MEETING NOTICE
AND AGENDA

CITIES/COUNTY TRANSPORTATION ADVISORY COMMITTEE
The Cities/County Transportation Advisory Committee may take action on any item appearing on this agenda.

Thursday, August 6, 2015
9:30 to 11 a.m.

SANDAG, 7th Floor Conference Room
401 B Street, Suite 800
San Diego, CA 92101

Staff Contact: Alex Estrella
(619) 699-1928
alex.estrella@sandag.org

Beginning in February, the parking garage elevators at Wells Fargo Plaza will undergo a six-month mechanical modernization. During this period, only one garage elevator will be in service. Please allow yourself extra time to make your way up from the garage to the SANDAG offices and Board Room. For those requiring special assistance, please call the SANDAG front desk in advance of any meetings at (619) 699-1900.

AGENDA HIGHLIGHTS

• REGIONAL CAPITAL IMPROVEMENT BENCHMARKING TOOL

• TransNet SIGNAGE GUIDE

SANDAG offices are accessible by public transit.
Phone 511 or see www.511sd.com for route information.
Secure bicycle parking is available in the building garage off Fourth Avenue.

In compliance with the Americans with Disabilities Act (ADA), SANDAG will accommodate persons who require assistance in order to participate in SANDAG meetings. If such assistance is required, please contact SANDAG at (619) 699-1900 at least 72 hours in advance of the meeting.

To request this document or related reports in an alternative format, please call (619) 699-1900, (619) 699-1904 (TTY), or fax (619) 699-1905.
Welcome to SANDAG. Members of the public may speak to the Working Group on any item at the time the Working Group is considering the item. Please complete a Speaker’s Slip, and then present the slip to the Clerk of the Working Group. Members of the public may address the Working Group on any issue under the agenda item entitled Public Comments/Communications/Member Comments. Public speakers are limited to three minutes or less per person unless otherwise directed by the Chair. The Working Group may take action on any item appearing on the agenda.

Public comments regarding the agenda can be sent to SANDAG via comment@sandag.org. Please include the agenda item, your name, and your organization. Email comments should be received no later than 12 noon, two working days prior to the meeting. Any handouts, presentations, or other materials from the public intended for distribution at the meeting should be received by the Clerk of the Working Group no later than 12 noon, two working days prior to the meeting.

In order to keep the public informed in an efficient manner and facilitate public participation, SANDAG also provides access to all agenda and meeting materials online at www.sandag.org/meetings. Additionally, interested persons can sign up for e-notifications via our e-distribution list at either the SANDAG website or by sending an email request to webmaster@sandag.org.

SANDAG operates its programs without regard to race, color, and national origin in compliance with Title VI of the Civil Rights Act. SANDAG has developed procedures for investigating and tracking Title VI complaints and the procedures for filing a complaint are available to the public upon request. Questions concerning SANDAG nondiscrimination obligations or complaint procedures should be directed to SANDAG General Counsel, John Kirk, at (619) 699-1997 or john.kirk@sandag.org. Any person who believes himself or herself or any specific class of persons to be subjected to discrimination prohibited by Title VI also may file a written complaint with the Federal Transit Administration.

In compliance with the Americans with Disabilities Act (ADA), SANDAG will accommodate persons who require assistance in order to participate in SANDAG meetings. If such assistance is required, please contact SANDAG at (619) 699-1900 at least 72 hours in advance of the meeting. To request this document or related reports in an alternative format, please call (619) 699-1900, (619) 699-1904 (TTY), or fax (619) 699-1905.

SANDAG agenda materials can be made available in alternative languages. To make a request call (619) 699-1900 at least 72 hours in advance of the meeting.

Los materiales de la agenda de SANDAG están disponibles en otros idiomas. Para hacer una solicitud, llame al (619) 699-1900 al menos 72 horas antes de la reunión.

如有需要，可以把SANDAG议程材料翻译成其他语言。

请在会议前至少 72 小时打电话 (619) 699-1900 提出请求.

