

FLOOD REVIEW BOARD

Date: November 18, 2021

Time: 8:30 AM, MST

Location: Lake Estes Conference Room, 3rd Floor, 200 W Oak St., Fort Collins, and Zoom meeting

Contact: Tina Kurtz, Larimer County Engineering Department

MEETING MINUTES

Staff Present: Tina Kurtz (remote), Devin Traff (remote), Traci Shambo

Board Members: Bets Ervin-Blankenheim (remote), Chad Morris (remote), Chris Carlson, Dr. Chris Thornton (remote), Greg Koch

Applicants Present: ; Amy Johnson (City of Fort Collins), Colin McKernan (HDR), Kayla Ranney (HDR), Mark Kempton (City of Fort Collins), Matthew Hickox (Ayres Associates), Lauren Winkelhake (Ayres Associates),

Call to Order: Mr. Koch opened the meeting at 8:45 a.m., MST

Introductions

Item #1: Poudre River Intake Floodplain Project Review

Ms. Kurtz introduced the project. This is a mitigation project to protect water supply coming into the City of Fort Collins (City) municipal water intake upstream of the Gateway Natural Area. Ms. Kurtz also shared the approval criteria.

Ms. Johnson shared an introduction. The project site is just upstream of the confluence with the North Fork of the Cache La Poudre River on City owned property. City water rights from the Poudre River are diverted at the intake, generally 50% of the water comes from the Poudre and 50% from Horsetooth Reservoir via the Colorado-Big Thompson Project. Post-High Park fire deposition has shifted the flow path by the intake and additional deposition is anticipated from Cameron Peak Fire. It is predicted that 250,000 tons of sediment may enter the site. The purpose of this project is to protect the structural integrity of the intake and restore the channel flow path to the pre-2013 condition. There are three planned solutions: riprap spur abutment, thalweg alignment redirection, and ecoblock wall. They anticipate minimal environmental impacts.

Ms. Ranney presented additional detail on the project. The ecoblock wall is submerged and will sit below the diversion dam crest. The riprap spur will aid the flow to match the pre-2013 flow path. One-dimensional and two-dimensional models were developed for evaluation of flooding impacts. They chose to use 24-inch riprap for the spur abutment. All floodplain impacts result in less than 0.3' of a rise in the Base Flood Elevation (BFE) and are on City property.



Dr. Thornton asked if the design could be modified to add additional spur dikes and extend the pilot channel further upstream due to how sharp the flow turns at the short distances involved. Mr. Koch stated that it seems unlikely that the pilot channel would be stable over time as designed. Ms. Ervin-Blankenheim agreed that it seemed to be an unstable design and had similar questions to the other Board members.

Mr. Koch asked about the depth of bedrock. Ms. Johnson stated that they are not exactly sure of the depth. Mr. Koch asked whether there was a reason why 10' was selected for scour depth. Ms. Ranney responded that 16' was overly conservative since the area is depositional. Mr. Morris stated that contraction scour should be considered at the nose of the spur and that abutment scour should also be considered.

Mr. Koch asked about how the ecoblock walls may overtop. Ms. Ranney replied that the ecoblocks will always be submerged. The optional fill has been accounted for in the modeling so that there will be no additional rises in BFEs beyond what is shown in the application.

Motion:

Dr. Thornton motioned to recommend approval of the Floodplain Project Review. Mr. Carlson seconded.

Discussion: Mr. Carlson made the comment that he has reservations of the design working but has no concerns about the floodplain as he expects they will be back out again. Dr. Thornton agreed that they will be out there again. Mr. Koch said no other structures are impacted. Ms. Ervin-Blankenheim shared the concerns previously mentioned.

Motion passes 5-0.

Item #2: Railroad Avenue Letter of Map Revision

Ms. Kurtz gave a brief introduction of the project and shared the approval criteria.

Mr. Carlson introduced the project, which is within the Big Thompson River floodplain. Railroad Avenue was destroyed in the September 2013 Flood and was subsequently repaired. Now the project is being completed with the Letter of Map Revision (LOMR) to satisfy a 1-dimensional (1D) model comparison with the Conditional Letter of Map Revision (CLOMR). The 2-dimensional (2-D) model was also updated to provided updated floodplain mapping.

Ms. Winklehake presented detail on the hydraulic modeling and stated that the models show that the floodplain boundaries will not expand due to the as-built condition. The corrected effective model added in the railroad bridge since that was not included in the Colorado Hazard Mapping Project (CHAMP) model. There is also very little, if any difference, in the floodway boundaries.



Mr. Morris clarified that the project replaced a culvert with a bridge and that both the 1D and 2D LOMRs show little deviation from the current FEMA products.

Motion:

Dr. Thornton made a motion to recommend approval of the Letter of Map Amendment proposal as submitted to the County Engineer. Seconded by Mr. Morris. Motion passed 3-0.

Item #3: Loveland Combined Letter of Map Revision

Ms. Kurtz gave a brief introduction of the project and shared the approval criteria.

The projects in this application included improvements on the Big Thompson River to the Rist-Goss Diversion structure, stream restoration from Rossum Drive to Wilson Avenue, replacement of the Namaqua Avenue Bridge, and improvements to the Wilson Avenue Bridge. These were all combined into one Letter of Map Revision (LOMR). All projects were completed through a no-rise analysis in 1-dimensional (1-D) modeling.

The corrected effective model increased the model mesh size under Rossum Drive to resolve instabilities at the Rossum Drive bridge. The model was updated to reflect the post-project conditions.

Mr. Koch mentioned that there was a 0.8' negative surcharge shown on the floodway data table. Mr. Hickox explained that they could investigate the cause of the negative surcharge. Mr. Koch requested that an explanation be added to the reports regarding the negative surcharges.

Motion:

Mr. Koch made a motion to recommend approval of the Letter of Map Amendment proposal as submitted to the County Engineer with explanation of negative surcharges made to staff. Seconded by Dr. Thornton. Motion passed 3-0.

Item #4: Approval of October 28, 2021, Board meeting minutes

Motion:

Dr. Thornton made a motion to approve the August 26, 2021, Board meeting minutes. Mr. Carlson seconded. Motion passed 3-0.

Meeting adjourned at 10:35 a.m., MST.