

Working Paper #7

Operation and Performance of the SolanoExpress System

7.1 Performance by Route

SolanoExpress routes have experienced significant restructuring across the last four years. Effective July 1, 2018, Solano Transportation Authority (STA) and FAST consolidated SolanoExpress Routes 20, 30, 40, and portions of 90 into the Blue Line. Certain peak Route 90 trips were retained as the Green Express “GX” (GX) Line. STA and SolTrans converted SolanoExpress Route 78 into the Yellow Line on July 1, 2018, while Routes 80 and 85 merged to become the Red Line on June 20, 2019.

The restructuring of the SolanoExpress routes resulted from the I-80/I-680/I-780/SR 12 Transit Corridor Study, completed in December 2014. The Implementation Plan arising from the Study called for the consolidation of seven routes into three routes. The Implementation Plan called for a two-step implementation as follows:

- Phase 1 (July 1, 2018):
 - Consolidate Routes 20, 30, 40, and 90 into the Blue Line
 - Replace Route 78 with the Yellow Line
 - Routes 80 and 85 continue as before
- Phase 2 (July 1, 2019):
 - Combine Routes 80 and 85 into the Red Line

During the public engagement process prior to the Phase 1 service change, which included meetings with Route 90 riders, STA modified the service plan to maintain Route 90 as an express route (GX) between Suisun City and El Cerrito Del Norte BART via Fairfield Transportation Center.

Given the Blue Line and Red Line replaced multiple routes, data for the component routes will be discussed under the current route designation. Data from Routes 80 and 85 is presented as the Red Line across the four fiscal years evaluated. Data from Routes 20, 30, and 40 is presented as the Blue Line. Route 90 data is not included in the initial Blue Line analysis but is presented under the Green GX Line. However, since Route 90 was originally envisioned to be incorporated into the Blue Line, a separate section looks at the Blue and Green GX Lines together to analyze the service between Fairfield and BART.

There is reason to be skeptical of the accuracy of the operator-supplied counts and allocated fare box revenues throughout all the analyses in this report. Revenue hours appear to be consistent and accurate. Total costs are a combination of operator-supplied data and imposed cost control limits that make analysis challenging. Therefore, one should consider this analysis to be using the best data available within the constraints of those data sources.

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Blue Line/Routes 20, 30, 40¹

Prior to July 1, 2018, the specific route currently known as the Blue Line was originally three distinct routes. Route 20 traveled from the Vacaville Transportation Center to the Fairfield Transportation Center. Route 30 offered primarily peak service from Fairfield, Vacaville, and Dixon to UC Davis and Sacramento. Route 40 offered primarily peak service between the Vacaville Transportation Center and BART stations in Pleasant Hill and Walnut Creek, via Fairfield and Benicia. The Blue Line incorporates elements of all these three routes plus portions of Route 90, with service extending from Pleasant Hill BART to Sacramento via Benicia, Fairfield, Vacaville, Dixon, and Davis. For this analysis, only Routes 20, 30, and 40 are analyzed as the Blue Route. Further analysis of the Blue Line in combination with the GX/Route 90 is provided later in this document.

Route Performance

In FY 2015/16, each of the three routes that now comprise the Blue Line had roughly equal ridership. Route 40, with its connectivity with BART, saw the most growth over time, increasing nearly 14 percent between FY 2015/16 and FY 2017/18. Routes 20 and 30 saw nearly equal declines (approximately 15 percent) across the same period. When ridership for the three routes is combined, there was an overall five percent decline between FY 2015/16 and FY 2017/18.

Blue Line ridership in FY 2018/19, however, represents a nearly 17 percent increase over the combined ridership for FY 2017/18, and a 10 percent increase over combined ridership in FY 2015/16. It is likely part of the ridership increase on the Blue Line is comprised of riders from the former Route 90 as this was the planned outcome.

The increase in ridership in FY 2018/19 was accompanied by increases in vehicle revenue hours as well as a decline in fare revenues. Revenue hours increased by 62.3 percent that year (as compared to the combined totals for all three routes during FY 2017/18).

In FY 2018/19, the 16.7 percent increase in Blue Line ridership is countered by a 4.2 percent decrease in fare revenue. This is unlikely to be accurate, as a ridership increases are typically accompanied by an increase in fare revenue.

In FY 2018/19, two separate operating cost figures were provided for the Blue Line. Depending on which figure is used, operating cost increased 44.9 percent² or 52.3 percent³ over the prior year. (The higher figure was used for calculations within this section.) However, farebox revenue declined 4.2 percent over the prior year. This decline, combined with the significant increase in operating cost, resulted in a 38 percent drop in the farebox recovery ratio (Blue Line in FY 2018/19 compared to the average of the three routes in FY 2017/18).

¹ Blue Line data sources: FAST FY 15-16 Operating Summary by Route; FAST Cost Allocation Model FY 2015-16 Reconciled (May 2017); FAST FY 16-17 Operating Summary by Route; FAST Cost Allocation Model FY 2016-17 Reconciled (May 2018); FAST FY 17-18 Operating Summary by Route; FAST FY 18-19 Operating Summary by Route; SolanoExpress FY 18-19 Quarterly Monitoring Report – End of Year (August 2019). Additional FY 18-19 route-specific financial data provided by FAST as part of Working Paper #3 edits (January 2020).

² Cost data included in SolanoExpress Quarterly Monitoring Report to the Consortium, year-end report, August 27, 2019.

³ Cost data as provided by FAST in its edits to Working Paper #3 on January 4, 2020 (via Basecamp).

While technically the operating cost per hour declined, this is only because the operating cost increased at a lower rate than the vehicle revenue hours. Given trends observed elsewhere, improvement in this performance indicator should not automatically be taken a positive trend.

Finally, passengers per revenue hour declined significantly (30.5 percent), despite the increase in ridership. This indicator is well below the standard established for this route.

In order to address the efficiency, effectiveness, and farebox recovery ratio issues on the Blue Line, FAST must identify the root cause of the dramatic increases in normalized operating cost. The second goal should be increasing ridership and fare revenue without increasing cost per revenue hour.



Exhibit 7.1.1 Blue Line Ridership, FY 2016 – FY 2019

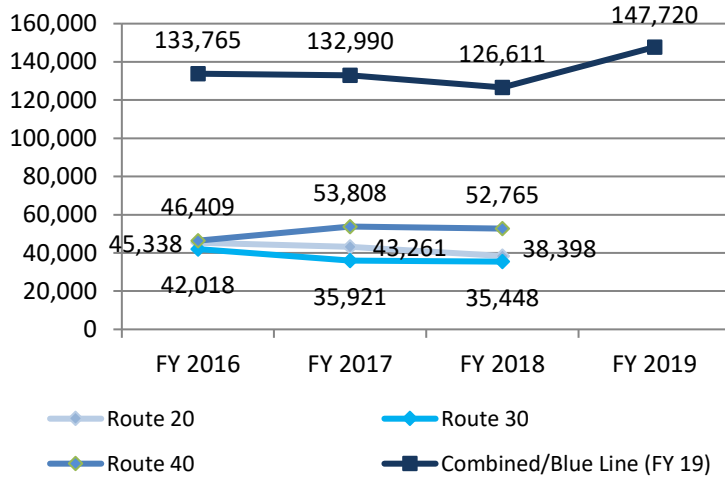


Exhibit 7.1.2 Blue Line Vehicle Revenue Hours, FY 2016 – FY 2019

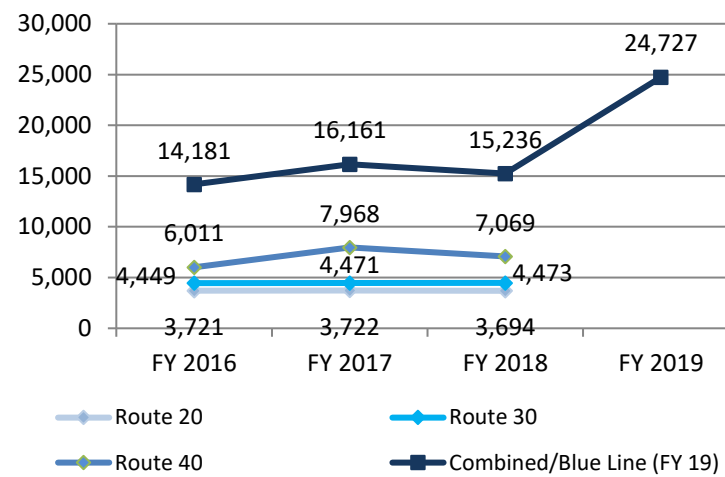


Exhibit 7.1.3 Blue Line Operating Cost, FY 2016 – FY 2019

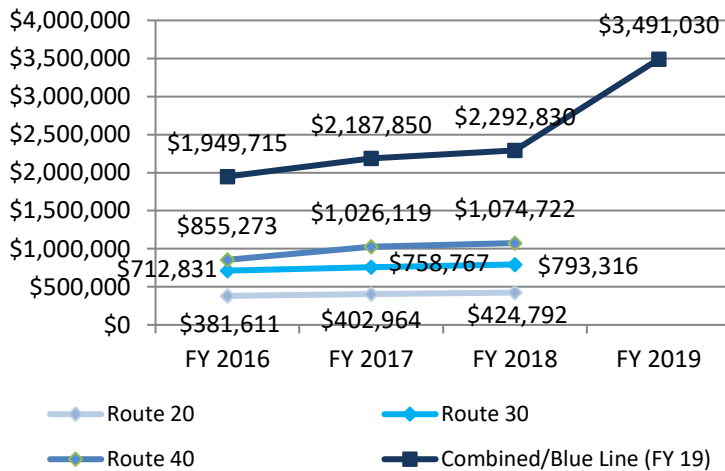


Exhibit 7.1.4 Blue Line Fare Revenue, FY 2016 – FY 2019

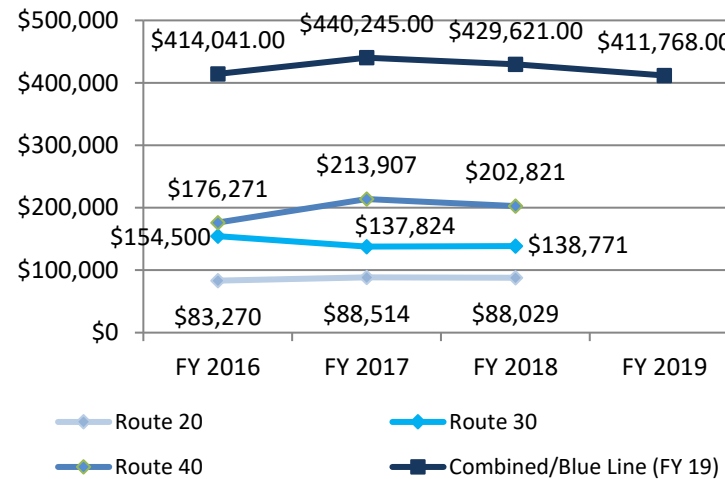


Exhibit 7.1.5 Blue Line Farebox Recovery Ratio, FY 2016 – FY 2019

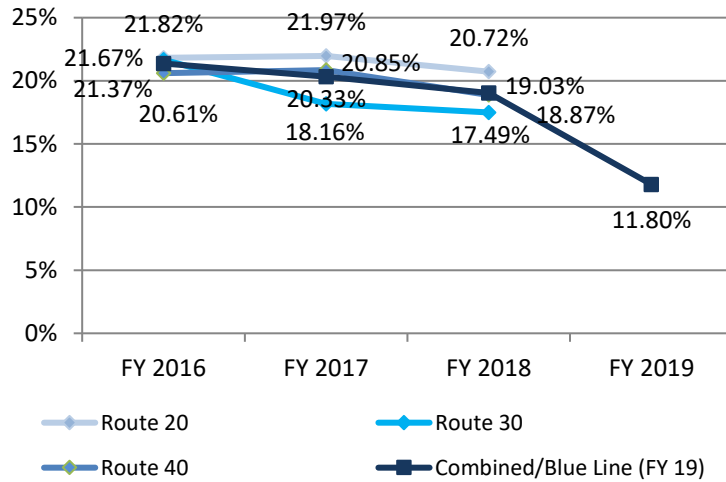


Exhibit 7.1.6 Blue Line Cost per VRH, FY 2016 – FY 2019

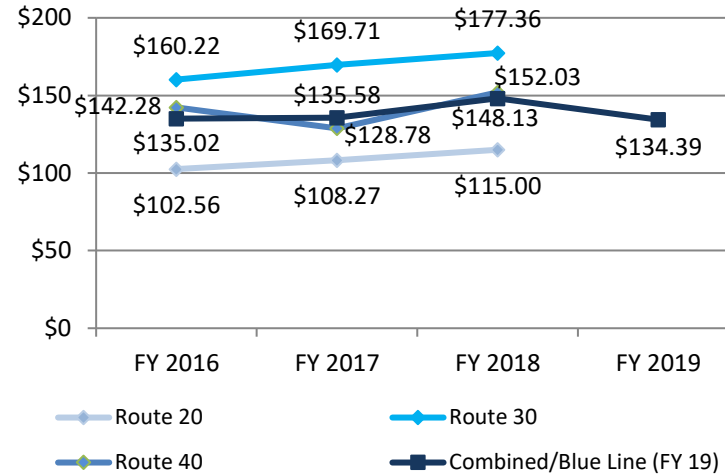
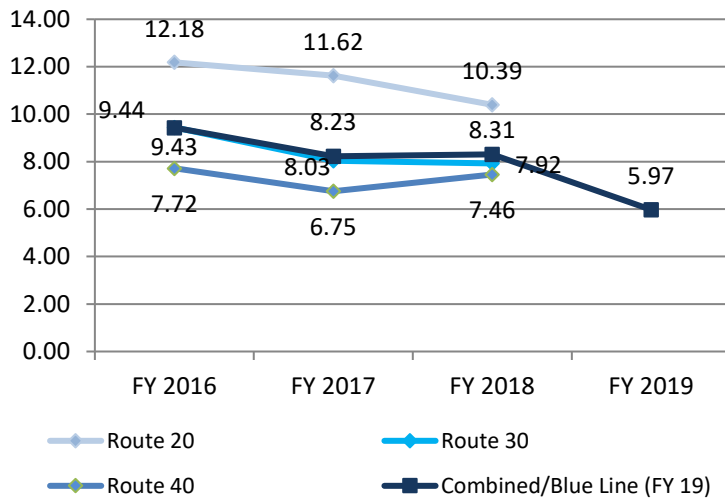


Exhibit 7.1.7 Blue Line Passengers per VRH, FY 2016 – FY 2019



Green “GX” Line/Route 90⁴

Prior to July 1, 2018, the route currently known as the GX Line existed as FAST Route 90.⁵ The GX was not originally intended to be a part of the SolanoExpress consolidation plan. Instead, the original routing concept called for three permanent routes. Route 90 would be incorporated into the consolidated Blue Line. Route 90 riders objected to the consolidation of the route into the Blue Line, and a limited Route 90 service retitled as the Green GX Line was implemented.⁶ Therefore, a separate analysis of the Blue and GX Lines as a combined service is provided in a subsequent section.

The Green Line is an express route, featuring three service points: Suisun City Amtrak station, Fairfield Transportation Center, and the El Cerrito de Norte BART station. The majority of trips operate between Fairfield and El Cerrito, with peak morning and afternoon trips extending to Suisun City. The Green Line operates Monday through Friday only. (The Red Line also serves the El Cerrito Del Norte BART station, providing hourly service between the Fairfield Transportation Center and El Cerrito Del Norte BART.)

Route Performance

Between FY 2015/16 and FY 2017/18, Route 90 ridership remained reasonably consistent. Ridership experienced a net increase of less than one percent, while vehicle revenue hours saw net increases of 4.8 percent and 2.9 percent, respectively. Operating cost increased at a much greater rate, rising 19.4 percent across the three-year period. Fare revenue kept pace with increases in ridership (experiencing a net increase of 3.3 percent), but was outpaced by the increase in operating cost.

In FY 2018/19, at the time Route 90 became the GX Line, significant declines were noted in ridership (21.7 percent), vehicle revenue hours (29.9 percent), cost (28.9 percent), and fares (19.6 percent) compared with the prior year. This is due at least in part to the elimination of weekday service between approximately 9:30 a.m. and 2:00 p.m. as well as the elimination of weekend service.

Despite the reductions in service implemented in FY 2018/19, operating cost per revenue hour increased from year to year, ultimately resulting in an overall 15.5 percent increase between FY 2015/16 and FY 2018/19. This is generally due to increases in operating cost that are greater than increases in revenue hours. In FY 2018/19, operating costs were proportionally higher than revenue hours, despite decreases in both.

Passengers per revenue hour, which had generally been trending down between FY 2015/16 and FY 2017/18, increased in FY 2018/19 due to the reduction in revenue hours. While it met the performance standard for all four years, in FY 2018/19 it increased from 17.22 to 19.24.

Farebox recovery ratio suffered a significant drop in FY 2017/18, decreasing 12 percent. Taken on its own, this is explained by an 8.4 percent increase in operating cost against a 4.6 percent decrease in fare

⁴ Green Line data sources: FAST FY 15-16 Operating Summary by Route; FAST Cost Allocation Model FY 2015-16 Reconciled (May 2017); FAST FY 16-17 Operating Summary by Route; FAST Cost Allocation Model FY 2016-17 Reconciled (May 2018); FAST FY 17-18 Operating Summary by Route; FAST FY 18-19 Operating Summary by Route; SolanoExpress FY 18-19 Quarterly Monitoring Report – End of Year (August 2019). Additional FY 18-19 route-specific financial data provided by FAST as part of Working Paper #3 edits (January 2020).

⁵ Per <https://fasttransit.org/new-solanoexpress-fast-service-and-fare-changes-effective-july-1-2018/>: “The Route 90 name is changed to the Green Express “GX” Line. Direct service continues from the Suisun City Amtrak/Fairfield Transportation Center to El Cerrito del Norte BART.”

⁶ Staff Report, SolanoExpress Implementation Update, as presented to Transit Consortium, December 10, 2017.

revenue. However, this decline is amplified by the dramatic increase in farebox recovery ratio the following year, as it rebounds to just below the FY 2016/17 level. In reality, the significant changes to the service that took place in FY 2018/19 (reduction of service hours due to the elimination of service, resulting in a 28.9 percent decline in operating cost) simply brought fare revenue and operating cost back to the same balanced level they were in FY 2016/17. The service change reversed the pattern of increasing operating cost and decreasing fare revenue; without that change, it is likely farebox recovery ratio would have continued to drop.

Diagnosing issues is more difficult for the GX Line, as FY 2018/19 is significantly different from the prior years and there is less basis for comparison. Changes in most performance indicators are generally positive, though the route's cost per revenue hour remains high compared to other routes. In FY 2018/19 the Green Line had the highest cost per revenue hour in the SolanoExpress system. The City of Fairfield should strive to keep its operating costs to a reasonable cost per revenue hour and strive to increase ridership without increasing revenue hours.



Exhibit 7.1.8 Green Line Ridership, FY 2016 – FY 2019

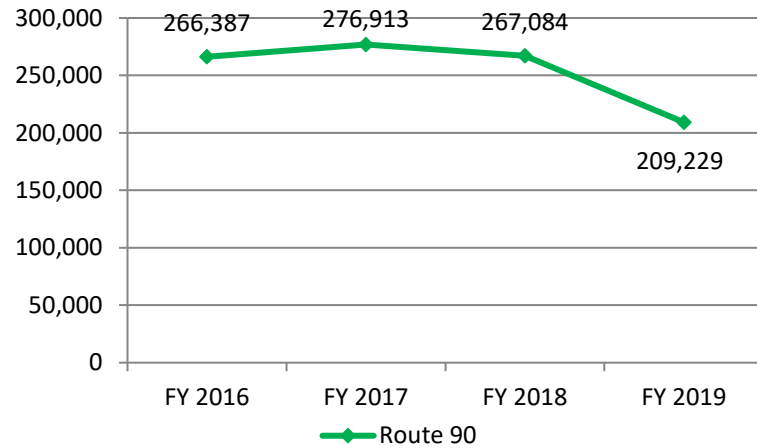


Exhibit 7.1.9 Green Line Vehicle Revenue Hours, FY 2016 – FY 2019

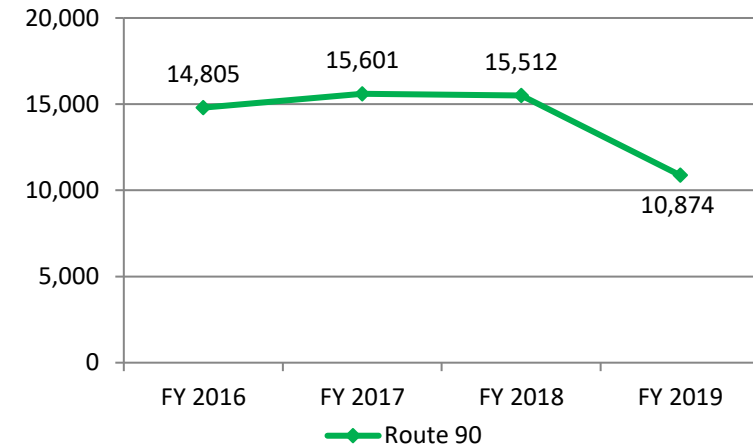


Exhibit 7.1.10 Green Line Operating Cost, FY 2016 – FY 2019

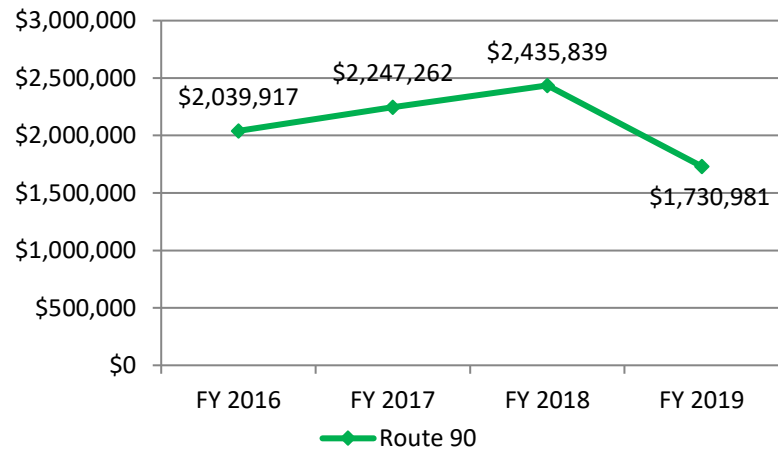


Exhibit 7.1.11 Green Line Fare Revenue, FY 2016 – FY 2019

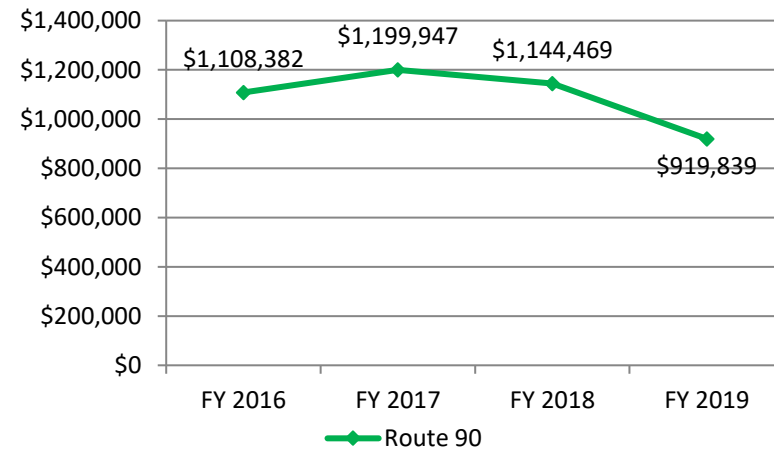


Exhibit 7.1.12 Green Line Farebox Recovery Ratio, FY 2016 – FY 2019

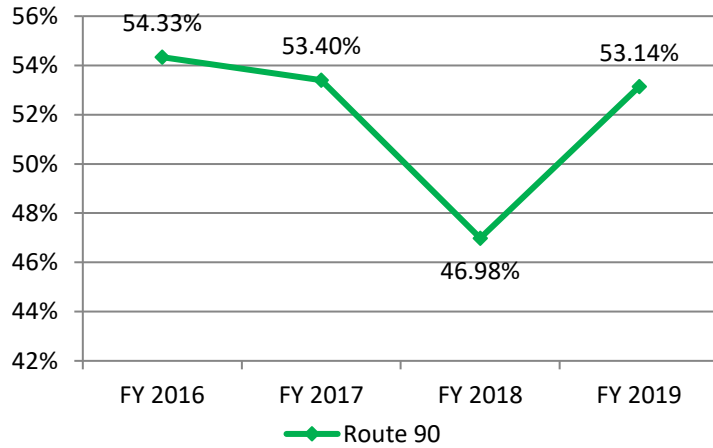


Exhibit 7.1.13 Green Line Cost per VRH, FY 2016 – FY 2019

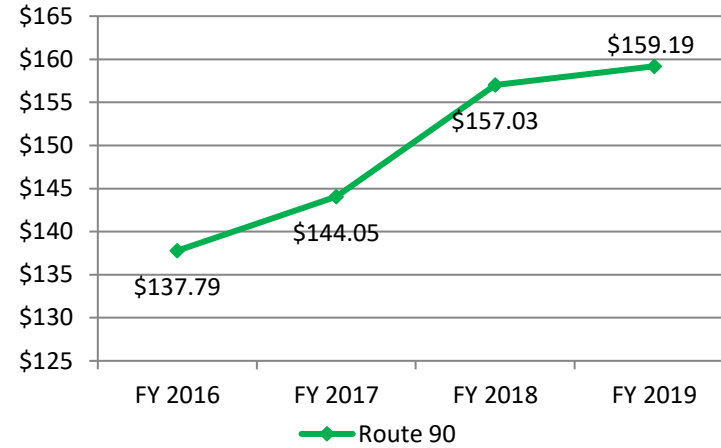
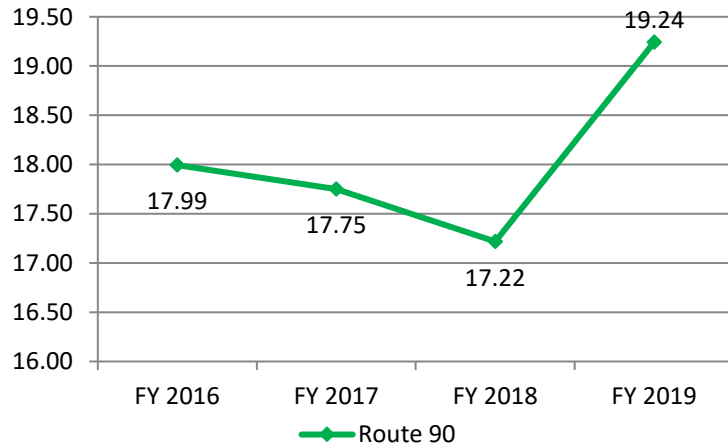


Exhibit 7.1.14 Green Line Passengers per VRH, FY 2016 – FY 2019



Blue and Green GX Line Combined Ridership

While the Green Express “GX” Line was marketed as the new FAST Route 90, the route’s role within the new system is less clear-cut. The original intent of the consolidation would offer connectivity with BART from Fairfield to Walnut Creek via the Blue Line. Connections to BART at El Cerrito Del Norte would be from Vallejo via the Red Line. As such, the Green GX Line claims riders that were originally envisioned to be using the Blue Line following consolidation. Therefore, in addition to analyzing the Green GX Line and Blue Line separately, they are also evaluated together in this section.

As a side note, the past analysis structure is driving the current analysis structure. For example, one could argue that the GX line should be analyzed in combination with both the Red Line and Route 82 as all these routes operate in the same corridor. Unfortunately, this is beyond the scope of this engagement but should be considered as a potential change for future analysis.

Route Performance

During FY 2018/19, Blue Line ridership increased over the combined Routes 20, 30, and 40 in prior years, while GX Line ridership decreased compared to Route 90 in prior years. Between the Blue Line and Green Line, overall ridership in FY 2018/19 decreased by 9.3 percent. While some riders may have transitioned from the GX Line to the Blue Line, the elimination of the midday service on the GX Line likely contributed to the majority of the ridership decrease.

Overall, performance on the two lines is quite different. The overall cost per vehicle revenue hour to operate the GX Line (\$159.19) is higher than the cost per hour to operate the Blue Line (\$141.18). However, the GX Line also carries a higher number of passengers per vehicle revenue hour (19.24) than the Blue Line (5.97). The GX Line, which charges an out-of-county fare, has a significantly higher farebox recovery ratio (53.1 percent) than the Blue Line (11.8 percent).

While the Green Line offers a somewhat faster trip by making fewer stops, its travel time of 40 to 43 minutes between the Fairfield Transportation Center and the El Cerrito Del Norte BART station is not significantly different than the Blue Line’s travel between the Fairfield Transportation Center and the Pleasant Hill BART station (typically 40 minutes during peak hours). Though the Blue Line’s midday trips may take up to 60 minutes, there is no corresponding service on the GX. Trips on the Red Line from the Fairfield Transportation Center to the El Cerrito Del Norte BART station take 60 minutes due to the route traveling through Vallejo.

Unless a rider is traveling to Berkeley, the only clear advantage to traveling to San Francisco out of El Cerrito Del Norte is a six-minute shorter BART commute. There is a higher level of service to San Francisco at Pleasant Hill, as BART’s Yellow Line offers six trips per hour. At El Cerrito Del Norte, the Orange and Red Lines offer just four trips per hour, with only the Red Line traveling to San Francisco.



According to the 2018 Onboard Transit Survey, 34.2 percent of riders cited BART as their means of access to the GX Line, while 51.6 percent cited BART as their means of accessing their destination from the GX Line. This represents nearly 86 percent of riders traveling either to or from BART on their GX Line trip. Such data suggests the majority of GX Line riders could be served through Blue Line service at the Pleasant Hill BART station rather than the El Cerrito Del Norte BART station.

If the ridership from both the GX Line and the Blue Line were consolidated into the existing Blue Line, this would improve performance without increasing operating cost. In fact, operating cost would decrease significantly due to the reduction in vehicle revenue hours resulting from the elimination of the GX Line.

It is very likely some riders would not make the switch to the Blue Line if the Green Line were eliminated, especially those traveling to/from Berkeley. The best option for those riders may be to switch to the Red Line, though it offers a longer trip. Even if only two-thirds of GX Line riders shifted to the Blue Line, resulting in an overall fare decrease, the cost per vehicle revenue hour would decrease while passengers per vehicle revenue hour and farebox recovery ratio would both increase. The potential impact of such a consolidation is shown in Exhibit 7.1.15.

Exhibit 7.1.15 Impact of Green Line Elimination on Blue Line

	Operating Cost	Fare Revenue	Ridership	Vehicle Revenue Hours	Cost per Vehicle Revenue Hour	Passengers per Vehicle Revenue Hour	Farebox Recovery Ratio
Blue Line only (Green Line would be consolidated into Blue Line)	\$3,491,030	\$1,025,537*	287,213 [†]	24,727	\$141.18	11.6	29.38%
Existing Blue and Green Lines (combined performance data)	\$5,333,022	\$1,331,607	356,949	35,601	\$146.68	10.0	24.97%

*Existing Blue Line riders are expected to generate an average fare of \$2.79 per ride. Transitioning Green Line riders are expected to generate an average fare of \$4.40 per ride.

[†]Assumes two-thirds of Green Line riders would transition to the Blue Line if Green Line is eliminated.