SANDAG offices are accessible by public transit. Phone 511 or see 511sd.com for route information. Bicycle parking is available in the parking garage of the SANDAG offices.
## CITIES/COUNTY TRANSPORTATION ADVISORY COMMITTEE

**Thursday, August 6, 2015**

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>APPROVE</td>
</tr>
<tr>
<td>4.</td>
<td>INFORMATION</td>
</tr>
<tr>
<td>5.</td>
<td>DISCUSSION</td>
</tr>
<tr>
<td>6.</td>
<td>DISCUSSION</td>
</tr>
</tbody>
</table>

### 1. WELCOME AND INTRODUCTIONS

### 2. PUBLIC COMMENTS

Members of the public shall have the opportunity to address the Cities/County Transportation Advisory Committee (CTAC) on any issue within the jurisdiction of SANDAG that is not on this agenda. Anyone desiring to speak shall reserve time by completing a “Request to Speak” form and giving it to the meeting coordinator prior to speaking. Public speakers should notify the meeting coordinator if they have a handout for distribution to working group members. Public speakers are limited to three minutes or less per person. CTAC members also may provide information and announcements under this agenda item.

### 3. APPROVAL OF MEETING MINUTES

The CTAC is asked to review and approve the minutes from its June 4, 2015, meeting.

### REPORTS

### 4. CALIFORNIA DEPARTMENT OF TRANSPORTATION UPDATES AND ANNOUNCEMENTS

Caltrans will provide an update on various local programs, funding program deadlines, and announcements regarding upcoming conferences.

### 5. DRAFT REGIONAL TRANSIT ORIENTED DEVELOPMENT STRATEGY (Susan Baldwin)

A draft of the Regional Transit Oriented Development Strategy (Draft TOD Strategy) is presented to the CTAC for review and discussion. The Draft TOD Strategy was presented to the Regional Planning Committee and Transportation Committee for discussion on July 17, 2015. The Regional Planning Technical Working Group discussed the Draft Strategy at its July 9 meeting and will discuss it again on August 13. It is anticipated that the final strategy will be presented to the Board of Directors on September 25, and will be included as an appendix of San Diego Forward: The Regional Plan. The Draft Strategy and the six working papers (which provide case studies and background/context/support for the proposed strategies and actions) can be found at the following link.


### 6. REGIONAL CAPITAL IMPROVEMENT BENCHMARKING TOOL (Richard Leja, City of San Diego)

CTAC members will be asked to participate in the development of a regional database to for benchmarking Capital Improvement projects. The intent of the database is to serve as a resource and analysis tool on the price of public works projects. Staff and City of San Diego staff will provide an overview of the tool and expected participation efforts from CTAC members.
7. TransNet SIGNAGE GUIDE (Elizabeth Cox and Keith Kanzel)

SANDAG recently completed a signage guide for projects that receive TransNet funds (available online at sandag.org/RTIP). It is important to notify the public about project construction, responsible parties/funding sources, and where to find more information. The family of TransNet signs – covering highway, local street, bike, smart growth, active transportation, and transit projects – consistently conveys to the public what the project is, that the project is funded by the local half-cent sales tax, and refers the public to KeepSanDiegoMoving.com for more information. In cases where secondary signs are used, other partner agencies/funding sources and project completion dates can be included. The signage guide includes recommendations for signage placement, vertical and horizontal design options, and production specifications. SANDAG Communications staff will review the signage guide and provide recent examples of its use.

8. ADJOURNMENT AND NEXT MEETING

The next CTAC meeting is scheduled for Thursday, September 3, 2015.

+ next to an agenda item indicates an attachment
The meeting of the Cities/County Transportation Advisory Committee (CTAC) was called to order by Chair Mario Sanchez at 9:40 a.m.

1. WELCOME AND INTRODUCTIONS

The attendance sheet for this meeting is attached.

2. PUBLIC COMMENTS

Members of the public had the opportunity to address CTAC on any issue. There were no public comments; however, there were a couple of announcements presented by Carolina Gregor and Alex Estrella (SANDAG staff). Carolina Gregor informed CTAC of the unexpected delay regarding the TransNet Smart Growth Incentive Program and Active Transportation Grant Program. Staff indicated that a draft report with proposed program grant recommendations will be released and made available by June 12, 2015, and be presented to the Transportation Committee on June 19, 2015. Ms. Gregor also informed CTAC that SANDAG received a total of 56 applications; 28 for Smart Growth and 28 for Active Transportation Projects.

Alex Estrella (SANDAG staff) notified CTAC of a Transportation Modeling Forum that will take place Wednesday, June 10, 2015, from 1:30 to 3 p.m.

