Santa Cruz County
Regional Transportation Commission

Rail Transit in Santa Cruz County?

Why Consider Rail Transit?

- More Options
- Reliable Travel Times
- Scalable
- Economic Vitality
- Efficient Land Use

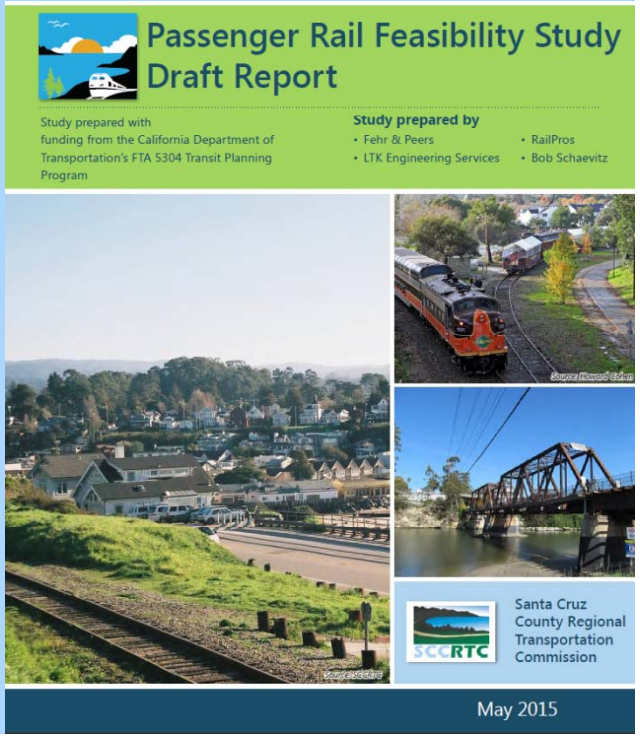
Why Consider Rail Transit?

- Coastal Access
- Reduce Emissions
- Funding
- System Integration
- All transportation public $
- Connectivity


Proposed
Coast Daylight
San Francisco
to Los Angeles
Proposed Capitol
Corridor Extension
San Jose to Salinas
Santa Cruz Big
Trees & Pacific
Railway
Proposed
CA High
Speed Rail
Santa Cruz
Rail Corridor
Proposed Pajaro Station
Proposed
Passenger
Rail
Coast Starlight - Amtrak
to Los Angeles
San Jose
Davenport
Santa Cruz
Gilroy
Salinas
84
280
87
17
101
1
152
156

Study Phases – Where are we?

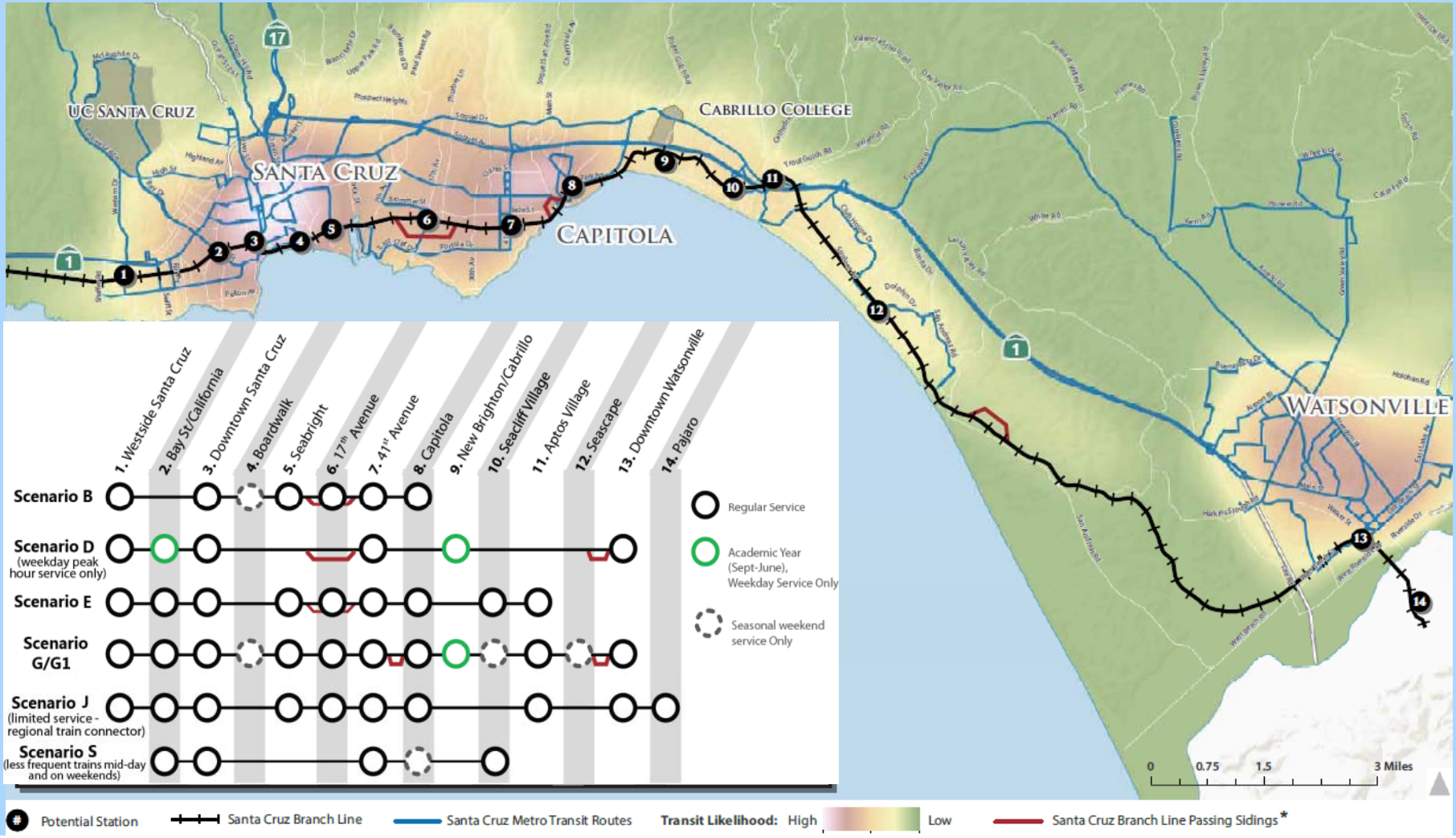
- ✓ **Goals & objectives,** evaluation framework, service scenarios for analysis
- ✓ **Technical analysis:** Ridership forecasts, cost estimates, and funding strategies
- ✓ **Scenario Evaluation** & identify implementation steps
- ✓ **Preparation of Draft Report**
- ✓ **Public review & comment**
- ✓ **Prepare Final Report**
- ❑ **RTC Receives Final Report**



