

## MEMORANDUM

**To:** David Pasic – Town of Erie

**From:** Bill Fox

**Date:** March 17, 2020

**Subject:** Conceptual State Highway 7 / US 287 BRT Station Design

At your request the Fox Tuttle Transportation Group has completed conceptual design alternatives for a Bus Rapid Transit (BRT) station to be located on SH 7/US 287 between Lucerne Drive and Arapahoe Road in Erie, Colorado. This BRT station would serve both the planned SH 7 BRT service and the planned US 287 service. This station area design process has built on the initial work done as part of the previous State Highway 7 BRT Station Area Design Project (Brighton to Boulder) which considered a range of station locations and configurations in this area.

The primary purpose of this project has been to identify alternatives for locating the BRT station and then defining the approximate R.O.W. needed to accommodate the station. The alternatives were prepared with consideration of the evolving development plans on the east (Nine Mile project) and west (Tebo project) sides of US 287 in this area.

This project initially considered the following three alternatives:

- Alt. 1 BRT stop at the Lucerne Street intersection with pedestrian crossing of US 287 accommodated by the existing traffic signal
- Alt. 2 BRT stop between Lucerne Street and Arapahoe Road with a pedestrian underpass
- Alt. 3 BRT stop between Lucerne Street and Arapahoe Road with a pedestrian overpass

An initial meeting to review the proposed alternatives, before any plans were prepared, was held in Erie on January 6, 2020. This meeting was attended by staff from the Town of Erie, the Town of Lafayette, Boulder County, RTD, and CDOT. This meeting included a discussion of both center-running BRT and side-running BRT in this area and the challenges that each option presented, including the complexity added by the need for the SH 7 service to make a 90-degree turn through the Arapahoe Road intersection. With input from this meeting, a set of draft plans were prepared for each of the three alternatives. A review meeting was then held in Erie on February 19, 2020 (same participants invited) to review the three conceptual station area alternative designs. At this meeting it was decided to abandon Alternative 3 with the pedestrian overpass, and to refine Alternatives 1 and 2.

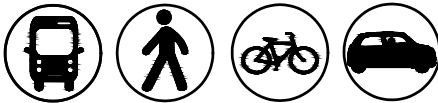
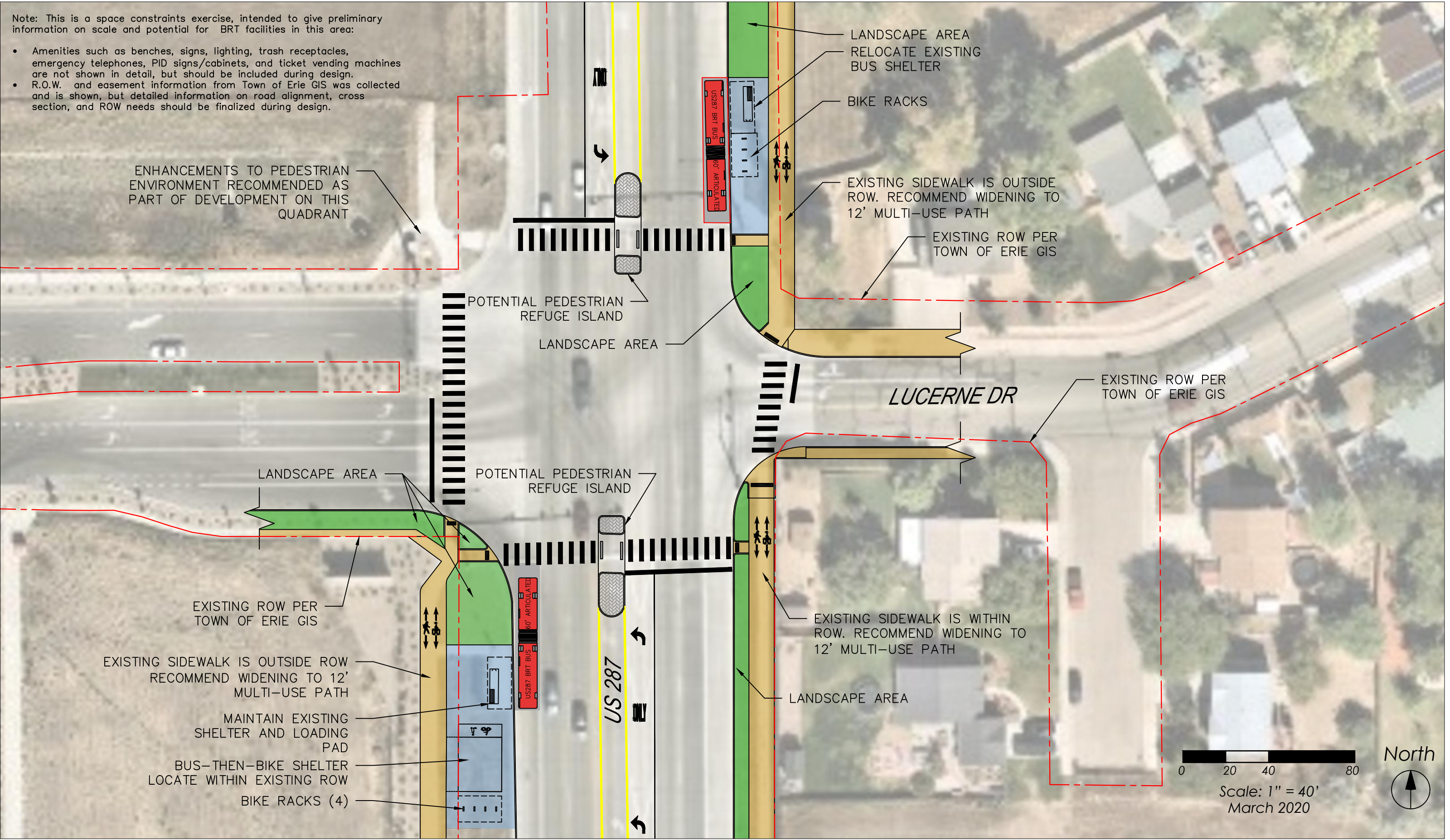
The refined Alternatives 1 and 2 are attached to this memorandum and represent the input received to date from the project participants. Either alternative could accommodate both the SH 7 and US 287 BRT services and should be considered as both BRT corridor planning efforts continue.

I hope this information is helpful. Please let me know if you have any questions.

BF/     Alternative 1 – Station Concept with At-grade Crossing at Lucerne Drive  
          Alternative 2 – Station Concept with Underpass between Lucerne Drive and Arapahoe Road

Note: This is a space constraints exercise, intended to give preliminary information on scale and potential for BRT facilities in this area:

- Amenities such as benches, signs, lighting, trash receptacles, emergency telephones, PID signs/cabinets, and ticket vending machines are not shown in detail, but should be included during design.
- R.O.W. and easement information from Town of Erie GIS was collected and is shown, but detailed information on road alignment, cross section, and ROW needs should be finalized during design.





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- Approximate dimensions of underpass structure based on SH 82 underpass in Basalt, CO

Note: Northbound BRT bus must cross all northbound lanes on 287 to make a left turn at the intersection of US 287 and Arapahoe Rd. There are two options:

- A northbound-only presignal (shown) could be coordinated with southbound left signal phase at US 287 and Arapahoe Rd to minimize loss of capacity.
- The traffic signal at US 287 and Lucerne Dr could be coordinated to create platoon gaps for the bus
- Further study is required.

