MEETING NOTICE
AND AGENDA

JOINT MEETING OF THE REGIONAL PLANNING
TECHNICAL WORKING GROUP AND CITIES/COUNTY
TRANSPORTATION ADVISORY COMMITTEE

The Regional Planning Technical Working Group and Cities/County Transportation Advisory
Committee may take action on any item appearing on this agenda.

Thursday, October 29, 2009
1 to 3:15 p.m.

SANDAG, 7th Floor Board Room
401 B Street, Suite 800
San Diego, CA 92101-4231

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AGENDA HIGHLIGHTS

• ANNOUNCEMENT: RETIREMENT OF BOB LEITER OF SANDAG
• OVERVIEW OF SUSTAINABLE COMMUNITIES STRATEGY
• URBAN CORE TRANSIT STRATEGY
• RAIL GRADE SEPARATION EVALUATION CRITERIA

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ITEM # | RECOMMENDATION
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1. | WELCOME AND INTRODUCTIONS INFORMATION
2. | PUBLIC COMMENTS AND COMMUNICATIONS COMMENT

Members of the public will have the opportunity to address the Cities/County Transportation Advisory Committee (CTAC) and the Technical Working Group (TWG) on any issue within the jurisdiction of the Working Groups that is not on this agenda. Speakers are limited to three minutes each.

+3. | APPROVAL OF MEETING SUMMARIES APPROVE

+A. Meeting Summary of the September 10, 2009, Regional Planning Technical Working Group Meeting
+B. Meeting Summary of the October 1, 2009, Cities/County Transportation Advisory Committee Meeting

The Working Groups should review and approve their meeting summaries.

CHAIR’S REPORT

4. | ANNOUNCEMENT: RETIREMENT OF BOB LEITER OF SANDAG INFORMATION

Bob Leiter, FAICP, Director of Land Use and Transportation Planning at SANDAG, has announced his retirement, which will take place on December 30, 2009. Bob has been in public service for over 35 years, having served as the planning director at the Cities of Escondido, Chula Vista, Ventura, and San Rafael, and most recently, as the Director at SANDAG. Bob has been actively engaged in the planning profession for many years. In addition to the numerous planning activities that he has been involved in over the years, he currently serves as Board Chair for the American Planning Association (APA) Regional and Intergovernmental Planning Division, teaches urban planning courses through UCSD Extension, and participates as an active member of Lambda Alpha. Bob was selected as a Fellow of the American Institute of Certified Planners in 2007 and won the San Diego Section APA Distinguished Planner Award in 2004. Congratulations on your retirement, Bob!
REPORTS (5 through 11)

5. STATUS UPDATE ON THE SERIES 12 - 2050 REGIONAL GROWTH FORECAST (Beth Jarosz)

SANDAG has been working closely with each jurisdiction to develop the 2050 Regional Growth Forecast for use in the 2050 Regional Transportation Plan (RTP). The draft forecast is scheduled to be available in December 2009, and the final forecast is scheduled for SANDAG Board approval in February 2010. Staff will present a status update on the forecast.

6. INITIAL CONCEPTS FOR 2050 RTP ENVIRONMENTAL JUSTICE ANALYSIS (Jane Clough-Riquelme and Beth Jarosz)

As part of the 2050 RTP process, SANDAG will be conducting an Environmental Justice Analysis. Staff is developing an initial study plan and is requesting input from the TWG and CTAC on the study's methodology and potential criteria.

7. OVERVIEW OF SUSTAINABLE COMMUNITIES STRATEGY (Susan Baldwin)

Staff will make a presentation regarding the Sustainable Communities Strategy (SCS) and the Regional Housing Needs Assessment (RHNA). The SCS is a new element of the RTP required by Senate Bill (SB) 375 (Steinberg). SB 375 also requires that the RHNA be consistent with the SCS and be prepared in conjunction with the RTP. Per SB 575 (Steinberg) signed by the Governor in October 2009, the next RHNA and housing element cycle (5th revision) will be completed in alignment with the 2050 RTP. The RHNA will be completed by July 2011, and local housing elements will be due by December 31, 2012.

8. URBAN CORE TRANSIT STRATEGY (Carolina Gregor)

An important part of the 2050 RTP will be the development of an innovative and visionary "Urban Core Transit Strategy" to significantly increase the attractiveness and use of transit, walking, and biking in the urban core area, and make transit time-competitive with the car. Staff will provide an overview of the work program to develop the Urban Core Transit Strategy and will facilitate an initial brainstorming session on potential transit concepts and ideas that could be considered in the development of the alternative transit networks.
9. COMMUNITY ACTIVE TRANSPORTATION PLANS (Chris Kluth)  

In conjunction with the development of the San Diego Regional Bicycle Plan, revisions to the project selection/evaluation process for the TDA/TransNet Bicycle, Pedestrian, and Neighborhood Safety/Traffic Calming grant program are proposed to achieve a balance between regional and local active transportation projects. A new concept is the Community Active Transportation Plan that would supplant Pedestrian Master Plans and replace it with a comprehensive effort to combine planning for pedestrians, bicycles, traffic calming, and Safe Routes to school. Ideally, all of these efforts should be coordinated to have the greatest impact.