Exhibit 7.1.16 Blue/Green Line Ridership, FY 2016 – FY 2019

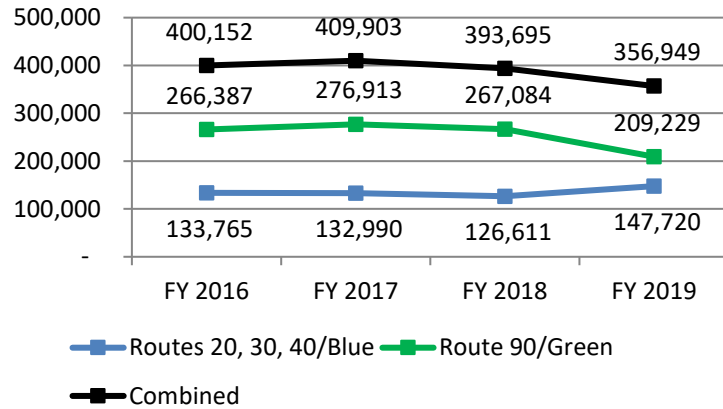


Exhibit 7.1.17 Blue/Green Line Vehicle Revenue Hours, FY 2016 – FY 2019

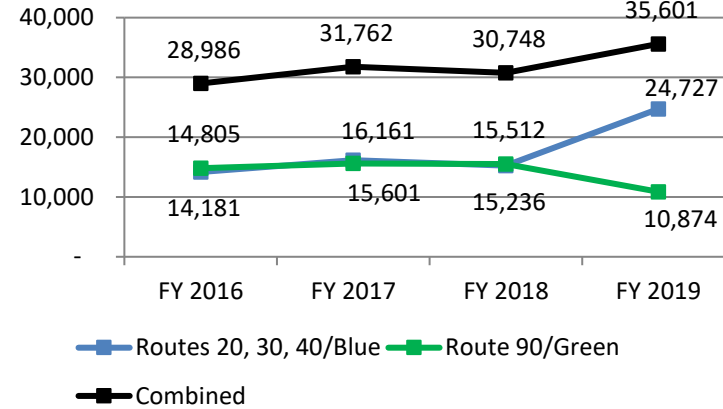


Exhibit 7.1.18 Blue/Green Line Operating Cost, FY 2016 – FY 2019

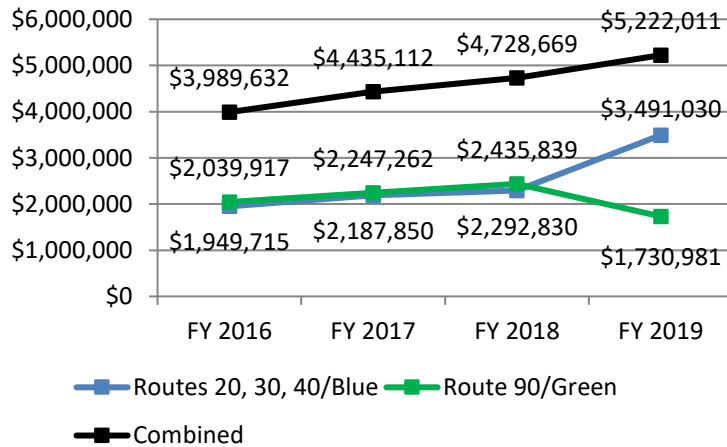


Exhibit 7.1.19 Blue/Green Line Fare Revenue, FY 2016 – FY 2019

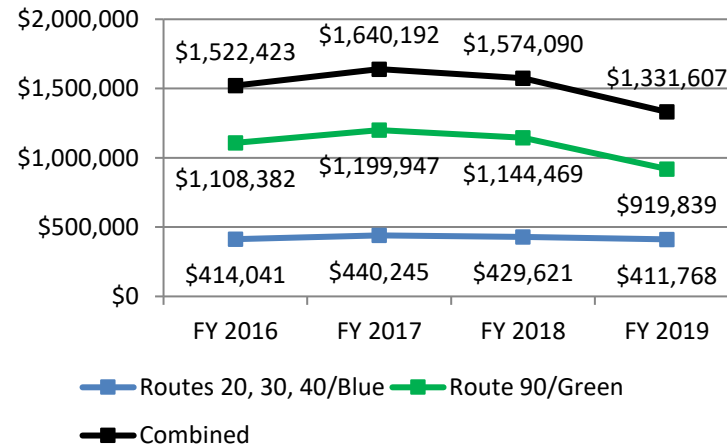


Exhibit 7.1.20 Blue/Green Line Farebox Recovery Ratio, FY 2016 – FY 2019

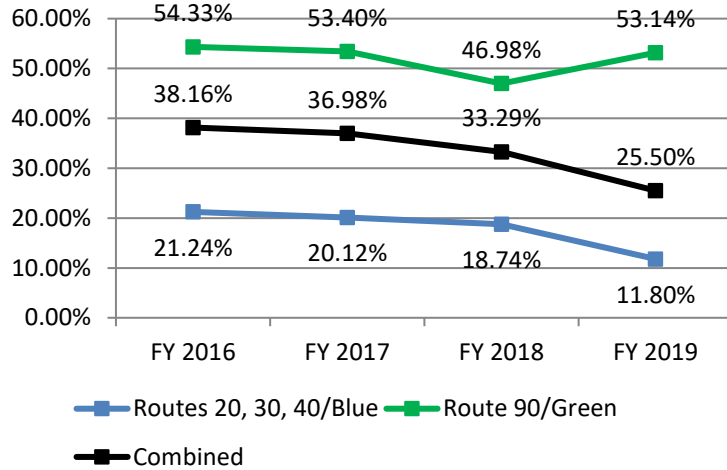


Exhibit 7.1.21 Blue/Green Line Cost per VRH, FY 2016 – FY 2019

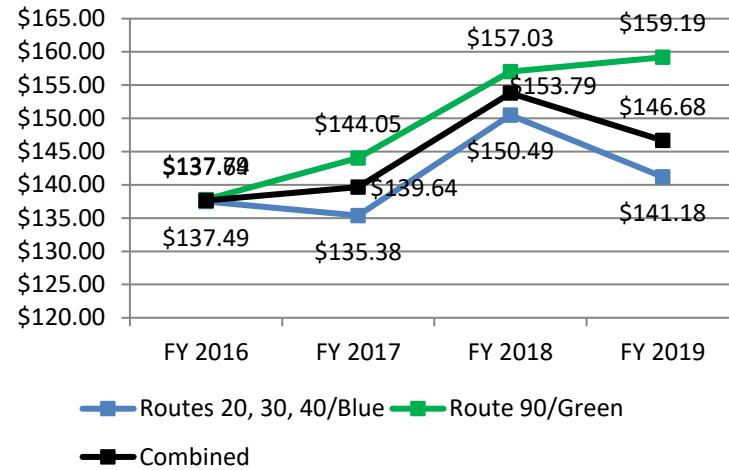
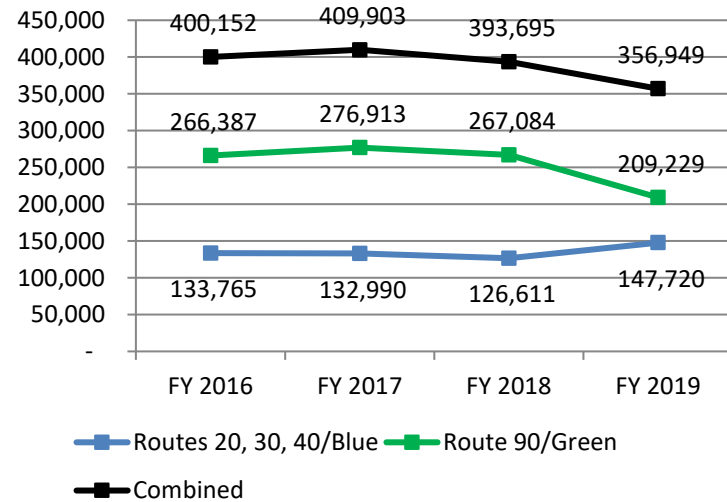


Exhibit 7.1.22 Blue/Green Line Passengers per VRH, FY 2016 – FY 2019



Yellow Line/Route 78⁷

Prior to July 1, 2018, the route currently known as the Yellow Line existed as SolTrans Route 78. The Yellow Line operates between the Vallejo Transit Center and BART stations in Pleasant Hill and Walnut Creek. Additional stops include the Vallejo Ferry Terminal, Curtola Park & Ride, Benicia, and the Sunvalley Shopping Center in Concord.

Transition to the Yellow Line resulted in modifications to streamline the route at its southern end (including the elimination of direct service to Diablo Valley College), but retained most of the features of Route 78. Currently, the service operates between 5:27 a.m. and 10:17 p.m. on weekdays, 6:20 a.m. and 9:53 p.m. on Saturday, and 8:00 a.m. and 9:58 p.m. on Sunday.

Route Performance

Ridership on the Yellow Line has steadily increased across the past four years, resulting in a total increase of 13.5 percent. Vehicle revenue hours also increased, but at a higher rate (24.4 percent overall).

Operating cost increased steadily across the four-year period, for a total increase of 34 percent. Fare revenue, however, increased steadily through FY 2017/18 before declining 8.4 percent in FY 2018/19. The fare adjustment on July 1, 2018 did not significantly affect fares on the Yellow Line (though within-county trips increased from \$1.75 to \$2.75), so the cause of the decrease in fare revenue despite a ridership increase of 3.6 percent during FY 2018/19 is unclear. One potential cause might be a significant increase of in-county riders and decline in out-of-county riders, although it is unlikely there has been a large enough shift to be the sole cause of this. Another potential cause could be an error in how revenues are allocated between routes. It is also possible the error lies with the fare revenue reported in FY 2017/18, which shows a 14.7 percent increase over the prior year. An over-allocation of fare revenue during that year could also cause an apparent decrease in fare revenue in FY 2018/19.

The decrease in fare revenue (8.4 percent) and increase in operating cost (6.8 percent) in FY 2018/19 resulted in a notable decrease in the farebox recovery ratio, dropping it to below 20 percent for the first time in four years.

Passengers per revenue hour fluctuated significantly between FY 2015/16 and FY 2017/18 but stabilized in FY 2018/19 (despite remaining below the standard all four years).

Cost per revenue hour increased dramatically between FY 2016/17 and FY 2017/18 and continued this increase in FY 2018/19. This indicates the operating cost is increasing at a much greater rate than vehicle revenue hours, which exhibits a much lower rate of change. The cost per revenue hour exceeds the reimbursable rate allowed by the intercity funding agreement.

The cause of the apparent imbalance between ridership and fare revenue in FY 2018/19 must be addressed, as there is no logical reason a 3.6 percent increase in ridership should result in an 8.4 percent decrease in fare revenue. Both FY 2017/18 and FY 2018/19 should be reviewed for fare revenue allocation or other errors. The second goal should be increasing ridership at a higher rate than increasing vehicle

⁷ Yellow Line data sources: SolTrans – Cost Allocation Model – FY 15-16 Actuals through 6-30-16_Final; SolTrans – Cost Allocation Model – FY 16-17 Actuals through 6-30-17_Final; SolTrans – Cost Allocation Model – FY 17-18 Actuals through 6-30-18_Final; SolTrans – Cost Allocation Model – FY 18-19 Actuals through 6-30-19_Final; SolanoExpress FY 18-19 Quarterly Monitoring Report – End of Year (August 2019).

service hours, so as to enable the Yellow Line to meet the passengers per revenue hour performance metric. This should also increase the fare revenue, contributing to a higher farebox recovery ratio.



Exhibit 7.1.23 Yellow Line Ridership, FY 2016 – FY 2019

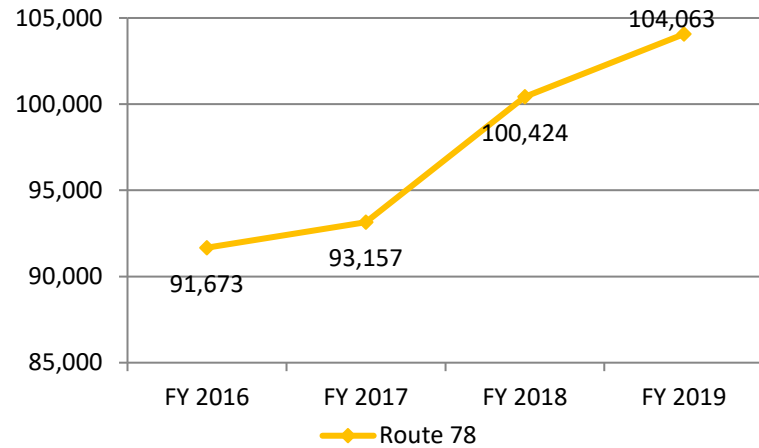


Exhibit 7.1.24 Yellow Line Vehicle Revenue Hours, FY 2016 – FY 2019

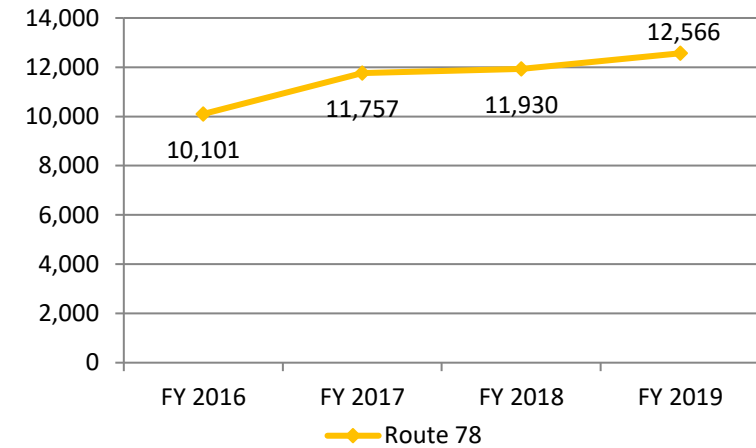


Exhibit 7.1.25 Yellow Line Operating Cost, FY 2016 – FY 2019

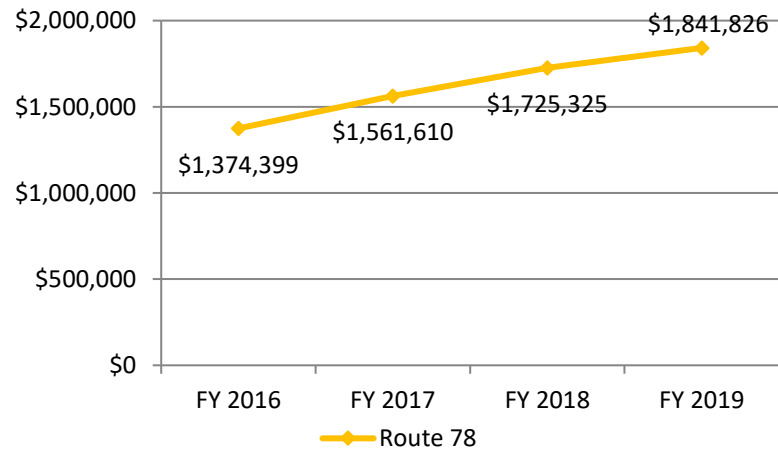


Exhibit 7.1.26 Yellow Line Fare Revenue, FY 2016 – FY 2019

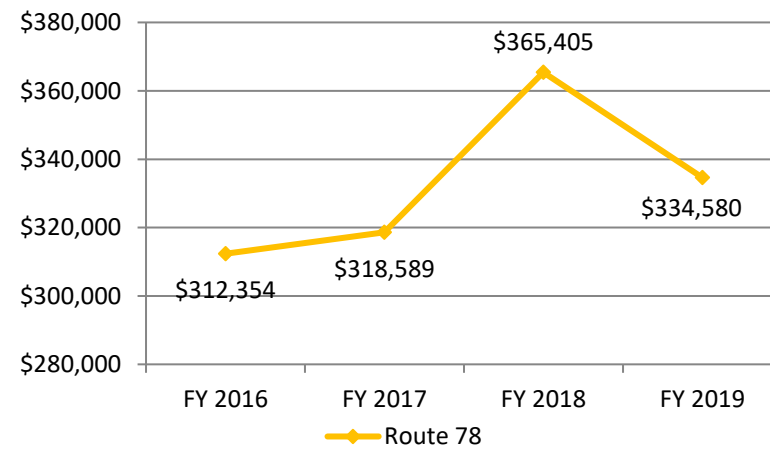


Exhibit 7.1.27 Yellow Line Farebox Recovery Ratio, FY 2016 – FY 2019

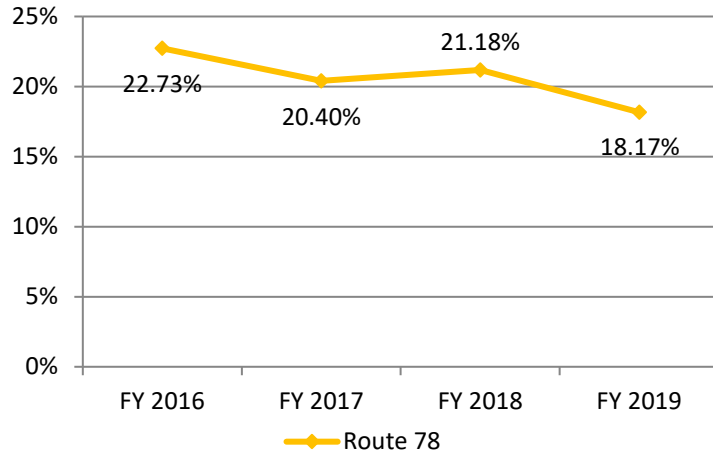


Exhibit 7.1.28 Yellow Line Cost per VRH, FY 2016 – FY 2019

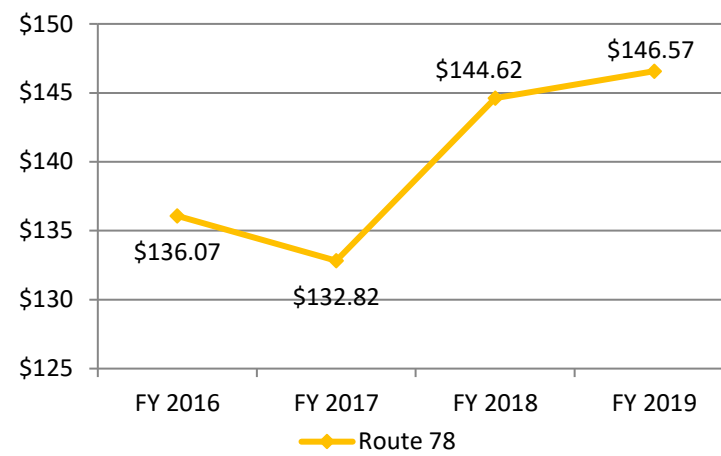
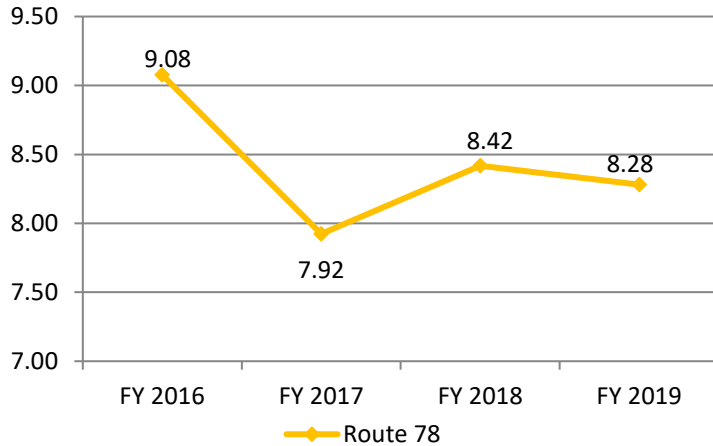


Exhibit 7.1.29 Yellow Line Passengers per VRH, FY 2016 – FY 2019



Red Line/Routes 80, 82, 85⁸

Prior to July 1, 2019, the route currently known as the Red Line was separated into two primary routes. Route 80 traveled south from Vallejo, between the Vallejo Transit Center and El Cerrito Del Norte BART station in Contra Costa County, with service to the Vallejo Ferry Terminal, Sereno Transit Center, and Curtola Park & Ride. Route 82, essentially a permutation of Route 80, only operated two trips per day and extended south to the San Francisco Transbay Terminal. Route 85 traveled north, from the Vallejo Transit Center to Solano Town Center in Fairfield, with stops at the Vallejo Ferry Terminal, Six Flags Discovery Kingdom, and Solano College.

The Red Line combined elements of Routes 80 and 85, with service extending from the El Cerrito del Norte BART station to Fairfield. Service to San Francisco was not incorporated into the Red Line, but Route 82 continued to operate one trip per day. (As such, Route 82 is not included within this analysis.) Essentially, the Red Line combined service north of Vallejo and service south of Vallejo into a single route, but retaining a higher frequency to El Cerrito del North BART station from Vallejo.

Route Performance

Route 80 has traditionally exhibited a higher level of service – along with a higher ridership – than Route 85. Proportionally, Route 85 had greater ridership growth during the past four years; it experienced a 27 percent net ridership increase, compared to 12.5 percent with Route 80.

Operating cost increased steadily across the past four years, though Route 80 saw a slight decrease between FY 2017/18 and FY 2018/19. This resulted in a net increase of 24.8 percent for Route 80 and 27.4 percent for Route 85. This is not consistent with such a modest change in revenue hours. Consequently, cost per revenue hour also increased significantly. Route 80 had a significantly higher cost per hour than Route 85. The only route with a higher cost per revenue hour in FY 2018/19 was the Green Line. The cause of the high cost per revenue hour is unknown. Such differences in cost per revenue hour across similar service types are unlikely.

The overall increase in fare revenue (13.8 percent) for Route 80 was consistent with the increase in ridership (12.5 percent). However, in FY 2017/18, ridership increased 3.6 percent yet fare revenue decreased 2.7 percent.

Overall, Route 85 saw a 10.6 percent decrease in fare revenue despite a 27.1 percent increase in ridership. This occurred primarily in FY 2018/19, where ridership increased 23.4 percent while fare revenue decreased by 9.8 percent. In FY 2018/19, the Route 85 fare went from \$5.00 to \$2.50 as part of the unified fare structure which included an intracounty fare of \$2.50. In addition, college passes began offering unlimited rides. Both of these are likely to be significant contributing factors to the fare revenue decline.

Finally, passengers per revenue hour increased during the four-year period, indicative of ridership increasing at a greater rate than revenue hours. Route 80 was above the standard during FY 2017/18 and FY 2018/19, while Route 85 did not meet the standard during any year.

⁸ Red Line data sources: SolTrans – Cost Allocation Model – FY 15-16 Actuals through 6-30-16_Final; SolTrans – Cost Allocation Model – FY 16-17 Actuals through 6-30-17_Final; SolTrans – Cost Allocation Model – FY 17-18 Actuals through 6-30-18_Final; SolTrans – Cost Allocation Model – FY 18-19 Actuals through 6-30-19_Final; SolanoExpress FY 18-19 Quarterly Monitoring Report – End of Year (August 2019).

In order to address the efficiency, effectiveness, and farebox recovery ratio issues on the Red Line, SolTrans' goal should be increasing ridership and fare revenue at a higher rate than increasing operating costs.



Exhibit 7.1.30 Red Line Ridership, FY 2016 – FY 2019

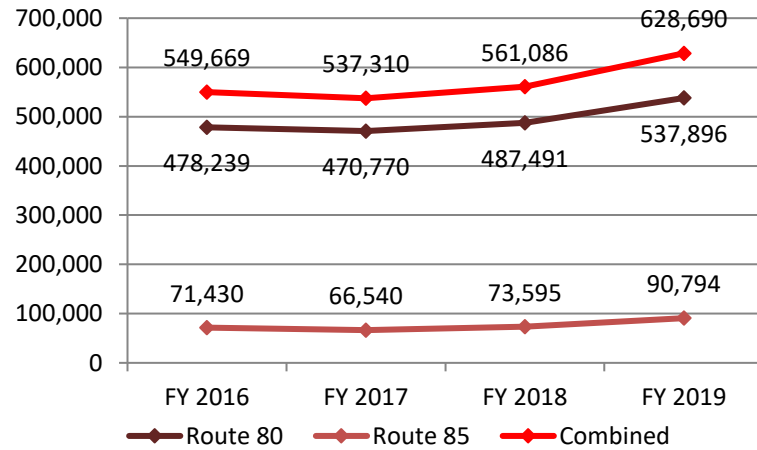


Exhibit 7.1.31 Red Line Vehicle Revenue Hours, FY 2016 – FY 2019

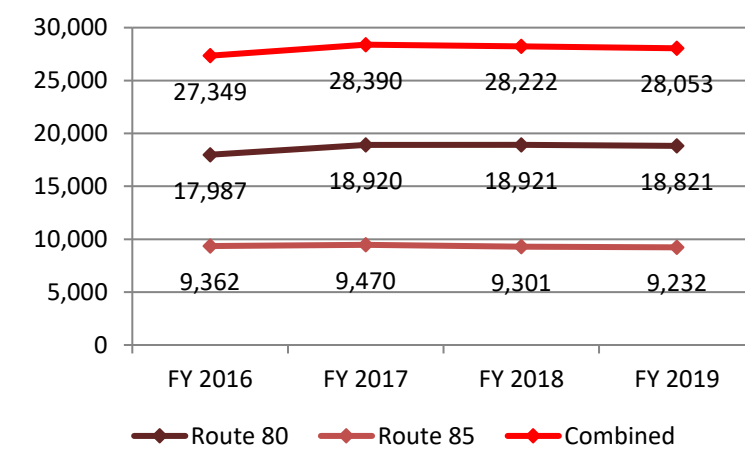


Exhibit 7.1.32 Red Line Operating Cost, FY 2016 – FY 2019

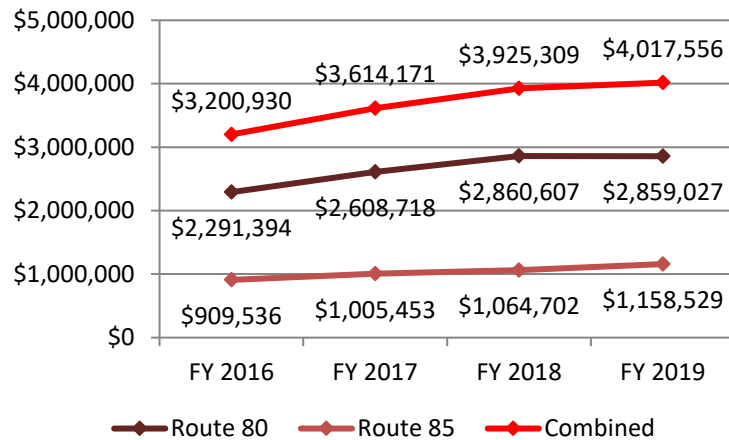


Exhibit 7.1.33 Red Line Fare Revenue, FY 2016 – FY 2019

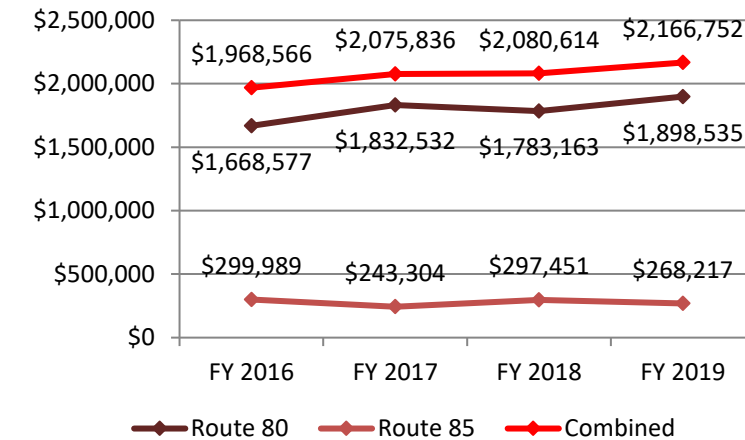


Exhibit 7.1.34 Red Line Farebox Recovery Ratio, FY 2016 – FY 2019

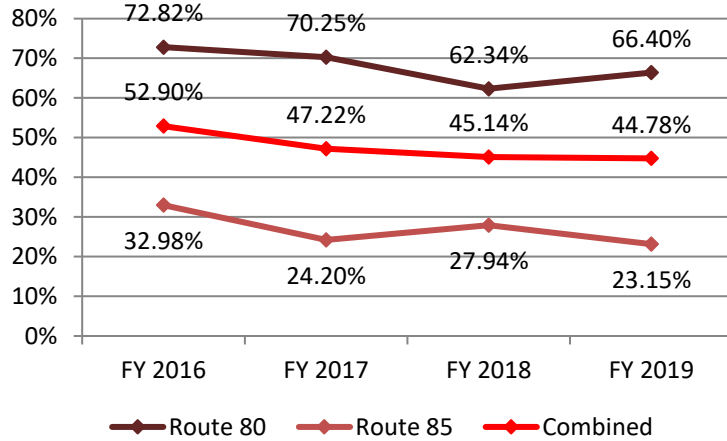


Exhibit 7.1.35 Red Line Cost per VRH, FY 2016 – FY 2019

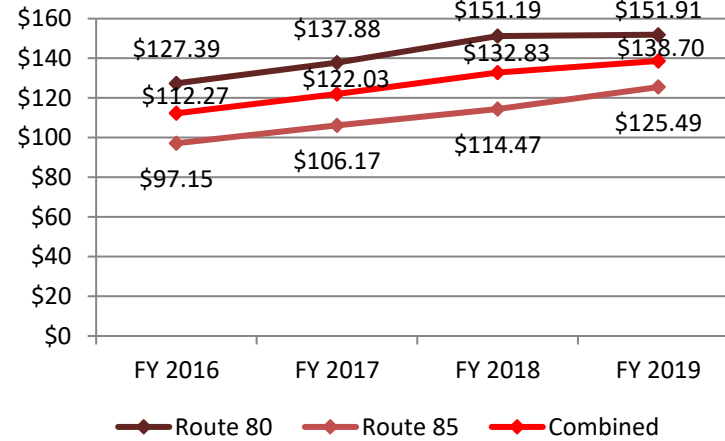
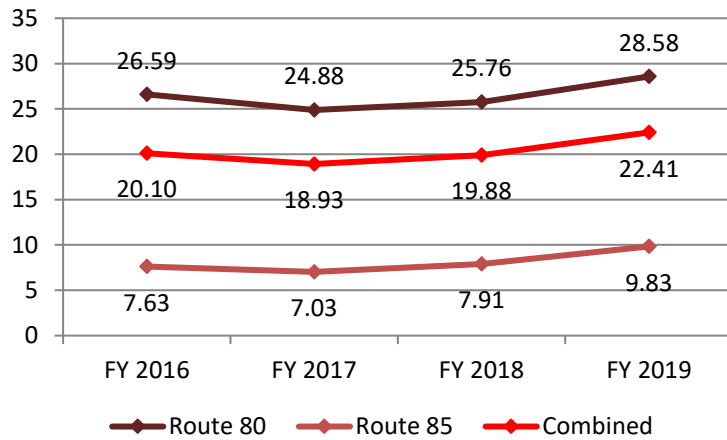


Exhibit 7.1.36 Red Line Passengers per VRH, FY 2016 – FY 2019



7.2 System Performance

The “system performance” section combines all SolanoExpress route configurations in operation each year to evaluate the service at-large across the past four years.

Ridership experienced a net increase of 4.8 percent between FY 2015/16 and FY 2018/19, due primarily to small increases from year to year. This rate of increase exceeded the estimated population growth of Solano County for FY 2017/18 and FY 2018/19.⁹ Ridership growth was observed in both years wherein the consolidated routes were implemented, with full implementation (FY 2018/19) resulting in the highest ridership increase of any of the four years. While this is a step in the right direction, the STA and their partner agencies should strive to increase ridership so as to improve productivity metrics as well as the farebox recovery ratio.

The total operating cost of the system increased by 27.8 percent, or nearly \$2.4 million, during the four-year period. The greatest change occurred in FY 2016/17 (which saw an increase of 12.4 percent). In subsequent years, route consolidation activities resulted in a slowing rate of increase. By FY 2018/19, the annual increase in operating cost had dropped to 5.0 percent, with growth restrictions imposed by STA. This is a positive trend, but only time will tell whether FAST and SolTrans can effectively control their operating costs.

Increasing fare revenues is easier said than done. System-wide, fare revenues did not respond favorably to the route consolidation, though we are skeptical of the accuracy in the application of fare revenues to the service. The only year with measurable growth in fare revenues was FY 2016/17; the following exhibited little change (although it was positive). In FY 2018/19, fare revenues declined, for a four-year net change of just 1.1 percent. The fare change implemented in July 2018 reduced some fares. While this brought FAST and SolTrans fares in line with one another (and made them consistent throughout the system), it likely also contributed to the decline in fare revenue in FY 2018/19.

System-wide, the farebox recovery ratio decreased by 20.9 percent across the four-year period, dropping from 44.4 percent in FY 2015/16 to 35.1 percent in FY 2018/19. While this remains high, the route-specific analysis showed some routes dropping below 20 percent. This is due to rising operating costs combined with decreasing fare revenues.

Cost per revenue hour experienced a net 11 percent increase between FY 2015/16 and FY 2018/19, considering a slight improvement in FY 2018/19. In the first three years, the calculated cost per revenue hour rose from \$128.73 to \$146.21, or 13.6 percent. The 2.3 percent decrease in FY 2018/19 was due to a cost per hour cap imposed on the operators by STA. Passengers per revenue hour saw a net decrease of 9.0 percent.

Finally, system-wide fare revenue per revenue hour decreased 12.2 percent across the last four years. The bulk of this change took place in FY 2018/19, heavily impacted by a decrease in fare revenue and increase in revenue hours.

⁹ State of California Department of Finance, Table E-4, Population Estimates for Cities, Counties, and the State 2011-2020 with 2010 Census Benchmark, <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-4/2010-20/>.

Exhibit 7.2.1 System-wide Performance

Performance Metrics	FY 2016	FY 2017	FY 2018	FY 2019	Overall Change
Ridership	1,044,028	1,042,031	1,059,671	1,094,386	+50,358
<i>Annual change (percent)</i>		-0.2%	1.7%	3.3%	4.8%
Vehicle Revenue Hours	66,676	72,190	71,456	76,769	+10,093
<i>Annual change (percent)</i>		8.3%	-1.0%	7.4%	15.1%
Operating Cost	\$8,583,148	\$9,650,537	\$10,447,713	\$10,965,219	+\$2,382,071
<i>Annual change (percent)</i>		12.4%	8.3%	5.0%	27.8%
Fare Revenue	\$3,812,583	\$4,042,302	\$4,043,081	\$3,853,919	+\$41,336
<i>Annual change (percent)</i>		6.0%	0.0%	-4.7%	1.1%
Performance Indicators					
Farebox Recovery Ratio	44.4%	41.9%	38.7%	35.1%	-9.27%
<i>Annual change (percent)</i>		-5.7%	-7.6%	-9.2%	-20.9%
Cost per Revenue Hour	\$128.73	\$133.68	\$146.21	\$142.83	\$14.10
<i>Annual change (percent)</i>		3.8%	9.4%	-2.3%	11.0%
Passengers per Revenue Hour	15.66	14.43	14.83	14.26	-1.40
<i>Annual change (percent)</i>		-7.8%	2.7%	-3.9%	-9.0%
Fare Revenue/Revenue Hour	\$57.18	\$56.00	\$56.58	\$50.20	-\$6.98
<i>Annual change (percent)</i>		-2.1%	1.0%	-11.3%	-12.2%



7.3 Key Corridor Segments

According to the 2017 Solano County Comprehensive Transportation Plan, key transit corridors specific to intercity travel in Solano County are Interstates 80, 680, and 780. The SolanoExpress service travels along these roadways both within Solano County and into neighboring counties.

Exhibit 7.3.1 Solano County Major Transit Corridors



To determine the percentage of trips currently being captured by SolanoExpress along each of these corridors, Moore & Associates utilized traffic volumes provided by Caltrans¹⁰ for calendar year 2017. SolanoExpress data for FY 2017/18 was utilized in the analysis, as it not only covered the same period but provided ridership data broken down into greater detail than FY 2018/19 (as it was prior to the implementation of route consolidation). Therefore, Exhibit 7.3.2 provides a general idea of the number of trips being captured by SolanoExpress.

¹⁰ <https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017>.



In calculating total trips, we assessed the Annual Average Daily Trips (AADT) in both directions for each route segment, then averaged the number of trips across the route segments for each individual highway. Given many travelers would likely be passing through multiple route segments, we did not add the AADTs together. We then multiplied the average AADT by 365 to get the estimated annual traffic volume along a given route.

In calculating the SolanoExpress relative share, we subtracted total annual truck volume from the total estimated traffic volume to determine the estimated number of vehicle trips for each corridor. We then divided the route ridership by the corridor total to determine the percentage.

When reviewing these figures, it is important to keep in mind that this is an imperfect analysis. In other words, the traffic and truck volume data are for a slightly different period (calendar year 2017) than the ridership data for SolanoExpress (fiscal year 2018). Bus trips are included in the total annual truck volume, as buses are considered Class 4 vehicles (as defined by the Federal Highway Administration) and vehicles in Classes 4-13 are counted as part of the truck volume.

In Exhibit 7.3.2, Route 80, during its travel on I-80, had the greatest share of trips (0.416 percent), followed by Route 78 on I-780 (0.264 percent) and Route 90 on I-80 (0.245 percent). Route 20 had the lowest share of trips on I-80 (0.027 percent), which is not surprising since Route 20 also travels along the shortest portion of I-80.

Historically, transit's mode-share for intercity travel has ranged from one to five percent (including long distance bus operators such as Greyhound). For this analysis we will use a two percent mode-share as a reference for purposes of analysis. The final column shows what the ridership on each route would need to be to meet that reference. This simply reveals that the SolanoExpress system, given the right set of responses, has an opportunity to capture more travel through the corridors served by the system. Analysis beyond the scope of this working paper is needed to set appropriate targets and responses.



Exhibit 7.3.2 Percentage of Trips Captured by SolanoExpress by Route

Highway Corridor	Total Annual Traffic Volume (2017) ^{1,4}	Total Annual Truck Volume (2017) ⁴	Total Passenger Traffic Volume (2017) ²	Total Annual SolanoExpress Ridership (FY 2018)	Percentage SolanoExpress Ridership ³	2% Mode-Share Goal
	(A)	(B)	(A - B)	(C)	[C]/(A-B)]	
I-80	148,296,182	7,963,692	140,332,490	38,398	0.027%	2,806,650
I-80	107,144,957	5,678,508	101,466,449	35,448	0.035%	2,029,329
I-80	148,296,182	7,963,692	140,332,490	52,765	0.038%	2,806,650
I-680	114,766,429	4,539,286	110,227,143	52,765	0.048%	2,204,543
I-80	113,856,681	4,786,082	109,070,599	267,084	0.245%	2,181,412
I-680	134,454,594	6,061,677	128,392,917	100,424	0.078%	2,567,858
I-780	39,724,167	1,633,375	38,090,792	100,424	0.264%	761,816
I-80	121,200,857	4,122,797	117,078,060	487,491	0.416%	2,341,561
I-80	106,683,885	7,206,651	99,477,233	73,595	0.074%	1,989,545

Notes:

1. It is assumed buses are included within the total annual traffic volume and not counted as part of the total annual truck volume.
2. "Total passenger traffic volume" subtracts the measured truck volume from the total annual traffic volume.
3. The percentage of SolanoExpress Ridership is shown as the number of riders carried by SolanoExpress as a percentage of the total traffic volume.
4. The total annual traffic volume and total annual truck volume represent the total portion of the corridor served by all routes.

