

# OPTIMIZED RAIL PASSENGER SERVICE FOR SANTA CRUZ COUNTY

## -Maximizing Ridership and Benefits of Rail Passenger Service

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### Introduction

Santa Cruz County voters approved a 0.5% county-wide sales tax for transportation at the November 2016 election which included an 8% set-aside for maintaining the current tracks in the 31.48-mile rail corridor now owned by the Santa Cruz County Regional Transportation Commission (SCCRTC) since its purchase in 2012 from the Union Pacific Railroad.

SCCRTC is conducting a “Unified Corridor Study” during 2018 through early 2019. This study is examining various transportation options in the Highway 1 corridor between Watsonville and Santa Cruz. Transit options being studied include Bus Rapid Transit (BRT) on existing arterial street, Highway 1 and potentially along the railroad right-of-way. Rail options are also being considered along the existing right-of-way and potentially in the Highway 1 freeway alignment, along with active transportation improvements such as improved pedestrian and bicycle facilities, and auxiliary lanes along Highway 1. Figure 1 illustrates the selected Scenarios being studied in Phase 2 of the Unified Corridor Study.<sup>2</sup>

After a proposal to add a freeway lane in each direction for either high occupancy vehicles (HOVs) or single-occupant vehicles on Highway 1, rail service on the right-of-way purchased by SCCRTC is the most controversial potential transportation project in Santa Cruz County. Portions of the proposed pedestrian and bicycle trail that would parallel the existing tracks over the 31.48 miles between Davenport, Santa Cruz and Watsonville are now under construction.

However, there are two outspoken and apparently very well-financed groups, “Trail Now” and “Greenway Santa Cruz,”<sup>3</sup> that are attempting to convince SCCRTC to abandon current “Rail and Trail” plans in favor of a “Trail Only” option that would remove the existing tracks. The Trail Only proposal would convert the current rail alignment and embankment to a combination bicycle-pedestrian trail that would occupy most of the existing railroad right-of-way. These anti-rail groups claim that in addition to conventional bicycles, electric-assisted bicycles and scooters would be adequate substitutes for transit, including for long-distance commuting between Watsonville and Santa Cruz.

However, the Trail Only plans put forward by rail opponents suffer from two major shortcomings plus a major, potentially fatal oversight.

**First**, the anti-rail faction claims that the existing rail corridor can be “rail-banked.” That is, existing tracks and ties can be removed now, in favor of using the corridor for a bicycle/pedestrian trail, and then reinstalled at some (undetermined) future date when rail service is determined to be “feasible.” However, to date in the United States no rail service has been

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<sup>2</sup> Unified Corridor Study information at: <http://sccrtc.org/projects/multi-modal/unified-corridor-study/>

<sup>3</sup> [www.trailnow.org](http://www.trailnow.org) and [www.sccgreenway.org](http://www.sccgreenway.org)

Figure 1.

**Unified Corridor Investment Study - Step 2 Scenarios for Analysis**  
**(Staff Recommendation - December 7, 2017)**






	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E	Scenario F	No Build
Highway 1 Projects							
buses on shoulders							
high occupancy vehicle lanes (HOV) and increased transit frequency							
auxiliary lanes to extend merging distance IN ADDITION TO MEASURE D							
metering of on-ramps							
additional lanes on bridge over San Lorenzo River							
Mission St intersection improvements							
rail transit on Hwy 1 between Santa Cruz and Watsonville							
Soquel Avenue/Drive and Freedom Blvd							
bus rapid transit lite (faster boarding, transit signal priority and queue jumps)							
dedicated lane for bus rapid transit and bikes							
increased frequency of transit with express services							
buffered/protected bike lanes							
intersection improvements for auto							
intersection improvements for bikes/pedestrians							
Rail Corridor							
bike and pedestrian trail*							
local rail transit with interregional connections							
bus rapid transit							
freight service on rail			Only Watsonville 				
Overall Project Area/Connections between Routes							
improved bike/pedestrian facilities throughout urban area closing gaps in network	These projects will be evaluated in all scenarios.						
additional transit connections							
bike share, bike amenities, transit amenities, park and ride lots							
multimodal transportation hubs							
automated vehicles/connected vehicles**							
Transportation Demand and System Management							
employers and residences - incentive programs	These projects will be evaluated in all scenarios.						
education and enforcement - electric vehicle, motorist safety, and bike safety							
* "multise trail" and "bike trail separate from pedestrian trail" was combined into "bike and pedestrian trail" until more information was available to better define the ability to separate bikes from pedestrians in a trail only, a trail with rail, and a trail with BRT. See project tables in Attachment 1 for staff recommendations of the project descriptions for the various trail options.							
** Qualitative evaluation for all scenarios							
Oval represents projects that are recommended to be added to scenarios for analysis in Step 2							
 <b>Kimley»Horn</b>							
 bus transit							
 rail transit							
 auto							
 bike/ped							
 rail freight							

