



PUBLIC WORKS & NATURAL RESOURCES

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Staff Cover Memorandum – May 3, 2019

RSVP – City Reach 3, Conceptual Design Options – Technical Memo

The attached report summarizes conceptual design options and information for City Reach 3 of the Resilient St. Vrain Project. City Reach 3 extends from Sunset Street upstream to Airport Road and the west end of the City of Longmont Planning Area.

The primary goals of the Resilient St. Vrain Project are to repair damage to St. Vrain Creek and the St. Vrain Greenway from the 2013 Flood, improve the channel capacity to protect public and private infrastructure and the public from future flood events, and to perform the work in the most environmentally sensitive manner possible.

Major Benefits of City Reach 3 - Major benefits resulting from completion of City Reach 3 include the following:

- Completion of City Reach 3 from Sunset Street to Hover Street will remove a large area of the community on the south side of St. Vrain Creek between Hover Street and the BNSF Railroad from the 100 year floodplain, protecting the residential, commercial and public property in this area from not only the 100 year flood, but from more frequent smaller flood events which would also flood this area and cause substantial damage.
- Completion of the City Reach 3 continuing upstream from Hover Street to the confluence with Lykins Gulch would take additional areas of the Longmont Planning Area from the 100 year floodplain, and would protect Hover Street from being overtopped and flooded in up to a 100 year storm event. That is critical to maintaining emergency access to the community during flood events, and maintaining general transportation for the community and regional traffic.
- Completion of City Reach 3 improvements at Airport Road result in eliminating flooding in areas of the Longmont Planning Area, and equally importantly could eliminate flooding of Airport Road maintaining both general and emergency access during flood events. One of the major impacts to the public in the 2013 Flood was the impacts to traffic and the impacts to emergency access during a critical public safety event in the community and region.

Single Thread versus Split Flow Options - The primary alternatives in the City Reach 3 Conceptual Design Option reflect the options of either a Single Thread Option from Lykins Gulch to Sunset Street, or a Split Flow Option in that same reach. Input received from the public has strongly supported the Split Flow Option which creates a new

secondary channel from Lykins Gulch through the Fairgrounds Ponds. Support for the Split Flow Option results primarily because of the impacts that the Single Thread Option would have on the existing riparian and environmental areas along the existing St. Vrain Creek Channel, including the Rogers Grove Nature Area immediately downstream of Hover Street. The Split Flow Option eliminates the significant impacts to the existing riparian, wildlife and greenway area along the existing St. Vrain Creek channel that is required in the Single Thread Option. The impacts and disturbance to the St. Vrain Creek channel and the Rogers Grove Nature Area have been identified as a significant negative impact of the Single Thread Option that can be avoided with the Split Flow Alternative. The Split Flow Option could be phased into smaller reaches depending on funding availability.

Additional Items – Additional items that will need to be addressed or reviewed during final design and implementation of City Reach 3 Phases include the following:

- Coordination and Participation with Boulder County – Two areas where Boulder County participation and coordination will be necessary are the following:
 - Airport Road Area – As stated in the attached report, the 100 year flows in St. Vrain Creek exceed channel capacity upstream of Airport Road, and channelization of those flows either into the main channel, or into a single secondary channel where a box culvert could be installed to pass those flows under Airport Road is required to keep Airport Road from being overtopped in a flood condition. Passage of both general traffic and more importantly emergency access traffic is critical during a flood event. Since work upstream of Airport Road is outside of the Longmont Planning Area and in Boulder County jurisdiction, participation and coordination by Boulder County would be necessary to address this. Maintaining regional traffic as well as emergency access on Airport Road during a flood event would benefit both Boulder County and the City of Longmont.
 - Rogers Grove Nature Area – The City of Longmont and Boulder County have worked in cooperation and coordination on numerous flood recovery and resiliency projects following the 2013 Flood. The City of Longmont granted a conversation easement to Boulder County on City owned property at Rogers Grove. The planned RSVP improvements for this area will need to be coordinated with Boulder County.
- As part of the Split Flow Option, there is still a need to look at the reach of the creek between the Hover Street Bridge and the confluence with the proposed Split Flow Channel for channel and stabilization work. As a result of the 2013 Flood, the low flow channel in this area has relocated in several locations, and minor work to insure that the low flow channel is stabilized in a resilient manner is necessary. Items that need to be reviewed include ongoing erosion that could impact adjacent property and infrastructure such as the BNSF RR, and vegetation in this area for protection of trees. Natural Resources staff is aware

of Bank Swallows nesting in the area of the St. Vrain Creek Channel adjacent to Roger's Grove. At the time of design of the RSVP adjacent to this area a review of this nesting area and potential impacts and mitigation will need to be reviewed.