AGENDA: September 6, 2012

TO: Santa Cruz County Regional Transportation Commission

FROM: George Dondero, Executive Director

RE: Director’s Report

For Information Only

Welcome Maura

On August 20 Maura Twomey assumed the role of Executive Director at the Association of Monterey Bay Area Governments (AMBAG). Maura has more than 30 years of transportation related experience, including 20 years of executive management. She recently served as Deputy Director for the California Transportation Commission where she provided high level policy and project management advice to the Commission. Previously she served as the Chief of External Audits for Caltrans. She has a bachelor’s degree in Business Administration from California State University, Sacramento and is a Certified Public Accountant.

Safe on 17 Award

The national Governors Highway Safety Association has awarded the Safe on 17 Task Force the Peter O-Rourke Special Achievement Award. This nation-wide award recognizes notable achievements in the field of highway safety. In 2011, not a single life was lost on Highway 17, and there was the lowest number of fatal and injury collisions on record. Since its founding, the Task Force has seen a 49% average reduction of injury and fatal collisions. The California Highway Patrol received this award this past Tuesday at the Governors Highway Safety Association Annual Meeting.

Caltrans Planning Grant

The RTC has been awarded a Caltrans Partnership Planning grant for $211,085, to conduct a Unified Corridor Multimodal Access and Sustainability Analysis. RTC staff will work with Caltrans and the North American Sustainable Transportation Council (STC) and local partners, to develop a plan for prioritizing investments on three primary transportation routes. The plan will build on Caltrans’ Highway 1 Corridor System Management Plan and the RTC’s work on the Highway 1 corridor HOV Lanes project, and will incorporate two parallel travel routes, Soquel Avenue/ Drive, and the soon to be acquired branch rail line. The work will incorporate STC’s STARS tool, which allows us to establish performance targets for the corridor, and then
analyze which investments and land use strategies best achieve the targets at the
desired life-cycle cost. The work will complement current efforts to apply STARS tools
to the update our Regional Transportation Plan. Transportation Planner Ginger
Dykaar is the RTC project manager of this grant and the RTP update.

**Scenic Trail Network – project update**

Last night we held a Scoping Meeting in Santa Cruz, to gather input regarding
potential environmental impacts to be analyzed as part of the Monterey Bay
Sanctuary Scenic Trail Network Draft Environmental Impact Report. An additional
meeting will be held tonight at 6pm at the Community Foundation in Aptos.

At the November 1, 2012 RTC meeting, staff will release the Draft Trail Network
Master Plan and provide a presentation of proposed multi-use bicycle and
pedestrian trail segments, design standards, crossing treatments, rail and
agricultural operational considerations, cost estimates, proposed criteria to
prioritize projects, implementation mechanisms and other details. We will hold
Public Workshops on Nov 26th – 29th in locations throughout the county. More
information can be found on our website.

**Kim Shultz – Ten Years with RTC**

Congratulations to Kim Shultz, Senior Planner and Project Manager on our Highway
1 corridor projects. Kim came to the RTC in 2002. He was immediately put to work
to solicit a consultant team to do the preliminary design and environmental analysis
of the nine mile corridor.

He joined the AMBAG Model Users Group, which worked to improve the regional
travel demand model. He assisted in our work to develop the Pilot Project
Application Manual for the Sustainable Transportation Access Rating System
(STARS) with the North American Sustainable Transportation Council. Kim worked
with our design team to identify fundable projects on the corridor, including the
next auxiliary lanes project between Soquel and 41st Avenue.

Kim currently spends most of his time coordinating activities involving the
construction project now underway between Soquel and Morrissey on Hwy. 1. He
has worked with staff from RTC, City of Santa Cruz, Santa Cruz City Schools, and
others to minimize traffic congestion due to the closure of the La Fonda Avenue
overcrossing. The complimentary tone of the many emails received in our office
over the past week indicates these efforts have been quite successful.

