

## Office of Structures Structural Details Manual

## **DETAIL REVISION HISTORY**

Detail Number	Detail Name	Revision Date	Revision Description
SUP-SLAB-401	Precast Concrete Slab Units Tie-Rod Details	07/15/2019	Version 2.0 Revised Tie Rod to Type II and eliminated ASTM testing for Nut (will be part of system)
SUP-SLAB-701	Precast Concrete Slab Panel Bridge Overlay Reinforcement Details	07/15/2019	Version 2.00 - Added notes that traffic barriers are to be modified to meet the overlay depth.
SR-ST(SR)-107	Structural Plate Girder End Plating Intermediate Stiffener on One Side	06/10/2019	Version 1.0 - New Detail Issued
SR-ST(SR)-106	Structural Plate Girder End Plating Intermediate Stiffeners on Both Sides	06/10/2019	Version 1.0 - New Detail Issued
SR-ST(NSR)-107	Non-Structural Plate Girder End Plating Intermediate Stiffeners on One Side	06/10/2019	Version 1.0 - New Detail Issued
SR-ST(NSR)-106	Non-Structural Plate Girder End Plating Intermediate Stiffeners on Both Sides	06/10/2019	Version 1.0 - New Detail Issued
SUP-TB(MB)-302	MASH TL-5 - 42" Single Slope Median Barrier for Bridge without a Longitudinal Joint where Traffic will use area prior to Placement	05/29/2019	Version 1.0 - New Detail Issued
SUP-TB(42SS)- 101	MASH TL-5 - 42" Single Slope Parapet - Straight Back	05/29/2019	Version 1.0 - Issued New Detail
SUP-TB(MB)-301	MASH TL-5 - 42" Single Slope Median Barrier for Bridge without Longitudinal Joint	05/29/2019	Version 1.0 - Issued New Detail
SUP-TB(42SS)- 102	MASH TL-5 - 42" Single Slope Parapet - Diamond Back	05/29/2019	Version 1.0 - Issued New Detail
SUP-TB(MB)-401	MASH TL-5 - 42" Single Slope Median Barrier for use on Bridge with Open Longitudinal Joint	05/29/2019	Version 1.0 - New Detail Issued

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SUP-TB(MB)-402	MASH TL-5 - 42" Single Slope Median Barrier for use on Bridge with Longitudinal Joint where traffic will use area prior to Placement	05/29/2019	Version 1.0 - New Detail Issued
SUP-TB(42SS)- 103	MASH TL-5 - 42" Single Slope Parapet - Architectural Finish	05/29/2019	Version 1.0 - Issued New Detail
SUP-SB(42F)-203	Support Bracket for Bridge Mounted Light Post with Dual Conduits and 42" F- Shape Parapet with Architectural Finish	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension. Corrected dimension for coping on Section B-B.
SUP-SB(42F)-101	Support Bracket for Bridge Mounted Light Post with Single Conduit and 42" F- Shape Parapet with Straight Back	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension.
SUP-SB(42F)-102	Support Bracket for Bridge Mounted Light Post with Single Conduit and 42" F- Shape Parapet with Diamond Back	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension.
SUP-SB(42F)-103	Support Bracket for Bridge Mounted Light Post with Single Conduit and 42" F- Shape Parapet with Architectural Finish	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension. Corrected dimension for coping on Section B-B.
SUP-SB(42F)-201	Support Bracket for Bridge Mounted Light Post with Dual Conduits and 42" F- Shape Parapet with Straight Back	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension.
SUP-SB(42F)-202	Support Bracket for Bridge Mounted Light Post with Dual Conduits and 42" F- Shape Parapet with Diamond Back	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension. Corrected the border file for Sheet 2
SUP-SB(SW)-101	Support Bracket for Bridge Mounted Light Post with Single Conduit and Parapet with Straight Back and Sidewalk	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension.

