Highway 1, Soquel/Freedom, Rail ROW
APPROACH

- Step 1: Analysis
- Scenarios
- Projects
- Goals & Performance Measures
- Preferred Scenario
### Step 2 Scenarios for Analysis

**Approved by RTC on December 7, 2017**

<table>
<thead>
<tr>
<th>Highway 1 Projects</th>
<th>Scenario A</th>
<th>Scenario B</th>
<th>Scenario C</th>
<th>Scenario E</th>
<th>No Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway 1 Projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buses on shoulders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High occupancy vehicle lanes (HOV) and increased transit frequency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auxiliary lanes to extend merging distance IN ADDITION TO MEASURE D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metering of on-ramps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional lanes on bridge over San Lorenzo River</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mission St intersection improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soquel Avenue/Drive and Freedom Blvd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BRT lite (faster boarding, transit signal priority and queue jumps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased frequency of transit with express services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buffered/protected bike lanes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intersection improvements for auto</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intersection improvements for bikes/pedestrians</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rail Corridor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bike and pedestrian trail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local rail transit with interregional connections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus rapid transit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freight service on rail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Only Watsonville</td>
</tr>
</tbody>
</table>
• Safety
• Reliability and efficiency
• Environment and health
• Economic vitality
• Equitable access
Annual Study Area Collisions

- Baseline: 2,916
- No Build: 3,265
- Scenario A: 3,017
- Scenario B: 2,899
- Scenario C: 3,013
- Scenario E: 3,008
### Annual Cost of Collisions ($millions)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Cost Reduction</th>
<th>Annual Cost ($millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Build</td>
<td></td>
<td>$731</td>
</tr>
<tr>
<td>Scenario A</td>
<td>$56</td>
<td>$675</td>
</tr>
<tr>
<td>Scenario B</td>
<td>$82</td>
<td>$649</td>
</tr>
<tr>
<td>Scenario C</td>
<td>$56</td>
<td>$674</td>
</tr>
<tr>
<td>Scenario E</td>
<td>$58</td>
<td>$673</td>
</tr>
</tbody>
</table>

Cost reduction due to project
Countywide Peak Period Average Auto Speed (MPH)
4:00 PM to 7:00 PM

Baseline: 34.4
No Build: 32.8
Scenario A: 34.7
Scenario B: 32.9
Scenario C: 32.8
Scenario E: 34.8
Peak Period Transit Travel Time (4:00 PM to 7:00 PM)
Santa Cruz to Watsonville

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Rail Route</th>
<th>SR 1</th>
<th>Soquel/Freedom Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario A</td>
<td>33.5</td>
<td>98.5</td>
<td></td>
</tr>
<tr>
<td>Scenario B</td>
<td>41</td>
<td>60.9</td>
<td></td>
</tr>
<tr>
<td>Scenario C</td>
<td>52.5</td>
<td>44.9</td>
<td>99.1</td>
</tr>
<tr>
<td>Scenario E</td>
<td>41</td>
<td>33.5</td>
<td>114.4</td>
</tr>
</tbody>
</table>
Mode Share Change by Scenario

Scenario A
- Drive Alone: 0.6%
- Carpool: 1.2%
- Transit: 0.9%
- Bike: 0.3%
- Walk: 0.1%

Scenario B
- Drive Alone: -2.4%
- Carpool: 3.1%
- Transit: 1.0%
- Bike: 0.1%
- Walk: 0.3%

Scenario C
- Drive Alone: -1.7%
- Carpool: 1.9%
- Transit: 0.8%
- Bike: 0.2%
- Walk: 0.1%

Scenario E
- Drive Alone: -1.1%
- Carpool: 2.4%
- Transit: 1.0%
- Bike: 0.1%
- Walk: 0.1%

RELIABILITY & EFFICIENCY
Countywide Vehicle Miles Traveled (in million miles/day)

- Scenario A: 6.13
- Scenario B: 5.90
- Scenario C: 5.92
- Scenario E: 6.10

Comparisons:
- No Build: 6.0
- Baseline: 5.5
CO2e Emissions (metric tons/day) and % Reduction from 2015 Baseline

<table>
<thead>
<tr>
<th>Scenario</th>
<th>CO2e (mtpd)</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>2,617</td>
<td>-27%</td>
</tr>
<tr>
<td>No Build</td>
<td>1,915</td>
<td>-26%</td>
</tr>
<tr>
<td>Scenario A</td>
<td>1,941</td>
<td>-28%</td>
</tr>
<tr>
<td>Scenario B</td>
<td>1,886</td>
<td>-27%</td>
</tr>
<tr>
<td>Scenario C</td>
<td>1,899</td>
<td>-26%</td>
</tr>
<tr>
<td>Scenario E</td>
<td>1,928</td>
<td></td>
</tr>
</tbody>
</table>
Environmentally Sensitive Areas
Add maps showing environmentally sensitive areas.
Environmental Analysis – Scenario B

Davenport

Monterey Bay
New Construction and Environmentally Sensitive Areas Overlap

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Length in Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario A</td>
<td>36.5</td>
</tr>
<tr>
<td>Scenario B</td>
<td>38.3</td>
</tr>
<tr>
<td>Scenario C</td>
<td>36.0</td>
</tr>
<tr>
<td>Scenario E</td>
<td>40.7</td>
</tr>
</tbody>
</table>
Household Transportation Costs

