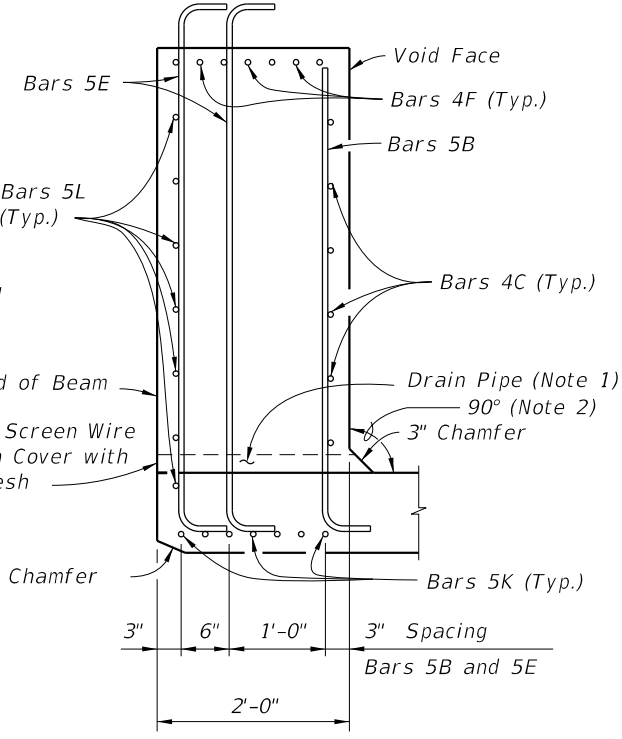


LAST REVISION	07/01/05	DESCRIPTION:	FDOT DESIGN STANDARDS FY 2012/2013	FLORIDA U 63 BEAM - STANDARD DETAILS	INDEX NO.	SHEET NO.
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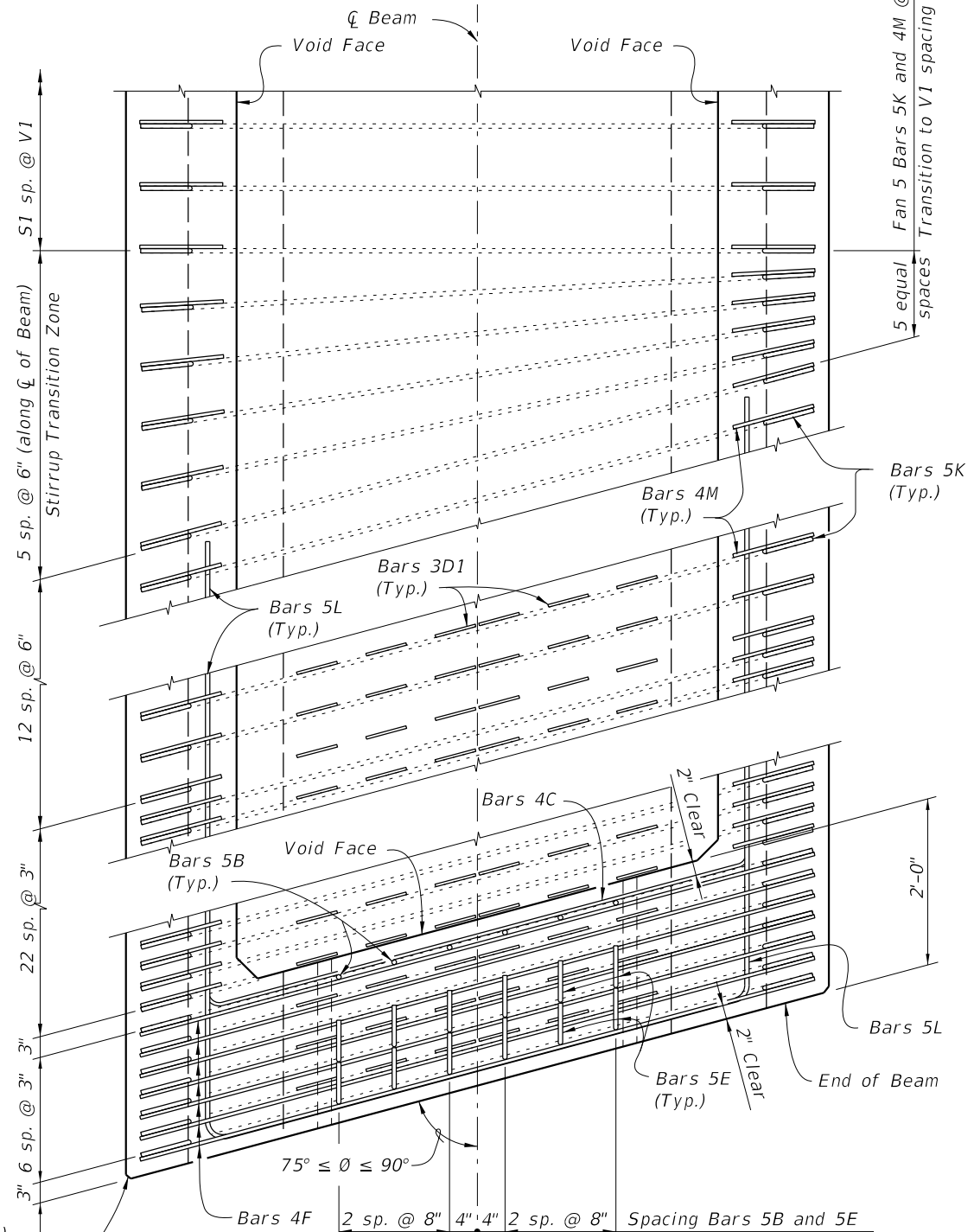
END VIEW AT END DIAPHRAGM



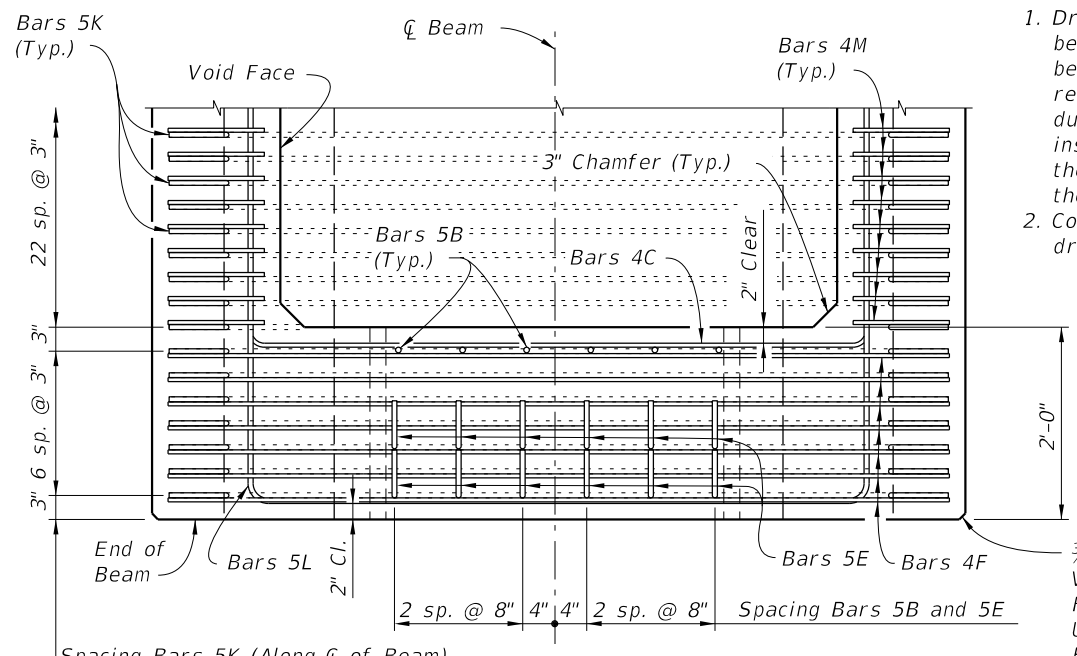
SECTION C-C

NOTES:

1. Drains shall be placed adjacent to each web at each beam end (four drains per beam). Drain Pipe shall be 2" Nominal Pipe Size, Schedule 80 PVC. Provide removable pipe plugs to prevent concrete entrance during beam casting. Plugs to be removed from the inside after casting. Galvanized screen wire shall cover the end of the pipe and bent down around the sides of the pipe, a minimum of 1" and secured prior to casting.
2. Concrete face may be sloped with a maximum 1:24 draft to facilitate formwork removal.