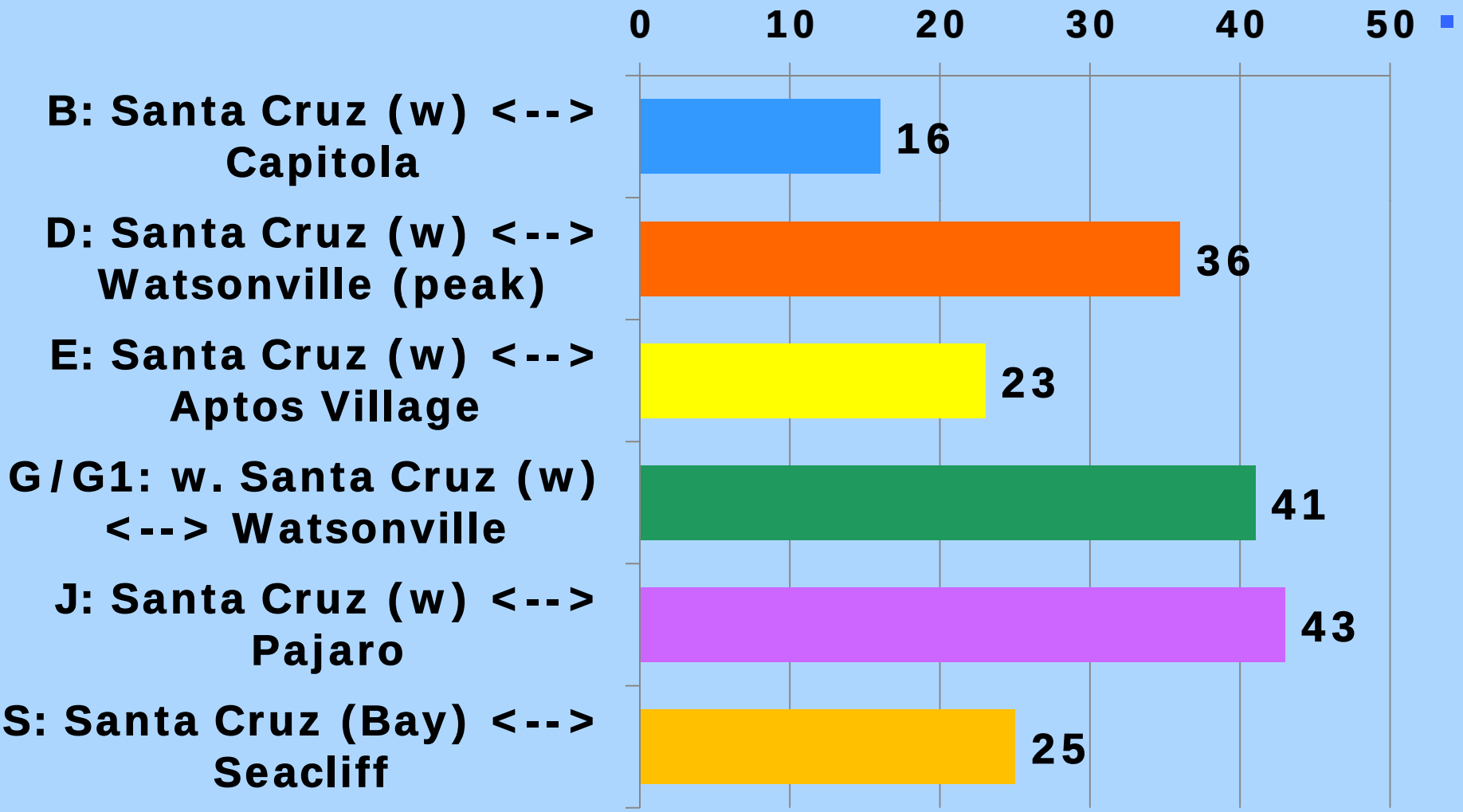
Rail Transit Feasibility Study

- Could it be done?
- What would it take?
- 7 scenarios analyzed
  - Ridership
  - Costs – Cap, O&M
  - Available $

Scenarios Selected for Detailed Analysis

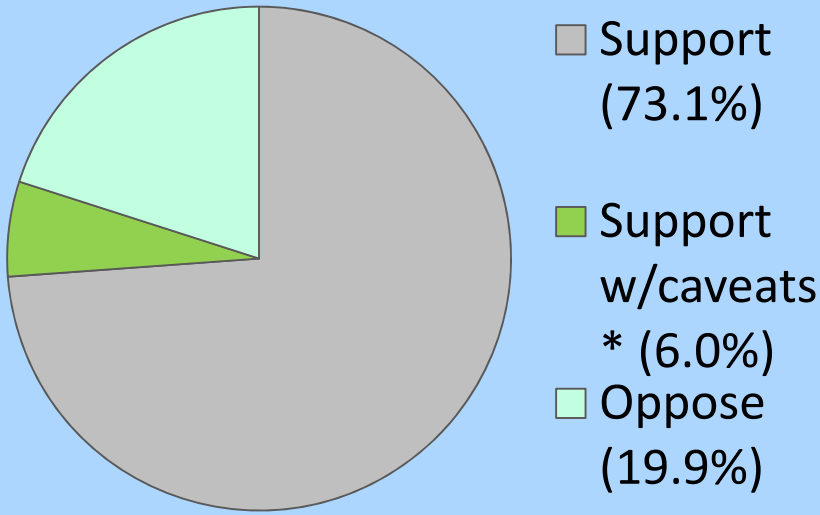


Train Travel Time
Minutes
(one-way)

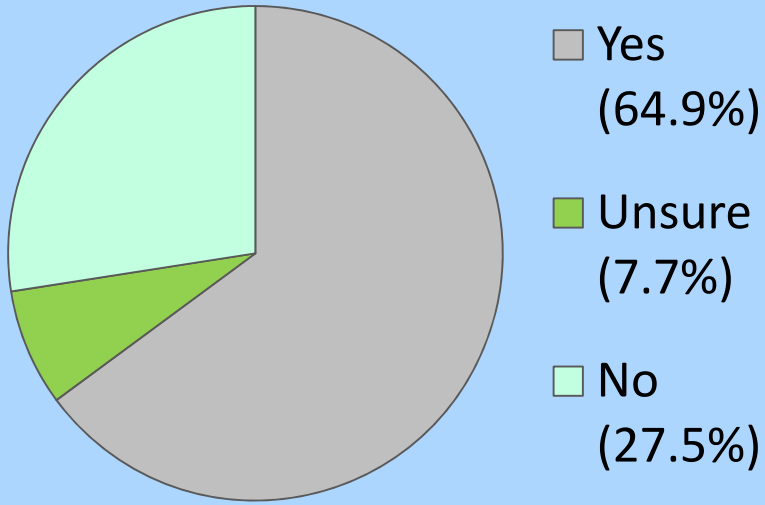


2015 Survey Results: Support for Transit Service on Rail Line

Q1: Support Using Rail Line for Public Transit Service



Q15: Makes sense to expand public transportation to include rail transit



* Caveats included "If infrequent" and "On limited sections"

Rail Transit Study"

Public Feedback

- Serve Watsonville
- Small, quiet, clean vehicles
- Costs
- Ridership
- Noise
- Station Access
- Corridor Use Coordination

Integrated Rail with Trail

Final Report

- **Hybrid**
  - **Santa Cruz to Watsonville peak**
  - **Santa Cruz to Aptos off peak**
  - **Limited stations**
- **Future Phases**
  - **Add Service**
  - **Add Stations**


