

Project Summary:

**June 16, 2009
Day 548 of 1278**

Recent Construction Highlights

Flatiron Constructors Intermountain continued with construction at Cantilever 3 WB by casting seven more segments. Also, construction continued with placing the bottom slab and the webs and diaphragm concrete portions at Span 1 EB CIP Superstructure, falsework installation at Pier Table 4 EB, and forming the top slab portion of Pier Table 3 EB. The following is a summary of the construction progress for the last month.



Figure 1 – Project Overview – May 10, 2009:

This aerial shows an overview of the site looking toward the northeast. Span 1 (WB & EB) is in the foreground, followed by Cantilever 3 WB (left) and Pier Table 3 EB (right), Pier Table 4 WB, and Span 5 WB in the background. Once the westbound bridge is complete, all four lanes of traffic will switch to the new structure. Then, demolition to the eastern (far) spans of the existing bridge will allow the Contractor to begin construction of Span 5 EB and complete Cantilever 4 EB.

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Figure 2 – Cantilever 3 WB Segmental Construction – May 15, 2009:

The segment crew places the concrete for Segment W3-8E, the first segment to contain a pair of deviators.



Figure 3 – Cantilever 3 WB – May 15, 2009:
A 61-meter concrete pump truck delivers the concrete for Segment W3-8E, while the UPRR stores several empty coal trains under the cantilever.



Figure 4 – Cantilever 3 WB – May 20, 2009:
Segment W3-8W in the side span is placed via the 52-meter pump set up below Span 1 WB.

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Figure 5 – Span 1 EB CIP Superstructure Construction – May 27, 2009:

Workers place the webs, bottom slab, and diaphragm concrete for Span 1 EB, as seen from the catwalk on the tower crane. The cantilever portion of Span 1 EB is slightly longer than Span 1 WB due to the pier layouts within the rail yard.



Figure 6 – Cantilever 3 WB Segmental Construction – June 1, 2009:

Flatiron continues to form and install the reinforcing and post-tensioning for Segment W3-10E, as seen from the tower crane jib overlooking the main-span.

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Figure 7 – Pier Table 4 EB Falsework Construction – June 5, 2009:

A BNSF train passes by just before a falsework bent for Pier Table 4 EB is hoisted into position. The BNSF flagger (lower right) controls all train movement and notifies the Contractor when tracks are clear to perform construction operations. The 165-ton crane occupies one track, requiring a temporary shut-down. However, the mainline track (left of the crane) remains open.

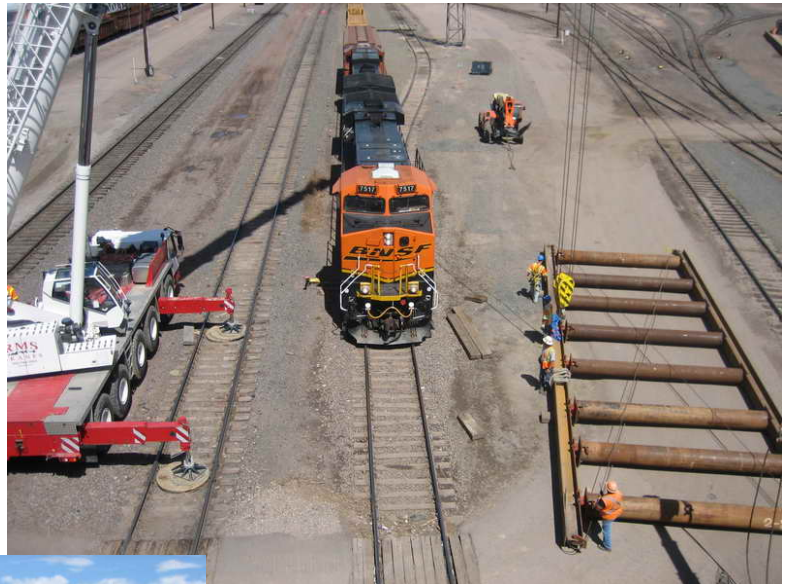


Figure 8 – Pier Table 4 EB Falsework Construction – June 5, 2009:

The falsework bent is flown into position when all train movements are clear.