When the data is segregated by corridor, I-80 had the greatest percentage of transit ridership share (0.903 percent). It also represents the longest corridor. The final column shows what the transit mode-share for each corridor would need to be to meet the two percent threshold.

Exhibit 7.3.3 Percentage of Trips Captured by SolanoExpress by Corridor

SolanoExpress Routes	Total Annual Traffic Volume (2017) ^{1,4}	Total Annual Truck Volume (2017) ⁴	Total Passenger Traffic Volume (2017) ²	Total Annual SolanoExpress Ridership (FY 2018)	Percentage SolanoExpress Ridership ³	2% Mode-Share Goal
	(A)	(B)	(A - B)	(C)	[C]/(A-B)]	
20, 30, 40, 80, 85, 90	110,939,427	5,165,897	105,773,530	954,781	0.903%	2,115,471
40, 78	114,766,429	4,539,286	110,227,143	153,189	0.139%	2,204,543
78	39,724,167	1,633,375	38,090,792	100,424	0.264%	761,816

Notes:

1. It is assumed buses are included within the total annual traffic volume and not counted as part of the total annual truck volume.
2. "Total passenger traffic volume" subtracts the measured truck volume from the total annual traffic volume.
3. The percentage of SolanoExpress Ridership is shown as the number of riders carried by SolanoExpress as a percentage of the total traffic volume.
4. The total annual traffic volume and total annual truck volume represent the portion of the corridor served by each route.

Absent additional passenger data segregating transit ridership by route segment within each route, no further corridor analysis can be offered. However, it is apparent there is significant opportunity for SolanoExpress to capture a greater share of trips made within each of the corridors it serves. Potential mode-share for SolanoExpress will be limited by the capacity available on each route within each corridor, and will depend on the amount of seat turnover on each route.



7.4 Potential Opportunities for Bus Rapid Transit (BRT)

Per the FTA, “Bus Rapid Transit (BRT) is a high-quality bus-based transit system that delivers fast and efficient service that may include dedicated lanes, busways, traffic signal priority, off-board fare collection, elevated platforms and enhanced stations. Because BRT contains features similar to a light rail or subway system, it is often considered more reliable, convenient and faster than regular bus services.”¹¹ BRT can be especially appealing from the operator’s perspective as it provides many of the benefits and features of light rail service with limited up-front and ongoing infrastructure costs. BRT is often attractive to commuters because it is a cost-effective alternative to traditional bus and rail service.

Before determining opportunities for BRT, it is important to define what BRT is. There are five key elements that traditionally constitute formal BRT service:

1. Physically separated bus lanes to allow buses to avoid congestion (e.g., bus-only lanes);
2. Stations and bus lanes aligned in the center of the street (to avoid delays arising from turning and stopped vehicles);
3. Off-vehicle fare collection;
4. Level-platform boarding; and
5. Turn restrictions and bus priority at intersections.¹²

Individual elements of a formal BRT service can often be implemented to create a “BRT-lite” service (sometimes called Rapid Bus) using existing infrastructure and/or vehicles. These may include:

1. Full or partial access to bus-only lanes;
2. Queue jumps (where a short bus lane allows buses to advance through a signalized intersection ahead of other traffic with an early green light);
3. Off-vehicle fare collection; and
4. Signal priority.

BRT is a typically faster, more efficient service because it eliminates many of the factors of a traditional bus service that require extra time. Some of these things are handled at the boarding point, while others pertain to the path and manner of travel. By collecting fares electronically or on the boarding platform (and eliminating cash fares), riders do not need to place their fares into a farebox, resulting in faster boarding. Level-platform boarding eliminates the need for riders to climb steps or for mobility-impaired individuals to wait for a ramp or lift to be lowered, also resulting in faster boarding. Placement of stops and stations, signal priority, and dedicated lanes allow the bus to travel faster by reducing the time spent navigating an exit from the roadway to access stops, increasing the average speed by allowing the bus to bypass congestion, and reducing the time spent waiting at intersections.

Identifying realistic opportunities for BRT or BRT-lite service first requires identifying key corridors. However, since SolanoExpress already operates within these corridors, it is recommended STA look at

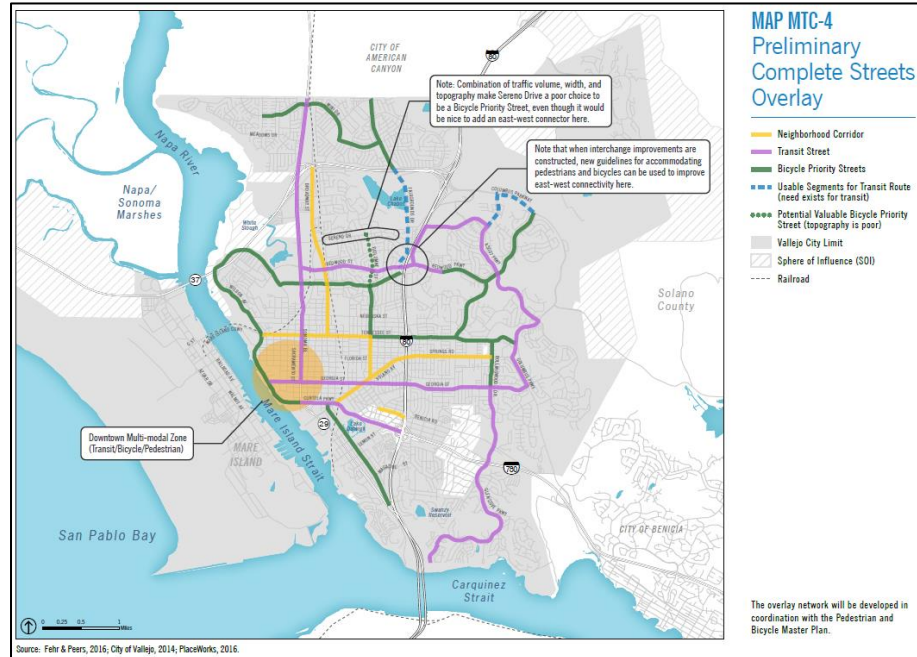
¹¹ FTA website, Bus Rapid Transit, <https://www.transit.dot.gov/research-innovation/bus-rapid-transit>

¹² *The BRT Planning Guide*, 4th edition. Institute for Transportation and Development Policy, New York, NY, 2017. www.brtguide.itdp.org.



how to move toward a BRT-lite or Rapid Bus model within its existing routes rather than looking to identify specific BRT corridors. (These recommendations will be presented in Section 7.5.)

Exhibit 7.4.1 Solano County Major Transit Corridors



Source: Vallejo General Plan 2040. Mobility, Transportation, & Connectivity. Accessed January 2020.

While some Solano communities have already identified local transit corridors that could support future BRT service, only Vallejo has included BRT-specific improvements as part of its “Transit Street” concept.

Fairfield

According to the Circulation Element of the City of Fairfield’s General Plan (adopted in 2002), the City will “integrate regional transit with local transit to make the entire system more user-friendly.” This includes SolanoExpress as well as rail service. The City has also created a policy to develop well-defined transit corridors to link the various parts of the city. Other BRT-supportive policies include working with Caltrans to implement high-occupancy vehicle (HOV) lanes on I-80 through Fairfield and improving Level of Service conditions at key intersections.

Benicia

Military Street bisects the city of Benicia and is where SolanoExpress provides service via the Yellow Line. It is the most likely corridor where bus rapid transit or enhanced bus service/amenities could be introduced.

Vallejo

According to the 2040 City of Vallejo General Plan, a “Transit Street” primarily serves public transit routes. Amenities include signal pre-emption, high quality bus stops, and bus-only lanes as appropriate. With the exception of pedestrians, public transit has the highest priority with respect to conflicts between modes. Transit Streets illustrated in Exhibit 7.4.1 which overlap with Corridors shown in Exhibit 7.4.2 would be candidates for future BRT/enhanced bus service.



State Route 29/Sonoma Boulevard through Vallejo is where Solano Express provides service via the Red Line. This corridor has been studied by Caltrans District 4, STA, and the City of Vallejo as a complete streets corridor through Vallejo and programmed for improvements in the State Highway Operations and Protection Program (SHOPP). STA will be working with Caltrans, City of Vallejo and SolTrans to design these improvements to benefit Solano Express and local transit provided by SolTrans and improved pedestrian and bicycle access. MTC's Plan Bay Area 2050 proposes service between Napa and Vallejo via SR29.

Exhibit 7.4.2 Vallejo Physical City Structure Elements Map



Source: Vallejo General Plan 2040. Planning Framework. Accessed January 2020.

Outside Solano County

In Davis, the 2013 Circulation Element of the City's General Plan includes several actions supporting potential BRT service in the Public Transportation section. While many of the actions identified in this section pertain primarily to local transit, some of the items that are specifically relevant to current SolanoExpress service as well as potential BRT service include:

1. Expand, improve, and publicize the multi-modal transportation center at the train depot in the Core Area.
2. Work proactively to coordinate and cross-promote transit service between the Yolo County Transportation District, Unitrans, Davis Community Transit, and other transit service providers.
3. Study installing transit signal priority systems at selected intersections and corridors to extend green time for approaching buses.



In the City of Sacramento’s 2018 Central City Specific Plan, the Mobility section addresses challenges and opportunities related to transit use in the city’s urban core. One of the proposed improvements includes the use of dedicated transit lanes, which would be created by reducing the number of traffic or parking lanes. Depending on where these lanes are placed, they could be used by SolanoExpress with or without BRT.

In 2017, the Western Contra Costa Transportation Advisory Committee completed its West County High-Capacity Transit Study. The study included several BRT and Rapid Bus improvements. While several of these would not apply to SolanoExpress service given their proposed location, of note is the potential introduction of bus-only lanes in the vicinity of the El Cerrito del Norte BART station. There is also discussion of extending BART service north to Hercules, which could mitigate the need for SolanoExpress to travel all the way to the El Cerrito del Norte station in the future. While transit priority improvements might take place within five years of the study, the other improvements discussed herein are at least 15 years into the future.



7.5 Recommendations to Improve Performance and Implement BRT

SolanoExpress Performance Recommendations

In reviewing the performance of the SolanoExpress service, four key issues were noted:

1. Decreases in farebox recovery ratio.
2. Changes in fare revenue not consistent with changes in ridership.
3. Not meeting established performance standards.
4. Not capturing enough of the travel within each route's service corridor.

Issue #1: Significant decrease in farebox recovery ratio.

The services in the Blue Line corridor experienced a 52 percent increase in operating costs between FY 2017/18 (the combined operating costs of Routes 20, 30, and 40) and FY 2018/19 (Blue Line). While this reflects a significant increase (62 percent) in vehicle revenue hours, it was not supported by a corresponding increase in fare revenue, even though there was a nearly 17 percent increase in ridership. As a result, the farebox recovery ratio dropped from 18.7 percent (combined Routes 20, 30, and 40) in FY 2017/18 to 11.8 percent in FY 2018/19. While there may have been additional revenues that could be counted as fare revenue supplementation for compliance purposes, this dramatic drop in the raw figures indicates either a performance or accounting issue. The STA and its partners will need to pay close attention to ensure its farebox recovery ratio for this route does not erode further, either by minimizing future operating cost increases or by increasing fare revenues through ridership growth.

Issue #2: Changes in fare revenue not consistent with changes in ridership.

On the Blue, Yellow, and Red Lines, changes in fare revenue were not consistent with changes in ridership during certain periods across the past four years. (This was discussed briefly under Issue #1 with respect to the Blue Line.) For the Blue Line, as the primary issue occurred between FY 2017/18 and FY 2018/19, it is easiest to look at the combined Routes 20, 30, and 40 in FY 2017/18 versus the Blue Line in FY 2018/19. In FY 2018/19, Blue Line ridership increased by 16.7 percent over the combined ridership from the previously year. However, fare revenue decreased by 4.2 percent. This resulted in a 17.9 percent decrease in the average fare per passenger.

As discussed in Section 7.1, a potential reason for fare revenue not changing at the same rate as ridership is the fare adjustment put into place in July 2018. This adjusted some of the SolanoExpress fares charged by FAST (especially intracounty fares) downward, resulting in a consistent fare schedule systemwide. It is likely this impacted the fare revenues collected on the Blue Line, especially if a high volume of the ridership travels within Solano County. This may also be the result of an error in allocation.



Exhibit 7.5.3 Blue Line Ridership vs. Fare Revenue

Blue Line Performance Metrics	FY 2016	FY 2017	FY 2018	FY 2019	Overall Change
Ridership	133,765	132,990	126,611	147,720	13,955
<i>Annual change (percent)</i>		-0.6%	-4.8%	16.7%	10.4%
Fare Revenue	\$414,041	\$440,245	\$429,621	\$411,768	-\$2,273
<i>Annual change (percent)</i>		6.3%	-2.4%	-4.2%	-0.5%
Performance Indicators					
Average fare per passenger	\$3.10	\$3.31	\$3.39	\$2.79	-\$0.31
<i>Annual change (percent)</i>		6.9%	2.5%	-17.9%	-9.9%

The Yellow Line (Route 78) also experienced a similar fare revenue decrease in response to a ridership increase. While not as extreme as that observed with respect to the Blue Line, FY 2018/19 saw an 8.4 percent decrease in fare revenue while there was a 3.6 percent increase in ridership. This resulted in an 11.6 percent decrease in the average fare per passenger. As with the Blue Line, the July 2018 fare adjustment resulted in a fare decrease for trips within Solano County, which could have had some impact on fares received from riders traveling between Vallejo and Benicia. Another consideration is the 14.7 percent fare revenue increase in FY 2017/18. If that year’s fare revenue was overstated, then the issue may lie in FY 2017/18, not FY 2018/19.

Exhibit 7.5.4 Yellow Line Ridership vs. Fare Revenue

Yellow Line Performance Metrics	FY 2016	FY 2017	FY 2018	FY 2019	Overall Change
Ridership	91,673	93,157	100,424	104,063	12,390
<i>Annual change (percent)</i>		1.6%	7.8%	3.6%	13.5%
Fare Revenue	\$312,354	\$318,589	\$365,405	\$334,580	\$22,226
<i>Annual change (percent)</i>		2.0%	14.7%	-8.4%	7.1%
Performance Indicators					
Average fare per passenger	\$3.41	\$3.42	\$3.64	\$3.22	-\$0.19
<i>Annual change (percent)</i>		0.4%	6.4%	-11.6%	-5.6%

A similar issue was noted with respect to Route 80 in FY 2017/18 and Route 85 in FY 2018/19. In FY 2017/18, Route 80 ridership increased 3.6 percent while fare revenue decreased 2.7 percent. In FY 2018/19, Route 85 ridership increased 23.4 percent while fare revenue decreased 9.8 percent. For Route 80, consideration should be given to the 9.8 percent fare revenue increase in FY 2016/17 that accompanied a ridership decline. For Route 85, there was a 22.2 percent fare revenue increase in FY 2017/18 accompanying a 10.8 percent ridership increase. If the earlier year’s fare revenue was overstated, then the issue may lie with that year, not the year exhibiting the fare revenue decrease.



Exhibit 7.5.5 Route 80 Ridership vs. Fare Revenue

Route 80 Performance Metrics	FY 2016	FY 2017	FY 2018	FY 2019	Overall Change
Ridership	478,239	470,770	487,491	537,896	59,657
Annual change (percent)		-1.6%	3.6%	10.3%	12.5%
Fare Revenue	\$1,668,577	\$1,832,532	\$1,783,163	\$1,898,535	\$229,958
Annual change (percent)		9.8%	-2.7%	6.1%	13.8%
Performance Indicators					
Average fare per passenger	\$3.49	\$3.89	\$3.67	\$3.53	\$0.04
Annual change (percent)		11.5%	-5.7%	-3.8%	1.1%

Exhibit 7.5.6 Route 85 Ridership vs. Fare Revenue

Route 85 Performance Metrics	FY 2016	FY 2017	FY 2018	FY 2019	Overall Change
Ridership	71,430	66,540	73,595	90,794	19,364
Annual change (percent)		-6.9%	10.6%	23.4%	27.1%
Fare Revenue	\$299,989	\$243,304	\$297,451	\$268,217	-\$31,772
Annual change (percent)		-18.9%	22.2%	-9.8%	-10.6%
Performance Indicators					
Average fare per passenger	\$4.20	\$3.66	\$4.04	\$2.95	-\$1.25
Annual change (percent)		-12.9%	10.4%	-30.0%	-29.8%

Issue #3: Failure to meet established performance standards.

One of the measures of productivity used by STA is performance standards with respect to passengers per vehicle revenue hour. The standard is 25.0 passengers per revenue hour for each of the SolanoExpress individual routes.

Exhibit 7.5.7 Performance Standard: Passengers per Revenue Hour

Route	Standard	FY 2016	FY 2017	FY 2018	FY 2019
Blue Line	25.0	9.4	8.2	8.3	6.0
Green Line		18.0	17.7	17.2	19.2
Red Line	25.0	20.1	18.9	19.9	22.4
Yellow Line		9.1	7.9	8.4	8.3

None of the current routes as currently structured for review against the performance standard meet the performance standard. The Blue Line and the Yellow Line are particularly challenged.

Given the oft-times large gaps between actual performance and established performance standards, it is possible the standards need to be re-evaluated. An important question is, would the current capacity of each route (assuming there are no increases to VRH) be able to absorb a ridership increase of 45 to 151 percent, thereby achieving the service standard? (Bear in mind that adding capacity by adding more buses/trips would also increase VRH, and therefore not improve productivity.) If not, then the standard for that route may warrant rethinking.

Alternately, consider whether it would be possible to reduce VRH (by reducing the number of trips) without significantly reducing ridership. The elimination of low-productivity trips (especially those during non-peak hours) may offer some reduction in VRH without a significant decrease in ridership. Another



alternative would be to utilize different standards for peak service versus non-peak service. By defining what constitutes peak-hour service and assessing productivity differently for those trips, some routes may come closer to meeting the established standards. In effect, this is what occurs by analyzing the GX as a separate route though it only operates during periods of peak potential usage.

If a route has the capacity to absorb an increase in ridership sufficient to meet the service standard, then efforts should be made to increase ridership. Recommendations for increasing ridership include:

- Ensure on-time performance (reliability) is consistently high.
- Increase marketing to target “choice riders” who do not currently use the service (focusing on the benefits of commuting via SolanoExpress).
- Add amenities such as onboard Wi-Fi, outlets, etc. to enhance SolanoExpress’ attractiveness as a commuter option.
- Offer a free 10-day pass to prospective (qualified) riders to foster confidence in the service. Conduct follow-up with rider prospects during the trial period to assess “conversion” factor.

Issue #4: Not capturing enough of the travel within each route’s service corridor.

The three recommendations detailed above look at how to improve ridership and performance within the current structure of the SolanoExpress program and routes. Despite the recent route consolidation, there is little expectation the current system would ever reach the ridership thresholds needed to even approach the two percent goal for mode-share in each of the major interstate highway corridors. For this to happen, major system-wide changes need to occur. The role of SolanoExpress needs to be redefined to confront competition with the automobile, provide more convenience, increase capacity, and offer faster service.

To reach the two percent mode-share threshold, annual SolanoExpress ridership would need to increase significantly. Along I-80, ridership would need to increase from 954,781 to 2,115,471, an increase of 122 percent. On the I-680 corridor, ridership would need to increase from 153,189 to 2,204,543, an increase of 1,339 percent. On the I-780 corridor, ridership would need to increase from 100,424 to 761,816, an increase of 659 percent. Without a complete system overhaul, not even the most aggressive marketing and promotion would result in ridership increases of this magnitude.

This may mean focusing on the intercity portions of the route (with less service within individual jurisdictions), looking at more of a Bus Rapid Transit-style service, relying more on effective “feeder” linkages (including Park and Ride lots and local bus services), and providing onboard amenities such as Wi-Fi and electrical outlets.

With a local service, it is often necessary to offer more geographic coverage, thereby bringing the service to the customer. For an intercity service, this can become counterproductive. By bringing the service to the customer, it becomes less convenient and the trips become longer. Compare this to BART. As a fixed-guideway service, it cannot move closer to the customer. Instead, the customer must come to BART. But once the customer reaches BART, it offers things the customer values – speed, convenience, and the opportunity to do other things during the commute.

The Red Line portion between Vallejo and El Cerrito del Norte BART is the one route that fits this more streamlined concept of intercity transit while meeting most, if not all, key performance indicators. This is certainly something to consider when redefining a vision for SolanoExpress.

We recommend STA and the Consortium address the following questions in evaluating the future vision for SolanoExpress.

1. What does the customer want? Not in terms of “how should the current SolanoExpress service change to fit your needs,” but without imposing any artificial limits. This will help STA and the Consortium identify a service model to emulate. For instance, if many customers want SolanoExpress to be more like BART, that provides insight into features and benefits customers would value with SolanoExpress.
2. How can SolanoExpress be more effective as a regional carrier in the corridors served? If the primary goal is to provide service between jurisdictions, including connections to BART and into Sacramento, then including multiple service locations within each community – or even traveling very far off the primary route path – does not support that goal.
3. What can be used as a model? While Solano County may be unique in many ways, its overall intercity transit needs are not uncommon. Look for another location with similar features: An outlying county adjacent to one or more major metropolitan areas, multiple local systems operating within the county, intercity bus service that connects to an urban core and/or provides a bridge to commuter rail service, etc. Preparing a case study of that location may offer insight into how various services could be delivered in Solano County. Ventura County is one example (albeit on a somewhat smaller scale), as is Georgia’s Xpress commuter bus program, operated by the State Road and Tollway Authority.

Bus Rapid Transit Recommendations

While full implementation of a formal/traditional BRT service may be difficult, given the multi-jurisdictional nature of the SolanoExpress service, BRT-lite or Rapid Bus service is certainly a viable alternative. Rather than focusing on improvements to specific corridors, the following recommendations are designed to move SolanoExpress closer to the efficiencies of BRT or Rapid Bus service on all routes.

1. Eliminate on-board fare collection. The use of mobile ticketing and platform-based ticket vending machines would reduce the time needed for boarding.
2. Reduce the number of stops served in each community. Limiting the number of stops will result in faster service due to less dwell time at boarding locations.
3. Minimize the distance of stops from the main route. Where possible, avoiding significant diversions from the main route can result in faster service as there is less time spent navigating surface streets.
4. Work with the jurisdictions in which SolanoExpress operates (within as well as outside of Solano County) regarding the implementation of BRT-supportive projects such as signal priority and queue jumping.
5. Adjust off-highway routing to take advantage of bus-only lanes, signal priority, etc., where these features are available (or become available in the future).
6. Consider purchasing future vehicles that offer the opportunity for level-platform boarding. The primary challenge to this recommendation is the use of over-the-road coaches on the existing SolanoExpress service. These are vehicles designed for highway travel (higher speeds and longer

distances). These vehicles also feature a single door, which can impact boarding speed, and require the use of a wheelchair lift. Level-platform boarding through two or more doors (such as with an articulated bus) can dramatically reduce the dwell time at stops. However, articulated vehicles may not be well-suited to highway travel or navigating existing transit stations. If STA is committed to providing a BRT-like experience with SolanoExpress, the use of a different vehicle should be considered.



Working Paper #8

Connectivity between Regional and Local Transit Networks

8.1 Transit Service in Solano County

This section presents an overview of local transit service options in Solano County, as well as the regional service provided by SolanoExpress. Details regarding connectivity at specific key transit hubs are provided in Section 8.2.

Dixon Read-Ride

There is a single key service point in Dixon. The Dixon Park and Ride facility is served by the Blue Line and Dixon Read-Ride. Given Dixon Read-Ride is a general public demand-response service, no schedule coordination is required. Dixon's Intercity Dial-A-Ride service provides service to Davis and Vacaville, which are also connected to Dixon via the Blue Line.

Dixon Read-Ride does not accept Clipper card fare payment due to cost and anticipated usage. There is no transfer policy in place between SolanoExpress and Dixon Read-Ride.

FAST

The Fairfield Transportation Center is served by the Blue Line as well as FAST Routes 1, 3, 5, and 7. Solano Town Center Mall is currently served by the Red Line as well as FAST Routes 2, 3, and 6. Solano Community College (Suisun Valley Road) is served by the Blue Line, Red Line, and FAST Route 7. The Suisun-Fairfield Amtrak station is served by the Red Line, Green Line, FAST Route 5, Capitol Corridor rail service, Greyhound, Napa Vine, and Rio Vista Delta Breeze Route 50.

FAST's local service includes eight fixed routes serving Fairfield, Suisun City, and Travis AFB. FAST also operates two of the SolanoExpress routes: the Blue Line and Green Express. The Red Line, which serves Fairfield and Suisun City, is operated by SolTrans.

FAST has adopted the Clipper card fare payment option. Transfers are provided between FAST and other Clipper operators. Transfers with other transit providers in Napa and Solano counties are valid for 60 minutes. Local 31-Day Pass Clipper cardholders can upgrade to ride intercity on a SolanoExpress route by paying the fare difference with cash value stored in the Clipper card. Transfers from local buses to intercity buses charge the difference in price between the lower local fare and the higher intercity fare. Transfers to local buses from intercity buses are free for the first connecting ride.

Rio Vista Delta Breeze

Rio Vista Delta Breeze Route 50 links Rio Vista with Suisun City and Fairfield on weekdays from 7:30 a.m. to 7:00 p.m. Two to four variations of the route alignment are operated in each direction. Among the locations served are Fairfield Transportation Center and Solano Town Center. The Suisun City Amtrak station is served upon request. Other Rio Vista Delta Breeze routes include Route 52 to Antioch and Pittsburgh/Bay Point BART, and Route 51 operating as a general public Dial-A-Ride service in Rio Vista, Isleton, and the resort communities between the two cities.

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The base fare for an intercity trip on Rio Vista Delta Breeze is six dollars, more than double the SolanoExpress fare within Solano County. The City of Rio Vista is not part of the Clipper fare program due to cost and anticipated usage. The fare discounts between Rio Vista and FAST/SolanoExpress were deemed not compatible. In addition, the City has adopted a lower senior fare eligibility age.

SolTrans

Vallejo Transit Center is served by the Red Line, Yellow Line, and SolTrans Routes 1, 2, 3, 4, 5, 6, 7A/B, 8, and 82 (San Francisco Bay Ferry supplemental). The Vallejo Ferry Terminal, which is within walking distance from the Vallejo Transit Center, is served by the Yellow Line, SolTrans Route 5, the Vallejo Ferry, and Napa Vine Route 11/11X. The Curtola Park and Ride facility is served by the Red Line, Yellow Line, and SolTrans Routes 3 and 82. Benicia City Park is served by the Yellow Line and SolTrans Routes 15 and 17.

Routes 1, 2, 3, 4, 5, 6, 7A/B, and 8 provide local service within Vallejo. Routes 15 and 17 operate in Benicia as school tripper routes. Route 82 offers one roundtrip to San Francisco, providing service after the end of ferry service.

The Clipper card fare payment system is available on all SolTrans fixed-routes. SolTrans replaced local transfers with day passes in 2011. Purchases on SolanoExpress with the Clipper card includes transfers with select transit providers for a specified time period.

Vacaville City Coach

Vacaville Transportation Center is served by the Blue Line, Vacaville City Coach Routes 1, 3, 4, 5, and 6, and Yolobus Route 220. The Vacaville Transit Plaza is served by Vacaville City Coach Routes 2, 5, and 6 only. Yolobus Route 220 and SolanoExpress Blue Line also provide service to the Solano Community College area at Vaca Valley Parkway. Vacaville City Coach Routes 1 and 4 serve the area as well, but most stops are not co-located.

Vacaville City Coach Routes 1, 3, 4, 5, and 6 offer local scheduled transit service within Vallejo. Route 2 does not serve the Vacaville Transportation Center. Yolobus Route 220 operates three runs per day in each direction; morning, midday, and afternoon. The route links destinations such as the Vacaville Transportation Center, Kaiser Permanente Vacaville Medical Center, Solano Community College Vacaville Center, Winters, and UC Davis.

Vacaville City Coach has incorporated the Clipper card into all fixed-route service, though there is little usage.

SolanoExpress

Regional (inter-community) transit service in Solano County is primarily provided by SolanoExpress. The sole exception is Rio Vista Delta Breeze Route 50, which travels from Rio Vista to Fairfield, as Rio Vista is not served by SolanoExpress. As mentioned in conjunction with individual operators, SolanoExpress offers connections at key service points within each Solano County operator's jurisdiction (except for Rio Vista). SolanoExpress also offers service to locations in Contra Costa, Sacramento, and Yolo counties.

SolanoExpress has adopted the Clipper card fare payment option. Transfers are provided between SolanoExpress and other Clipper operators. Transfers with other transit providers in Napa and Solano



counties are valid for 60 minutes. Local 31-Day Pass Clipper cardholders can upgrade to ride intercity on a SolanoExpress route by paying the fare difference with cash value stored in the Clipper card. Transfers from local buses to intercity buses charge the difference in price between the lower local fare and the higher intercity fare. Transfers to local buses from intercity buses are free for the first connecting ride.

In July 2018, SolanoExpress established a single schedule of fares for travel within Solano County and outside Solano County, as well as a separate fare for the Green Express Line. Prior to this date, FAST and SolTrans set their own fares for the portion of SolanoExpress service they operate.

Exhibit 8.1.1 Key Service Locations within Solano County

City	Hub	SolanoExpress	Solano Operators	Other Operators
Dixon	Dixon Park & Ride	Blue Line	Dixon Read-Ride	
Vacaville	Vaca Valley Parkway	Blue Line		
	Vacaville Transportation Center	Blue Line	City Coach: 1, 3, 4, 5, 6	Yolobus: 220
Suisun City	Suisun City Amtrak	Red Line Green Express	Delta Breeze: 50 FAST: 5	Capitol Corridor Greyhound Napa Vine: 21
Fairfield	Solano Town Center Mall	Red Line	Delta Breeze: 50 FAST: 1, 2, 3, 6	
	Fairfield Transportation Center	Blue Line Red Line Green Express	Delta Breeze: 50 FAST: 1, 3, 5, 7	Napa Vine: 21
	Suisun Valley Road (Solano College)	Blue Line Red Line Green Express	FAST: 7	
Vallejo	Six Flags North Vallejo	Red Line		
	Sereno Transit Center	Red Line	SolTrans: 1, 2, 4, 5, 7A/B	Napa Vine: 21
	Vallejo Ferry Terminal	Yellow Line	SolTrans: 5	Vallejo Ferry Napa Vine: 11/11X
	Vallejo Transit Center	Red Line Yellow Line	SolTrans: 1, 2, 3, 4, 5, 6, 7 A/B, 8, 82	VA Shuttle Greyhound
	Curtola Park & Ride	Red Line Yellow Line	SolTrans: 3, 82	
Benicia	Benicia Bus Hub/Industrial Way	Blue Line		
	City Park (Military & First)	Yellow Line		



Exhibit 8.1.2 Key Service Locations outside Solano County

City	Hub	SolanoExpress	Solano Operators	Other Operators
Sacramento	Sacramento Valley Station	Blue Line		Amtrak Capitol Corridor SacRT SacRT Gold Line
	*9th Street & L Street	Blue Line		e-tran (Elk Grove) Roseville Transit SacRT SacRT Blue Line Yolobus
	*2nd/Capitol Mall	Blue Line		Yolobus
Davis	UC Davis Silo	Blue Line		Unitrans Yolobus
Concord	Sunvalley Shopping Center	Yellow Line		County Connection
Pleasant Hill	Pleasant Hill BART	Blue Line Yellow Line		BART County Connection Wheels: 70X
Walnut Creek	Walnut Creek BART	Yellow Line		BART County Connection Wheels: 70X
El Cerrito	El Cerrito del Norte BART	Red Line Green Express		AC Transit BART Golden Gate Transit: 40/40X WestCAT: JX, JPX, JR, JL Napa Vine: Napa- BART Express



8.2 Regional and Local Connectivity at Key Transit Hubs

This section addresses regional and local connectivity at key transit hubs located both within and outside Solano County. Solano County locations are not only key service points for SolanoExpress, but also for local service in the community in which they are located. Locations outside of Solano County offer broad regional connectivity through the SolanoExpress regional service.

Both spatial and temporal connectivity is reviewed for each transit hub. However, the following considerations regarding temporal connectivity must be kept in mind:

1. A temporal analysis does not include planning for all possible trips. Therefore, there may be outliers to some general assessments regarding connectivity between two operators at a particular location. Specific trip planning was not conducted as part of this review.
2. Only weekday (Monday – Friday) connectivity is examined. It can be assumed regional connectivity on Saturday and Sunday is significantly more limited.
3. In some cases, the reduction of service due to the COVID-19 pandemic made it difficult to secure regular service schedules for some operators. Instances where reduced or modified service schedules were used in this analysis are clearly identified. Otherwise, it can be assumed a pre-COVID-19 schedule was used.

Connectivity within Solano County

Fairfield Transportation Center

The Fairfield Transportation Center is served by three SolanoExpress routes (Red Line, Blue Line, and Green Line); FAST Routes 1, 3, 5, and 7; Rio Vista Delta Breeze Route 50, and Napa Vine Route 21.

FAST routes only provide connectivity to SolanoExpress routes departing at 6:00 a.m. or later. FAST provides good connectivity with Napa Vine Route 21.

Early-morning connectivity between Napa Vine Route 21 and SolanoExpress is better for the Blue Line than the Red Line. It is not necessary to have a high level of connectivity between Route 21 and the Red Line at this point given other Napa Vine routes provide direct service to Vallejo and BART. There is connectivity between Route 21 and the Blue Line, although connections do typically require a wait of 15-20 minutes.

Morning connectivity between Rio Vista Delta Breeze Route 50 westbound and the Red Line and Blue Line is good, though requires a wait of between 15 and 30 minutes. Eastbound connections are possible but require a longer wait. Midday connectivity is more complicated; connecting from the Red Line to Route 50 requires a wait of nearly an hour, as both northbound and southbound Red Line trips occur five and 10 minutes following the departure of Route 50 eastbound. Travel to Rio Vista in the evening is easier, with a high level of connectivity (and wait times of seven to 28 minutes) from both SolanoExpress routes.

There is no FAST service offering local connections to the last few SolanoExpress trips on each route. This makes it necessary for riders who might otherwise be able to use FAST to connect to SolanoExpress for their morning commute (as they may start their SolanoExpress trip between 6:00 a.m. and 7:00 a.m.)



to drive to the FTC because there is no FAST connection that would allow them to travel home. The last FAST service departing from the FTC is at 7:00 p.m. (Routes 1, 3, and 5) and 6:52 p.m. (Route 7). This leaves five Red Line, three Blue Line (four on Fridays), and three Green Line arrivals without connectivity at the end of the day.