3. APPROVAL OF MEETING MINUTES (APPROVE)

Action: Upon two amendments made by Frank Rivera (City of Chula Vista) and Hank Levien (City of Imperial Beach) and a motion by Mr. Rivera and a second by Linda Marabian (City of San Diego) the CTAC approved the May 7, 2015, meeting minutes.

Amendments: Agenda Item No. 5: Regional Arterial Management System Update, page 6, change “TI line” to “T1 line” and was also noted that Mr. Levien did not say yes under this item but rather abstained from voting for this agenda item.

Yes: Chair Sanchez, Vice Chair Rivera, Marshall Plantz (City of Carlsbad), Julie Procopio (City of Escondido), Hank Levien (City of Imperial Beach), Linda Marabian (City of San Diego), Dan Goldberg (City of Solana Beach); No: None; Abstain: Tim Thiele (City of Del Mar), Ed Deane (City of Encinitas), David DiPierro (City of Oceanside), Jon Collins (City of Poway), Minjie Mei (City of Santee)
REPORTS

4. REGIONAL BIKE WAYFINDING SIGNAGE DESIGN GUIDELINES (DISCUSSION)

Bridget Enderle (SANDAG staff) presented an update on the Regional Bike Wayfinding Signage Design Guidelines. These guidelines will ensure consistent and comprehensive wayfinding sign implementation across the region. Ms. Enderle informed CTAC that by the end of next month a draft report should be ready for release and that the project, which began in August of 2014, should be complete by August 2015. SANDAG staff conducted phone and email interviews to determine existing conditions of signage around the region. With these existing conditions, SANDAG staff was able to create design guidelines that will ensure legibility, avoid extraneous information, establish meaningful destinations, use hierarchies to structure sign content, and implement consistency. There are four main sign types that SANDAG staff plans to implement; these include: decision signs, confirmation signs, turn destination signs, and off-route signs, all of which will incorporate the GoByBike brand in some form.

There were several questions and concerns addressed by CTAC members. Mr. Rivera (City of Chula Vista) inquired as to whether the new signs will be too large since SANDAG hopes to incorporate, in some instances, two logos. Ms. Enderle addressed this question by stating that it is SANDAG staff's intent to have two different signs in those special instances. Mr. Rivera then suggested the possibility of incorporating the GoByBike logo horizontally beneath the bike path name and directions.

Ms. Marabian (City of San Diego) addressed a concern regarding intercepting bike networks and the congestion of signs at those intercepting points. The suggestion was made on the use of only one sign at those points; however, Mr. DiPierro (City of Oceanside) stated that the use of only one sign would make a bicyclist have to stop to read the entire sign before continuing to his/her desired destination. Ms. Enderle stated that the point of interception is a topic that SANDAG staff is continuing to examine and get input from local jurisdictions.

Ms. Marabian also inquired as to the plan for jurisdictions that already have established bike networks such as the Bayshore Bikeway. Ms. Enderle stated that SANDAG staff will most likely do a small procurement of signs to replace old signage along those paths.

Mr. Levien (City of Imperial Beach) recalled the request by Ms. Enderle for local jurisdictions to submit desired destinations to be implemented on these new signs and inquired about the submittal deadline and required format. Ms. Enderle indicated that a follow up request will be issued through use of an Excel spreadsheet and established a two to three week turnaround for feedback.

Concern was also raised by CTAC regarding the on-going maintenance of the new signs proposed by SANDAG. Many cities addressed that their local jurisdictions already have their formats for sign procurement and maintenance.

Ms. Enderle also agreed to receive pictures from currently used signs from local jurisdictions which can be used for further consideration and discussion on this item.
5. **TransNet TRIENNIAL PERFORMANCE AUDIT REPORT RECOMMENDATION ACTIVITIES (DISCUSSION)**

Alex Estrella (SANDAG staff) would like CTAC to continue the discussion of addressing Recommendation No. 7 of the Draft FY 2015 TransNet Triennial Performance Audit Report Recommendations. More specifically, the discussion is to focus on revisiting the expenditure plan guidelines and work through CTAC to examine the possibilities of enhancing/incorporating the advantages of new pavement technologies, thus updating the definitions into what may constitute maintenance or congestion relief, and thus providing more options for pavement maintenance or rehabilitation while still meeting the congestion relief category of the program.