Regional Transportation Commission
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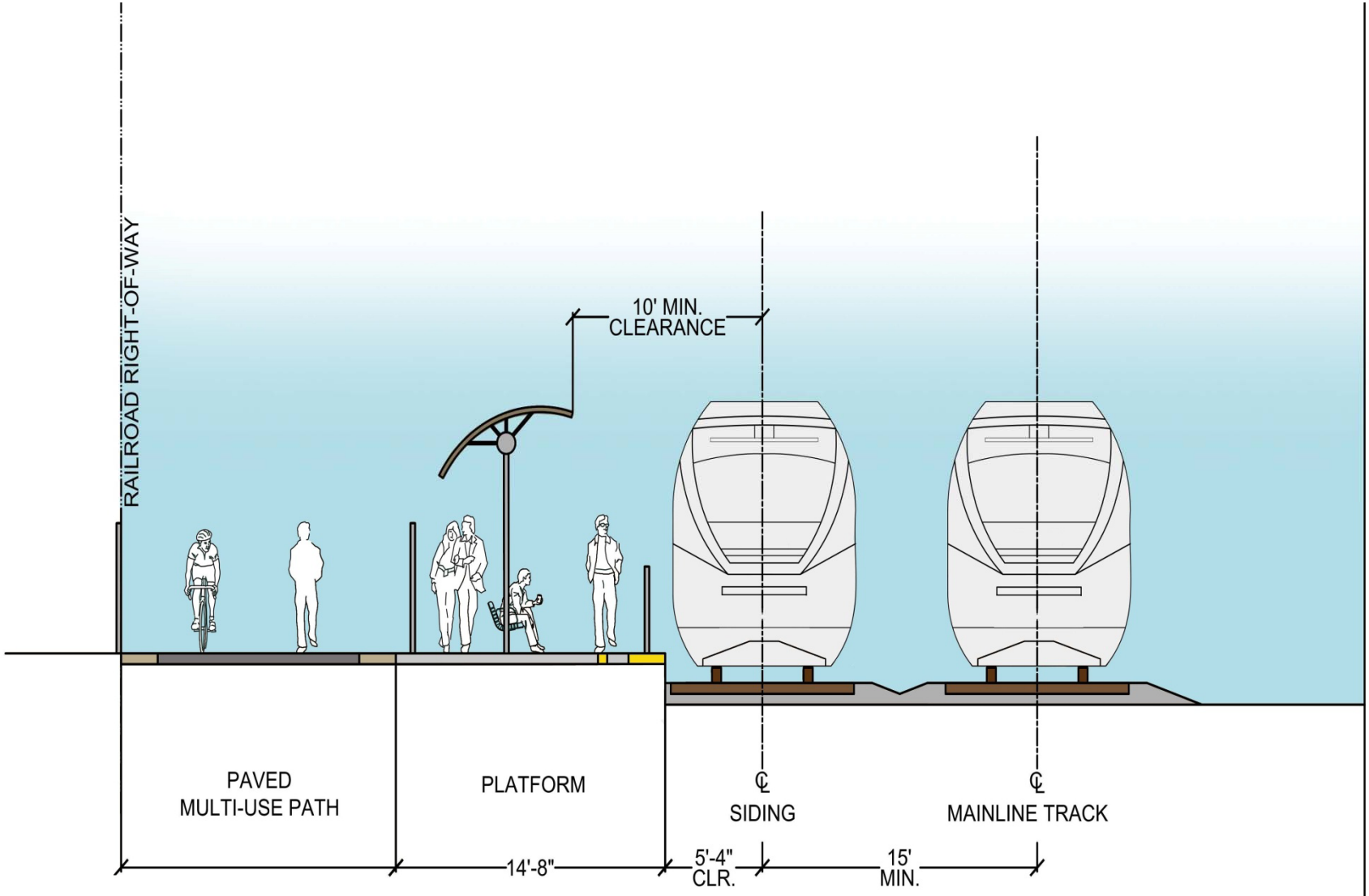


SCALE: 1" = 5'-0"

March 17, 2015

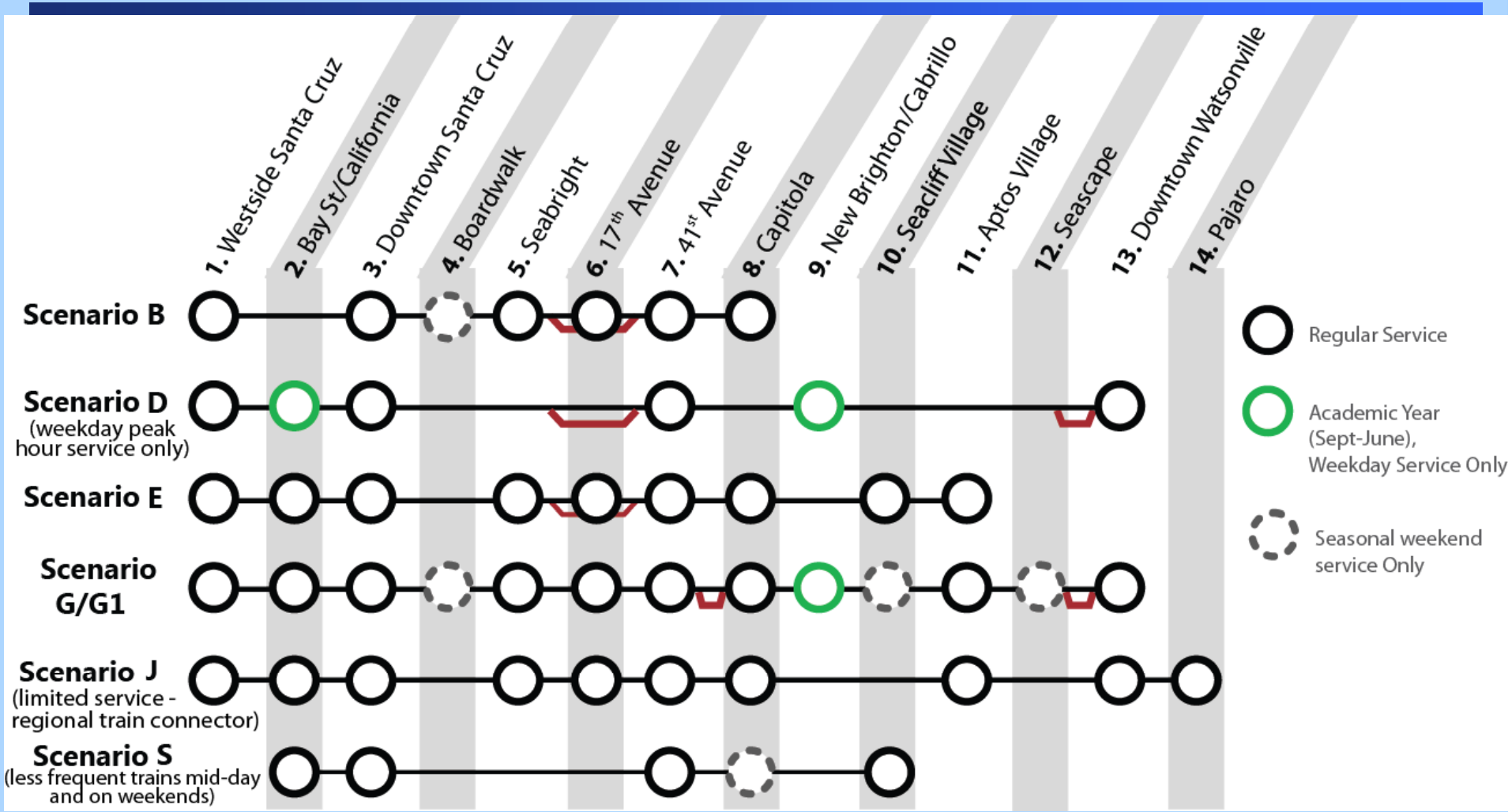
rrm design group

15' 14'-8" 5'-4" CLR. 15' MIN.