Thank you Kim - for your persistence, attention to detail and ability to work with a
large team of engineering and environmental specialists on these very complex,
always challenging, and important transportation projects.
Hi Kim,
Our Cabinet team made it to every school yesterday, as we opened up the new school year. We anticipated some traffic issues to arise at Harbor and DL. We started our day at DeLaveaga and found that traffic was flowing smoothly. I did get a chance to connect with Tegan there and she was busy assisting folks and distributing flyers.

Once we made it to Harbor, office staff reported that the traffic in/out of school was the best it's been since the last 9 years!

Obviously your hard efforts paid off. We had police presence, and staff directing the flow of the Harbor parking lot. I think you there as well! I just want to express my sincere appreciation for what your team has done for our schools and our community.

Big, big kudos to your team!
1.0 EXECUTIVE SUMMARY

The J.L. Patterson & Associates, Inc. (JLP) team under Contract No. RT14019-01 with the Santa Cruz County Regional Transportation Commission (SCCRTC) was to assist the SCCRTC in identifying, reassessing and prioritizing $6 million in capital improvements. The $6 million is generally directed towards maintaining and expanding (at a limited level) freight and recreational rail service on the Santa Cruz Branch Rail Line (Branch Line) and includes project cost analysis and budgeting for those investments that are most cost-beneficial for extending the useful life of the rail line. The JLP team reviewed previously prepared inspection, condition, environmental and other related reports and conducted supplemental data collection, field inspections, testing, and analysis as needed to determine the overall scope of required rehabilitation, reconstruction, and other improvements. Once the information was reviewed and analyzed, the JLP team prioritized the most important repairs needed that can be performed within the $6 million construction budget and that information is included in this report.

1.1 Capitola Railroad Truss

A detailed individual assessment was conducted to determine the existing condition of the Capitola Crossing Deck Truss bridge structure, a major bridge located within the Santa Cruz Branch Line. Recommendations for its rehabilitation were developed by the JLP team’s subconsultant, Modjeski and Masters, Inc. (MMI). The bridge is positioned at milepost 15.89c on the 31-mile Branch Line located along Monterey Bay between the towns of Davenport and Pajaro Junction, California.

This engineering assessment was based on data obtained through review of previous work, site inspection, non-destructive ultrasonic testing of the bridge pins, the laboratory testing of the bridge metal, structural load capacity evaluations (ratings), the AREMA Manual for Railway Bridge Engineering and standard railroad bridge engineering practice.

The existing bridge was found to be in generally fair condition with minor to moderate corrosion throughout. An ultrasonic inspection of the bridge pins was performed and no defects of immediate concern were noted. Sampling of metalwork concluded that the floor system is not steel and is most likely wrought iron. It is possible and likely that the truss is as well and rating analysis has assumed wrought iron. Additional testing to determine the material may be warranted if additional study is undertaken.

The floor system of the bridge was found to have insufficient capacity under normal and maximum service stress conditions to support the typical 263,000 or 286,000 pound railcar loadings, even in its original as-built condition. The capacity and conditions are such that all of the stringers and floorbeams require replacement. The truss cannot satisfactorily support the typical 263,000 or 286,000 pound railcar under normal service stress conditions, but can do so on a limited basis with reduced speeds. The truss
bearings were found to be in poor and non-functioning condition and it is recommended that the truss bearings and anchor bolts be replaced.

The recommended rehabilitation of this bridge will take approximately twelve weeks on-site. The estimated construction costs with contingencies, but not including design or construction engineering costs, is $588,000. Additionally, it is recommended for purposes of extending the service life of the bridge that the entire structure be cleaned and painted. The cost of cleaning and painting the structure is estimated to be $600,000.

