BRIDGE DESIGN FINAL PLAN CHECKLIST



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- Project Name:Project No:
- Bridge No.:
- Location:

- Designer:Checker:
- Drafter:
- Reviewer:

• NOTE: Each Task, when applicable & completed, is Checked (Y, N, N/A), Dated and Initialed by the Designer, Checker, and Reviewer.

F: 15: F :			27.1.1	Designer			
Final Plan Tasks	Y	N	N/A	Checker		DATE	
Final Plan Data Collection				Reviewer			
Wetland and Shoreland Permits				Comments:			1
Special Provisions							
PS&E Checklist							
Supplemental Specification						$ \checkmark $	
Final ROW Purchase Plans						· .	
Final POW and TCP						s to be used	
EPA-NPDES Requirements						<u>de</u> . The list	
Supplemental Project Information Sheet				1 (ive. Additioi	,
Director's Data Sheet				\		may be req	uired
EPA ID Number (for painting)					0	n plans.	
Utilities Certificate					ζ ,	L	
ROW Certificate]			
Scour Analysis Report]			
Engineer of Record Form]			
Rating Form 4							
Fill out Bridge Particulars on Data Base							
Front Sheet Plan						DATE	
Project Titles				Comments:			
Location Map							
Approval Signature Box							
Signatures of FHWA, Front Office Obtained							
PE Stamps, Signatures, Date							
Traffic Data							
Project Layout with bridge number							
General Plan and Elevation						DATE	
Summary of Bridge Quantities Table				Comments:			
Hydraulic Data							
	\perp	<u> </u>		1			
Bridge General Plan	\perp	<u> </u>		1			
Oriented with over road upstation to the right		1					
and centerline at horizontal, if possible		1					
Proposed Alignment and Stations	+			1			
Alignment Data	+	<u> </u>	-	1			
Intersection Stations and & Angles	+	<u> </u>		1			
Begin and End Bridge Stations & FG Elev	+			1			
Expansion and Fixed Joints	+	<u> </u>		1			
Traffic Arrows	+			1			
Trailic Affows	\bot	\bot					

Final Plan Tasks Cont.	Y	N	N/A	Designer		
	-	-11	14/21	Checker Reviewer	DATE	
General Plan and Elevation Cont.						
Span Lengths Applies by the series Bouts and Contacting			-	Comments:		
Angles between Bents and Centerline Proposed Utilities						
Right-of-way Lines				4		
North Arrow				-		
0						
Proposed Slopes and Limits of Toe of Slopes				=		
Proposed Channel Protection				_		
Stream Name and Flow Arrow Proposed Drainage						
Label Point of Min. Vertical Clearance				4		
Outline of Bridge, Approach Slab, Piers, and			-			
Wingwalls						
Working Line/ Construction Line				-		
Proposed Bridge and Approach Rail						
○ Label Roadways						
Dimension Out to Out of Bridge Width						
Dimension Rail to Rail and Coping Width						
Length of approach slab						
Bridge Elevation						
 Proposed Bridge Projected from Plan 						
 Proposed Channel Protection 						
 OHW and 100 yr Flood Call-out w/ Elev 						
Proposed Bridge and Approach Rail						
						I
Project Notes					DATE	
Project Note Sheet						
Summary of Bridge Quantities Table						I
Site Plan and Profile				0	DATE	
Profiles of upper and lower roadways or railroad				Comments:		
Bridge Site Plan				1		
٥						
Oriented with over road upstation to the right and centerline at horizontal, if possible						
O Deck not shown. Show channel or roadway				1		
below deck				4		
Outline of Proposed Substructures, Footings,						
Approach Slab, Wingwalls						
Outline of Existing Bridge				4		
Proposed Alignment and Stations			-	4		
Alignment Data Alignment Data	1		-	-		
Intersection Stations and & Angles Regin and End Bridge Stations & EC Floy	1		-	-		
Begin and End Bridge Stations & FG Elev Expansion and Fixed Joints	ļ			-		
Expansion and Fixed Joints Traffic Arrows	ļ			-		
Angles between Bents and Centerline		-		†		
Proposed Utilities		-		1		
Right-of-way Lines/ Easements			-	1		
North Arrow		-		1		
Proposed Slopes		-		1		
Proposed Channel Protection				†		
				†		
Stream Name and Flow Arrow						