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SUP-SB(SW)-102	Support Bracket for Bridge Mounted Light Post with Single Conduit and Parapet with Diamond Back and Sidewalk	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension.
SUP-SB(SW)-103	Support Bracket for Bridge Mounted Light Post with Single Conduit and Parapet with Architectural Finish and Sidewalk	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension.
SUP-SB(SW)-201	Support Bracket for Bridge Mounted Light Post with Dual Conduits and Parapet with Straight Back and Sidewalk	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension.
SUP-SB(SW)-203	Support Bracket for Bridge Mounted Light Post with Dual Conduits and Parapet with Architectural Finish and Sidewalk	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension.
SUP-SB(SW)-202	Support Bracket for Bridge Mounted Light Post with Dual Conduits and Parapet with Diamond Back and Sidewalk	04/03/2019	Version 1.01 - Revised note to indicate that the lighting supplier is responsible for the bolt circle dimension.
GEN-101	General Notes	03/13/2019	Version 1.01 - Added reinforcing clearances for footings and bottom of concrete slabs to the chart
GEN-101	General Notes	02/13/2019	Version 1.0 - General Notes guide sheet approved for use.
SUP-SLAB-501	Precast Concrete Slab Panel Shear Key Details	02/13/2019	Version 1.01 - Added "pourable" to the epoxy grout in the shear keys
SUP-SLAB-103	Precast Concrete Slab Panel Concrete Overlay Squence of Operations	02/12/2019	Detail Rescinded - Information provided in the Special Provision for Concrete Slabs
SUP-SLAB-102	Precast Concrete Slab Panel Slab Erection Sequence of Operations	02/12/2019	Detail Rescinded - Information provided in the Special Provision for Concrete Slabs

Detail Number	Detail Name	Revision Date	Revision Description
SUP-BD(SG)-301	Concrete Diaphragms at Abutments Carrying Steel Girders with Steel Fixed Bearings or Steel Expansion Bearings with Lengths Contributing to Expansion <= 70 Ft.	09/28/2018	Version 1.01 - Revised Sheet 1 to show the concrete diaphragm extending to the bottom of seat angle to match Sheet 3
SUP-BD(SG)-401	Concrete Diaphragms at Abutments Carrying Steel Girders with Steel Expansion Bearings with Lengths Contributing to Expansion > 70 Ft.	09/28/2018	Version 1.01 - Revised Sheet 1 to show the concrete diaphragm extending to the bottom of seat angle to match Sheet 3
SUP-FR(RL)-201	One Strand Bridge Railing	08/01/2018	New Detail Approved for one-strand rail
SUP-BD(CG)-401	Concrete Diaphragms at Abutments Carrying Prestresed Concrete Girders with Elastomeric Bearings with Lengths Contributing to Expansion <= 70 Feet	07/27/2018	Approved Detail - Revised rebar in diaphragm around flanges
SUP-BD(CG)-301	Concrete Diaphragms at Abutments Carrying Prestresed Concrete Girders with Elastomeric Bearings with Lengths Contributing to Expansion > 70 Feet	07/27/2018	Approved Detail - Revised rebar in diaphragm around flanges
SUP-FR(FN)-101	Layout of Fencing on Bridges	07/27/2018	Version 2.0 - Revised Fence Layout to eliminate the tapered panel over a bridge joint.
SI-102	Small Structure Sign and Placement Details	07/27/2018	Version 1.01 - Revised the thickness of the aluminum to match MDOT SHA Standard Specifications for signs - request from OMT metals
SUP-BD(CG)-109	Type XLVIII Bridge Deck Slabs for PCEF Bulb Tee Prestressed Girders HL-93 Loading (Greater than 11'-0" to 11'-6" Girder Spacing)	06/01/2018	Approved from Useable Draft
SUP-BD(CG)-103	Type XLII Bridge Deck Slabs for PCEF Bulb Tee Prestressed Girders HL-93 Loading (Greater than 8'-0" to 8'-6" Girder Spacing)	06/01/2018	Approved from Useable Draft

Detail Number	Detail Name	Revision Date	Revision Description
SUP-BD(CG)-102	Type XLI Bridge Deck Slabs for PCEF Bulb Tee Prestressed Girders HL-93 Loading (Greater than 7'-0" to 8'-0" Girder Spacing)	06/01/2018	Approved from Useable Draft
SUP-BD(CG)-104	Type XLIII Bridge Deck Slabs for PCEF Bulb Tee Prestressed Girders HL-93 Loading (Greater than 8'-6" to 9'-0" Girder Spacing)	06/01/2018	Approved from Useable Draft
SUP-BD(CG)-105	Type XLIV Bridge Deck Slabs for PCEF Bulb Tee Prestressed Girders HL-93 Loading (Greater than 9'-0" to 9'-6" Girder Spacing)	06/01/2018	Approved from Useable Draft
SUP-BD(CG)-106	Type XLV Bridge Deck Slabs for PCEF Bulb Tee Prestressed Girders HL-93 Loading (Greater than 9'-6" to 10'-0" Girder Spacing)	06/01/2018	Approved from Useable Draft
SUP-BD(CG)-108	Type XLVII Bridge Deck Slabs for PCEF Bulb Tee Prestressed Girders HL-93 Loading (Greater than 10'-6" to 11'-0" Girder Spacing)	06/01/2018	Approved from Useable Draft
SUP-BD(CG)-110	Type XLIX Bridge Deck Slabs for PCEF Bulb Tee Prestressed Girders HL-93 Loading (Greater than 11'-6" to 12'-0" Girder Spacing)	06/01/2018	Approved from Useable Draft
SUP-BD(CG)-107	Type XLVI Bridge Deck Slabs for PCEF Bulb Tee Prestressed Girders HL-93 Loading (Greater than 10'-0" to 10'-6" Girder Spacing)	06/01/2018	Approved from Useable Draft
SUP-JT(FIX)-301	Full Height Roadway Joint For 42" F-Shape Parapet for Bridge with Fixed Bearings or Expansion Bearings with Length Contributing to Expansion <= 70 Ft.	05/07/2018	Version 1.01 - Revised the studs on the roadway angle to remove the need to bend the stud

