COLORADO
Transportation Commission

4201 East Arkansas Avenue, Room270
Denver, CO 80222-3406

MEMORANDUM

DATE: **September 17th, 2014**
TO: **Bridge Enterprise Board of Directors**
FROM: **David Eller, Region 3 Director**
SUBJECT: **SH 82, Grand Avenue Bridge - Update on 60% Pricing and Path Forward**

Purpose
Budgetary concerns were expressed when Region 3 requested a budget supplement approval to the Colorado Bridge Enterprise (CBE) Board of Directors (BOD) in July 2013, the Region was asked to come back once the 60% Opinion of Probable Construction Cost (OPCC) was complete. We are committed to keeping the net CBE project fiscal commitment within allowable constraints through refinement of the CM/GC Cost Model, strategic potential scope reductions, and additional local funding participation.

Action
Region 3 seeks a CBE Board "head nod" to move forward on the project as defined by the project schedule and key milestones (listed below). The 60% pricing value on the construction phase is complete and a draft financial plan is in the process of being developed. The total project draft sources and uses of funds document has been disclosed to the BOD for discussion.

Background
The SH 82 Grand Avenue Bridge has a sufficiency rating of 43.2 and is Scour-Critical (meaning the bridge is at risk of failure due to scour). When this project was initiated we contemplated a bridge replacement in essentially the same location as the existing structure. The project's original cost estimate included a contingency to utilize Accelerated Bridge Construction (ABC) techniques helping to limit traffic delays during construction for the 25,000 vehicles that use the SH 82 structure daily. Right of Way (ROW) acquisition was considered to be minimal, and assumed a fairly straight forward Environmental Assessment (EA) process. The need for the replacement of the pedestrian bridge was not immediately clear at project initiation.

Region 3, in concert with the Federal Highway Administration (FHWA), identified the EA project logical terminus and developed a draft Purpose and Need:

"The purpose of the project is to provide a safe, secure, and effective multimodal connection from downtown Glenwood Springs across the Colorado River and I-70 to the historic Glenwood Hot Springs area. The importance of the bridge to the local and regional transportation network underscores the following two project needs:

(1) Improve multimodal connectivity between downtown Glenwood Springs and the Roaring Fork Valley with the historic Glenwood Hot Springs pool area and I-70; and

(2) Address the functional and structural deficiencies of the bridge."

In the associated PowerPoint presentation, there are graphics that supplement the Need for the project and show project features.

Through the planning process we incorporated the Chief Engineer Policy Memo #26, Context Sensitive Solutions (CSS) approach, and it was determined that building the new structure in the proposed location, using ABC techniques, provided a better project as it offered opportunities to create a more direct, safer and effective

connection between I-70 and SH 82, and minimized impacts to the Glenwood Springs community. Policy Memo #26 further states: "CSS requires the flexibility to consider alternative solutions that can benefit a broad range of stakeholders, while recognizing the fiscal constraints and the limits of CDOT's mission as a transportation agency."

We are here today to talk about the fiscal constraints, as well as our Agency Mission with regard to this project.

Details

The Preferred Alignment (Alternative 3) was identified in December of 2012, with the unanimous vote of the Glenwood Springs City Council as well as strong support from affected stakeholders and agencies. This alignment added length to the bridge as it curves westward over the Colorado River to connect with I-70. This alignment was chosen based on extensive stakeholder input and it vastly improves both pedestrian and vehicular operations and safety in this tourist environment that is vital to the State economy. This alignment, however, does have higher costs due to the longer alignment and needed connections to the local system.

A pedestrian bridge replacement was also included as the most effective and efficient method to address the needs to relocate critical utilities before the demolition, address multi-modal needs in accordance with PD 1602, and enable implementation of I-70 Mountain Corridor safety improvements related to the Eastbound On-Ramp . The existing pier location of the vehicle bridge and the superstructure of the existing pedestrian bridge did not allow the ramp safety improvements. Consideration of the PEIS for the I-70 Mountain Corridor was a major influence in this portion of the CSS on this project. Funding from affected Utility Companies has been committed and funding for the Eastbound On-Ramp is being pursued.