TOP VIEW OF SKEWED END DIAPHRAGM AND STIRRUP TRANSITION ZONE (Bars 3D2 Not Shown For Clarity)



TOP VIEW OF END DIAPHRAGM (Bars 3D1 And 3D2 Not Shown For Clarity)

LAST REVISION	DESCRIPTION:
07/01/05	



FDOT DESIGN STANDARDS
FY 2012/2013

FLORIDA U 63 BEAM - STANDARD DETAILS

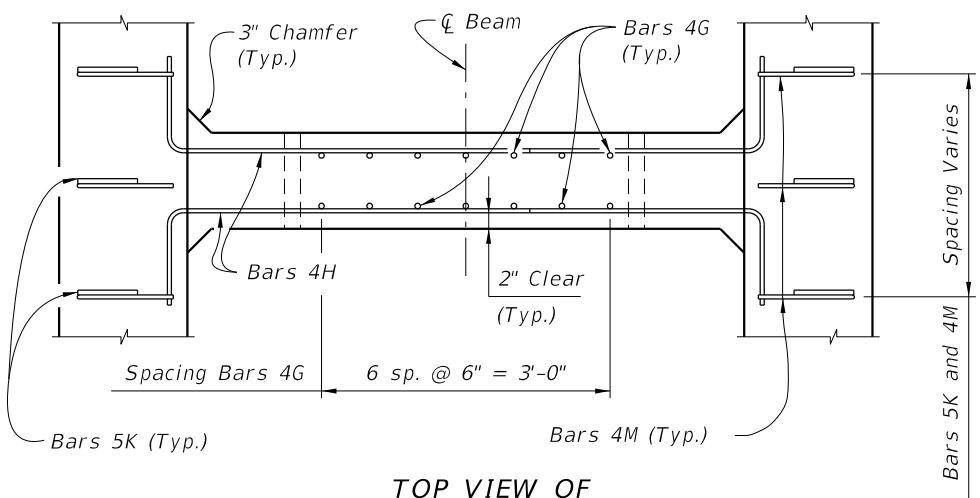
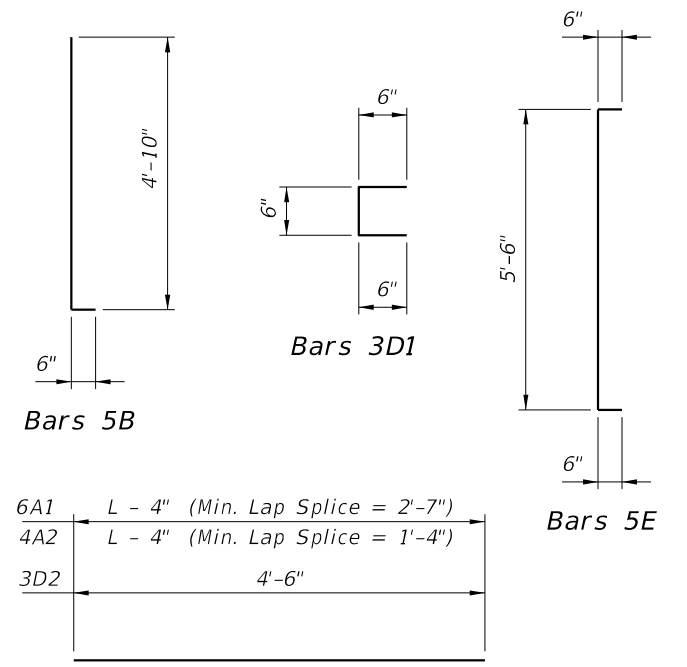
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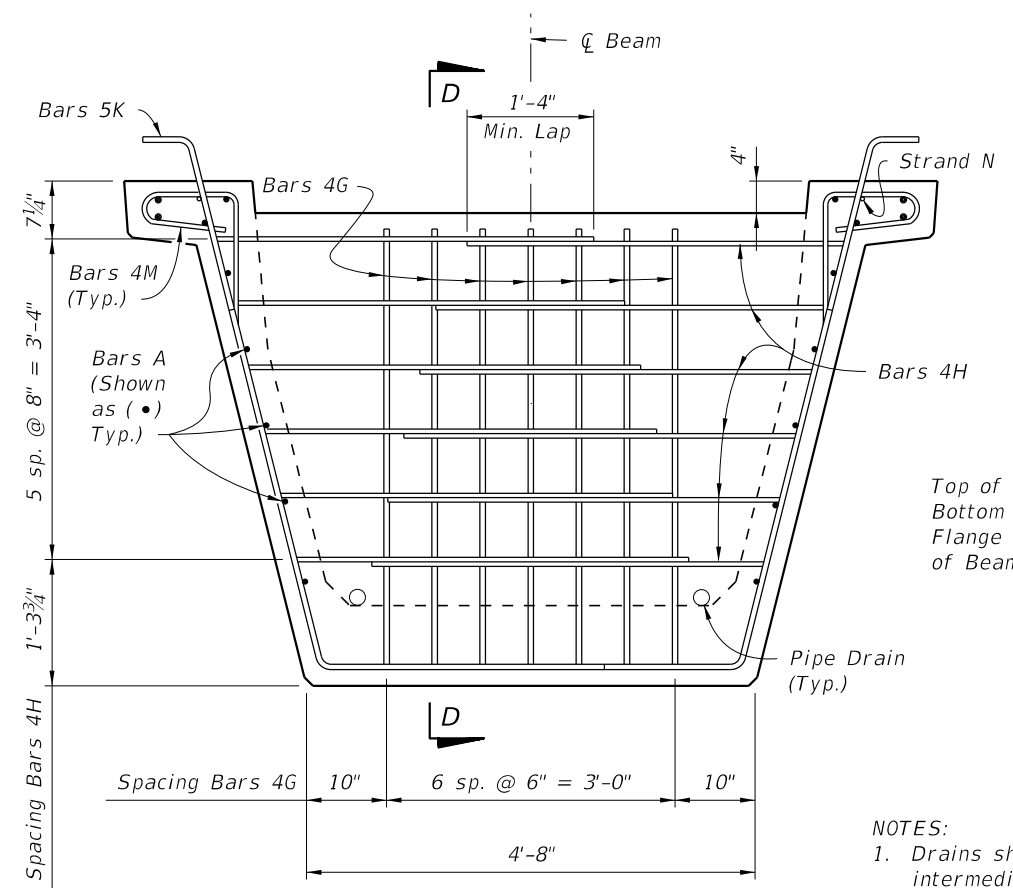
CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL FOR ONE BEAM ONLY

