

## **7 TRANSIT SERVICE PLAN**

This chapter discusses proposed changes for B-Line services over the short- (by 2016), mid- (2017 through 2027), and long-term (to 2040) time horizons. The services described in this section are based on the iterative draft service plan proposals discussed with BCAG staff in 2014, and are also informed by the extensive data collection effort and passenger survey conducted in the fall of 2013. The focus of this chapter is on fixed-route transit services; B-Line's paratransit services are anticipated to remain essentially unchanged.

For planning purposes, the short-term service plan assumes that funding levels will remain at the status quo. Funding in the mid- and long-term assumes only a very modest increase in funding over existing levels.

Figures that illustrate the use of resources in the short- and mid-term periods are shown in Appendix C. Ridership estimates and greenhouse gas emissions calculations are included in Appendix D.

### **THE B-LINE SERVICE PLANNING PROCESS**

In many ways, B-Line's existing system is positioned well for the future, and many routes, particularly the intercity trunk Routes 20, 40, and 41, as well as the University Circulator Routes 8 and 9, are already performing well and do not need to be adjusted. In other cases, however, opportunities exist to adjust both local and regional routes to satisfy the service and performance standards detailed in Chapter 6 to better meet observed demand.

Some of the challenges encountered during the service planning process are a function of how much the existing street network limits options for improving/enhancing transit service. The sheer limitations of a street system with a limited number of arterials suitable for transit – combined with an extremely limited number of options for locating bus layover points and turn-back areas – significantly reduces the number of options that can be considered. For example, Route 16 must travel almost 3 miles farther (round trip) than demand would suggest (along Esplanade to Highway 99) simply because there are very few suitable locations in the area for turning around a 40-foot bus. While this limitation and others throughout Chico may be reduced in the mid- to long-term timeframes as increased development extends the road network on the edges of the city, it nevertheless may continue to pose problems in designing service for Chico's eastern neighborhoods, where there are few crossings of SR 99 and Bidwell Park.

## **SHORT-TERM SERVICE PLAN (BY 2016)**

The short-term service plan describes how B-Line will transform over the next two years.<sup>1</sup> This plan begins to introduce elements that are seen in the mid- and long-term service plans, while also addressing immediate needs as determined through this planning process.

With a few exceptions noted below, regional services perform well on their current route alignments and at their current frequencies. The bulk of recommendations concern local services in Chico and Oroville.

Service criteria for the short-term service plan include:

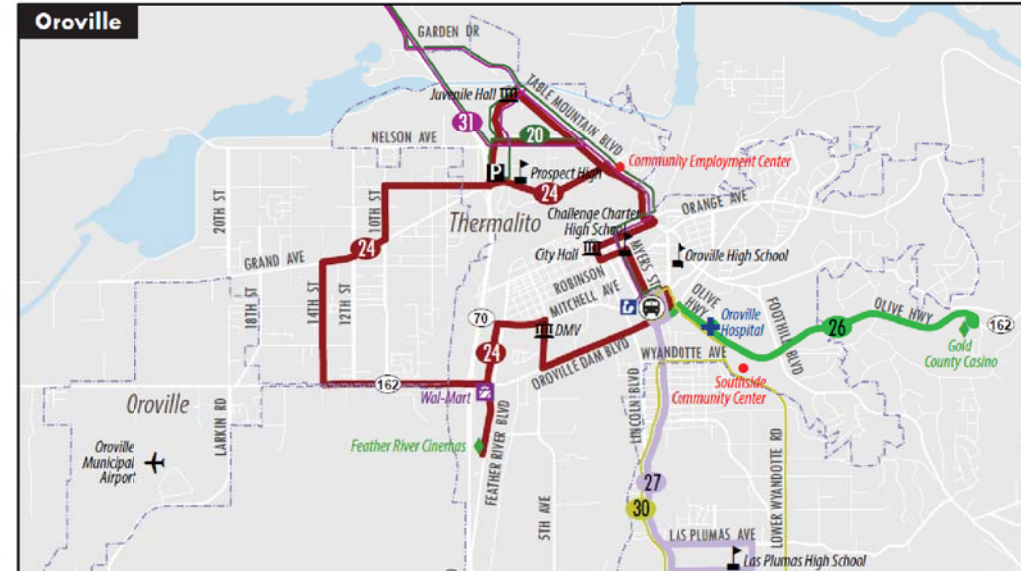
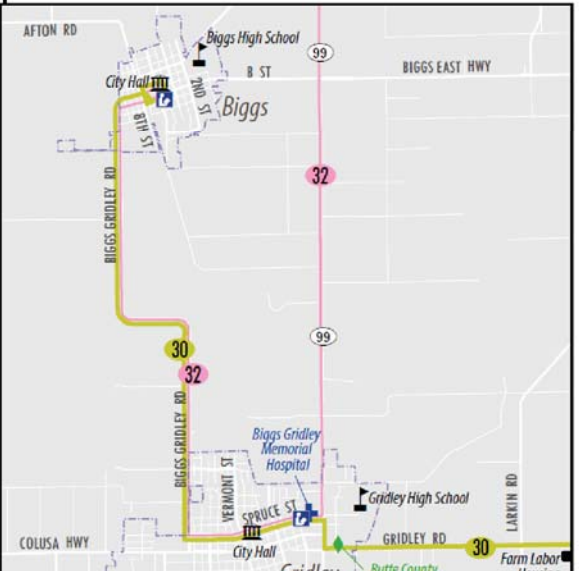
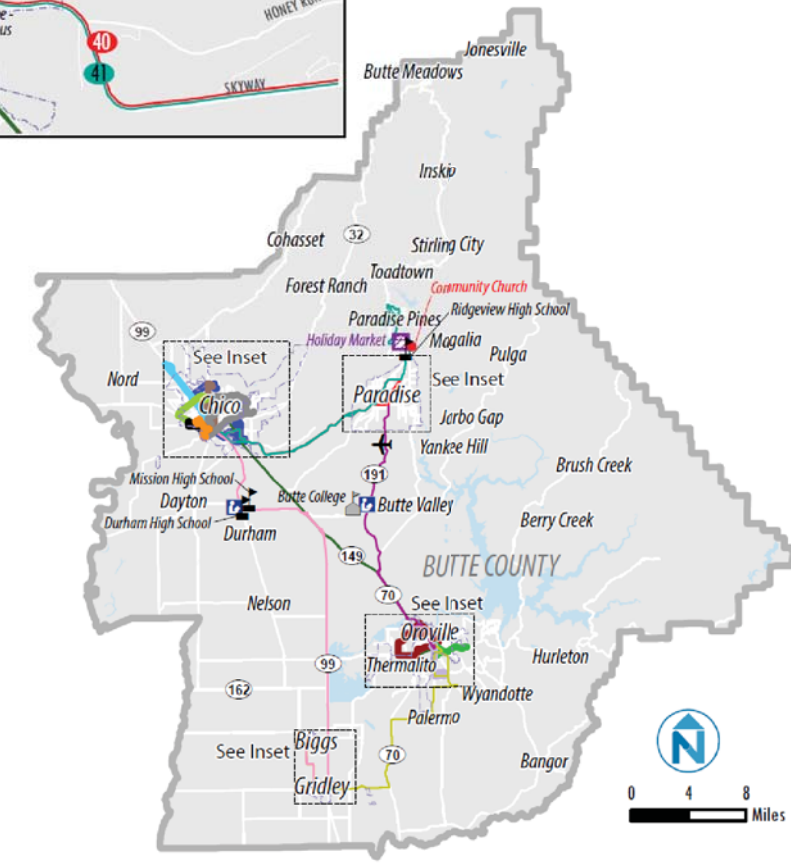
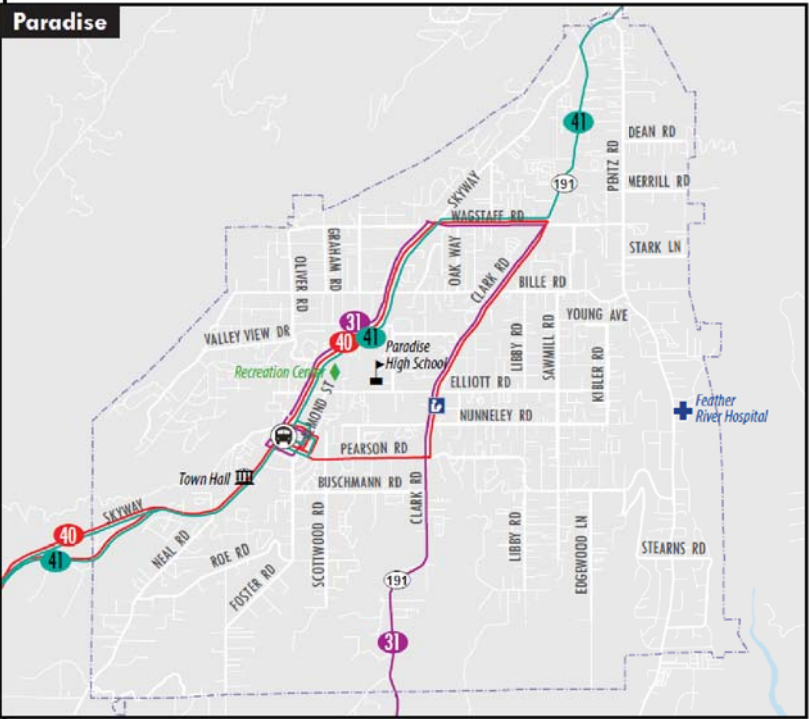
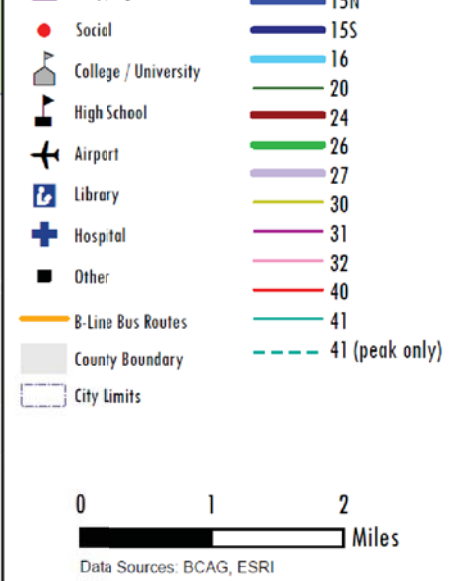
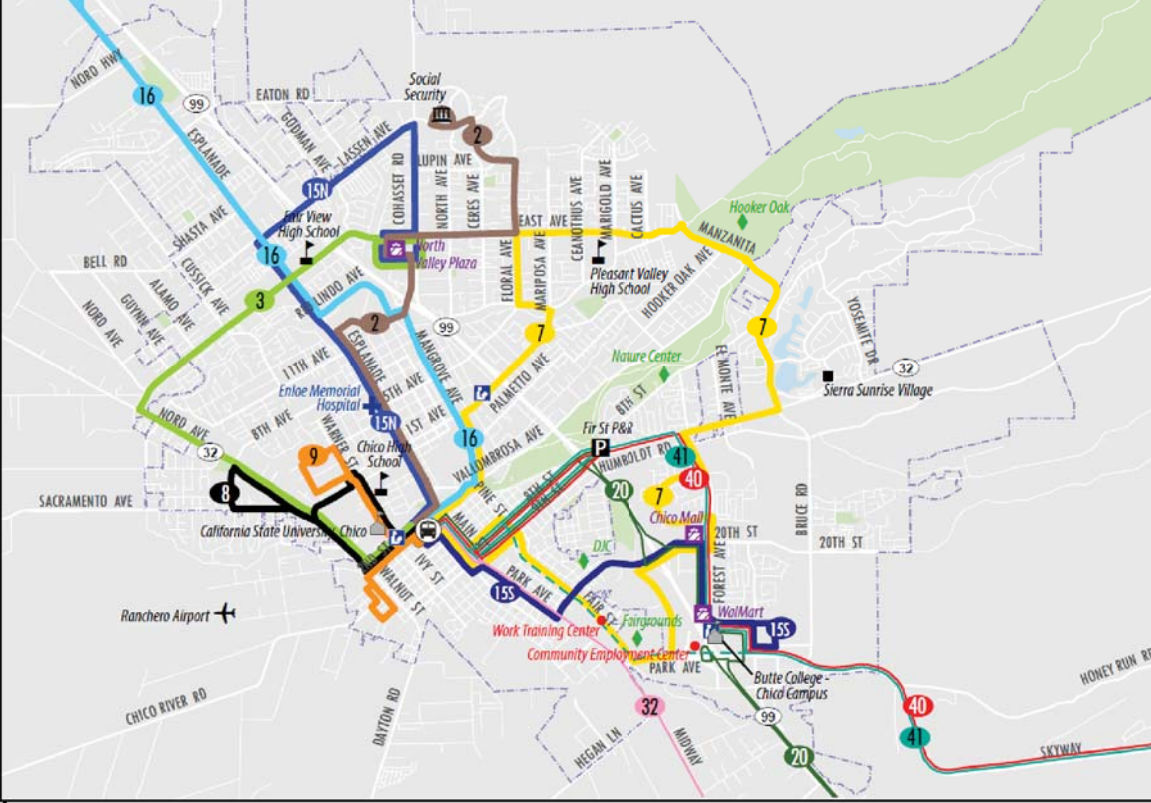
- Assume an average layover rate (i.e., the percentage of time added to scheduled running time for layover, rest, and recovery periods) of 13%.
- Maintain existing levels of service on and/or make minimal changes to the most productive routes, including the CSUC Routes 8 and 9, intercity Routes 20, 40, and 41, and Oroville Routes 24 and 27.
- Maintain the existing span of service on all days, but increase the operating consistency/frequency on some routes (i.e., Route 7).
- Improve local service in Chico and Oroville by targeting route changes that maximize B-Line's existing resources.