The project is also incorporating a construction detour, given community input early on to choose a shorter duration closure, rather than enduring several years of building the structure under lane closures. Given the tight topographical and geological constraints at the mouth of the Roaring Fork Valley, there is really only one route option for a construction detour, and it is a substandard local road. The planned detour alignment will make temporary and shallow improvements on their "8th Street Connection" alignment to facilitate traffic volumes that rival I-70 in this area being placed on the City system.

Key Benefits

The existing bridge was designed over 60 years ago for two-lane usage, including multi-modal sidewalks on each side. It is now Functionally Obsolete and Scour Critical. A 7 foot deep scour hole was found in a 1992 inspection, two feet below the bottom of the 5-foot deep footing at river center. There is also considerable spalling (chipping or flaking) of the concrete and corrosion of the reinforcing steel. One of the leading tourist attractions, the Hot Springs Pool, has closed sections of their parking lot on occasion to limit damage to their patrons and their vehicles; there are instances of falling cast iron and spalling concrete that have resulted in property damage.

The Safety Assessment report chronicles multiple sideswipe accidents owing to the 9 foot, 4-1/2 inch lanes: for a similar roadway over a 5 year period, the expected number of side swipe accidents per mile per year would be 10.51. The observed number is 38.77 so you can see this section has a much higher total accident rate. As an anecdotal consideration, some local parents forbid their entry level drivers from using the SH 82 bridge.

The planned bridge also improves operations for this congested section of SH 82, a section that carries about 84% of all vehicles in and out of the Roaring Fork Valley. The project creates a more direct, effective connection between I-70 and SH 82 by eliminating existing signals at 6th and Pine and separating the pedestrian movement at 6th & Laurel while reducing overall delay and potential for backups onto I-70. These planned improvements separate regional and local traffic resulting in significant operational improvements that will reduce the need for future interchange improvements.

The Intermountain TPR, comprised of Garfield, Pitkin, Eagle, Lake and Summit Counties, is strongly supportive of the project. In July 2014 we presented the project (and associated budgetary shortfall) to this group during a session for Regional Priorities Program (RPP) funding. The TPR recognized the importance of the project's location at the apex of their two highest rated corridors: Interstate 70 and SH 82. The TPR voted on prioritization and this project received the highest number of votes (16 out of 19) to allocate the entire IMTPR funding for FY 16 and FY 17.

The Region is making considerable progress in identifying additional revenues to hit the target of keeping the CBE net budget figure; the meetings with locals have occurred or will occur in the near future. If projections materialize, the project will meet the fiscal constraints that has been clearly articulated. The locals communities truly understand the importance of this project, and embrace the "clean" vs "gold-plated" aesthetic approach that has developed during the EA and CSS phase.

We have now completed the 60% OPCC pricing with the CM/GC team. The OPCC number from the CM/GC team will continue to be refined as we move toward 100% design and continue to examine risks and receive more specific pricing from subcontractors and suppliers.

Options and Recommendations

Options Include moving forward with the Grand Avenue Bridge project per the aggressive project schedule and key milestones as shown in this document; or not moving forward with design and ROW offers, pending specific direction from the CBE Board to either stop work on the project or return to further NEPA studies for alternatives. Based on the public process conducted to date, it is the opinion of staff that other alternatives have been studied and local support for anything other than this preferred alternative is unlikely.

Given the timing of the upcoming milestones the Region looks forward to the Question and Answer Session to address past concerns and issues and deliver this project as advertised.