Mr. Rivera suggested the use of the Pavement Condition Index to determine what projects fall into the 70 percent congestion relief category or 30 percent maintenance category.

Ms. Marabian addressed to CTAC that the intent of the ordinance is to promote local jurisdictions to engage in more Active Transportation Projects and not simply maintain roadways. She stated that there is a much larger underlying issue than pavement conditions. The ordinance is meant to motivate jurisdictions to create projects that will reduce congestion.

Mr. Estrella clarified that other possible changes to the expenditure guidelines can be examined, however current efforts are focused on discussing the recommendation set by the 2015 TransNet Triennial Performance Audit Report and present a proposed approach for addressing the recommendation to ITOC.

Ms. Procopio suggested the idea of qualifying some areas of the ordinance. This would give local jurisdictions some flexibility to define projects as congestion relief and places the burden on these jurisdictions to justify their projects.

Based on the discussion, Mr. Estrella will put together some general thoughts to be presented at the next CTAC meeting to further the discussion and possibly create a recommendation for ITOC.

6. **CALIFORNIA DEPARTMENT OF TRANSPORTATION UPDATES (INFORMATION)**

**Highway Safety Improvement Program Cycle 6 Early Project Delivery Incentive – 100 Percent Federal Funding Using Toll Credits**

Per the Highway Safety Improvement Program (HSIP) Delivery Letter mailed to our Transportation Partners dated March 18, 2015: Effective immediately and until September 30, 2016, Caltrans is offering the incentive of increasing the federal funding share to 100 percent for eligible HSIP project costs through the use of toll credits. The incentive is limited to new phase funding obligations and for Cycle 6 projects only. Currently, there are 17 Cycle 6 projects identified in the San Diego Region that may be eligible to receive this incentive.

**Active Transportation Program Cycle 2 Call for Projects**

Caltrans received a total of nine project applications for the District, including eight in the San Diego region and one in Imperial. It is anticipated that successful applicants will be notified by October 2015.
United States Department of Transportation Local Labor Hiring Pilot Program

The United States Department of Transportation (U.S. DOT) has announced a new Local Labor Hiring Pilot Program. It is a one-year contracting initiative to allow local or other geographic-based hiring preferences, economic-based labor hiring preferences, and labor hiring preferences for veterans. The Pilot Program is primarily intended for construction projects, but the U.S. DOT may consider the application to Architectural and Engineering contracts as appropriate.

To be eligible, projects must be advertised during the pilot period, by March 5, 2016. Local agencies desiring to participate in the program will need to prepare and submit a Special Experimental Project (SEP-14) Work Plan to the District Local Assistance Engineers for review. Additional information can be accessed at:


Inactive Projects

Currently, SANDAG and the Cities of Carlsbad, Encinitas, La Mesa, National City, Oceanside, San Diego, and Vista have projects that are flagged for invoice inactivity. Please submit an invoice to our office by August 20, 2015, to avoid deobligation project funds. A complete list of inactive projects can be found at the following link:


If you have question or need assistance, contact Debora Ledesma-Ribera at debora.ledesma-ribera@dot.ca.gov or (619) 278-3766

Training

- **Disadvantaged Business Enterprise Certification Workshop**
  
  June 17, 2015  
  10 a.m. to 12 noon  
  Caltrans District 11 office, Gallegos Room 1-134  
  For additional information, contact Michelle Gongora at michele.gongora@dot.ca.govRegistration link: [www.debecertworkshop.com](http://www.debecertworkshop.com)

- **Find Out How Your Business Can Benefit**
  
  June 18, 2015  
  9 a.m. to 12 noon  
  Imperial Valley College, Building 2700, 389 East Aten Road, Imperial, CA  
  For additional information, contact Caltrans District 11 Small Business Outreach Program at (619) 688-3151. Registration link: [www.imperialvalleyoutreach.eventbrite.com](http://www.imperialvalleyoutreach.eventbrite.com)
Every Day Counts (EDC) 3 – Follow-Up Webinar “Road Diets” –

June 24, 2015
1 to 4 p.m.
Caltrans District 11 office, Gallegos Room 1-134

EDC 3 – Webinar on “Data Driven Analysis”