+10. RAIL GRADE SEPARATION EVALUATION CRITERIA (Dan Martin)  

The Transportation Committee approved the evaluation criteria at its October 16, 2009, meeting. Staff will provide an update on the actions taken by the Transportation Committee, including the approved Implementation Option and discuss the next steps for local jurisdictions.

11. ADJOURNMENT AND NEXT MEETING(S)  

Another joint CTAC/TWG meeting is proposed on Thursday, December 3, 2009, from 9 to 11 a.m. to continue discussion on the items presented today. The working groups should discuss/approve the proposed joint meeting.

The next regularly scheduled TWG meeting will be held on either Thursday, November 12, 2009, or December 10, 2009, from 1:15 to 3:15 p.m.

The next regularly scheduled CTAC meeting will be held on Thursday, December 3, 2009, from 9:30 to 11 a.m., contingent on the proposed joint meeting date outlined above.

+ next to an item indicates an attachment
MEETING SUMMARY OF THE SEPTEMBER 10, 2009, REGIONAL PLANNING TECHNICAL WORKING GROUP MEETING

Agenda Item #1: Welcome and Introductions

Vice Chair John Brindle (City of Escondido) called the meeting of the Regional Planning Technical Working Group (TWG) to order at 1:20 p.m. Self-introductions were conducted.

Agenda Item #2: Public Comments and Communications

No public comments.

CONSENT ITEMS (3 through 4)

Agenda Item #3: July 9, 2009, Meeting Summary (APPROVE)

The Working Group reviewed and approved the July 9, 2009, TWG meeting summary.

Action: Bill Chopyk (La Mesa) made a motion and Ed Batchelor (Chula Vista) seconded to approve the minutes of the July 9, 2009, TWG. The minutes were unanimously approved.

Agenda Item #4: Regional Planning Stakeholders Working Group Recommendation (INFORMATION)

The SANDAG Board of Directors approved the establishment of the new Regional Planning Stakeholders Working Group at its May 2009 meeting. A call for applications was released in June, and 70 applications were received. A report provided the recommended slate that was approved by the Transportation and Regional Planning Committees in July. Board action is expected on September 11, 2009.

Action: This item was presented for information only.
Agenda Item #5: Appointment of TWG Members to the Transportation Project Evaluation Criteria Ad Hoc Working Group for the 2050 Regional Transportation Plan (APPOINT)

As part of the development of the 2050 Regional Transportation Plan (RTP), a Transportation Project Evaluation Criteria Ad Hoc Technical Working Group (TPEC) has been established. The TPEC will provide input on transportation project evaluation criteria and plan performance measures, which will support the goals and objectives for the 2050 RTP to be established by the Board of Directors. The TPEC will be made up of technical staff from existing SANDAG working groups, as well as staff from partner agencies. The group will begin meeting in fall 2009 and is expected to conclude its activities by summer 2010. Scott Strelecki, SANDAG, requested the TWG to appoint two members to this group.

Action: Bill Chopyk (La Mesa) and Rich Whipple (Solana Beach) volunteered for the TPEC with TWG approval.

Agenda Item #6: 2050 Regional Growth Forecast (INFORMATION)

Beth Jarosz, SANDAG, provided an update on the status of meetings with local jurisdictions on the 2050 Regional Growth Forecast and highlighted the project schedule. Ms. Jarosz thanked staff for their efforts and explained that the next step is to collect inputs from each jurisdiction for 2050 by the end of October 2009. A draft forecast is planned for completion in December and the final forecast is planned for February 2010.

Action: This item was presented for information only. Ed Batchelder (Chula Vista) suggested that providing quantification or “order of magnitude” gaps for the optional approaches for jurisdictions would be useful for staff discussion and presentation to city councils. Tait Galloway (City of San Diego) requested that a hard copy of a map from SANDAG would be useful.

Agenda Item #9 (taken out of order): Senate Bill 375 (Steinberg) Update (INFORMATION)

Susan Baldwin, SANDAG, updated the TWG regarding the most recent version of Senate Bill (SB) 575 (Steinberg). This bill proposes requirements for the upcoming housing element cycle for the jurisdictions in the San Diego region. If passed, the next Regional Housing Needs Assessment (RHNA) will be completed by July 2011, and the next housing elements will be due by December 31, 2012.

Action: This item was presented for information only.

Agenda Item #7: Preliminary Draft Regional Energy Strategy Update (INFORMATION)

SANDAG has received comments from the public and input from the California Energy Commission (CEC) State Advisory Task Force (SATF) on the Draft Regional Energy Strategy (RES) Update. Susan Freedman, SANDAG, provided an overview of comments and updates to the draft plan, and asked the TWG to discuss priorities for action projects and provide input on ideas regarding the connections between energy consumption and land use. Comments are due to the Energy Working
Group by Monday, September 14, 2009. A final draft RES Update will be presented to the Regional Planning Committee for recommendation to the Board of Directors in October 2009.

**Action**: This item was presented for information only. Andy Hamilton (Air Pollution Control District) suggested a special workshop on climate action at the local level. Greg Wade (Imperial Beach) recommended that cities fund programs, similar to that of the County of San Diego, which invest in immediate improvements in household energy efficiency.