Why consider rail transit?

- Expand transportation options
  - changing travel patterns
  - Complete and compact communities
- Projected population growth: 37,000 through 2035
- State mandates- reduce VMT/GHG
  - Increase transit ridership/mode share
- Improve local and regional connectivity

Scenarios Selected for Detailed Analysis



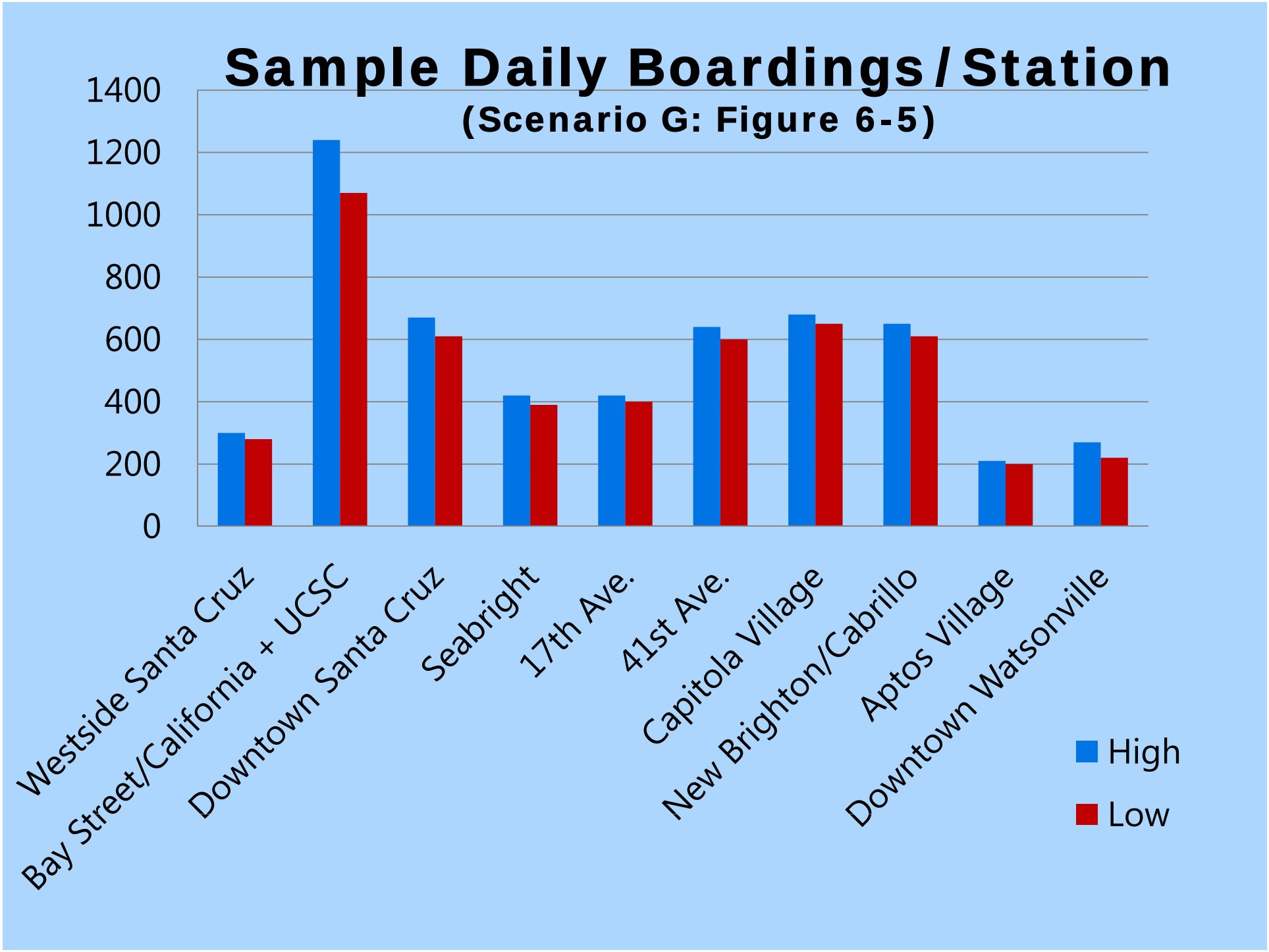
Diesel Multiple Units
Non-FRA Compliant "Light"

Rail Transit Study

Locomotives + Coach/Cab cars (Scenarios G1 & S)