Exhibit 8.2.1 Fairfield Transportation Center Connectivity

Operator --> Service Hour	SolanoExpress Red Line (North)	SolanoExpress Blue Line (M-Th)	SolanoExpress Blue Line (Fri)	SolanoExpress Green Line	FAST Route 1	FAST Route 3	FAST Route 5	FAST Route 7	RVDB Route 50	Napa Vine Route 21
4:00 AM		SB 4:35 AM	SB 4:35 AM	WB 4:10 AM, WB 4:30 AM, WB 4:50 AM						
5:00 AM	NB 5:32 AM	SB 5:15 AM, SB 5:36 AM	SB 5:15 AM, SB 5:36 AM	WB 5:10 AM, WB 5:30 AM, WB 5:50 AM			WB 5:54 AM			
6:00 AM	SB 6:25 AM, NB 6:33 AM	NB 6:00 AM, SB 6:05 AM, NB 6:30 AM, SB 6:35 AM, NB 6:40 AM, NB 6:50 AM	NB 6:00 AM, SB 6:05 AM, NB 6:30 AM, SB 6:35 AM, NB 6:40 AM, NB 6:50 AM	WB 6:10 AM, WB 6:30 AM, WB 6:50 AM, EB 6:56 AM	NB 6:00 AM, NB 6:30 AM, SB 6:54 AM	NB 6:00 AM, SB 6:24 AM, NB 6:30 AM, SB 6:54 AM	EB 6:00 AM, WB 6:54 AM	SB 6:00 AM, SB 6:30 AM, NB 6:52 AM		WB 6:24 AM
7:00 AM	SB 7:27 AM, NB 7:33 AM	SB 7:00 AM, NB 7:17 AM (arr), NB 7:22 AM (dep), SB 7:35 AM, NB 7:47 AM (arr)	SB 7:00 AM, NB 7:17 AM (arr), NB 7:22 AM (dep), SB 7:35 AM, NB 7:47 AM (arr)	WB 7:10 AM, EB 7:16 AM, WB 7:30 AM, WB 7:54 AM, EB 7:55 AM	NB 7:00 AM, SB 7:24 AM, NB 7:30 AM, SB 7:54 AM	NB 7:00 AM, SB 7:24 AM, NB 7:30 AM, SB 7:54 AM	EB 7:00 AM, WB 7:54 AM	SB 7:00 AM, SB 7:22 AM, SB 7:30 AM, NB 7:52 AM		EB 7:01 AM, WB 7:24 AM, EB 7:57 AM
8:00 AM	SB 8:26 AM, NB 8:33 AM	SB 8:10 AM, NB 8:17 AM (arr), NB 8:22 AM (dep), SB 8:23 AM (arr), SB 8:35 AM (arr), SB 8:40 AM (dep), NB 8:47 AM (arr)	SB 8:10 AM, NB 8:17 AM (arr), NB 8:22 AM (dep), SB 8:23 AM (arr), SB 8:35 AM (arr), SB 8:40 AM (dep), NB 8:47 AM (arr)	EB 8:16 AM, EB 8:37 AM, EB 8:58 AM	NB 8:00 AM, SB 8:24 AM, NB 8:30 AM, SB 8:54 AM	NB 8:00 AM, SB 8:24 AM, NB 8:30 AM, SB 8:54 AM	EB 8:00 AM, WB 8:54 AM	SB 8:00 AM, SB 8:22 AM, SB 8:30 AM, NB 8:52 AM		WB 8:24 AM
9:00 AM	SB 9:26 AM, NB 9:33 AM	SB 9:00 AM (arr), NB 9:17 AM (arr), NB 9:22 AM (dep), SB 9:35 AM (arr), 9:40 AM (dep), NB 9:47 AM (arr)	SB 9:00 AM (arr), NB 9:17 AM (arr), NB 9:22 AM (dep), SB 9:35 AM (arr), SB 9:40 AM (dep), NB 9:47 AM (arr)	EB 9:22 AM	NB 9:00 AM, SB 9:24 AM, NB 9:30 AM, SB 9:54 AM	NB 9:00 AM, SB 9:24 AM, NB 9:30 AM, SB 9:54 AM	EB 9:00 AM, WB 9:54 AM	SB 9:00 AM, SB 9:22 AM, SB 9:30 AM, NB 9:52 AM	WB 9:10 AM (arr), EB 9:15 AM (dep)	EB 9:04 AM, WB 9:24 AM
10:00 AM	NB 10:23 AM, SB 10:26 AM	SB 10:06 AM (arr), NB 10:17 AM (arr), NB 10:22 AM (dep), SB 10:25 AM (arr), SB 10:40 AM (dep)	SB 10:06 AM (arr), NB 10:17 AM (arr), NB 10:22 AM (dep), SB 10:25 AM (arr), SB 10:40 AM (dep)		NB 10:00 AM, SB 10:24 AM, NB 10:30 AM, SB 10:54 AM	NB 10:00 AM, SB 10:24 AM, NB 10:30 AM, SB 10:54 AM	EB 10:00 AM, WB 10:54 AM	SB 10:00 AM, SB 10:22 AM, SB 10:30 AM, NB 10:52 AM	WB 10:10 AM (arr), EB 10:20 AM (dep)	EB 10:04 AM, WB 10:24 AM

Operator -->	SolanoExpress	SolanoExpress	SolanoExpress	SolanoExpress	FAST	FAST	FAST	FAST	RVDB	Napa Vine
Service Hour	Red Line (North)	Blue Line (M-Th)	Blue Line (Fri)	Green Line	Route 1	Route 3	Route 5	Route 7	Route 50	Route 21
11:00 AM	NB 11:23 AM, SB 11:26 AM	NB 11:17 AM (arr), NB 11:22 AM (dep), SB 11:35 AM (arr), SB 11:40 AM (dep)	NB 11:17 AM (arr), NB 11:22 AM (dep), SB 11:35 AM (arr), SB 11:40 AM (dep)		NB 11:00 AM, SB 11:24 AM, NB 11:30 AM, SB 11:54 AM	NB 11:00 AM, SB 11:24 AM, NB 11:30 AM, SB 11:54 AM	EB 11:00 AM, WB 11:54 AM	SB 11:00 AM, SB 11:22 AM, SB 11:30 AM, NB 11:52 AM		EB 11:04 AM, WB 11:24 AM
12:00 PM	NB 12:25 PM, SB 12:27 PM	NB 12:17 PM (arr), NB 12:22 PM (dep), SB 12:25 PM (arr), SB 12:40 PM (dep)	NB 12:19 PM (arr), NB 12:24 PM (dep), SB 12:25 PM (arr), SB 12:40 PM (dep), NB 12:54 PM		NB 12:00 PM, SB 12:24 PM, NB 12:30 PM, SB 12:54 PM	NB 12:00 PM, SB 12:24 PM, NB 12:30 PM, SB 12:54 PM	EB 12:00 PM, WB 12:54 PM	SB 12:00 PM, SB 12:22 PM, SB 12:30 PM, NB 12:52 PM		EB 12:04 PM, WB 12:24 PM
1:00 PM	NB 1:25 PM, SB 1:27 PM	NB 1:17 PM (arr), NB 1:22 PM (dep), SB 1:35 PM (arr), SB 1:40 PM (dep), NB 1:52 PM	NB 1:19 PM (arr), NB 1:24 PM (dep), SB 1:35 PM (arr), SB 1:40 PM (dep), NB 1:50 PM	WB 1:56 PM	NB 1:00 PM, SB 1:24 PM, NB 1:30 PM, SB 1:54 PM	NB 1:00 PM, SB 1:24 PM, NB 1:30 PM, SB 1:54 PM	EB 1:00 PM, WB 1:54 PM	SB 1:00 PM, SB 1:22 PM, SB 1:30 PM, NB 1:52 PM	1:20 PM	EB 1:04 PM, WB 1:24 PM
2:00 PM	NB 2:29 PM, SB 2:31 PM	SB 2:10 PM, NB 2:17 PM (arr), NB 2:22 PM (dep), SB 2:35 PM (arr), SB 2:40 PM (dep), NB 2:47 PM	SB 2:10 PM, NB 2:21 PM (arr), NB 2:26 PM (dep), SB 2:35 PM (arr), SB 2:40 PM (dep), NB 2:43 PM	WB 2:16 PM, WB 2:36 PM, WB 2:56 PM	NB 2:00 PM, SB 2:24 PM, NB 2:30 PM, SB 2:54 PM	NB 2:00 PM, SB 2:24 PM, NB 2:30 PM, SB 2:54 PM	EB 2:00 PM, WB 2:54 PM	SB 2:00 PM, SB 2:22 PM, SB 2:30 PM, NB 2:52 PM		EB 2:04 PM, WB 2:24 PM
3:00 PM	NB 3:30 PM, SB 3:31 PM	SB 3:10 PM, NB 3:22 PM (arr), NB 3:27 PM (dep), SB 3:35 PM (arr), SB 3:40 PM (dep), NB 3:52 PM (arr)	SB 3:10 PM, NB 3:25 PM (arr), NB 3:30 PM (dep), SB 3:35 PM (arr), SB 3:40 PM (dep), NB 3:55 PM (arr)	WB 3:16 PM, EB 3:30 PM, WB 3:36 PM, EB 3:50 PM, WB 3:56 PM	NB 3:00 PM, SB 3:24 PM, NB 3:30 PM, SB 3:54 PM	NB 3:00 PM, SB 3:24 PM, NB 3:30 PM, SB 3:54 PM	EB 3:00 PM, WB 3:54 PM	SB 3:00 PM, SB 3:22 PM, SB 3:30 PM, NB 3:52 PM		EB 3:04 PM, WB 3:24 PM
4:00 PM	SB 4:31 PM, NB 4:38 PM	SB 4:10 PM, NB 4:22 PM (arr), NB 4:27 PM (dep), SB 4:35 PM (arr), SB 4:40 PM (dep), NB 4:52 PM (arr)	NB 4:00 PM (dep), SB 4:05 PM (arr), SB 4:10 PM (dep), NB 4:25 PM (arr), SB 4:35 PM (arr), SB 4:40 PM (dep), NB 4:55 PM (arr)	EB 4:10 PM, WB 4:16 PM, EB 4:30 PM, WB 4:36 PM, EB 4:50 PM, WB 4:56 PM	NB 4:00 PM, SB 4:24 PM, NB 4:30 PM, SB 4:54 PM	NB 4:00 PM, SB 4:24 PM, NB 4:30 PM, SB 4:54 PM	EB 4:00 PM, WB 4:54 PM	SB 4:00 PM, SB 4:22 PM, SB 4:30 PM, NB 4:52 PM		EB 4:04 PM, WB 4:24 PM



Operator -->	SolanoExpress	SolanoExpress	SolanoExpress	SolanoExpress	FAST	FAST	FAST	FAST	RVDB	Napa Vine
Service Hour	Red Line (North)	Blue Line (M-Th)	Blue Line (Fri)	Green Line	Route 1	Route 3	Route 5	Route 7	Route 50	Route 21
5:00 PM	SB 5:30 PM, NB 5:43 PM	SB 5:10 PM, NB 5:22 PM (arr), NB 5:27 PM (dep), SB 5:35 PM (arr), SB 5:40 PM (dep), NB 5:52 PM (arr), SB 5:57 PM (dep)	NB 5:00 PM (dep), SB 5:05 PM (arr), SB 5:10 PM (dep), NB 5:25 PM (arr), NB 5:30 PM (dep), SB 5:35 PM (arr), SB 5:40 PM (dep), NB 5:55 PM (arr),	EB 5:10 PM, WB 5:16 PM, EB 5:30 PM, WB 5:36 PM, EB 5:50 PM, WB 5:56 PM	NB 5:00 PM, SB 5:24 PM, NB 5:30 PM, SB 5:54 PM	NB 5:00 PM, SB 5:24 PM, NB 5:30 PM, SB 5:54 PM	EB 5:00 PM, WB 5:54 PM	SB 5:00 PM, SB 5:22 PM, SB 5:30 PM, NB 5:52 PM	5:50 PM	EB 5:04 PM, WB 5:29 PM
6:00 PM	SB 6:30 PM, NB 6:43 PM	SB 6:08 PM (arr), NB 6:22 PM (arr), NB 6:27 PM (dep), SB 6:26 PM (arr), SB 6:31 PM (dep), NB 6:52 PM (arr), SB 6:56 PM (arr), NB 6:57 PM (dep)	NB 6:00 PM (dep), SB 6:12 PM (arr), NB 6:25 PM (arr), NB 6:30 PM (dep), SB 6:35 PM (arr), SB 6:40 PM (dep), NB 6:55 PM (arr)	EB 6:10 PM, EB 6:30 PM, WB 6:36 PM, EB 6:50 PM	NB 6:00 PM, SB 6:24 PM, NB 6:30 PM, SB 6:54 PM	NB 6:00 PM, SB 6:24 PM, NB 6:30 PM, SB 6:54 PM	EB 6:00 PM, WB 6:54 PM	SB 6:00 PM, SB 6:22 PM, SB 6:30 PM, NB 6:52 PM		EB 6:04 PM, WB 6:26 PM
7:00 PM	SB 7:27 PM, NB 7:33 PM	NB 7:22 PM (arr), NB 7:27 PM (dep), SB 7:36 PM (arr)	NB 7:00 PM (dep), SB 7:08 PM (arr), NB 7:22 PM (arr), NB 7:27 PM (dep), SB 7:41 PM (arr)	EB 7:10 PM, EB 7:30 PM	NB 7:00 PM, SB 7:24 PM (arr), SB 7:54 PM (arr)	NB 7:00 PM, SB 7:24 PM (arr), SB 7:54 PM (arr)	EB 7:00 PM, WB 7:54 PM (arr)	NB 7:22 PM (arr)		EB 7:04 PM
8:00 PM	SB 8:09 PM, NB 8:32 PM	NB 8:13 PM	NB 8:13 PM	EB 8:10 PM						
9:00 PM	SB 9:09 PM									
10:00 PM										
11:00 PM										
12:00 AM										



Suisun City Amtrak Station

The Suisun City Amtrak Station is served by two SolanoExpress routes (Red Line and Green Line), FAST Route 5, Rio Vista Delta Breeze Route 50, Napa Vine Route 21, Capitol Corridor rail service, and Greyhound Bus Lines. SolanoExpress currently serves the station during morning and afternoon peak service hours only; while FAST, Napa Vine, and Capitol Corridor provide service all day. Rio Vista Delta Breeze and Greyhound service is limited to specific times of day.

FAST Route 5 does not connect to the SolanoExpress Red Line northbound trip at 5:42 a.m., as it arrives at the Suisun City location at 5:43 AM. As such, riders wishing to travel north on the Red Line must wait (up to) one hour until the next trip at 6:43 a.m.

Rio Vista Delta Breeze Route 50 westbound does not connect with the SolanoExpress Red Line southbound trip departing at 8:17 a.m., as it arrives at approximately 8:35 a.m. Riders wishing to travel south must wait until the next Red Line trip at 9:17 a.m. This is the only morning connection between westbound Route 50 and the Red Line. However, RVDB Route 52 provides an early morning connection with BART at the Pittsburg/Bay Point BART station, which may mitigate the need for the Route 50-Red Line connection.

There are similar connectivity issues between RVDB Route 50 and the Capitol Corridor rail service. Those arriving on the first Route 50 trip at 8:35 a.m. have a wait-time of nearly one hour for the next westbound train (9:27 a.m.). During the midday, the Route 50 trip arrives at approximately 12:55 p.m. while the westbound train departs at 12:55 p.m. It is unclear as to whether there is a demand for connectivity during this trip.

Connectivity between Napa Vine Route 21 and the Red Line is not of primary concern, as other Vine routes travel directly to Vallejo and further south; and there is reasonable connectivity between Vine Route 21 and FAST Route 5.



Exhibit 8.2.2 Suisun City Amtrak Station Connectivity

Operator -->	SolanoExpress	SolanoExpress	FAST	RVDB	Napa Vine	Capitol	
Service Hour	Red Line (North)	Green Line	Route 5	Route 50	Route 21	Corridor	Greyhound
4:00 AM		WE 4:36 AM, WB 4:56 AM				EB 4:50 AM (bus)	
5:00 AM	NB 5:42 AM (arr)	WB 5:16 AM, WB 5:36 AM/ EB 5:36 AM, WB 5:56 AM/ EB 5:56 AM	WB 5:43 AM			WB 5:15 AM	
6:00 AM	SB 6:16 AM (dep), NB 6:43 AM (arr)	WB 6:16 AM/ EB 6:16 AM, WB 6:36 AM/ EB 6:36 AM	EB 6:14 AM, WB 6:43 AM		WB 6:15 AM	WB 6:16 AM, EB 6:24 AM	
7:00 AM	SB 7:18 AM (dep), NB 7:43 AM (arr)	WB 7:40 AM/ EB 7:40 AM	EB 7:14 AM, WB 7:43 AM		EB 7:10 AM/ WB 7:15 AM	WB 7:03 AM, EB 7:29 AM, WB 7:46 AM	
8:00 AM	SB 8:17 AM (dep), NB 8:43 AM (arr)		EB 8:14 AM, WB 8:43 AM	WB approx. 8:35 AM (on request)	EB 8:05 AM/ WB 8:15 AM	WB 8:14 AM, EB 8:47 AM	EB 8:20 AM, NB 8:20 AM
9:00 AM	SB 9:17 AM (dep), NB 9:43 AM (arr)		EB 9:14 AM, WB 9:43 AM	EB 9:50 AM	EB 9:13 AM/ WB 9:15 AM	WB 9:27 AM	
10:00 AM	SB 10:17 AM (dep)		EB 10:14 AM, WB 10:43 AM	EB approx. 10:45 AM (on request)	EB 10:13 AM/ WB 10:15 AM	WB 10:56 AM	
11:00 AM			EB 11:14 AM, WB 11:43 AM		EB 11:13 AM/ WB 11:15 AM	EB 11:13 AM	SB 11:00 AM, WB 11:00 AM



Operator -->	SolanoExpress	SolanoExpress	FAST	RVDB	Napa Vine	Capitol	
Service Hour	Red Line	Green Line	Route 5	Route 50	Route 21	Corridor	Greyhound
12:00 PM			EB 12:14 PM, WB 12:43 PM	WB approx. 12:55 PM (on request)	EB 12:13 PM/ WB 12:15 PM	WB 12:55 PM	
1:00 PM			EB 1:14 PM, WB 1:43 PM	EB approx. 1:45 PM (on request)	EB 1:13 PM/ WB 1:15 PM	EB 1:19 PM	
2:00 PM			EB 2:14 PM, WB 2:43 PM		EB 2:13 PM/ WB 2:15 PM	EB 2:25 PM, WB 2:51 PM	
3:00 PM	NB 3:42 PM (arr)		EB 3:14 PM, WB 3:43 PM		EB 3:13 PM/ WB 3:15 PM	EB 3:54 PM	
4:00 PM	SB 4:20 PM (dep), NB 4:50 PM (arr)		EB 4:14 PM, WB 4:43 PM		EB 4:13 PM/ WB 4:15 PM	WB 4:19 PM, EB 4:39 PM	
5:00 PM	SB 5:19 PM (dep), NB 5:55 PM (arr)		EB 5:14 PM, WB 5:43 PM	WB 5:30 PM	EB 5:18 PM/ WB 5:20 PM	EB 5:14 PM, WB 5:26 PM, EB 5:54 PM	
6:00 PM	SB 6:20 PM (dep), NB 6:55 PM (arr)	WB 6:22 PM/ EB 6:22 PM, EB 6:42 PM	EB 6:14 PM, WB 6:43 PM	EB approx. 6:15 PM (on request)	EB 6:18 PM/ WB 6:20 PM	EB 6:22 PM, WB 6:33 PM	
7:00 PM	SB 7:19 PM (dep), NB 7:45 PM (arr)	EB 7:02 PM, EB 7:22 PM, EB 7:42 PM	EB 7:14 PM, WB 7:43 PM		EB 7:13 PM	EB 7:20 PM, WB 7:41 PM, EB 7:51 PM	
8:00 PM	SB 8:01 PM (dep)	EB 8:22 PM					
9:00 PM						EB 9:24 PM, WB 9:51 PM	
10:00 PM							



Operator -->	SolanoExpress Red Line	SolanoExpress Green Line	FAST Route 5	RVDB Route 50	Napa Vine Route 21	Capitol Corridor	Greyhound
11:00 PM						WB 11:11 PM, EB 11:17 PM	
12:00 AM							

Vacaville Transportation Center

The Vacaville Transportation Center is currently served by three operators: SolanoExpress (Blue Line), Vacaville City Coach (Routes 1, 3, 4, 5, and 6), and Yolobus (Route 220).

Yolobus Route 220 connects Vacaville with Winters and UC Davis. This provides an alternative to using the Blue Line to access UC Davis. Yolobus also offers service to Sacramento, which mitigates a need for Route 220 to connect with the Blue Line. City Coach offers reasonable connections to Route 220's three trips per weekday.

City Coach does not offer connections for Blue Line trips departing before 6:00 a.m. or arriving after 5:00 p.m. (Route 1), 6:00 p.m. (Routes 3 and 4), 6:43 p.m. (Route 5), or 6:17 p.m. (Route 6). This leaves between five and 11 Blue Line trips without a local connection in Vacaville.



Exhibit 8.2.3 Vacaville Transportation Center Connectivity

Operator -->	SolanoExpress	SolanoExpress	City Coach	City Coach	City Coach	City Coach	City Coach	Yolobus
Service Hour	Blue Line (M-Th)	Blue Line (F)	Route 1	Route 3	Route 4	Route 5	Route 6	Route 220
4:00 AM	SB 4:19 AM, SB 4:59 AM	SB 4:19 AM, SB 4:59 AM						
5:00 AM	SB 5:20 AM, SB 5:49 AM	SB 5:20 AM, SB 5:49 AM						
6:00 AM	NB 6:14 AM, SB 6:19 AM, NB 6:44 AM, SB 6:44 AM, NB 6:54 AM	NB 6:14 AM, SB 6:19 AM, NB 6:44 AM, SB 6:44 AM, NB 6:54 AM	6:00 AM, 6:57 AM	6:00 AM, 6:50 AM	6:00 AM, 6:28 AM (arr), 6:30 AM (dep), 6:58 AM	6:15 AM, 6:43 AM (arr), 6:45 AM (dep)	6:00 AM, 6:30 AM, 6:47 AM	
7:00 AM	NB 7:05 AM, SB 7:19 AM, NB 7:38 AM	NB 7:05 AM, SB 7:19 AM, NB 7:38 AM	7:00 AM, 7:57 AM	7:00 AM, 7:50 AM	7:00 AM, 7:28 AM (arr), 7:30 AM (dep), 7:58 AM	7:13 AM (arr), 7:15 AM (dep), 7:43 AM (arr), 7:45 AM (dep)	7:00 AM, 7:17 AM, 7:30 AM, 7:47 AM	
8:00 AM	SB 8:07 AM, SB 8:19 AM, NB 8:38 AM, SB 8:44 AM	SB 8:07 AM, SB 8:19 AM, NB 8:38 AM, SB 8:44 AM	8:00 AM, 8:57 AM	8:00 AM, 8:50 AM	8:00 AM, 8:28 AM (arr), 8:30 AM (dep), 8:58 AM	8:13 AM (arr), 8:15 AM (dep), 8:43 AM (arr), 8:45 AM (dep)	8:00 AM, 8:17 AM, 8:30 AM, 8:47 AM	
9:00 AM	SB 9:19 AM, NB 9:38 AM, SB 9:50 AM	SB 9:19 AM, NB 9:38 AM, SB 9:50 AM	9:00 AM, 9:57 AM	9:00 AM, 9:50 AM	9:00 AM, 9:28 AM (arr), 9:30 AM (dep), 9:58 AM	9:13 AM (arr), 9:15 AM (dep), 9:43 AM (arr), 9:45 AM (dep)	9:00 AM, 9:17 AM, 9:30 AM, 9:47 AM	WB 9:01 AM (arr), EB 9:07 AM (dep)
10:00 AM	SB 10:08 AM, NB 10:38 AM	SB 10:08 AM, NB 10:38 AM	10:00 AM, 10:57 AM	10:00 AM, 10:50 AM	10:00 AM, 10:28 AM (arr), 10:30 AM (dep), 10:58 AM	10:13 AM (arr), 10:15 AM (dep), 10:43 AM (arr), 10:45 AM (dep)	10:00 AM, 10:17 AM, 10:30 AM, 10:47 AM	



Operator -->	SolanoExpress	SolanoExpress	City Coach	City Coach	City Coach	City Coach	City Coach	Yolobus
Service Hour	Blue Line (M-Th)	Blue Line (F)	Route 1	Route 3	Route 4	Route 5	Route 6	Route 220
11:00 AM	SB 11:18 AM, NB 11:38 AM	SB 11:18 AM, NB 11:38 AM	11:00 AM, 11:57 AM	11:00 AM, 11:50 AM	11:00 AM (arr), 11:28 AM (dep), 11:30 AM, 11:58 AM	11:13 AM (arr), 11:15 AM (dep), 11:43 AM (arr), 11:45 AM (dep)	11:00 AM, 11:17 AM, 11:30 AM, 11:47 AM	WB 11:42 AM (arr), EB 11:52 AM (dep)
12:00 PM	SB 12:08 PM, NB 12:45 PM	SB 12:08 PM, NB 12:45 PM	12:00 PM, 12:57 PM	12:00 PM, 12:50 PM	12:00 PM, 12:28 PM (arr), 12:30 PM (dep), 12:58 PM	12:13 PM (arr), 12:15 PM (dep), 12:43 PM (arr), 12:45 PM (dep)	12:00 PM, 12:17 PM, 12:30 PM, 12:47 PM	
1:00 PM	SB 1:18 PM, NB 1:38 PM	SB 1:18 PM, NB 1:19 PM, NB 1:49 PM	1:00 PM, 1:57 PM	1:00 PM, 1:50 PM	1:00 PM, 1:28 PM (arr), 1:30 PM (dep), 1:58 PM	1:13 PM (arr), 1:15 PM (dep), 1:43 PM (arr), 1:45 PM (dep)	1:00 PM, 1:17 PM, 1:30 PM, 1:47 PM	
2:00 PM	NB 2:10 PM, SB 2:18 PM, NB 2:42 PM	NB 2:15 PM, SB 2:18 PM, NB 2:51 PM	2:00 PM, 2:57 PM	2:00 PM, 2:50 PM	2:00 PM, 2:28 PM (arr), 2:30 PM (dep), 2:58 PM	2:13 PM (arr), 2:15 PM (dep), 2:43 PM (arr), 2:45 PM (dep)	2:00 PM, 2:17 PM, 2:30 PM, 2:47 PM	
3:00 PM	NB 3:07 PM, SB 3:18 PM, NB 3:47 PM	NB 3:08 PM, SB 3:18 PM, NB 3:55 PM	3:00 PM, 3:57 PM	3:00 PM, 3:50 PM	3:00 PM, 3:28 PM (arr), 3:30 PM (dep), 3:58 PM	3:13 PM (arr), 3:15 PM (dep), 3:43 PM (arr), 3:45 PM (dep)	3:00 PM, 3:17 PM, 3:30 PM, 3:47 PM	WB 3:42 PM (arr), EB 3:52 PM (dep)
4:00 PM	SB 4:18 PM, NB 4:47 PM	SB 4:18 PM, NB 4:25 PM, SB 4:48 PM	4:00 PM, 4:57 PM	4:00 PM, 4:50 PM	4:00 PM, 4:28 PM (arr), 4:30 PM (dep), 4:58 PM	4:13 PM (arr), 4:15 PM (dep), 4:43 PM (arr), 4:45 PM (dep)	4:00 PM, 4:17 PM, 4:30 PM, 4:47 PM	



Operator -->	SolanoExpress	SolanoExpress	City Coach	City Coach	City Coach	City Coach	City Coach	Yolobus
Service Hour	Blue Line (M-Th)	Blue Line (F)	Route 1	Route 3	Route 4	Route 5	Route 6	Route 220
5:00 PM	SB 5:18 PM, NB 5:47 PM, SB 5:51 PM	SB 5:18 PM, NB 5:25 PM, NB 5:55 PM, SB 5:55 PM	5:00 PM, 5:57 PM (arr)	5:00 PM, 5:50 PM	5:00 PM, 5:28 PM (arr), 5:30 PM (dep), 5:58 PM	5:13 PM (arr), 5:15 PM (dep), 5:43 PM (arr), 5:45 PM (dep)	5:00 PM, 5:17 PM, 5:30 PM, 5:47 PM	EB 5:02 PM
6:00 PM	SB 6:09 PM, NB 6:17 PM, SB 6:39 PM, NB 6:47 PM	SB 6:18 PM, NB 6:25 PM, SB 6:51 PM, NB 6:55 PM		6:00 PM, 6:50 PM (arr)	6:00 PM, 6:28 PM (arr)	6:13 PM (arr), 6:15 PM (dep), 6:43 PM	6:00 PM, 6:17 PM, 6:47 PM (arr)	
7:00 PM	NB 7:14 PM, SB 7:19 PM, NB 7:43 PM	NB 7:18 PM, SB 7:24 PM, NB 7:45 PM				7:13 PM (arr)		
8:00 PM	NB 8:29 PM	NB 8:31 PM						
9:00 PM								
10:00 PM								
11:00 PM								
12:00 AM								



Vallejo Transit Center and Vallejo Ferry Terminal

The Vallejo Transit Center is the primary transit hub in Vallejo. It is directly served by four operators: SolanoExpress (Red Line), SolTrans (all routes), the VA Shuttle (to Mare Island and Martinez outpatient centers), and Greyhound.

While the frequency and span of service is currently reduced on SolTrans routes, there is reasonable connectivity with the Red Line throughout the day. The reduced SolTrans service does not connect with any Red Line trips before 7:00 a.m. or after 6:00 p.m. or 7:00 p.m. (depending on the route). It is assumed SolTrans' full service schedule offers improved connectivity with the Red Line throughout the day.

Both the Red Line and the current SolTrans service offer connectivity with the VA Shuttle and Greyhound, though some riders may face a wait-time of up to 45 minutes for the connection.

The Vallejo Ferry Terminal, a short walk from the Vallejo Transit Center is directly served by four operators: SolanoExpress (Yellow Line), Vallejo-to-San Francisco Ferry, SolTrans (Route 5), and Napa Vine (Routes 11 and 11X). Napa Vine Route 11 provides service between the Redwood Park & Ride in Napa with the Vallejo Ferry Terminal; it also serves the Vallejo Transportation Center. Route 11X offers an express version of this route, with just two stops (American Canyon and Vallejo Ferry Terminal) after departing Napa.

Based on the published schedule, SolanoExpress Yellow Line service to this hub is limited to the afternoon commute hours. If there is service to the Ferry Terminal earlier in the day, this is not clearly identified in the schedule or route information. Since the walk from the Vallejo Transportation Center is less than one-quarter of a mile, the absence of Yellow Line service earlier in the day may not be a significant barrier to accessing the Vallejo Ferry.

While the frequency and span of service is currently reduced on SolTrans routes, SolTrans Route 5 currently provides reasonable connectivity with the Vallejo Ferry, with a maximum wait time of approximately 50 minutes. The reduced schedule for Route 5 does not, however, connect with Ferry trips departing before 7:45 a.m. or after 5:45 p.m. It is assumed SolTrans' full service schedule offers improved connectivity with the ferry throughout the day.