Figure 9 – Pier Table 4 EB Falsework Construction – June 5, 2009:

Before the falsework bent is temporarily braced to the pier and released from the crane, another BNSF train passes by, this time on the mainline track. The Contractor is required to hold their positions until cleared by the Railroad flagger (i.e. cannot release the load from the crane until the train is clear).



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Figure 10 – Cantilever 3 WB Segmental Construction – June 9, 2009:

The concrete is struck off using a roller screed on Segment W3-10E, as seen from the cantilevered portion of Span 1 WB. Only one segment remains to be cast prior to removing the Form Travelers, installing the strongbacks and closure formwork, and casting Span 2 WB closure segment.



Figure 11(A & B) – Cantilever 3 WB Segmental Construction – June 11, 2009:

The side-span traveler is launched to begin forming Segment W3-11W, the last segment for this cantilever. The form traveler crew had to lower the front of the lower deck drive to avoid running into the top cap of Span 1 EB falsework bent (See left photo). Once the traveler was fully launched, the front of the lower deck drive was raised into position to form the last segment.



Figure 12 – Cantilever 3 WB Segmental Construction – June 11, 2009:
Dark skies threaten to drop rain and hail on the jobsite, as the form traveler crew finishes launching the side-span traveler. Span 2 WB closure segment concrete is scheduled to be placed later this month.



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Substructure Construction	<u>To</u> <u>Date</u>		<u>Total</u>	<u>Unit</u>	<u>% Complete</u>
48" Diameter Drilled Shafts (Monuments)	3	of	4	Each	75%
48" Diameter Drilled Shafts (Abutments)	11	of	14	Each	79%
60" Diameter Drilled Shafts (Pier 2 & 5)	6	of	8	Each	75%
96" Diameter Drilled Shafts (Pier 3 & 4)	8	of	8	Each	100%
Type I Footings (Pier 2 & 5)	3	of	4	Each	75%
Type II Footings (Pier 3 & 4)	4	of	4	Each	100%
3'-6" Piers (Pier 2 & 5)	3	of	4	Each	75%
7'-1" Piers (Pier 3 & 4)	4	of	4	Each	100%
Abutments	3/4	of	2	Each	38%

Superstructure Construction	<u>To</u> <u>Date</u>		<u>Total</u>	<u>Unit</u>	<u>% Complete</u>
Westbound					
End Span CIP Westbound	2	of	2	Each	100%
Abutment Diaphragm Westbound	2	of	2	Each	100%
Pier Diaphragm Westbound	2	of	2	Each	100%
Pier Table Westbound	2	of	2	Each	100%
Cantilever 3 Segments Westbound	21	of	22	Each	95%
Cantilever 4 Segments Westbound	0	of	20	Each	0%
Closure Segments Westbound	0	of	3	Each	0%
Eastbound					
End Span CIP Eastbound	1/2	of	2	Each	25%
Abutment Diaphragm Eastbound	1	of	2	Each	50%
Pier Diaphragm Eastbound	1	of	2	Each	50%
Pier Table Eastbound	2/3	of	2	Each	33%
Cantilever 3 Segments Eastbound	0	of	22	Each	0%
Cantilever 4 Segments Eastbound	0	of	20	Each	0%
Closure Segments Eastbound	0	of	3	Each	0%



