



Missoula County
South Avenue Bridge Project

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| Subject: | Project TDC Meeting No. 03 | Meeting Location: | HDR Engineering Inc. Office 700 SW Higgins Street, Suite 200 (Clark Fork Conference Room) |
| Meeting Date: | August 31, 2016; 12 PM (Mountain) | Conference Call Information | Call-in: n/a Code: n/a |
| Notes by: | - | Minutes Issued: | - |

Attendees (see attached sign-in sheet):

Meeting Purpose:

Conducted Technical Design Committee (TDC) meeting to review project status and schedule, and provide overview of Public Meeting No. 2.

Discussion Items:

Any additions or corrections should be sent to Chris Kelly within three (3) business days after receipt or the items and notes will be assumed to be accurate as shown.

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| 01 | Introductions and Committee Purpose |
| 1.1 | n/a |

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| 02 | Project Updates & Status |
| 2.1 | Field Work Update |
| | <ul style="list-style-type: none"> Engineering and Cadastral survey is complete - No new updates Geotechnical boring completed last year, more borings will be needed for final geotechnical recommendations. HDR will coordinate with geotechnical engineer (Tetra Tech) and Missoula County on obtaining the additional borings. Additional field survey needed on irrigation canal (extending culvert, need to make sure we don't impact the canal). The County will plan to collect this information. County will be surveying utilities. |
| 2.2 | Bridge Alternatives Update |
| | <ul style="list-style-type: none"> Nothing new on alternatives; selected the preferred span arrangement (4-span). Draft Bridge TSL, Roadway, Hydraulics, and Geotechnical Reports have been submitted to Missoula County and MDT for review. Once comments are received, the reports will be finalized and posted on the website. Once those are finalized, more finalized bridge layout will be developed along with the preliminary roadway plans used for 30% design review and development of the environmental document. |
| 2.3 | Roadway Alternatives Update: |
| | <p>Alignment has been selected. There will be slight modifications (because of the proposed typical section, the bridge will be wider on the south side to accommodate the shared use path. 12-foot travel lanes, 4-foot shoulder, 10-foot wide walkway). Some small adjustments to the alignment may be required based on the selection of the typical section.</p> <ul style="list-style-type: none"> Non-motorized. Lisa Moisey (CAPS) is soliciting feedback on the non-motorized options; County is coordinating with Kevin Slovarp regarding their plans for non-motorized traffic (City planning to do a traffic impact study). General plan is to continue the pathway along with south side of South Avenue, perpetuating what is currently there. City of Missoula is responsible west to 36th, Missoula County is responsible beyond that point. UPDATE: The County has asked that we look at an option to place the trail on the north side of South Avenue. The main benefit of this location is that it would avoid impacting O'Brien Creek if the trail is extended to Blue Mountain Road and may fit better with future county improvements along South Avenue east of this project. Attached is a preliminary layout showing what this would look like. Please respond if you have any questions or concerns. This will be a discussion item at the next TDC. |

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- **MDT Authority.** Missoula County maintains the roadway, but MDT has authority on what happens with the roadway (crosswalks, etc.).

2.4 Public Meeting Update

- 59 people signed in
- 37 written comments received at the meeting, 11 transcribed comments.
- To date, 11 emails and 12 online comments received.
- Comments, presentation, and boards are posted on our website; comments are updated daily as they are received.
- Responses to questions are being drafted and will be posted online once completed. Chris will email the group when the responses are posted online.
- Next and last public meeting planned for November. County Commissioners will hold a separate hearing in November.

2.5 Resource Agency Meeting Update

- Met to discuss the issues and concerns of permitting agencies.
- Presentation and minutes are available online.

2.6 Hydraulics Update and Bridge Demolition

- The need for additional modelling for O'Brien Creek was discussed at the Resource Agency Meeting. HDR Hydraulic Engineers are working with Todd Klietz to determine if that is necessary. Excavation of the east overbank.
 - No rise condition eliminates CLOMR; if there is a rise, a CLOMR is required.
 - Todd K. prefers no excavation, does not want to meet maintenance requirements.
 - Chris Brick concerned about revegetating a flood plain.
 - Calculated rise is less than 6/100th of a foot, not impacting residents upstream of the bridge.
- Discussion of removing the existing River Pines Road template
 - At this point, the new roadway fill slopes will blend into the existing roadway prism.
 - Removal of the existing River Pines road prism may be required pending discussions with Todd Klietz.

2.7 Environmental Update

- Moving forward on the environmental document; draft submittal to Missoula County and MDT anticipated in early November pending completion of preliminary design phase.
- The environmental document will be posted on the project website when possible and an email sent to TDC members to notify them once it's available.