Final Plan Tasks Cont.	Y	N	N/A	Designer Checker		DATE	
Site Plan and Profile Cont.				Reviewer		DATE	
O.H.W., T.O.B., Shoreland, and 500 yr. Scour					I		
Line o Proposed Drainage				=			
Existing Detail				1			
Existing Contours							
Temporary Sheeting							
Detour bridge/ Temporary Diversion Construction Access (place as a separate)				-			
 Construction Access (place as a separate sheet if doesn't fit or too crowded on Site Plan) 							
□ Access Roads							
☐ Railroad Crossing Access Road							
☐ Trestle							
☐ Limits of Temporary Slope				-			
☐ Temporary Slope Lines☐ Temporary Sheeting				-			
Proposed Approach Rail				-			
Limits of all toe of slopes				-			
- Dridge Destite							
Bridge Profile Grade/ Vertical Curvature/ Profile Grade				-			
Profile of Bridge, Substructures and Approach		-					
Slabs							
Approximate Existing Ground Line							
Approximate Existing Bottom of Channel				=			
Datum Elevation Line				1			
Slopes of embankments, type and thickness of slope protection (don't need to label)							
Berm location. elevation and width				-			
 Finished and Existing Grade Elevations 							
Railroad/ Cross Road				-			
 High Water, O.H.W., Scour Elevations Minimum Vertical Clearances 				-			
Bottom of Footing, Piles, and/or Drilled Shafts; BOF Elevations							
○ Foundation Types							
Vertical Curve Data							
 Track dimensions, centerline and ditches if railroad is involved 							
Length of each span measured along profile				-			
grade line							
Channel Sections and Surroy Leveut				-		DATE	
Channel Sections and Survey Layout Typical approach cross sections for upper and/or						DATE	
lower roadways and channel							
Excavation and Fill Limits				-			
○ Item numbers							
 Elevations 				-			
Survey Layout				-			
Working Points Labeled				-			
Working Points Coordinates Table							
Dimension WP to WP				<u> </u>			
Angle of Crossing North Arrays				-			
North Arrow CL Construction		-					
- OF CONSTRACTOR							
Boring Log						DATE	
Boring Logs				Comments:	•		•
 Label Bottom of Footing, Bottom of Seal, and Water Level 							
Boring Notes				-			
Boring Layout Plan and Locations Proposed Alignment and Stations		-	-	-			
• Table showing boring #, coordinates, stations,							
and offsets							

Final Plan Tasks - Cont.	Y	N	N/A	Designer Checker	DATE	
Boring Log Cont.				Reviewer	DAIE	
Detour bridge/ Temporary Diversion Alignment				Comments:		
North Arrow Outline of Existing Bridge Substructure				+		
Existing Detail				-		
Outline of Proposed Bridge Substructures,				1		
Footings and Wingwalls						
Boring Location Symbols and Label				_		
Footing Masonry					DATE	
North Arrow				Comments:		
Outline of Footing, Abutment and Wingwalls						
Working Line and CL Construction Line				1		
Working Points Labeled						
Angle of Crossing						
O All dimensions and angles required to						
construct the abutment and wingwalls tied to						
the centerline of bearings and working line						
Section Location Labels				1		
Sections of Abutment and Wingwalls Footings						
^O Elevations Bottom of Footing (Top of Footing if				1		
on bedrock)						
Slope of Wingwall Batter						
o Footing Steps						
Construction Joints for Phase Construction Dilar Dillar Chaffe				_		
Piles/ Drilled Shafts Tie the pile spacing to the intersection of the				-		
centerline of bearings and working line						
0				1		
Show pile batter and location of battered piles				=		
Footing Reinforcement					DATE	
North Arrow				Comments:		
Outline of Footing, Abutment and Wingwalls Working Line and CL Construction Line				_		
Section Location Labels				-		
Layout of Reinforcement Steel				1		
Label and Dimension Reinforcing Steel				1		
Footing Steps						
Construction Joints for Phase Construction						
Identify Mechanical Connections						
○ Label Lap Splices			-	-		
Sections of Abutment and Wingwalls Footings						
Dimension J-bar Height from Top of Footing				1		
- 5 1 5						
Abutment Mesons					DATE	
Abutment Masonry				Community	DATE	
• Plan • North Arrow			-	Comments:		
Outline Abutment		-		1		
Working Line and CL Construction Line				1		
Working Points Labeled				1		
Angle of Crossing				1		