\* "multiuse trail" and "bike trail separate from pedestrian trail" was combined into "bike and pedestrian trail" until more information was available to better define the ability to separate bikes from pedestrians in a trail only, a trail with rail, and a trail with BRT. See project tables in Attachment 1 for staff recommendations of the project descriptions for the various trail options.

\*\* Qualitative evaluation for all scenarios

Oval represents projects that are recommended to be added to scenarios for analysis in Step 2



	bus transit
	rail transit
	auto
	bike/ped
	rail freight

reestablished in any "rail-banked" in the decades since "rail-banking" was established as a concept. In the few cases where service reestablishment was attempted, trail users and adjacent property owners united and stopped implementation. In short, the call for rail-banking seeks to eliminate the only remaining option to prevent Santa Cruz County's descent into total gridlock.

**Second**, rail opponents claim that likely rail ridership would be too low. Given the rapidly growing congestion in the Highway 1 corridor, this claim cannot be taken seriously. In SCCTC's 2015 *Passenger Rail Feasibility Report*, consultants estimated that the highest ridership option would carry from 6,150 to 6,800 daily riders under projected 2035 conditions, or roughly 5,000-5,500 daily riders under 2015 conditions.

These projections were based on a robust "direct demand forecasting model" method pioneered by the ridership consultants (Fehr & Peers) in the early 2000's. The study assumed no service to downtown Santa Cruz or Cabrillo College. The author examined how extending service to those destinations would affect ridership, and concluded that expanding the service area would double the projected ridership.

**Third**, rail opponents overlook another major problem, which is probably fatal to their Trail Only proposal. If a series of mixed Federal Court rulings including the Supreme Court regarding conversion of abandoned railroad rights-of-way to trail usage are any indication, removing the tracks would likely spark years of litigation. While SCCRTC has established outright ownership of 93.09 acres (31%) of the total land used for the railroad right-of-way, titles for the remaining 208.53 acres consist either of “rail only” easements that legally revert to adjacent landowners after abandonment of rail usage, or parcels for which no clear title could be established. Title searches and other real estate “due diligence” reports funded by SCCRTC were unable to establish clear ownership of 100+ parcels on which easements for rail usage existed when the Union Pacific Railroad transferred ownership of the Santa Cruz Branch Line to SCCRTC in 2012.

Part 1 of this paper outlines TRAC’s proposed changes to the scenarios examined in the 2015 *Rail Passenger Rail Feasibility Report* that should be additional input into the Unified Corridor Study, designed to potential double ridership.

Part 2 examines the details of why years of litigation can be expected should Santa Cruz Branch Line tracks be removed to implement the Trail Only plan.

## **1. Optimizing Rail Passenger Service for Santa Cruz County**

The author followed up on the *Passenger Rail Feasibility Report* by applying recent census employment and population data to our own rail patronage projections based on the direct demand forecasting model originally developed by the same consultant in 2003 for an analysis of proposed BART extensions in Eastern Alameda County (“tBART Bay Area Direct Demand Ridership Model”).<sup>4</sup>

Population and employment located within 0.5 miles of proposed station stops are the most important factors in projecting rail ridership, followed by the number of bus arrivals and departures at a given station. These figures have been calculated by the author for the Marin-Sonoma, Santa Cruz County, and North San Diego County cases discussed in this paper.

### **Testing the Direct Demand Forecasting Model**

Despite the original data being 15 years old, applying the model to new SMART rail service in Marin and Sonoma Counties that began in September 2017, it remarkably predicted current SMART ridership within +10%/-10%. Model inputs were adjusted by the author to account for:

- Less frequent a.m. and p.m. peak period services than originally promised, e.g., hourly southbound trains during the “peak of the peak” between 6:00 a.m. and 8:00 a.m., instead of the 30-minute frequencies promised.