Exhibit 8.2.4 Vallejo Ferry Terminal Connectivity

Operator -->	SolanoExpress Yellow Line	Vallejo Ferry	SolTrans* Route 5	Napa Vine Route 11	Napa Vine Route 11X
4:00 AM					SB 4:30 AM
5:00 AM		Dep 5:30 AM		NB 5:30 AM	SB 5:25 AM, SB 5:55 AM
6:00 AM		Dep 6:00 AM, Dep 6:30 AM		NB 6:30 AM	NB 6:25 AM, SB 6:40 AM NB 6:55 AM
7:00 AM		Dep 7:00 AM, Arr 7:35 AM, Dep 7:45 AM	SB 7:21 AM, NB 7:32 AM	SB 7:14 AM, NB 7:30 AM	NB 7:45 AM
8:00 AM		Arr 8:25 AM, Dep 8:30 AM	SB 8:21 AM, NB 8:32 AM	SB 8:14 AM, NB 8:30 AM	
9:00 AM		Arr 9:15 AM	SB 9:21 AM, NB 9:32 AM	SB 9:19 AM, NB 9:30 AM	
10:00 AM		Dep 10:15 AM, Arr 10:55 AM	SB 10:21 AM, NB 10:32 AM	SB 10:19 AM, NB 10:30 AM	
11:00 AM			SB 11:21 AM, NB 11:32 AM	SB 11:19 AM, NB 11:30 AM	
12:00 PM		Dep 12:00 PM, Arr 12:45 PM	SB 12:21 PM, NB 12:32 PM	SB 12:19 PM, NB 12:30 PM	
1:00 PM			SB 1:21 PM, NB 1:32 PM	SB 1:19 PM, NB 1:30 PM	
2:00 PM		Dep 2:00 PM	SB 2:21 PM, NB 2:32 PM	SB 2:19 PM, NB 2:40 PM	
3:00 PM	3:57 PM	Dep 3:10 PM, Arr 3:50 PM	SB 3:21 PM, NB 3:32 PM	SB 3:19 PM, NB 3:40 PM	
4:00 PM	4:52 PM	Dep 4:00 PM, Arr 4:30 PM, Dep 4:45 PM	SB 4:21 PM, NB 4:32 PM	SB 4:19 PM, NB 4:40 PM	SB 4:25 PM
5:00 PM	5:52 PM	Arr 5:30 PM, Dep 5:45 PM	SB 5:21 PM, NB 5:32 PM	SB 5:19 PM, NB 5:40 PM	SB 5:25 PM, NB 5:45 PM, NB 5:55 PM
6:00 PM	6:22 PM, 6:48 PM	Arr 6:00 PM, Arr 6:40 PM	SB 6:21 PM	SB 6:29 PM, NB 6:40 PM	NB 6:50 PM
7:00 PM	7:18 PM	Dep 7:00 PM, Arr 7:00 PM		SB 7:29 PM, NB 7:40 PM	NB 7:10 PM
8:00 PM	8:48 PM	Arr 8:15 PM		SB 8:29 PM, NB 8:40 PM	
9:00 PM	9:33 PM	Arr 9:15 PM			
10:00 PM					
11:00 PM					
12:00 AM					
			*Effective 4/11/20		



Exhibit 8.2.5 Vallejo Transit Center Connectivity

Operator -->	SolanoExpress	SolanoExpress	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	VA	Greyhound
Service Hour	Red Line (South)	Red Line (North)	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Route 7A/B	Route 8	Shuttle	
4:00 AM	SB 4:27 AM, SB 4:42 AM, SB 4:55 AM											
5:00 AM	SB 5:09 AM, NB 5:22 AM, SB 5:24 AM, SB 5:37 AM, NB 5:39 AM, SB 5:51 AM, NB 5:54 AM	NB 5:00 AM										
6:00 AM	SB 6:05 AM, NB 6:09 AM, SB 6:20 AM, NB 6:24 AM, SB 6:35 AM, NB 6:39 AM, SB 6:50 AM, NB 6:54 AM	NB 6:00 AM							7A: 6:45 AM			
7:00 AM	SB 7:06 AM, NB 7:10 AM, SB 7:21 AM, NB 7:25 AM, SB 7:38 AM, NB 7:40 AM, SB 7:53 AM, NB 7:55 AM	NB 7:00 AM, SB 7:01 AM	NB 7:26 AM, SB 7:30 AM	NB 7:00 AM, SB 7:56 AM	WB 7:40 AM, EB 7:45 AM	SB 7:48 AM	SB 7:24 AM, NB 7:30 AM	WB 7:23 AM, EB 7:30 AM	7B: 7:13 AM (arr), 7B: 7:15 AM (dep), 7A: 7:45 AM	WB 7:42 AM		EB 7:45 AM, NB 7:45 AM
			<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>		

Operator -->	SolanoExpress	SolanoExpress	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	VA	Greyhound
Service Hour	Red Line (South)	Red Line (North)	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Route 7A/B	Route 8	Shuttle	
8:00 AM	SB 8:08 AM, NB 8:10 AM, NB 8:25 AM, SB 8:25 AM, NB 8:40 AM, SB 8:45 AM, NB 8:55 AM	NB 8:00 AM, SB 8:03 AM	NB 8:26 AM, SB 8:30 AM	NB 8:00 AM, SB 8:56 AM	WB 8:10 AM, EB 8:15 AM, WB 8:40 AM, EB 8:45 AM	NB 8:00 AM, SB 8:48 AM	SB 8:24 AM, NB 8:30 AM	WB 8:23 AM, EB 8:30 AM	7B: 8:13 AM (arr), 7B: 8:15 AM (dep), 7A: 8:45 AM	EB 8:00 AM, WB 8:42 AM	Mare Island Arr 8:25 AM Dep 8:35 AM	
9:00 AM	SB 9:05 AM, NB 9:10 AM, SB 9:25 AM, NB 9:27 AM, SB 9:45 AM, NB 9:47 AM	NB 9:00 AM, SB 9:02 AM, NB 9:50 AM	NB 9:26 AM, SB 9:30 AM	NB 9:00 AM, SB 9:56 AM	WB 9:10 AM, EB 9:15 AM, WB 9:40 AM, EB 9:45 AM	NB 9:00 AM, SB 9:48 AM	SB 9:24 AM, NB 9:30 AM	WB 9:23 AM, EB 9:30 AM	7B: 9:13 AM (arr), 7B: 9:15 AM (dep), 7A: 9:45 AM	EB 9:00 AM, WB 9:42 AM	Martinez Dep 9:15 AM	
10:00 AM	SB 10:05 AM, NB 10:06 AM, SB 10:25 AM, NB 10:26 AM, SB 10:45 AM, NB 10:46 AM	SB 10:02 AM, NB 10:50 AM	NB 10:26 AM, SB 10:30 AM	NB 10:00 AM, SB 10:56 AM	WB 10:10 AM, EB 10:15 AM, WB 10:40 AM, EB 10:45 AM	NB 10:00 AM, SB 10:48 AM	SB 10:24 AM, NB 10:30 AM	WB 10:23 AM, EB 10:30 AM	7B: 10:13 AM (arr), 7B: 10:15 AM (dep), 7A: 10:45 AM	EB 10:00 AM, WB 10:42 AM	Mare Island Dep 10:30 AM	
11:00 AM	SB 11:05 AM, NB 11:06 AM, SB 11:25 AM, NB 11:26 AM, SB 11:45 AM, NB 11:46 AM	SB 11:02 AM, NB 11:50 AM	NB 11:26 AM, SB 11:30 AM	NB 11:00 AM, SB 11:56 AM	WB 11:10 AM, EB 11:15 AM, WB 11:40 AM, EB 11:45 AM	NB 11:00 AM, SB 11:48 AM	SB 11:24 AM, NB 11:30 AM	WB 11:23 AM, EB 11:30 AM	7B: 11:13 AM (arr), 7B: 11:15 AM (dep), 7A: 11:45 AM	EB 11:00 AM, WB 11:42 AM	Martinez Dep 11:15 AM	SB 11:35 AM, WB 11:35 AM
			<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>		



Operator -->	SolanoExpress	SolanoExpress	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	VA	Greyhound
Service Hour	Red Line (South)	Red Line (North)	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Route 7A/B	Route 8	Shuttle	
12:00 PM	SB 12:05 PM, NB 12:06 PM, SB 12:25 PM, NB 12:26 PM, SB 12:45 PM, NB 12:46 PM	SB 12:02 PM, NB 12:50 PM	NB 12:26 PM, SB 12:30 PM	NB 12:00 PM, SB 12:56 PM	WB 12:10 PM, EB 12:15 PM, WB 12:40 PM, EB 12:45 PM	NB 12:00 PM, SB 12:48 PM	SB 12:24 PM, NB 12:30 PM	WB 12:23 PM, EB 12:30 PM	7B: 12:13 PM (arr), 7B: 12:15 PM (dep), 7A: 12:45 PM	EB 12:00 PM, WB 12:42 PM		
1:00 PM	SB 1:05 PM, NB 1:06 PM, SB 1:25 PM, NB 1:26 PM, SB 1:45 PM, NB 1:46 PM	SB 1:02 PM, NB 1:53 PM	NB 1:26 PM, SB 1:30 PM	NB 1:00 PM, SB 1:56 PM	WB 1:10 PM, EB 1:15 PM, WB 1:40 PM, EB 1:45 PM	NB 1:00 PM, SB 1:48 PM	SB 1:24 PM, NB 1:30 PM	WB 1:23 PM, EB 1:30 PM	7B: 1:13 PM (arr), 7B: 1:15 PM (dep), 7A: 1:45 PM	EB 1:00 PM, WB 1:42 PM	Mare Island Dep 1:10 PM	
2:00 PM	SB 2:04 PM, NB 2:08 PM, SB 2:24 PM, NB 2:28 PM, SB 2:39 PM, NB 2:48 PM, SB 2:54 PM	SB 2:02 PM, NB 2:53 PM	NB 2:26 PM, SB 2:30 PM	NB 2:00 PM, SB 2:56 PM	WB 2:10 PM, EB 2:15 PM, WB 2:40 PM, EB 2:45 PM	NB 2:00 PM, SB 2:48 PM	SB 2:24 PM, NB 2:30 PM	WB 2:23 PM, EB 2:30 PM	7B: 2:13 PM (arr), 7B: 2:15 PM (dep), 7A: 2:45 PM	EB 2:00 PM, WB 2:42 PM	Martinez Dep 2:05 PM	
3:00 PM	NB 3:04 PM, SB 3:09 PM, NB 3:21 PM, SB 3:24 PM, NB 3:40 PM, SB 3:39 PM, SB 3:54 PM, NB 3:55 PM	SB 3:06 PM	NB 3:26 PM, SB 3:30 PM	NB 3:00 PM, SB 3:56 PM	WB 3:10 PM, EB 3:15 PM, WB 3:40 PM, EB 3:45 PM	NB 3:00 PM, SB 3:48 PM	SB 3:24 PM, NB 3:30 PM	WB 3:23 PM, EB 3:30 PM	7B: 3:13 PM (arr), 7B: 3:15 PM (dep), 7A: 3:45 PM	EB 3:00 PM, WB 3:42 PM	Mare Island Dep 3:30 PM	
			<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>		



Operator -->	SolanoExpress	SolanoExpress	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	VA	Greyhound
Service Hour	Red Line (South)	Red Line (North)	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Route 7A/B	Route 8	Shuttle	
4:00 PM	SB 4:09 PM, NB 4:10 PM, SB 4:24 PM, NB 4:25 PM, SB 4:39 PM, NB 4:43 PM, SB 4:54 PM, NB 4:58 PM	NB 4:00 PM, SB 4:06 PM	NB 4:26 PM, SB 4:30 PM	NB 4:00 PM, SB 4:56 PM	WB 4:10 PM, EB 4:15 PM, WB 4:40 PM, EB 4:45 PM	NB 4:00 PM, SB 4:48 PM	SB 4:24 PM, NB 4:30 PM	WB 4:23 PM, EB 4:30 PM	7B: 4:13 PM (arr), 7B: 4:15 PM (dep), 7A: 4:45 PM	EB 4:00 PM, WB 4:42 PM	Mare Island Arr 4:05 PM	
5:00 PM	SB 5:09 PM, NB 5:16 PM, SB 5:24 PM, NB 5:31 PM, SB 5:39 PM, NB 5:46 PM, SB 5:54 PM	NB 5:05 PM, SB 5:06 PM	NB 5:26 PM, SB 5:30 PM	NB 5:00 PM, SB 5:56 PM	WB 5:10 PM, EB 5:15 PM, WB 5:40 PM, EB 5:45 PM	NB 5:00 PM, SB 5:48 PM	SB 5:24 PM, NB 5:30 PM	WB 5:23 PM, EB 5:30 PM	7B: 5:13 PM (arr), 7B: 5:15 PM (dep), 7A: 5:45 PM	EB 5:00 PM, WB 5:42 PM		
6:00 PM	NB 6:01 PM, SB 6:09 PM, NB 6:14 PM, SB 6:24 PM, NB 6:29 PM, SB 6:39 PM, NB 6:44 PM, SB 6:54 PM, NB 6:55 PM	NB 6:06 PM, SB 6:06 PM	NB 6:26 PM, SB 6:30 PM	NB 6:00 PM, SB 6:56 PM	WB 6:10 PM (arr)	NB 6:00 PM	SB 6:24 PM (arr)	WB 6:23 PM (arr)	7B: 6:13 PM (arr), 7B: 6:15 PM (dep), 7A: 6:45 PM	EB 6:00 PM		
			<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>		



Operator -->	SolanoExpress	SolanoExpress	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	SolTrans*	VA	Greyhound
Service Hour	Red Line (South)	Red Line (North)	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Route 7A/B	Route 8	Shuttle	
7:00 PM	SB 7:09 PM, NB 7:10 PM, NB 7:21 PM, SB 7:30 PM, NB 7:36 PM, SB 7:45 PM, NB 7:51 PM	NB 7:00 PM, SB 7:06 PM	NB 7:26 PM (arr)	NB 7:00 PM								
8:00 PM	SB 8:05 PM, NB 8:07 PM, NB 8:22 PM, SB 8:29 PM, NB 8:36 PM, SB 8:53 PM	NB 8:00 PM, SB 8:02 PM, SB 8:44 PM										
9:00 PM	NB 9:01 PM, NB 9:21 PM, SB 9:23 PM, NB 9:41 PM, SB 9:47 PM	SB 9:44 PM										
10:00 PM	NB 10:15 PM, NB 10:36 PM, SB 10:49 PM											
11:00 PM	NB 11:21 PM, NB 11:41 PM											
12:00 AM												
			<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>	<i>*Effective 4/11/20</i>		



Connectivity outside Solano County

El Cerrito del Norte BART Station

The El Cerrito del Norte BART Station is located in El Cerrito. It is served by two BART lines: the Orange Line (Warm Springs/South Fremont – Richmond) and the Red Line (Richmond – Millbrae). Other operators serving this station include SolanoExpress (Red Line and Green Line), Golden Gate Transit (Routes 40 and 40X), WestCAT (Routes JX, JPX, JR, and JL), Napa Vine (Napa-BART Express), and AC Transit (Routes 7, 72, 72M, 72R, 76, 376, 800 and Transbay L).

SolanoExpress Red Line offers at least 20-minute frequencies throughout the day; service is more frequent during morning and afternoon peak commute hours. The Green Line only provides service during morning and afternoon peak commute hours. These routes are well coordinated with both BART lines, which typically offer four trips per hour. As a result, wait-times between SolanoExpress and BART connections are minimal, usually less than 15 minutes.

Most of the other services connecting at El Cerrito del Norte are connecting with BART rather than SolanoExpress. However, the 2019 SolanoExpress rider survey did indicate some riders connecting with AC Transit, presumably at this station. Even on AC Transit's modified schedule, local service to El Cerrito del Norte is offered approximately every 30 minute. The span of service is also reduced, but start times vary by route (for example, the first trip on Route 76 is at 6:20 a.m., while Route 7 starts at 7:55 a.m.). It is assumed AC Transit's full service schedule offers improved connectivity with SolanoExpress throughout the day.

Red and Green Line riders have ample opportunity to connect with Golden Gate Transit to travel to San Rafael or Napa Vine to travel to Napa, if desired (even with Golden Gate Transit's reduced schedule). WestCAT, also on a reduced schedule, provides good connectivity to Hercules and Pinole.



Exhibit 8.2.6 El Cerrito del Norte BART Station Connectivity

Operator -->	SolanoExpress	SolanoExpress	SolanoExpress	SolanoExpress	Golden Gate Transit*	Napa Vine	WestCAT*	BART	BART	BART	BART	AC Transit*
Service Hour	Red Line (NB) (arrive)	Red Line (SB) (depart)	Green Line (WB) (arrive)	Green Line (EB) (depart)	Routes 40/40X	Napa-BART Express	Routes JX, JPX, JR, JL	to Millbrae	from Millbrae	to Warm Springs	from Warm Springs	Routes 7, 72, 72M, 72R, 76, 376, 800, L
4:00 AM	4:50 AM		4:50 AM	4:56 AM								
5:00 AM	5:05 AM, 5:20 AM, 5:34 AM, 5:49 AM	5:00 AM, 5:17 AM, 5:32 AM, 5:47 AM	5:10 AM, 5:30 AM, 5:50 AM	5:16 AM, 5:36 AM, 5:56 AM	40 WB: 5:46 AM	SB 5:41 AM (arr), NB 5:45 AM (dep)	SB JPX: 5:52 AM, SB JL: 5:54 AM, NB JL 5:56 AM	5:05 AM, 5:15 AM, 5:30 AM, 5:45 AM		5:07 AM, 5:22 AM, 5:37 AM, 5:52 AM	5:45 AM, 5:58 AM	
6:00 AM	6:02 AM, 6:17 AM, 6:34 AM, 6:49 AM	6:02 AM, 6:17 AM, 6:32 AM, 6:47 AM	6:10 AM, 6:30 AM, 6:50 AM	6:16 AM, 6:36 AM, 6:56 AM	40 EB: 6:03 AM, 40 WB: 6:12 AM, 40 WB: 6:23 AM, 40 WB: 6:53 AM, 40X WB: 6:58 AM	SB 6:15 AM (arr), NB 6:20 AM (dep), SB 6:45 AM (arr), NB 6:50 AM (dep)	NB JPX: 6:16 AM, SB JPX: 6:32 AM, SB JR: 6:33 AM, NB JR: 6:36 AM, NB JPX: 6:56 AM	6:00 AM, 6:15 AM, 6:30 AM, 6:45 AM	6:50 AM	6:07 AM, 6:22 AM, 6:37 AM, 6:52 AM	6:13 AM, 6:28 AM, 6:43 AM, 6:58 AM	
7:00 AM	7:04 AM, 7:19 AM, 7:35 AM, 7:50 AM	7:02 AM, 7:17 AM, 7:32 AM, 7:47 AM	7:10 AM, 7:30 AM, 7:50 AM	7:16 AM, 7:36 AM, 7:56 AM	40 EB: 7:04 AM, 40X WB: 7:28 AM, 40 WB: 7:32 AM, 40 EB: 7:34 AM, 40X WB: 7:58 AM	SB 7:15 AM (arr), NB 7:20 AM (dep), SB 7:45 AM (arr), NB 7:50 AM (dep)	SB JPX: 7:12 AM, SB JL: 7:12 AM, NB JL: 7:16 AM, NB JPX: 7:36 AM, SB JPX 7:52 AM, SB JR: 7:52 AM	7:00 AM, 7:15 AM, 7:30 AM, 7:45 AM	7:05 AM, 7:21 AM, 7:36 AM, 7:51 AM	7:07 AM, 7:22 AM, 7:37 AM, 7:52 AM	7:13 AM, 7:29 AM, 7:44 AM, 7:59 AM	Frequent service on eight routes; too many to represent here
8:00 AM	8:05 AM, 8:20 AM, 8:35 AM, 8:50 AM	8:02 AM, 8:17 AM, 8:32 AM, 8:47 AM	8:10 AM, 8:34 AM	8:16 AM, 8:40 AM	40 EB: 8:05 AM, 40X WB: 8:28 AM, 40 WB: 8:32 AM, 40 EB: 8:35 AM, 40X WB: 8:58 AM	SB 8:17 AM (arr), NB 8:20 AM (dep)	NB JR: 8:02 AM, NB JPX: 8:16 AM, SB JPX: 8:32 AM, SB JL: 8:32 AM, NB JL: 8:36 AM, NB JPX: 8:56 AM	8:00 AM, 8:15 AM, 8:30 AM, 8:45 AM	8:06 AM, 8:21 AM, 8:36 AM, 8:51 AM	8:07 AM, 8:22 AM, 8:37 AM, 8:52 AM	8:14 AM, 8:28 AM, 8:43 AM, 8:58 AM	
9:00 AM	9:10 AM, 9:28 AM, 9:48 AM	9:04 AM, 9:25 AM, 9:44 AM			40 EB: 9:38 AM, 40 WB: 9:49 AM		SB JPX: 9:12 AM, SB JR: 9:13 AM, NB JR: 9:16 AM, NB JPX: 9:36 AM, SB JL: 9:55 AM	9:00 AM, 9:15 AM, 9:30 AM, 9:45 AM	9:06 AM, 9:21 AM, 9:36 AM, 9:51 AM	9:07 AM, 9:22 AM, 9:37 AM, 9:52 AM	9:13 AM, 9:28 AM, 9:43 AM, 9:58 AM	
					<i>*Effective 3/28/20</i>		<i>*Effective 4/18/20</i>					<i>*Effective 3/31/20</i>



Operator -->	SolanoExpress	SolanoExpress	SolanoExpress	SolanoExpress	Golden Gate Transit*	Napa Vine	WestCAT*	BART	BART	BART	BART	AC Transit*
Service Hour	Red Line (NB)	Red Line (SB)	Green Line (WB)	Green Line (EB)	Routes 40/40X	Napa-BART Express	Routes JX, JPX, JR, JL	to Millbrae	from Millbrae	to Warm Springs	from Warm Springs	Routes 7, 72, 72M, 72R, 76, 376, 800, L
10:00 AM	10:08 AM, 10:28 AM, 10:48 AM	10:04 AM, 10:25 AM, 10:44 AM			40 EB: 10:36 AM, 40 WB: 10:51 AM	SB 10:09 AM (arr), NB 10:15 AM (dep)	NB JL: 10:02 AM, NB JPX: 10:16 AM, SB JR: 10:35 AM, NB JR: 10:36 AM, SB JPX: 10:42 AM, NB JPX: 10:56 AM	10:00 AM, 10:15 AM, 10:30 AM, 10:45 AM	10:06 AM, 10:21 AM, 10:36 AM, 10:51 AM	10:07 AM, 10:22 AM, 10:37 AM, 10:52 AM	10:13 AM, 10:28 AM, 10:43 AM, 10:58 AM	
11:00 AM	11:08 AM, 11:28 AM, 11:48 AM	11:04 AM, 11:25 AM, 11:44 AM			40 EB: 11:33 AM		SB JL: 11:13 AM, NB JL: 11:16 AM, SB JPX: 11:22 AM, NB JPX: 11:36 AM, SB JR: 11:55 AM	11:00 AM, 11:15 AM, 11:30 AM, 11:45 AM	11:06 AM, 11:21 AM, 11:36 AM, 11:51 AM	11:07 AM, 11:22 AM, 11:37 AM, 11:52 AM	11:13 AM, 11:28 AM, 11:43 AM, 11:58 AM	
12:00 PM	12:08 PM, 12:28 PM, 12:48 PM	12:04 PM, 12:25 PM, 12:44 PM			40 EB: 12:33 PM, 40 WB: 12:49 PM	NB 12:45 PM	SB JPX: 12:02 PM, NB JR: 12:02 PM, NB JPX: 12:16 PM, SB JL: 12:35 PM, NB JL: 12:36 PM, SB JPX: 12:42 PM	12:00 PM, 12:15 PM, 12:30 PM, 12:45 PM	12:06 PM, 12:21 PM, 12:36 PM, 12:51 PM	12:07 PM, 12:22 PM, 12:37 PM, 12:52 PM	12:13 PM, 12:28 PM, 12:43 PM, 12:58 PM	
1:00 PM	1:08 PM, 1:28 PM, 1:48 PM	1:04 PM, 1:25 PM, 1:44 PM			40 EB: 1:33 PM		NB JPX: 1:02 PM, SB JR: 1:13 PM, NB JR: 1:16 PM, SB JPX: 1:22 PM, NB JPX: 1:36 PM, SB JL: 1:55 PM	1:00 PM, 1:15 PM, 1:30 PM, 1:45 PM	1:06 PM, 1:21 PM, 1:36 PM, 1:51 PM	1:07 PM, 1:22 PM, 1:37 PM, 1:52 PM	1:13 PM, 1:28 PM, 1:43 PM, 1:58 PM	
					<i>*Effective 3/28/20</i>		<i>*Effective 4/18/20</i>					<i>*Effective 3/31/20</i>



Operator -->	SolanoExpress	SolanoExpress	SolanoExpress	SolanoExpress	Golden Gate Transit*	Napa Vine	WestCAT*	BART	BART	BART	BART	AC Transit*
Service Hour	Red Line (NB)	Red Line (SB)	Green Line (WB)	Green Line (EB)	Routes 40/40X	Napa-BART Express	Routes JX, JPX, JR, JL	to Millbrae	from Millbrae	to Warm Springs	from Warm Springs	Routes 7, 72, 72M, 72R, 76, 376, 800, L
2:00 PM	2:08 PM, 2:28 PM, 2:48 PM	2:04 PM, 2:24 PM, 2:40 PM, 2:57 PM	2:39 PM, 2:59 PM	2:50 PM	40 EB: 2:36 PM, 40 WB: 2:46 PM		SB JPX: 2:02 PM, NB JL: 2:02 PM, NB JPX: 2:16 PM, SB JR: 2:35 PM, NB JR: 2:36 PM, SB JPX: 2:42 PM	2:00 PM, 2:15 PM, 2:30 PM, 2:45 PM	2:06 PM, 2:21 PM, 2:36 PM, 2:51 PM	2:07 PM, 2:22 PM, 2:37 PM, 2:52 PM	2:13 PM, 2:28 PM, 2:43 PM, 2:58 PM	
3:00 PM	3:03 PM, 3:18 PM, 3:33 PM, 3:48 PM	3:12 PM, 3:27 PM, 3:42 PM, 3:57 PM	3:19 PM, 3:39 PM, 3:59 PM	3:10 PM, 3:30 PM, 3:50 PM	40 EB: 3:06 PM, 40 EB: 3:35 PM, 40 WB: 3:46 PM	SB 3:15 PM (arr), NB 3:30 PM (dep)	NB JPX: 3:02 PM, SB JL: 3:13 PM, NB JL: 3:16 PM, SB JPX: 3:22 PM, NB JPX: 3:36 PM, SB JR: 3:55 PM	3:00 PM, 3:15 PM, 3:30 PM, 3:45 PM	3:06 PM, 3:21 PM, 3:36 PM, 3:51 PM	3:07 PM, 3:22 PM, 3:37 PM, 3:52 PM	3:13 PM, 3:28 PM, 3:43 PM, 3:58 PM	
4:00 PM	4:03 PM, 4:18 PM, 4:33 PM, 4:48 PM	4:12 PM, 4:27 PM, 4:42 PM, 4:57 PM	4:19 PM, 4:39 PM, 4:59 PM	4:10 PM, 5:30 PM, 5:50 PM	40 EB: 4:08 PM, 40 WB: 4:16 PM, 40 EB: 4:42 PM	SB 4:20 PM (arr), NB 4:30 PM (dep)	SB JPX: 4:02 PM, NB JR: 4:02 PM, NB JPX: 4:16 PM, SB JL: 4:35 PM, NB JL: 4:36 PM, SB JPX: 4:42 PM	4:00 PM, 4:15 PM, 4:30 PM, 4:45 PM, 4:59 PM	4:06 PM, 4:21 PM, 4:36 PM, 4:51 PM	4:07 PM, 4:22 PM, 4:37 PM, 4:52 PM	4:13 PM, 4:28 PM, 4:43 PM, 4:58 PM	
5:00 PM	5:03 PM, 5:18 PM, 5:33 PM, 5:48 PM	5:12 PM, 5:27 PM, 5:42 PM, 5:57 PM	5:19 PM, 5:39 PM, 5:59 PM	5:10 PM, 5:30 PM, 5:50 PM	40 EB: 5:13 PM, 40X EB: 5:18 PM, 40 EB: 5:43 PM, 40 WB: 5:47 PM, 40X EB: 5:49 PM	SB 5:06 PM (arr), NB 5:20 PM (dep), SB 5:35 PM (arr), NB 5:50 PM (dep)	NB JPX: 5:02 PM, SB JPX: 5:12 PM, SB JR: 5:13 PM, NB JR: 5:16 PM, NB JPX: 5:36 PM, SB JPX: 5:52 PM, SB JL: 5:55 PM	5:14 PM, 5:29 PM, 5:45 PM	5:06 PM, 5:21 PM, 5:36 PM, 5:51 PM	5:07 PM, 5:22 PM, 5:37 PM, 5:52 PM	5:13 PM, 5:28 PM, 5:43 PM, 5:58 PM	
					<i>*Effective 3/28/20</i>		<i>*Effective 4/18/20</i>					<i>*Effective 3/31/20</i>



Operator -->	SolanoExpress	SolanoExpress	SolanoExpress	SolanoExpress	Golden Gate Transit*	Napa Vine	WestCAT*	BART	BART	BART	BART	AC Transit*
Service Hour	Red Line (NB)	Red Line (SB)	Green Line (WB)	Green Line (EB)	Routes 40/40X	Napa-BART Express	Routes JX, JPX, JR, JL	to Millbrae	from Millbrae	to Warm Springs	from Warm Springs	Routes 7, 72, 72M, 72R, 76, 376, 800, L
6:00 PM	6:03 PM, 6:18 PM, 6:33 PM, 6:48 PM	6:12 PM, 6:27 PM, 6:42 PM, 6:57 PM	6:19 PM, 6:39 PM	6:10 PM, 6:30 PM, 6:50 PM	40 WB: 6:17 PM, 40X EB: 6:19 PM, 40 WB: 6:49 PM	SB 6:05 PM (arr), NB 6:15 PM (dep), SB 6:25 PM (arr), NB 6:35 PM (dep)	NB JL: 6:02 PM, NB JPX: 6:16 PM, SB JPX: 6:32 PM, SB JR: 6:35 PM, NB JR: 6:36 PM	6:00 PM, 6:15 PM, 6:30 PM, 6:45 PM	6:06 PM, 6:21 PM, 6:36 PM, 6:51 PM	6:07 PM, 6:22 PM, 6:37 PM, 6:52 PM	6:13 PM, 6:28 PM, 6:43 PM, 6:58 PM	
7:00 PM	7:03 PM, 7:17 PM, 7:32 PM, 7:53 PM	7:12 PM, 7:27 PM, 7:43 PM, 7:58 PM	7:19 PM	7:30 PM	40 EB: 7:06 PM, 40 EB: 7:34 PM, 40 WB: 7:53 PM		NB JPX: 7:02 PM, SB JPX: 7:12 PM, SB JL: 7:15 PM, NB JL: 7:16 PM, NB JPX: 7:36 PM, SB JPX: 7:52 PM, SB JR: 7:55 PM	7:00 PM, 7:15 PM, 7:30 PM, 7:45 PM	7:06 PM, 7:21 PM, 7:36 PM, 7:51 PM	7:07 PM, 7:22 PM, 7:37 PM, 7:53 PM	7:13 PM, 7:28 PM, 7:43 PM, 7:58 PM	
8:00 PM	8:08 PM, 8:28 PM, 8:52 PM	8:12 PM, 8:37 PM, 8:57 PM			40 EB: 8:33 PM, 40 WB: 8:53 PM		NB JR: 8:02 PM, NB JPX: 8:16 PM, SB JPX: 8:32 PM, SB JL: 8:35 PM, NB JL: 8:36 PM	8:42 PM (Fri only)	8:06 PM, 8:19 PM, 8:39 PM, 8:59 PM	8:14 PM, 8:34 PM, 8:53 PM	8:13 PM, 8:29 PM, 8:49 PM	
9:00 PM	9:16 PM, 9:46 PM	9:17 PM, 9:53 PM			40 EB: 9:33 PM, 40 WB: 9:55 PM		NB JPX: 9:02 PM, SB JR: 9:15 PM, NB JR: 9:19 PM, SB JL: 9:55 PM, NB JL: 9:58 PM		9:19 PM, 9:32 PM (Fri only), 9:39 PM	9:21 PM, 9:46 PM	9:09 PM, 9:29 PM, 9:48 PM	
10:00 PM	10:10 PM	10:15 PM			40 EB 10:32 PM			10:19 PM (Fri only)	10:01 PM	10:10 PM, 10:34 PM, 10:58 PM	10:05 PM, 10:29 PM, 10:53 PM	
					<i>*Effective 3/28/20</i>		<i>*Effective 4/18/20</i>					<i>*Effective 3/31/20</i>



Operator -->	SolanoExpress	SolanoExpress	SolanoExpress	SolanoExpress	Golden Gate Transit*	Napa Vine	WestCAT*	BART	BART	BART	BART	AC Transit*
Service Hour	Red Line (NB)	Red Line (SB)	Green Line (WB)	Green Line (EB)	Routes 40/40X	Napa-BART Express	Routes JX, JPX, JR, JL	to Millbrae	from Millbrae	to Warm Springs	from Warm Springs	Routes 7, 72, 72M, 72R, 76, 376, 800, L
11:00 PM	11:12 PM	11:00 PM, 11:20 PM							11:29 PM (Fri only)	11:22 PM, 11:46 PM	11:17 PM, 11:41 PM	
12:00 AM										12:06 AM, 12:26 AM	12:05 AM, 12:29 AM, 12:53 AM	
					*Effective 3/28/20		*Effective 4/18/20					*Effective 3/31/20



Pleasant Hill BART Station

The Pleasant Hill BART Station is served by the BART Yellow Line (Antioch – SFO). Connecting bus service is available through SolanoExpress (Blue Line and Yellow Line), Wheels (Route 70X), and County Connection (Routes 1, 4, 5, 9, 14, 21, 93X, 95X, 96X, 98X, 311, and 321).

Based on the published schedule, SolanoExpress Yellow Line service to this hub is limited to early mornings only, as the main focus of the Yellow Line is on Walnut Creek BART. If there is service to Pleasant Hill BART during the afternoon/evening, this is not clearly identified in the schedule or route information. It appears service to Pleasant Hill is provided as a convenience for riders who do not wish to travel all the way to Walnut Creek, given all BART routes travel through Walnut Creek BART Station as well, and Wheels and County Connection service is also available there. What is not clear is how those who travel to/from Pleasant Hill in the morning via the Yellow Line return in the evening.

SolanoExpress Blue Line offers two trips per hour during peak commute times; service is less frequent during midday hours. As noted above, the Yellow Line only provides service between 6:00 a.m. and 8:35 a.m., all traveling southbound. These routes are well coordinated with BART, which offers a minimum of four trips per hour, with as many as 11 trips per hour during peak commute times. As a result, wait times between SolanoExpress and BART connections are minimal, usually less than 15 minutes.

County Connection offers connectivity on eight routes, including local service within central Contra Costa County. Some routes operate as frequently as every 15 minutes during peak hours, though others offer more limited service (with frequency of 75 to 90 minutes).



Exhibit 8.2.7 Pleasant Hill BART Station Connectivity

Operator -->	SolanoExpress	SolanoExpress	LAVTA (Wheels)	BART	BART	County Connection
Service Hour	Blue Line	Yellow Line	Route 70X	to SFO	From SFO	Routes 7, 9, 11, 14, 15, 18, 311, 316
4:00 AM						Frequent service on 8 routes; too many to represent here
5:00 AM	Arr 5:15 AM, Dep 5:27 AM, Arr 5:55 AM		Dep 5:43 AM	5:01 AM, 5:16 AM, 5:31 AM, 5:46 AM		
6:00 AM	Dep 6:07 AM, Arr 6:25 AM, Dep 6:37 AM, Arr 6:55 AM	6:05 AM, 6:35 AM	Dep 6:13 AM, Dep 6:43 AM	6:01 AM, 6:11 AM, 6:16 AM, 6:26 AM, 6:31 AM, 6:41 AM, 6:46 AM, 6:56 AM	6:04 AM, 6:19 AM, 6:34 AM, 6:49 AM	
7:00 AM	Dep 7:07 AM, Arr 7:25 AM, Dep 7:37 AM, Arr 7:55 AM	7:05 AM, 7:35 AM	Arr 7:01 AM, Dep 7:11 AM, Arr 7:31 AM, Dep 7:41 AM	7:01 AM, 7:06 AM, 7:11 AM, 7:16 AM, 7:21 AM, 7:26 AM, 7:31 AM, 7:36 AM, 7:41 AM, 7:46 AM, 7:56 AM	7:04 AM, 7:19 AM, 7:27 AM, 7:35 AM, 7:42 AM, 7:50 AM, 7:57 AM	
8:00 AM	Dep 8:07 AM, Arr 8:25 AM, Dep 8:37 AM, Arr 8:55 AM	8:05 AM, 8:35 AM	Arr 8:01 AM, Dep 8:11 AM	8:01 AM, 8:11 AM, 8:16 AM, 8:26 AM, 8:31 AM, 8:46 AM	8:05 AM, 8:12 AM, 8:20 AM, 8:34 AM, 8:49 AM	
9:00 AM	Dep 9:07 AM, Arr 9:25 AM, Dep 9:37 AM			9:01 AM, 9:16 AM, 9:31 AM, 9:46 AM	9:04 AM, 9:19 AM, 9:34 AM, 9:49 AM	
10:00 AM	Arr 10:25 AM, Dep 10:37 AM			10:01 AM, 10:16 AM, 10:31 AM, 10:46 AM	10:04 AM, 10:19 AM, 10:34 AM, 10:49 AM	
11:00 AM	Arr 11:25 AM, Dep 11:37 AM			11:01 AM, 11:16 AM, 11:31 AM, 11:46 AM	11:04 AM, 11:19 AM, 11:34 AM, 11:49 AM	



Operator -->	SolanoExpress	SolanoExpress	LAVTA (Wheels)	BART	BART	County Connection
Service Hour	Blue Line	Yellow Line	Route 70X	to SFO	From SFO	Routes 7, 9, 11, 14, 15, 18, 311, 316
12:00 PM	Arr 12:25 PM, Dep 12:37 PM			12:01 PM, 12:16 PM, 12:31 PM, 12:46 PM	12:04 PM, 12:19 PM, 12:34 PM, 12:49 PM	
1:00 PM	Arr 1:25 PM, Dep 1:37 PM			1:01 PM, 1:16 PM, 1:31 PM, 1:46 PM	1:04 PM, 1:19 PM, 1:34 PM, 1:49 PM	
2:00 PM	Arr 2:25 PM, Dep 2:37 PM, Arr 2:55 PM			2:01 PM, 2:16 PM, 2:31 PM, 2:46 PM	2:04 PM, 2:19 PM, 2:34 PM, 2:49 PM	
3:00 PM	Dep 3:07 PM, Arr 3:25 PM, Dep 3:37 PM, Arr 3:55 PM			3:01 PM, 3:16 PM, 3:31 PM, 3:46 PM	3:04 PM, 3:19 PM, 3:34 PM, 3:49 PM	
4:00 PM	Dep 4:07 PM, Arr 4:25 PM, Dep 4:37 PM, Arr 4:55 PM		Arr 4:43 PM, Dep 4:50 PM	4:01 PM, 4:16 PM, 4:31 PM, 4:46 PM, 4:55 PM	4:04 PM, 4:19 PM, 4:34 PM, 4:39 PM, 4:49 PM, 4:54 PM	
5:00 PM	Dep 5:07 PM, Arr 5:25 PM, Dep 5:37 PM, Arr 5:55 PM		Arr 5:20 PM, Dep 5:22 PM, Arr 5:50 PM, Dep 5:52 PM	5:01 PM, 5:10 PM, 5:16 PM, 5:25 PM, 5:31 PM, 5:46 PM,	5:04 PM, 5:09 PM, 5:19 PM, 5:24 PM, 5:34 PM, 5:39 PM, 5:44 PM, 5:49 PM, 5:54 PM	
6:00 PM	Dep 6:07 PM, Arr 6:25 PM, Dep 6:37 PM		Arr 6:13 PM, Dep 6:20 PM, Arr 6:40 PM	6:01 PM, 6:16 PM, 6:31 PM, 6:46 PM	6:04 PM, 6:09 PM, 6:14 PM, 6:19 PM, 6:29 PM, 6:34 PM, 6:44 PM, 6:49 PM, 6:59 PM	
7:00 PM	Arr 7:16 PM, Dep 7:37 PM		Arr 7:10 PM	7:01 PM, 7:16 PM, 7:31 PM, 7:46 PM	7:04 PM, 7:19 PM, 7:35 PM, 7:49 PM	



Operator -->	SolanoExpress	SolanoExpress	LAVTA (Wheels)	BART	BART	County Connection
Service Hour	Blue Line	Yellow Line	Route 70X	to SFO	From SFO	Routes 7, 9, 11, 14, 15, 18, 311, 316
8:00 PM				8:01 PM, 8:07 PM, 8:27 PM, 8:46 PM	8:04 PM, 8:20 PM, 8:35 PM, 8:55 PM	
9:00 PM				9:14 PM, 9:30 PM (Fri only), 9:39 PM	9:15 PM, 9:35 PM, 9:54 PM	
10:00 PM				10:03 PM, 10:27 PM, 10:51 PM	10:11 PM, 10:35 PM, 10:59 PM	
11:00 PM				11:15 PM, 11:39 PM	11:23 PM, 11:47 PM	
12:00 AM				12:15 AM	12:05 AM (Fri only), 12:11 AM, 12:35 AM, 1:02 AM	



Walnut Creek BART Station

The Walnut Creek BART Station is served by the BART Yellow Line (Antioch – SFO). Connecting bus service is available through SolanoExpress (Yellow Line), Wheels (Route 70X), and County Connection (Routes 7, 9, 11, 14, 15, 18, 311, and 316).