Y	N	N/A	Designer Checker	DATE	
			Reviewer		
			Comments:	1	

Final Plan Tasks - Cont.	Y	N	N/A			
				Checker	DATE	
Abutment Masonry Cont.				Reviewer		
Anchor Bolt Layout Detail				Comments:		
Outline of pedestal						
Outline of masonry plate						
Centerline of bearings						
Centerline of beam			-			
All dimensions necessary to set the anchor helts find to the contoling of hearings and the						
bolts tied to the centerline of bearings and the centerline of beam						
Centennie of Deam						
Abutment Reinforcement					DATE	
North Arrow				Comments:	2.112	
Outline of Abutment				Comments.		
Working Line and CL Construction Line				1		
Section Location Labels				1		
Layout of Reinforcement Steel				1		
Label and Dimension Reinforcing Steel				1		
Footing Steps				1		
Phase Construction Locations Labeled						
Identify Mechanical Connections						
Label Lap Splices						
Sections of Abutment						
Horizontal Sections at Abutment, Backwall and						
Corner Sections						
○ Dimension J-bar Height from Top of Footing				1		
Wingwall Masonry					DATE	
Elevation				Comments:		
Proposed Ground						
 Existing Ground 						
 Outline of New and Existing Wingwalls 						
○ Elevations						
Structural Fill						
Phase Construction Location						
Piles/ Drilled Shafts						
Existing and Proposed Utilities						
○ Weepers				4		
Architectural Treatment						
Location of Construction Joints						
Location of Exp. And Contraction Joints						
Section Location Labels			-			
o Footing Steps						
 Wingwall Length Outline of Approach Slab Behind Wingwall if U- 						
Back Wings						
Dack Willigs			-	1		
Section				1		
Proposed Ground				1		
Existing Ground				1		
Outline of New and Existing Wingwall		-	-	1		
Cutiline of New and Existing Wingwall Elevations		-	-	1		
Structural Fill				1		
Piles/ Drilled Shafts				1		
Existing and Proposed Utilities				1		
Existing and Froposod Offices				ļ		

				Designer		
Final Plan Tasks - Cont.	Y	N	N/A	Checker	DATE	
Wingwall Masonry Cont.				Reviewer		
○ Weepers				Comments:		
Architectural Treatment						
 All dimensions required to construct the]		
wingwall						
Approach Slab						
Pay Limits for Excavation and Backfill				1		
Channel Excavation and Protection Pay Limits				-		
Architectural Treatment Details				-		
Wingwall Reinforcement					DATE	
Outline of Wingwall				Comments:		l
Section Location Labels				55		
Layout of Reinforcement Steel				1		
Label and Dimension Reinforcing Steel				1		
Footing Steps				1		
Phase Construction Locations Labeled				1		
Identify Mechanical Connections				1		
Label Lap Splices				1		
Sections of Wingwalls				1		
				1		
				1		
Pier Masonry					DATE	
• Plan				Comments:		
North Arrow				Commonto.		
Outline Pier				1		
Working Line and CL Construction Line				1		
Working Points Labeled				1		
Angle of Crossing				1		
 All dimensions and angles required to construct the pier tied to the centerline of bearings and working line 						
Outline of Beam Seats				1		
○ Label Beam Numbers				1		
Location of Construction Joints				1		
Phase Construction Location				1		
Layout of Piles or Drilled Shafts						
				1		
Elevation						
Proposed Ground						
Existing Ground						
Outline of New and Existing Pier						
○ Elevations						
Structural Fill						
 Phase Construction Location 						
Piles/ Drilled Shafts]		
 Existing and Proposed Utilities]		
Architectural Treatment]		
Location of Construction Joints]		
 Location of Exp. And Contraction Joints]		
Section Location Labels						
○ Footing Steps]		
○ Cofferdams	. —					