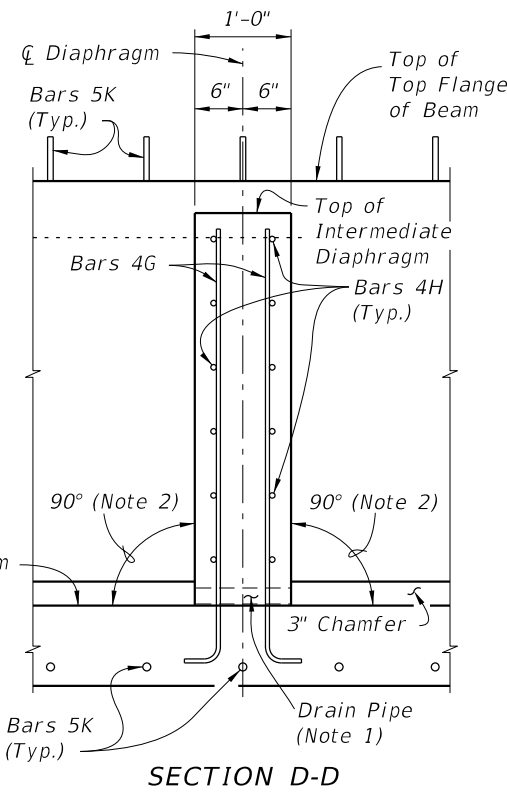
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A2	4	12	Dim. L - 4"
B	5	12	5'-4"
C	4	24	5'-5"
D1	3	204	1'-6"
D2	3	34	4'-6"
E	5	24	6'-6"
F	4	28	6'-6"
G	4	See Table	5'-3"
H	4	See Table	4'-11"
K	5	See Table	9'-2 1/2"
L	5	28	17'-8"
M	4	See Table	3'-11"
N	3/8" Ø Strand	2	Dim. L - 3"



TOP VIEW OF INTERMEDIATE DIAPHRAGM

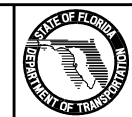
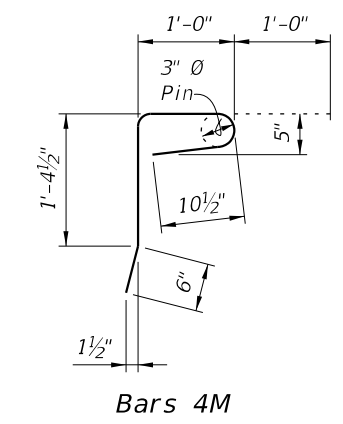
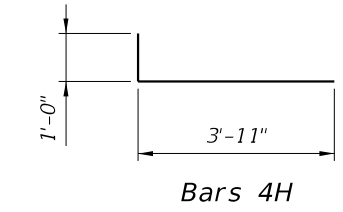
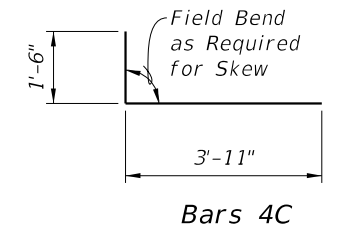
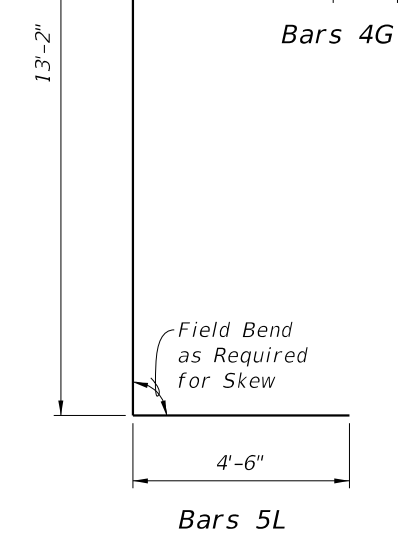
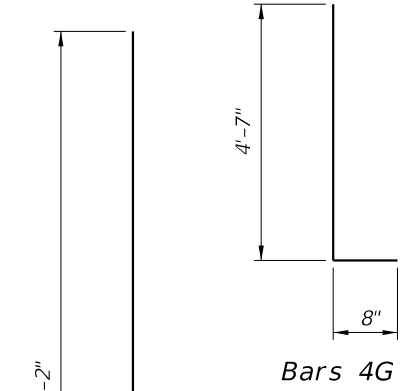
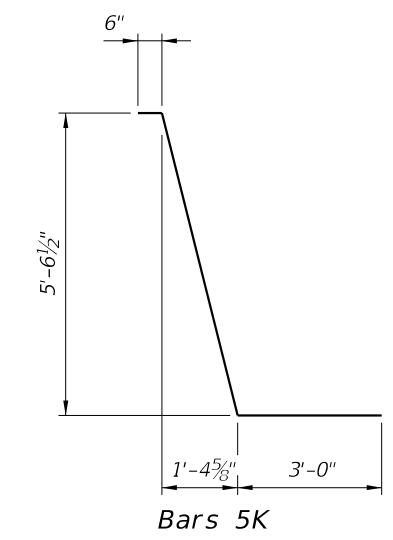
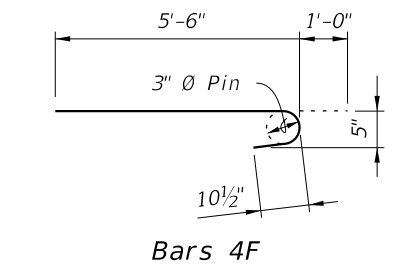


SECTION AT INTERMEDIATE DIAPHRAGM



SECTION D-D

- NOTES:
- Drains shall be placed adjacent to each web at each intermediate diaphragm (two drains per intermediate diaphragm). Drain Pipe shall be 2" Nominal Pipe Size, Schedule 80 PVC. Provide removable pipe plugs to prevent concrete entrance during beam casting. Plugs to be removed from the inside after casting.
 - Concrete face may be sloped with a maximum 1:24 draft to facilitate formwork removal.
 - Intermediate diaphragms must be cast and concrete release strength obtained prior to removing beam from casting bed.