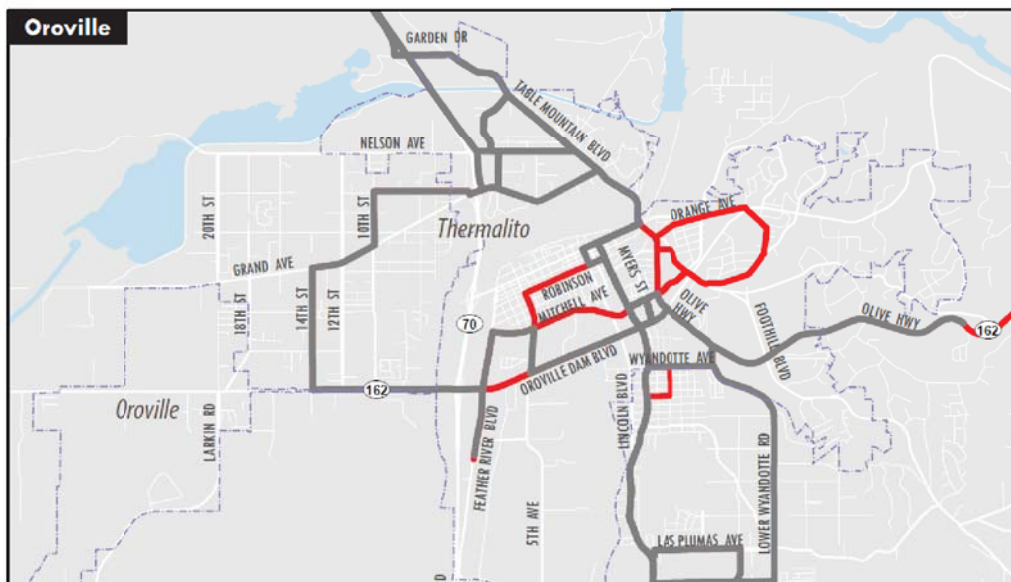
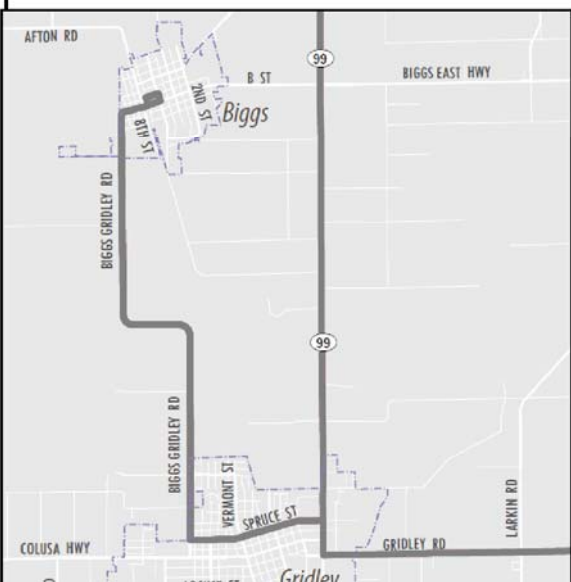
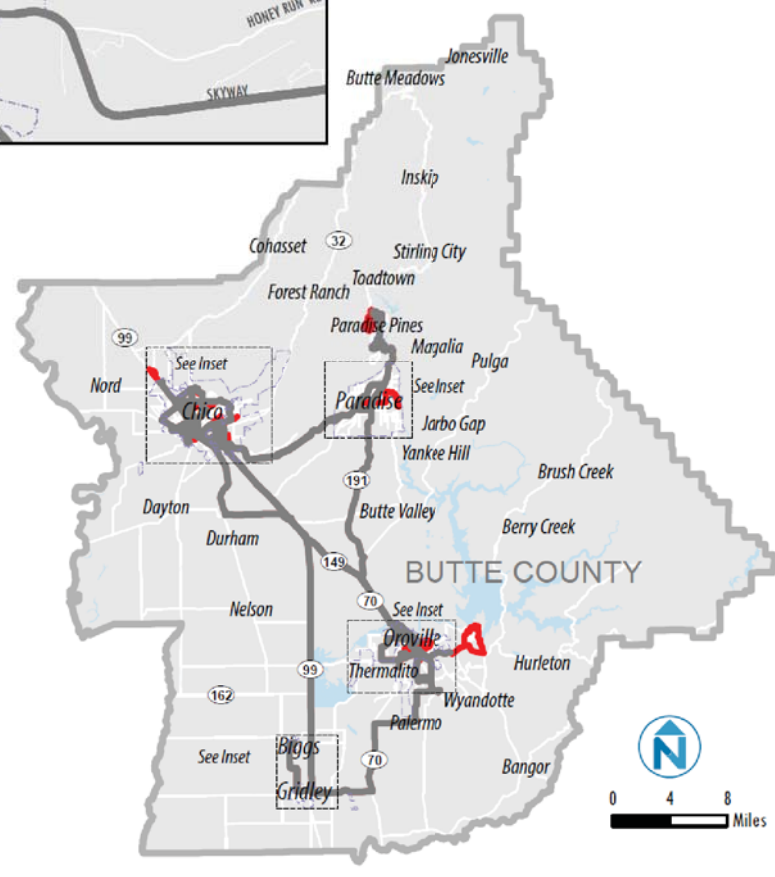
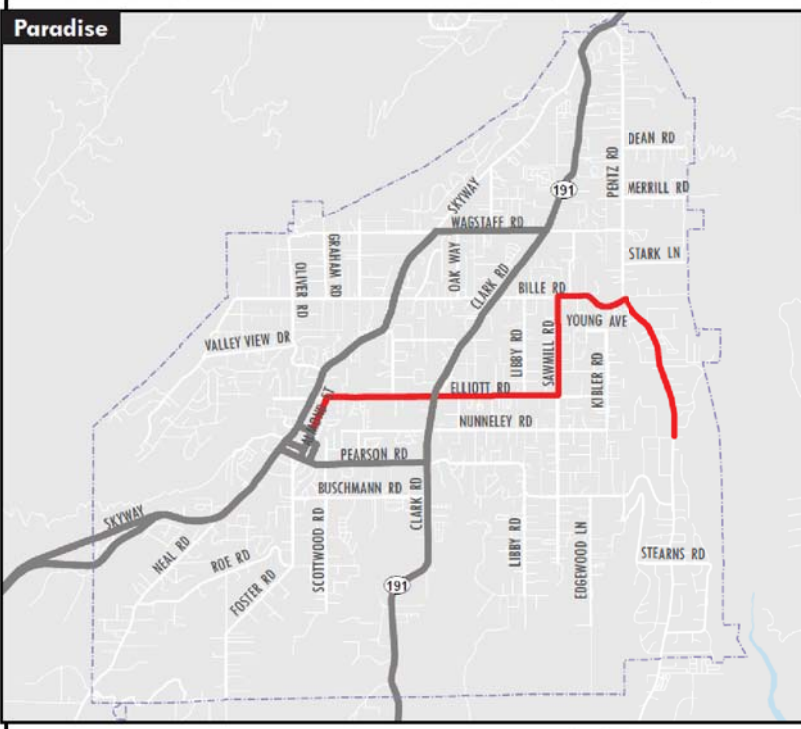
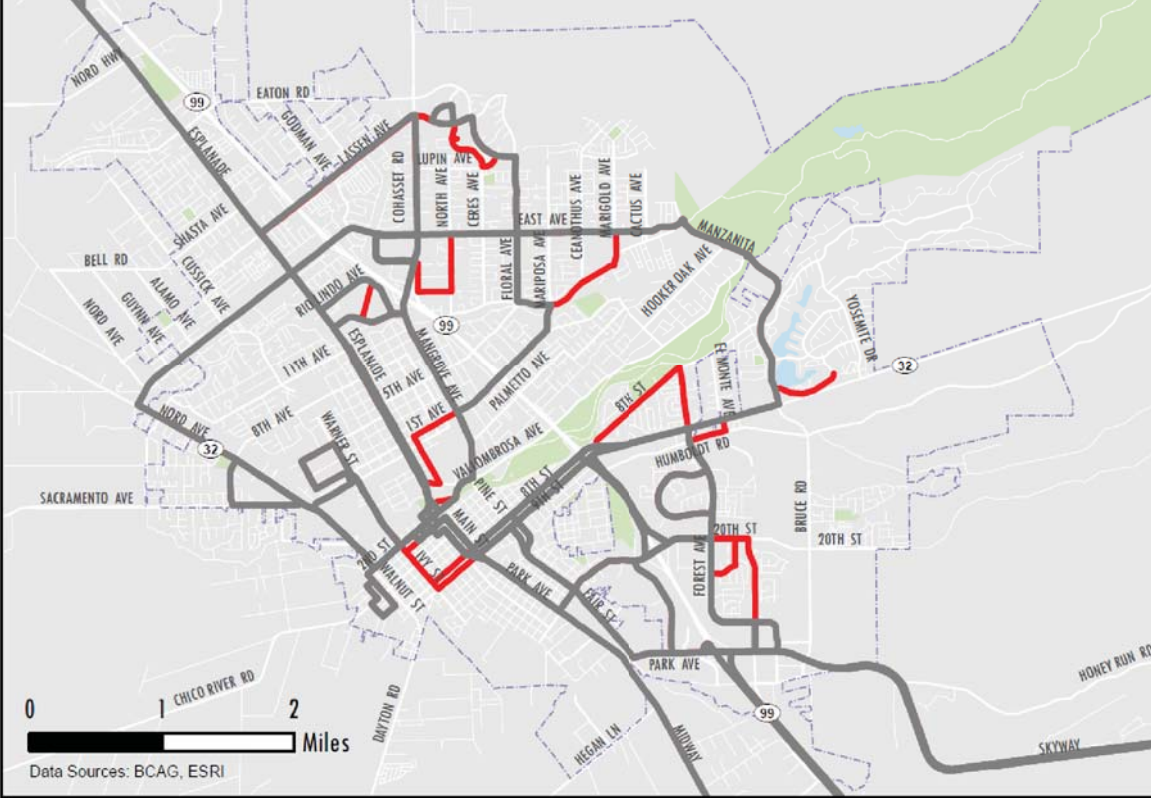
Figure 7-1 shows the recommended short-term service changes in Chico and Oroville.