Next Steps

Key Milestones:

Sept 2014:	CBE Board Review; Make ROW acquisition offer to Shell property-owner
Oct 2014:	Budget Request for Utility Phase
Jan 2015:	Budget Request for Steel Tub Fabrication
Feb 2015:	Complete FOR 90% level design plans; Budget requests for ROW acquisition
Apr 2015:	Complete final 100% construction plans; Receive final environmental clearances; Budget Request for Construction
May 2015:	Negotiate Construction Agreed Price with CM/GC Team Schedule Advertisement for Open Bid
June 2015	Schedule Project for Competitive Bid/Award Project (only if cap negotiations with CM/GC Team fail)
Aug 2015:	Notice to Proceed to CM/GC Team or Competitive Bid Awarded Contractor
Sept 2015:	Mobilization effort begins
Dec 2017:	Project Completion

This schedule assumes successful and timely negotiations including early ROW acquisitions and other critical milestones, as in accordance with Every Day Counts criteria. Due to the need to work in the Colorado River during low-flow months and outside the trout spawning season, any delay to the milestones in the schedule could cause the construction of this project to slip 8 months to a year depnding on runoff.

SH82 GRAND AVENUE BRIDGE

CBE Packet Slides

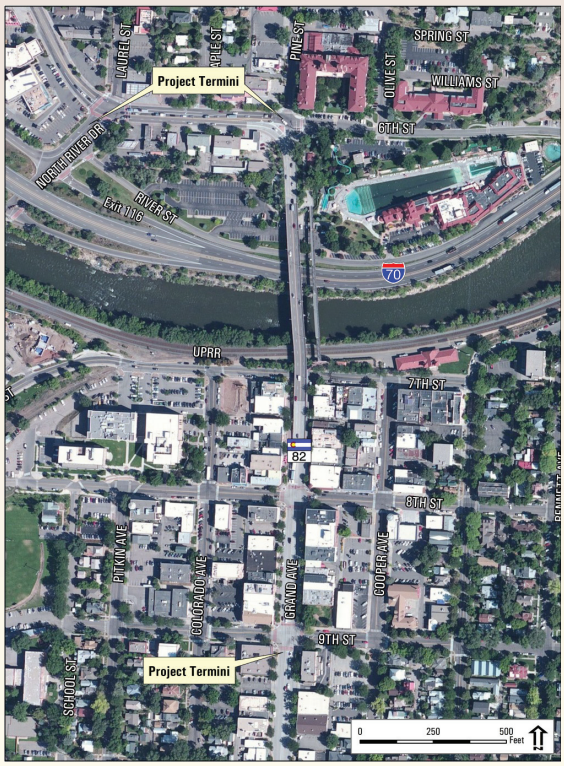
COLORADO Department of Transportation

September 17, 2014

SH82 GRAND AVENUE BRIDGE

Project termini

Project logical terminus was determined with FHWA input, in concert with the draft Purpose and Need



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SH82 GRAND AVENUE BRIDGE

Need for this Project

- **Improve multi-modal connectivity between downtown Glenwood Springs and the Roaring Fork Valley with the historic Hot Springs pool area and Interstate 70.**
- **Address the functional and structural deficiencies of the bridge to improve public safety, including emergency service response, and reliability as a critical transportation route.**

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SH82 GRAND AVENUE BRIDGE

Need for this Project

•Well known problems both structurally and functionally - but technically safe.