**Agenda Item #8: TransNet Environmental Mitigation Program: Status Update (INFORMATION)**

Keith Greer, SANDAG, presented an update on the TransNet Environmental Mitigation Program (EMP) Status Report, which outlines the status, successes, and challenges of implementing the TransNet EMP under the Memorandum of Agreement signed last March by the Board of Directors. This report has been presented to the Independent Taxpayer Oversight Committee and is being presented to the Regional Planning Committee, Transportation Committee, and Board of Directors for information.

**Action**: This item was presented for information only.

**Agenda Item #10: Adjournment and Next Meeting**

Vice Chair Brindle adjourned the meeting at 3:15 p.m. and added a congratulatory remark to the jurisdictions that recently received awards from the American Public Works Association.
MEETING SUMMARY OF THE OCTOBER 1, 2009, CITIES/COUNTY TRANSPORTATION ADVISORY COMMITTEE

Introductions

Frank Rivera (CTAC Chair) chaired the meeting. Meeting participants introduced themselves.

Meeting Summary

CTAC members reviewed and approved the meeting summary for the August 6, 2009, CTAC meeting.

Public Comments

There were no comments from the public.

Update on the Regional Planning Stakeholders Working Group (SWG)

Jane Clough-Riquelme, SANDAG, provided an overview of the establishment of the new Regional Planning Stakeholders Working Group (SWG). Ms. Clough-Riquelme noted that on the SANDAG Board of Directors approved September 11, 2009, the slate of members and alternates to serve as at-large citizen representatives, as shown in Tables 1 and 2 of the report. She also provided an overview of the Environmental Justice Community-Based Outreach Grant Program and selection process, including the eight successful organizations selected for this program, as shown in Table 3 of the report.

Ms. Riquelme reported that the first SWG meeting was held on September 16, 2009, at Caltrans and that additional meetings are scheduled for the third Tuesday of each month.

Overview of Transportation Conformity Process

Andrea Hoff, SANDAG, began by providing background on Transportation Conformity and its link to Air Quality Planning and Transportation Planning, including requirements by the Federal Clean Air Act. Ms. Hoff noted that the Federal Clean Air Act requires that the U.S. Environmental Protection Agency set National Ambient Air Quality Standards (NAAQS) for pollutants that harm public health and the environment. She further described that areas found to exceed these standards are called ‘nonattainment areas.’ Nonattainment areas are then required to develop State Implementation Plans (SIPs) to attain conformity. In the San Diego region, the Air Pollution Control
District (APCD) develops the SIP in collaboration with SANDAG. This document is then turned into the California Air Resources Board and becomes part of the statewide SIP.

Ms. Hoff noted that Transportation Conformity only addresses on-road mobile sources like cars, buses, and trucks. She also noted that the San Diego region conformity designations include nonattainment for the 8-hour Ozone (O3) Standard, and Maintenance Area for Carbon Monoxide (CO). She described that SANDAG, as the regional agency, must determine that the Regional Transportation Plan (RTP), Regional Transportation Improvement Program (RTIP), and associated projects conform to the SIP. Conformity to the SIP means transportation activities will not create new air quality violations, worsen existing violations, or delay attainment of NAAQS.

Ms. Hoff described that the conformity process includes conducting the Regional Emissions Analysis (Transportation and Air Quality Models). This includes the use of the latest planning assumptions (Growth Forecast, Emissions Model), timely implementation of Transportation Control Measures (TCM), and Interagency Consultation. She reviewed the timing on when conformity must be determined and the approval process needed. She also distributed and reviewed a table that lists projects that are exempt, including safety, mass transit, and air quality projects.

Ms. Hoff also covered the role of local agencies in providing new or updated project information to include in RTP modeling. In addition, she described the importance of local agencies providing accurate critical information in ProjectTrak to prevent delays with environmental clearance of a project.

Frank Rivera (Chula Vista) asked if cruise ships are included in the determination. Rachel Kennedy, SANDAG, answered that only on-road mobile sources are included, but that the APCD includes airports, cruise ships, and other sources. Zoubir Ouadah (Poway) asked if safety projects that include widening are exempt. Ms. Kennedy responded that some projects like the kind described are reviewed by the Federal Highway Administration on a case-by-case basis.

Maryam Babaki (National City) asked if the region is going to have problems with conformity given the region’s growth forecast. Ms. Hoff answered that we do not anticipate a problem at this point.

**Caltrans Updates**

Wei Xia (Caltrans) provided the following announcements:

- The 2010/11 BTA applications are due December 1, 2009.
- HBP survey is being performed to update the FTIP for all HBP and Proposition 1B seismic projects. The survey is due on October 9, 2009.
- HSIP – On July 21, 2009, a call for the Cycle 3 HSIP was made. Caltrans anticipates HSIP funding apportioned to local agencies to be approximately $50 million for FY 2009/10. Applications are due by October 8, 2009, for this program.
- Approved Quality Assurance Plans (QAPs) are required from agencies receiving funds for a Federal-aid transportation project. District 11 has received a total of ten QAPs from agencies in San Diego and Imperial counties. Agencies were reminded to update their QAPs.

**Utility Undergrounding Districts**
Frank Rivera (Chula Vista) and Elizabeth Chopp (Chula Vista) provided an update on recent meetings with SDG&E regarding utility undergrounding district projects in Chula Vista. They identified issues of concern raised by the City, including cost escalation and increases in scope on projects. As a path to resolution, the City is working with SDG&E on attaining detailed cost information and accounting.