Figure 7-2 shows that despite the fact that services have been simplified, the majority of areas that are currently served by B-Line Transit will retain service under this plan.

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<sup>1</sup> In response to early drafts of this plan, B-Line made preparations for modest changes to Route 15S in the immediate short-term timeframe (Fall 2014).





## Short-Term Service Overview

The following describes the short-term service plan's new routes. It highlights key changes between these services and today's existing services, demarcating them by service area.

### Chico

Recommendations in Chico are designed to better match demand for certain types of travel with the right types of services, and as much as possible to route more frequent trunk route services on streets that are appropriate for transit service. As an example, local service along Mulberry Street is more appropriately served by a community circulator (i.e., Route 7) than a regional intercity service (i.e., Routes 40/41). Recommended services are as follows:

- **Route 15S "Downtown/CSU/Mall"**  
Service Type: Urban Area Trunk Route  
Serves: Chico Transit Center, Park, 20<sup>th</sup>, Forest, Raley's, the Skyway loop, and return.  
Frequency (Peak/Base, in minutes): 15/30  
Span: Same as current span. It is assumed that 15S's "peak period" will remain the same as today – a span of 9 hours (i.e., 6:18am – 10:37am & 2:18pm – 6:57pm).  
Key Changes: Does not serve MLK Jr. Parkway or Springfield Drive.
- **Route 15N "Downtown/CSU/Lassen/Esplanade Express"**  
Service Type: Urban Area Trunk Route  
Serves: Chico Transit Center, Esplanade (express<sup>2</sup>), Lassen, Cohasset, North Valley Plaza, and return.  
Frequency: 30/30  
Span: Same as current span.  
Key Changes: Northern terminus moved to North Valley Plaza transfer point/anchor; serves Cohasset instead of Ceres & Eaton loop; operates "express" along Esplanade.
- **Route 2 "Downtown/CSU/Ceres/Esplanade Local"**  
Service Type: Neighborhood Circulator  
Serves: Chico Transit Center, Esplanade (local), Cohasset, North Valley Plaza, East, Floral, Ceres/Lassen loop, and return.  
Frequency: 30/60  
Span: Same as current span.  
Key Changes: As a complement to Route 15N, Route 2 will provide "local" service on the Esplanade and will no longer serve Mangrove Avenue or the Parmac loop. Route 2 serves areas currently served by Routes 7 and 15N.
- **Route 3 "Nord/East"**  
Service Type: Urban Area Trunk Route  
Serves: Same as current Route 3

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<sup>2</sup> The route would function as an "express" within the Esplanade section, operating in the primary traffic lanes with one or two stops at key locations on the corridor. For these stops, the bus would either pull out to the side roads or stop at new stops in the main lanes, assuming a stop agreement can be reached with the City.

Frequency: 60/60

Span: Same as current span. No changes, except frequency would be a uniform 60 minutes.

- **Routes 4 & 5: Deleted**

Most segments of Routes 4 and 5 are replaced in the short-term service plan by an expanded Route 7. However, service on Manzanita between Mariposa and Marigold Avenues, and on Notre Dame Boulevard between Forest Avenue and 20<sup>th</sup> Street, along with other short segments, will not be replaced.

- **Route 7 “Downtown/CSU/Manzanita Loop CW/CCW”**

Service Type: Neighborhood Circulator

Serves: Bi-directional loop serving eastern neighborhoods, Forest, MLK, and Mulberry areas. In the clockwise direction, Chico Transit Center, Mangrove, 1<sup>st</sup>, Manzanita, Floral, East, Manzanita (Hooker Oak), Bruce, SR 32, Forest Avenue, Skyway, MLK Parkway, 20<sup>th</sup>, Mulberry, 8th Street, Main Street.

Frequency: 60/60

Span: Same as current span, but service will be consistent throughout the day.

Key Changes: Most notably, Route 7 absorbs parts of deleted Routes 4 and 5, as well as the Springfield Drive and MLK Jr. Parkway segments of current Route 15S. Route 7 no longer serves Sierra Sunrise Village.

Note: This expansion puts the route right at a 60-minute cycle time, including the 13% layover/recovery rate.

- **Routes 8/9/9c: University Circulators**

No changes are planned for these services.

- **Route 16 “Downtown/CSU/Mangrove/North Esplanade”**

Service Type: Urban Area Trunk Route

Serves: Chico Transit Center, Mangrove, Rio Lindo, Esplanade, Leora Court/Nord Highway, and return.

Frequency: 60/60

Span: Same as current span.

Key Changes: Serves Mangrove instead of Esplanade south of Rio Lindo.

## **Oroville**

In Oroville, the short-term service plan primarily builds on the findings of the fall 2013 data collection effort, concentrating service in areas of strong demand and cutting unproductive routes. In particular, Route 24 has been expanded and Route 27 has been retained, essentially unchanged.

- **Route 24 “Thermalito”**

Service Type: Neighborhood Circulator/Feeder

Serves: Oro Dam Boulevard, DMV, Wal-Mart, Feather River Cinemas, Thermalito, Butte County Center, Downtown Oroville, Oroville Transit Center.

Frequency: 60/60

Span: Longer than current span.

Key Changes: Route extended to Feather River Cinemas to provide more direct service to Wal-Mart.

Note: at present, several minutes of remaining slack still exist in the Route 24 cycle time. Although expanding this route further is not recommended, it should be noted that this slack time could be used to serve additional destinations along the proposed route, if desired.

- **Route 25: Oro Dam**

Deleted. Parts of Route 25 – the spur to Feather River Cinemas, and service along Oro Dam Boulevard between Oroville Transit Center and 5<sup>th</sup> Avenue – are provided by Route 24.

- **Route 26: Olive Highway**

Service Type: Feeder

Serves: Oroville Transit Center, Oroville Hospital, Gold Country Casino, and return.

Frequency: 60/60

Span: Same as current span.

Key Changes: Low performing 26a (Kelly Ridge) and 26b (Orange & Acacia) routes, as well as South Oroville service, are no longer provided.

Note: Through-routed with Line 27. At present, several minutes of remaining slack exist in the Route 26-27 cycle time. This slack time could be used to serve additional destinations along Oro Dam Boulevard, if desired.

- **Route 27: South Oroville**

Service Type: Neighborhood Circulator

No changes are proposed for Route 27, which will be through-routed with Route 26.

## **Regional Routes**

Most of the major regional routes, including Routes 20, 40, and 41, all perform strongly and as a result the short-term service plan recommends relatively few changes to these services (mostly minor routing changes in Chico, as shown in Figure 7-1). However, the regional coverage routes – Routes 30, 31, and 32 – do not perform quite as well and are slated for more substantial service changes in the short- and mid-term timeframes.

All regional routes are classified as “Intercity Arterial Routes.”

- **Route 20: Chico-Oroville**

No changes to Route 20 in the short-term timeframe. Consider rebranding and/or eliminating special Route 20 services (i.e., commute runs, Oroville Park & Ride service, weekend Oroville local service).

- **Route 30: Oroville - Biggs**

No route changes to Route 30 in the short-term timeframe. However, we recommend that BCAG reduce Saturday service to three trips daily (down from four) for scheduling consistency.

- **Route 31: Paradise - Oroville**

Deleted. Service is recommended to be converted to an employee vanpool.

- **Route 32: Gridley - Chico**

No changes to Route 32 in the short-term timeframe, although the service should be operated using a paratransit vehicle/small bus instead of a standard 40-foot bus.

- **Route 40/40X: Paradise – Chico**

All operational characteristics are the same as current service.