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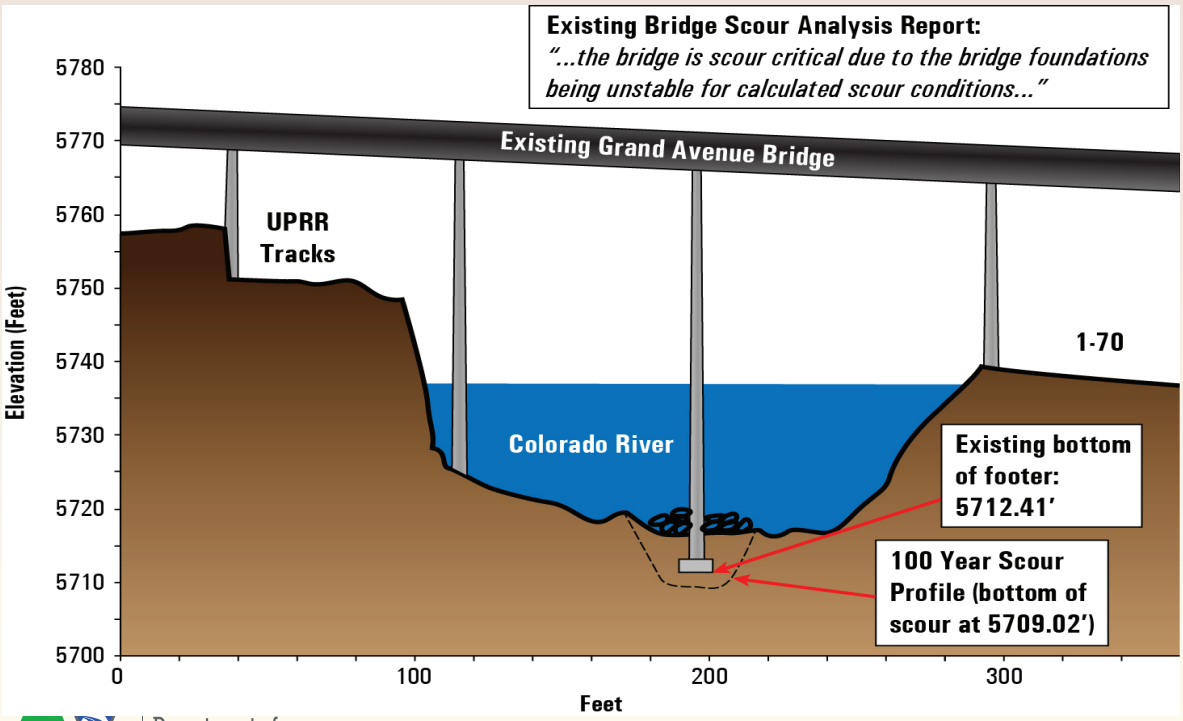
SH 82 GRAND AVENUE BRIDGE

Existing Bridge Pier – Scour Critical



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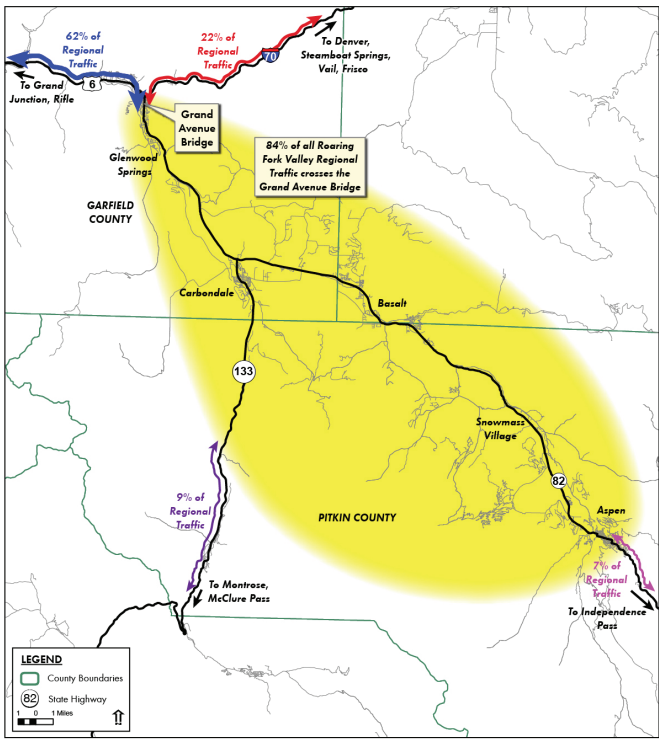
SH 82 GRAND AVENUE BRIDGE

Regional Need for Bridge



84% of all regional vehicular traffic into and out of the Roaring Fork Valley uses the Grand Avenue Bridge

SH 82 GRAND AVENUE BRIDGE

Why Not Existing Alignment?

Information from Glenwood Springs Post Independent newspaper article, Oct. 22nd, 2012

SH 82 GRAND AVENUE BRIDGE

What's happening on the Grand Avenue Bridge project?

After the public meeting on August 22, the project team identified Alternative 3 as the alignment for the environmental study.