Detail Number	Detail Name	Revision Date	Revision Description
SUB-BP-102	Bearing Pad (For Special Piers) Where Only a Single Shoe is Required on Support	05/07/2018	Version 1.01 - Added Development Length for Bearing pad (2'-1" for #5 bar in Mix 6 Concrete)
SUB-BP-101	Bearing Pad Where Only A Single Shoe Is Required On A Support	05/07/2018	Version 1.01 - Added Development Length for Bearing pad (2'-1" for #5 bar in Mix 6 Concrete)
SUP-BD(DT)-102	Bridge Deck Slab Detail at Transverse Construction Joint	04/30/2018	Version 2.0 - Revised to include deck lap dimensions and clarify the detail.
SUP-BD(SC)-101	Splicing of Bridge Deck Slab Truss Bars During Stage Construction Lap Splice Alternatives	04/30/2018	Version 2.0 - Updated detail to be to scale and add reinforcing lap dimensions
SUP-BD(DT)-201	Bridge Deck Slab Splice Locations	04/30/2018	Version 2.0 - removed the splice "cases: and included the splice dimensions.
SUP-TB(TR)-301	Precast Concrete Slab Panel Curb Detail for Three Strand Structural Tube Rail	04/30/2018	Version 1.01 - Revised rebar from the curb into exterior slab to extend to bottom of stirrups
SR-JT(RB)-101	Compression Seal Gland Replacement - Armored Joint	04/30/2018	Version 1.01 - Removed weld dimensions and placing retainer bars in alternating 5' lengths
SUP-SLAB-701	Precast Concrete Slab Panel Bridge Overlay Reinforcement Details	04/30/2018	Version 1.01 - Revised to "Office Use Only" and added Three Strand Rail detail.
SUP-BD(SC)-102	Splicing of Bridge Deck Slab Reinforcing Steel/Truss Bars During Stage Construction	04/30/2018	Version 2.0 - Revised details to be to scale and included reinforcing lap dimensions
SUP-SC-101	Type I Bridge Scupper	04/17/2018	Detail Rescinded - Only Cast Iron Scuppers shall be used
SUP-BR(SB)-103	Fixed Bearing Medium Length Spans (Grade 50 Steel)	04/03/2018	Ver. 2.0 - Revised the material for the Anchor Bolts to ASTM F 1554 Grade 55, Nuts to ASTM A 563, and Washers to ASTM F 436 in Note 9 on Sheet 2. Eliminated Verified LRFD stamp on all sheets (notation has been phased out)
SUP-SS(GEN)-202	Bearing Stiffeners for Rolled Steel Beams	04/03/2018	Ver. 1.01 - Moved the 'Mill to Bear' designation from the Top Flange to the Bottom Flange at Pier Locations on Sheet 1 and Sheet 2
SUP-BR(SB)-102	Expansion Bearing Short Length Spans (Grade 50 Steel)	04/03/2018	Ver. 2.0 - Revised the material for the Anchor Bolts to ASTM F 1554 Grade 55, Nuts to ASTM A 563, and Washers to ASTM F 436 in Note 9 on Sheet 2. Eliminated Verified LRFD stamp on all sheets (notation has been phased out)