June 25, 2015
11 a.m. to 1 p.m.
Caltrans District 11 office, Dotson Room 1-117

Small Business and Disabled Veteran Enterprise Certification Workshop –

September 24, 2015
10 a.m. to 12 noon, or 2 to 4 p.m.
Caltrans District 11 offices (room to be determined later)
For additional information, contact Michelle Gongora at michelle.gongora@dot.ca.gov. To register, contact Debora Ledesma-Ribera at debora.ledesma-ribera@dot.ca.gov, or (619) 278-3766

Local Assistance Blog

Caltrans has rolled out the Local Assistance Blog “theLAB” as a communication tool to provide the latest information in regards to the Local Assistance Program. The blog is connected to other social media outlets like Facebook, Twitter, LinkedIn, and Google+. The link to theLAB is: http://www.localassistanceblog.com/

7. UPCOMING MEETINGS (INFORMATION)

The next meeting of CTAC is scheduled for Thursday, July 2, 2015.

8. ADJOURNMENT

Chair Sanchez adjourned the meeting at 11:07 a.m.
### CITIES/COUNTY TRANSPORTATION ADVISORY COMMITTEE (CTAC)
MEETING ATTENDANCE FOR JUNE 4, 2015

<table>
<thead>
<tr>
<th>JURISDICTION/ORGANIZATION</th>
<th>NAME</th>
<th>ATTENDING</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Carlsbad (Primary)</td>
<td>TBD</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Marshall Plantz, First Alternate</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Doug Bilse, Second Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of Chula Vista (Primary)</td>
<td>Frank Rivera</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Dave Kaplan, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Bill Valle, Second Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of Coronado (Primary)</td>
<td>Ed Walton</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Jim Newton, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of Del Mar (Primary)</td>
<td>Tim Thiele</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Eric Minicilli, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of El Cajon (Primary)</td>
<td>Mario Sanchez</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Majed Al-Ghafry, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of Encinitas (Primary)</td>
<td>Ed Deane</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Kipp Hefner, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of Escondido (Primary)</td>
<td>Julie Procopio</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Ed Domingues, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of Imperial Beach (Primary)</td>
<td>Hank Levien</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Carmen Kasner, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of La Mesa (Primary)</td>
<td>Greg Humora</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Kathy Feilen, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of Lemon Grove (Primary)</td>
<td>Leon Firsht, Second Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Tamara O’neal</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of National City (Primary)</td>
<td>Mike James, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Stephen Manganiello</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Kuna Muthusamy, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of Oceanside (Primary)</td>
<td>Gary Kellison</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>David DiPierro, First Alternate</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>City of Poway (Primary)</td>
<td>Steve Crosby</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Taryn Kjolsing, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of San Diego (Primary)</td>
<td>Linda Marabian</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Gary Chui, First Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>City of San Diego County (Primary)</td>
<td>Terry Rayback</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>San Diego County (Primary)</td>
<td>Abi Palaseyed, Second Alternate</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Ramin Abidi, First Alternate</td>
<td>No</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Sirous Daylamian, Second Alternate</td>
<td>No</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>City of San Marcos (Primary)</td>
<td>Paul Vo</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Matt Little, First Alternate</td>
<td>No</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>City of Santee (Primary)</td>
<td>Minjie Mei</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Pedro Orso-Delgado, First Alternate</td>
<td>No</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>City of Solana Beach (Primary)</td>
<td>Mohammad Sammak</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Dan Goldberg, First Alternate</td>
<td>Yes</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>City of Vista (Primary)</td>
<td>Greg Mayer</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Tim Shell, First Alternate</td>
<td>No</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Husam Hasenin, Second Alternate</td>
<td>No</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Metropolitan Transit System</td>
<td>Mark Thomsen</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>North County Transit District</td>
<td>Johnny Dunning, Jr.</td>
<td>No</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**ADVISORY MEMBERS LISTED BELOW** *(ATTENDANCE NOT COUNTED FOR QUORUM PURPOSES)*

| Caltrans | Cory Binns | Yes | N/A |
| Caltrans | Robin Owen | Yes | N/A |
| Caltrans | Melina Pereira | Yes | N/A |
| Caltrans | Bing Luu | Yes | N/A |

**OTHER ATTENDEES**

| Aindrea Sparks (BikeSD) | Alex Estrella |
| Aindrea Sparks (BikeSD) | Miguel Arciniega |
| Aindrea Sparks (BikeSD) | Carolina Gregor |
| Aindrea Sparks (BikeSD) | Ariana Zur Nieden |
| Aindrea Sparks (BikeSD) | Bridget Enderle |
| Aindrea Sparks (BikeSD) | Michelle Smith |
| Aindrea Sparks (BikeSD) | Dawn Vettese |
LOCAL AGENCY EMPLOYEE IN RESPONSIBLE CHARGE

I. BACKGROUND

As an area of increased emphasis, local agencies are required to designate a “Local Agency Employee in Responsible Charge.”