Key Route Changes: In Chico, Routes 40/40X will now operate on Forest Avenue, SR 32, and 8<sup>th</sup>/9<sup>th</sup> Streets at all times.

- **Route 41: Magalia – Chico**

All operational characteristics are the same as current service.

Key Route Change: In Chico, Route 41 will now operate on Forest Avenue, SR 32, and 8<sup>th</sup>/9<sup>th</sup> Streets for most runs. The existing peak run on Park Avenue, Fair Street, and Mulberry Street will remain. Route 41 no longer serves the Carnegie/Colter flag-stop loop.

- **Route 46: Feather River Hospital**

Deleted.

### **Other General Short-Term Recommendations**

- Consolidate and/or eliminate bus stops for improved service and to reduce customer confusion.
- Coordinate with the City of Chico and Chico High School for improved Esplanade service.
- Redesign brochure, map, and schedules to improve user-friendliness and clarity.

### **Resource Allocation in the Short-Term**

The short-term service plan during peak service (i.e., when CSUC is in session) will require a total of **25 peak buses** (one fewer than today) and approximately **260 revenue hours** on a school service weekday. This total is slightly increased from current revenue hours, approximately 257 revenue hours. Again, if Route 31 were converted to a vanpool service, a total of two (2) revenue hours and one (1) peak period bus could be recovered for use elsewhere in the system. Weekend hours would remain on par with current totals.

See Figure 7-3 below for an overview of annual resource allocation by route for the short-term timeframe.



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**Butte County Association of Governments**

Figure 7-3 Short-Term Annual Resource Allocation

Route Number	Route Name	Annual Revenue Hours*		Change	% Change
		2013 (Scheduled)	2016 (Proposed)		
<b>Chico Local</b>					
2	Esplanade/Ceres	4,400	5,927	1,527	35%
3	Nord/East	4,419	4,525	106	2%
4	First/East	5,094	0	(5,094)	-100%
5	East 8th Street	5,224	0	(5,224)	-100%
7	Manzanita Loop CW	0	4,142	4,142	100%
7	Manzanita Loop CCW	1,849	4,142	2,293	124%
8	Nord	1,359	1,359	0	0%
9 / 9c	Oak/Warner/Cedar	2,460	2,460	0	0%
15N	NVP/Lassen Express	8,160	8,477	317	4%
15S	Park & Mall Loop	8,160	11,344	3,267	40%
16	Esplanade/Mangrove	3,402	3,453	50	1%
<b>Subtotal</b>		<b>44,527</b>	<b>45,829</b>	<b>1,301</b>	<b>3%</b>
<b>Oroville Local</b>					
24	Thermalito Loop CW	1,836	2,805	969	53%
25	Oro Dam	1,046	0	(1,046)	-100%
26-27	Hospital/Casino & S Oroville	2,945	3,060	115	4%
<b>Subtotal</b>		<b>5,827</b>	<b>5,865</b>	<b>38</b>	<b>1%</b>
<b>Intercity</b>					
20	Chico - Oroville	7,360	7,360	0	0%
30	Oroville - Biggs	1,642	1,642	0	0%
31	Oroville - Paradise	472	472	0	0%
32	Chico - Gridley	510	510	0	0%
40 / 40x	Chico - Paradise	5,233	5,233	0	0%
41	Chico - Magalia	4,012	4,012	0	0%
46	Feather River Hospital	344	0	(344)	-100%
<b>Subtotal</b>		<b>19,573</b>	<b>19,092</b>	<b>(344)</b>	<b>-2%</b>
<b>Grand Total</b>		<b>69,927</b>	<b>70,785</b>	<b>858</b>	<b>1%</b>

\* Includes 13% assumed layover rate for 2016 data. Shaded rows indicate routes that will not be substantially changed in the short-term timeframe. Totals do not include Route 90 (Jesus Center) services.

## Major Short-Term Initiatives

In addition to the service changes described above, we recommend that BCAG undertake several additional initiatives designed to speed up transit service and provide additional customer enhancements in the short-term. They are:

- **Butte Regional Operations Center.** BCAG and Butte Regional Transit are already in the process of developing and designing a new transit maintenance and operations center, which will also house BCAG's administrative offices. It involves the acquisition of approximately 7.5 acres surrounding the existing facility on Hegan Lane in Chico for a total facility size of 10 acres at full buildout. The facility and all adjacent improvements are scheduled to be completed in 2016.
- **Implementing BCAG's new bus stop spacing policy.** As described in Chapter 3, B-Line currently does not have a policy for locating and spacing bus stops, although B-Line has been working to consolidate stops. There are many examples of "legacy" bus stops that exist simply because they have always existed, and lead to erratic and inconsistent bus stop spacing along key routes. An example of this is along Route 15N at the intersection of Lassen Avenue and Esplanade, where a new sheltered bus stop on Esplanade was built as part of the CVS development, but the old stop on Lassen just after the route's right turn onto that street was retained. In the short-term timeframe and as part of restructuring the B-Line system, BCAG should consider implementing the new bus stop spacing and location policy outlined in Chapter 6 (i.e., a minimum distance between stops of one-quarter mile in general, or closer to one-sixth of a mile in denser areas). In practice, implementing the policy might include first updating BCAG's bus stop inventory, then following TriMet's methodology for assessment of stop locations described on page 6-8 of this report. Consolidation of stops could happen incrementally to reduce delay on key routes, or could be done wholesale as part of the upcoming route restructuring strategy. In any event, stop locations that we have already identified as redundant and which could be removed immediately include:
  - Cohasset & Christi; Cohasset & Cyndi (Route 15N)
  - Lassen & Santos, near CVS (Route 15N)
  - South side of East Ave, just east of Ceres Ave (Route 4)
  - East side of Forest, near the old Social Security office (Routes 5, 7, 15S, 20, 40, 41)
- **Improvements to the North Valley Plaza transfer center.** The North Valley Plaza bus stop is already an important transfer point between Routes 2, 3, and 4, as well as between B-Line, Butte College bus services, and Glenn Ride. In the short-term, the NVP transfer center will be served by Route 2 and will be the terminus for Routes 3 and 15N. In terms of amenities, the stop already has shelters, benches, and trash receptacles on both the north and south sides of Pillsbury Avenue. The south side stop also features bike parking. However, the stops are about 250 feet apart. To the extent possible, the stops should be re-sited to be across the street from each other, connected by a highly visible crosswalk. Shelters should also be re-labeled to show the B-Line name and logos, replacing the "Chico Area Transit" name that remains. Additionally, BCAG may consider adding additional bike parking facilities at this location, such as keyed or electronic bike lockers.
- **School tripper services.** "School tripper" services are routes that operate during peak school commute hours to provide access to and from schools. They are available to all

members of the public, but their primary purpose is to get students to school before the first bell and to pick them up and return them to their residential neighborhood after the last bell. Many transit systems operate school trippers as a way to maximize limited resources when schools are located in out-of-the-way locations or in areas with low ridership. By operating buses to and from schools during limited hours, regular bus routes do not need to serve schools when students are not riding and can instead be employed in areas where ridership potential is greater. In Chico, morning and afternoon school tripper services may be implemented either along future fixed routes or along special alignments between residential neighborhoods and local schools. This strategy maximizes the benefits of transit as an alternative to driving for students while ensuring that regular fixed routes continue to effectively serve the general population.

- **Coordinate with regional casinos to share costs.** B-Line serves two casinos in the Oroville area: Gold County Casino, on Route 26, and Feather Falls Casino, on Route 30. In the short-term, BCAG should explore creating cost and/or service sharing partnerships with the casinos, which could help B-Line use cost savings to improve local service elsewhere (i.e., in central Oroville or Chico).

## **MID-TERM PLAN (2017 – 2027)**

In the mid-term, B-Line would largely build on the short-term investments in transit service and amenities. In Chico, this would consist of combining Routes 15N and 15S to form the “Route 1” “BRT-lite” transit corridor, and regionally, service changes would largely work to ensure that BCAG is running the right type of services and making key infrastructure investments to support longer distance travel.