FDOT DESIGN STANDARDS
FY 2012/2013

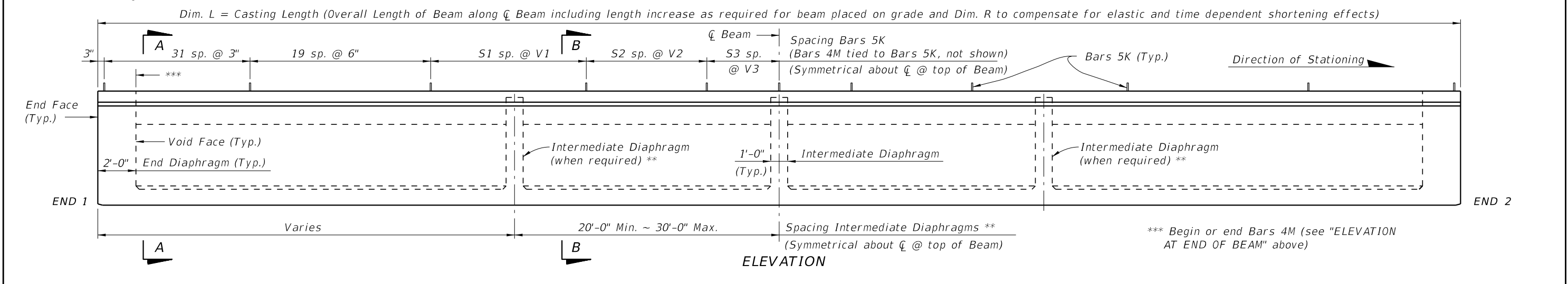
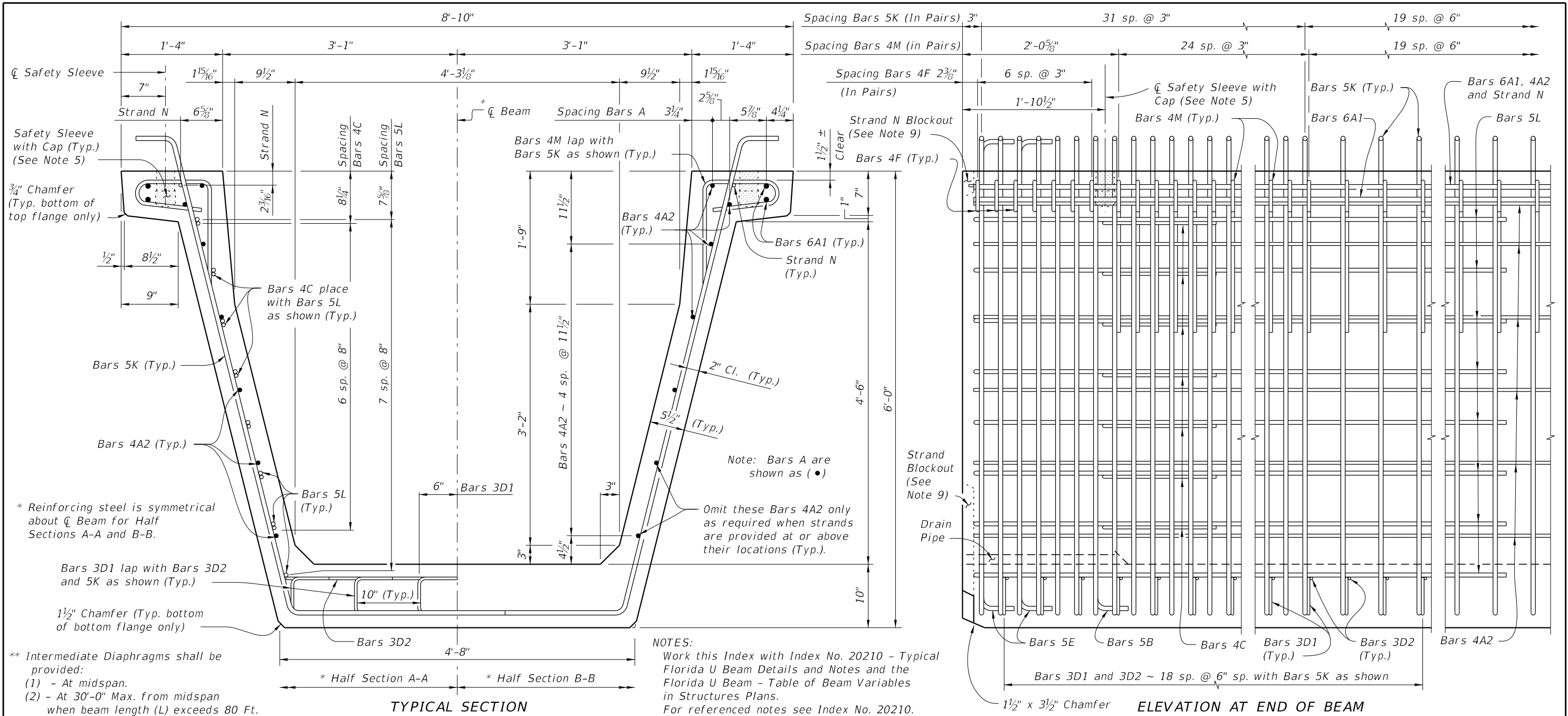
FLORIDA U 63 BEAM - STANDARD DETAILS

LAST REVISION
01/01/11

DESCRIPTION:
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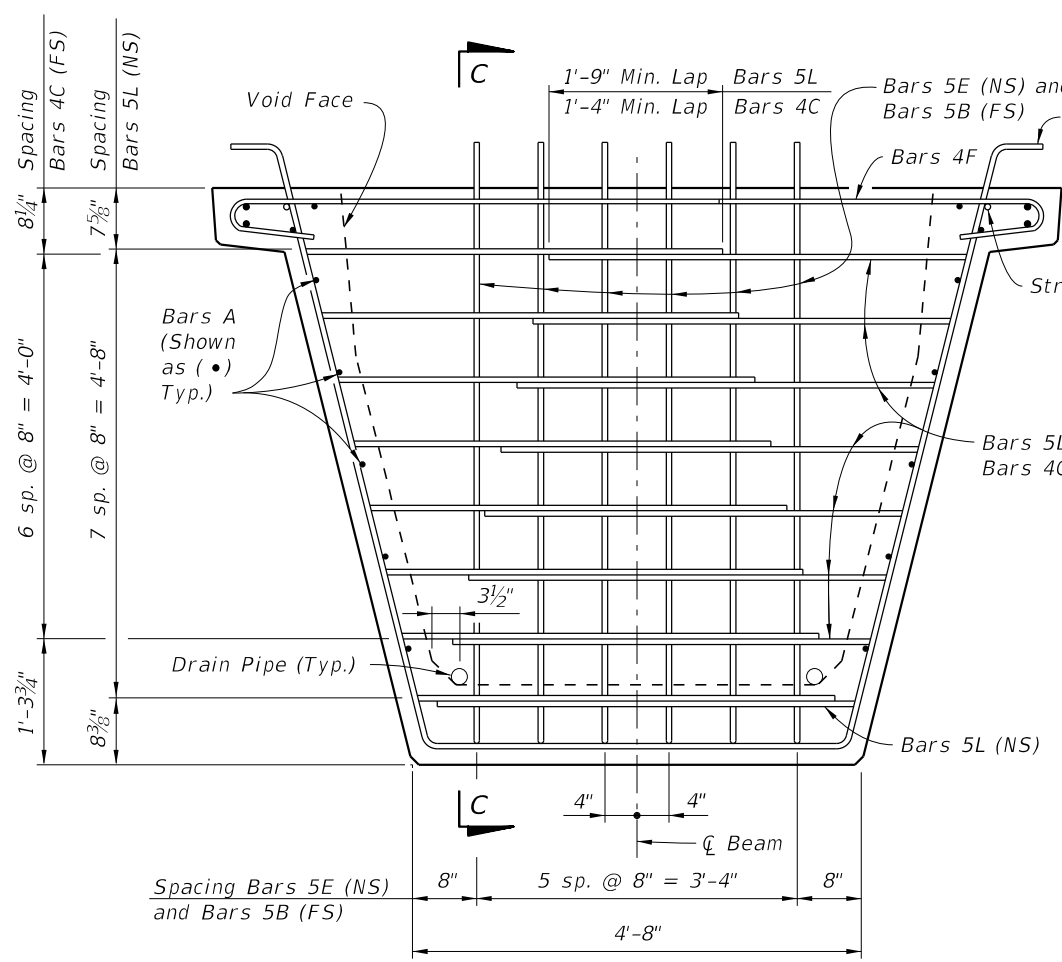
INDEX NO.
20263
SHEET NO.
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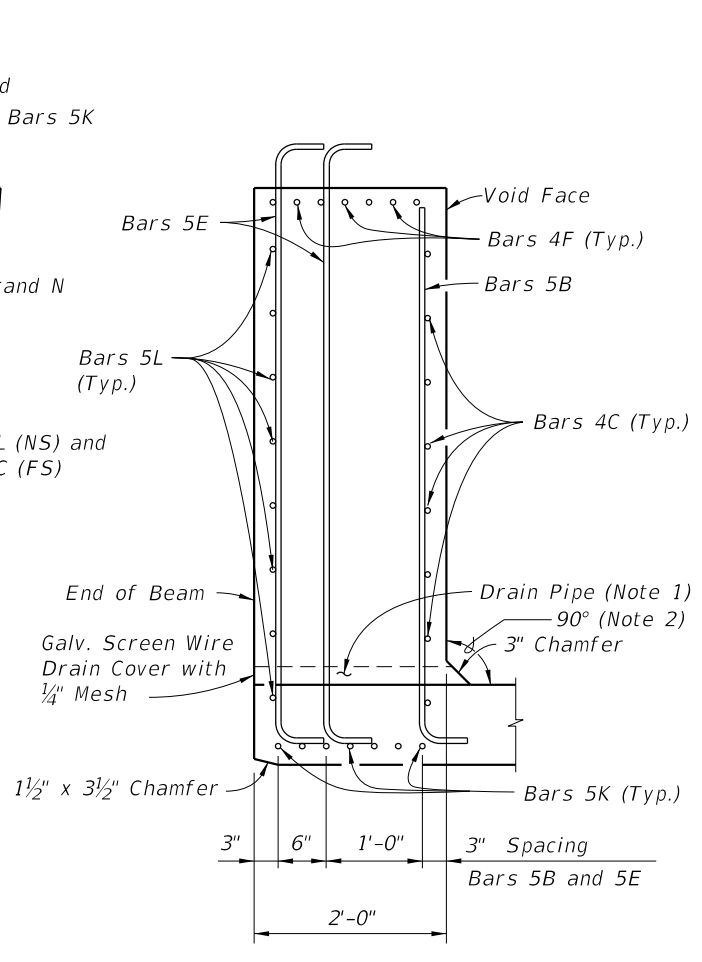


