



LARIMER COUNTY | ENGINEERING DEPARTMENT

P.O. Box 1190, Fort Collins, Colorado 80522-1190, 970.498.5700, Larimer.org

FLOOD REVIEW BOARD

Date: July 25, 2024

Time: 8:30 AM, MDT

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

Contact: Tina Kurtz, Larimer County Engineering Department

MEETING MINUTES

Staff Present: Tina Kurtz, Caryn Nezat, Samuel Hartley, Andrew Mackin, Alan Kee

Staff Online:

Board Members Present: John Hunt, Dr. Chris Thornton, Chad Morris, Jamis Darrow, Travis Rounsaville

Board Members Online:

Call to Order: Dr. Thornton opened the meeting at 8:34 a.m., MDT

Introductions

Item 1: Approval of June 27, 2024, Board meeting minutes

Motion:

Mr. Morris motioned to approve the June 27, 2024, Board meeting minutes.

Mr. Rounsaville seconded the motion.

Further Discussion:

None

Vote:

Mr. Hunt – yes

Dr. Thornton – yes

Mr. Morris – yes

Mr. Darrow – yes

Mr. Rounsaville – yes

Motion passed [5-0], with 0 abstentions.



Item 2: A petition filed by Kelsey Bishop under Section 12.1.6.H of the Larimer County Land Use Code for a new culvert within the Little Thompson River Zone AE (Floodway) Floodplain Overlay District at the following location to wit: Section 19, Township 4 North, Range 71 West, Larimer County, CO, also known as 9590 East Highway 36, Lyons, CO

Applicants Present: Aaron Cvar, Front Range Stormwater and Floodplain Consulting, LLC, Kelsey Bishop, Bishop Forest, Applicant

Ms. Kurtz introduced the project. This project is to replace an illegal 60" corrugated metal pipe culvert on the Little Thompson River Zone AE (Floodway) with two box culverts measuring 10' wide and 6' high. These box culverts will contain the 100-yr flood discharge of 840 cubic feet per second. This project is considered a Floodplain Project Review under LCLUC 12.1.6.H.2.

Mr. Cvar started his presentation sharing some background information on the culvert that was illegally installed. The floodplain mapping is FEMA regulatory mapping for the Little Thompson River. The corrugated metal pipe will be replaced with a more substantial structure. The base model for the project was the FEMA Effective model for the Little Thompson provided by Larimer County Floodplain Administrator. Additional cross sections were incorporated into the model to model the proposed structure. The required criteria were to achieve a no-rise condition or attempt to obtain a CLOMR/LOMR from FEMA. The applicant chose the no-rise criteria. Larimer County Rural Area Road Standards requires the 10-yr storm event to be passed without overtopping. The structure will pass the 100-year storm to maintain the no-rise condition.

Rip-rap sizing was based on the standard methodology from the Mile High Flood District urban drainage manual. There is riprap proposed up- and downstream for protection and cutoff walls. Mr. Hunt asked about the water surface elevation Table 4.0 in the report. There was an updated table provided to the Board which corrected Table 4.0. Dr. Thornton asked about the velocities in the area. Dr. Thornton also asked about the overtopping in the 100-year storm. Mr. Rounsaville asked about the wingwall model approach. He also recommended updating the contraction and expansion coefficients in the area of the culvert. The recommendation for an increase in the riprap sizing was made. The invert of the plans and model need to be verified again. The bed material is small cobble and large gravel.

Mr. Hunt asked about future modeling and encroachments. Mr. Darrow asked about the model and floodway data table agreement regarding the floodway. Mr. Morris asked about the corrected effective condition modeled. The corrected effective model should have cross-sections in the model represented by the same cross-sections in the model of the proposed condition. Discussion of the cross-section floodway encroachments was discussed.

Discussion of conditions that may be required occurred. The following Conditions were identified by the Board for conditions of approval. The applicant will be required to:

1. Update the proposed condition (PC) hydraulic model to match floodway encroachments at cross-sections 243195 and 243222 from the Duplicate Effective/Corrected Effective (DE/CE) model floodway encroachment stations.



2. Update riprap sizing to size M or H after revised analysis of Scour Conditions.
3. Update cross-sections (XS) 243195, 243222, and 243239 to the standard FEMA 0.3 and 0.5 coefficients.
4. Update the entrance and exit modeling methodology from Scale 2 for 15-degree wing walls (from plans) or 30-degrees (as modeled) for Scale 1 to be consistent between plans and model.
5. Update the culvert invert elevations in the model to match elevations on the plans.
6. Add cross-sections 243195 and 243222 to the corrected effective model. Reevaluate the no-rise condition.
7. Include more information on 10 x 6 box culverts and riprap criteria and standards in the body of the report.
8. Proposed condition floodway surcharges and difference table needs to be updated.

Motion:

Mr. Hunt moved to recommend approval to construct a new culvert at 9590 E Hwy 36, Lyons, within the Little Thompson River Zone AE (Floodway) for a Floodplain Project Review to the County Engineer with the condition that the conditions listed in the minutes be completed.

Mr. Darrow seconded the motion.

Further Discussion:

None

Vote:

Mr. Hunt – yes
Dr. Thornton – yes
Mr. Morris – yes
Mr. Darrow – yes
Mr. Rounsaville – yes

Motion passed [5-0], with 0 abstentions

Other items:

- Discussed upcoming agendas.

Meeting adjourned at 9:30 a.m., MDT.