Memorandum

Date: November 19, 2020

To: Sara Cain – Butte County Association of Governments

From: Greg Behrens – Fehr & Peers

Subject: **Post Camp Fire Regional Population & Transportation Study**
Butte County Transit and Non-Motorized Plan Update
Task 6.3 Planning Framework Memorandum

RS19-3800

This memorandum provides a summary of the planning framework, which includes the key issues and guiding principles that will guide the development of future B-Line service recommendations. These principles respond to the opportunities and challenges identified for the existing B-Line system and its underlying market conditions. The service framework will help develop specific transit services and the overall B-Line network that meet the plan goals.

At this stage, the service framework is informed by the key findings from the Market Assessment and Service Evaluation. The service framework should be updated to reflect input provided during the community and stakeholder outreach process to ensure that the eventual service plan is reflective of the needs of its existing and prospective riders.

The planning framework is comprised of the following tenets:

- **Service Delivery Model**: Currently, the B-Line system operates with a primarily fixed-route bus service delivery model, where customers plan trips via published schedules and utilize regular routes to access destinations throughout the service area. Under this model, customer travel choice is defined by the availability of transit service as determined by the timing of scheduled trips and the location of transit routes and their associated bus stops. This plan will explore the potential for refinements to the current fixed-route model, as well as the potential for new market-based services, that more closely match customer expectations for transit in and around Butte County. Potential market-based services include demand response transit services in areas with lower transit ridership potential, point-to-point intercity services, and transportation network company (TNC) partnership programs. The plan will also examine measures to optimize the efficiency and effectiveness of paratransit service.
- **Balancing Ridership and Coverage**: B-Line allocates fixed operating resources towards balancing goals of maximizing ridership (the number of people using its buses) and coverage (the amount of area served by its buses). Balancing these goals requires

tradeoffs: a system that only maximizes ridership would focus on areas where transit demand is highest, while a system that only maximize coverage would spread bus routes evenly across the service area. B-Line currently balances these goals by providing more frequent service (peak frequency of 30-minutes or better) on seven routes while providing low frequency service (every 60 minutes) to as many other areas as possible. This plan will evaluate whether this current balance meets the needs of existing and prospective B-Line passengers. A key component of this evaluation will include an assessment of whether existing routes with more frequent service justify this increased investment based on their ridership patterns.

- **Service Span**: While people within the B-Line service area may drive, bike, or walk at any time of day, they may only ride the bus during B-Line operating hours of 6 AM to 10 PM on weekdays (on all 22 B-Line routes), from 8 AM to 7 PM on Saturdays (on 13 of 22 B-Line routes), and from 8 AM to 6 PM on Sundays (on one of 22 B-Line routes). This plan will consider if these hours of operation meet the needs of existing and prospective B-Line passengers.
- **Equity**: The plan will identify transit services that meet the mobility needs of the service area's most vulnerable populations, including low income, minority, and transit dependent populations.
- **Downtown Chico**: Downtown Chico will remain a key part of the B-Line network due to the proximity of Chico State, available transit connections at the Chico Transit Center, and other prevailing market conditions. B-Line operations through Downtown Chico will be evaluated to optimize service reliability and passenger transfer opportunities.
- **Key Corridors**: The plan will explore potential upgrades to services on existing key corridors with higher transit ridership potential, including those where local jurisdictions are planning for land uses that support transit, pedestrian activity, and bicycle use.
- **Service Restoration**: A phased service plan will be developed to re-introduce transit service to Paradise and other communities impacted by recent wildfires. This phased plan will consider the anticipated timing and nature of resettlement in impacted communities. Additionally, this phased plan will consider the role of market-based services as a component of restored service in Butte County.
- **Funding**: In light of current uncertainties related to transit funding sources and the on-going COVID-19 pandemic, care should be taken to invest B-Line's limited financial resources in areas where market conditions will best support transit usage.
- **Amenities**: Transit amenities represent the nexus between transit passengers and transit service. Transit amenities play a significant role in service quality, ease of access, and the overall customer experience. Key areas for focus for B-Line include the provision of safe and comfortable bicycle and pedestrian facilities to provide first-/last-mile active transportation connections to transit, particularly within the vicinity of major transit centers. Additional items may include new or improved shelters and integrated real-time customer information.

- **Network Design**: Successful transit systems share the same basic elements related to network design and service delivery to ensure a positive customer experience. The B-Line system will be configured to incorporate the following guiding principles related to network design:
    - Regularity: Regularity refers to the time interval between trips at a given transit stop. Repeating trip intervals are easier for customers to remember, while inconsistent schedule patterns can confuse customers as they plan their trip. For example, regular trip intervals based on basic clockface elements (i.e., 15-, 30-, and 60-minute intervals) are immediately recognizable. On-time performance also affects the regularity of a transit service, since routes that routinely arrive early or late introduce irregularity and uncertainty to a scheduled timetable. Recommendations identified in this plan will maintain a high degree of service reliability while providing service at regular intervals in line with customer mobility needs.
    - Directness: Directness refers to the path between a transit trip origin and destination. Route directness correlates with travel time, which is a key factor in a customer's decision to utilize transit service. Routes that minimize the distance between origins and destinations are more attractive than circuitous routes that add unnecessary travel time. Circuitous routes can disorient customers by deviating from familiar travel corridors.
    - Symmetry: Symmetry measures how closely a departing transit trip resembles a return transit trip. Symmetrical routes follow similar inbound and outbound paths and allow customers to board and deboard at bus stops in close proximity to each other, improving the legibility of a transit route.
    - Synchronization: Synchronization refers to the operation of individual routes to form a unified, cohesive transit system. Synchronized transit systems facilitate coordinated, seamless transfers from one route to another while minimizing redundant routings and service coverage.
    - Simplicity: Simple transit systems are highly legible and easy to understand for customers of all ages and abilities. Hallmarks of simple transit systems include a straightforward route structure with distinct routes serving key markets, routes with repetitive trip and schedule patterns, and major origin-destination connections fulfilled by a single route or two routes with a brief, well-coordinated transfer window.