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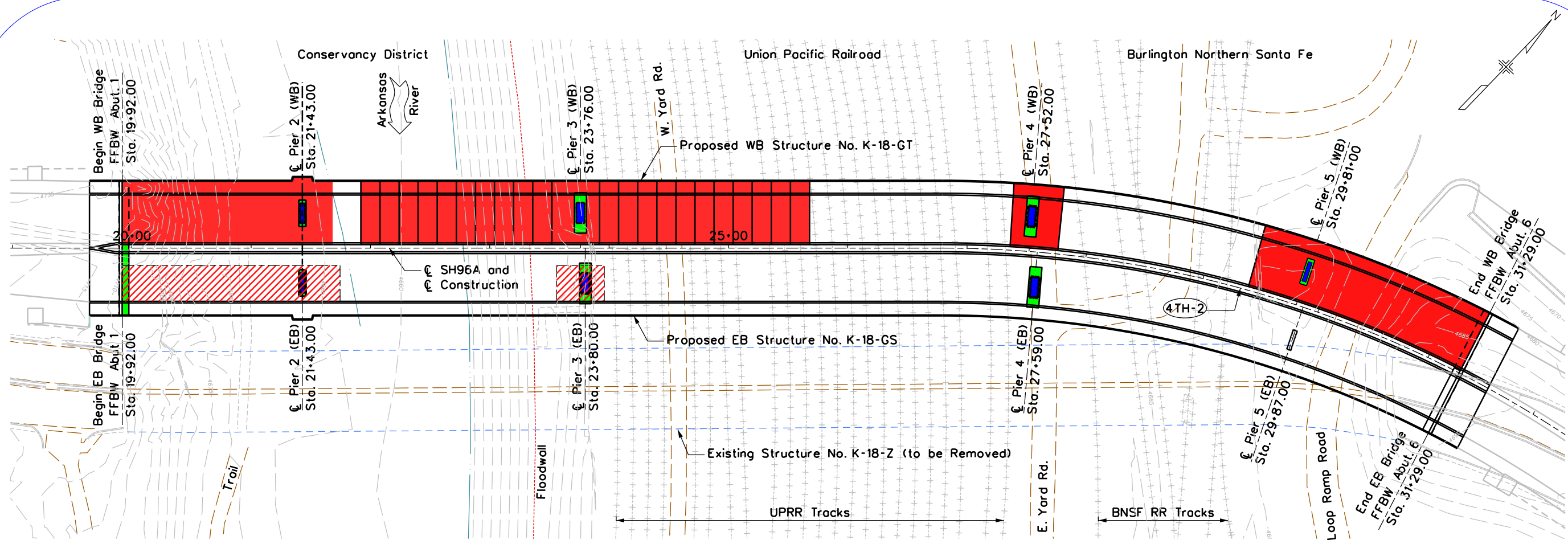
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Project Milestone Dates