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<sup>4</sup> *Forecasting Transit Demand in a Fast Growing Corridor: The Direct-Ridership Model Approach*. Also *tBART 580/680 Corridor Ridership Forecasting Methodology*. Gerald Walters & Robert Cervero [UC Berkeley transportation faculty]. Completed for BART, August 2003 for study of “tBART” service in the I-680 and I-580 corridors (extensions to preexisting I-580 BART service). Note: the equation for A.M. peak period ons+offs was developed and refined from this research; this information has been presented at a number of transportation conferences. The 2003 paper is not online but the author can provide a scan.

- Limited midday service (e.g., only two mid-day round trips).
- Lack of SMART service after 8:00 p.m. on weekdays.
- Limited weekend service, e.g., only 5 round trips on Saturdays, Sundays and holidays at two to three-hour intervals.

SMART ridership has been averaging around 3,000 weekday one-way passenger trips during non-holiday periods since beginning revenue service last September. This compares to the 3,200+/- daily one-way passenger trips projected by the tBART Bay Area Direct Demand Ridership Model, with inputs adjusted as summarized in Figure 2.

**Figure 2. SMART Projections Using tBART Rail Patronage Model**

	Population 2010 <sup>5</sup>	Employment 2009	Pop.+ Jobs	Projected A.M. Peak Period Ons+Offs	Projected All-Day Ons+Offs
<b>CURRENT SMART SCHEDULE</b>					
Current 10 Open Stations	37,231	32,745	69,976	3,063	6,400
				Projected Daily Riders	3,200
				<b>Actual Daily Riders</b>	<b>2,800-3,200</b>
Planned 16 Stations Open	52,119	41,707	93,826	Projected Daily Riders#	4,500

# Important note: To obtain total daily ridership, divide Total Ons+Offs in half, e.g., 6,400 Ons+Offs=3,200 daily one-way passenger trips, or 1,600 round trips

Current (April 2018) SMART's practical service capacity is severely limited by provision of 60-minute a.m. peak frequencies southbound peak direction between 6:00 a.m. and 9:00 a.m. and only 2 daily mid-day round trips. This limits total capacity and ridership. The fact that several SMART stations have not yet opened for regular service also reduces potential ridership. (Detailed spreadsheet available upon request).

As an additional check, applying Santa Cruz parameters to North San Diego County's Sprinter rail service resulted in a Sprinter patronage estimate of 6,300 daily riders. As the Sprinter ridership actually averaged about 9,000 daily in Fiscal Year 2015-16, the model parameters are realistic<sup>6</sup>. Figure 5 illustrates projected ridership by stations serving identified Census Tracts.<sup>7</sup>

#### **Applying the Direct Demand Ridership Model to the Santa Cruz Rail Corridor**

The tBART direct demand model was applied to the Santa Cruz County rail corridor under two scenarios with the following changes designed to increase ridership beyond the highest ridership scenarios studied in the 2015 *Passenger Rail Feasibility Report*:

<sup>5</sup> It should be noted that estimated population and employment near most SMART stations has not changed significantly since the Great Recession.

<sup>6</sup> The actual Sprinter ridership included bus transfers and college ridership, which were not accounted for in the model.

<sup>7</sup> Based on data from U.S. Census Bureau, <https://onthemap.ces.census.gov/>, adjusted for estimated distance from proposed stations and assumptions regarding local bus connections.

- Service extended 0.7 miles north from the Santa Cruz depot, to two additional stations at Chestnut & Laurel and Chestnut & Locust Streets in Downtown Santa Cruz. The Laurel Street stop would connect directly to the Laurel Street buses to/from UCSC that operate every 7.5 minutes in each direction (16 buses per hour, plus other bus lines nearby) during the school year. The proposed Locust Street station location has sufficient room for a 2-track terminal within the railroad right-of-way, is less than a block from Santa Cruz City Hall, and is about 0.25 mile from the downtown core.