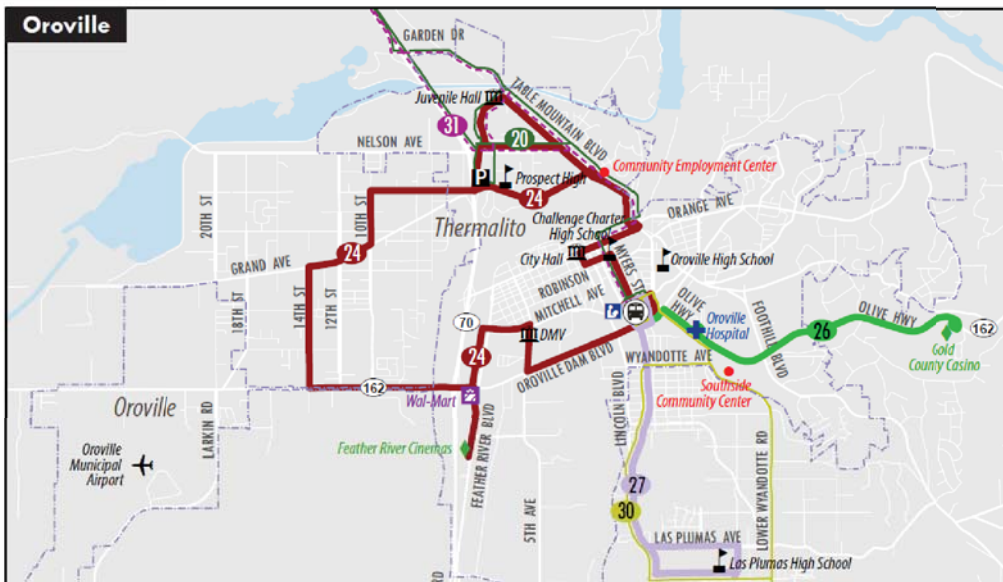
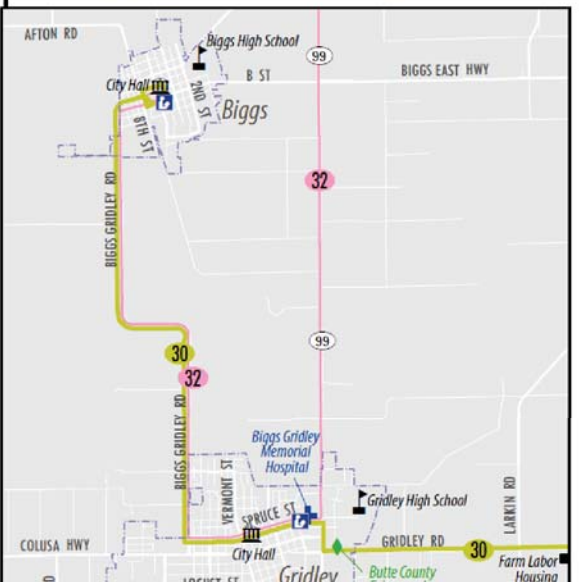
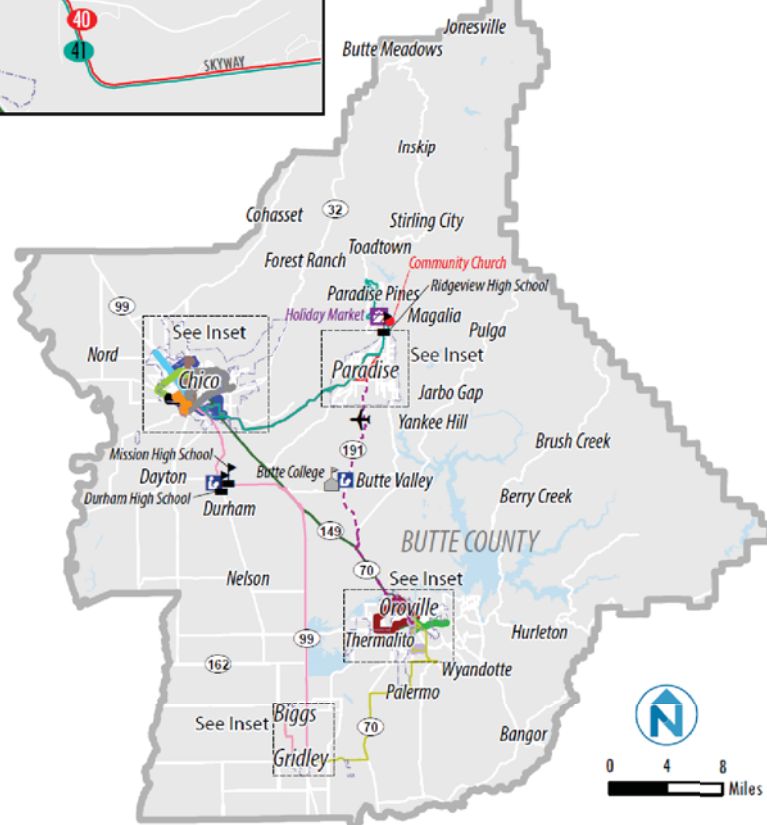
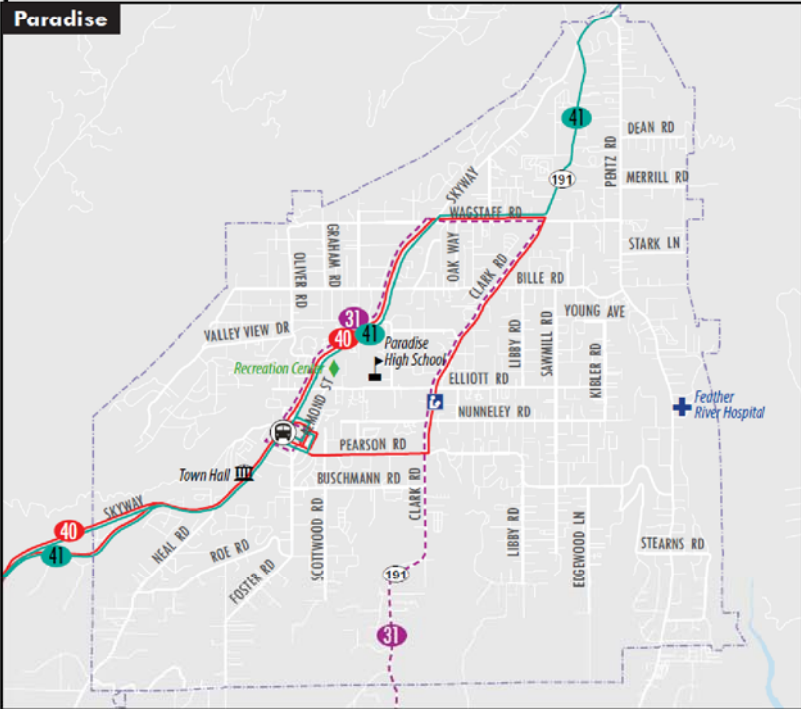
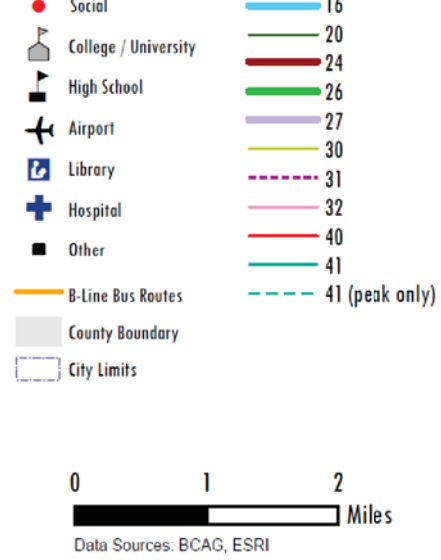
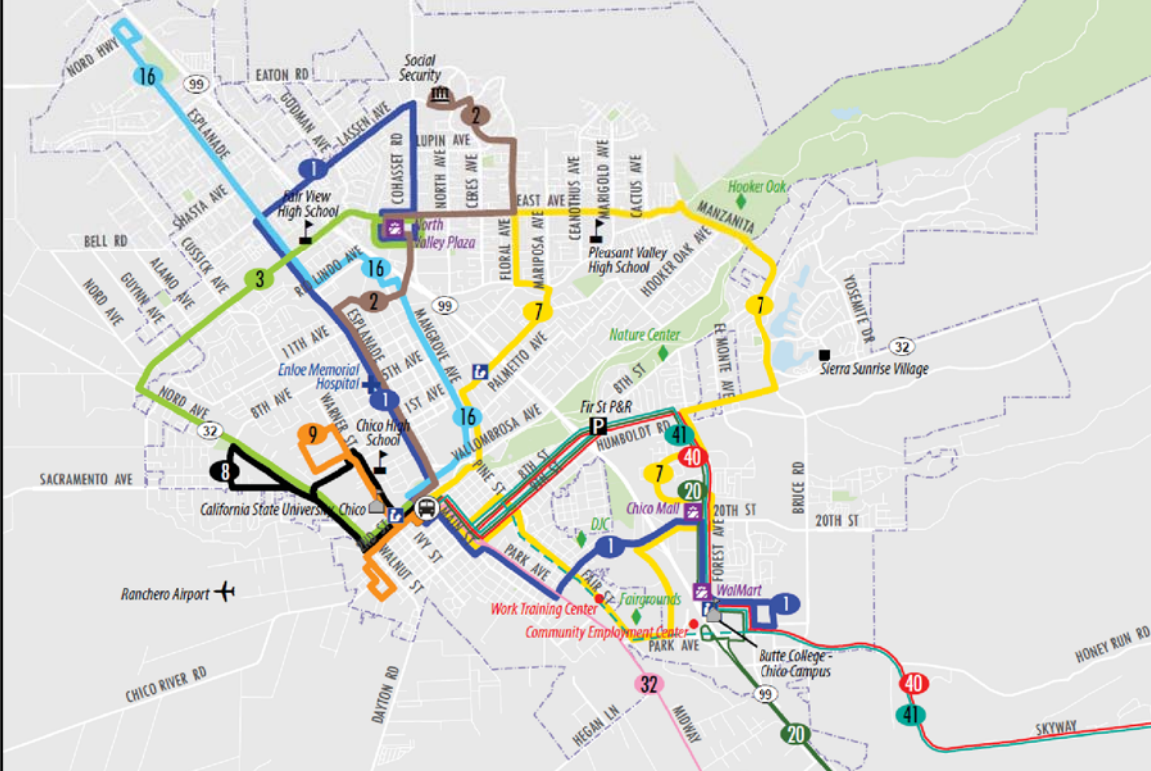
### **Service Changes in the Mid-Term**

B-Line service changes in the mid-term are largely driven by major initiatives, described below. As seen in Figure 7-4, B-Line service in the mid-term is very similar to the short-term plan, having used the short-term changes as a foundation for enhanced service in key locations. The most significant change is the consolidation of Routes 15N and 15S into a through-routed Route 1, bringing the idea of a true transit corridor to fruition.

The mid-term recommendations for Oroville and Paradise service are much more general, and include:

- Consider additional hours and services on weekends.
- Consider additional cost sharing and/or service partnerships with regional casinos, if not implemented in the short-term timeframe.

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## Resource Allocation in the Mid-Term

In the mid-term, during peak service (i.e., when CSUC is in session) B-Line will still require a total of **25 peak buses** (one fewer than today and the same as in the short-term) and approximately **254 revenue hours** on a school service weekday. This total is slightly less than current revenue hours, which are approximately 257 revenue hours, and also slightly less than short-term levels (see Figure 7-5) due primarily to speed efficiencies and reduced stops in the new Route 1 corridor.