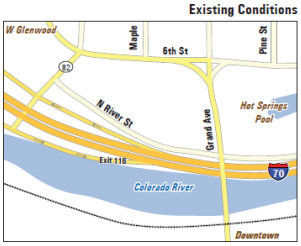
This alignment was selected because it minimizes construction impacts; reduces congestion (total delay is reduced during peak hours by about 30%); best met project goals; and had very strong support based on public feedback.

The alignment connects SH 82 (Grand Avenue) directly with a reconfigured I-70 Exit 116 interchange and changes how drivers get to downtown Glenwood and to areas south of the Colorado River. After exiting I-70, drivers will make one right turn directly onto Grand Avenue to cross back over the river, rather than three turns: north to 6th and Laurel, right on 6th, and then right again onto Grand Avenue. Drivers headed to west Glenwood and to the Hot Springs Pool will travel through the intersection, making two turns to their destinations very much like today. The traffic and visual simulations of the reconfigured intersection options shown at the Open House in August help understand how the new traffic movement will occur. The visualizations and other project information are now available to view at the project's website (http://www.coloradodot.info/projects/sh82grandavenuebridge).

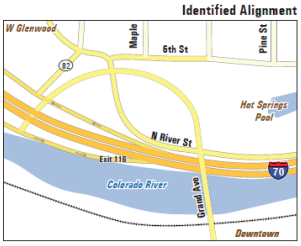
There is continued interest in a bypass alternative as part of this project. The Colorado Bridge Enterprise funding for the Grand Avenue Bridge project must be used to solve the problems with the existing bridge. It cannot be used for purposes that would not fix the bridge, such as a bypass. However, the Colorado Department of Transportation and the City of Glenwood Springs are considering how to best proceed with the planning and feasibility of a bypass, as recommended in the Glenwood Springs Comprehensive Plan.

The project team is evaluating how various bridge types can best reduce construction impacts and address aesthetics and other criteria established for the project. The team is also developing new considerations of how pedestrian and bicycle connections can best be addressed through the project. The results of the evaluations and new information will be presented at a planned Public Open House in mid-January 2013.

Existing Conditions



Identified Alignment



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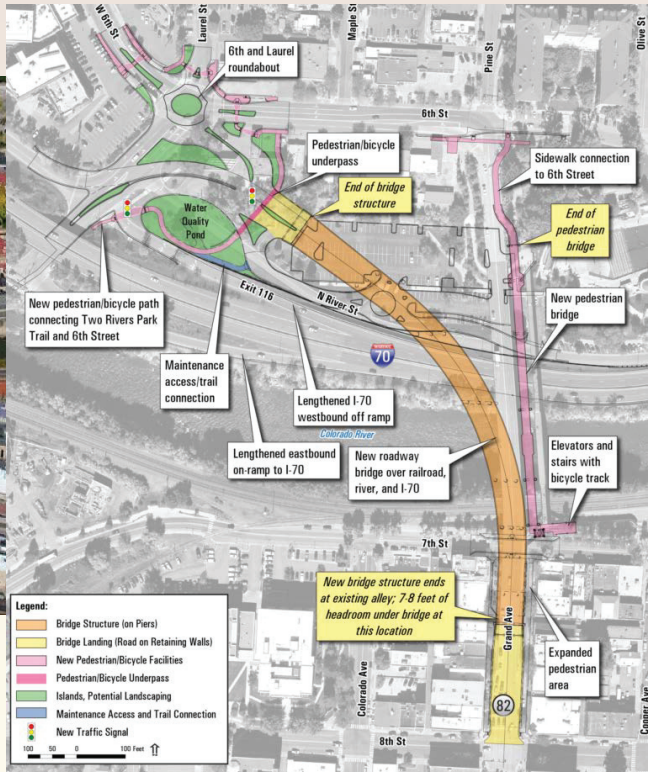
SH 82 GRAND AVENUE BRIDGE

Preferred Alignment (Alt. 3)



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SH82 GRAND AVENUE BRIDGE

Pedestrian Bridge

Need for pedestrian bridge documented in press release 8/19/2013
– partial copy at right

The pedestrian bridge also enables implementation of I-70 Mountain Corridor safety improvements

News From
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August 19, 2013

Grand Ave. Bridge EA - Enthusiastic Support for the New Pedestrian Bridge Type

Glenwood Springs City Council favors simple ped bridge design that complements surrounding environment

GLENWOOD SPRINGS –At an August 1, 2013, workshop with Glenwood Springs City Council, a pedestrian bridge that focused on historic elements consistent with downtown Glenwood Springs was unanimously favored. This was consistent with what the project team had heard from public comments on pedestrian bridge types and features at public meetings, Strawberry Days exhibits and Downtown Market events.