Detail Number	Detail Name	Revision Date	Revision Description
SUP-BR(SB)-104	Bronze Expansion Bearing Medium Length Spans (Grade 50 Steel)	04/03/2018	Ver. 2.0 - Revised the material for the Anchor Bolts to ASTM F 1554 Grade 55, Nuts to ASTM A 563, and Washers to ASTM F 436 in Note 10 on Sheet 2. Eliminated Verified LRFD stamp on all sheets (notation has been phased out)
FND-PF-302	Toothed Pile Point for 10" H Pile	04/03/2018	Ver 1.01 - Revised Note 2 to to allow beveling of the flange or a prefabricated tip for placement of weld
FND-PF-303	Toothed Pile Point for 12" H Pile	04/03/2018	Ver 1.01 - Revised Note 2 to to allow beveling of the flange or a prefabricated tip for placement of weld
FND-PF-401	Pile Point for Pipe Pile	04/03/2018	Ver 1.0 - Issued for Use - Conical Tips may be considered.
SUP-JT(EXP)-101	Roadway Joint at Abutments Carrying Steel Griders with Steel Expansion Bearings with Length Contributing to Exansion > 70 Feet	04/03/2018	Ver 1.01 - Removed angle size from seal retainer angle as 2 sizes are in SUP-JT(JS)-101
SUP-JT(EXP)-201	Roadway Joint at Abutments Carrying Prestressed Concrete Griders with Elastomeric Expansion Bearings with Length Contributing to Exansion > 70 Feet	04/03/2018	Ver 1.01 - Removed angle size from seal retainer angle as 2 sizes are in SUP-JT(JS)-101
SUP-TB(TR)-101	Three Strand Structural Tube Rail Curb Mounted	04/03/2018	Version 1.01 - Sheet 2 and 3: Revised weld symbology to a flare v weld between tubes and revised base stud length to 2".
FND-PF-304	Toothed Pile Point for 14" H Pile	04/03/2018	Ver 1.01 - Revised Note 2 to to allow beveling of the flange or a prefabricated tip for placement of weld
SUP-BR(SB)-101	Fixed Bearing Short Length Spans (Grade 50 Steel)	04/03/2018	Ver. 2.0 - Revised the material for the Anchor Bolts to ASTM F 1554 Grade 55, Nuts to ASTM A 563, and Washers to ASTM F 436 in Note 9 on Sheet 2. Eliminated Verified LRFD stamp on all sheets (notation has been phased out)
SUP-SLAB(3FT)- 802	Simple Span Greater than 50'-0" to 55'- 0" Exterior 3'-0" Precast Concrete Slab Panel	08/11/2017	Version 1.01 Revised Sheet 2 to correct end of slab dimension (2'-1").
SR-PCL-101	Lining of Existing Culvert - General Notes	08/11/2017	Version 1.01 Revised Specification date to May 2017
SR-PI-102	Invert Paving of Existing Pipe - General Notes	08/11/2017	Version 1.01 Revised Specification Date to May 2017

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SR-PI-103	Invert Paving of Existing Pipe - General Notes (Project with E&S Permit)	08/11/2017	Version 1.01 Revised Specification Date to May 2017
SUP-SLAB-401	Precast Concrete Slab Units Tie-Rod Details	08/11/2017	Version 1.01 Revised tensile strength to 150,000 psi BEFORE galvanizing
SUB-WW-201	Typical Wing Wall Cantilever at End of End Post Reinforcement Details	08/11/2017	Version 2.0 Revisesd Sheet 1 to indicate when this detail can be used.
SR-ST(FR)-101	Fatigue Crack Repairs for Structural Steel	08/11/2017	Version 1.01 Revised Specification date to May 2017
SR-JT(DT)-201	Drainage Trough Detail at Abutment For Existing Structure	08/11/2017	Version 1.01 Revised Sheet 1 to update Specifications
SUP-BD(SG)-108	Type XXXVII Bridge Deck Slab for Steel Girders HL-93 Loading	07/04/2017	Version 2.0 - Original was in SUP-BD(SG)-105 but was separated and development length added
SUP-BD(SG)-102	Type XXXII Bridge Deck Slab for Steel Girders HL-93 Loading	07/03/2017	Version 2.0 - Details have been placed on separate sheets and development length added
SUP-BD(SG)-109	Type XXXVIII Bridge Deck Slab for Steel Girders HL-93 Loading	07/03/2017	Version 2.0 - Original was in SUP-BD(SG)-105 but details were separated and development length added
SUP-BD(SG)-107	Type XXXVI Bridge Deck Slab for Steel Girders HL-93 Loading	07/03/2017	Version 2.0 - Original is in SUP-BD(SG)-104 which was separated and development length info added
SUP-BD(SG)-110	Type XXXIX Bridge Deck Slab for Steel Girders	07/03/2017	Version 2.0 - Original was in SUP-BD(SG)-106 but details were separated and development length info added
SUP-BD(SG)-104	Type XXXIII Bridge Deck Slab for Steel Girders HL-93 Loading	07/03/2017	Version 2.0 - Details have been separated and development length information added (originally part of SUP-BD(SG)-103)
SUP-BD(SG)-106	Type XXXV Bridge Deck Slab for Steel Girders HL-93 Loading	07/03/2017	Version 2.0 - Separated Details and added development length information
SUP-BD(SG)-103	Type XXXII Bridge Deck Slab for Steel Girders HL-93 Loading	07/03/2017	Version 2.0 - Details have been separated and development length info added (originally part of SUP-BD(SG)-102
SUP-BD(SG)-105	Type XXXVIV Bridge Deck Slab for Steel Girders HL-93 Loading	07/03/2017	Version 2.0 - Separated Details and added Development Length information (Originally part of SUP-BD(SG)-104)