Figure 7-5 Mid-Term Annual Resource Allocation

Route Number	Route Name	Annual Revenue Hours*			Difference 2016 - 2027	% Difference
		2013 (Scheduled)	2016 (Proposed)	2027 (Proposed)		
<b>Chico Local</b>						
1 "Short"	DTC to Mall	0	0	4,590	4,590	100%
1 "Long"	NVP to Mall via DTC	0	0	13,956	13,956	100%
2	Esplanade/Ceres	4,400	5,927	5,927	0	0%
3	Nord/East	4,419	4,525	4,525	0	0%
4	First/East	5,094	0	0	0	0%
5	East 8th Street	5,224	0	0	0	0%
7	Manzanita Loop CW	0	4,142	4,142	0	0%
7	Manzanita Loop CCW	1,849	4,142	4,142	0	0%
8	Nord	1,359	1359	1359	0	0%
9 / 9c	Oak/Warner/Cedar	2,460	2,460	2,460	0	0%
15N	NVP/Lassen Express	8,160	8,477	0	(8,477)	-100%
15S	Park & Mall Loop	8,160	11,344	0	(11,344)	-100%
16	Esplanade/Mangrove	3,402	3,453	3,453	0	0%
<b>Subtotal</b>		<b>44,527</b>	<b>45,829</b>	<b>44,544</b>	<b>(1,275)</b>	<b>-3%</b>
<b>Oroville Local</b>						
24	Thermalito Loop CW	1,836	2,805	2,805	0	0%
25	Oro Dam	1,046	0	0	0	0%
26-27	Hospital/Casino & S Oroville	2,945	3,060	3,060	0	0%
<b>Subtotal</b>		<b>5,825</b>	<b>5,865</b>	<b>5,865</b>	<b>0</b>	<b>0%</b>
<b>Intercity</b>						
20	Chico - Oroville	7,360	7,360	7,360	0	0%
30	Oroville - Biggs	1,642	1,642	1,642	0	0%
31	Oroville - Paradise	472	472	472	0	0%

**TRANSIT & NON-MOTORIZED PLAN | DRAFT FINAL REPORT**  
**Butte County Association of Governments**

Route Number	Route Name	Annual Revenue Hours*			Difference 2016 - 2027	% Difference
		2013 (Scheduled)	2016 (Proposed)	2027 (Proposed)		
32	Chico - Gridley	510	510	510	0	0%
40 / 40x	Chico - Paradise	5,233	5,233	5,233	0	0%
41	Chico - Magalia	4,012	4,012	4,012	0	0%
46	Feather River Hospital	389	0	0	0	0%
<b>Subtotal</b>		<b>19,573</b>	<b>19,092</b>	<b>19,092</b>	<b>0</b>	<b>0%</b>
<i>Grand Total</i>		<i>69,927</i>	<i>70,785</i>	<i>69,510</i>	<i>(1,275)</i>	<i>-2%</i>

\* Includes 13% assumed layover rate for 2016 and 2027 data. Totals do not include Route 90 (Jesus Center) services.

## Major Transit Initiatives

### Route 1 “Transit-Emphasis Corridor”

Successful “transit-emphasis corridors” or “transit-priority corridors” are arterials that are served by fast, frequent, and very “identifiable” transit service(s).

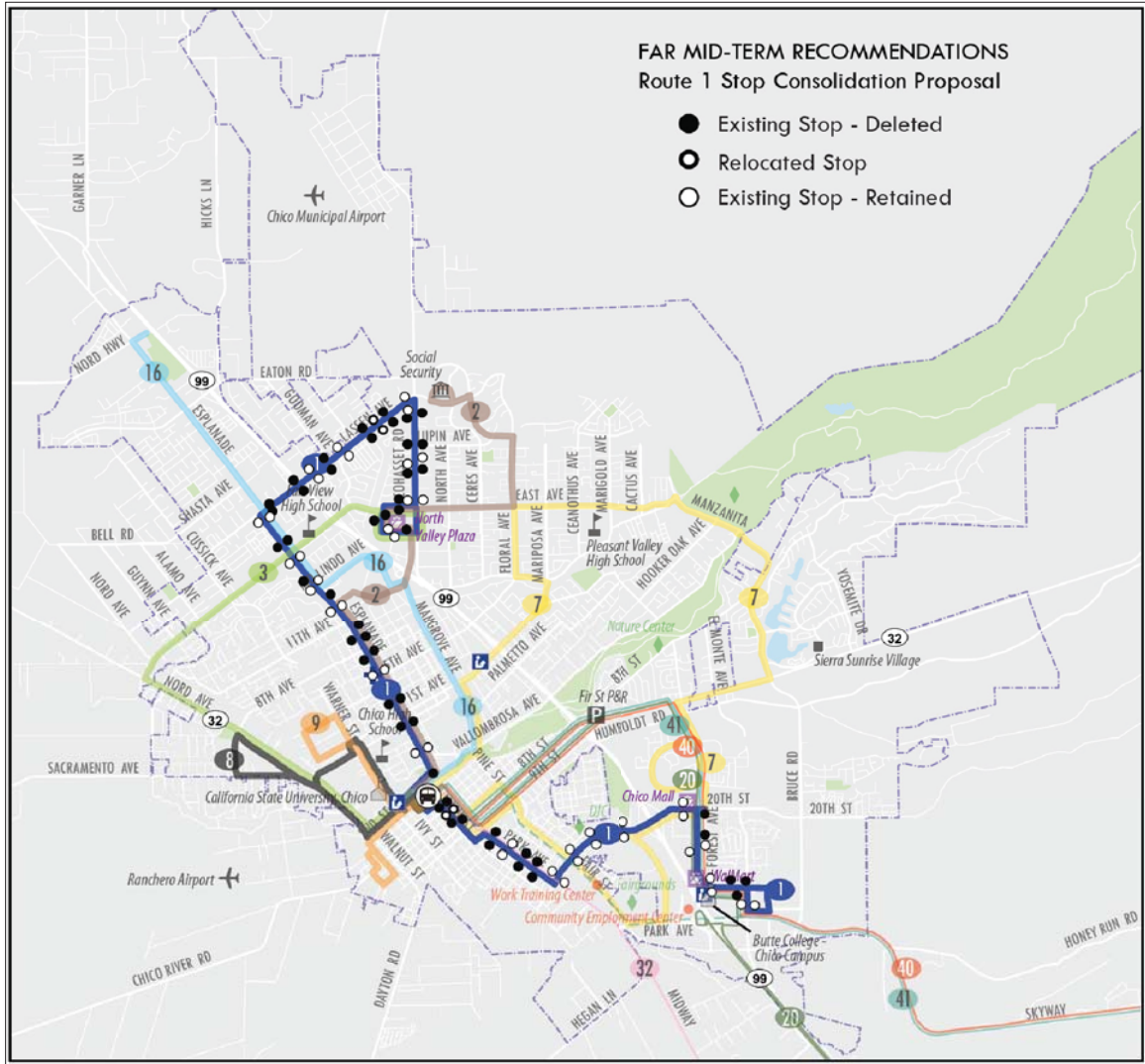
- In the short-term, Route 15S will become known as a “transit-emphasis corridor” due to its 15-minute frequency during the peak period and convenient service to and between major popular destinations.
- In the near mid-term, Routes 15N and 15S would be through-routed and rebranded as “Route 1.” Proposed mid-term frequencies would remain as they are in the short-term plan; on weekdays, service on the south end of the route (i.e., between the downtown transit center and the Mall area) would consist of two alternating runs – 1 ‘short’ and 1 ‘long.’ 1 ‘short’ would operate between the Mall area and the downtown transit center every 15 minutes in the peak, and 1 ‘long’ (between the Mall and North Valley Plaza via downtown) would operate every 30 minutes all day.
- In the far mid-term, the next major transit improvement(s) to be funded would be those that increase average operating speeds and improve service reliability. The ultimate goal is to determine how much the average speed needs to be increased to reduce the peak pullout requirement for Route 1 by one (1) bus. Reducing the bus requirement on this route could save as much as \$300,000/year in operating costs. It is possible to determine the Net Present Value of a 10-year cost savings in operating funds and use that to determine how much might be invested in capital projects to achieve the increased speeds. Potential capital program speed improvement projects could include:
  - Transit signal priority
  - Wider/targeted stop spacing
  - Off-board fare payment

Any of these improvements would reinforce the strength of the transit corridor, helping to solidify it in riders’ minds as the “backbone” of B-Line’s Chico operations. Figure 7-6 below shows a recommended approach to reduce bus stops along Route 1 in the far mid-term.



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**Butte County Association of Governments**

Figure 7-6 Potential B-Line Route 1 Stop Spacing



Finally, another strategy to cement the importance of this corridor would be to implement special bus stop and vehicle branding. For illustration only, a sample mockup of a Route 1 “BRT lite” bus is provided as a concept to show how it could be distinguished from the other routes (see Figure 7-7 below).

Figure 7-7 B-Line Route 1 Bus: Sample Branding Concept



### **Expanded Park & Ride Strategy**

B-Line currently serves two Caltrans Park & Rides in Butte County – Fir Street Park & Ride in Chico, and Oroville Park & Ride, located at Highway 70 and Grand Avenue. Park & Rides are a convenient and very visible access point to transit service for commuters who have access to an automobile but do not wish to commute via car. In the mid-term, there are several opportunities to increase the role of Park & Rides as multimodal hubs within Butte County.

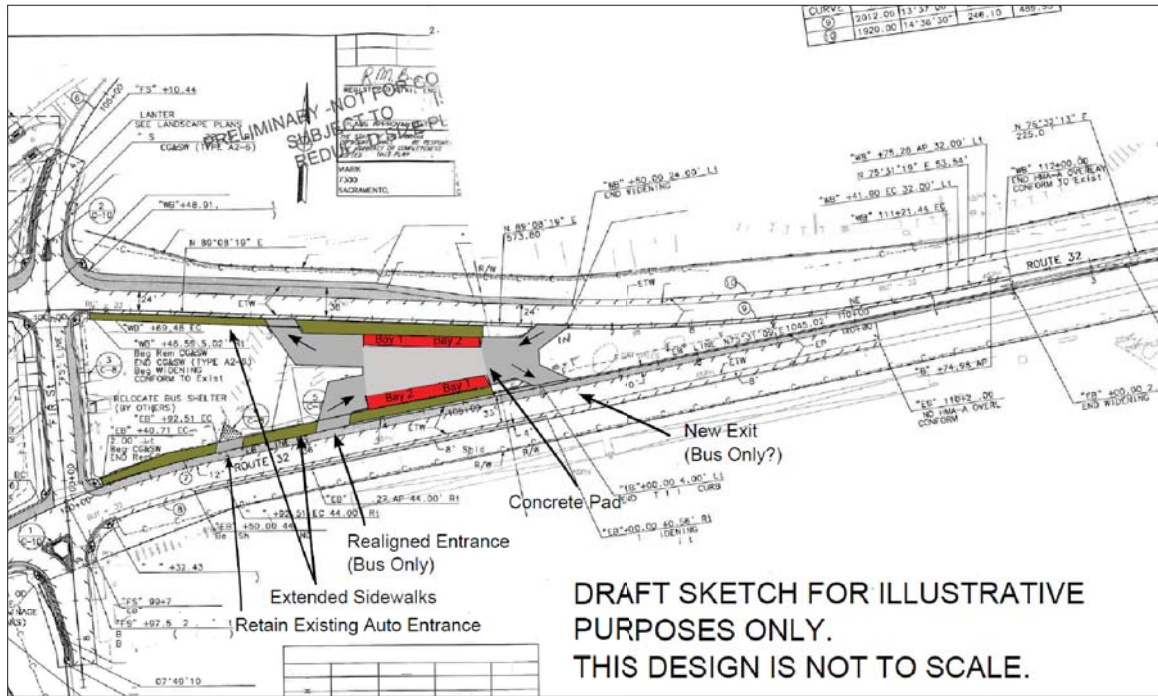
#### **Chico: Fir Street “Park & Bike or Ride”**

Currently, only Routes 5, 20, and 40X serve the Fir Street Park & Ride, which is owned and maintained by Caltrans. The current location of the Fir Street Park & Ride bus stop makes expanding services at the Park & Ride difficult. However, with a few targeted changes to the design of the east parking lot, the Fir Street Park & Ride could be converted to a key resource for both the city of Chico and B-Line; perhaps it could even morph into an “eastside” multimodal station with a transit facility, Park & Ride lot, bike facilities and better pedestrian crossings on SR 32

In the far mid-term, the east lot at the Park & Ride could be rebuilt following the “sketch” proposal below (Figure 7-8). Streamlining the stops to allow for easy entry from the inner lanes of SR 32 permits the following:

- Rerouting Route 20 off of Highway 99 to follow Routes 40/41 up Forest Ave and down SR 32 into downtown Chico at all times
- Allowing Routes 40/41 to also serve the Park & Ride at all times
- Additionally, due to its proximity to Lower Bidwell Park (particularly the multi-use path entrance off of 8<sup>th</sup> Street adjacent to the Park & Ride), the Fir Street Park & Ride could be marketed as a regional entry point for the park for hikers and bicyclists, underscoring the benefits of enabling Routes 20, 40, and 41 to serve the Park & Ride.
- Given the very wide right of way, an opportunity exists to provide a multiuse path connecting Fir St. and Forest Ave. or Bruce St. along the north side of SR 32.