SolanoExpress Yellow Line offers two trips per hour during peak commute times; service is less frequent during midday hours. This is well coordinated with BART, which offers a minimum of four trips per hour, with as many as 11 trips per hour during peak commute times. As a result, wait-time between SolanoExpress and BART connections are minimal, usually less than 15 minutes.

County Connection offers connectivity on 12 routes, including local service within central Contra Costa County and several express routes (most of which serve multiple BART, Amtrak, and/or transit centers). Some routes operate as frequently as every 15 minutes during peak hours, although others offer more limited service (with frequency of 75 to 90 minutes).



Exhibit 8.2.8 Walnut Creek BART Station Connectivity

Operator -->	SolanoExpress	LAVTA (Wheels)	BART	BART	County Connection
	Yellow Line	Route 70X	to SFO	from SFO	Routes 1, 4, 5, 9, 14, 21, 93X, 95X, 96X, 98X, 311, 321
Service Hour					
4:00 AM					Frequent service on 12 routes; too many to represent here
5:00 AM		5:53 AM	5:04 AM, 5:19 AM, 5:34 AM, 5:49 AM		
6:00 AM	Arr 6:13 AM, Dep 6:17 AM, Arr 6:43 AM, Dep 6:47 AM	6:23 AM, 6:53 AM	6:04 AM, 6:14 AM, 6:19 AM, 6:29 AM, 6:34 AM, 6:44 AM, 6:49 AM, 6:59 AM	6:01 AM, 6:17 AM, 6:32 AM, 6:47 AM	
7:00 AM	Arr 7:13 AM, Dep 7:17 AM, Arr 7:43 AM, Dep 7:47 AM	7:21 AM 7:51 AM	7:04 AM, 7:09 AM, 7:14 AM, 7:19 AM, 7:24 AM, 7:29 AM, 7:34 AM, 7:39 AM, 7:44 AM, 7:49 AM, 7:59 AM	7:02 AM, 7:17 AM, 7:24 AM, 7:33 AM, 7:39 AM, 7:48 AM, 7:54 AM	
8:00 AM	Arr 8:13 AM, Dep 8:17 AM, Arr 8:43 AM, Dep 8:47 AM	8:21 AM	8:04 AM, 8:14 AM, 8:19 AM, 8:29 AM, 8:34 AM, 8:49 AM	8:03 AM, 8:09 AM, 8:18 AM, 8:32 AM, 8:47 AM	
9:00 AM	Arr 9:44 AM, Dep 9:54 AM		9:04 AM, 9:19 AM, 9:34 AM, 9:49 AM	9:02 AM, 9:17 AM, 9:32 AM, 9:47 AM	
10:00 AM	Arr 10:44 AM, Dep 10:54 AM		10:04 AM, 10:19 AM, 10:34 AM, 10:49 AM	10:02 AM, 10:17 AM, 10:32 AM, 10:47 AM	
11:00 AM	Arr 11:44 AM, Dep 11:54 AM		11:04 AM, 11:19 AM, 11:34 AM, 11:49 AM	11:02 AM, 11:17 AM, 11:32 AM, 11:47 AM	



Operator -->	SolanoExpress	LAVTA (Wheels)	BART	BART	County Connection
Service Hour	Yellow Line	Route 70X	to SFO	from SFO	Routes 1, 4, 5, 9, 14, 21, 93X, 95X, 96X, 98X, 311, 321
12:00 PM	Arr 12:44 PM, Dep 12:54 PM		12:04 PM, 12:19 PM, 12:34 PM, 12:49 PM	12:02 PM, 12:17 PM, 12:32 PM, 12:47 PM	
1:00 PM	Arr 1:44 PM, Dep 1:54 PM		1:04 PM, 1:19 PM, 1:34 PM, 1:49 PM	1:02 PM, 1:17 PM, 1:32 PM, 1:47 PM	
2:00 PM	Arr 2:14 PM, Dep 2:24 PM		2:04 PM, 2:19 PM, 2:34 PM, 2:49 PM	2:02 PM, 2:17 PM, 2:32 PM, 2:47 PM	
3:00 PM	Arr 3:14 PM, Dep 3:24 PM		3:04 PM, 3:19 PM, 3:34 PM, 3:49 PM	3:02 PM, 3:17 PM, 3:32 PM, 3:47 PM	
4:00 PM	Arr 4:14 PM, Dep 4:24 PM, Arr 4:46 PM, Dep 4:54 PM	4:33 PM	4:04 PM, 4:19 PM, 4:34 PM, 4:49 PM, 4:58 PM	4:02 PM, 4:17 PM, 4:32 PM, 4:36 PM, 4:47 PM, 4:51 PM	
5:00 PM	Arr 5:11 PM, Dep 5:24 PM, Arr 5:41 PM, Dep 5:54 PM	5:10 PM, 5:40 PM	5:04 PM, 5:12 PM, 5:19 PM, 5:27 PM, 5:34 PM, 5:49 PM,	5:02 PM, 5:06 PM, 5:17 PM, 5:22 PM, 5:32 PM, 5:37 PM, 5:42 PM, 5:47 PM, 5:52 PM	
6:00 PM	Arr 6:11 PM, Dep 6:24 PM, Arr 6:41 PM, Dep 6:54 PM	6:03 PM, 6:30 PM	6:04 PM, 6:19 PM, 6:34 PM, 6:49 PM	6:02 PM, 6:07 PM, 6:12 PM, 6:17 PM, 6:27 PM, 6:32 PM, 6:42 PM, 6:47 PM, 6:57 PM	



Operator -->	SolanoExpress	LAVTA (Wheels)	BART	BART	County Connection
Service Hour	Yellow Line	Route 70X	to SFO	from SFO	Routes 1, 4, 5, 9, 14, 21, 93X, 95X, 96X, 98X, 311, 321
7:00 PM	Arr 7:11 PM, Dep 7:24 PM, Arr 7:37 PM, Dep 7:54 PM	7:00 PM	7:04 PM, 7:19 PM, 7:34 PM, 7:49 PM	7:02 PM, 7:17 PM, 7:33 PM, 7:47 PM	
8:00 PM	Arr 8:37 PM, Dep 8:41 PM		8:03 PM, 8:10 PM, 8:30 PM, 8:49 PM	8:02 PM, 8:17 PM, 8:32 PM, 8:52 PM	
9:00 PM	Arr 9:37 PM, Dep 9:41 PM		9:17 PM, 9:33 PM (Fri only), 9:41 PM	9:12 PM, 9:32 PM, 9:51 PM	
10:00 PM			10:05 PM, 10:29 PM, 10:53 PM	10:08 PM, 10:32 PM, 10:56 PM	
11:00 PM			11:17 PM, 11:41 PM	11:20 PM, 11:44 PM	
12:00 AM			12:17 AM	12:02 AM (Fri only), 12:08 AM, 12:32 AM, 12:59 AM	



UC Davis Silo

The UC Davis Silo actually consists of two bus stop locations. The analysis here is for the stop utilized by the SolanoExpress Blue Line (located at Hutchison Drive and Bioletti Way). However, the main Silo stop (Hutchison Drive at UC Davis Silo) is located less than one-tenth of a mile to the east and offers additional connectivity via Unitrans.

The Blue Line offers service at least once per hour, though usually only in one direction during any given hour. The earliest northbound service occurs at 7:18 a.m., while the last southbound trip serves this location at 5:16 p.m. Unitrans offers frequent local service (in many cases, every 10 to 15 minutes), offering a high level of connectivity. Four routes serve the same stop as the Blue Line, with additional routes serving the main Silo stop to the east.

Yolobus offers limited service at this stop. Four routes connect here, each with one morning trip and one afternoon trip. There is little connectivity between the Blue Line and Yolobus. Yolobus routes connect to Davis from Woodland, West Sacramento, and Sacramento.



Exhibit 8.2.9 Connectivity

Operator -->	SolanoExpress	Unitrans	Unitrans	Unitrans	Unitrans	Yolobus
Service Hour	Blue Line	Line C	Line D	Line J	Line V	Routes 44, 220C, 242, 243
4:00 AM						
5:00 AM						
6:00 AM						
7:00 AM	NB 7:18 AM, SB 7:32 AM	7:00 AM (dep), 7:20 AM (arr), 7:30 AM (dep), 7:50 AM (arr)	7:00 AM (dep), 7:10 AM (dep), 7:25 AM, 7:35 AM (arr), 7:40 AM (dep), 7:50 AM (arr)	7:10 AM (dep), 7:20 AM, 7:40 AM, 7:50 AM (arr)	7:00 AM (dep), 7:15 AM (dep), 7:20 AM (arr), 7:30 AM (dep), 7:35 AM (arr), 7:45 AM (dep) 7:50 AM (arr)	44: 7:31 AM, 242: 7:31 AM, 220C: 7:42 AM
8:00 AM	NB 8:10 AM	8:00 AM (dep), 8:20 AM (arr), 8:30 AM (dep), 8:50 AM (arr)	8:00 AM (dep), 8:05 AM (arr), 8:10 AM (dep), 8:25 AM, 8:35 AM (arr), 8:40 AM (dep), 8:50 AM (arr)	8:00 AM (dep), 8:10 AM, 8:20 AM (dep), 8:30 AM (arr), 8:40 AM, 8:50 AM (arr)	8:00 AM (dep), 8:05 AM (arr), 8:15 AM (dep), 8:20 AM (arr), 8:30 AM (dep), 8:35 AM (arr), 8:45 AM (dep) 8:50 AM (arr)	243: 8:21 AM
9:00 AM	NB 9:10 AM	9:00 AM (dep), 9:20 AM (arr), 9:30 AM (dep), 9:50 AM (arr)	9:00 AM (dep), 9:05 AM (arr), 9:10 AM (dep), 9:25 AM, 9:35 AM (arr), 9:40 AM (dep), 9:50 AM (arr)	9:00 AM (dep), 9:10 AM, 9:20 AM (dep), 9:30 AM (arr), 9:40 AM, 9:50 AM (arr)	9:00 AM (dep), 9:05 AM (arr), 9:15 AM (dep), 9:20 AM (arr), 9:30 AM (dep), 9:35 AM (arr), 9:45 AM (dep) 9:50 AM (arr)	



Operator -->	SolanoExpress	Unitrans	Unitrans	Unitrans	Unitrans	Yolobus
Service Hour	Blue Line	Line C	Line D	Line J	Line V	Routes 44, 220C, 242, 243
10:00 AM	SB 10:43 AM	10:00 AM (dep), 10:20 AM (arr), 10:30 AM (dep), 10:50 AM (arr)	10:00 AM (dep), 10:05 AM (arr), 10:10 AM (dep), 10:25 AM, 10:35 AM (arr), 10:40 AM (dep), 10:50 AM (arr)	10:00 AM (dep), 10:10 AM, 10:20 AM (dep), 10:30 AM (arr), 10:40 AM, 10:50 AM (arr)	10:00 AM (dep), 10:05 AM (arr), 10:15 AM (dep), 10:20 AM (arr), 10:30 AM (dep), 10:35 AM (arr), 10:45 AM (dep), 10:50 AM (arr)	
11:00 AM	NB 11:08 AM	11:00 AM (dep), 11:20 AM (arr), 11:30 AM (dep), 11:50 AM (arr)	11:00 AM (dep), 11:05 AM (arr), 11:10 AM (dep), 11:25 AM, 11:35 AM (arr), 11:40 AM (dep), 11:50 AM (arr)	11:00 AM (dep), 11:10 AM, 11:20 AM (dep), 11:30 AM (arr), 11:40 AM, 11:50 AM (arr)	11:00 AM (dep), 11:05 AM (arr), 11:15 AM (dep), 11:20 AM (arr), 11:30 AM (dep), 11:35 AM (arr), 11:45 AM (dep), 11:50 AM (arr)	
12:00 PM	SB 12:43 PM	12:00 PM (dep), 12:20 PM (arr), 12:40 PM (dep)	12:00 PM (dep), 12:05 PM (arr), 12:10 PM (dep), 12:25 PM (arr), 12:35 PM, 12:40 PM (dep), 12:50 PM (dep)	12:00 PM (dep), 12:10 PM, 12:20 PM (dep), 12:30 PM, 12:40 PM (arr), 12:50 PM (dep)	12:00 PM (dep), 12:05 PM (arr), 12:15 PM (dep), 12:20 PM (arr), 12:35 PM (arr), 12:40 PM (dep), 12:55 PM (dep)	



Operator -->	SolanoExpress	Unitrans	Unitrans	Unitrans	Unitrans	Yolobus
Service Hour	Blue Line	Line C	Line D	Line J	Line V	Routes 44, 220C, 242, 243
1:00 PM	NB 1:10 PM	1:00 PM (arr), 1:10 PM (dep), 1:30 PM (arr), 1:40 PM (dep)	1:00 PM (arr), 1:10 PM (dep), 1:15 PM (arr), 1:20 PM (dep), 1:35 PM, 1:45 PM (arr), 1:50 PM (dep)	1:00 PM (arr), 1:10 AM (dep), 1:20 PM, 1:30 PM (dep), 1:40 AM (arr), 1:50 AM	1:00 PM (arr), 1:10 PM (dep), 1:15 PM (arr), 1:25 PM (dep), 1:30 PM (arr), 1:40 PM (dep), 1:45 PM (arr), 1:55 PM (dep)	
2:00 PM	NB 2:42 PM, SB 2:45 PM	2:00 PM (arr), 2:10 PM (dep), 2:30 PM (arr), 2:40 PM (dep)	2:00 PM (arr), 2:10 PM (dep), 2:15 PM (arr), 2:20 PM (dep), 2:35 PM, 2:45 PM (arr), 2:50 PM (dep)	2:00 PM (arr), 2:10 PM (dep), 2:20 PM, 2:30 PM (dep), 2:40 PM (arr), 2:50 PM	2:00 PM (arr), 2:10 PM (dep), 2:15 PM (arr), 2:25 PM (dep), 2:30 PM (arr), 2:40 PM (dep), 2:45 PM (arr), 2:55 PM (dep)	
3:00 PM	NB 3:14 PM, NB 3:40 PM, SB 3:43 PM	3:00 PM (arr), 3:10 PM (dep), 3:30 PM (arr), 3:40 PM (dep)	3:00 PM (arr), 3:10 PM (dep), 3:15 PM (arr), 3:20 PM (dep), 3:35 PM, 3:45 PM (arr), 3:50 PM (dep)	3:00 PM (arr), 3:10 PM (dep), 3:20 PM, 3:30 PM (dep), 3:40 PM (arr), 3:50 PM	3:00 PM (arr), 3:10 PM (dep), 3:15 PM (arr), 3:25 PM (dep), 3:30 PM (arr), 3:40 PM (dep), 3:45 PM (arr), 3:55 PM (dep)	
4:00 PM	NB 4:20 PM, SB 4:43 PM	4:00 PM (arr), 4:10 PM (dep), 4:30 PM (arr), 4:40 PM (dep)	4:00 PM (arr), 4:10 PM (dep), 4:15 PM (arr), 4:20 PM (dep), 4:35 PM, 4:45 PM (arr), 4:50 PM (dep)	4:00 PM (arr), 4:10 PM (dep), 4:20 PM, 4:30 PM (dep), 4:40 PM (arr), 4:50 PM	4:00 PM (arr), 4:10 PM (dep), 4:15 PM (arr), 4:25 PM (dep), 4:30 PM (arr), 4:40 PM (dep), 4:45 PM (arr), 4:55 PM (dep)	



Operator -->	SolanoExpress	Unitrans	Unitrans	Unitrans	Unitrans	Yolobus
Service Hour	Blue Line	Line C	Line D	Line J	Line V	Routes 44, 220C, 242, 243
5:00 PM	SB 5:16 PM	5:00 PM (arr), 5:10 PM (dep), 5:30 PM (arr), 5:40 PM (dep)	5:00 PM (arr), 5:10 PM (dep), 5:15 PM (arr), 5:20 PM (dep), 5:35 PM, 5:45 PM (arr), 5:50 PM (dep)	5:00 PM (arr), 5:10 PM (dep), 5:20 PM, 5:30 PM (dep), 5:40 PM (arr), 5:50 PM	5:00 PM (arr), 5:10 PM (dep), 5:15 PM (arr), 5:25 PM (dep), 5:30 PM (arr), 5:40 PM (dep), 5:45 PM (arr), 5:55 PM (dep)	243: 5:11 AM 220C: 5:15 PM, 44: 5:24 PM, 242: 5:24 PM
6:00 PM		6:00 PM (arr), 6:10 PM (dep), 6:30 PM (arr), 6:40 PM (dep)	6:00 PM (arr), 6:10 PM (dep), 6:15 PM (arr), 6:20 PM (dep), 6:35 PM	6:00 PM (arr), 6:10 PM (dep), 6:20 PM (arr), 6:30 PM (dep), 6:40 PM (arr)	6:00 PM (arr), 6:10 PM (dep), 6:15 PM (arr), 6:30 PM (arr), 6:40 PM (dep),	
7:00 PM		7:00 PM (arr), 7:10 PM (dep), 7:30 PM (arr), 7:40 PM (dep)	7:00 PM (arr), 7:10 PM (dep), 7:35 PM	7:00 PM (arr), 7:10 PM (dep), 7:35 PM (dep), 7:40 PM (arr)	7:00 PM (arr), 7:10 PM (dep), 7:30 PM (arr), 7:40 PM (dep)	
8:00 PM		8:00 PM (arr), 8:10 PM (dep), 8:30 PM (arr)	8:00 PM (arr), 8:10 PM (dep)	8:05 PM (arr), 8:10 PM (dep)	8:00 PM (arr), 8:10 PM (dep), 8:30 PM (arr)	
9:00 PM						
10:00 PM						
11:00 PM						
12:00 AM						



Sacramento Valley Station

Sacramento Valley Station is a primary transit hub located in downtown Sacramento. It is served by four Amtrak routes (California Zephyr, Coast Starlight, San Joaquins, and Capitol Corridor), Amtrak Thruway Bus service, Sacramento Regional Transit (RT) Light Rail (Gold Line), and SolanoExpress Blue Line. In addition, numerous Sacramento RT routes and regional commuter bus routes (including Yolobus, e-tran, Roseville Transit, El Dorado Transit, and Yuba Sutter Transit) serve downtown Sacramento; even if they do not directly serve the station. These connections are not explored in this section. However, the Blue Line does serve other locations in downtown Sacramento (northbound – Second/Capitol Mall and southbound – Ninth/L Street), which offer a high degree of connectivity with local and regional routes.

The Sac RT Gold Line serves the station every 15 minutes between 3:49 a.m. and midnight, offering a high level of connectivity with the Blue Line. Connectivity with Amtrak is more sporadic. However, it is unlikely a Blue Line rider would be traveling to Sacramento to connect with the Capitol Corridor service. Given Sacramento Valley Station is a full-service rail station, extended wait-time for casual travel can be mitigated through station amenities.



Exhibit 8.2.10 Sacramento Valley Station Connectivity

Operator -->	SolanoExpress	Sac RT	Amtrak
Service Hour	Blue Line	Gold Line	CC, CZ, CS, SJ, Thruway
4:00 AM		Service operates every 15 minutes	CC: WB 4:34 AM (dep)
5:00 AM			Thruway: WB 5:20 AM (arr), CC: 5:35 AM (dep)
6:00 AM			Thruway: WB 6:05 AM (arr), Thruway: EB 6:15 AM (arr), CC: WB 6:22 AM (dep), SJ: SB 6:26 AM, CS: SB 6:35 AM
7:00 AM	NB 7:09 AM (arr), SB 7:32 AM (dep), NB 7:40 AM (arr), SB 7:57 AM (dep)		CC: WB 7:05 AM (dep), CC: EB 7:18 AM (arr), CC: WB 7:32 AM (arr), CC: WB 7:33 AM (dep), Thruway: SB 7:15 AM
8:00 AM	NB 8:01 AM (arr), SB 8:20 AM (dep), NB 8:48 AM (arr)		CC: EB 8:23 AM (arr), CC: WB 8:46 AM (dep)
9:00 AM	SB 9:03 AM (dep), NB 9:47 AM (arr)		CC: EB 9:46 AM (arr), Thruway: SB 9:50 AM, Thruway: NB 9:50 AM
10:00 AM	SB 10:03 AM (dep)		Thruway: EB 10:00 AM (dep), CC: WB 10:15 AM (dep)
11:00 AM	NB 11:50 AM (arr)		CZ: EB 11:09 AM, SJ: NB 11:49 AM, Thruway: SB 11:55 AM, Thruway: WB 11:55 AM (arr)
12:00 PM	SB 12:03 PM (dep)		CC: WB 12:14 PM (dep), CC: EB 12:17 PM (arr), Thruway: EB 12:30 PM (dep)
1:00 PM			
2:00 PM	NB 2:03 PM (arr), SB 2:32 PM (dep), NB 2:41 PM (arr), SB 2:58 PM (dep)		Thruway: SB 2:05 PM, Thruway: NB 2:05 PM, CC: WB 2:10 PM (dep), CC: EB 2:13 PM (arr)



Operator -->	SolanoExpress	Sac RT	Amtrak
Service Hour	Blue Line	Gold Line	CC, CZ, CS, SJ, Thruway
3:00 PM	NB 3:52 PM (arr)		Thruway: WB 3:20 PM (arr), CC: EB 3:24 PM (arr), Thruway: EB 3:30 PM (dep), CC: WB 3:38 PM (dep)
4:00 PM	SB 4:14 PM (dep), NB 4:28 PM (arr), SB 4:50 PM (dep)		Thruway: EB 4:20 PM (dep), SJ: SB 4:26 PM, CC: WB 4:45 PM (dep), CC: EB 4:48 PM (arr)
5:00 PM	NB 5:28 PM (arr), SB 5:50 PM (dep)		CC: EB 5:20 PM (arr), CC: EB 5:21 PM (dep), Thruway: WB 5:40 PM (arr), CC: WB 5:52 PM (dep)
6:00 PM			Thruway: SB 6:05 PM, Thruway: NB 6:05 PM, CC: EB 6:17 PM (arr), Thruway: EB 6:25 PM (dep), CC: EB 6:48 PM (arr)
7:00 PM			CC: WB 7:00 PM (dep), Thruway: EB 7:00 PM (dep), CC: EB 7:21 PM (arr), Thruway: EB 7:30 PM (dep)
8:00 PM			Thruway: NB 8:00 PM, CC: EB 8:14 PM (arr), CC: EB 8:50 PM (arr)
9:00 PM			Thruway: EB 9:00 PM (dep), CC: WB 9:10 PM (dep)
10:00 PM			Thruway: NB 10:00 PM, Thruway: WB 10:00 PM (arr), CC: EB 10:24 PM (arr), CC: WB 10:30 PM (dep)
11:00 PM			SJ: NB 11:35 PM CZ: WB 11:53 PM, CS: NB 11:59 PM
12:00 AM			CC: EB 12:12 AM (arr)



8.3 Modifications to Enhance Connectivity

Operating Modifications

1. Should Dixon decide to implement a fixed-route or flex-route service, that service should offer regular connections to the Dixon Park and Ride facility. Given the Blue Line's schedule is likely to be significantly more limited than the local fixed-route schedule, care should be taken when building the fixed-route schedule to enable connectivity with the Blue Line.
2. If demand is sufficient, an extension of the Red Line or Green Express during select weekday runs into Rio Vista could benefit residents who transfer between operators on long distance travel. Cost-sharing could be shifted to replace or supplement Delta Breeze Route 50.
3. Absent direct service to Rio Vista by SolanoExpress, there are two specific recommendations that will enhance connectivity with Rio Vista.
 - a. The City of Rio Vista and STA should determine if there is a need for eastbound connectivity between the Red Line and Rio Vista Delta Breeze Route 50 during midday (the 1:20 p.m. Route 50 trip). If so, the Route 50 schedule for that trip should be moved back by 10 minutes to enable that connection.
 - b. In addition, we recommend adjusting RVDB Route 50's arrival time at the Suisun City Amtrak forward by 30 minutes. This will enable connectivity with the Red Line's 8:17 a.m. trip for riders wishing to travel to Vallejo as well as the 8:14 a.m. westbound Capitol Corridor trip. (Incidentally, this will also facilitate eastbound/northbound connections with Greyhound at 8:20 a.m.)
4. Consider extending FAST service later in the evening to better connect with SolanoExpress arrivals after 7:00 p.m. This will likely enable some SolanoExpress riders who drive to the FTC to take FAST instead, as they would have FAST service at both the beginning and end of their commute.
5. Determine whether locations with minimal service by SolanoExpress (such as Sereno Transit Center for the Red Line and Pleasant Hill BART for the Yellow Line) warrant continued service by those routes, especially if the existing service only occurs during morning or afternoon peak service times, but not both.

Fare System Modifications

1. Given Rio Vista has a lower age requirement for senior discounts, it is unclear if Clipper integration can be established. If this discrepancy can be changed or worked around, Clipper card integration would work hand-in-hand with direct SolanoExpress service. Residents could use Rio Vista Delta Breeze to travel to the new SolanoExpress stop. Another way to improve connections between Rio Vista and SolanoExpress would be to publish time-points instead of only serving some connecting stops upon request.
2. The Clipper payment method can be used for all FAST routes except for the Blue Line service within Solano County. Full integration of payment via Clipper card will simplify fare payment for public transit across the region.
3. According to the SolTrans fare structure effective July 1, 2019, inter-agency transfers (not including SolanoExpress) are not yet available on Clipper. A rider planning to use both SolTrans and FAST must purchase a paper pass from a ticket office of SolTrans or FAST. Further fare integration would benefit existing customers while facilitating new passengers to navigate



multiple operators. While these local routes between operators do not directly connect, passengers may connect to and from SolanoExpress with local routes in each community to complete their trip.



Working Paper #9

Access to Medical Providers and Services

Overview

The goal of Working Paper #9 is the identification of opportunities to enhance transit access to medical/healthcare facilities located in Solano County. In doing so we have identified key medical facilities within and in close proximity to Solano County, inventoried current transit programs serving those facilities, and analyzed the viability and reasonableness of the perspective home-to-facility trip. Lastly, we have identified opportunities for improving transit access to these medical facilities through modifications to existing services.

Given there are many transit providers referenced throughout this document, a list of abbreviations used to represent those providers is shown in Exhibit 9.0.1.

Exhibit 9.0.1 Legend of Transit Providers

Transit Provider	
AT	Amador Transit
CC	Capitol Corridor
CoCo	County Connection
CZ	California Zephyr (Amtrak)
EDT	El Dorado Transit
EG	e-Tran (Elk Grove)
FAST	Fairfield and Suisun Transit
RVDB	Rio Vista Delta Breeze
SacRT	Sacramento Regional Transit District
SCT	SCT Link

Transit Provider	
SE	SolanoExpress
SFBF	San Francisco Bay Ferry
SJ	San Joaquins (Amtrak)
ST	SolTrans
TDT	Tri Delta Transit
UNI	Unitrans
VCC	Vacaville City Coach
VINE	The VINE (NVTA)
WC	WestCat
YOLO	Yolobus

Details regarding access to specific healthcare locations is included the matrices following the narrative discussion of access within each county. The third column, "Service within 0.5 mile radius," includes information about local services. It is assumed residents could access one of the listed routes to access service within their own community. The remaining columns to the right indicate the combination of routes needed to complete a full trip from the designated community to the specific healthcare facility. Routes separated by a slash (/) are part of a single one-way trip. Each new one-way trip starts on its own line. A one-way trip may include as few as one route or as many as six.



9.1 Solano County

The SolanoExpress Blue, Red, and Yellow routes serve as important inter-community connections within Solano County.

La Clinica-Vallejo, on average, has been determined to be the most transit-accessible facility in Solano County. This is due to the facility requiring the fewest number of “transit transfers” to access. It is located adjacent to the Vallejo Transit Center which is served by the majority of SolTrans routes and two SolanoExpress routes, as well as other regional operators. Travel to the facility from Fairfield, Suisun City, and Benicia requires a single-seat SolanoExpress ride, while travel from Dixon, Vacaville, and Rio Vista requires one transfer.

The least transit-accessible medical facility is the Center for Primary Care-Fairfield, which provides family, internal, and pediatric services. No fixed-route transit service is available west of Interstate 80 north of Travis Blvd. The nearest bus stop is approximately one mile away with no good path of travel along Air Base Parkway and across I-80. Demand-response service in Fairfield is limited to FAST’s DART ADA Paratransit program available to persons with disabilities and the Reduced Fare Taxi Program available to seniors.

Two facilities located in Dixon, Community Medical Centers, Inc. and Sutter Medical Plaza Dixon, entail use of the general public demand-response service (Dixon Redit-Ride) from the Dixon park and ride which is served by the SolanoExpress Blue route.

Medical facilities in Fairfield, particularly south of Highway 12 in proximity to Solano County Health and Human Services, have local transit service access via FAST 7 and RVDB 50. Dixon, Vacaville, Suisun City, and Vallejo require one transfer, while Benicia requires two.

Otherwise, the vast majority of transit trips from one community to a medical facility in another community require a minimum of one transfer and often at least two. One limitation to inter-community access includes the limited availability of local transit service.

Within Solano County, the greatest transit-connection challenges include travel between the communities of Dixon, Rio Vista, and Benicia, as well as travel from these communities to other cities in the county. Dixon does not have local fixed-route service yet has access to the SolanoExpress Blue route. Rio Vista has limited transit service with some locations only served upon request. However, Rio Vista Delta Breeze provides direct service to some medical facilities in Fairfield as well as a transfer point with the SolanoExpress Red route. Finally, riders from Benicia must transfer once for access to Fairfield, and twice to Suisun City, Rio Vista, Vacaville, or Dixon.

Solano County Recommendations

Nearly all key medical/healthcare facilities in Solano County are accessible via public transit from throughout the county. In many cases, customers have multiple options with respect to routes and services. We include one recommendation specific to the Center for Primary Care in Fairfield, identified above as the only facility without general public transit service.

1. **Identify strategies to provide access to the Center for Primary Care in Fairfield.** It would not be feasible for FAST Route 1 to divert from N. Texas Street as doing so would add more than two miles round-trip and several minutes of run-time. Assuming there is limited demand for travel to that location, we recommend FAST offer referrals to other transportation providers should there be requests for service to the Center. ADA-certified individuals would qualify for service through DART Paratransit, while seniors would qualify under the Reduced Fare Taxi Program. FAST could also consider expediting the registration process for customers requesting service who are not already registered for these programs. For others needing to access this facility, referrals to local taxi companies or NEMT providers could be offered. Doing so would provide “last mile” service facilitating travel from any community in Solano County via currently available public transit. Referrals would be cost-neutral, while solutions that expand access to DART Paratransit or the Reduced Fare Taxi Program could result in a modest increase in administrative activity dependent upon demand.



