

ADA COUNTY HIGHWAY DISTRICT BRIDGE DRAWING GENERAL LAYOUT REQUIREMENTS

**All Bridge Plan Submittals must be provided to the District for review no later than December 31.
The bridge plans must be approved by ACHD no later than January 31.
Bridge construction must begin no later than February 1.**

TITLE SHEET

Legend
"ADA COUNTY HIGHWAY DISTRICT"
"Boso Road Bridge #999 Replacement (Repair) (New)"
Project #
Section XX, TXN, RXE, BM, Ada County, Idaho
Vicinity Map with North Arrow
Index of Sheets
Design Notes
Ada County Map
Design Firm Logo, Address, & Engineer's Stamp & Signature

SITUATION & LAYOUT

Site Plan with North Arrow
Bridge Elevation
Transverse Deck Section
Longitudinal Section
Design Firm Logo, Address, & Engineer's Stamp & Signature
Bridge Name & Number

DECK PLAN & DETAILS

Bridge Deck Plan with North Arrow
Deck Reinforcement Plan
Stringer Placement Plan
Deck Section
Design Firm Logo, Address, & Engineer's Stamp & Signature
Bridge Name & Number

ABUTMENT PLAN & DETAILS

Abutment Plan with North Arrow
Backwall Section
Wingwall Section
Abutment No. 1 Looking Back
Abutment No. 2 Looking Forward
Anchor Bolt Detail
Design Firm Logo, Address, & Engineer's Stamp & Signature
Bridge Name & Number

REINFORCEMENT SCHEDULE

Rebar Table
Reinforcement Notes
Design Firm Logo, Address, & Engineer's Stamp & Signature
Bridge Name & Number

THE FOLLOWING DRAWINGS ARE REQUIRED ONLY IF APPLICABLE

STRUCTURAL STEEL DETAILS (PRECAST CONCRETE DETAILS)

Member Shop Details
Bill of Material
Design Firm Logo, Address, & Engineer's Stamp & Signature
Bridge Name & Number

PEDESTRIAN RAIL DETAILS

Member Shop Details
Bill of Material
Design Firm Logo, Address, & Engineer's Stamp & Signature
Bridge Name & Number

GUARDRAIL LAYOUT & DETAILS

Guardrail Plan with North Arrow
Details as Required (ITD Standards)
Design Firm Logo, Address, & Engineer's Stamp & Signature
Bridge name & Number

TRAFFIC CONTROL PLAN

Sign Legend
Vicinity Map with North Arrow
Informational Sign
Notes
Design Firm Logo, Address, & Engineer's Stamp & Signature
Bridge Name & Number

CHECK LIST FOR BRIDGE DESIGNS

GENERAL NOTES	YES	NO	COMMENTS
Are plan sheets stamped by a Professional Engineer licensed in Idaho?			
If structure is crossing over an irrigation facility have you received permission from the appropriate controlling agency to place the structure over the facility?			
Has a rebar schedule been submitted for a cast in place structure or shop drawings for a precast structure?			
Have you submitted 2 sets of plans? Shop drawings for precast structures may be 11"x17".			
Is there a scale on every sheet that shows a detail or section of the bridge, if not a note stating not to scale?			
Pedestrian rails extend beyond structure and wrap around wing-walls. Pedestrian rail minimum 54".			
Are the structural and miscellaneous details included? Example: fabricated stringers, pedestrian rails, guard rails, anchor bolts.			
TITLE SHEET			
Index of all sheets including the Title Sheet.			
Vicinity Map with coordinates of bridge.			
Legend.			
North arrow.			
Title of Project			
Roadway Typical Sections.			
Last revision date.			
Soil pressures or capabilities.			
Were material unit stresses (concrete & steel) used in the design and included in the plans?			
Is there 3 lbs. per cy of polypropylene fiber (or equivalent) in the deck?			
Is the top reinforcement protected i.e.: MMFX or galvanized?			
SITUATION & LAYOUT SHEET			
Is a situation and layout sheet included? Does it include the following?			
Location of Reference Monuments.			
Elevation view.			
Typical transverse section.			
Is the appropriate datum noted?			
Does it show the test pits and data or the bore logs and locations on the plans or reference the geotechnical report that is included with the plans?			
If the bridge is over a canal or irrigation facility 24" of free board is required. In event the structure crosses a natural waterway; 24" over the 100-year flood elevation			
Are utilities shown on the plan or detail sheet, including appropriate details of existing or future facilities?			
Is the centerline stationing and bearing provided?			

