

District 3 Project Spotlight:

S FK PAYETTE BR (LOWMAN), BOISE CO

Key No. 20681

Greer Gardner, P.E.



YOUR Safety • • • ► **YOUR Mobility** • • • ► **YOUR Economic Opportunity**

South Fork Payette Bridge (Lowman, ID)



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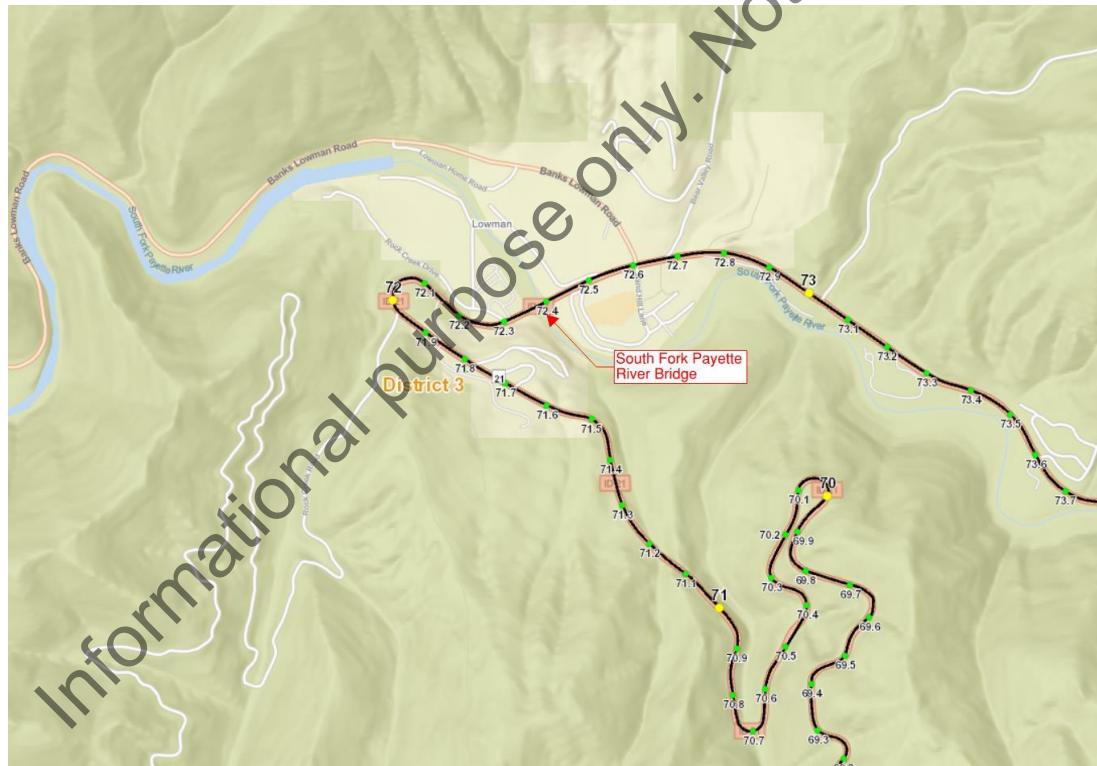
South Fork Payette Bridge (Lowman, ID)



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PROJECT SCOPE

The SH-21, S FK PAYETTE BR (LOWMAN), BOISE CO project located near Lowman in Boise County will replace the Lowman bridge over the South Fork of the Payette River on SH-21 at mile post 72 in Boise Co. Plans involve Drilled Shaft Foundations, Precast Deck Panels, & Steel Girders.



PROJECT DETAILS

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- Federally Funded
- Multi-Year Project
- Expected Start: Spring 2025

Informational purpose only. Not for Bidding.