Other agencies expressed similar issues. Some agencies described competitive bid processes used along with contract change order review as ways to control cost overruns. Mr. Rivera proposed that CTAC may want to develop a standard accounting request for utility undergrounding districts that could be used by all of the region's jurisdictions. CTAC members agreed to appoint a subcommittee to review the issues and develop a proposed standard accounting request for use by jurisdictions. Mr. Rivera agreed to send out an e-mail to solicit interest from CTAC members wishing to be part of the subcommittee.

**Announcements**

Dan Martin, SANDAG, announced that the Rail Grade Crossing Criteria is scheduled to go to the Transportation Committee on October 16, 2009. As part of the action to approve the criteria, staff is recommending that jurisdictions determine which at-grade crossings located within their respective jurisdictions will be submitted. Mr. Martin described that the purpose of this recommendation is to focus the region’s resources on the highest priority at-grade crossings, considering that each jurisdiction will perform the traffic analysis needed for each crossing submitted.

Heather Werdick, SANDAG, announced that the region has attained both the population and number of jurisdictions needed to opt out of the State’s Congestion Management Program. Ms. Werdick indicated that this will be shared with the Transportation Committee on October 16, 2009.

**Next Meeting**

The next planned meeting of the CTAC will be held as a joint meeting with the Regional Planning Technical Working Group on Thursday, October 29, 2009, at 1 p.m. It will be held at SANDAG in the Board Room located on the 7th floor.
URBAN CORE TRANSIT STRATEGY  

Introduction

An important part of the 2050 Regional Transportation Plan (RTP) will be the development of an innovative and visionary “Urban Core Transit Strategy” to significantly increase the attractiveness and use of transit, walking, and biking in the urban core area, and to make transit time-competitive with the car. The urban core area is defined as the downtown trolley ring that includes downtown, Mission Valley, La Mesa, and Lemon Grove, as shown in Attachment 1. Through this project, three transit network alternatives will be developed and tested over the next year, with ultimate incorporation of one of the networks (or a combination or variation thereof) into the development of the 2050 RTP.

In order to “kick off” the project, staff will review the work program for the project and facilitate an initial brainstorming session on potential transit concepts that could be considered in the development of the transit network alternatives.

Discussion

Work Program

In an effort to prepare for the 2050 RTP and in compliance with the terms of the 2008 Settlement Agreement between SANDAG and various parties over the 2030 RTP Environmental Impact Report, SANDAG is developing an “Urban Core Transit Strategy.” This project will develop and evaluate a series of innovative and visionary transit network alternatives designed to maximize peak period transit mode share in the urban core area and in key transportation corridors/communities, and to reduce vehicle miles traveled and greenhouse gas (GHG) emissions in the San Diego region. Transit network alternatives resulting from the planning process will be used as major inputs in the preparation of the 2050 RTP.

SANDAG has signed a contract agreement with PB Americas to conduct work on the Urban Core Transit Strategy. Liz Young of PB Americas will serve as the PB Americas Project Manager on this project. The project schedule includes a number of detailed tasks that need to be completed in a very concentrated time span. The following project highlights summarize the work program.
Project Highlights

- Establish a Peer Review Panel
- Conduct stakeholder meetings throughout the process (policymakers, working groups, Settlement Agreement Parties, Peer Review Panelists, public workshops, other interested parties)
- Research and review lessons learned from Peer Regions
- Develop transit mode share methodology
- Develop peak-period transit mode share goals for key corridors/communities
- Develop network evaluation criteria
- Develop “Comparison Scenario” based on:
  a. 2050 Regional Growth Forecast land uses, and
  b. 2030 RTP Unconstrained Transportation Network
- Interpret the travel demand forecast
- Assemble the PB “Think Team” and host the Think Team workshop to develop conceptual transit network alternatives
- Peer review of the conceptual alternatives
- Refine the alternatives
- Code and model the transit network alternatives and develop initial cost estimates and graphic representations
- Conduct transportation model runs
- Evaluate the performance of the transit network alternatives
- Develop parking strategies and assessments, and re-evaluate performance
- Refine the alternatives for 2050 RTP transportation model runs and analysis
- Conduct the unconstrained transportation model runs and select the Draft 2050 Unconstrained Transportation Network
- Refine the cost estimates for the selected network
- Develop the network phasing/priority rankings
- Develop five- and ten-year implementation strategies
- Produce the final Urban Core Transit Strategy Technical Documentation Report

Attachment 2, the Work Flow Approach, illustrates how the work effort will be conducted and shows approximate times for stakeholder input. Input will be sought around three key points: (1) mode share goals and network performance criteria; (2) the transit network alternatives and their evaluation; and (3) phasing and implementation, including the five- and ten-year action plans. Input and recommendations from the TWG and CTAC, as well as from the new Stakeholders Working Group (SWG), the Settlement Agreement Parties, the Peer Review Panel, public workshops,
and other forums, will be relayed to the Transportation and Regional Planning Committees. The Transportation Committee will be responsible for making recommendations to the Board of Directors. The Board will ultimately select the transit network that will be incorporated into the 2050 RTP.

**Brainstorming Session and Next Steps**

Early next year, PB Americas will assemble a “Think Team” of transportation experts from throughout the United States and Australia to begin developing the three transit networks. Representation from TWG and CTAC, along with the other stakeholders, will be solicited to participate in specific elements of the Think Team workshop. In preparation for the workshop and to kick off the project, staff will facilitate a brainstorming session with the TWG and CTAC on ideas and concepts that could be considered in the alternative networks.