- One Vehicle Ownership Cost - $5625 per year
- Fuel and Maintenance Costs - $0.235 per mile
- Average SCC household vehicle miles - 21,033 miles per year

$15.41/day + $15.41/day + $13.56 = $44.38/day
Household Transportation Cost (% of Median Income)

1 Vehicle Household
- Scenario A: Baseline 16%
- Scenario B: 17%
- Scenario C: 25%

2 Vehicle Household
- Scenario A: Baseline 24%
- Scenario B: 25%
- Scenario C: 26%

Legend:
- Scenario A
- Scenario B
- Scenario C
- Scenario E
Share of Investment Benefit for Transportation Disadvantaged Population

14% of population is transportation disadvantaged

Scenario A: 24.0%
Scenario B: 25.2%
Scenario C: 25.2%
Scenario E: 23.5%
Level of Public Investment
Capital Costs and Funding Estimates (in millions)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>New Public Investments Needed</th>
<th>Funding Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario A</td>
<td>$520</td>
<td>$379</td>
</tr>
<tr>
<td>Scenario B</td>
<td>$899</td>
<td>$455</td>
</tr>
<tr>
<td>Scenario C</td>
<td>$833</td>
<td>$455</td>
</tr>
<tr>
<td>Scenario E</td>
<td>$740</td>
<td>$453</td>
</tr>
</tbody>
</table>

Capital Cost: $1,247
Annual Cost for Operation and Maintenance – Transit and Trail (in millions)

- Scenario A: $7, $13
- Scenario B: $20, $35, $9
- Scenario C: $22, $6, $43, $28
- Scenario E: $32, $32, $1
Transportation projects generate economic benefits by improving access

• Factors used to evaluate economic benefits for each scenario:
  • Area impacted by the transportation improvement
  • Who benefits from the improvement
  • Creation of a new transportation route
  • Creation of a new amenity
Visitor Tax Revenues (per year) (in million $)

- **Total**
- **Transient Occupancy Tax**
- **Visitor Related Sales Tax**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Visitor Tax Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>$28.6</td>
</tr>
<tr>
<td>Scenario A</td>
<td>$40.1</td>
</tr>
<tr>
<td>Scenario B</td>
<td>$40.2</td>
</tr>
<tr>
<td>Scenario C</td>
<td>$39.7</td>
</tr>
<tr>
<td>Scenario E</td>
<td>$40.1</td>
</tr>
<tr>
<td>No Build</td>
<td>$39.0</td>
</tr>
</tbody>
</table>

**Baseline Scenario:**
- Visitor Tax Revenues: $28.6 million
- Transient Occupancy Tax: $18.3 million
- Visitor Related Sales Tax: $10.3 million

**Scenario A:**
- Visitor Tax Revenues: $40.1 million
- Transient Occupancy Tax: $28.0 million
- Visitor Related Sales Tax: $12.0 million

**Scenario B:**
- Visitor Tax Revenues: $40.2 million
- Transient Occupancy Tax: $28.1 million
- Visitor Related Sales Tax: $12.1 million

**Scenario C:**
- Visitor Tax Revenues: $39.7 million
- Transient Occupancy Tax: $27.8 million
- Visitor Related Sales Tax: $11.9 million

**Scenario E:**
- Visitor Tax Revenues: $40.1 million
- Transient Occupancy Tax: $28.1 million
- Visitor Related Sales Tax: $12.0 million

**No Build Scenario:**
- Visitor Tax Revenues: $39.0 million
- Transient Occupancy Tax: $27.2 million
- Visitor Related Sales Tax: $11.8 million
## Relative Economic Benefits

<table>
<thead>
<tr>
<th></th>
<th>Scenario A</th>
<th>Scenario B</th>
<th>Scenario C</th>
<th>Scenario E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Location Decisions</strong></td>
<td>High</td>
<td>High</td>
<td>Moderate-High</td>
<td>Moderate-High</td>
</tr>
<tr>
<td><strong>Development Potential and Property Values/Rents</strong></td>
<td>Moderate</td>
<td>High</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Business Performance</strong></td>
<td>Moderate-High</td>
<td>High</td>
<td>Moderate-High</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Local Tax Revenue</strong></td>
<td>Moderate-High</td>
<td>High</td>
<td>Moderate-High</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>User Benefits</strong></td>
<td>High</td>
<td>High</td>
<td>Moderate-High</td>
<td>Moderate-High</td>
</tr>
</tbody>
</table>
• Outreach
  • Stakeholder Meetings
  • RTC Advisory Committees
  • Public Workshops
  • Focus Group Meetings
  • City Council Presentations

• RTC Meeting November 15, 6:00 PM Watsonville (staff recommendation of preferred Scenario, no action taken)

• RTC Meeting December 6, 9:00 AM County Chambers (action on preferred scenario)
Public Workshops
Unified Corridor Investment Study
Draft Step 2 Scenario Analysis

Monday, October 15
6:00 p.m. - 7:30 p.m.
Live Oak Elementary School
Multi-Purpose Room
1916 Capitola Road, Live Oak, CA

Tuesday, October 16
6:00 p.m. - 7:30 p.m.
Civic Plaza Community Rm A, 4th Fl
275 Main Street, Watsonville, CA
(Parking in garage on Level 6)

Website: sccrtc.org
Email: ucs@sccrtc.org