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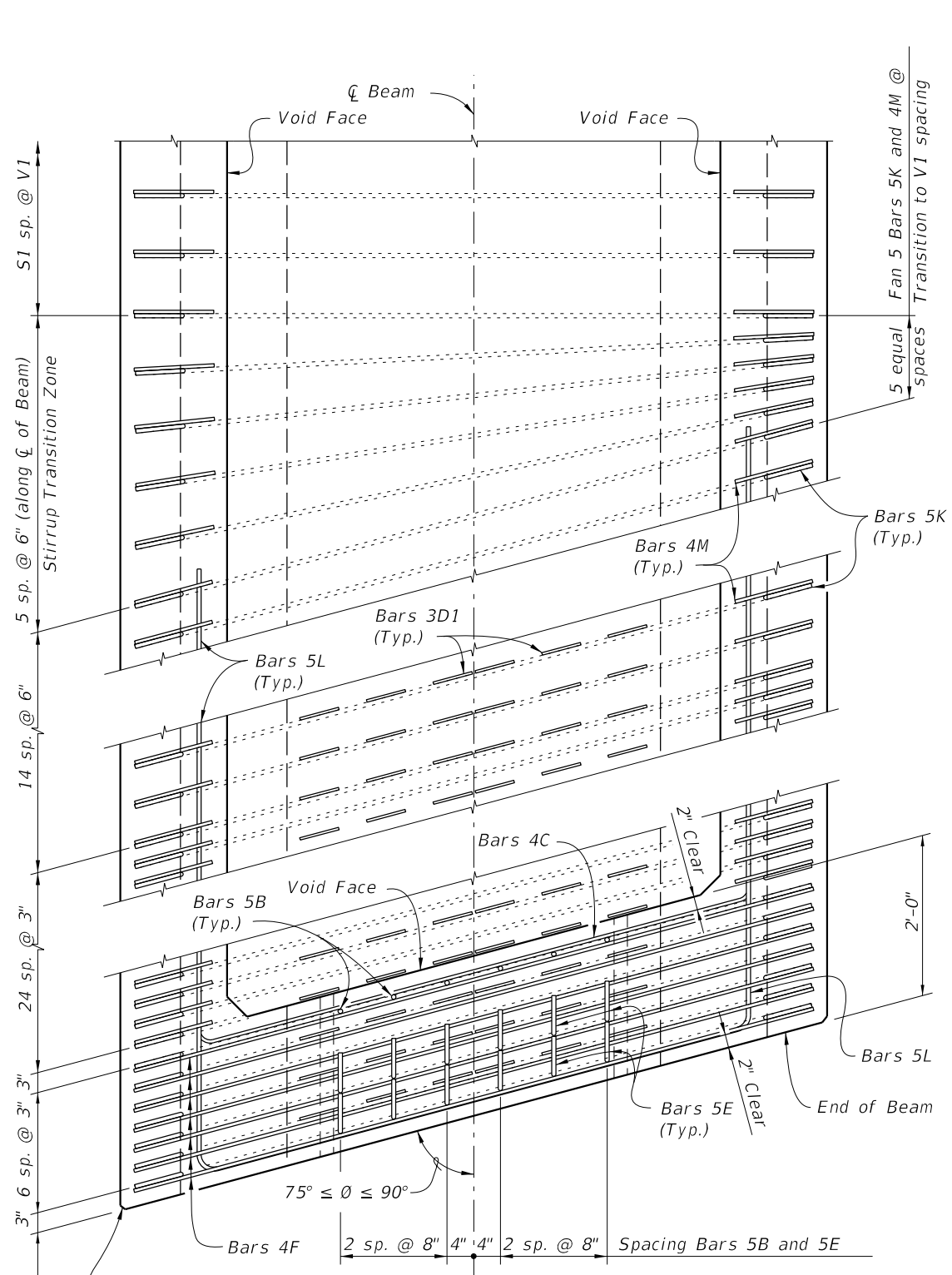