Final Plan Tasks - Cont.	Y	N	N/A	Designer Checker		DATE	
Pier Masonry Cont.				Reviewer		DAIL	
Piles/ Drilled Shafts				Comments:	I		
○ Tremie Seal							
○ Wash requirements of bridge seat				= =			
Section				=			
Proposed Ground							
Existing Ground							
Outline of New and Existing Pier							
Elevations							
Structural Fill				<u> </u>			
Piles/ Drilled Shafts				<u> </u>			
Existing and Proposed Utilities				<u> </u>			
Architectural Treatment				<u> </u>			
O Cofferdams							
Piles/ Drilled Shafts							
o Tremie Seal							
Vent Elevation Pattern of Termin Coal Flouration							
Bottom of Tremie Seal Elevation							
Wash requirements of bridge seat				-			
Pay Limits for Excavation and Backfill							
Section of Pier Armor				=			
				=			
Anchor Bolt Layout Detail				<u> </u>			
Outline of pedestal				-			
Outline of masonry plate				-			
Centerline of bearings							
Centerline of beam				_			
 All dimensions necessary to set the anchor bolts tied to the centerline of bearings and the 							
centerline of beam							
Pier Reinforcement						DATE	
Outline of Pier				Comments:			
Working Line and CL Construction Line							
Section Location Labels							
Layout of Reinforcement Steel				1			
Label and Dimension Reinforcing Steel							
○ Footing Steps							
Phase Construction Locations Labeled]			
Identify Mechanical Connections							
○ Label Lap Splices							
 Section of Pier 							
Layout of Piles or Drilled Shafts				=			
Typical Tie Bar Detail							
Seismic Reinforcing Details				-			
Bridge Bearings						DATE	
Bearing Assembly Plan and Sections				Comments:	l		
Sole and masonry plate details							
 Elastomeric internal plate size and number of elastomer layers 							
Indicate each bearing location and number reg'd							

Final Plan Tasks - Cont.	Y	N	N/A	Designer Checker		DATE	
Bridge Bearings Cont.				Reviewer		DATE	
O All dimensions and angles necessary to fabricate the steel plates tied to the centerline of bearings and the centerline of beam				Comments:	·		
Anchor bolt size and embedment length Anchor Bolt Detail				1			
Bridge Bearing Notes							
Steel Keeper Assembly Detail				=			
Superstructure Framing Plan & Details						DATE	
Framing Plan				Comments:			
North Arrow				Comments.			
				1			
Working Line and CL Construction Line				_			
Centerline of Proposed Beams				<u> </u>			
Label Beam Line Numbers							
Angle of Crossing				4			
OCL of Bearings			-	4			
Station of CL Brg. At CL Construction							
○ Beam spacing dimensioned and tied to CL							
Construction							
 K-Frame Spacing and Diaphragm 							
o Field splice location tied to centerline of							
bearing station							
 Bearing and Intermediate Stiffeners 							
○ Drip Bars							
Proposed Utilities							
Proposed Utility Support Spacing							
Curved Girder K-Frame Spacing Table							
Deck Placement Sequence							
Beam Details						DATE	
Girder Web Layout				Comments:			
Girder Elevation & Shear Connector Layout				Comments.			
Connection Plate and Bearing Stiffener Details							
Shop Splice Flange Transition Detail							
Shop Splice Flange Transition Detail Shop Web Splice Details				-			
Shear Connector Detail				-			
	 			+			
Camber Table & Diagram Field Splice Details	1		-	-			
Field Splice Details Timinal K. France Patrill		_	-	-			
Typical K-Frame Detail		_	-	-			
Abutment K-Frame and Drip Bar Detail Control Control			-	4			
Pier K-Frame Detail	1		-	4			
Flange Width Transition Detail				-			
Typical Deck Section & Details						DATE	
Typical Deck Section				Comments:	!		
Overall width of structure				1			
Working Line and CL Construction Line				1			
Bridge, lane, shoulder, and curb width				1			
Cross Slope in Percent				1			
Superelevation Rate	<u> </u>			†			
Proposed Bridge Rail			 	1			
Limits of Water Repellent	 			1			
Conduits/ Utilities on Bridge	 			1			
Girder Type, Number and Spacing		-	-	1			
Girder Type, Number and Spacing	<u> </u>						