At the next joint TWG/CTAC meeting, staff and the consultant team will present an overview of lessons learned from the Peer Regions. Comments also will be sought on the methodology for developing the transit mode share goals, and on suggestions for criteria by which the transit network alternatives will be evaluated.

**Attachments:**
1. Map of Urban Core Transit Strategy Study Area
2. Urban Core Transit Strategy Work Flow Approach

**Key Staff Contact:** Carolina Gregor, (619) 699-1989, cgr@sandag.org
Figure 1

Urban Core Transit Strategy
Study Area

Study Area Boundaries
- Urban Core Area
- Other Transit Investment Areas

April 2009

SANDAG
Urban Core Transit Strategy
Work Flow Approach

Think Team Workshop

Criteria Development & Evaluation Methodology

Travel Demand Interpretation

Stakeholder Input:
Settlement Agreement Parties (1)
RTP/SCS SWG (1)
TWG/CTAC (1)

Workshop Participation:
Settlement Agreement Parties
RTP/SCS SWG

Network Alternatives Development

Peer Review Panel (1)
SANDAG Policy Committee(s)

Peer Review Panel (2)
SANDAG Policy Committee(s)

SANDAG Policy Committee(s)/Board

Peer Review Panel (3)
SANDAG Policy Committee(s)/Board

Network Evaluation

Research/Related Efforts Comparison

Goals Development

Round 1 Model Runs Review

Sensitivity Analyses

Capital/O&M Cost Estimates

Round 2 Model Runs Review

Stakeholder Input:
Settlement Agreement Parties (2)
RTP/SCS SWG (2)

TWG/CTAC (2)

Round 3 Model Runs

Refinement of Network Alternatives for 2050 RTP

Unconstrained 2050 Network

SANDAG Funding Assumptions

Refined Capital/O&M Cost Estimates

Priority Rankings / 5 and 10 Year Plans

Stakeholder Input:
Settlement Agreement Parties (3)
RTP/SCS SWG (3)

2050 RTP Transit Network

Attachment 2
RAIL GRADE SEPARATION EVALUATION CRITERIA

The Transportation Committee on October 16, 2009, took action on the Rail Grade Separation Evaluation Criteria recommended by CTAC. The action taken by the Transportation Committee included approval of the Draft Rail Grade Separation Evaluation Criteria, as shown in Attachment 1, and approval of Implementation Option 2 to direct jurisdictions to prioritize, analyze, and submit a consolidated list of grade crossings using the approved criteria shown in Attachment 1, within their respective jurisdiction for inclusion in the regional Grade Separation List.

Staff will outline the next steps needed to establish the regional Grade Separation List in preparation for inclusion in the 2050 Regional Transportation Plan.

Attachment: 1. Transportation Committee Item No. 7 from October 16, 2009

Key Staff Contact: Dan Martin, (619) 699-16987, dma@sandag.org
RAIL GRADE SEPARATION EVALUATION CRITERIA

Introduction

The Transportation Committee, at its May 16, 2008, meeting, raised a concern regarding the SANDAG Rail Grade Separation Evaluation Criteria documented in the 2030 Regional Transportation Plan (RTP). The Transportation Committee requested additional information to assure the evaluation criteria considered traffic impacts on the adjacent streets when an at-grade rail crossing is evaluated in San Diego County. The Transportation Committee requested that the Cities/County Transportation Advisory Committee (CTAC) review the criteria and provide recommendations.

Discussion

At its January 8, 2009, meeting, CTAC discussed the evaluation criteria. CTAC reviewed the warrants included in the criteria and commented that greater weighting should be considered for public safety in the overall criteria. CTAC recommended that the San Diego Regional Traffic Engineers Council (SANTEC) review the criteria to determine if the criteria considered impacts to adjacent streets, and if the criteria allocated the appropriate amount of weight to factors affecting public safety.

SANTEC formed an ad hoc working group to review the evaluation criteria. During the ad hoc working group sessions, it was determined that the focus of the initial review should be expanded to include a comprehensive review of the criteria to assure that the Transportation Committee’s concerns were addressed. The recommendations presented in this report address all of the content under the “Project-Specific Criteria” section of the criteria document. A Draft Rail Grade Separation Evaluation Criteria document (Attachment 1) was developed as a result of the ad hoc working group’s efforts.

The draft evaluation criteria document is intended to be used to create a prioritized list of potential grade separation projects within the San Diego region and contains nine warrants under “Project-Specific Criteria.” Points are accumulated for each warrant based on formulas and/or tables. Higher point totals equate to a higher grade separation priority ranking. Each warrant was reviewed and assessed by the SANTEC working group. The following is an overview of the warrants contained within the criteria:

Recommendation

The Transportation Committee is asked to:

1. Approve the Draft Rail Grade Separation Evaluation Criteria as shown in Attachment 1; and

2. Approve Implementation Option 2 to direct jurisdictions to prioritize, analyze, and submit a consolidated list of grade crossings using the approved criteria shown in Attachment 1 within their respective jurisdiction for inclusion in the regional Grade Separation List.
1. **Peak-Period Exposure Index**: this warrant assigns points for factors that contribute to traffic congestion. The two factors included in this warrant are vehicular traffic volume and blocking delay time. Cumulative vehicular traffic volumes from adjacent streets impacted by the operation of train are included over the most congested three one-hour periods of the day.