A new pedestrian bridge was not originally part of the Grand Avenue Bridge project. The concept was introduced as part of the overall solution last fall when the project team began looking at how to demolish and construct the highway bridge. There are numerous utilities under the highway bridge that will have to be relocated before the existing bridge can be removed and replaced. The most efficient way to relocate these utilities was to place them on a new pedestrian bridge. The new pedestrian bridge also facilitates accelerated bridge construction techniques, important on this project to minimize impacts.

As this concept was considered in the evaluation process, it became apparent that a new pedestrian bridge would address almost all of the project criteria, including multimodal connectivity; safety and consistency with regional planning. As well, it has the potential to offer better harmony within the community, have reduced overall construction costs, minimize impacts to private property, and reduce overall impacts.

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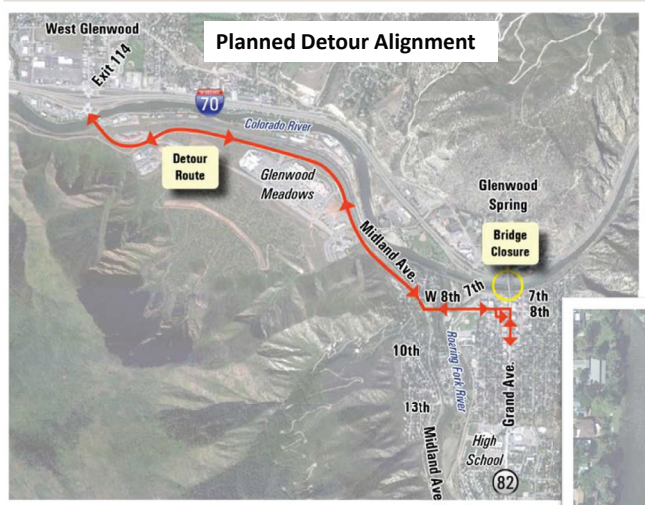
Bridge Closure Detour



Detour route during bridge demolition and construction

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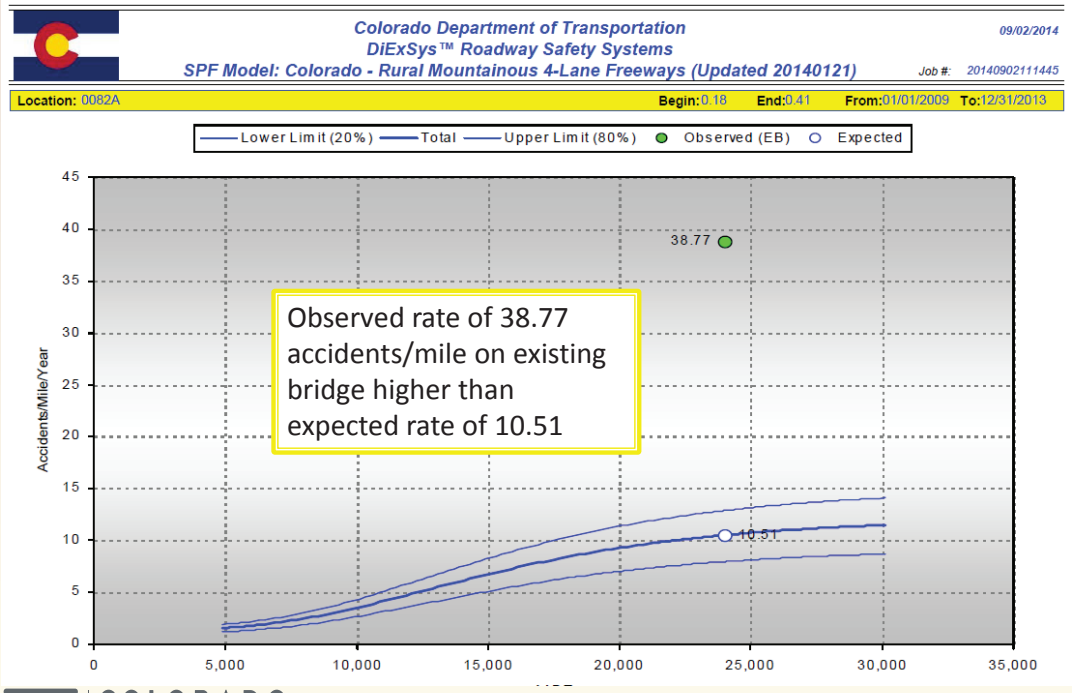
Existing High Accident Rate