END VIEW AT END DIAPHRAGM

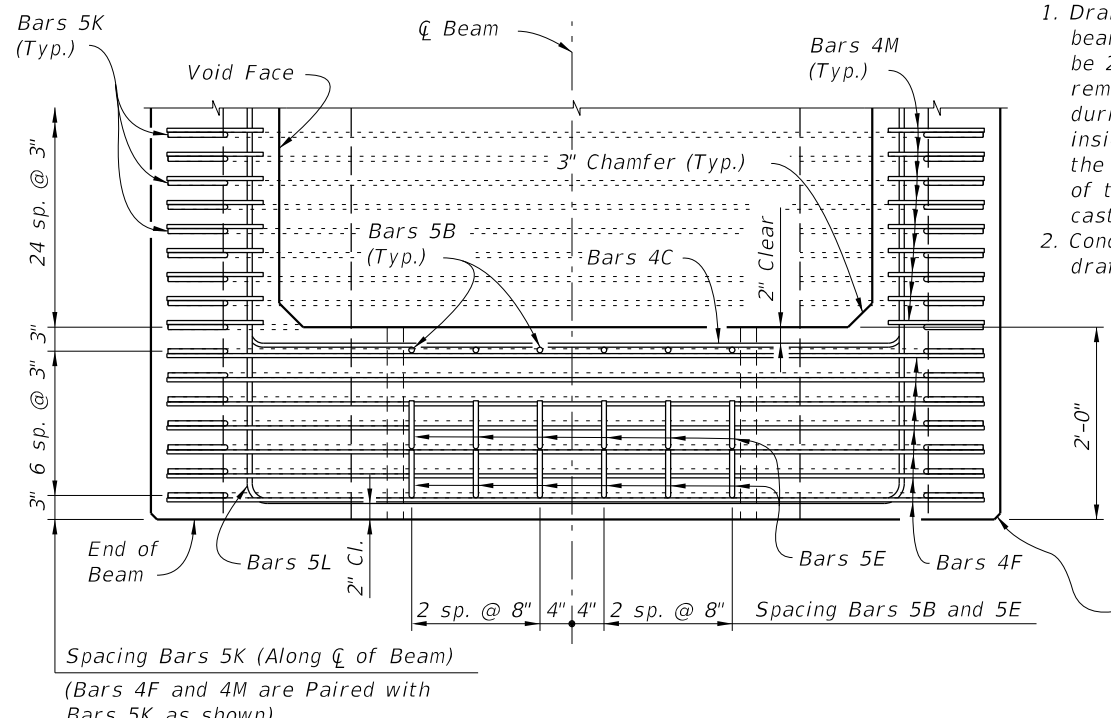


SECTION C-C

- NOTES:
1. Drains shall be placed adjacent to each web at each beam end (four drains per beam). Drain Pipe shall be 2" Nominal Pipe Size, Schedule 80 PVC. Provide removable pipe plugs to prevent concrete entrance during beam casting. Plugs to be removed from the inside after casting. Galvanized screen wire shall cover the end of the pipe and bent down around the sides of the pipe, a minimum of 1" and secured prior to casting.
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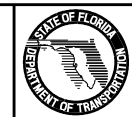


TOP VIEW OF SKEWED END DIAPHRAGM AND STIRRUP TRANSITION ZONE (Bars 3D2 Not Shown For Clarity)



TOP VIEW OF END DIAPHRAGM (Bars 3D1 And 3D2 Not Shown For Clarity)

LAST REVISION	DESCRIPTION:
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FDOT DESIGN STANDARDS
FY 2012/2013

FLORIDA U 72 BEAM - STANDARD DETAILS

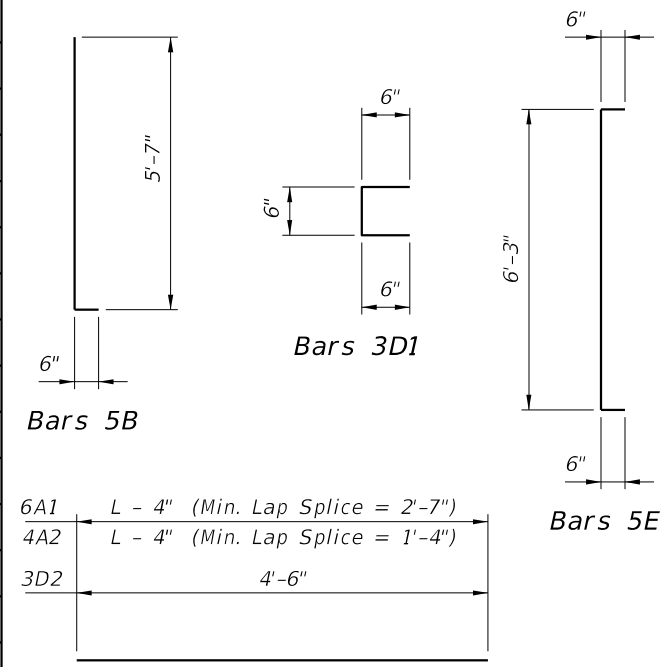
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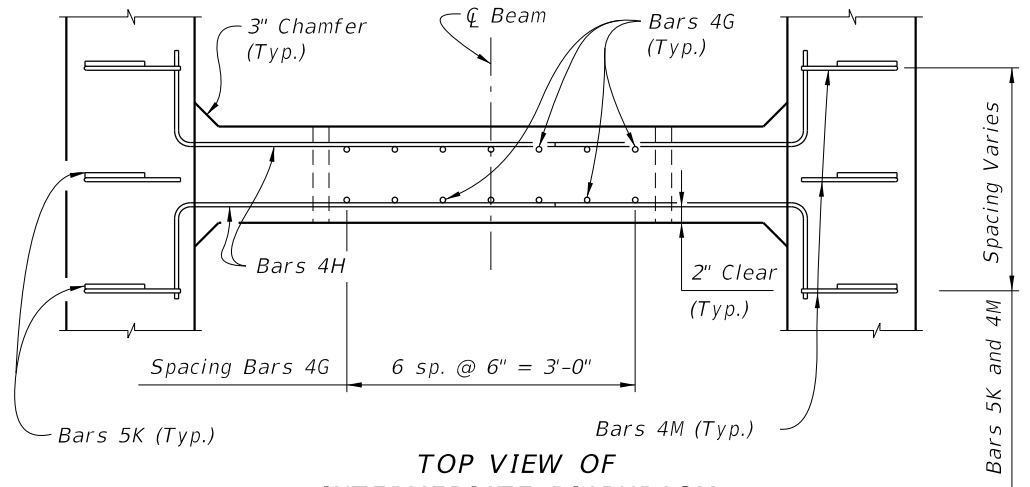
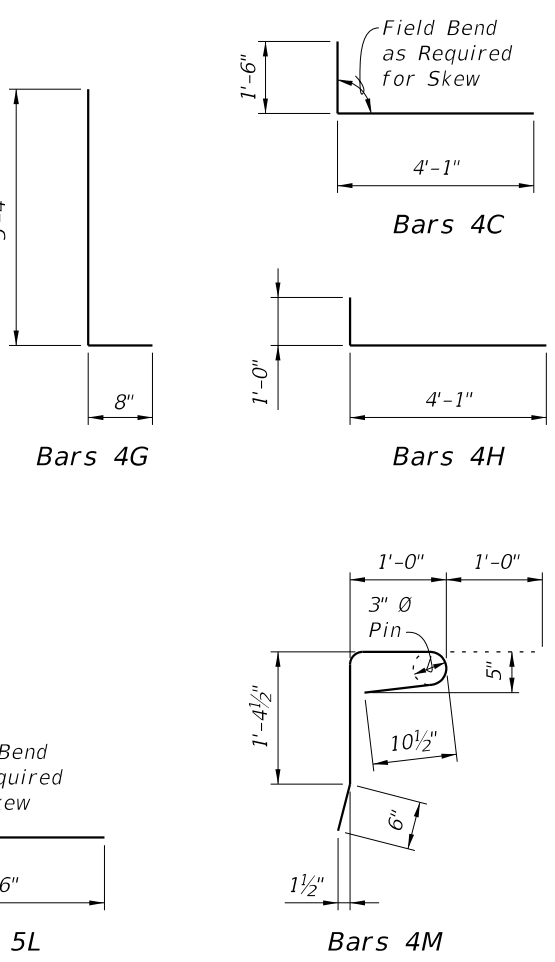
CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL FOR ONE BEAM ONLY