Approximate Quantities

- Structures
 - Removal of Bridge
 - Concrete
 - CL 40-A ~ 159 CY
 - CL 40 AF ~ 32 CY
 - UHPC ~ 56 CY
 - Self Consolidating CL 40A ~130 CY
 - CL 40 Concrete ~ 650 CY
 - 332,000 LB Steel Bridge
 - Metal Reinforcement ~ 40,000 LB
 - PPC Overlay ~ 1,200 SY
 - Full Depth Deck Panels ~ 9,000 SF
- Roadway
 - Temp HMA ~450 TON
 - HMA CL SP-3 ~1,700 TON
 - $\frac{3}{4}$ " Aggregate ~3,650 TON
 - Excavation ~3,000 CY
 - Guardrail ~1,500 FT
 - Reinforced Soil Slope ~7,650 SF



Key Points to Note:

- In-water work permitted only between July 10th and November 10th
- Must minimize impacts to fisheries
 - Will require fish biologist onsite for removal of fish trapped within coffer dams
- High Community Interest
- Will require a licensed Plumber for install of sanitary sewer lines



Sequence

KN20681, S FK PAYETTE BR (LOWMAN), BOISE CO

Phase 1 SB Approaches

- Clearing, Grubbing, & Tree Removal
- Construct 1:1 Soil Slope
- Install SB Guardrails
- Install SB Permanent & Temp Paving
- Construct Local Approaches on SB side

Phase 2 SB Bridge

- Install Precast Barrier
- Demo SB Side of Bridge
- Construct SB Side of Bridge
- Install Guardrail
- Prepare Bridge for Winter Shutdown
- Reopen 2 lanes of traffic

Phase 3 NB Approaches

- Install Drainage Pipe & Inlet
- Install NB Permanent & Temp Paving
- Construct Local Approaches on NB side

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Sequence

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Phase 4 NB Bridge

- Install Precast Barrier
- Demo NB Side of Bridge
- Construct NB Side of Bridge
- Install Guardrail
- Prepare Bridge for Winter Shutdown
- Reopen 2 lanes of traffic

Phase 5 Project Completion

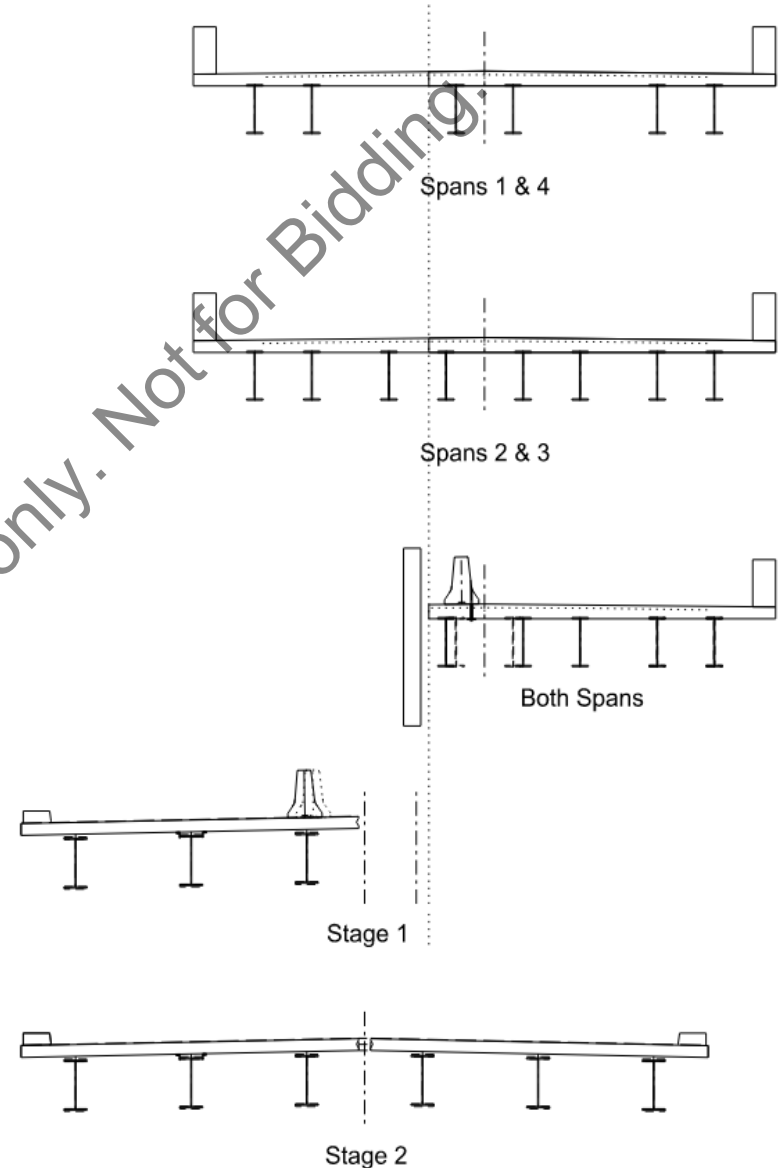
- Mill & Inlay Bridge Approaches for Final Pavement
- Place PPC Overlay
- Preconstruct Snowplow Turnout
- Pavement Markings