2.8 River Access Update

- Access is not going to be provided at the new South Avenue crossing. Fencing will be constructed but those details are not yet determined.
- Access at Maclay is part of the discussion with CAPS. Erik will follow up with CAPS and FWP.

03 TDC Input and Other Technical Items

3.1 Bridge Typical Section

- General consensus from the public is to provide accommodations for bikes/peds. There was not an apparent preference between a single shared use path on one side compared to a sidewalk on both sides of the bridge.
- The County prefers a shared use path on one side. The existing South Ave trail is on the south side of the roadway. At-grade crossing(s) on South Avenue will be required for pedestrian access the trail.
- A 4' roadway shoulder on both sides of the bridge will be provided which can accommodate cyclists.
- Dave Loomis feels 32-foot wide roadway is too wide, encouraging higher speeds. The 32-ft wide roadway (two 12-foot lanes with 4-foot wide shoulders) is a County design standard
- The posted speed limit is undetermined at this time. The design speed is 35mph. The existing east terminus of South Avenue is posted at 25mph. River Pines Road is posted at 35mph.
- Shared-use path options is acceptable to TDC, with traffic calming to be addressed. The shared use path option will move forward.

3.2 Bridge Girders – Arched or Straight

- Discussed girder options. Does arched give more clearance for floaters and debris? Yes, potentially, or grade could be slightly lowered. Arched girder is 3-5% more in cost. Arched was preferred and will advance.
- Who determined the base flood? HDR did as part of the hydraulic analysis, utilizing 100-year flood data.

03 TDC Input and Other Technical Items

- Wall vs. column piers: Wall piers are potentially more hydraulically efficient, less susceptible to catching debris compared to a multiple column pier. Wall piers will require cofferdams. Column piers would likely be wider (6 ft vs. 3-4 ft), but could be built within a steel casing. Construction would be done in one season. Cofferdam with a pile foundation and wall piers appears to be more cost effective based on initial cost estimates. Additional design and geotechnical recommendations are needed to better define costs. Clark Fork Coalition prefers a design that has more of long-term benefit. Both are valid alternatives based on initial geotechnical investigations.

3.3 Traffic Calming

- Discussed a traffic calming transition off the ends of the bridge.
- Provided an overview of possible traffic calming measures including roundabouts, traffic circles, speed humps, intersection bulb-outs, chicanes, and medians. Discussed maintenance, rural vs. urban, vehicle restrictions.
- TDC is in favor of including traffic calming features in the design. HDR will develop options/recommendations for next TDC meeting.

3.4 Next TDC Meeting

- Chris to explore dates for next meeting – late September and early October.

04 Other Items

4.1. None



MC PUBLIC WORKS MANUAL

TABLE 6.1 ROAD DESIGN CONSIDERATIONS (SOUTH AVENUE)

| DESIGN PARAMETER | COLLECTOR OR COMMERCIAL |
|--|-------------------------|
| DESIGN SPEED (MPH) | 25-45 |
| MAXIMUM VERTICAL GRADE (%) | 6 |
| MINIMUM HORIZONTAL CURVE RADIUS (FT) | 525 |
| RETURN RADIUS BETWEEN INTERSECTION STREETS* (FT) | 50 |
| HORIZONTAL CLEARANCE (FT) | 20 |
| VERTICAL CLEARANCE (FT) | 14 |

*BASED ON ROAD WITH HIGHER CLASSIFICATION

LEGEND

- SOUTH AVE.
- SHARED MULTI-USE PATH

MC SOUTH AVENUE BRIDGE
OVER BITTERROOT RIVER
NORTH SHARED USE PATH



MISSOULA COUNTY
SOUTH AVENUE BRIDGE
TDC MEETING NO. 4

Wednesday, August 31, 2016
HDR Engineering
12:00 - 2:00pm

| NAME | AFFILIATION | ADDRESS | E-MAIL |
|------------------|-----------------|------------------------------|--------------------------|
| Bob Schweitzer | MBA | Missoula | outlaw.43@hotmail.com |
| Dave Loomis | MBA/self | Mesa Ct. | mi200a@gmail |
| Don Stevenson | MBC | 4528 Edward MS/A | donvick199@egmail.com |
| Michael Burnside | MBCSC | 4610 Edward Ave | macalaybridge@gmail.com |
| Chris Brick | CFC | 140 S. 4 th St. W | chris@clarkfork.org |
| Chris Kelly | HDR | 7005 W Higgins. | Chriskelly@hdrinc.com |
| Riley Lubbers | LHDR | Miss. | riley.lubbers@hdrinc.com |
| DUSTIN HIROSE | HDR | | |
| ERIK DICKSON | MISSOULA COUNTY | | |
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