Exhibit 9.1.1 Transit Access to Medical Facilities – Solano County

Facility/Address	Medical Services	Service within 0.5 mile radius	Fixed-Route Service from Other Communities to Facility						
			Benicia	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo
Center for Primary Care - Fairfield 2458 Hillborn Rd Fairfield, CA 94534	Family Internal Pediatrics	FAST DAR	None	None	-	None	None	None	None
Center for Primary Care - Green Valley 4520 Business Center Dr Ste 200 Fairfield, CA 94534	Family Internal Pediatrics	FAST 7, DAR SE Blue, Red	SE Yellow/SE Red	SE Blue SE Blue/FAST 7	-	RVDB 50/SE Red RVDB 50/FAST 7	SE Red FAST 5/FAST 7	SE Blue	SE Red
Center for Primary Care - Vacaville 421 Nut Tree Rd Vacaville, CA 95687	Family Internal Pediatrics	VCC 1, 4, 5, 6, DAR YOLO 220EB, 220WB	SE Yellow/SE Red/SE Blue/VCC 5 SE Yellow/SE Blue/VCC 5	SE Blue/VCC 5	SE Blue/VCC 5	RVDB 50/SE Blue/ VCC 5	FAST 5/SE Blue/VCC 5 RVDB 50/SE Blue/VCC 5 SE Green/SE Blue/VCC 5 SE Red/SE Blue/VCC 5 VINE 21/SE Blue/VCC 5	-	SE Red/SE Blue/VCC 5
Community Medical Centers 600 Nut Tree Rd Ste 310 Vacaville, CA 95687	Family Internal Pediatrics	VCC 1, 5, DAR YOLO 220EB	SE Yellow/SE Red/SE Blue/VCC 5 SE Yellow/SE Blue/VCC 5	SE Blue/VCC 5	SE Blue/VCC 5	RVDB 50/SE Blue/VCC 5	FAST 5/SE Blue/VCC 5 RVDB 50/SE Blue/VCC 5 SE Green/SE Blue/VCC 5 SE Red/SE Blue/VCC 5 VINE 21/SE Blue/VCC 5	-	SE Red/SE Blue/VCC 5
Community Medical Centers, Inc. 131 W A St Ste 1 Dixon, CA 95620	Family Medicine	DRR	SE Yellow/SE Red/SE Blue/DRR	-	SE Blue/DRR	RVDB 50/SE Blue/DRR	FAST 5/SE Blue/DRR SE Green/SE Blue/DRR SE Red/SE Blue/DRR VINE 21/SE Blue/DRR	SE Blue/DRR	SE Red/SE Blue/DRR
Fairfield Adult Primary Care Center 2201 Courage Dr Fairfield, CA 94533	Family Internal	FAST 7, DAR RVDB 50	SE Yellow/SE Red/FAST 7	SE Blue/FAST 7	-	RVDB 50	RVDB 50 FAST 5/FAST 7 SE Red/FAST 7 VINE 21/FAST 7	SE Blue/FAST 7	SE Red/FAST 7
Fairfield Pediatric Primary Care Center 2101 Courage Dr Fairfield, CA 94533	Pediatrics	FAST 7, DAR RVDB 50	SE Yellow/SE Red/FAST 7	SE Blue/FAST 7	-	RVDB 50	RVDB 50	SE Blue/FAST 7	SE Red/FAST 7
Kaiser Permanente Medical Center 975 Sereno Dr Vallejo, CA 94586	Family Internal Pediatrics	ST 1, 2, 4, 5, 7A, 7B, DAR SE Red VINE 11	SE Yellow/ST 4 SE Yellow/ST 5	SE Blue/SE Red/ST 5	SE Red/ST 5	RVDB 50/SE Red/ST 5	SE Red/ST 5	SE Blue/SE Red/ST 5	-
Kaiser Permanente Vacaville Medical Center 1 Quality Dr Vacaville, CA 95688	Family Internal Pediatrics	VCC 1, 4, DAR SE Blue YOLO 220EB, 220WB	SE Yellow/SE Red/SE Blue	SE Blue SE Blue/VCC 4	SE Blue	RVDB 50/SE Blue RVDB 50/SE Blue/VCC 4	FAST 5/SE Blue RVDB 50/SE Blue SE Green/SE Blue SE Red/SE Blue VINE 21/SE Blue	-	SE Red/SE Blue
Kaiser Permanente 1550 Gateway Blvd Fairfield, CA 94533	Family Internal Pediatrics	FAST 2, 3, 6, DAR RVDB 50 SE Red	SE Yellow/SE Red	SE Blue/FAST 3 SE Blue/SE Red	-	RVDB 50 (WB)/ RVDB 50 (EB) RVDB 50 (WB)/FAST 6 RVDB 50 (WB)/SE Red	FAST 5/FAST 3 RVDB 50/FAST 3 VINE 21/FAST 3 RVDB (WB)/RVDB (EB) CC/FAST 2	SE Blue/FAST 1 SE Blue/3 SE Blue/RVDB 50	SE Red
La Clinica - North Vallejo 220 Hospital Dr Vallejo, CA 94589	Family Internal	ST 4, 5, 7A, 7B, DAR VINE 11	SE Yellow/SE Red/ST 4 SE Yellow/SE Red/ST 5 SE Yellow/SE Red/ST 7A	SE Blue/SE Red/ST 4 SE Blue/SE Red/ST 5 SE Blue/SE Red/ST 7A SE Blue/SE Red/VINE 11	SE Blue/SE Red/ST 4 SE Blue/SE Red/ST 5 SE Blue/SE Red/ST 7A SE Blue/SE Red/VINE 11	RVDB 50/SE Red/ST 4 RVDB 50/SE Red/ST 5 RVDB 50/SE Red/ST 7A RVDB 50/SE Red/VINE 11	SE Red/ST 4 SE Red/ST 5 SE Red/ST 7A SE Red/VINE 11	SE Blue/SE Red/ST 4 SE Blue/SE Red/ST 5 SE Blue/SE Red/ST 7A SE Blue/SE Red/VINE 11	-

Facility/Address	Medical Services	Service within 0.5 mile radius	Fixed-Route Service from Other Communities to Facility						
			Benicia	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo
La Clinica - Vallejo 243 Georgia St Ste B Vallejo, CA 94590	Family Internal	ST 1, 2, 3, 4, 5, 6, 7A, 7B, 8, 82, DAR SE Red, Yellow SFBF: SF Ferry Bldg, SF Pier 41 VINE 11, 11X	SE Yellow	SE Blue/SE Red	SE Red	RVDB 50/SE Red	SE Red	SE Blue/SE Red	-
North Bay Medical Center 1200 B. Gale Wilson Blvd Fairfield, CA 94533	Family Internal Pediatrics	FAST 2, 3, 6, DAR RVDB 50 SE Red	SE Yellow/SE Red/FAST 3 SE Yellow/SE Red/RVDB 50 SE Yellow/SE Red/FAST 1/FAST 6	SE Blue/FAST 3 SE Blue/RVDB 50	-	RVDB 50 (WB)/RVDB 50 (EB) RVDB 50/FAST 6	CC/FAST 2 FAST 5/FAST 3 VINE 21/FAST 3 FAST 5/FAST 6 RVDB 50 (WB)/RVDB 50 (EB)	SE Blue/FAST 3 SE Blue/RVDB 50	SE Red/FAST 3 SE Red/RVDB 50 SE Red/FAST 1
North Bay Pediatrics 1261 Travis Blvd Ste 190 Fairfield, CA 94533	Pediatrics	FAST 2, 3, 6, DAR RVDB 50 SE Red	SE Yellow/SE Red/RVDB 50 SE Yellow/SE Red/FAST 2	SE Blue/FAST 1/FAST 6	-	RVDB 50 (WB)/ RVDB 50 (EB) RVDB 50 (WB)/FAST 6 RVDB 50 (WB)/SE Red	FAST 5/FAST 3 RVDB 50/FAST 3 VINE 21/FAST 3 RVDB 50 (WB)/RVDB 50 (EB) CC/FAST 2	SE Blue/FAST 1 SE Blue/FAST 3 SE Blue/RVDB 50	SE Red/RVDB 50 SE Red/FAST 2
North Bay Pediatrics 160 Glen Cove Marina Rd Ste E 103 Vallejo, CA 94591	Pediatrics	ST 8, 38, DAR	SE Yellow/ST 8 (EB)/ST 8 (WB)	SE Blue/SE Red/ ST 3/ST 8	SE Red/ST 3/ST 8	SE Red/ST 3/ST 8	SE Red/ST 3/ST 8	SE Blue/SE Red/ST 3/ST 8	-
North Bay VacaValley Hospital 1000 Nut Tree Rd Vacaville, CA 95687	Family Internal Pediatrics	VCC 1, 5, DAR	SE Yellow/SE Red/SE Blue/VCC 5	SE Blue/VCC 5	SE Blue/VCC 5	RVDB 50/SE Blue/VCC 5	FAST 5/SE Blue/VCC 5 RVDB 50/SE Blue/VCC 5 SE Green/SE Blue/VCC 5 SE Red/SE Blue/VCC 5 VINE 21/SE Blue/VCC 5	-	SE Red/SE Blue/VCC 5
Sutter Medical Group Solano 100 Hospital Dr 2nd Fl Vallejo, CA 94589	Family Pediatrics	ST 4, 5, 7A, 7B, DAR VINE 11	SE Yellow/SE Red/ST 4 SE Yellow/SE Red/ST 5 SE Yellow/SE Red/ST 7A	SE Blue/SE Red/ST 4 SE Blue/SE Red/ST 5 SE Blue/SE Red/ST 7A SE Blue/SE Red/INE 11	SE Red/ST 4 SE Red/ST 5 SE Red/ST 7A SE Red/VINE 11	RVDB 50/SE Red/ST 4 RVDB 50/SE Red/ST 5 RVDB 50/SE Red/ST 7A RVDB 50/SE Red/VINE 11	SE Red/ST 4 SE Red/ST 5 SE Red/ST 7A SE Red/VINE 11	SE Blue/SE Red/ST 4 SE Blue/SE Red/ST 5 SE Blue/SE Red/ST 7A SE Blue/SE Red/VINE 11	-
Sutter Medical Group Solano 2720 Low Ct Fl 1 Fairfield, CA 94534	Family Internal Pediatrics	FAST 7, DAR RVDB 50	SE Yellow/SE Red/FAST 7	SE Blue/FAST 7	-	RVDB 50	FAST 5/FAST 7 SE Red/FAST 7 VINE 21/FAST 7 RVDB 50	SE Blue/FAST 7	SE Red/FAST 7
Sutter Medical Group Solano 770 Mason St Vacaville, CA 95688	Family Internal Pediatrics	VCC 2, 3, 5, 6, DAR	SE Yellow/SE Red/SE Blue/VCC 3 SE Yellow/SE Red/SE Blue/VCC 5 SE Yellow/SE Red/SE Blue/VCC 6	SE Blue/VCC 3 SE Blue/VCC 5 SE Blue/VCC 6	SE Blue/VCC 3 SE Blue/VCC 5 SE Blue/VCC 6	RVDB 50/SE Blue/VCC 3 RVDB 50/SE Blue/VCC 5 RVDB 50/SE Blue/VCC 6	FAST 5/SE Blue/VCC 3 RVDB 50/SE Blue/VCC 3 SE Green/SE Blue/VCC 3 SE Red/SE Blue/VCC 3 VINE 21/SE Blue/VCC 3 FAST 5/SE Blue/VCC 5 RVDB 50/SE Blue/VCC 5 SE Green/SE Blue/VCC 5 SE Red/SE Blue/VCC 5 VINE 21/SE Blue/VCC 5 FAST 5/SE Blue/VCC 6 RVDB 50/SE Blue/VCC 6 SE Green/SE Blue/VCC 6 SE Red/SE Blue/VCC 6 VINE 21/SE Blue/VCC 6	-	SE Red/SE Blue/VCC 3 SE Red/SE Blue/VCC 5 SE Red/SE Blue/VCC 6

Facility/Address	Medical Services	Service within 0.5 mile radius	Fixed-Route Service from Other Communities to Facility						
			Benicia	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo
Sutter Medical Plaza Dixon 125 N Lincoln St Ste G Dixon, CA 95620	Family Medicine	DRR	SE Yellow/SE Red/SE Blue/DRR	-	SE Blue/DRR	RVDB 50/SE Blue/DRR	FAST 5/SE Blue/DRR SE Green/SE Blue/DRR SE Red/SE Blue/DRR VINE 21/SE Blue/DRR	SE Blue/DRR	SE Red/SE Blue/DRR
Sutter Solano Medical Center 300 Hospital Dr Vallejo, CA 94589	Family Internal Pediatrics	ST 4, 5, 7A, 7B, DAR VINE 11	SE Yellow/SE Red/ST 4 SE Yellow/SE Red/ST 5 SE Yellow/SE Red/ST 7A	SE Blue/SE Red/ST 4 SE Blue/SE Red/ST 5 SE Blue/SE Red/ST 7A SE Blue/SE Red/VINE 11	SE Red/ST 4 SE Red/ST 5 SE Red/ST 7A SE Red/VINE 11	RVDB 50/SE Red/ST 4 RVDB 50/SE Red/ST 5 RVDB 50/SE Red/ST 7A RVDB 50/SE Red/VINE 11	SE Red/ST 4 SE Red/ST 5 SE Red/ST 7A SE Red/VINE 11	SE Blue/SE Red/ST 4 SE Blue/SE Red/ST 5 SE Blue/SE Red/ST 7A SE Blue/SE Red/VINE 11	-
Vacaville Family Health Services Center 1119 East Monte Vista Ave Vacaville, CA 95688	Family Internal Pediatrics	VCC 2, 7, DAR	SE Yellow/SE Red/SE Blue/VCC 6	SE Blue/VCC 6	SE Blue/VCC 6	RVDB 50/SE Blue/ VCC 6	FAST 5/SE Blue/VCC 6 RVDB 50/SE Blue/VCC 6 SE Green/SE Blue/VCC 6 SE Red/SE Blue/VCC 6 VINE 21/SE Blue/VCC 6	-	SE Red/SE Blue/VCC 6
Vallejo Family Health Services Center 365 Tuolumne St Vallejo, CA 94590	Family Internal Pediatrics	ST 1, 4, 7A, 7B, 8, DAR	SE Yellow/ST 1 SE Yellow/ST 4 SE Yellow/ST 7B	SE Blue/SE Red/ST 1 SE Blue/SE Red/ST 4 SE Blue/SE Red/ST 7B	SE Red/ST 1 SE Red/ST 4 SE Red/ST 7B	RVDB 50/SE Red/ST 1 RVDB 50/SE Red/ST 4 RVDB 50/SE Red/ST 7B	SE Red/ST 1 SE Red/ST 4 SE Red/ST 7B	SE Blue/SE Red/ST 1 SE Blue/SE Red/ST 4 SE Blue/SE Red/ST 7B	-



9.2 Contra Costa County

The SolanoExpress Blue, Green, Red, and Yellow Lines and Capitol Corridor each connect Solano County with parts of Contra Costa County. The Kaiser Permanente facility in Richmond is the most transit-accessible, as it is less than half a mile from the Richmond Transit Center, which is served by three Amtrak routes, two BART routes, and multiple AC Transit routes. In fact, the Capitol Corridor provides a one seat trip between Suisun City and Richmond. Additionally, the SolanoExpress Red and Green lines serve El Cerrito del Norte BART, which is just one stop away from Richmond, meaning that travelers from Fairfield and Vallejo only have to make one transfer.

The Orinda Care Center is a quarter-mile from the Orinda BART station, and a trip there requires one transfer except from Suisun City, which requires two. Riders would take the SolanoExpress Blue or Yellow Line to Pleasant Hill or Walnut Creek, respectively; then continue on BART to Orinda. Even riders from Rio Vista would only have one transfer, taking the RVDB 52 to Pittsburg, then BART to Orinda. However, that bus only runs once daily each way, leaving Rio Vista at 5:30 a.m. and returning at 7 p.m. RVDB 50 has two round trips per day, leaving Rio Vista at 7:30 a.m. and 12 p.m., but goes west to Suisun City and Fairfield instead of south, therefore making trips to Contra Costa County up to three hours longer.

County Connection Routes 7 and 11 connect riders coming from the SolanoExpress Blue and Yellow Lines going to the Kaiser Permanente Park in Walnut Creek. Riders from Suisun City and Rio Vista, which are not served by the Yellow and Blue lines, require two transfers to get there, while the other communities require only one.

Tri-Delta Transit (TDT) Routes 380, 388, and 390 help connect riders to health facilities in Antioch. Passengers take the SolanoExpress Yellow Line to Pleasant Hill, then BART to Pittsburg, then a TDT route to Kaiser Permanente or Sutter Delta. Riders from Rio Vista only need one transfer, taking RVDB 52 to Pittsburg, then TDT.

The Martinez Outpatient Clinic only requires one transfer for passengers coming from Suisun City, Rio Vista, Vallejo, and Benicia. This is because TDT 200 serves Pittsburg BART and Martinez Amtrak, which provide direct connections to Suisun City and Rio Vista respectively. County Connection 28 connects with the SolanoExpress Yellow Line, which serves Benicia and Vallejo, at Diablo Valley College.

County Connection Routes 9, 16, and 18 serve John Muir General Hospital in Pleasant Hill. Routes 9 and 18 connect with the SolanoExpress Blue and Yellow Lines at Pleasant Hill BART, while Route 18 connects with the *Capitol Corridor* at Martinez.

The John Muir Health Center in Concord is the only health facility that requires at least two transfers from each Solano County community. This is because none of the buses that serve this facility directly connect with the *Capitol Corridor* or Solano Express.

Typically, if a healthcare facility is served by a bus route that serves an Amtrak or BART station, said trip would likely involve one or two transfers. This is because the *Capitol Corridor* provides a direct connection from Suisun to Martinez and Richmond, and the SolanoExpress Blue, Green, Red, and Yellow Lines each serve BART stations in Contra Costa County. With the exception of facilities in Antioch,

Orinda, and Richmond, Rio Vista has the least public transportation access to Contra Costa healthcare facilities among the Solano communities, as it is not served by Solano Express, BART, or the *Capitol Corridor*. There is infrequent service on Route 52, and a trip on Route 50 requires additional connections.

Contra Costa County Recommendations

Individuals throughout Solano County generally have good access to medical/healthcare facilities in Contra Costa County due to regional transit services such as SolanoExpress and the *Capitol Corridor*. However, Rio Vista is served by neither of these services. Therefore, we recommend a new on-demand service between Rio Vista and Antioch.

1. [Consider providing a once-weekly on-demand service between Rio Vista and medical facilities in Antioch.](#) Both Sutter Health and Kaiser Permanente have hospital facilities in Antioch, which is the closest point in Contra Costa County to Rio Vista. We believe this service could be provided using an existing vehicle in the Rio Vista Delta Breeze fleet.

The span of service would likely need to be at least eight hours, although the driver would likely have an extended break in Antioch during midday. The departure time from Rio Vista would need to be set, but the return time could be flexible contingent upon the time riders finish their appointments. Assuming an operating cost of \$138.79 per vehicle revenue hour (FY 2019), the weekly cost of the service (assuming one eight-hour day) would be \$1,110. Across a year, the annual cost would be \$13,324. However, since the service would only be operated on-demand, the actual annual cost could be less. There would also be a modest administrative cost to develop and publicize the program and schedule rides. The City should also approach the two medical facilities in Antioch regarding a potential annual contribution to support the service.

Exhibit 9.2.1 Transit Access to Medical Facilities – Contra Costa County

Facility/Address	Medical Services	Service within 0.5 mile radius	Fixed-Route Service from Other Communities to Facility						
			Benicia	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo
Contra Costa Regional Medical Center 2500 Alhambra Ave Martinez, CA 94553	General Hospital	CoCo 16, 28, 98X, 316 WC 30Z TDT 200	SE Yellow/CoCo 98X	SE Blue/UNI A/CC/WC 30Z SE Blue/YOLO 44/CC/WC 30Z	FAST 5/CC/CoCo 98X FAST 5/CC/WC 30Z	RVDB 52/BART Yellow/CoCo 98X RVDB 50/CC/CoCo 98X	CC/WC 30Z CC/CoCo 98X	SE Blue/VINE 21/CC/WC 30Z	SE Yellow/CoCo 98X SE Red/WC JPX
John Muir Health General Hospital 401 Gregory Ln #104 Pleasant Hill, CA 94523	General Hospital	CoCo 9, 16, 18, 314, 316	SE Yellow/CoCo 9 SE Yellow/CoCo 18	SE Blue/CoCo 18	SE Blue/CoCo 9 SE Blue/CoCo 18	RVDB 52/CC/CoCo 18 RVDB 52/BART Yellow/CoCo 18	CC/CoCo 16	SE Blue/CoCo 18	SE Yellow/CoCo 9 SE Yellow/CoCo 18
John Muir Health Concord Medical Center 2540 East St Concord, CA 94520	General Hospital	CoCo 11, 15, 17, 20, 311, 315, 320 TDT 201	SE Yellow/BART Yellow/CoCo 17	SE Blue/BART Yellow/CoCo 15	SE Blue/BART Yellow/CoCo 15	RVDB 52/BART Yellow/CoCo 15	CC/CoCo 98X/CoCo 20	SE Blue/BART Yellow/CoCo 15	SE Yellow/BART Yellow/TDT 201
John Muir Health Walnut Creek Medical Center 1601 Ygnacio Valley Rd Walnut Creek, CA 94598	General Hospital	CoCo 1, 92X, 93X, 311	SE Yellow/CoCo 1 SE Yellow/CoCo 7/CoCo 1	SE Blue/CoCo 14/CoCo1 SE Blue/CoCo 14/CoCo 93X SE Blue/BART Yellow/CoCo1 SE Blue/BART Yellow/CoCo 93X	SE Blue/BART Yellow/CoCo 1	RVDB 52/BART Yellow/CoCo 1 RVDB 50/SE Blue/CoCo 14/CoCo 93X	SE Blue/CoCo 99X/BART Yellow/CoCo 1	SE Blue/CoCo 7/CoCo 1 SE Blue/BART Yellow/CoCo 1	SE Yellow/CoCo 1 SE Yellow/CoCo 14/CoCo 1 SE Yellow/CoCo 7/CoCo 1
Kaiser Permanente Antioch 4501 Sand Creek Rd Antioch, CA 94531	General Hospital	TDT 379, 388, 392	SE Yellow/BART Yellow/TDT 388	SE Yellow/BART Yellow/TDT 388	SE Yellow/BART Yellow/TDT 388	RVDB 52/TDT 388	CC/CoCo 99X/BART Yellow/TDT 388	SE Yellow/BART Yellow/TDT 388	SE Yellow/BART Yellow/TDT 388
Kaiser Permanente Park Shadelands Medical Offices 320 Lennon Ln Walnut Creek, CA 94598	General Hospital	CoCo 1, 7, 92X, 93X	SE Yellow/CoCo 7	SE Blue/CoCo 11	SE Blue/CoCo 7 SE Blue/CoCo 11	RVDB 52/BART Yellow/CoCo 7 RVDB 52/BART Yellow/CoCo 1 RVDB 52/TDT 391/CoCo 93X RVDB 50/SE Blue/CoCo 7	VINE 21/SE Blue/CoCo 7 FAST 5/SE Blue/CoCo 7 CC/CoCo 16/CoCo 14/CoCo 7	SE Blue/CoCo 7 SE Blue/CoCo 11	SE Yellow/CoCo 7

Facility/Address	Medical Services	Service within 0.5 mile radius	Fixed-Route Service from Other Communities to Facility						
			Benicia	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo
Kaiser Permanente Richmond Medical Center 901 Nevin Ave Richmond, CA 94801	General Hospital	AC 70, 71, 72M, 74, 76, 376, 607, 667, 668, 675, 681 BART Orange, Red CC CZ SJ	SE Yellow/SE Red/AC 72M SE Yellow/SE Red/BART Orange SE Yellow/SE Red/BART Red	SE Blue/FAST 5/CC SE Blue/SE Red/CC SE Blue/UNI C/UNI W/CC	SE Green/AC 72M SE Green/BART Red SE Green/Orange	RVDB 50/CC RVDB 50/SE Red/BART Red RVDB 52/BART Yellow/BART Orange	CC	SE Blue/FAST 5/CC SE Blue/VINE 21/CC SE Blue/RVDB 50/CC SE Blue/BART Yellow/BART Orange	SE Red/AC 72M SE Red/BART Orange SE Red/BART Red
Martinez Outpatient Clinic 150 Muir Rd Martinez, CA 94553	Veterans Hospital	CoCo 28 TDT 200 WC 30Z	SE Yellow/BART Yellow/TDT 200 SE Yellow (EB)/SE Yellow (WB)/CoCo 28	SE Blue/FAST 5/CC/TDT 200 SE Blue/SE Red/CC/TDT 200 SE Blue/UNI C/C/TDT 200	SE Green/WC JPX/WC 30Z FAST 5/CC/TDT 200	RVDB 52/TDT 200 RVDB 50/CC/TDT 200	CC/TDT 200	SE Blue/FAST 5/CC/TDT 200 SE Blue/VINE 21/CC/TDT 200	SE Yellow (EB)/SE Yellow (WB)/CoCo 28 SE Red/WC JPX
Orinda Care Center 12 Camino Encinas Orinda, CA 94563	General Hospital	BART Yellow CoCo 6	SE Yellow/BART Yellow	SE Blue/BART Yellow	SE Blue/BART Yellow	RVDB 52/BART Yellow	CC/CoCo 99X/BART Yellow	SE Blue/BART Yellow	SE Yellow/BART Yellow SE RED/BART Red/BART Yellow
San Ramon Regional Medical Center 6001 Norris Canyon Rd San Ramon, CA 94583	General Hospital	CoCo 21, 92X, 95X, 321	SE Yellow/CoCo 95X SE Yellow/CoCo 96X	SE Blue/CoCo 14	SE Blue/SE Yellow/CoCo 95 X SE Blue/SE Yellow/CoCo 96X SE Blue/BART Yellow/CoCo 95X SE Blue/BART Yellow/CoCo 96X	RVDB 52/BART Yellow/CoCo 95X RVDB 52/BART Yellow/CoCo 96X	CC/CoCo 98X/CoCo 96X CC/CoCo 98X/CoCo 21	SE Blue/BART Yellow/CoCo 96X	SE Yellow/CoCo 95X SE Yellow/CoCo 96X
Sutter Delta Medical Center 3901 Lone Tree Way Antioch, CA 94509	General Hospital	TDT 380, 388, 390, 392	SE Yellow BART Yellow TDT 388	SE Blue/BART Yellow/TDT 380 SE Blue/BART Yellow/TDT 388	SE Blue/BART Yellow/TDT 380 SE Blue/BART Yellow/TDT 388	RVDB 52/TDT 390	CC CoCo 99X BART Yellow TDT 388	SE Blue/BART Yellow/TDT 380 SE Blue/BART Yellow/TDT 388	SE Yellow BART Yellow TDT 388



9.3 Napa County

Napa Valley Transit Authority (VINE) provides service within Napa County, as well as into the Solano County communities of Fairfield and Vallejo. As a result, all trips from Fairfield or Suisun City to Napa health facilities involve only one transfer, since VINE Route 21 goes from the Fairfield-Suisun Amtrak Station to the Soscol Gateway Transit Center in Napa. At that point, riders can connect with another VINE route to reach their destination.

Travelers from Dixon and Vacaville can take the Solano Express Blue Line to the Fairfield Transit Center, when they can connect with VINE 21 for travel into Napa. Similarly, riders from Rio Vista can take the Rio Vista Delta Breeze (RVDB) Route 50 to Suisun City, where they can transfer to VINE 21. While RVDB 50 has only two westbound trips per day, VINE 21 operates hourly on weekdays, with the first trip departing Suisun City at 6:15 a.m., and the last at 6:20 p.m.

All trips from Vallejo to Napa involve one or zero transfers thanks to VINE Routes 11 and 11X, which run from the Vallejo Ferry Terminal to Napa. Route 11 operates hourly 16 times a day starting at 5:30 A.M. on weekdays, and goes to the Redwood park & ride, further north than the Soscol Gateway Transit Center. While Route 11 takes 1 hour and 50 minutes to go from start to end, Route 11X is an express route that operates only six times a day during peak hours, and takes only 53 minutes to go from start to end. In Napa, Route 11X travels a different path from the Transit Center to the park & ride than Route 11. For example, someone traveling to Queen of the Valley Medical Center in Napa will have to transfer to VINE Route E if taking Route 11X, but those riding the slower but more frequent Route 11 will not have to, since Route 11 serves that facility.

Riders from Benicia can take the SolanoExpress Yellow Line to the Vallejo Transit Center, where they can connect with VINE Route 11 or 11X, depending on the time of day. Additionally, SolTrans Route 1 operates every half hour between Vallejo Transit Center and Rancho Square (roughly one-third of the way between Vallejo and Napa), where riders can continue to Napa on VINE Route 11. SolTrans Route 1 comes in handy for riders from Benicia, especially persons having limited mobility, given VINE Route 11 departs from the Ferry Terminal, which is two blocks from the Transit Center. VINE Routes 11 and 11X also serve the Transit Center, but only as part of their southbound trips.

All VINE routes that operate just within the city of Napa are lettered A-H. Routes C, D, E, and G connect the Transit Center to health facilities. All facilities are generally accessible, and require no more than two transfers.

Napa County Recommendations

Rio Vista has the least amount of access to medical/healthcare facilities in Napa given the infrequent service provided on Rio Vista Delta Breeze Route 50, which serves as the starting point for all Napa-focused travel from Rio Vista. However, given Rio Vista's geographical location at the eastern side of Solano County, it is much more likely someone from Rio Vista would travel to locations within Solano County or neighboring Contra Costa County than Napa County. As such, we have no recommendations for Napa County.

Exhibit 9.3.1 Transit Access to Medical Facilities –Napa County

Facility/Address	Medical Services	Service within 0.5 mile radius	Fixed-Route Service from Other Communities to Facility						
			Benicia	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo
Department of State Hospitals - Napa 2100 Napa Vallejo Hwy Napa, CA 94558	Government Hospital	VINE 10, 11, D	SE Yellow/VINE 11 SE Yellow/ST 1 SE Yellow/ST 4 VINE 11	SE Blue/VINE 21/VINE 10 SE Blue/VINE 21/VINE D	VINE 21/VINE 10/VINE D VINE 21/VINE 10/VINE D	RVDB 50/VINE 21/VINE 10 RVDB 50/VINE 21/VINE D	VINE 21/VINE 10/VINE D VINE 21/VINE 10/VINE D	SE Blue/VINE 21/VINE 10 SE Blue/VINE 21/VINE D	VINE 11 ST 1/VINE 11 ST 4/VINE 11
Kaiser Permanente Napa Medical Offices 3285 Claremont Way Napa, CA 94558	Family Internal Pediatrics	VINE 10, 11, A, C, E, H	SE Yellow/ST 1/VINE 11/VINE C SE Yellow/VINE 11X/VINE E	SE Blue/VINE 21/VINE C	VINE 21/VINE C	RVDB 50/VINE 21/VINE C	VINE 21/VINE C	SE Blue/VINE 21/VINE C	ST 1/VINE 11/VINE C VINE 11X/VINE E
Napa Valley Vinters Community Health Center 1141 Pear Tree Ln Napa, CA 94588	General Hospital	VINE 10, 11, A, C, E, H	SE Yellow/ST 1/VINE 11/VINE C	SE Blue/VINE 21/VINE C	VINE 21/VINE C	RVDB 50/VINE 21/VINE C	VINE 21/VINE C	SE Blue/VINE 21/VINE C	ST 1/VINE 11/VINE C VINE 11X/VINE E
Napa Valley Care Center 3275 Villa Ln Napa, CA 94558	Nursing Home	VINE 10, 11, A, C, E, H	SE Yellow/ST 1/VINE 11 SE Yellow/VINE 11X/VINE E	SE Blue/VINE 21/VINE 10 SE Blue/VINE 21/VINE 11 SE Blue/VINE 21/VINE C	VINE 21/VINE 10 VINE 21/VINE 11 VINE 21/VINE C	RVDB 50/VINE 21/VINE 10 RVDB 50/VINE 21/VINE C	VINE 21/VINE 10 VINE 21/VINE 11 VINE 21/VINE C	SE Blue/VINE 21/VINE 10 SE Blue/VINE 21/VINE 11 SE Blue/VINE 21/VINE C	ST 1/VINE 11 VINE 11X/VINE E
OLE Health - South Campus 300 Hartle Court Napa, CA 94559	General Hospital	VINE 10, 11, B, D, F, G	SE Yellow/VINE 11 SE Yellow/ST 1/VINE 11	SE Blue/VINE 21/VINE G	VINE 21/VINE G	RVDB 50/VINE 21/VINE G	VINE 21/VINE G	SE Blue/VINE 21/VINE G	VINE 11/VINE G VINE 11/11X
Queen of the Valley Medical Center 1000 Trancas St Napa, CA 94558	General Hospital	VINE 10, 11, A, C, E, H	SE Yellow/VINE 11 SE Yellow/ST 1/VINE 11	SE Blue/VINE 21/VINE 10	VINE 21/VINE 10 VINE 21/VINE C	RVDB 50/VINE 21/VINE 10 RVDB 50/VINE 21/VINE C	VINE 21/VINE 10 VINE 21/VINE C	SE Blue/VINE 21/VINE 10	VINE 11 VINE 11X/VINE E



9.4 Sacramento County

Given the *Capitol Corridor* and SolanoExpress Blue Line both serve Sacramento, riders from Dixon, Vacaville, Fairfield, and Suisun City only require one transfer to access Sacramento Hospitals. Trips from Rio Vista and Vallejo require two transfers, while trips from Benicia require three. Once arriving at Sacramento Valley Station, riders may transfer to Sacramento RT's Route 30 or 38 bus, or to the Gold Line (light rail) if they are traveling to the UC Davis Medical Hospital.

The SolanoExpress Blue Line serves Benicia at the Benicia Bus Hub. However, this is more than three miles from the Benicia City Park, and no SolTrans route connects the two locations. However, STA and SolTrans do offer a subsidized Lyft ride between the Benicia Bus Hub and Gateway Plaza. Additional Lyft subsidies for travel within Benicia city limits are available for qualified and low-income individuals through Solano Mobility. Travelers from Benicia may also take the Yellow Line (which serves City Park) to Vallejo, Red Line to Fairfield, and Blue Line to Sacramento, before making their final connection.

Travelers from Rio Vista also face lengthy travel options. Despite being the second-closest community to Sacramento County within Solano, riders must take the Rio Vista Delta Breeze (RVDB) Route 50 to the Fairfield Transit Center, and then take the SolanoExpress Red Line to the Suisun-Fairfield train station before taking the *Capitol Corridor* to Sacramento. However, RVDB Route 50 only has two round trips per day between Rio Vista and Fairfield. Another potential option would be to connect to SCT Link's Delta Route in Isleton and the Galt-Sacramento Commuter Express Route in Galt; while more direct, especially to Sutter General Hospital, it is unlikely a same-day round trip would be possible given the service times.

Sacramento County Recommendations

While access to medical/healthcare facilities in Sacramento County from most communities is limited to one or two trip options, service from Rio Vista is the most limited due to the infrequent service provided on RVDB Route 50. Since service exists (though complicated), we recommend the City offer guidance as to how to travel from Rio Vista to Sacramento.

1. Develop information specific to travel from Rio Vista to Sacramento to guide individuals in scheduling their medical appointments. Given travel options are limited and rather lengthy, the City can determine available travel times and post this information on its transit website. The cost to do this (and update it to reflect any changes to *Capitol Corridor* or Sacramento RT service) would be very modest.



Exhibit 9.4.1 Transit Access to Medical Facilities – Sacramento County

Facility/Address	Medical Services	Service within 0.5 mile radius	Fixed-Route Service from Other Communities to Facility						
			Benicia	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo
Mercy General Hospital 4001 J St Sacramento, CA 95819	General Hospital	SacRT 30, 134, 210, 211, 212, 213, 214	SE Yellow/SE Red/SE Blue/SacRT 30	SE Blue/SacRT 30	SE Blue/SacRT 30	RVDB 50/SE Red/CC/SacRT 30 RVDB 51/SCT Delta/SCT Galt/SacRT30	CC/SacRT 30	SE Blue/SacRT 30	SE Red/SE Blue/SacRT 30
Sutter General Hospital 2801 L St Sacramento, CA 95816	General Hospital	SacRT 30, 38, 67, 68, 109, 134, 210, 211, 226, 227, 228 EG 10, 11, 12, 13, 14, 15, 16, 17, 18 AT 1 EDT C	SE Yellow/SE Red/SE Blue/SacRT 30	SE Blue/SacRT 30 SE Blue/SacRT 38	SE Blue/SacRT 30 SE Blue/SacRT 38	RVDB 50/SE Red/CC/SacRT 38 RVDB 51/SCT Delta/SCT Galt	CC/SacRT 30	SE Blue/SacRT 30 SE Blue/SacRT 38	SE Red/SE Blue/SacRT 30
UC Davis Medical Center 2315 Stockton Blvd Sacramento, CA 95817	General Hospital	SacRT 38, 212, 213, 214, Gold	SE Yellow/SE Red/SE Blue/SacRT Gold	SE Blue/SacRT Gold	SE Blue/SacRT Gold	RVDB 50/SE Red/CC/SacRT 38 RVDB 51/SCT Delta/SCT Galt/SacRT38	CC/SacRT Gold	SE Blue/SacRT Gold	SE Red/SE Blue/SacRT Gold



9.5 Yolo County

Nearly all trips from Solano County to Yolo County medical/healthcare facilities require at least one trip on SolanoExpress or the *Capitol Corridor*. The only trip that does not is Yolobus Route 220, which directly connects Vacaville with Sutter Davis Hospital. All other trips require at least one transfer. As the *Capitol Corridor* serves Suisun City, trips originating from there require two transfers at most, occasionally only one. Fairfield to Sutter Davis Hospital is the only non-Suisun City trip that involves one transfer, as passengers can ride the SolanoExpress Blue Line to Vacaville Transit Center, where they transfer to Yolobus Route 220.