**Figure 3. Example of Automated Minibus**



- A new station near Cabrillo College across Highway 1 at the entrance to New Brighton State Beach. This stop would connect to Cabrillo College with a transit lane on McGregor Drive, and then across a new a pedestrian/bicycle bridge that includes a dedicated path for small, low axle-weight automated minibuses, as shown in Figure 3. The automated minibus would operate from the rail station through the heart of the Cabrillo College campus to the Metro bus stops on Soquel Drive. All scenarios include a Pajaro station.
- Several Census Tracts would be served by one station in a few locations, and there would be 2-3 local stations not evaluated in the 2015 rail study, in addition to the downtown, Cabrillo College and Pajaro stations.
- In Watsonville, all local buses would be extended beyond the existing downtown transit center to the West Watsonville rail station. This maximizes coordination and provides a choice of more than one route to transit patrons.

Appendix A illustrates the Census Tracts evaluated along the Santa Cruz Branch Line.

Two service scenarios were examined. Both assume usage of hydrogen or 100% battery-powered trains that would have acceleration comparable to current electric trains, but without overhead wires. For one example of this rapidly improving technology, see Figure 4. Scenarios examined were:

- Operate 30-minute frequencies all-day over the line between Downtown Santa Cruz and Pajaro.
- Operate 30-minute frequencies all-day over the line between Downtown Santa Cruz and Pajaro. Overlay additional service every 30-minutes during the morning (6:00 a.m.-9:00 a.m.) and afternoon (3:30 p.m.-6:30 p.m.) peak periods between Downtown and Rio Del Mar, resulting in 15-minute service between those points.

This exercise had positive results.



For the **30-minute all-day frequency scenario**, projected ridership was **11,156 daily riders**, of which about 4,500 came from downtown, Cabrillo College, and the Pajaro extension. These stations, plus 2-3 additional stops, explain most of the higher ridership compared to Option G1 in the *Passenger Rail Feasibility*

**Figure 4. Hydrogen-Powered Train Being Tested in Germany**



*Study*, which ranged between 5,000-5,500 daily riders under 2015 conditions.

For the **15-minute peak, 30-minute frequency at other times scenario**, total projected ridership was **13, 737 daily riders**. Again, most of the difference from Option G1 in the rail study is due to two new stations in Downtown Santa Cruz, a new stop serving Cabrillo College with a direct pedestrian, bicycle and automated minibus connection, as well as a connection to Pajaro and train service to/from the Bay Area at that location. Figure 5 details projected ridership by Census Tract near the rail line. (Detailed calculations available in a spreadsheet upon request).

One area where the author's modeling significantly differed from the 2015 Passenger Rail Feasibility Study is for ridership origins and destinations in Watsonville. The author projects about 3,000 daily riders to and from Watsonville, versus less than 1,000 projected by the 2015 and earlier studies. The reasons for these low ridership projections are not obvious. The author assumes the following which may not have been included in earlier studies:

- Rail service would have about a 40-minute travel time between downtown Watsonville and downtown Santa Cruz (Chestnut & Locust station)—which is 5-10 minutes faster than Santa Cruz Metro's existing Route 93 express bus, and
- Apparently unlike earlier study scenarios, the author also assumes all local Watsonville buses and Monterey-Salinas Transit (MST) buses from Monterey County would connect to the downtown Watsonville station to serve that large concentration of employment and population (though MST would also serve the proposed Pajaro rail station).