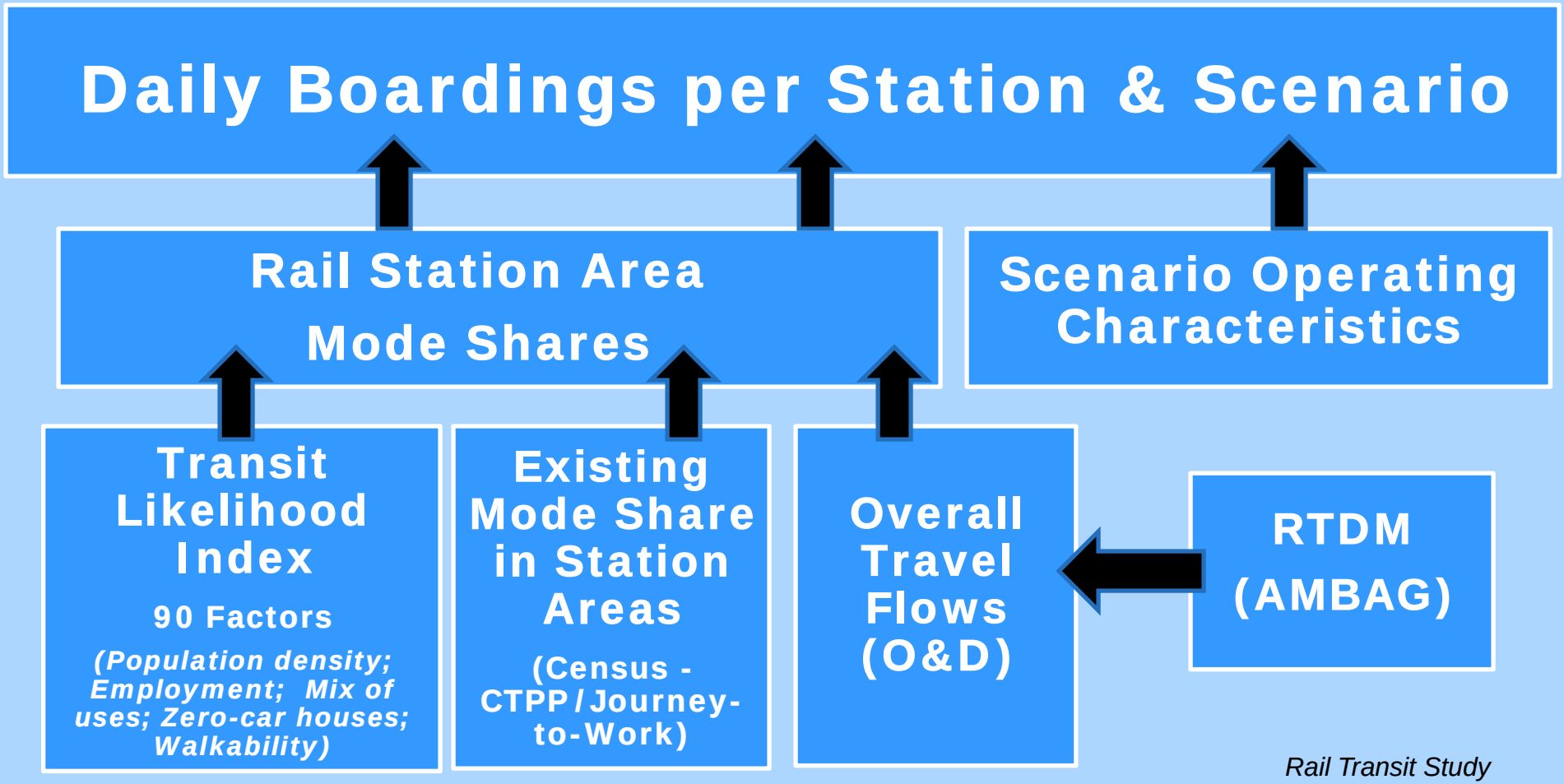
Ridership Forecasts

ID	Scenario	Trains per Day / Direction	Baseline – Boardings		2035 Daily Boardings	
			Daily	Annual	Daily	Annual
B	Santa Cruz ←→ Capitola (Limited)	30	2,800-3,400	846k-1M	3,700-4,300	1.1M-1.3M
D	Santa Cruz ←→ Watsonville (Peak)	12	1,100-1,350	287k-343k	1,300-1,600	337k-405k
E	Santa Cruz ←→ Aptos (Local)	30	4,700-5,150	1.4M-1.5M	5,900-6,400	1.8M-1.9M
G/ G1	Santa Cruz ←→ Watsonville (Expanded)	30	5,000-5,500	1.5M-1.65M	6,150-6,800	1.85M-2M
J	Santa Cruz ←→ Pajaro (limited)	6	1,750-1,500	528k-585k	2,250-2,500	672k-741k
S	Santa Cruz ←→ Seacliff	19	1,400-1,600	420k-480k	2,000-2,200	600k-660k


Sample Daily Boardings/Station
(Scenario G: Figure 6-5)
1400
1200
1000
800
600
400
200
0
Westside Santa Cruz
Bay Street/California + UCSC
Downtown Santa Cruz
Seabright
17th Ave.
41st Ave.
Capitola Village
New Brighton/Cabrillo
Aptos Village
Downtown Watsonville
High
Low

Ridership Estimates

Section 5.1.3



Cost Estimates

Scenario =>	B	D	E	G	G1	J	S
Start/end points	**Capitola-SC**	**Wat-SC (peak only)**	**SC-Aptos**	**SC-Wat**	**SC-Aptos** (locomotive)	**Pajaro-SC (6/day)**	**Bay/SC-Seacliff** (locomotive)
Capital Cost **(including Vehicles + 30% Soft Costs, and 30% Contingency)**	$77M	$119M	$85M	$133M	$176M	$93M	$32M *(lease trains)*
Track Miles	6.6	20.5	9.6	20.5	20.5	22.1	7.6
Capital Cost per Mile ***(millions)***	$11M	$5.8M	$8.9M	$6.5M	$8.6M	$4.2M	$4.2M

Operations & Maintenance Estimates

Scenario	Number of Vehicles (train sets)	Trains per Weekday (both directions)	Operating Hours per Year (rev train hours)	Annual Revenue Train Miles	Annual O&M Cost (millions $)
B	3	60	9,800	145,500	$7.0
D	4	24	4,313	136,600	$3.8
E	3	60	9,800	204,000	$7.0
G	5	60	13,591	400,000	$9.9
G1	5	60	13,591	400,000	$14.0
J	2	12	5,024	56,000	$3.7
S	3 (leased)	36	5,513	94,500	$5.4

*Bay St/California and New Brighton/Calbrillo stop during academic year (Sept. - June) only | Scenario S: Revenue hours are limited mid-day with only 18 weekday trains and 13 weekend trains

Funding Assessment

- Most likely sources *(Tables 6-22 & 6-23)*:
  - FTA §5309 Fixed Guideway New/Small Starts
  - USDOT Transportation Investment Generating Economic Recovery Program (TIGER)
  - New Santa Cruz Co. Transportation Sales Tax
  - Rail System Fare Revenue
  - Cap & Trade
- *Not considered: METRO operating funds & 90% of STIP & RSTP*

Scenario Evaluation (Sec. 7)