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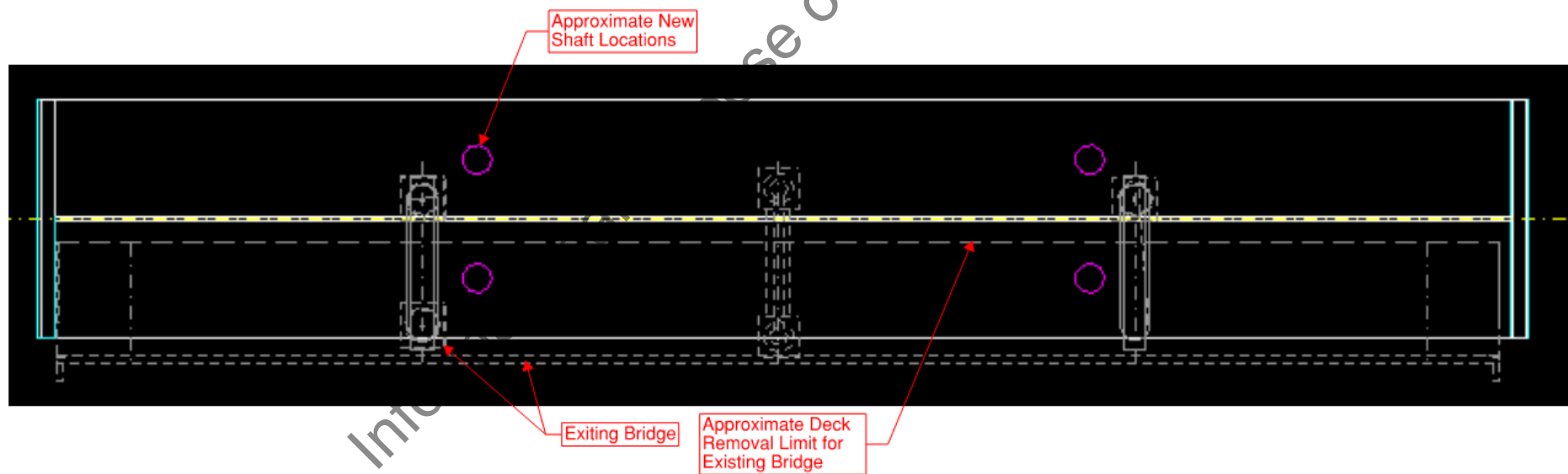
Bridge Construction Sequence

- Girder Spacing different from end spans vs. middle spans.
- Will be replaced with consistently spaced girders across entire length of bridge.



Drilled Shaft

- Cage/hoops to be welded, not spiral. Can be welded in place.
- Permanent casing.
- Some shafts approximately 45' deep.
- Existing Bridge in the way, so no driven piles.
- Rebar alignment must be perfect between stages.
- BIG RISK. Make sure shafts are placed & aligned properly, or else Pier Cap elevations won't match from SB & NB lanes.



Example Rebar Placement Pictures



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Steel Girders

- Girder Length should be short enough to allow for transport to Lowman.
- Intermediate Diaphragms to be installed between Girders. Recommend placing prior to deck panel placement.

Precast Deck Panels

- NO SUBSTITUTIONS ALLOWED.
- 4 different Panel Types. Nearly identical. End pieces are different.

Sanity Sewer

- To be installed by licensed plumber.
- We will install portions on bridge. Owner will hook up to ends.



QUESTIONS?

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