**Figure 5. Projected Ridership on Davenport-Santa Cruz-Watsonville Rail Line**

			A.M. Peak Period Ons & Offs		Equivalent All-Day Ons & Offs, All Stations	
			Proposed Service Frequencies			
	Census Tract	Population + Employment within 0.5 mile	30 min. peak periods 30-min. all day	15-min. peak periods 30 min. all day	30-min. peaks, 30-min. all day	15-min. peaks, 30-min. all day
Davenport Coast	=	2,500	156	156	468	468
Natural Bridges	1012	6,000	332	332	996	996
Boardwalk West	1011	6,636	340	340	1,020	1,020
<b>Downtown – Chestnut &amp; Laurel, Chestnut &amp; Locust</b>	<b>1007</b>	<b>8,388</b>	<b>593</b>	<b>786</b>	<b>1,779</b>	<b>2,358</b>
Boardwalk	1010	12,609	392	518	1,176	1,554
River East	1008	7,500	293	388	879	1,164
Harbor North	1009	4,000	254	336	762	1,008
Twin Lakes	1215	6,467	411	544	1,233	1,632
Twin Lakes East	1216-part	8,091	354	468	1,062	1,404
Twin Lake North	1214.03-part	4,518	261	346	783	1,038
Twin Lakes Northeast	1214.02-part	3,300	153	203	459	609
Capitola Mall	1217-part	8,000	420	556	1,260	1,668
Capitola-Downtown/Beach	1218	7,543	356	471	1,068	1,413
<b>New Brighton-Cabrillo College#</b>	<b>1218</b>	<b>9,000</b>	<b>588</b>	<b>778</b>	<b>1,764</b>	<b>2,334</b>
Seacliff	1221	4,524	165	226	495	678
Aptos Village	1220.03-part	3,500	294	475	882	882
Rio Del Mar 1	1222.03-part	4,395	264	350	792	1,050
Rio Del Mar 2	1222.01-part	4,000	259	342	777	1,026
La Selva Beach	1223-part	3,600	186	186	549	549
Watsonville West	1104	8,000	427	427	1,281	1,281
Watsonville-Downtown	1103	9,958	564	564	1,692	1,692
<b>Pajaro</b>	<b>Pajaro CCD</b>	<b>4,189</b>	<b>377</b>	<b>377</b>	<b>1,131</b>	<b>1,131</b>
Total, Population + Employment		136,718				
Employment		39,218				
Population		97,500				
		A.M. ons+offs	7,439	9,171		
		Daily ons+offs			22,317	27,513
		<b>Daily Riders</b>			<b>11,156</b>	<b>13,757</b>
# Based on average student attendance per weekday, e.g., (14,000 x 3 days/wk)/5=8,500						

## 2. Removing Tracks Would Spark Years of Litigation Over Expiring Deeds of Easement & Unclear Parcel Ownership along the Santa Cruz Branch Line

As noted in the Introduction, of the 301.53 total acres included in the rail right-of-way, only 93.09 acres (31%) are “fee simple” properties, e.g., originally owned outright by the Union Pacific Railroad and passed on to SCCRTC when purchased in 2011. The remaining 208.53 acres (69%) consists of water and stream crossings, roadway grade crossings and most significantly, easements dedicated for railroad use from adjacent property owners originally in the 19<sup>th</sup> century.<sup>8</sup>

According to a 2006 appraisal report<sup>9</sup>, out of a total of 228 legal land parcels estimated by the appraiser that comprised the right-of-way, there were 123 parcels owned outright by Union Pacific Railroad for which title insurance could be obtained (e.g., the 93.09 acres). There were many other parcels that consisted of easements for railroad purposes, or for which no record could be found by the appraiser in 2006. There were approximately 50 parcels included in the proposed sale by Union Pacific to SCCRTC that could not obtain title insurance because there were insufficient records at the County Recorder’s Office. There were 10 parcels with railroad use only easements that had clear reversion clauses should rail usage be abandoned. There were 38 parcels for which title insurance was not to be issued as directed by SCCRTC. Finally, there were 43 parcels that were “...excluded from valuation for lack of recorded title evidence or other ambiguity about nature of title, if any.”<sup>10</sup>

Most of the parcels with easements requiring reversion to adjacent property owners upon cessation of railroad usage were located in the 2006 report’s Segment 3 from Watsonville to La Selva Beach, and Segment 7 in the City of Santa Cruz. The following is an example of reversion language in a deed of easement for the Santa Cruz Railroad Company from the 1870’s:

The condition providing for reversion of title set forth in the Indenture dated as of June 17, 1876, filed for record August 2, 1876 and recorded August 12, 1876 in Volume 21 of Deeds, Pages 372-374, Santa Cruz County Records, between S.W. Holladay and Georgiana C. Ord Holladay, and the Santa Cruz Railroad Company, viz:

“In case said railroad should be removed to a different place or line from that upon which it is now built, so that said land should no longer be required of used for said purposes, **or if for any other reason the land above described shall become no longer necessary for railroad purposes, this grant shall cease and the rights therein hereby granted shall revert** to the said Georgiana C. O. Holladay or to her successors in interest” [emphasis added]. (Vol. 2, page 244, No. 38 Parcel V72-2, No. 13.)