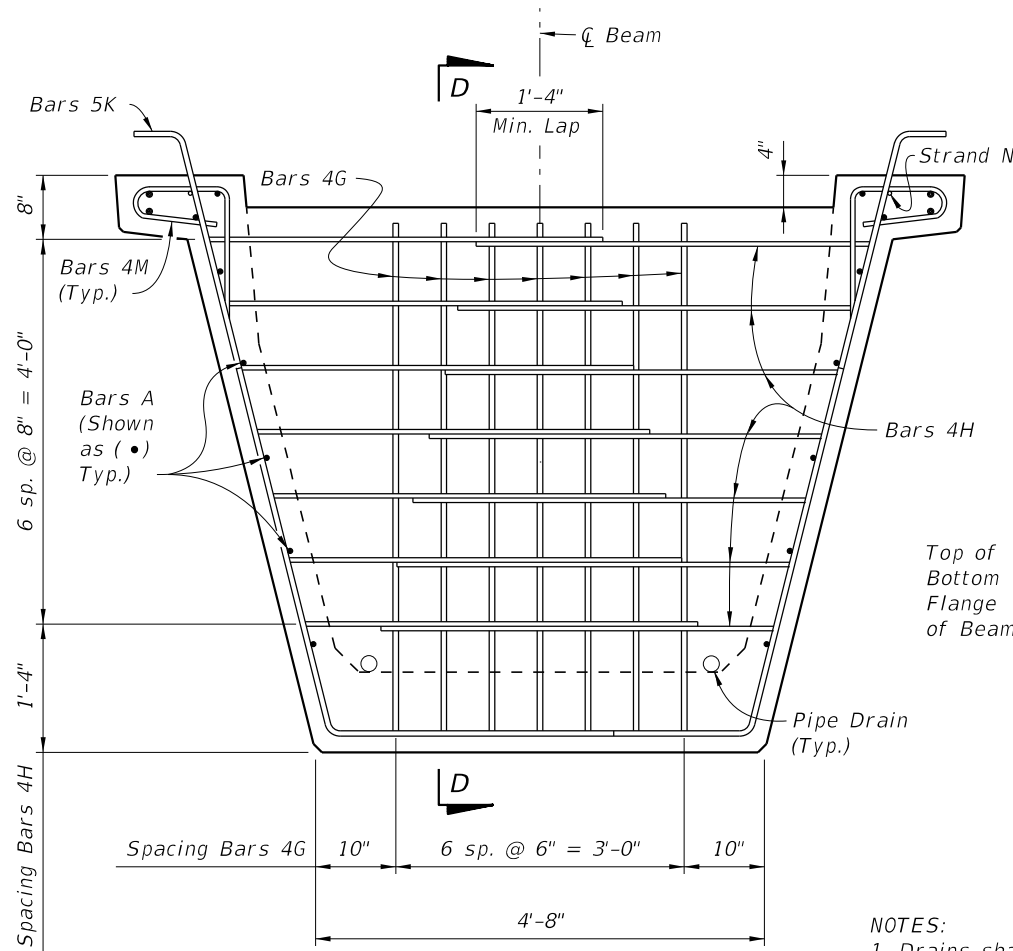
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A2	4	14	Dim. L - 4"
B	5	12	6'-1"
C	4	28	5'-7"
D1	3	228	1'-6"
D2	3	38	4'-6"
E	5	24	7'-3"
F	4	28	6'-9"
G	4	See Table	6'-0"
H	4	See Table	5'-1"
K	5	See Table	10'-0"
L	5	32	19'-6"
M	4	See Table	3'-11"
N	3/8" Ø Strand	2	Dim. L - 3"



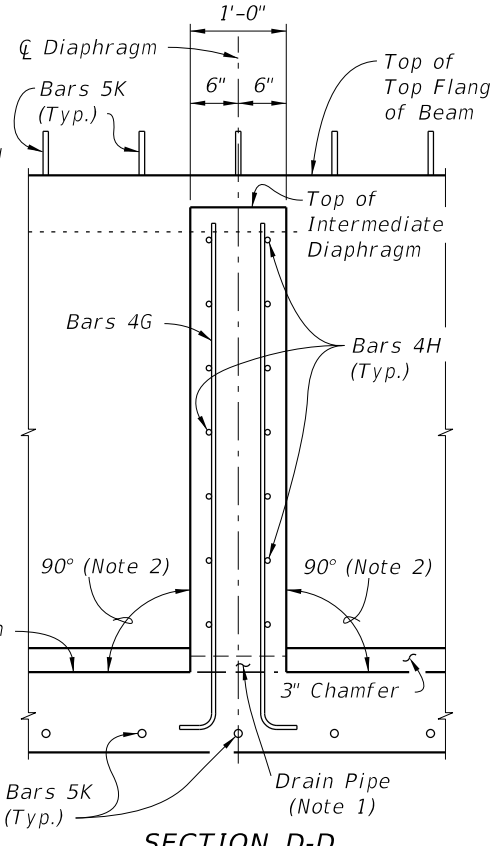
Bars 6A1, 4A2 and 3D2



TOP VIEW OF INTERMEDIATE DIAPHRAGM



SECTION AT INTERMEDIATE DIAPHRAGM



SECTION D-D

- NOTES:
1. Drains shall be placed adjacent to each web at each intermediate diaphragm (two drains per intermediate diaphragm). Drain Pipe shall be 2" Nominal Pipe Size, Schedule 80 PVC. Provide removable pipe plugs to prevent concrete entrance during beam casting. Plugs to be removed from the inside after casting.
 2. Concrete face may be sloped with a maximum 1:24 draft to facilitate formwork removal.
 3. Intermediate diaphragms must be cast and concrete release strength obtained prior to removing beam from casting bed.

LAST REVISION	DESCRIPTION:
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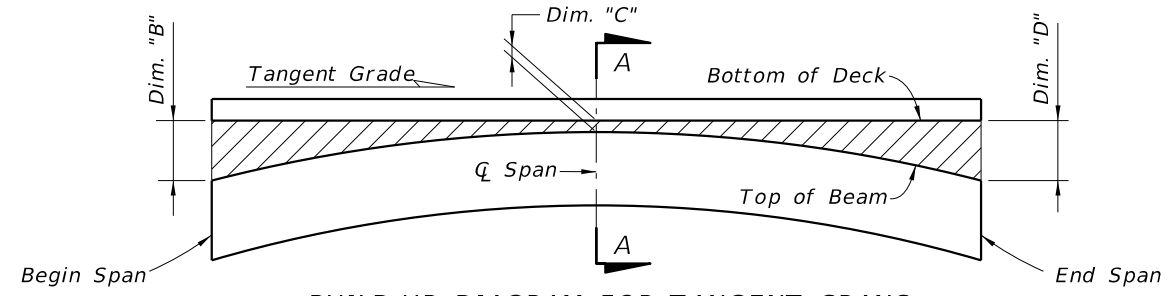