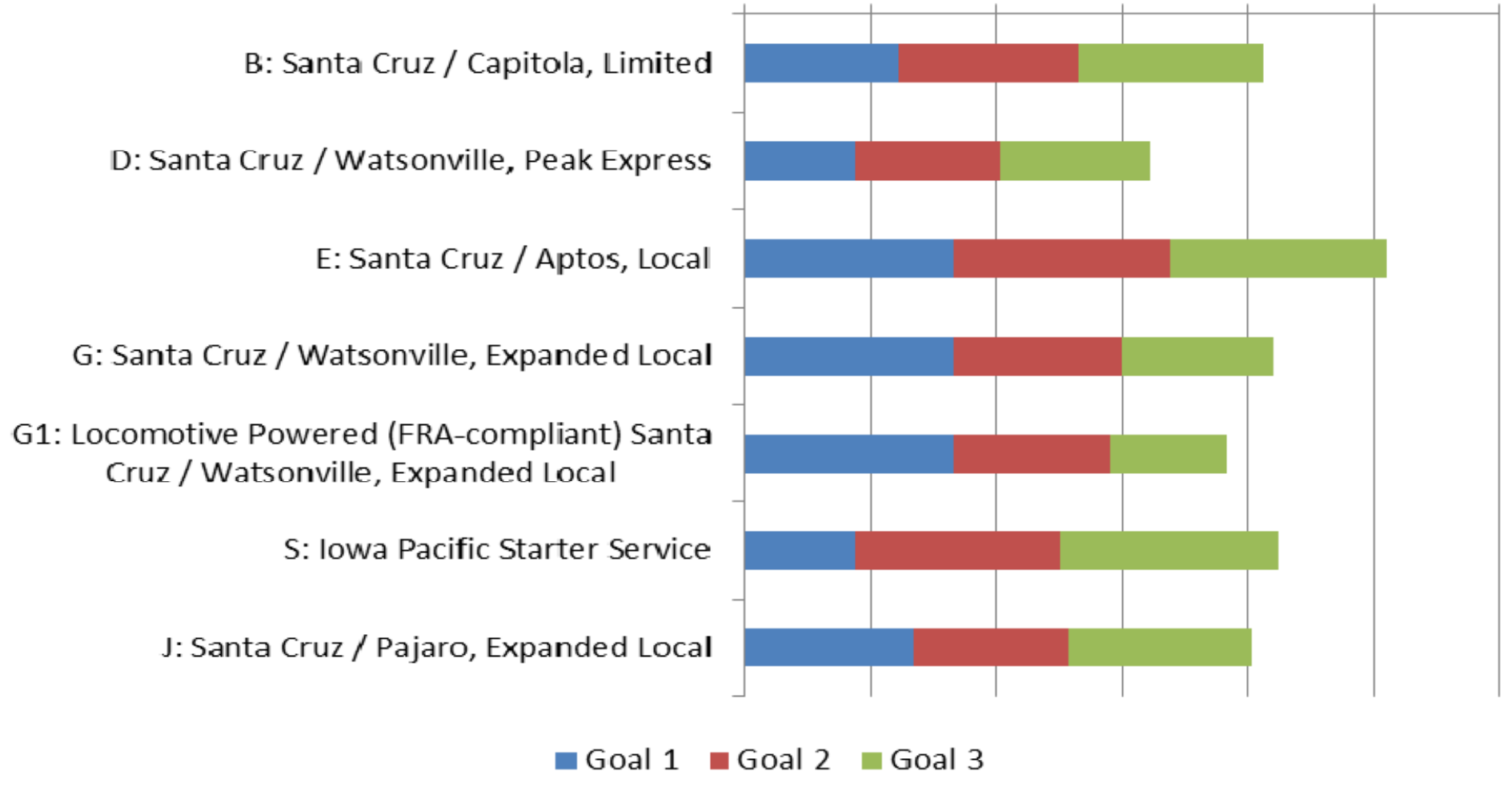
GOAL 1 – Transportation Choices

GOAL 2 – Sustainability

GOAL 3 - Cost Effectiveness

Evaluation Framework included
18 quantitative & qualitative metrics

Advancement of Project Goals



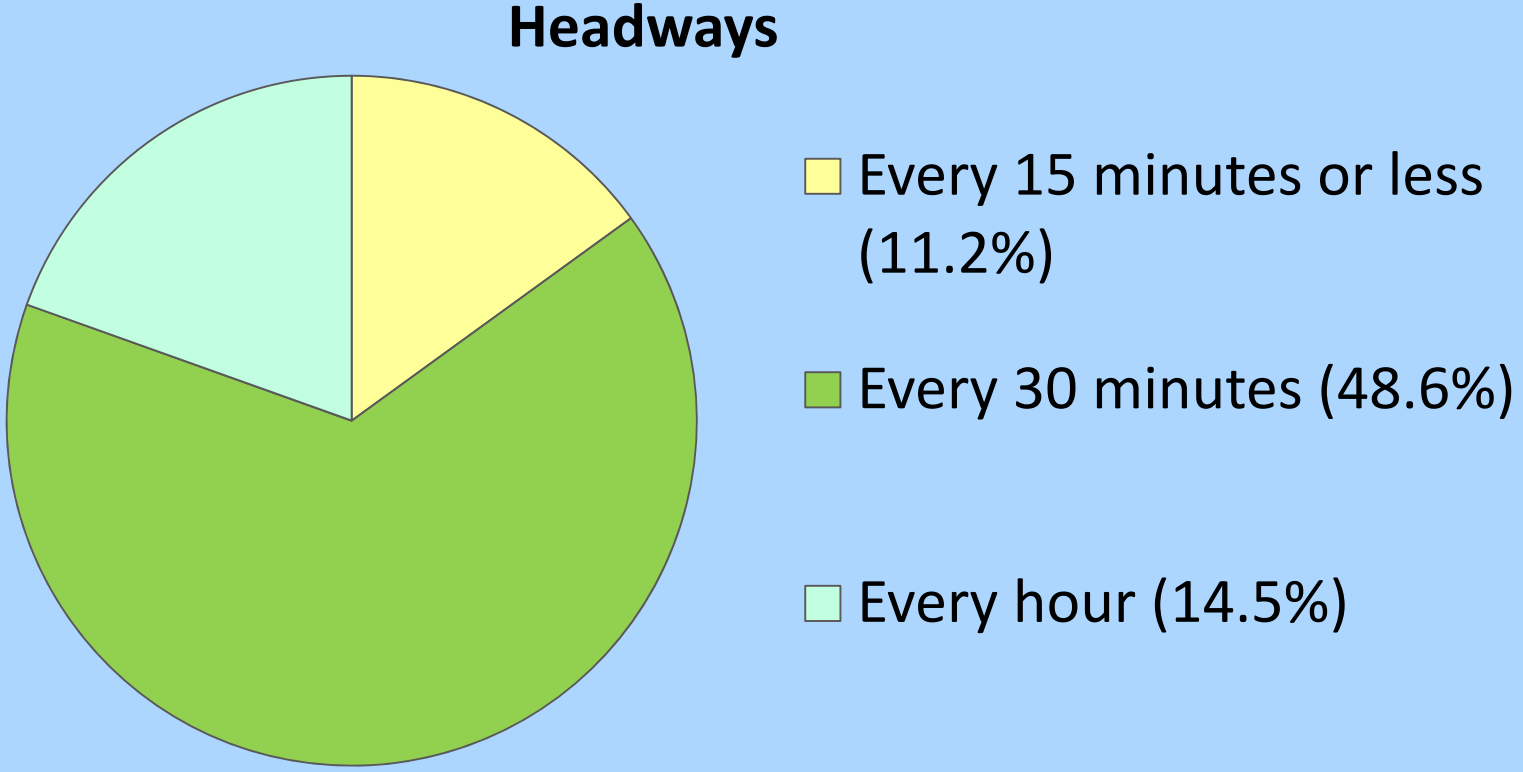
Outreach Activities
May 21 – Jul 31

- RTC website
- eNews
- Social Media
- Survey
- Spanish Language
- Media
- Newsletters by others
- Focus Groups
- Presentations
- Events

Community Engagement

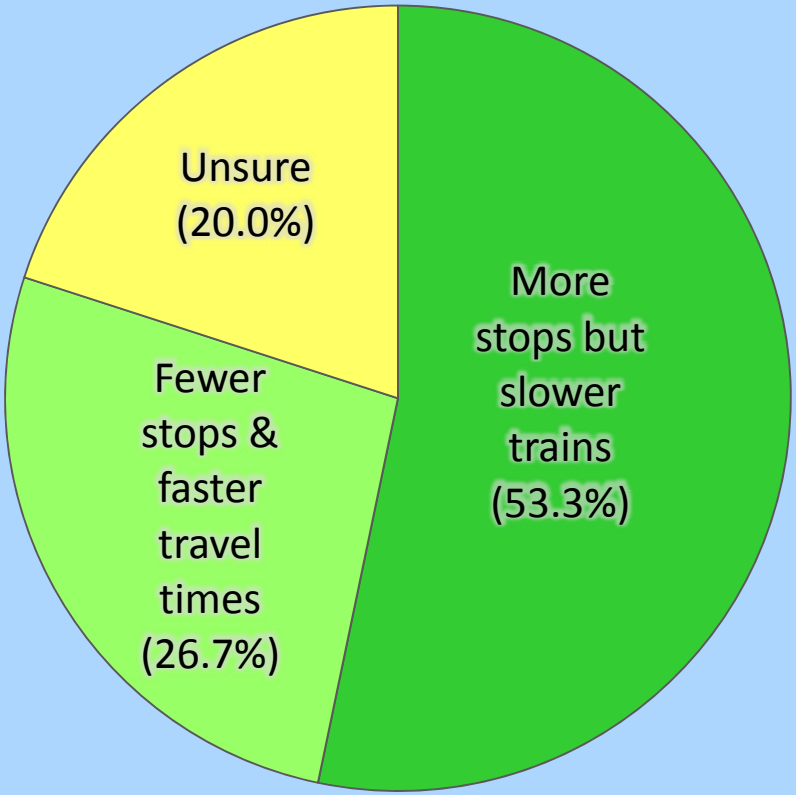
- **RTC meeting, Open House**
  - **About 100 attended**
- **Email, Comment Form, Letters**
  - **Over 430 submissions**
- **Online Survey**
  - **Over 2,600 responses**