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<sup>8</sup> *Appraisal Review Report and Appraisal Review Certificate of Appraisals and Related Valuation Analyses for the Santa Cruz Branch Line of the Santa Cruz Subdivision of the Union Pacific Railroad Company*. Pages, 7, 19. Linked at <http://sccrtc.org/projects/rail/rail-line-purchase/rail-line-due-diligence/>.

<sup>9</sup> *Final Report, Appraisal Report, Union Pacific Railroad Santa Cruz and Davenport Branch Lines (Watsonville Junction to Davenport)*. Volume One. Arthur Gimmy International, April 20, 2006. Linked at <http://sccrtc.org/projects/rail/rail-line-purchase/rail-line-due-diligence/>.

<sup>10</sup> See pages 49-54 of the Gimmy report, Volume 2. Also refer to accompanying text in Volume Two.



Another deed of easement with clear reversion language should railroad usage be abandoned:

The condition providing for reversion of title set forth in the Indenture dated as of March 17, 1892 and recorded March 18, 1892 in Volume 86 of Deeds, pages 108-109, Santa Cruz County Records, between Mrs. Jane Lynch, first party, and the Santa Cruz Railroad Company, second party, viz:

“The land above described shall be used solely for railroad purposes and . . . **in the event said second party, its successors or assigns, shall cease to use it for railroad purposes, it shall revert** to the party of the first part[,] her heirs or assigns.” [emphasis added] (Vol. 2, page 249, No 58. Affects parcels V72-1, No. 9)

While there were only 10 deeds of easement to the railroad with clear reversion clauses, the status of dozens of other parcels not apparently owned outright by SCCRTC is ambiguous at best. Should railroad usage be abandoned by removing current tracks in favor of a trail only, it is clear that additional funding would be required to obtain outright ownership of current easements that have clear reversion clauses. In addition, given the fact that dozens of additional parcels have unclear titles which are likely to lead to years of litigation to determine ownership and compensation required to adjacent property owners should railroad usage cease.