2. **Peak-Day Total Delay Exposure Index**: this warrant also assigns points for factors that contribute to traffic congestion. The factors included in this warrant are average daily traffic, number of daily trains, and blocking delay time over a 24-hour period. Cumulative vehicular traffic volumes from adjacent streets affected by the operations of the train are included in this calculation also.

These two warrants address the technical concern regarding traffic impacts on the adjacent streets raised by the Transportation Committee. It should be noted that these two warrants also will require jurisdictions to gather field measurements and perform a traffic analysis to determine the amount of vehicular traffic and the total blocking delay. The work associated with this effort may require a significant amount of resources depending on the number of existing crossings evaluated in the region.

3. **Accident History and Safety**: this warrant assigns points for factors associated with accident history and grade crossing configuration. The factors include number of qualifying accidents, fatal accidents, and special conditions associated with the existing at rail grade crossing configuration. Additional weight has been added to this warrant when compared to the current criteria to reinforce the concept of safety as an important priority in the evaluation of potential grade separation projects.

4. **Funding Request**: this warrant assigns points based on the percentage of total project costs contributed by the local agency.

5. **Pedestrian Benefits**: this warrant assigns points based on the number of pedestrians served at the existing crossing during the top four hours.

6. **Bus Operations Effects**: this warrant assigns points based on the maximum number of buses served at the existing crossing in an hour and if the crossing is adjacent to a transit center.

7. **Noise Reduction**: this warrant assigns points based on proximity of the existing crossing to sensitive receptors such as residences and hospitals.

8. **Benefit to Emergency Services**: this warrant assigns points based on proximity of the existing crossing to emergency service providers.

9. **Impact to Truck Freight Operations**: this warrant assigns points based on percentage of trucks using the existing grade crossing. Trucks are defined as Class 4 and above to Class 13 as defined by the Federal Highway Administration.
The nine project-specific warrants outlined above account for 75 percent of the total regional rail grade separation project score. The remaining 25 percent of the project score is assigned based on Board Policy No. 033, which calculates Regional Housing Needs Assessment incentive points on an annual basis for each jurisdiction. The CTAC reviewed the Draft Rail Grade Separation Criteria at its August 6, 2009, meeting and voted to support a recommendation to adopt the criteria.

If the Draft Rail Grade Separation Criteria is approved by the Transportation Committee, the approved criteria will be incorporated into the 2050 Regional Transportation Plan. In addition, the region will need to initiate efforts to evaluate the region’s existing rail grade crossings. As part of these efforts, the region will need to consider prospects for future funding and the level of effort required to evaluate the region’s 119 major gated grade crossings. As included above, project-specific warrants 1 and 2 will require jurisdictions to gather field measurements and perform a traffic analysis to determine the amount of vehicular traffic and the total blocking delay. Jurisdictions will work with SANDAG staff to complete the evaluation of each crossing submitted in accordance with the approved criteria. Each crossing evaluated will require significant resources to perform the evaluation.

In consideration of the resources needed to evaluate each rail grade crossing, the following three Implementation Options are provided for consideration:

1. Direct CTAC to perform a preliminary analysis of existing grade crossings in the region to determine a consolidated list of grade crossings that should be considered for evaluation. Jurisdictions would provide the data to rank their specific projects.

2. Direct jurisdictions to prioritize, analyze, and submit a consolidated list of grade crossings in consideration of the approved criteria within their respective jurisdiction for inclusion in the regional grade separation list. The final list will be reviewed by CTAC and the transit operators with a recommendation for the Transportation Committee to approve for the inclusion into the 2050 RTP.

3. Direct SANDAG staff to perform a preliminary analysis of existing grade crossings in the region to determine a consolidated list of grade crossings that should be considered for evaluation. Jurisdictions would provide the data to rank their specific projects.

Staff recommends that the Transportation Committee approve Implementation Option 2 for the following reasons:

- The traffic analysis required to rank each rail grade crossing will be performed by the jurisdiction where the rail grade crossing is located.
- Jurisdictions have first hand knowledge about the traffic patterns on their respective streets and rail grade crossing locations where the most accidents have occurred.
- Each jurisdiction should be given the flexibility to choose which grade crossings they want to place on the list.
- A review by CTAC and the transit operators is warranted as quality assurance that the region’s highest priority rail grade crossings are included.
After approval of the Draft Rail Grade Separation Evaluation Criteria and recommended implementation option by the Transportation Committee, next steps will include working with the jurisdictions to initiate the development of the region’s ranked list of Rail Grade Separation projects. Additional steps will include working with the region’s transit agencies to solicit input on the ranked list of projects.

JACK BODA
Director of Mobility Management and Project Implementation

Attachment: 1. Draft Rail Grade Separation Evaluation Criteria

Key Staff Contact: John Dorow, (619) 699-1915, jdo@sandag.org
DRAFT RAIL GRADE SEPARATION EVALUATION CRITERIA

The Cities/County Transportation Advisory Committee (CTAC) developed regional rail grade separation prioritization criteria that stress congestion relief, safety, and funding needs as the primary elements with additional consideration of other factors, including effects on pedestrian traffic, bus transit operations, emergency services, truck freight operations, and noise.