2015 Survey Results: Frequency

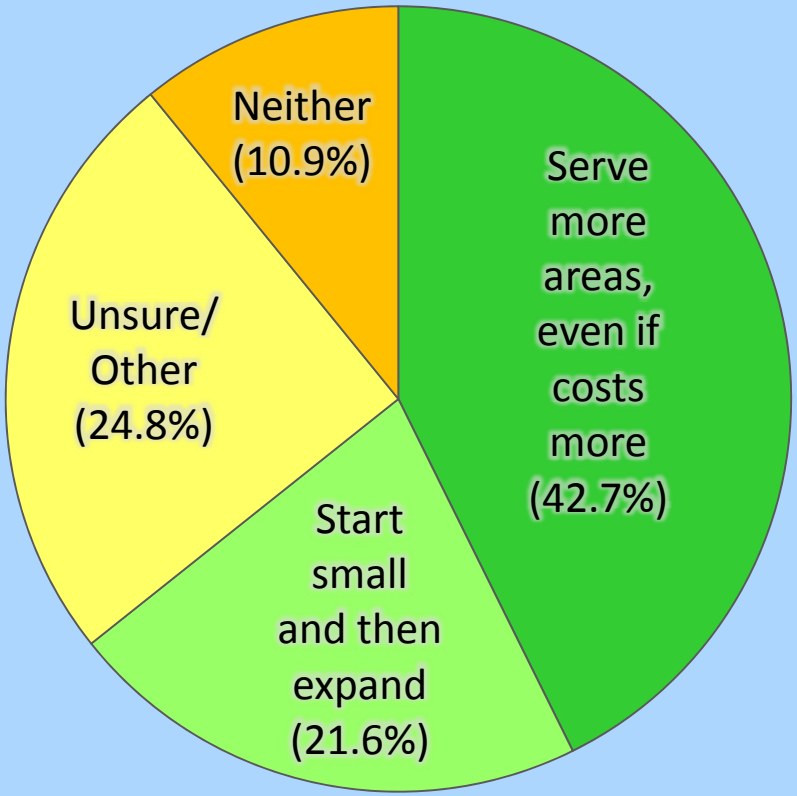


2015 Survey Results: Service Scenarios

Q3: General Service Preference



Q6: Service Implementation



Comment Summary - Concerns

- Noise from trains
- Service to Watsonville
- Cost of the project
- Width of right-of-way
- Stations proximity to major destinations
- Traffic impacts at grade crossings
- Impact on property values

Comment Summary - Benefits

- Environment – potential to reduce emissions and sprawl
- Alternative to sitting in traffic
- Economic - increasing access to jobs, school, shopping
- Increase Housing (TOD)
- Improve travel time reliability
- Community Connection via walkablity
- Mitigates Visitor impacts

Comment Summary & Final Report Recommendations

- Serve Watsonville
- Hours/Frequency
- Train Speeds
- Vehicle Technology

Comment Summary & Final Report Recommendations

- Costs & Funding
- Ridership Estimates
- Noise
- Economy

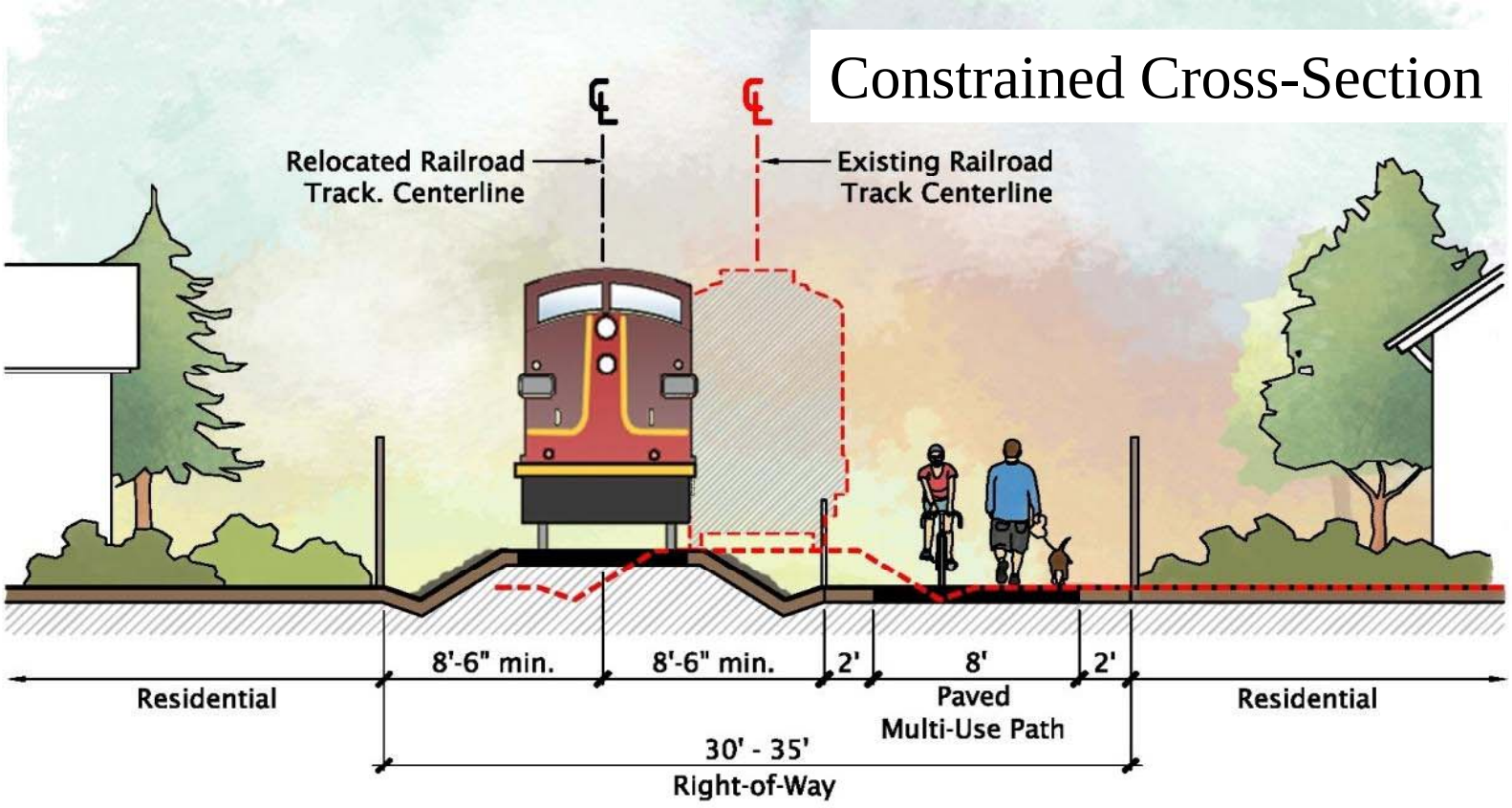
Comment Summary & Final Report Recommendations