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Local Agency Funding Support

- Committed:
  - Intermountain TPR: $3.3 M committed (*highest level of support*)
- Key funding requests in process:
  - City of Glenwood Springs: Council Meeting: 9/9/14
  - Garfield County: Council Meeting: 9/9/14
  - Eagle County: BOCC Meeting: 2nd meeting being scheduled
  - Pitkin County: BOCC Meeting: 9/9/14
  - City of Aspen: Council Meeting: 9/15/14

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SH 82 GRAND AVENUE BRIDGE

Project Support

- Unanimous support from City Council
- Highest priority (by vote) from InterMountain TPR
- Supported by Chamber of Commerce, Downtown Development Authority, major businesses, & area governments
- Thousands of contacts with project stakeholders
- Endorsement by local newspaper

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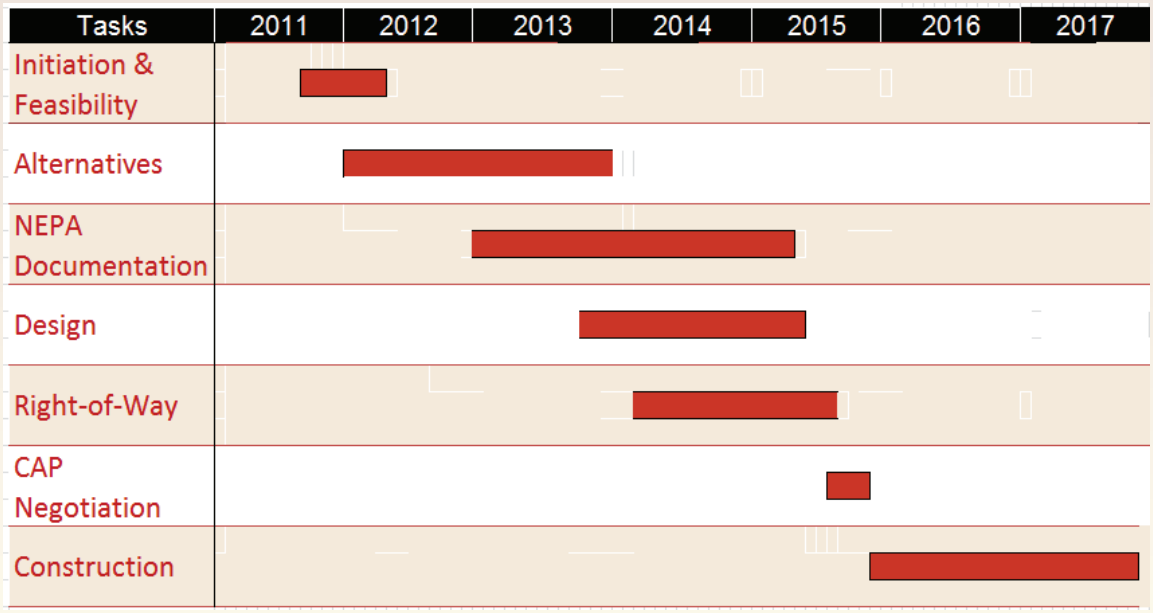
SH 82 GRAND AVENUE BRIDGE

Schedule



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SH82 GRAND AVENUE BRIDGE

Editorial Glenwood Post 8/11/14

EDITORIAL: Glenwood, region must make most of bridge

Let's get past the bypass.