Figure 7-8 Proposed Fir Street Park & Ride Relocation/Expansion



**Regional Park & Rides**

Park & Rides can also serve as hubs for different types of service; in addition to being served by fixed routes, they can also function as vanpool start points. In fact, in the mid- to long-term, there are several opportunities for additional Park & Rides throughout Butte County:

- **Oroville.** The current Park & Ride lot adjacent to Highway 70 has a total of 30 parking spaces. If there were demand for additional parking spaces in this area, BCAG could explore a shared parking agreement with Home Depot at Nelson Avenue & 3<sup>rd</sup> Street to provide additional capacity. If this option were pursued, Route 20 would need to be slightly modified to serve this lot.
- **Paradise.** There is an opportunity to pair a Park & Ride lot with a new transit center in Paradise, which will help simplify transit routing in the area, in addition to attracting potential new riders. The new facility could be located on Black Olive Drive, north of Birth Street and adjacent to Paradise Community Park. The small gravel parking lot just north of the park could be repurposed to serve BCAG customers.
- **Gridley.** Route 32 will remain in service (albeit with a small bus/paratransit vehicle) in the short-term timeframe, serving Gridley and Biggs via Durham. In the mid-term timeframe and if applicable given employment demographics, it may make more sense to implement vanpools between these locations (see below). Regardless of the service type, BCAG could work with Gridley to install a Park & Ride using shared parking spaces at the Butte County Fairgrounds. This Park & Ride lot could support either fixed route or vanpool services, or a combination of both.

In the long-term, BCAG may choose to implement a Butte County-to-Sacramento commute service, possibly using Park & Rides as major stops within the County.

## **New Downtown Transit Center**

In the mid-term, and possibly in conjunction with the City's upcoming Downtown Access Plan planning processes, BCAG should work with the City to establish a new transfer location in downtown designed to expedite transit services (by reducing the amount of circling to reach the location) and to make connections between routes more intuitive.

Ultimately, the objective of a new downtown transit center in Chico would be to elevate the visibility of transit, and improve the experience of being a transit user in Chico. It would allow for better-timed connections among routes, offer a comfortable passenger facility, allow B-Line service to be streamlined, and promote development and activity in downtown Chico. When transit centers have been developed in central urban locations adjacent to key activity centers and shopping areas, they have provided a steady stream of patrons to local businesses while people wait for buses and transfer between buses. In theory, a new transit center should:

- Have space to accommodate the next 20 years of growth.
- Have adequate boarding/alighting space, layover space and circulation space to ensure smooth operations.
- Provide safe and convenient access for pedestrians and bicyclists.
- Provide a pleasant atmosphere for passengers.
- Meet the needs of bus drivers (including driver amenities such as a restrooms and break room).
- Provide an operations outpost for the transit agency, allowing B-Line riders to collect information about the service and talk with a customer service representative.

## **Potential New Transit Center Location**

While identifying and vetting new transfer center locations deserves a separate planning process of its own, one concept for a new location for the transfer center was identified in downtown Chico. Although this is not proposed at this time, looking at new locations in Chico provides context for how future service changes might be implemented.

An example of a conceptual location is on West 4<sup>th</sup> Street in downtown Chico, between Main and Broadway Streets, immediately adjacent to City Plaza (see Figure 7-9). This location would require shutting this block of 4<sup>th</sup> Street to through traffic (save for deliveries/loading), and would also require BCAG and the City to work with adjacent businesses to ensure that access to an off-street parking lot from Main Street alone would be sufficient.

Figure 7-9 Sketch Concept of 4<sup>th</sup> Street Transit Center



Source map: Google

While relocating the transit center would involve coordinating with several entities including the City, adjacent businesses, and other stakeholders, and would incur moderate capital costs, the benefits likely would outweigh the costs. Relocating the transit center to 4<sup>th</sup> Street would result in the following:

- **Reduce bus-turning movements, thereby increasing safety for all modes downtown.** According to this analysis, during one peak hour (e.g., 7 a.m. to 8 a.m.), current B-Line bus routes operating both to and from the Downtown Transit Center make a total of approximately 100 turns. A 4<sup>th</sup> Street transit center, by contrast, would require 50% fewer turning movements.<sup>3</sup> Reducing the number of turning movements also reduces route running times and minimizes opportunities for collisions with drivers, bicyclists, and pedestrians.
- **Increase visibility of B-Line bus service.** By centralizing B-Line bus operations in downtown Chico, the service could attract more riders. Additionally, the presence of B-

<sup>3</sup> Assuming that Routes 1 and 7 would serve stops on Broadway and Main Streets, buses in the mid-term would make a total of 44 turning movements to/from the transit center during one morning peak hour.

Line buses near the city park would help residents and visitors alike better understand the ingrained nature of the transit system with the city and region.

### **Implementing Vanpool Service**

Vanpool programs are cost effective means for providing commute transportation to employment sites. In Butte County, the most practical implementation of a vanpool service would be as a replacement for Route 31 (Paradise – Oroville) in the short- to mid-term timeframe. BCAG may also consider implementing vanpool service along Route 32 (Biggs – Gridley – Chico) in the mid-term timeframe. In the late mid-term timeframe, BCAG may also consider introducing vanpool services in Magalia and other flag-stop service areas.

Typically, vanpool programs may be managed by local or regional transit agencies, which provide vehicles, fuel, maintenance and full insurance coverage but charge a fare that is divided among the passengers. However, private options are available as well, with national operators such as VRide and Enterprise able to facilitate small (i.e., one vehicle) vanpool operations if appropriate. Additionally, some employers subsidize vanpool fares as an employee benefit or when addressing congestion or parking problems. For both public and private operations, the vanpool must identify a driver, who typically does not pay part of the fare. Ridematching services can also help facilitate and promote vanpooling; these services can be operated by public, private, or nonprofit organizations. Regardless of whether a vanpool program is operated in-house or by a contractor, a small administrative staff is needed to manage vanpool records, service issues, etc.

In practice, vanpools offer a higher degree of flexibility than fixed route services. For example, the precise route and schedule of the service are developed by participants themselves, with the service able to pick up vanpool participants at their residences and drop them off at their workplaces. Additionally, vanpools may be organized in such a way as to originate at and/or serve other Park & Ride lots.

## **LONG-TERM SERVICE PLAN (TO 2040)**

In the long-term service plan, BCAG would continue to build on the foundations of the short- and mid-term service plans. Service changes would largely be dependent on urbanization and development throughout Chico and the region; in particular, service expansion, such as new coverage routes, would be reliant on new pockets of development on Chico and Oroville's outskirts as well as new roadway connections. New transit-priority corridors could also be added within Chico (and potentially Oroville) pending increased development (or redevelopment) within existing built-up areas.

### **Major Transit Initiatives**

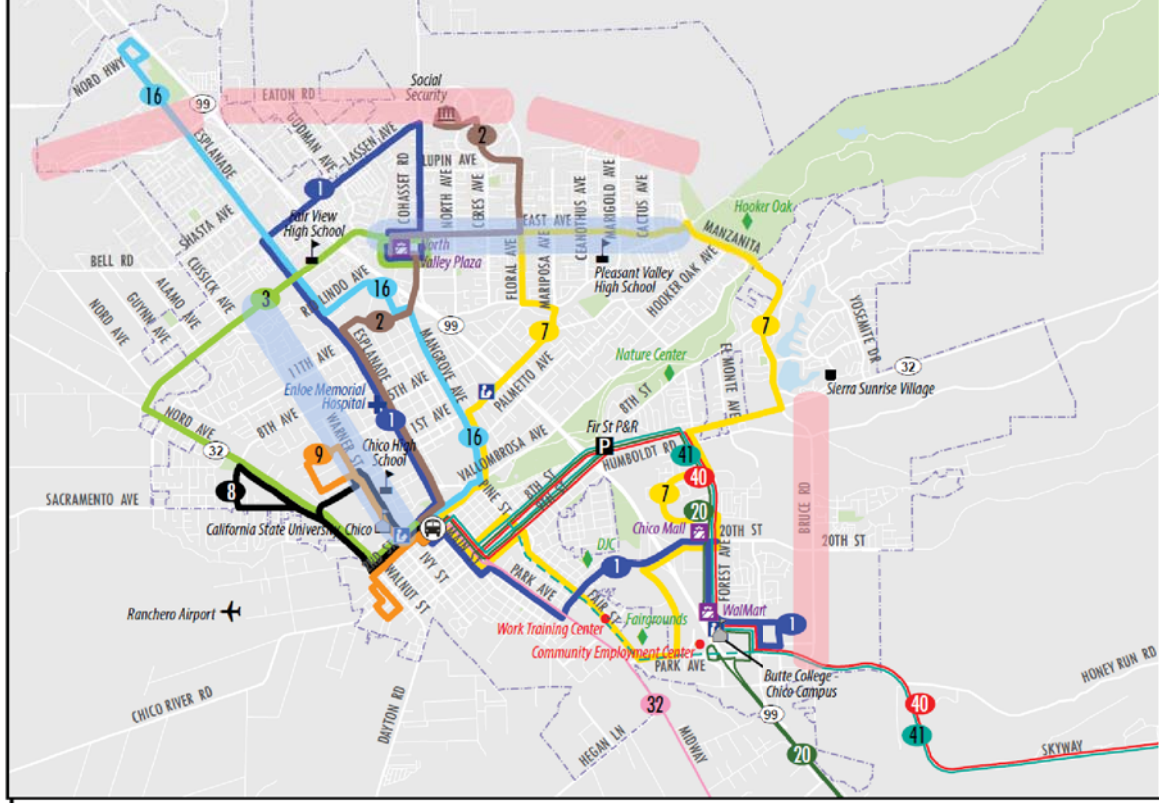
Much of the long-term service plan is speculative as it is highly dependent on future development throughout Butte County. Figure 7-10 presents the major long-term transit initiatives in context. It includes the following elements:

- **Additional coverage routes.** Pending development on the edges of Chico, particularly along the Eaton Corridor and Bruce Road near Chico Mall, BCAG could expand transit services to include additional coverage routes serving these areas. Ideally, any coverage routes would take advantage of new roadways connecting development areas with each other as well as older areas of Chico.