In the Caltrans Local Assistance Procedures Manual (LAPM), there are several sections that indicate, imply or infer that an Architectural and Engineering (A&E) consultant, whether procured as a retained Agency Engineer or in a project-specific engineering role may fulfill this requirement.

The intent of this Office Bulletin provides for the clarification, definition, and the detailed roles of the “Local Agency Employee in Responsible Charge” as applied to Federal-Aid and State-Funded transportation infrastructure projects.

II. POLICY

This Office Bulletin supersedes portions of LAPM Chapters 15 and 16 that do not correctly state that the local agency must provide a full-time employee (not just a consultant) to be in responsible charge of, and maintain a level of engagement in, each project.

Pursuant to 23 CFR 635.105(c)(4),

In those instances where a local public agency elects to use consultants for construction engineering services, the local public agency shall provide a full-time employee of the agency to be in responsible charge of the project.

Also, pursuant to 23 CFR 172.9 (d),

Contract administration and monitoring—(1) Responsible charge. A full-time, public employee of the contracting agency qualified to ensure that the work delivered under contract is complete, accurate, and consistent with the terms, conditions, and specifications of the contract shall be in responsible charge of each contract or project. While an independent consultant may be procured to serve in a program or project management support role, as specified in §172.7(b)(5), or to provide technical assistance in review and acceptance of engineering and design related services performed and products developed by other consultants, the contracting agency shall designate a public employee as being in responsible charge. A public employee may serve in responsible charge of multiple projects and contracting agencies may use multiple public employees to fulfill monitoring responsibilities. The term responsible charge is intended to be applied only in the context defined within this regulation. It may or may not correspond to its usage in State laws regulating the licensure and/or conduct of professional engineers. The public employee's responsibilities shall include:

(i) Administering inherently governmental activities including, but not limited to, contract negotiation, contract payment, and evaluation of compliance, performance, and quality of services provided by consultant;

(ii) Being familiar with the contract requirements, scope of services to be performed, and products to be produced by the consultant;
(iii) Being familiar with the qualifications and responsibilities of the consultant's staff and evaluating any requested changes in key personnel;

(iv) Scheduling and attending progress and project review meetings, commensurate with the magnitude, complexity, and type of work, to ensure the work is progressing in accordance with established scope of work and schedule milestones;

(v) Ensuring consultant costs billed are allowable in accordance with the Federal cost principles and consistent with the contract terms as well as the acceptability and progress of the consultant's work;

(vi) Evaluating and participating in decisions for contract modifications; and

(vii) Documenting contract monitoring activities and maintaining supporting contract records, as specified in 2 CFR 200.333.

As such, this individual must be employed directly by the local agency who is the direct recipient of Federal or State funds. A consulting firm that is on retainer as the City Engineer or a project specific consultant (serving as the Project Manager, Construction Resident Engineer or other role) may not fill the role as the “Local Agency Employee in Responsible Charge”.

The regulation is silent about engineering credentials. Thus, the Local Agency Employee in Responsible Charge need not be an Engineer.

The regulations do not restrict an agency’s organizational authority over the person designated in “responsible charge”, and the regulations do not preclude sharing of these duties and functions among a number of public agency employees. The regulations also do not preclude one employee from having responsible charge of several projects and directing project managers assigned to specific projects.

The above federal regulation is already incorporated into Article 1 of the Administering Agency-State Master Agreement for Federal-Aid and State Funded Projects. Within these agreements it states, “ADMINISTERING AGENCY shall provide or arrange for adequate supervision and inspection of each PROJECT. While consultants may perform supervision and inspection work for PROJECT with a fully qualified and licensed engineer, ADMINISTERING AGENCY shall provide a full-time employee to be in responsible charge of each PROJECT.”