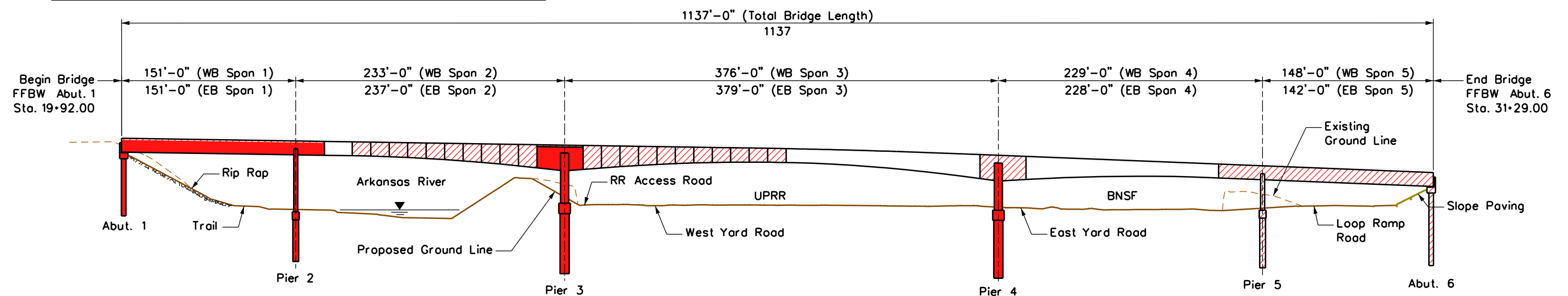
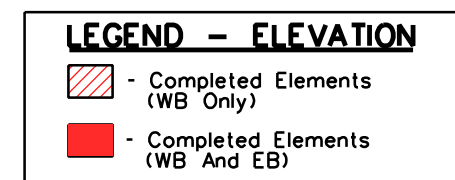
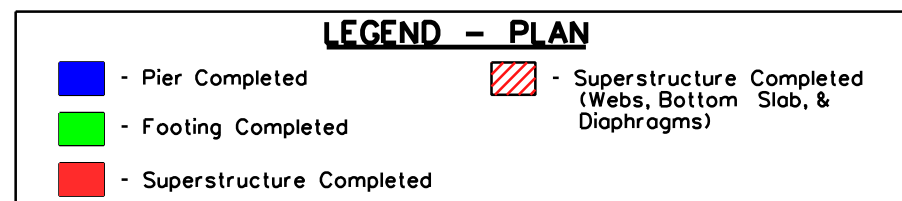
Milestone Event	April 2008 Baseline Finish Date	Actual
Project Award	October 18, 2007	October 18, 2007
Notice to Proceed	November 8, 2007	November 8, 2007
Abutment 1 Drill Caissons	February 15, 2008	February 15, 2008
Abutment 1 Cap Form/Rebar/Pour	March 6, 2008	March 6, 2008
Pier 2 EB Drill Caissons	March 3, 2008	March 3, 2008
Pier 2 WB Form/Rebar/Pour Footing	March 24, 2008	March 24, 2008
Pier 2 WB Column Form/Rebar/Pour	April 29, 2008	April 29, 2008
Pier 3 EB Drill Caissons	April 17, 2008	May 1, 2008
Pier 3 WB Form/Rebar/Pour Footing	May 15, 2008	June 4, 2008
Pier 3 WB Column Form/Rebar/Pour	July 1, 2008	August 5, 2008
Pier 4 EB Drill Caissons	May 8, 2008	July 1, 2008
Pier 4 WB Form/Rebar/Pour Footing	May 13, 2008	August 8, 2008
Pier 4 WB Column Form/Rebar/Pour	August 20, 2008	September 18, 2008
Pier 5 WB Drill Caissons	April 17, 2008	May 30, 2008
Pier 5 WB Form/Rebar/Pour Footing	April 21, 2008	June 12, 2008
Pier 5 WB Column Form/Rebar/Pour	October 21, 2008	July 11, 2008
Abutment 6 WB Drill Caissons	April 18, 2008	April 22, 2008
Abutment 6 WB Cap Form/Rebar/Pour	May 8, 2008	May 8, 2008
Span 1 WB Form/Rebar/Pour Bottom Slab/Webs/Diaphragms	June 17, 2008	August 29, 2008
Span 1 WB Form/Rebar/Pour Deck	July 8, 2008	October 10, 2008
Pier Table 3 WB Form/Rebar/Pour Bottom Slab	August 18, 2008	November 21, 2008
Pier Table 3 WB Form/Rebar/Pour Diaphragm & Webs	September 4, 2008	December 5, 2008
Pier Table 3 WB Form/Rebar/Pour Deck	October 7, 2008	December 31, 2008
Span 5 WB Form/Rebar/Pour Bottom Slab/Webs/Diaphragms	February 12, 2009	January 29, 2009
Span 5 WB Form/Rebar/Pour Deck	March 12, 2009	March 6, 2009
Form and Pour First Segment – W3-1E	November 19, 2008	February 16, 2009
Pier Table 4 WB Form/Rebar/Pour Bottom Slab	March 5, 2009	February 26, 2009
Pier Table 4 WB Form/Rebar/Pour Diaphragm & Webs	March 23, 2009	March 20, 2009
Pier Table 4 WB Form/Rebar/Pour Deck	April 23, 2009	April 15, 2009
Form and Pour First Closure – Span 2 WB	May 19, 2009	
Span 1 EB Form/Rebar/Pour Bottom Slab/Webs/Diaphragms	October 7, 2008	June 10, 2009
Span 1 EB Form/Rebar/Pour Deck	October 27, 2008	
Pier Table 3 EB Form/Rebar/Pour Bottom Slab	November 13, 2008	April 30, 2009
Pier Table 3 EB Form/Rebar/Pour Diaphragm & Webs	December 2, 2008	May 13, 2009
Pier Table 3 EB Form/Rebar/Pour Deck	January 9, 2009	
Shift Traffic to New WB Structure	February 17, 2010	
Install Last Drilled Caissons – Abutment 6 (EB Only)	April 26, 2010	
Form and Pour Last Segment – E4-10E	October 12, 2010	
Form and Pour Last Closure – Span 3 EB	November 16, 2010	
Complete Structure and Final Traffic Configuration	March 4, 2011	

All items are based on the April 2008 Baseline Schedule. All dates represent the “Finish” of the activity, unless otherwise noted.

Cantilever construction is continuing at approximately one pair of segments a week. Pier Table construction is keeping ahead of segmental construction, with Flatiron planning to move the form travelers immediately to the next pier table when a cantilever is complete. Although several milestones dates were completed beyond the original date, but Flatiron has stated that project completion will occur within contractual requirements.



PLAN



ELEVATION