Final Plan Tasks - Cont.	Y	N	N/A	Designer		
Final Plan Tasks - Cont.	1	IN	IV/A	Checker	DATE	
Typical Deck Section & Details Cont.				Reviewer		
Closure Pour				Comments:		
Phase Construction						
Temporary Barrier Locations						
Overlay Type and Depth						
Deck Depth						
Curb Reveal						
Outside Curb Depth				1		
 Item Numbers (pavement, membrane, rail, cip deck, and precast panels 						
Limits of deck grooving for bare decks				1		
Overhang dimensioned				-		
Typical Intermediate Bay				-		
Typical Internediate Bay Typical Bay at Piers						
Typical Bay at Abutments				-		
Sidewalk Width and Slope				1		
Olderrain with and Olope				1		
Table for Elevations at Bottom of Concrete Deck Slab				=		
				_		
Haunch Detail Abutment Fixed Joint Detail (may be placed on			-	-		
abutment details sheet)						
abatment details sheety				-		
Reinforcement Deck Section & Details					DATE	
					DAIL	
• Plan				Comments:		
North Arrow Washing Line and Cl. Construction Line				_		
Working Line and CL Construction Line Angle of Creening				-		
Angle of Crossing Class Basings						
CL of Bearings Outline of Concrete Deck				1		
Outline of Concrete Beck Outline of Bridge Rail Post Base Plates				-		
Outline of Deck Haunch				-		
Layout of Reinforcement Steel				-		
Label and Dimension Reinforcing Steel				-		
Phase Construction Locations Labeled				-		
Identify Mechanical Connections				1		
Label Lap Splices				1		
Section A-A taken transversely through center				1		
of the slab						
Conduits/ Utilities on Bridge						
Utility Pull-out Boxes]		
O Acute/obtuse corner reinforcing details (if						
needed)				1		
Section A-A			_	1		
Sections at Deck Ends				1		
Approach Slabs					 DATE	
• Plan				Comments:	 	
○ North Arrow				1		
Working Line and CL Construction Line				1		
Angle of Crossing			_	1		
CL of Bearings				1		
Outline of Approach Slab and Seat				1		
Length and width of approach slabs and						
sleeper slabs	ļ			1		
Layout of Reinforcement Steel		-	-	4		
Label and Dimension Reinforcing Steel		-	-	4		
Phase Construction Locations Labeled			-	4		
Identify Mechanical Connections	1		-	1		
○ Label Lap Splices				1		

				Desi	1		
Final Plan Tasks - Cont.	Y	N	N/A	Designer		DATE	
Approach Slabs Cont.				Reviewer			
 Section A-A taken longitudinal through the 				Comments:			
slab			_	1			
Conduits/ Utilities on Bridge				-			
• Section A-A				-			
Dimension Length, Thickness, Haunch							
Slope in Percentage							
Sleeper Slab							
Layout of Reinforcement Steel							
Label and Dimension Reinforcing Steel							
Section at Curb							
- Section at Curb							
Expansion Joint Details						DATE	
$^{\circ}$ Draw plan view to full length of joint and to the							
skew of the bridge				Comments:			
Layout of stiffeners and anchors							
 Draw Section A-A along profile 							
 Fill in X's (Including Temperature Table) 							
 Design sidewalk plate widths 							
5: 440 % 4410 4 %				=			
Field Splice Weld Detail Fidus Par Partilla Fidus Parti				-			
Edge Bar Details Plate Angle Connection Details				4			
Plate Angle Connection Details Plow Protection Plate Details				4			
Plow Protection Plate Details Plow Protection Plate Details				4			
						DATE	
Rail and Curb Layout						DATE	
• Plan View				Comments:			
Dimension spacing and total lengths Horizontal Curve Information				4			
North Arrow				+			
Label Lengths and Offsets				+			
Centerline of Construction and Tanget Line				=			
- Contentine of Constitution and Panget Line				-			
Rail and Curb Notes							
 Item Number, Description, Label, and Length 							
Curb Offset Table				_			
Bridge Rail						DATE	
• Elevation View				Comments:		2.211	
• Fill in X's				John Horito.			
				1			
Bridge Approach Rail						DATE	
Elevation View				Comments:			
○ Fill in X's				_			
				-			
Reinforcing Schedules					I	DATE	
				Comments:			<u> </u>
				35			
				_			

Final Plan Tasks - Cont.	Y	N	N/A	Designer Checker Reviewer	DATE	
Title Block w/ project name, number,				Comments:		
location, bridge number, & date				Comments.		
Based on construction cost estimate						
Final quantities in estimate are in agreement with						
tabulated quantities shown on the plans.						
Load Rating Summary (Form 4) and Computation	e				DATE	
Load Rating Summary (Form 4) Completed	3			Comments:	DAIL	
PE Stamp and Signature on Form 4				Comments.		
All load ratings shown on the Form 4 are in agreement with the load rating computations						
Project name and number indicated on both the load rating computations and Form 4						
Calculation Books - Design					DATE	
Analysis & Design of Bridge Structural Components				Comments:		
Documentation of Work						
Hand Calculations						
Computer Output						
Detailed Notes						
Quantity Calculations						