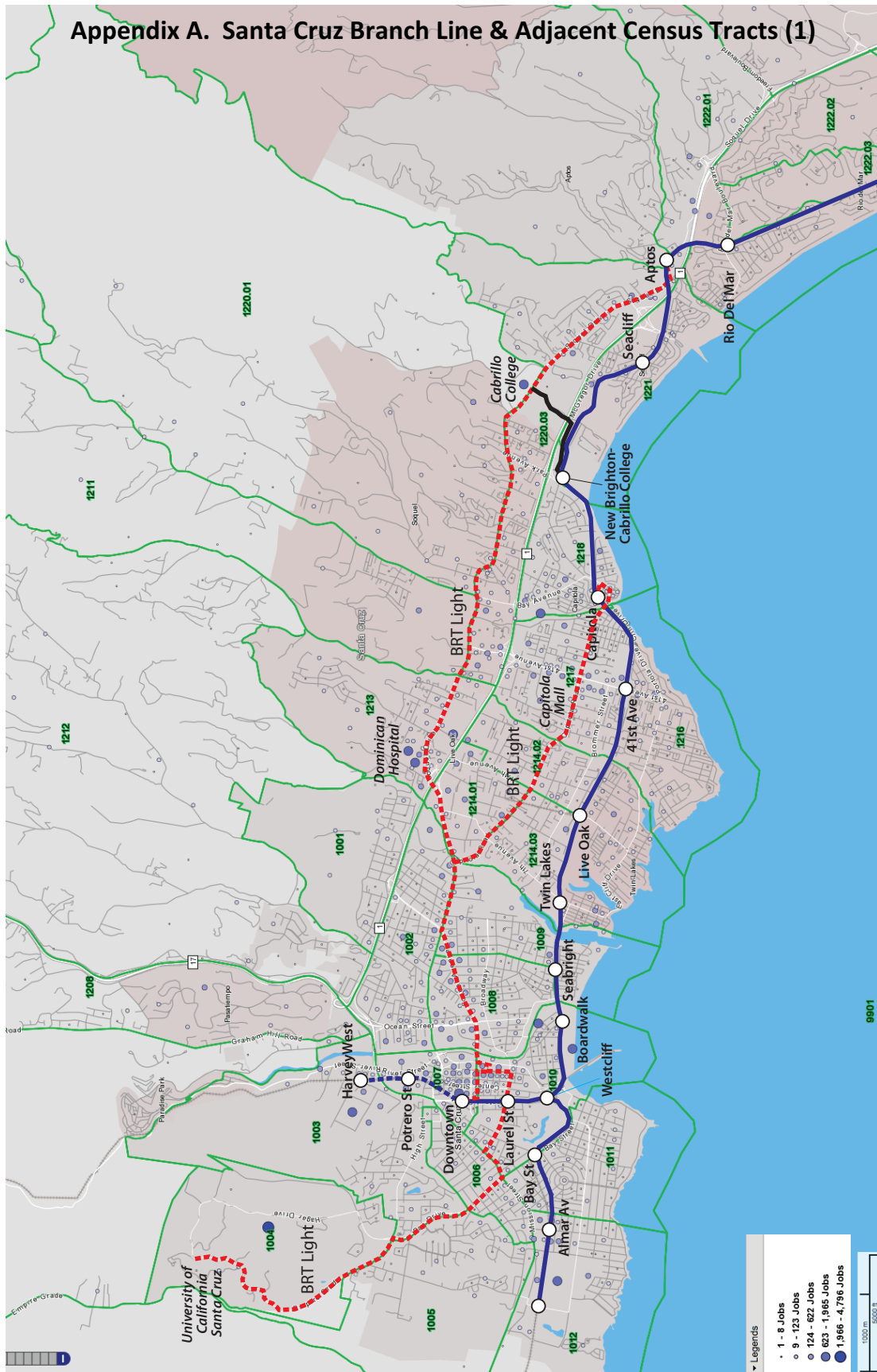
The proposal by Trail Now and Greenway Santa Cruz for **ripping out existing tracks on the Santa Cruz Branch Line in favor of a trail only would open up SCCRTC and taxpayer to great uncertainty, guaranteeing years of litigation.** In addition to the cost of removing tracks, constructing the proposal trail on existing rail embankments and the repair or replacement of bridges and other structures, this author’s educated guess is that repurchasing existing easements intended for railroad use could cost \$80-\$100 million, or more. **Retaining the existing tracks is the least costly and most prudent action for SCCRTC, whether rail transit is implemented within the next few years or later in the 21<sup>st</sup> Century.**

The railroad easement reversion problem would also apply if a busway were developed on the right-of-way. It should also be noted that a key United States Supreme Court ruling on railroad right-of-way reversion disputes after abandonment was favorable to property owners though inconsistent with most rulings by other Federal courts. In the *Marvin M. Brandt Revocable Trust v. United States* case, the Court ruled that property ownership granted outright to a now abandoned railroad in Wyoming by the Federal government must revert to an adjacent property owner, despite the fact that their property was granted by the government a significant time **after** the railroad was granted full ownership through an earlier land grant. While not certain, this means that the current Supreme Court – and other Federal courts following its lead – is likely to be favorable to adjacent property owners, particularly where clear reversion clauses exist, and also in ambiguous cases such as those in Santa Cruz County.<sup>11</sup>

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<sup>11</sup> The inconsistency between current Supreme Court proclivities on the topic of railroad property reversions and many rulings by lower courts is discussed in detail by the article, *Doing a Double Take: Rail-Trail Takings Litigation in the Post-Brandt Trust Era*. Levin School of Law, University of Florida. Legal Studies Research Paper Series No. 15-32. Also see *Vermont Law Review* 2015, Vol. 39:703. Danaya C. Wright. Available at <http://lawreview.vermontlaw.edu/past-issues/volume-39/volume-39-book-3/>

## Appendix A. Santa Cruz Branch Line & Adjacent Census Tracts (1)



Map of the Watsonville area showing job density by census tract. The map includes labels for Seaside, La Selva Beach, Watsonville, Watsonville West, and Pajaro. A legend in the bottom left corner indicates job density ranges: 1-8 Jobs (white dot), 9-123 Jobs (light blue dot), 124-622 Jobs (medium blue dot), 623-1,965 Jobs (dark blue dot), and 1,966-4,796 Jobs (darkest blue dot). The map shows a high concentration of jobs in the central urban areas, particularly around Watsonville and Watsonville West.