Despite being the closest Solano County community to Yolo County, most trips from Dixon require two or three transfers. A trip to Sutter Medical Plaza in Woodland requires a transfer in Sacramento. Otherwise, one would have to make two transfers in Davis before reaching Woodland.

The most accessible medical facilities appear to be the Sutter Davis Hospital and the Dignity Health Medical Foundation, both in Davis. For five of the seven Solano communities, trips to these facilities require two transfers at most. Trips from Rio Vista and Benicia to Sutter Davis require three transfers. Rio Vista has infrequent service, and Benicia is not served by the Blue Line, requiring passengers to travel via Vallejo.

Dignity Health Medical Foundation and Woodland Memorial Hospital in Woodland are virtually inaccessible for persons traveling from Benicia, as four transfers are required.

Yolo County Recommendations

Access to Yolo County is quite difficult for travelers from the southern portion of Solano County. Given this, it is more likely someone from Rio Vista or Benicia would travel to locations within Solano County or Contra Costa County rather than Yolo County. As such, we have no recommendations for Yolo County.



Exhibit 9.5.1 Transit Access to Medical Facilities – Yolo County

Facility/Address	Medical Services	Service within 0.5 mile radius	Fixed-Route Service from Other Communities to Facility						
			Benicia	Dixon	Fairfield	Rio Vista	Suisun City	Vacaville	Vallejo
Dignity Health Medical Foundation - Davis 2330 W Covell Blvd Davis, CA 95616	General Hospital	UNI P, Q YOLO 220CA, 220EB, 220WB, 220CP, 230AM, 230PM, 232PM	SE Yellow/SE Blue/UNI D/UNI Q SE Yellow/SE Blue/YOLO 220EB	SE Blue/UNI D/UNI Q	SE Blue/YOLO 220EB SE Blue/UNI D/UNI Q	RVDB 50/CC/UNI Q	CC/UNI Q	YOLO 220EB SE Blue/UNI D/UNI Q	SE Red/SE Blue/YOLO 220EB SE Red/SE Blue/UNI D/UNI Q
Dignity Health Medical Foundation 632 W Gibson Rd Woodland, CA 95695	General Hospital	YOLO 45AM, 45PM, 210, 211, 242AM, 242PM	SE Yellow/SE Red/SE Blue/ YOLO 42A/YOLO 211	SE Blue/UNI V/YOLO 42A/YOLO 211 SE Blue/UNI J/YOLO 42A/YOLO 211	SE Blue/UNI V/YOLO 42A/YOLO 211 SE Blue/UNI J/YOLO 42A/YOLO 211	RVDB 50/CC/YOLO 42A/YOLO 211	CC/YOLO 42A/YOLO 211 CC/YOLO 42B/YOLO 210	SE Blue/UNI V/YOLO 42A/YOLO 211 SE Blue/UNI J/YOLO 42A/YOLO 211	SE Red/SE Blue/UNI V/YOLO 42A/YOLO 211 SE Red/SE Blue/UNI V/YOLO 42A/YOLO 212 SE Red/SE Blue/UNI J/YOLO 42A/YOLO 211 SE Red/SE Blue/UNI J/YOLO 42A/YOLO 212
Sutter Davis Hospital 2000 Sutter Pl Davis, CA 95616	General Hospital	UNI B, G, J, P, Q YOLO 42A, 42B, 220CA, 220CP, 220EB, 220WB, 230AM, 230PM, 232PM, 242PM	SE Yellow/SE Red/SE Blue/ YOLO 220EB	SE Blue/UNI J/UNI P SE Blue/UNI V/UNI P SE Blue/YOLO 220EB	SE Blue/YOLO 220EB	RVDB 50/CC/UNI Z/UNI Q RVDB 50/CC/UNI Z/YOLO 220WB	CC/UNI A/UNI P CC/UNI Z/UNI Q	YOLO 220EB	SE Red/SE Blue/YOLO 220EB
Sutter Medical Plaza Woodland 475 Pioneer Ave #400 Woodland, CA 95776	General Hospital	YOLO 42A, 42B, 45AM, 45PM, 45XAM, 45XPM, 212, 214, 216AM, 216PM, 217AM, 217PM	SE Yellow/SE Blue/YOLO 42B	SE Blue/UNI V/YOLO 42A SE Blue/UNI J/YOLO 42A SE Blue/YOLO 42B	SE Blue/UNI V/YOLO 42A	RVDB 50/CC/YOLO 42B	CC/YOLO 42A CC/YOLO 42B	SE Blue/UNI V/YOLO 42A SE Blue/UNI J/YOLO 42A SE Blue/YOLO 42B YOLO 22EB/YOLO 42A	SE Red/SE Blue/UNI V/YOLO 42A SE Red/SE Blue/UNI J/YOLO 42A
Woodland Memorial Hospital 1325 Cottonwood St Woodland, CA 95695	General Hospital	YOLO 45AM, 45PM, 210, 211, 242AM, 242PM	SE Yellow/SE Red/SE Blue/ YOLO 42A/YOLO 211	SE Blue/UNI V/YOLO 42A/YOLO 211 SE Blue/UNI J/YOLO 42A/YOLO 211	SE Blue/UNI V/YOLO 42A/YOLO 211 SE Blue/UNI J/YOLO 42A/YOLO 211	RVDB 50/CC/YOLO 42A/YOLO 211	CC/YOLO 42A/YOLO 211 CC/YOLO 42B/YOLO 210	SE Blue/UNI V/YOLO 42A/YOLO 211 SE Blue/UNI J/YOLO 42A/YOLO 211	SE Red/SE Blue/UNI V/YOLO 42A SE Red/SE Blue/UNI J/YOLO 42A

Working Paper #10

Transit Access and Connecting Communities to Priority Development Areas and Future Priority Production Areas for Jobs

Overview

Priority Development Areas (PDAs) and future Priority Production Areas (PPAs) have been designated by the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) for analysis within their respective regional long-term land-use and transportation plans. PDAs have a greater focus on housing while future PPAs emphasize industrial, middle-wage employment centers.

Increasing the density of residents or employees within these areas is intended to reduce vehicle miles traveled (VMT) via infill development and attracting or retaining industrial employment. Access to public transit can reduce congestion and VMT, and can support regional initiatives to increase density. Furthermore, included within the PDA qualifying criteria is a minimum standard regarding transit accessibility. Therefore, transit accessibility within each designated area of Solano County will be identified, PDA transit accessibility will be contrasted with the current standard, recommendations to meet the adopted standard, and timing and forecast cost for said improvements will be addressed.

10.1 Priority Development Areas (PDAs)

Priority Development Areas receive designation by city and county governments. However, certain qualifying criteria must be met. A potential PDA must be:

- Located within an urbanized area;
- Forecast for significant housing growth, including affordable housing; and
- **Served by an existing or planned rail station, ferry terminal, or bus stop served by a route, or routes, with peak headways of 30 minutes or less.**¹

Plan Bay Area 2050 is proposed for adoption in Summer 2021. Subsequent to the adoption of this Plan the current PDA designation will be split into two new ones; 1) locations with higher transit standards and 2) locations with lower transit standards. Transit-Rich PDAs will reflect a higher standard of transit-access while Connected Community PDAs will have lower transit-access standards.

20200914

¹ Plan Bay Area 2050: MTC/ABAG Regional Growth Framework Revisions – Next Steps Memo, May 5, 2019.

Benicia

North Gateway Benicia Industrial Park PDA

The North Gateway Benicia Industrial Park PDA is located in northeast Benicia bounded by Lake Herman Road to the north, Reservoir Road to the west, and Industrial Way to the south and east. The SolanoExpress Blue Line, which runs from Pleasant Hill to Sacramento, serves Benicia Park Road/Industrial Way approximately every 30 minutes during peak hours, and every 60 minutes during off-peak hours and weekends. Given this route currently operates on a 30-minute headway, this PDA meets the current standard for a Connected Community PDA.

Downtown Benicia PDA

The Downtown Benicia PDA is located between West Second Street and East Third Street (west to east), and N Street to the Carquinez Strait (north to south). The SolanoExpress Yellow Line stops at City Park (located at First & Military) and runs every 30 minutes during peak hours between Vallejo and Walnut Creek. Additionally, SolTrans Routes 15 and 17 serve the area, but the focus is on local schools, and therefore the service runs only three times per day Monday-Thursday and four times on Friday. Given this area has a route with 30-minute frequency, this PDA qualifies.

Dixon

Downtown Dixon PDA

The Downtown Dixon PDA is bounded by D Street on the north, Adams Street and Porter Road on the west, Chestnut Street on the south, and Second Street to the east. There is no fixed-route transit service within this area, and therefore this PDA does not qualify. A general public Dial-A-Ride service operates within Dixon city limits. The City of Dixon park & ride, which is served by the SolanoExpress Blue Line, is within one mile of this location.

Fairfield

Fairfield Downtown South PDA

The Fairfield Downtown South PDA lies between Kentucky Street and Highway 12 (north to south), and Pennsylvania Avenue to the train tracks (west to east). Fairfield and Suisun Transit (FAST) Routes 1 and 5 serve the area. Route 1 operates every 30 minutes and Route 5 hourly. Given Route 1 offers 30-minute service, this PDA qualifies.

Fairfield-Vacaville Train Station PDA

The Fairfield-Vacaville Train Station PDA lies approximately half way between the centers of Fairfield and Vacaville, and is situated along the Fairfield-Vacaville *Capitol Corridor* station. It is bordered by Vacaville city limits to the north, Peabody Road to the west, Vanden Road to the south, and Gate Road to the east. *Capitol Corridor* trains stop at the station offering 15 round trips each weekday between Sacramento and Oakland, seven of which extend to San Jose. While Vacaville City Coach does not serve the station, FAST Route 2 does, with service every 30 minutes. Given this route offers 30-minute frequency, this PDA qualifies.

North Texas Gateway PDA

The North Texas Gateway PDA is located between Air Base Parkway and Travis Boulevard (north to south) and approximately 700 feet on either side of Texas Street (east to west). FAST Routes 1, 2, and 6 serve this corridor, and each offers 30-minute service. Given these routes have 30-minute frequency, this PDA qualifies.

West Texas Gateway PDA

The West Texas Gateway PDA is bordered by Texas Street to the north, Hamilton Drive to the west, Woolner Avenue to the south, and Pennsylvania Avenue to the east. The Fairfield Transportation Center is located here, and is served by FAST Routes 1, 3, 5, and 7; Rio Vista 50; and SolanoExpress Blue, Green, and Red Lines. FAST Route 5 operates hourly, while Routes 1, 3, and 7 offer 30-minute frequency. Rio Vista Route 50 provides two round trips daily on weekdays between Rio Vista and Fairfield. The SolanoExpress Red Line operates hourly on weekdays, and every other hour on weekends. During peak-hours, SolanoExpress Blue Line operates every 30 minutes and the Green Line every 20 minutes. Given the 30-minute frequency provided on multiple routes, this PDA qualifies.

Rio Vista

Rio Vista Downtown PDA

The Rio Vista Downtown PDA is located between Highway 12 and California Street from north to south, and Seventh Street to the Sacramento River from west to east. Rio Vista Routes 50 and 52 serve the area. Route 50 provides two round trips to Fairfield each weekday, while Route 52 provides one round trip to Antioch each weekday. Given these routes do not provide 30-minute frequency, this PDA does not qualify.

To fulfill the 30-minute service requirement, two round trips (for example, departing Rio Vista at 8:00 a.m. and 8:30 a.m. for the AM peak and at 5:00 p.m. and 5:30 p.m. for the PM peak) would need to be added in both the morning and evening to Route 50. Doing so would result in an additional 5.2 VSH per day, estimated at approximately \$720 per service day. This translates to an annual cost of approximately \$184,000. A second option would be to add two southbound morning trips (for example, departing Rio Vista at 5:45 a.m. and 6:15 a.m.) and two northbound evening runs (for example, at 5:30 p.m. and 6:30 p.m.) to Route 52, resulting in an additional 5.0 VSH per day at an estimated cost of approximately \$695 per service day. This translates to an annual cost of approximately \$178,000.

Suisun City

Suisun City Downtown & Waterfront PDA

The Suisun City Downtown & Waterfront PDA is bordered by the train tracks to the northwest, Suisun Slough to the south, and Marina Boulevard to the east. The Suisun-Fairfield Amtrak Station is located within this PDA. The station is served by the *Capitol Corridor*, FAST Route 5, Rio Vista Route 50, and the SolanoExpress Green and Red Lines. The Red Line offers limited service to this location, operating hourly during peak-hours only and four times on Saturday. However, given the Green Line operates every 30 minutes, this PDA qualifies.

Vacaville

Allison Area PDA

The Allison Area PDA lies within the section bounded by Interstate 80 to the northwest, Ulatis Creek to the south, and Putah South Canal to the east. The Vacaville Transportation Center is located within this PDA, near the intersection of Interstate 80 and Allison Drive. Vacaville City Coach (VCC) Routes 1, 3, 4, 5, and 6 serve this location, as does the SolanoExpress Blue Line and Yolobus Route 220. VCC Routes 1 and 3 operate on 60-minute headways; while Routes 4, 5, and 6 operate on 30-minute headways. The SolanoExpress Blue Line operates on a 30-minute headway during peak-hours, and hourly during off-peak. Yolobus Route 220 provides three round trips between Vacaville and Davis, Monday through Saturday. Given these routes provide 30-minute frequency, this PDA qualifies.

Downtown Vacaville PDA

The Downtown Vacaville PDA is bordered by Monte Vista Avenue to the north, Cernon and Boyd Streets to the west, Interstate 80 to the south, and Depot Street to the east. This area is served by VCC Routes 2, 5, and 6. While Routes 5 and 6 operate on 30-minute headways, Route 2 runs every 60 minutes. Given these routes offer 30-minute frequency, this PDA qualifies.

Vallejo

Sonoma Boulevard PDA

The Sonoma Boulevard PDA lies along Sonoma Blvd from Redwood Street in the north to Curtola Parkway in the south. SolTrans Routes 1, 2, 3, 4, 5, 7A, 7B, 8, and 82 serve this area. The SolanoExpress Red Line also serves this location. Routes 1, 2, 3, 4, 5, 7A, and 7B each provide 30-minute service, Route 8 offers hourly service, and Route 82 runs once daily to San Francisco and returns to Vallejo. The Red Line operates every 15 minutes during peak hours. As a result, this PDA qualifies.

Vallejo Downtown & Waterfront PDA

The Vallejo Downtown & Waterfront PDA includes two sections. The main section is bordered by Capitol Street to the north, Solano Avenue to the south, Sutter Street to the east, and the Napa River to the west. This section includes the Vallejo Transit Center and Vallejo Ferry Terminal. SolTrans Routes 1, 2, 3, 4, 5, 6, 7A, 7B, 8, and 82 each serve the Vallejo Transit Center. The SolanoExpress Red and Yellow Lines, and VINE Routes 11 and 11X also serve the Transit Center.

The Vallejo Ferry Terminal is served by SolTrans Routes 5 and 82, SolanoExpress Yellow Line, and VINE Routes 11 and 11X. Here these routes connect with the San Francisco Bay Ferry, which links Vallejo with the San Francisco Ferry Building, along with limited service to Pier 41 and Mare Island. The Ferry Terminal is two city blocks from the Transit Center.

The Vallejo-San Francisco Ferry operates every 30-45 minutes during peak-hours. SolTrans Route 6 and VINE Route 11 each provide 60-minute service, while the SolanoExpress Yellow Line runs every half-hour. VINE Route 11X operates six times per day during peak-hours only. This bi-directional routes links Vallejo with Napa.

Located four blocks north of the main section is the second section, an area bounded by the Mare Island Causeway on the north, Napa River on the southwest, and Mare Island Way on the east. SolTrans Routes 5 and 82 serve this section.

Given the Red Line operates every 15 minutes during peak hours, this PDA qualifies.



Exhibit 10.1.1 PDA Transit Access in Solano County

Community	Priority Development Area (PDA)	Boundaries (Counter-Clockwise)	Transit Access	Meets Requirement?	*Daily/Annual Cost Estimate
Benicia	North Gateway Benicia Industrial Park	N: Lake Herman Rd W: Reservoir Rd SW, SE: Industrial Way	SE Blue	Yes	-
	Downtown Benicia	N: N St W: W 2nd St S: Carquinez Strait E: E 3rd St	SE Yellow ST 15, 17	Yes	-
Dixon	Downtown Dixon	N: D St N W: Adams St, Porter Rd S: Chestnut St E: 2nd St		No	-
Fairfield	Fairfield Downtown South	N: Kentucky St W: Pennsylvania Ave S: Highway 12 E: Train Tracks	FAST 1, 5	Yes	-
	Fairfield-Vacaville Train Station	N: Vacaville city limits W: Peabody Rd S: Vanden Rd E: Gate Rd	CC FAST 2	Yes	-
	North Texas Gateway	N: Air Base Pkwy W, E: approx 700 ft on either side of Texas St S: Travis Blvd	FAST 1, 2, 6	Yes	-
	West Texas Gateway	N: Texas St W: Hamilton Dr S: Woolner Ave W: Pennsylvania Ave	FAST 1, 3, 5, 7 Rio Vista 50 SE Blue, Green, Red VINE 21	Yes	-
Rio Vista	Rio Vista Downtown	N: Highway 12 W: 7th St S: California St E: Sacramento River	Rio Vista 50, 52	No	\$695-\$725/ \$178,000- \$184,000
Suisun City	Suisun City Downtown & Waterfront	NW: train tracks S: Suisun Slough E: Marina Blvd	CC FAST 5 Rio Vista 50 SE Green, Red VINE 21	Yes	N/A
Vacaville	Allison Area	NW: Interstate 80 S: Ulatis Creek E: Putah South Canal	SE Blue VCC 1, 3, 4, 5, 6 YOLO 220	Yes	-



Community	Priority Development Area (PDA)	Boundaries (Counter-Clockwise)	Fixed-Route Transit Access	Meets Requirement?	*Daily/Annual Cost Estimate
Vacaville	Downtown Vacaville	N: Monte Vista Ave W: Cernon St, Boyd St S: Interstate 80 E: Depot St	VCC 2, 5, 6	Yes	-
	Sonoma Blvd	N: Redwood St S: Curtola Pkwy	SE Red ST 1, 2, 3, 4, 5, 7A, 7B, 8, 82	Yes	N/A
Vallejo	Vallejo Downtown & Waterfront	N: Capitol St W: Napa River S: Solano Ave E: Sutter St	SE Red, Yellow SFBF ST 1, 2, 3, 4, 5, 6, 7A, 7B, 8, 82 VINE 11, 11X	Yes	N/A
	Vallejo Downtown & Waterfront	N: Mare Island Causeway SW: Napa River E: Mare Island Way	ST 5, 82	Yes	N/A

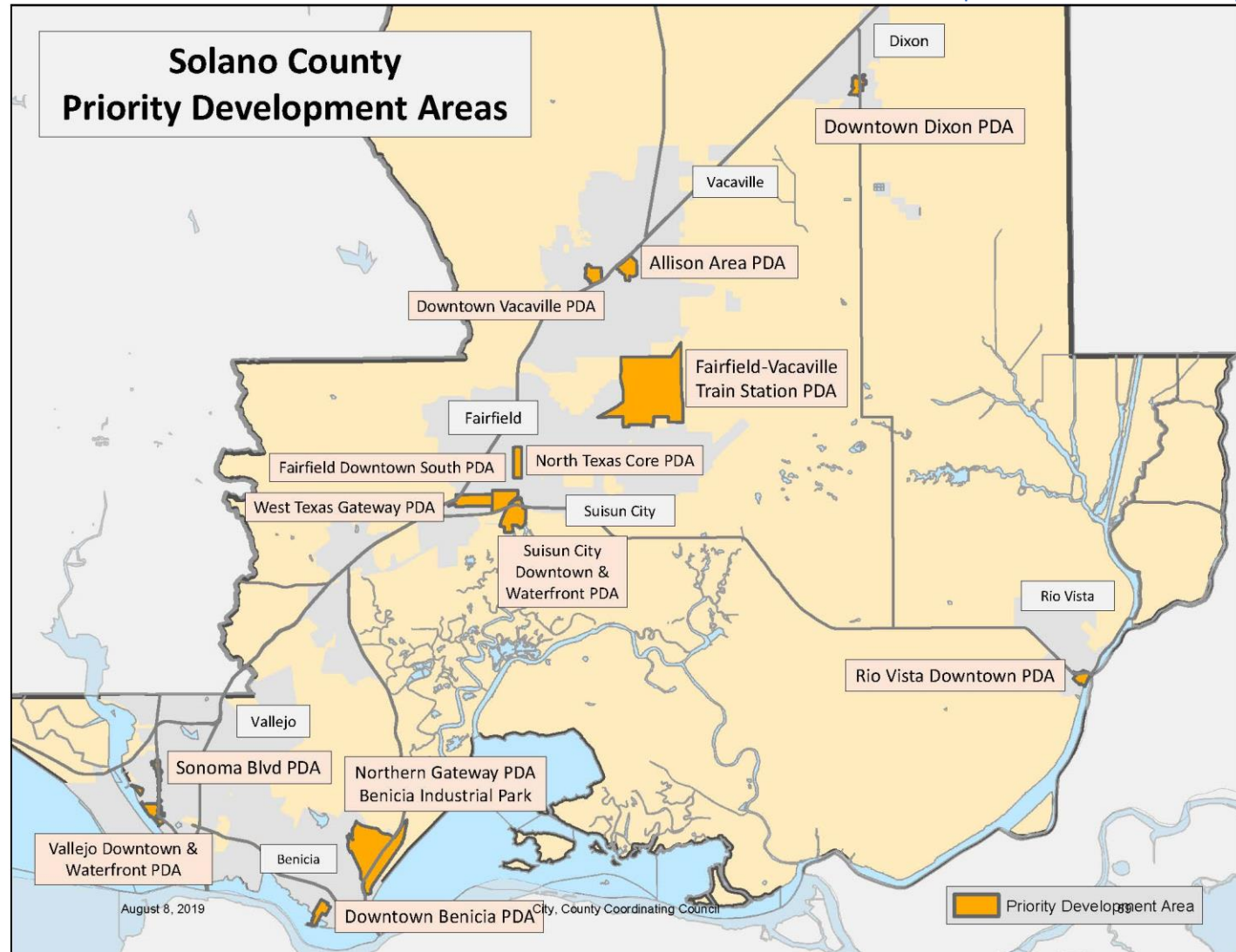
*Cost estimates are based on FY 2018/19 operating-cost/VSH by mode. Daily cost estimate is to meet the PDA requirements.

Exhibit 10.1.2 Transit Provider Legend

Transit Provider	
CC	Capitol Corridor
FAST	Fairfield and Suisun Transit
RV	Rio Vista
SE	SolanoExpress
SFBF	San Francisco Bay Ferry
ST	SolTrans
VCC	Vacaville City Coach
VINE	The VINE (NVTA)
YOLO	Yolobus



Exhibit 10.1.3 Map of PDAs in Solano County



Source: Solano City-Council Coordinating Council Staff Report. Agenda Item No. VI.3 "Priority Development Areas (PDAs), Priority Conservation Areas (PCAs), and Priority Planning Area (PPA) Designations. August 8, 2019. Accessed March 2020.

10.2 Future Priority Production Areas (PPAs)

Unlike PDAs, future Priority Production Areas do not require inclusion in MTC's minimum standard of transit-access. However, transit access to future PPAs in Solano County will be evaluated. The PPA criteria employed is:

- Zoned for industrial use or has a high concentration of Production, Distribution, and Repair (PDR) activities;
- Does not overlap with a Priority Development Area and does not include land within one-half mile of a regional rail station; and
- Jurisdiction has a certified Housing Element.²

Benicia

Benicia Industrial PPA

The Benicia Industrial PPA is located in northeast Benicia bounded by Lake Herman Road to the north, Reservoir Road to the west, and Industrial Way to the south and east. It has boundaries identical to the North Gateway Benicia Industrial Park PDA. PDAs and PPAs cannot be shared jurisdictions. The SolanoExpress Blue Line, which runs from Pleasant Hill to Sacramento, serves Benicia Park Road and Industrial Way approximately every 30 minutes during peak hours, and every 60 minutes during off-peak hours and on weekends.

Dixon

Northeast PPA

The Northeast PPA is located in the northeast section of Dixon. It is bordered by Interstate 80 to the northwest, First Street (Highway 113) to the west, Vaughn Road to the south, and Pedrick Road to the east. There is currently no fixed-route public transit service within this area. However, the Dixon ReadyRide (general-public Dial-A-Ride) provides service within Dixon city limits.

Fairfield

Solano Business Park PPA

The Solano Business Park PPA is bordered by Highway 12 to the north, Chadbourne Road to the west, Cordelia Road to the south, and Beck Avenue to the east. FAST Route 7 and Rio Vista Route 50 serve this area.

Train Station Employment Center PPA

The Train Station Employment Center PPA is located just east of the Solano Business Park PPA. It is bounded by Highway 12 to the north, Beck Avenue to the west, Cordelia Road to the south, and Pennsylvania Avenue to the east. FAST Route 5 serves this area.

² Plan Bay Area 2050: Regional Growth Framework Update – Overview of Existing and Updated Geographies. Table A.2 Overview of Current and Updated Regional Growth Framework Designations. August 8, 2019. Accessed March 2020.

Rio Vista

Rio Vista Industrial Park PPA

The Rio Vista Industrial Park PPA is located in the northwest portion of Rio Vista. It is bounded by Rustic Oak Path to the north, Province Path to the west, and Liberty Island Road to the southeast. Rio Vista Routes 50 and 52 serve this area.

Suisun City

East Side PPA

The East Side PPA is located in the eastern portion of Suisun City bounded by Petersen Road to the north, Walters Road to the west, Highway 12 to the southwest, and Union Creek to the east. FAST Route 6 serves this area via service along Walters Road. Rio Vista Route 50 also serves the Suisun City Walmart, located adjacent to this area across Walters Road.

Gentry PPA

The Gentry PPA is located adjacent to the Suisun-Fairfield rail station. It is bounded by Pennsylvania Avenue to the west, Cordelia Street to the south, and Peytonia Slough to the northeast. The *Capitol Corridor*, FAST Route 5, Rio Vista Route 50, SolanoExpress Green and Red Lines, and VINE Route 21 each serve the Suisun-Fairfield rail station.

Vacaville

Vacaville Industrial PPA

The Vacaville Industrial PPA is composed of two sections. The first section is located north of downtown Vacaville, and is bordered by Midway Road to the north, Putah South Canal to the west, Nut Tree Road to the south, and Interstate 505 to the east. This section has no fixed-route transit access.

The second section is located in downtown Vacaville bordered by Interstate 80 to the northwest, Shasta Drive and Elmira Road to the southwest, Hume Way and Peabody Road to the southeast, and Ulatis Creek and Allison Drive to the northeast. VCC Route 3 is the only fixed-route transit service directly serving this location. However, the Vacaville Transportation Center is only one-quarter mile away from this PPA, and it is served by the SolanoExpress Blue Line; VCC Routes 1, 3, 4, 5, and 6; and Yolobus Route 220.

Vallejo

North Sonoma & Broadway Corridor PPA

The North Sonoma & Broadway Corridor PPA is located north of Downtown Vallejo, north to south from Lewis Brown Drive to Redwood Street and east to west from Broadway to Sonoma Boulevard. The SolanoExpress Red Line; SolTrans Routes 1, 2, 4, 5, 7A, and 7B; and VINE Route 11 each serve this area.



South Vallejo PPA

The South Vallejo PPA is located south of Downtown Vallejo; bordered by Solano Avenue and Curtola Parkway to the north, the Napa River to the west, Lemon Street to the south, and Fifth Street to the east. The SolanoExpress Red Line as well as SolTrans Routes 3, 8, and 82 serve this area.

Mare Island PPA

The Mare Island PPA is located on Mare Island, across the Napa River from Downtown Vallejo. It is divided into two sections. The northern section is bordered by Elm Street to the north, L Street to the west, J Street to the south, and Azuar Drive to the east. This section has no fixed-route transit service, though STA does provide first/last mile service through Lyft.

The southern section lies along the waterfront from the Mare Island Causeway on the north to 15th Street on the south. The Vallejo-San Francisco Ferry serves the Mare Island Ferry Terminal every 30 minutes during peak hours, and otherwise provides limited service.



Exhibit 10.2.1 PPA Transit Access in Solano County

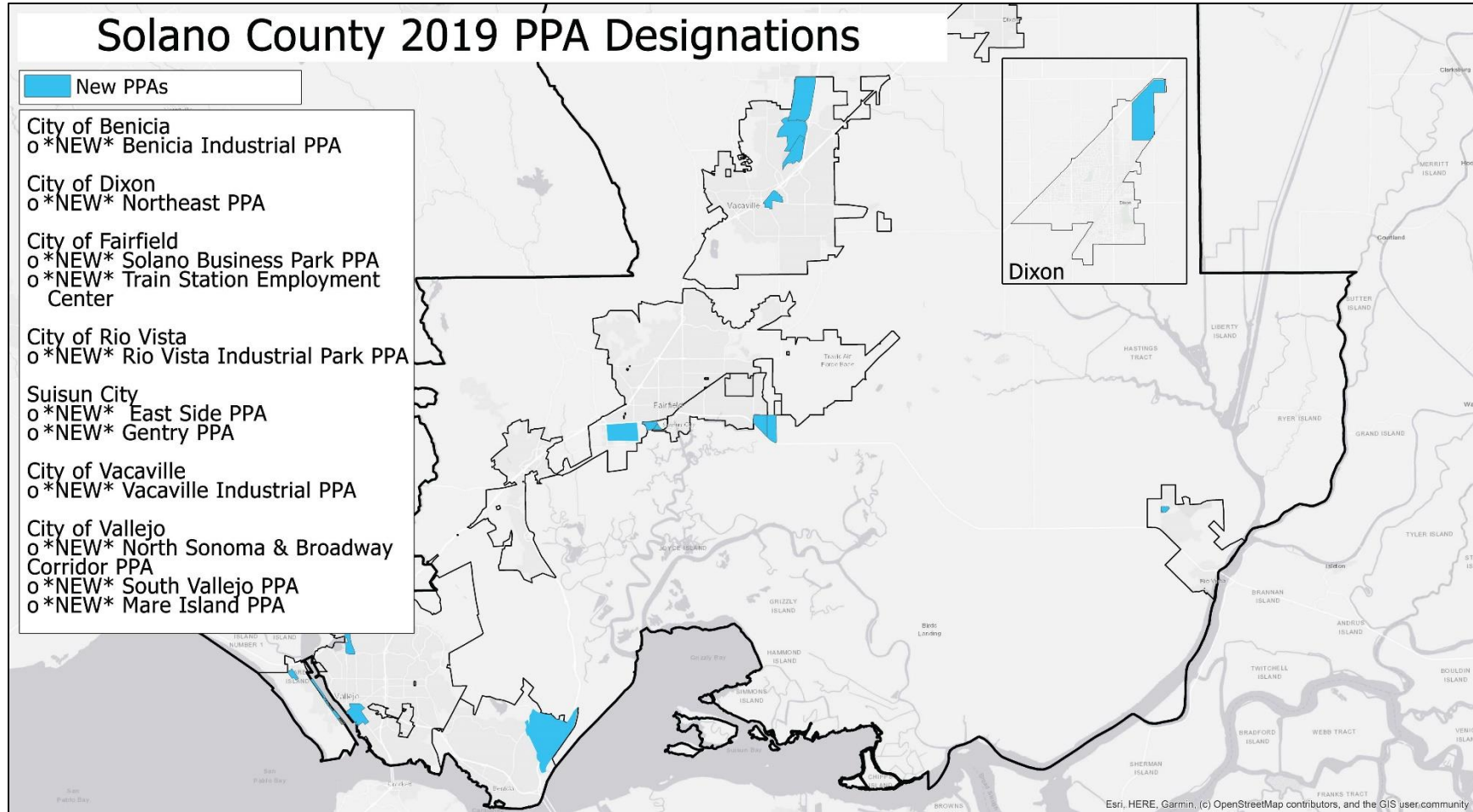
Community	Priority Production Area (PPA)	Boundaries (Counter-Clockwise)	Fixed-Route Transit Access
Benicia	Benicia Industrial	N: Lake Herman Rd W: Reservoir Rd SW, SE: Industrial Way	SE Blue
Dixon	Northeast	NW: Interstate 80 W: 1st St (CA SR 113) S: Vaughn Rd E: Pedrick Rd	-
Fairfield	Solano Business Park	N: Highway 12 W: Chadbourne Rd S: Cordelia Rd E: Beck Ave	FAST 5, 7 Rio Vista 50
	Train Station Employment Center	N: Highway 12 W: Beck Ave S: Cordelia Rd E: Pennsylvania Ave	FAST 5 Rio Vista 50
Rio Vista	Rio Vista Industrial Park	N: Rustic Oak Path W: Province Path SE: Liberty Island Rd	Rio Vista 50, 52
Suisun City	East Side	N: Petersen Rd W: Walters Rd SW: Highway 12 E: Union Creek	FAST 6 Rio Vista 50
	Gentry	W: Pennsylvania Ave S: Cordelia St NE: Peytonia Slough	CC FAST 5 Rio Vista 50 SE Green, Red VINE 21
Vacaville	Vacaville Industrial	N: Midway Rd W: Putah South Canal S: Nut Tree Rd E: Interstate 505	-
		NW: Interstate 80 SW: Shasta Dr, Elmira Rd SE: Hume Way, Peabody Rd NE: Ulatis Creek, Allison Dr	VCC 3



Community	Priority Production Area (PPA)	Boundaries (Counter-Clockwise)	Fixed-Route Transit Access
Vallejo	North Sonoma & Broadway Corridor	N: Lewis Brown Dr W: Sonoma Blvd S: Redwood St E: Broadway	SE Red ST 1, 2, 4, 5, 7A, 7B VINE 11
	South Vallejo	N: Solano Ave, Curtola Pkwy W: Napa River S: Lemon St E: 5th St	SE Red ST 3, 8, 82
	Mare Island	N: Elm St W: L St S: J St E: Azuar Dr	SFBF



Exhibit 10.2.2 Map of PPAs in Solano County



Source: Solano Transportation Authority. December, 2019. Accessed March 2020.