Are the wingwall stations and offsets from centerline shown?			
Is the angle between the barrel and the wingwall provided?			
DETAIL SHEETS			
Does the bridge design deck correspond to the ultimate width for the roadway it is on? If not have alternate safety arrangements been implemented? (design include the appropriate traffic safety features guardrail, end treatment, approach rails, transitions or clear zone, etc.)			
DESIGN CRITERIA			
In instance when an existing structure is being added onto then the connection details designed by Licensed Engineer will be provided.			
Is the appropriate design criteria on the situation or layout sheet?			
Have they noted that the design is per AASHTO Standard Specifications for Highway Bridges and which edition was used?			
Do they show a live load of LRFD HL-93 or equivalent? (This would not apply in a bridge that was being added on to in which casethe live loading should be the same as the existing bridge.)			
Is the bridge multiple spans or single span over 20? If so this will require an outside review by a Structural Engineer.			
Does the deck design allow for future wearing surface for a minimum 25 lbs. per square foot?			
If the deck is not the wearing surface then has a waterproof membrane been included per section 511 of ITD Specs with a 3-foot drape?			
Where a membrane is required, is there a leveling layer of sand per section 511 ITD Specs with a minimum thickness of 2" or 1 1/2 times the nominal diameter of the largest aggregate being used for backfill which ever is greater?			
SUPERSTRUCTURE DETAILS			
Is Deck Plan included?			
Do deck reinforcement plans have detail showing deck section view with details?			
If deck is supported by stringers do they show a stringer placement plan?			
If in urban area vertical curb is required on Structure and minimum of 50' all directions from structure.			
Are there sufficient section views so that reinforcements can be understood?			
SUBSTRUCTURE DETAILS			
Are the inside faces of the abutments a minimum of 24" behind the edge of the canal banks?			
Is the top of footing at least 24" below the bottom pf the streambed or canal bottom?			
If pouring concrete against the earth is there 3" of cover? If placing earth against a formed concrete surface then 2" of cover or if against the atmosphere then 1" cover minimum?			
Do drawings show elevations of all substructures? i.e.: all abutments and piers footings etc.			
Are there sufficient section views so rebar details can be understood?			

Are the drawings sufficient enough so you can determine what the details are on the entire structure?			
Does the plan provide for back filling the excavation behind the abutment with 3/4 minus crushed aggregate, with a minimum width of 24"?			
Is the back fill compacted per recommendation in soil report?			
ADDITIONAL CRITERIA FOR PRECAST			
Has section #3004.3 of the Policy Manual for precast stiff leg bridge structures or box culverts which require special features to provide for carrying the shear stresses across the joints been complied with?			
Have they included calculations and shop drawings from the precaster stamped by a Professional Engineer Licensed in Idaho?			
Included in the general notes is there a note on the situation or layout sheet or shop drawing stating they will not remove the sections from the form until they have achieved 70% strength?			
Have manufacturer's directions been followed for grouting and sealing of joints between sections?			
Are there plans to expand structure in the future? If so, have allowances for expansion been made?			
If using precast deck units such as hollow core, girders, T's etc., review will be done by an outside Structural Engineer.			
Are there provisions for filter fabric to be placed down the backside of the legs or some other specific design feature that would accommodate the hydrostatic pressure?			
Wingwalls, headwalls, cut-off walls and footings must be cast-in-place.			