FDOT DESIGN STANDARDS
FY 2012/2013

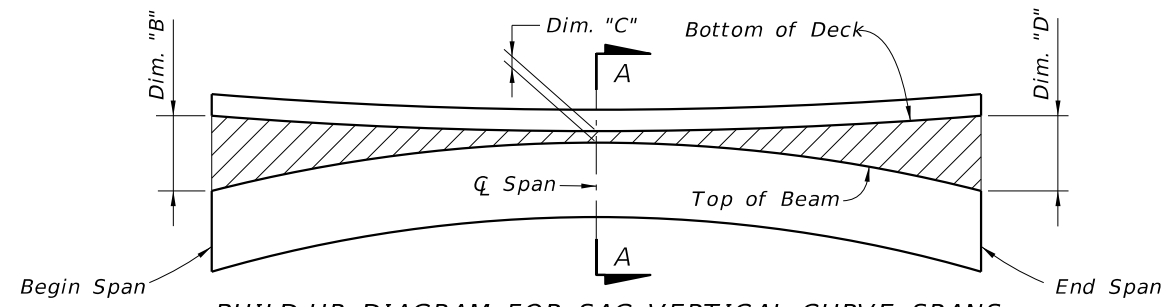
FLORIDA U 72 BEAM - STANDARD DETAILS

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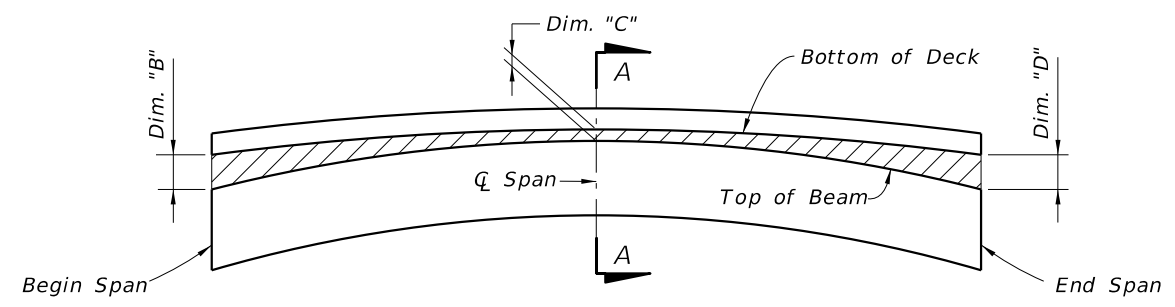
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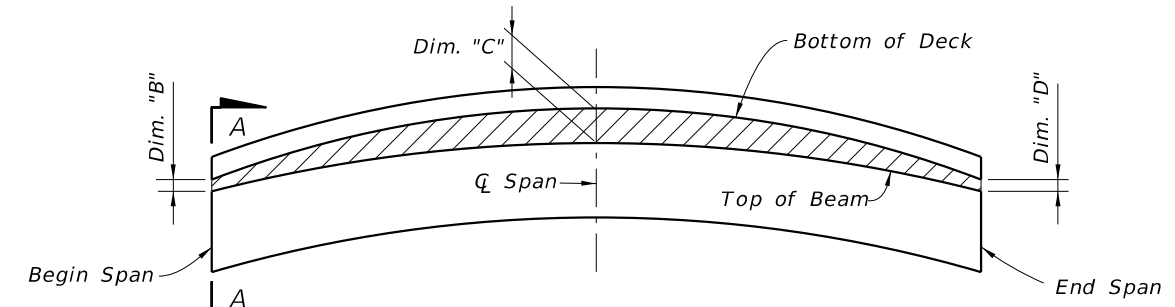
**BUILD-UP DIAGRAM FOR TANGENT SPANS
(ALONG Q FLANGE) (CASE 1)**



**BUILD-UP DIAGRAM FOR SAG VERTICAL CURVE SPANS
(ALONG Q FLANGE) (CASE 2)**



**BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT Q SPAN
(ALONG Q FLANGE) (CASE 3)**

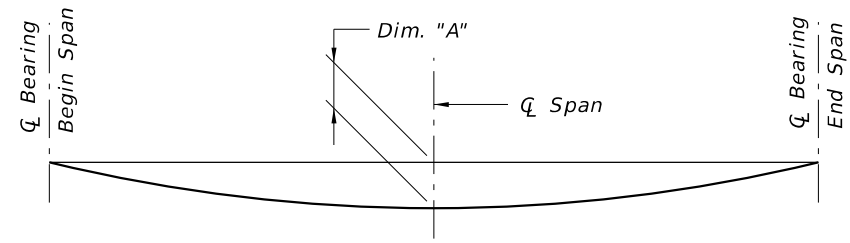


**BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT BEGIN OR END SPAN
(ALONG Q FLANGE) (CASE 4)**

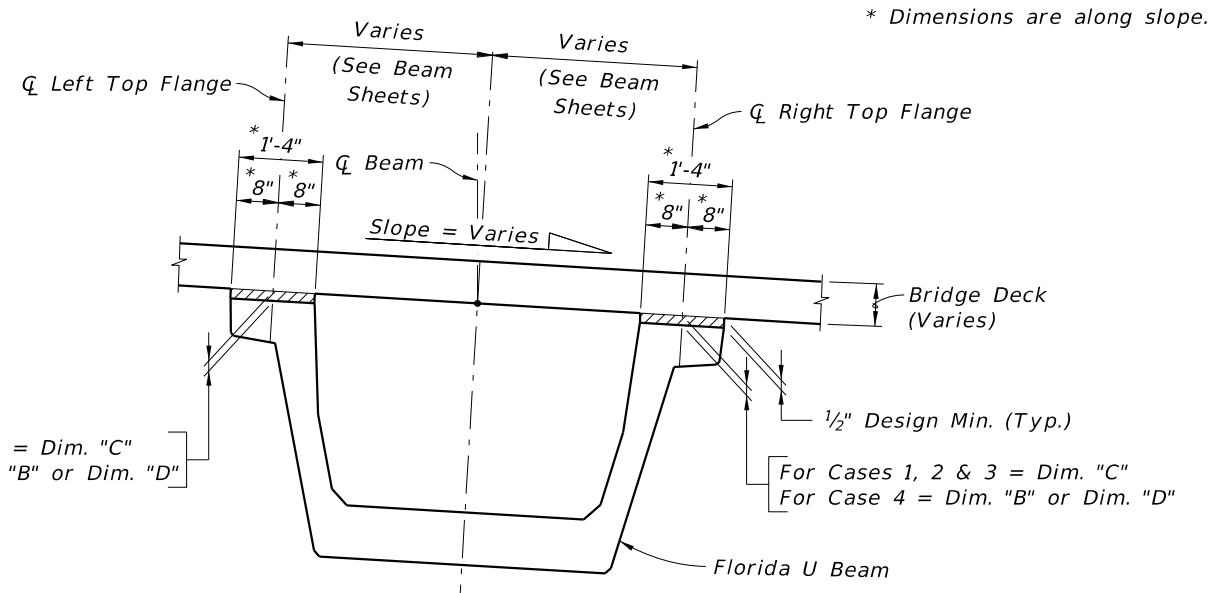
BEAM CAMBER AND BUILD-UP NOTES:

The build-up values given in the Data Table* are based on theoretical beam cambers. The Contractor shall monitor beam cambers for the purpose of predicting camber values at the time of the deck pour. If the predicted cambers based on field measurements differ more than +/- 1/2" from the theoretical "Net Beam Camber @ 120 Days" shown in the Data Table*, obtain approval from the Engineer to modify the build-up dimensions as required. When the measured beam cambers create a conflict with the bottom mat of deck steel, notify the Engineer a minimum of 21 days prior to casting.

Dim. "A" includes the weight of the Stay-In-Place Formwork.



**DEAD LOAD DEFLECTION DIAGRAM
(ALONG Q BEAM)**



**SECTION A-A
BUILD-UP OVER BEAMS
(LOOKING AHEAD STATION)**

SAFSADKFSAJDFLKJSDLF

* NOTE:
Work this Index with the Build-up and Deflection Data Table for Florida U Beams in Structures Plans.

LAST REVISION	REVISION	DESCRIPTION:		FDOT DESIGN STANDARDS FY 2012/2013	BUILD-UP & DEFLECTION DATA FOR FLORIDA U BEAMS	INDEX NO.	SHEET NO.
01/01/11						20299	1