This policy applies to all infrastructure projects receiving Federal-aid or State funds for any phase of work administered by a local public agency.

The failure of a local agency to provide an Employee in Responsible Charge will result in the loss of Federal and/or State funding on the project.

III. PROCEDURE

While consultants may perform project management, supervision and inspection work, the local agency shall provide a full-time employee of the local agency to be in responsible charge of each transportation infrastructure project.

Various exhibits in the Local Assistance Procedures Manual will be updated to reflect this designation/requirement.

The Caltrans Construction Oversight Engineers (COEs) will be responsible for oversight on this issue, through their ongoing construction reviews and corresponding checklists. This requirement will also be checked for compliance by the Office of Implementation as part of the procedure for issuing a locode/master agreement to new agencies.
IV. APPLICABILITY/IMPACTS

This policy applies to all infrastructure projects receiving Federal-aid or State funds for any phase of work administered by a local public agency. Non-infrastructure projects are not considered to be a part of this Office Bulletin and may be addressed at a later time.

Approved: ___________________________ __________________________
Mike Giuliano, Acting Chief
Office of Project Oversight

Approved: ___________________________ __________________________
Winton Emmett, Chief
Office of Implementation, North

Original Signed By

6/30/2015
Date
Announcement:

The Active Transportation Program – Technical Advisory Committee (ATP-TAC) Call for Member Nominations is open and posted at
http://www.dot.ca.gov/hq/LocalPrograms/atp/ATPTAC.html

Background: In 2013, Senate Bill No. 99 established the Active Transportation Program (ATP) and identified the California Transportation Commission (CTC) and Caltrans as responsible for development, administration and management of the ATP.

Change: Together, Caltrans and the CTC are establishing the ATP-TAC.

Impacts: The establishment of the ATP-TAC is intended to provide balanced strategic technical guidance and assist with complex program decisions to enable and maximize continuous improvement of the ATP.

Contact: Please direct any questions to Ted Davini at ted.davini@dot.ca.gov or (916) 653-4335.
***PROMPT PAYMENT OF SUBCONTRACTORS***

The Prompt Payment methodology designated by most Agencies on the annual DBE Exhibit 9-B is Method 3. Please be reminded that the Agency is responsible for making regular incremental acceptances and incrementally releasing retention on the accepted work. If the retention was released for work performed by a subcontractor, the Agency is required per 49 CFR, Part 26.29(d) to enforce prompt payment to the subcontractors.

**Method 3:** The agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the agency of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Any delay or postponement of payment may take place only for good cause and with the agency’s prior written approval. Any violation of these provisions shall subject the violating prime contractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

**CFR 26.29(c):** For purposes of this section, a subcontractor’s work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the recipient. When a recipient has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

At what time does the rule require prime contractors to return retainage to subcontractors? (Posted - 9/20/99 on US DOT’s DBE Q&A page https://cms.dot.gov/partners/small-business/official-faqs-dbe-program-regulations-49-cfr-26)

- Many recipients hold back a certain percentage of the payment they owe the prime contractor ("retainage") until all the work of the prime contractor has been satisfactorily completed. In turn, prime contractors (and middle-tier subcontractors) often withhold a certain percentage of the payment they owe to subcontractors. In many cases, prime contractors’ traditional practice has been to hold these funds until the recipient has made final payment to the prime contractor, even though the subcontractor’s work may have been satisfactorily completed months or years earlier. The prompt payment provision of the DBE rule is intended to change this practice.

- The DBE rule requires recipients to mandate and enforce prompt payment of subcontractors, including the payment of retainage from the prime contractor to the subcontractor, as soon as subcontractor’s work has been satisfactorily completed (i.e., all the tasks called for in the subcontract have been accomplished and documented as required by the recipient). The prompt payment provision is intended to apply to subcontractors at all tiers.
May 13, 2015

To: CITIES AND COUNTIES IN CALIFORNIA
METROPOLITAN PLANNING ORGANIZATIONS
REGIONAL TRANSPORTATION PLANNING AGENCIES

Dear Transportation Partners:

The purpose of this letter is to bring to your attention the new Local Labor Hiring Pilot Program (Pilot Program) and to provide you with information on how to participate in the Pilot Program. On March 6, 2015, the United States Department of Transportation (USDOT) announced a one year contracting initiative Pilot Program to allow local or other geographic-based hiring preferences, economic-based labor hiring preferences, and labor hiring preferences for veterans.