As Glenwood Springs residents and leaders ponder our transportation headaches and future, we must focus on making the most of the Grand Avenue Bridge project, which holds significant opportunity for both the town and the region.

It may not be our transportation and tourism dream come true. Trucks and other traffic still will disrupt the pedestrian friendliness and tourist ambiance of our downtown main street.

But know this and accept this: A Colorado Highway 82 alternative route is not going to happen for Glenwood Springs any time in the foreseeable future. The expense and logistics in our narrow and geologically challenging town are simply too much to overcome in today's fiscally gridlocked America.

The new bridge, on the other hand, seems quite likely to be built. The Colorado Department of Transportation is moving forward with the bridge, looking for money to close the gap in what's allocated and what's needed and, significantly, beginning to win regional support. Construction is to start next summer.

CDOT COLORADO Department of Transportation

SH82 GRAND AVENUE BRIDGE

Editorial Glenwood Post 8/11/14 cont.

CDOT has $60 million earmarked for bridge construction, but the total cost is now estimated at $70 million to pay for a changed alignment, improved pedestrian bridge and aesthetic elements. We will be glad for these features, and we can't add them later.

The $100 million figure you hear includes planning costs, which are covered by the state.

It's a lot of money, but a fraction of what an alternate route would cost — an alternate route that, again, despite shoulds and wishful thinking, is not going to happen.

The other idea that won't work is leaving the bridge alone. It was built in 1953, it's dangerously narrow and its footings in the river have suffered significant erosion. Inaction invites disaster and an inelegant emergency solution. If Glenwood Springs leaders and residents (and our neighbors upvalley) fail to embrace reality, we will lose an opportunity to make the most of a major infrastructure investment in our region.

Let's underscore that it's a regional investment, actually, a project important to the state economy.

The bridge brings people into Glenwood, where we want them to stop, walk and spend to boost our sales-tax-dependent city budget.

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SH82 GRAND AVENUE BRIDGE

Editorial Glenwood Post 8/11/14 cont.

The bridge also is a gateway to the big-name resorts upvalley. Aspen and Aspen Skiing Co. need to care about traffic flow through Glenwood for tourists, yes, but particularly for workers. Numerous upvalley workers live across the Colorado River, and the economy needs their commute, by car or by bus, to be reliable.

People often look for The Big Thing to make a situation better. For big city downtowns, for example, that sometimes is a major sports stadium, such as Coors Field boosting LoDo in Denver. For Glenwood, a $100 million investment by the state, with some regional cooperation, IS our big thing for the foreseeable future.

Locals can watch the bridge happen and continue to wring our hands about a bypass, a tunnel or other fantasies. Or we can look at opportunities created by the bridge project and begin to address which of those we want to seize and how.

For example, the bridge alignment opens a triangle of space north of the Colorado River that can be a wonderful pedestrian- and bicycle-friendly plaza. It's a big potential side benefit of the bridge that locals must figure out how to finance.

COLORADO Department of Transportation

SH82 GRAND AVENUE BRIDGE

Editorial Glenwood Post 8/11/14 cont.

Fortunately, the town has shown how to make a series of steps come together. The governor's award just announced for the cooperative effort to improve the area from Grand to Blake between Seventh and 10th streets shows how the Downtown Development Authority and a range of partners can knit together ideas and investment to create a whole bigger than the sum of its parts.

The library, parking garage, Colorado Mountain College/chamber of commerce building, outdoor dining and improved pedestrian environment create a model for what can happen north of the river after the bridge is built.

The project poses more questions for the community to address, such as: Can a permanent Eighth Street connector be built? Should we work to slow traffic on Grand and allow trucks on Midland?

The questions, though, have nothing to do with whether to build a new bridge. They are related to how to seize the reality of the moment. The clock is ticking.

http://www.postindependent.com/news/12527119-113/bridge-glenwood-coloradobuilt

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