It is the JLP team’s opinion that, provided that the recommended bridge rehabilitation is undertaken, including the painting of the structural steel, the resulting rehabilitated structure with proper maintenance and no significant increase in load volume or weight should provide a satisfactory service life of about 20-30 years. If only the floor system and bearings are rehabilitated, it is the opinion of the JLP team that the satisfactory service life would be about 10-15 years, due to the conditions and continuation of corrosion at the pin connections.

1.2 La Selva Beach Trestle

A detailed assessment of the La Selva Beach Trestle, a major bridge structure within the Branch Line, was also conducted by MMI and the JLP team to provide the current condition of the structure and to develop recommendations for its rehabilitation. The bridge is positioned at milepost 9.09 on the Branch Line.

This engineering assessment was based on data obtained through review of previous work, site inspection, structural load capacity evaluations (ratings), the AREMA Manual for Railway Bridge Engineering and standard railroad bridge engineering practice.

The steel tower bents have significant section loss with portions of columns having either 100% loss of member flanges or webs, and the lateral and longitudinal bracing is for all intents and purposes non-existent in many of the towers. These conditions render the bridge to be in immediate danger of a buckling failure under either axial or lateral loads. It is the JLP team’s recommendation that the bridge should not be allowed to be loaded under railroad or construction loads until these deficiencies are corrected. The steel bents should be removed and replaced with new steel bents.

In addition, at the ends of the girders there is significant to severe section loss at the bottom flanges, webs and bearing stiffeners and the web plates are at risk of buckling under load. It is the JLP team’s recommendation that the girders be removed and taken to an off-site location, the ends of girders cut off and new prefabricated ends be attached with bolted splices. Prior to the girders being erected onto new tower bents, they should be cleaned and painted. Four of the eighteen deck girders have flange section losses that will need repairs to restore them to the controlling as-built capacity
of the bridge. These losses can be repaired with welded cover plates. The existing steel has been tested and determined to be a weldable steel.

The recommended rehabilitation of this bridge will take approximately nine months to construct, including fabrication time. The estimated construction costs with contingencies, but not including design or construction engineering costs, is $1,575,000 for standard construction. In the event that heavy equipment is not allowed beneath the bridge, stage construction and erection towers will be necessary, increasing the estimated construction costs to $1,875,000.

The type and extent of superstructure repairs is such that the number of qualified bidders is relatively low and the potential for high and widespread bids exists. To alleviate this potential, it is recommended that an alternative for complete replacement of the superstructure be developed and bid.

The resulting structure with proper maintenance and no substantial change in service loadings, in the JLP team’s opinion, should provide satisfactory service for approximately 50 years. For comparison, an entirely new structure of similar length at this location would cost approximately $4,080,000.

1.3 Other Bridges and Structures

Based upon J.L. Patterson & Associates, Inc.’s field inspections and evaluations, a number of the wooden bridge structures will require repair work. A list of wooden structures that will require repair work based upon our inspection observations was developed and is presented in Section 5. Two of these structures have significant reduction in load capacity due to defective pile and are recommended to be placed “out-of-service” until the repair work is performed and the work is verified as complete by a qualified bridge supervisor. The repairs include but are not limited to cap installations and pile replacements.

1.4 Alignment Discussion Overview

The team reviewed and evaluated other available reports and data relative to surveying, right-of-way, UPRR information, environmental/permitting, track, drainage and at-grade crossing information. These items are discussed individually in Sections 3.7 through 3.10.

In addition, the team reviewed a Draft of the Monterey Bay Sanctuary Scenic Trail Network Master Plan, dated August 20, 2012 in preparing this report. Based upon a review of the plan, the JLP team concurs with the recommendation for further study regarding the feasibility of attaching the bicycle/pedestrian trail to some of the existing bridges. The JLP team recommends “standalone” structures for the majority of the crossings where the path is adjacent to rail bridges and wooden structures. JLP also
recommends adopting the same terminology for designating the railroad bridges by using the associated railroad milepost. The milepost designations are listed in the table in Section 2 and as noted in the track chart in the appendix.

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