- **Additional transit-priority corridors.** Again, subject to increased infill development and/or redevelopment in existing built-up areas, BCAG could expand the “transit-priority corridor” concept in Chico, designating such arterials such as East Avenue and Warner Street as high-quality transit corridors. (Note: a Warner Street transit corridor is dependent on the completion of the street extension between West 7<sup>th</sup> Avenue and West 11<sup>th</sup> Avenue.)
- **Transit Village development at North Valley Plaza.** In the long-term, BCAG could work with the City of Chico and other major stakeholders to spearhead higher-density, transit-oriented development at North Valley Plaza. (Refer to the “Community Design Standards in Support of Service Design Standards” on page 6-14 for additional guidance.)
- **Potential regional transit consolidation.** In the long-term timeframe, BCAG may wish to further increase coordination, or pursue service consolidation, with other intra- and inter-regional transit providers, including Butte College, Glenn Ride, and Yuba-Sutter Transit. One option could be to form a regional Joint Powers Agreement (JPA) to oversee all regional transit operations.

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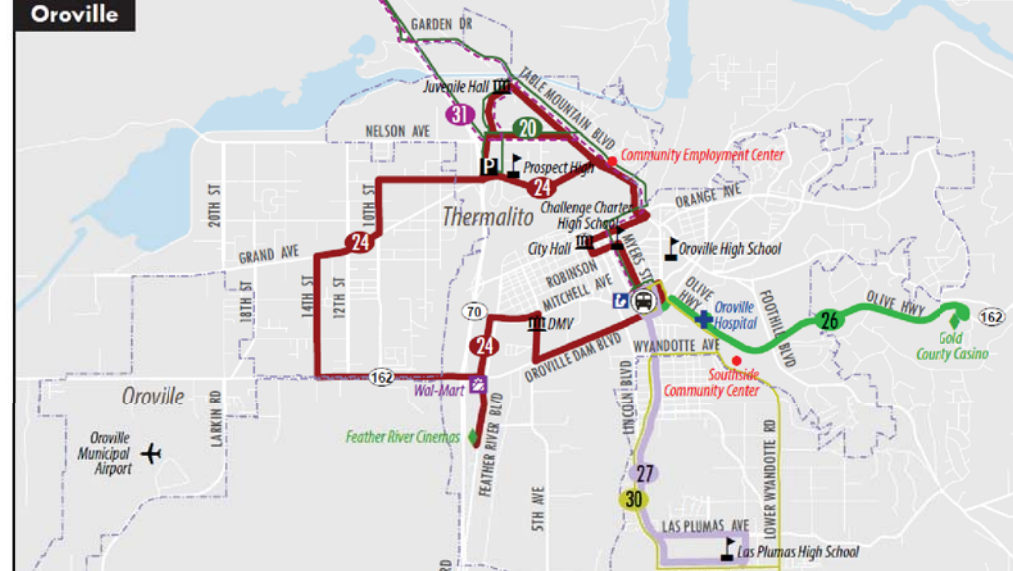
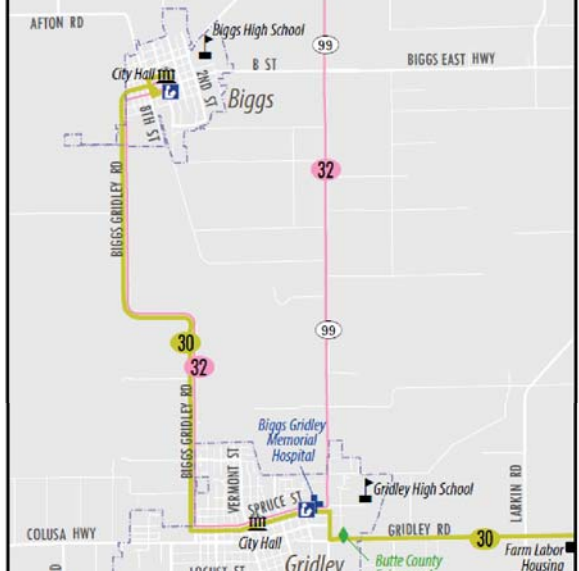
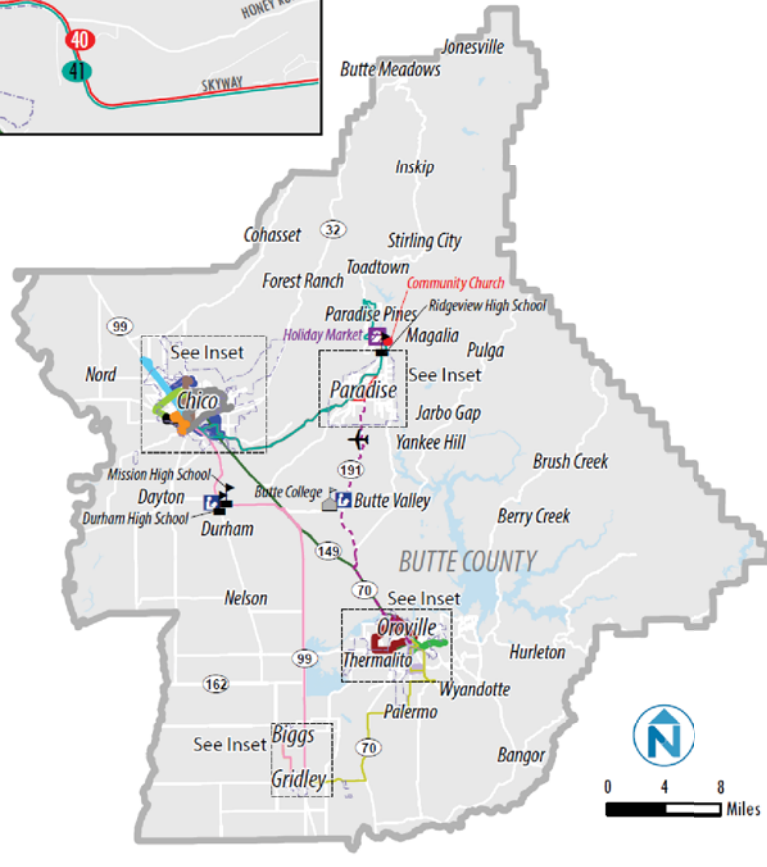
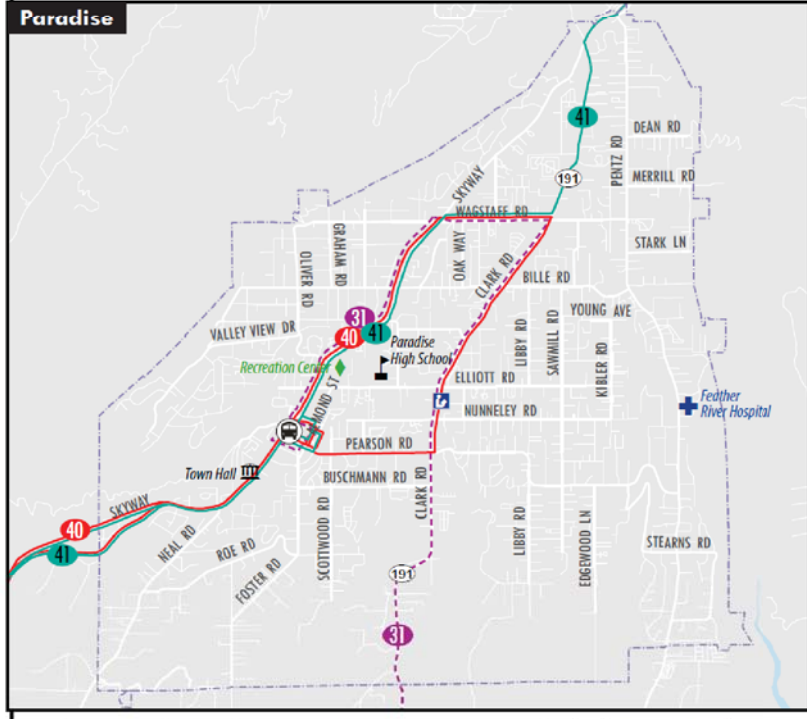


- Social
- College / University
- High School
- ✈ Airport
- 📖 Library
- + Hospital
- Other
- B-Line Bus Routes
- County Boundary
- City Limits
- Potential Future Transit Service Pending Peripheral Development
- Potential Future-Priority Corridors Pending Infill Development or Redevelopment

	16
	20
	24
	26
	27
	30
	31
	32
	40
	41
	41 (peak only)

0 1 2 Miles

Data Sources: BCAG, ESRI





## **CONCLUSION**

Proposed changes to B-Line services in the short-term time horizon (by 2016) are focused on streamlining services and providing greater efficiencies. The recommendations for mid- (2017 through 2027), and long-term (to 2040) time horizons include investments to speed transit and to serve portions of Butte County, primarily in Chico, where transit investments will be appropriate given anticipated development.

Several of B-Line's existing routes perform well and were not modified in the service recommendations. Others can better meet performance standards and address demand. Even with modest changes to the system and essentially status quo operating levels, Butte County's jurisdictions will enjoy some reductions in VMT, along with related reductions in GHG emissions.

Implementation of the transit service plan will require investment in several new capital projects, some of which are optional. These include improvements to the North Valley Plaza transfer center and the implementation of Route 1 "BRT lite" improvements. A recommended capital investment for Caltrans includes improvements to the Fir Street "Park & Bike or Ride" in Chico as well as the development of additional Park & Rides throughout Butte County in Oroville, Paradise, and Gridley. Finally, a new Downtown Chico Transit Center is recommended.