- Crossings
- Trail Coordination
- Access to/From Stations
- Land Use

Implementation / Next Steps

- Key activities for implementing service
  - RTC Board decides whether to advance some scenarios or hybrid of scenarios for additional analysis
  - Draft Environmental Studies and Conceptual Engineering (15%)
  - Preferred Alternative and Preliminary Engineering (35%)
  - Final Design, Construction Documents, and Funding
  - ROW Acquisition
  - Contractor Procurement
  - Construction
  - Vehicle Procurement (DMU)
  - Testing/Opening

Trail / Rail Compatibility



Scenario Evaluation – Performance Evaluation

Metric	Scenario B	Scenario D	Scenario E	Scenario G	Scenario G1	Scenario J	Scenario S
Annual O&M $M	7	3.8	7	9.9	14	3.7	5.4
Weekday Ridership Low	2,800	1,100	4,700	5,000	5,000	1,750	1,400
Annual Ridership Low Estimate[1]	846,000	278,500	1413000	1,509,000	1,509,000	528,000	420,000
Cost per boarding	**$8**	**$14**	**$5**	**$7**	**$9**	**$7**	**$13**
Weekday Ridership High	3,400	1,350	5,150	5,500	5,500	1,950	1,600
Annual Ridership Low Estimate[1]	1,005,000	342,500	1,539,000	1,650,000	1,650,000	585,000	480,000
Cost per boarding	**$7**	**$11**	**$5**	**$6**	**$8**	**$6**	**$11**

Comparable Systems –

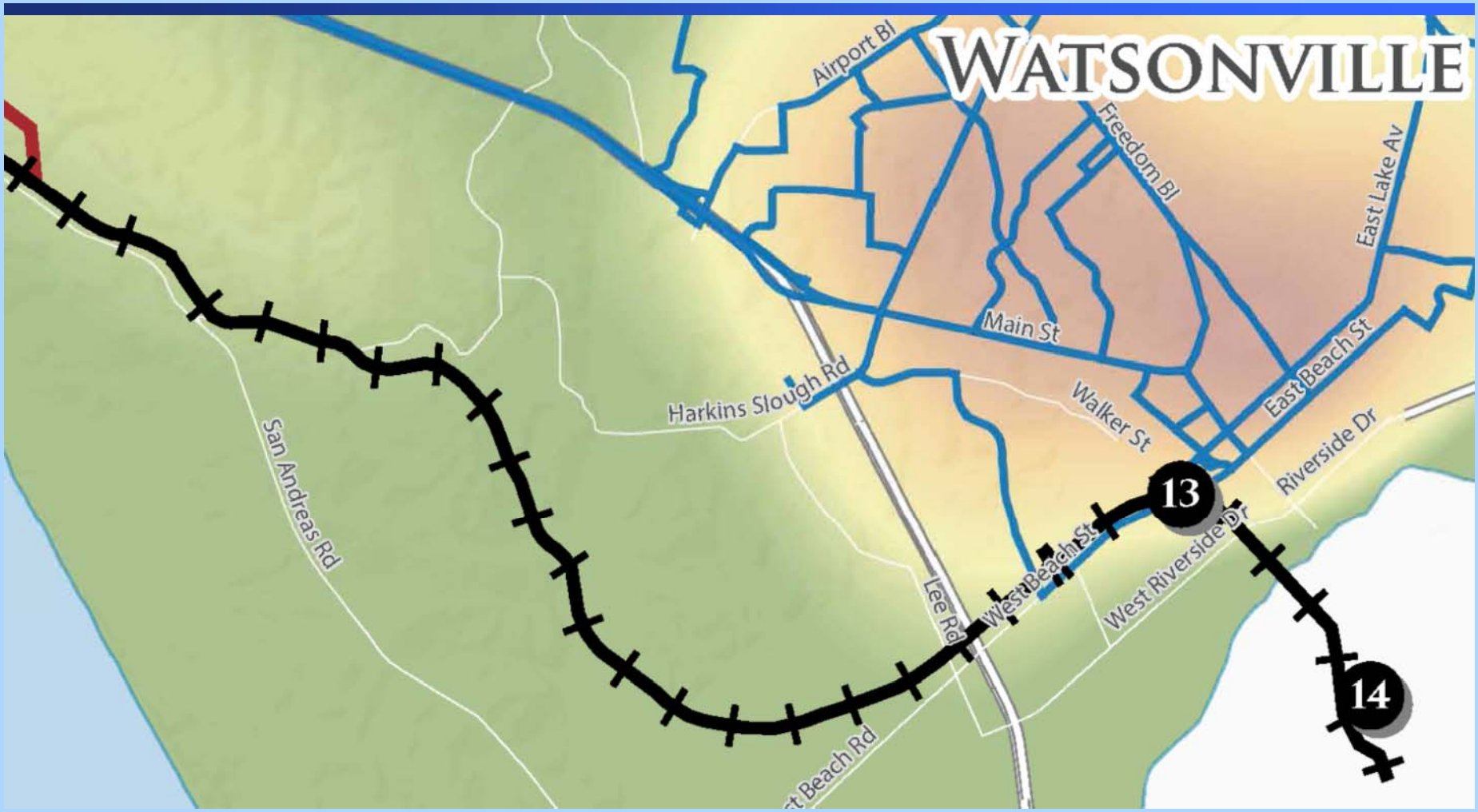
System	Annual O&M $	Annual Revenue Hours	Annual Fare Rev. $	Farebox Rec. %	Cost per VRH $	Cost per Boarding $	Annual Ridership
Rail Transit – DMU							
Tri-Met WES (Portland)	6.5M	7,500	450K	7%	860	16	418K
Capital Metro (Austin)	11.4M	10,200	2.3M	20%	1,115	22	530K
Denton County A-Train (Dallas)	9.8M	20,400	565K	6%	480	25	387K
NCTD Sprinter (San Diego)	13.8M	30,300	2.7M	20%	455	6	2.4M
NJ Transit River Line	31.2M	49,300	2.4M	8%	635	11	2.8M
Railroad							
Altamont Commuter Express (ACE)	12.2M	20,200	4.2M	34%	605	16	790K
Caltrain	98M	184,000	55M	56%	530	8	13M
Music City Star (Nashville)	4.0M	6,800	790K	20%	580	14	280K

Rail Transit Study

Potential Stations

Potential Stations

Potential Stations



Regional Rail Network

Existing:

- Caltrain
- Capitol Corridor
- ACE
- Amtrak
- SMART (2017)
- *Hwy 17 Express connections*

Proposed:

- Capitol Corridor Salinas Extension
- Amtrak Coast Daylight
- TAMC Monterey Branch Line
- CA HSR