Detail Number	Detail Name	Revision Date	Revision Description
SUP-SLAB-601	Precast Concrete Slab Unit Detail at Abutment	05/12/2017	Version 1.02 Removed Styrofoam Blocking from in front of bearing for ease of inspection
SUP-SLAB-601	Precast Concrete Slab Unit Detail at Abutment	04/25/2017	Version 1.01
SUP-SLAB-103	Precast Concrete Slab Panel Concrete Overlay Squence of Operations	04/25/2017	Version 1.01 Revised Note 4 to place overlay reinforcing 2 1/2" clear from the top of the overlay instead of mid depth.
SUP-SLAB-501	Precast Concrete Slab Panel Shear Key Details	02/15/2017	Version 1.00 - Original Approval
SUP-SLAB-601	Precast Concrete Slab Unit Detail at Abutment	02/15/2017	Version 1.00 Original Approved Detail
SUP-SLAB-103	Precast Concrete Slab Panel Concrete Overlay Squence of Operations	02/15/2017	Version 1.00 Original Approved Detail
SUP-JT(FJ)-101	Finger Joint Details (42" F-Shape Parapet) for Bridges with Steel Stringers with Skew Angles Between 50° and 90°	11/15/2016	Sheet 13 - Added a dimension "M" for the lower finger joint plan and made it 1" less than dimension "L" of the upper finger joint plate
SUB-AB-101	Typical Section for Catilever Abutments on Piles Carrying Steel Girders with Steel Fixed Bearings or Steel Expansion Bearings with Length Contributing to Exapnsion <= 70 FT.	11/15/2016	Removed Waterproofing Membrane from the joint between the diaphragm and backwall
SUP-BD(SG)-301	Concrete Diaphragms at Abutments Carrying Steel Girders with Steel Fixed Bearings or Steel Expansion Bearings with Lengths Contributing to Expansion <= 70 Ft.	11/15/2016	Added notes about placing diaphragm concrete directly against the backwall roofing paper and indicated areas of no SIP forms
SUP-BD(SG)-401	Concrete Diaphragms at Abutments Carrying Steel Girders with Steel Expansion Bearings with Lengths Contributing to Expansion > 70 Ft.	11/15/2016	Added notes about placing diaphragm concrete directly against the backwall roofing paper and indicated areas of no SIP forms

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SUP-BD(CG)-401	Concrete Diaphragms at Abutments Carrying Prestresed Concrete Girders with Elastomeric Bearings with Lengths Contributing to Expansion <= 70 Feet	11/15/2016	Added notes about placing diaphragm concrete directly against the backwall roofing paper and indicated areas of no SIP forms
SUP-BD(CG)-301	Concrete Diaphragms at Abutments Carrying Prestresed Concrete Girders with Elastomeric Bearings with Lengths Contributing to Expansion > 70 Feet	11/15/2016	Added notes about placing diaphragm concrete directly against the backwall roofing paper and indicated areas of no SIP forms
SUP-TB(CP)-302	Parapet Control Joints and Dual Conduit Placement on Parapets with Sidewalk	01/06/2016	Removed 34" parapet from details
SUP-TB(CP)-202	Parapet Control Joints and Single Conduit Placement on Parapets with Sidewalk	01/06/2016	Removed 34" parapets from details
SUP-SLAB-102	Precast Concrete Slab Panel Slab Erection Sequence of Operations	11/18/2015	Added requirement for pre-grout meeting (note 1) and expanded note 5 to include reference to shear key pocket.
SUP-SLAB-101	Precast Concrete Slab Panel General Notes	11/18/2015	Added note regarding surface finish of shear key
SUP-JT(FIX)-401	Full Height Roadway Joint for Sidewalks for Bridge with Fixed Bearings or Expansion Bearings with Length Contributing to Expansion <= 70 Ft.	11/18/2015	Revised Joint Location off the backwall
SUP-JT(JS)-101	Compression Seal Joint and Retainer Angle Detail	09/24/2015	Revised angle to 1/2" to be consistent with roadway angles in abutment details