In preparation for the development of the criteria, staff conducted a literature search of other rail grade separation prioritization criteria. These included the California Public Utilities Commission criteria, other states’ criteria, the federal government, as well as articles published in research journals. The findings formed the basis for the initial discussions within CTAC.

The intent of the implementation of a regional rail grade separation program is to provide funding for construction of significant traffic congestion relief projects through the implementation of rail grade separations where other more economical alternatives are demonstrably not feasible or practical. Elimination of crossings is considered a potentially practical alternative. Program allocations will need to be considered in conjunction with other regional transportation funding priorities and needs, and will be dependent on the availability of funding from federal, state, and local sources.

The rail grade separation prioritization criteria were accepted by the San Diego Association of Governments (SANDAG) Board of Directors for inclusion in the 2030 Regional Transportation Plan (RTP) on October 13, 2006. This document has incorporated minor revisions to the criteria after a review was conducted by a working group formed by the San Diego Regional Traffic Engineers Council. To date, a regional list of potential grade separations has not been created or prioritized.

Projects will be prioritized based on two criteria categories: project-specific criteria and Regional Housing Needs Assessment (RHNA) housing production. The project-specific criteria will be worth 75 percent, and the RHNA housing production criteria will comprise 25 percent of the total project score.

Project-Specific Criteria

These criteria take into account existing vehicular and train traffic, accident history, cost, noise, access to emergency services, and other factors.

Step 1: Warrants

The following criteria and point system will be implemented with a potential maximum of 100 points. The total project-specific criteria score will be multiplied by 0.75 to produce a scaled, 75-point score for the total regional rail grade separation project score.
1. **Peak-Period Exposure Index (PPEI) Factor**, measured as the product of the existing high directional traffic and the total measured blocking delay during the same three hours of the day experiencing the highest congestion at the crossing.

\[ PPEI = \text{VT3} \times \text{BD3} \times \text{C3} \]

Where the score is the product of the above formula, rounded to the next whole number, up to a maximum of 20; and, where

- VT3 = Vehicular traffic in high direction during selected three-hour period
- BD3 = Total blocking delay during same three-hour period selected
- C3 = 1/1,350,000, a mathematical constant used for the three-hour peak-period calculation

**Notes**

a. For crossings where two or more streets that are adjacent to each other that are affected simultaneously by the operation of the train, the vehicular traffic volume on those streets is cumulative for purposes of the calculation of this congestion relief factor

b. Selected three-hour period consists of three one-hour periods which may be consecutive. However, the selected three-hour period shall be the same when counting vehicular and train traffic

c. Blocking delay shall be measured as the time period beginning when the warning devices are activated to the time when the warning devices are de-activated

**Example**

At a crossing, there are 5,400 total cars in the high direction counted between 6:30 and 7:30 a.m., 8 and 9 a.m., and 5 and 6 p.m., with eight trains per hour during those same hours and a 60-second delay time per train during those same hours.

\[ \text{VT3} = 5400 \] cars in high direction-selected, three-hour period

\[ \text{BD3} = 8 \text{ trains} \times 2 \text{ directions} \times 3 \text{ hours} \times 60\text{-second delay} = 2880 \]

\[ PPEI = 5400 \times 2880 \times \left[\frac{1}{1,350,000}\right] = 11.52 \]

Rounding up to the next whole number: PPEI score = 12

2. **Peak-Day Total Delay Exposure Index (PDEI) Factor**, measured as the product of the existing average daily traffic (ADT), the total number of trains, and an average train crossing delay time factor.

\[ PDEI = \text{PD-ADT} \times \text{PD-NT} \times \text{ATCDF} \times \text{PD-C} \]

**MAXIMUM POINTS = 20**
Where the score is the product of the above formula, rounded to the next whole number, up to a maximum of 20; and, where

\[ PD-ADT = \text{Peak-Day Average Daily Traffic} \]
\[ PD-NT = \text{Peak-Day Total Number of Trains} \]
\[ ATCDF = \text{Average Train Crossing Delay Factor, corresponds to point scale as shown in table below} \]
\[ PD-C = \frac{1}{1,000,000}, \text{a mathematical constant used for peak-day period calculation} \]

<table>
<thead>
<tr>
<th>ATCDF Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>From (minutes)</td>
</tr>
<tr>
<td>0.00</td>
</tr>
<tr>
<td>0.75</td>
</tr>
<tr>
<td>1.00</td>
</tr>
<tr>
<td>1.25</td>
</tr>
<tr>
<td>1.50</td>
</tr>
<tr>
<td>2.00</td>
</tr>
<tr>
<td>3.00</td>
</tr>
<tr>
<td>4.00</td>
</tr>
<tr>
<td>6.00</td>
</tr>
<tr>
<td>8.00</td>
</tr>
</tbody>
</table>

Notes

a. For crossings where two or more streets that are adjacent to each other that are affected simultaneously by the operation of the train, the vehicular traffic volume on those streets is cumulative for purposes of the calculation of this congestion relief factor

b. Average annual daily traffic can be used for peak-day, but ADT for weekday or weekend day may be used as appropriate, if available. However, the selected day period shall be the same when counting vehicular and train traffic. As an example, if ADT for weekday is available, the highest train traffic of any day between Monday and Friday can be used for the calculations, and not the weekend day train traffic

c. Blocking delay shall be measured as the time period beginning when the warning devices are activated to the time when the warning devices are de-activated

Example

At a crossing, there is an arterial with an ADT of 30,000 vehicles on weekdays, 144 daily trains in both directions also on weekdays, averaging 55 seconds per crossing.

\[ PDEI = PD-ADT \times PD-NT \times ATCDF \times PD-C \]
\[ PD-ADT = 30,000 \text{ vehicles on weekdays} \]
\[ PD-NT = 144 \text{ trains in both directions, on weekdays} \]
\[ ATCDF = 2 \text{ points} \]
\[ PDEI = 30,000 \times 144 \times 2 \times \frac{1}{1,000,000} = 8.64 \]

Rounding up to the next whole number: PDEI score = 9
3. **Accident History:** accident history in the past five years involving vehicles, pedestrians, and bicycles with trains, not including accidents involved in attempted suicides. **MAXIMUM POINTS = 25**

Assign points according to the following schedule

<table>
<thead>
<tr>
<th>Number of Qualifying Accidents</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td>14</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fatal Accidents</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1+</td>
<td>5</td>
</tr>
</tbody>
</table>

**Special Conditions (maximum 2 points)**

- More than one traffic signal is pre-empted: 1 point
- More than two tracks cross the roadway: 1 point
- The crossing is skewed more than 20 degrees: 1 point
- Offset roadway intersections are present: 1 point

4. **Funding Request:** The funding request criterion awards points for the percentage of total project costs contributed by the local agency including funds already committed from state, federal, or other sources. **MAXIMUM POINTS = 15**

Assign points according to the following schedule

<table>
<thead>
<tr>
<th>Local Contribution</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10%</td>
<td>0</td>
</tr>
<tr>
<td>10% to 25%</td>
<td>5</td>
</tr>
<tr>
<td>More than 25% to less than 50%</td>
<td>10</td>
</tr>
<tr>
<td>50% or more</td>
<td>15</td>
</tr>
</tbody>
</table>

5. **Pedestrian Benefits** **MAXIMUM POINTS = 4**

Assign points according to the following criteria

a. Grade separation will serve 1-50 pedestrians during top four hours: 1 point
b. Grade separation will serve 51-100 pedestrians during top four hours: 2 points
c. Grade separation will serve 101-150 pedestrians during top four hours: 3 points
d. Grade separation will serve more than 150 pedestrians during top four hours: 4 points
6. **Bus Operations Effects**  
MAXIMUM POINTS = 4

Assign points according to the following criteria

a. Grade separation will serve up to four buses an hour: 1 point  
b. Grade separation will serve from four to eight buses an hour: 2 points  
c. Grade separation will serve from eight to sixteen buses an hour: 3 points  
d. Grade crossing is adjacent to a transit center: 1 point

7. **Noise Reduction**  
MAXIMUM POINTS = 4

Assign points according to the following criteria

a. Rail crossing area located within 200 feet of sensitive receptors: 4 points  
b. Rail crossing area located between 200-500 feet of sensitive receptors: 2 points  
c. Rail crossing area located more than 500 feet away from sensitive receptors: 0 points

Sensitive receptors include: residential areas, hospitals, schools, and houses of worship. Rail crossing area includes crossing plus 200 feet along track in either direction away from crossing.

8. **Benefit to Emergency Services**  
MAXIMUM POINTS = 4

Assign points according to the following criteria

a. Rail crossing located within ½ mile of emergency service provider and no alternative grade-separated crossing exists within ½ half mile: 4 points  
b. Rail crossing located between ½ and 1 mile of emergency service provider and no alternate grade-separated crossing exists within ½ mile: 2 points  
c. Rail crossing located between 1 and 1½ miles of emergency service provider and no alternate grade-separated crossing exists within ½ mile: 1 point  
d. Rail crossing located further than 1½ miles of emergency service provider and no alternate grade-separated crossing exists within ½ mile: 0 points

Emergency service providers include services such as police, fire, paramedic, ambulance, and hospital services. Distance is measured as driven distance from crossing.

9. **Impact to Truck Freight Operations**  
MAXIMUM POINTS = 4

Assign points according to the following table

<table>
<thead>
<tr>
<th>% Trucks</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 5</td>
<td>4</td>
</tr>
<tr>
<td>2 to 5</td>
<td>2</td>
</tr>
<tr>
<td>Less than 2</td>
<td>0</td>
</tr>
</tbody>
</table>
Trucks shall include Class 4 to Class 13 as defined by the Federal Highway Administration.

**Step 2: Once the projects have been prioritized according to the criteria above, consideration for funding would include the following project readiness elements**

a. Project feasibility (e.g., physical constraints and reliability of cost estimate)
b. Environmental document status
c. Right-of-Way acquisition status
d. Permits (e.g., Public Utilities Commission, Coastal Commission, or the Department of Fish and Game)

**RHNA Criteria**

Please refer to SANDAG Board Policy No. 033. Regional rail grade separation projects must include incentive points (a minimum of 25 points out of 100 possible) based on the number of lower income housing units produced in accordance with RHNA Alternative 3. SANDAG staff will calculate the incentive points for each jurisdiction on an annual basis in accordance with the Board Policy.