The Pilot Program is primarily intended for construction projects, but USDOT may consider the application to Architectural and Engineering contracts as appropriate. To be eligible, projects must be advertised, during the pilot period, by March 5, 2016. Awarded contracts during this pilot period may continue to utilize the approved contractual requirements throughout the life of the project. The applications may be for specific contracts, group of contracts or programmatic approvals where the agency proposes to use labor hiring preferences on more than one federal-aid project during the pilot evaluation period.

**How to apply and participate in the pilot:**

This Pilot Program is carried out under Federal Highway Administration’s (FHWA) Special Experimental Project No. 14 (SEP-14) Authority, which allows the experimental use of innovative contracting practices.

To participate in the Pilot Program, local agencies will need to prepare and submit a SEP-14 Work Plan to the appropriate Caltrans District Local Assistance Engineer (DLAE). DLAEs will review local agency SEP-14 Work Plans for completeness before forwarding to HQ Division of Local Assistance (DLA) Area Engineers. The complete Work Plan will be submitted to FHWA for review and approval. For your convenience, we have provided a template for your use in documenting your agency’s Pilot Program Work Plan (Attachment “A”).

The Work Plan should include a description of the technique to be evaluated and a proposed evaluation plan. Draft special provisions pertinent to the alternative practice should also be

"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"
included at the time of the submission. Attachment “B” contains a complete list of general requirements for the development of Pilot Program Work Plan. Additional information regarding the SEP-14 Work Plan requirements and process can be found in the link below:

FHWA Contracting Initiative and SEP-14 Information:
http://www.fhwa.dot.gov/programadmin/contracts/

Contract Initiatives Question and Answers:

We look forward to your participation in this Pilot Program.

Sincerely,

Ray Zhang, Chief
Division of Local Assistance

Attachments:
A – Pilot Program Work Plan Template
B – Pilot Program Work Plan Development General Requirements

c: Robert Nguyen, Acting Chief, Office of Implementation South, Division of Local Assistance, Caltrans
   Winton Emmett, Chief, Office of Implementation North, Division of Local Assistance, Caltrans
   Mark Samuelson, Chief, Office of Policy Development and Quality Assurance, Caltrans
   Matt Schmitz, Director, Project Delivery, FHWA
   District Local Assistance Engineers, Caltrans

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability"
ATTACHMENT “A”

US DOT Local Labor Hiring Pilot Program Work Plan-(Template)

Local Agency Name: _______________________________________________
Project Name: _____________________________________________________
Date: ____________________________________________________________

A. Introduction

A brief description of the project and proposal.

B. Purpose

A brief description of the innovation which is to be evaluated and the expected results.

C. Scope

A brief discussion as to how the experiment will be conducted, including the number of project(s), a description of the location, existing conditions, etc.

D. Schedule

An approximate schedule for the project(s) including: advertisement, letting, award, project completion, and evaluations and reports.

E. Evaluation of Qualifications

A brief description of how the innovation is going to be evaluated (i.e., cost savings, time savings, improved quality, etc.).

F. Technical and Cost Proposals

Describe the technical proposal evaluation, scoring, acceptance criterion, cost evaluation and section of contractor process.

G. Reporting

Describe the reporting proposal. The number of evaluations should be proportional to the nature of the contracting technique and the size of the project. For small projects with relatively simple
contracting techniques, a single initial/final evaluation report will suffice. For large projects where more evaluation is appropriate, initial, intermediate and final evaluations will be necessary.
ATTACHMENT “B”

US DOT Local Labor Hiring Pilot Program Application (SEP-14 Work Plan)
Development General Requirements

In developing application to FHWA to use contracting requirements under SEP–14, local agencies should address the following points:

(1) Describe the project, including the amount of FHWA funding involved in the as well as the estimated total project cost.

(2) Describe the contracting requirement that may otherwise be found to be inconsistent with the general requirement for full and open competition.

(3) Describe how they will evaluate the effects of relevant contracting requirements on competitive bidding. In doing so, the agency should, at a minimum, provide comparisons of bids received for the projects utilizing the relevant contract requirements to other projects of similar size and scope and in the same geographic area not utilizing such requirements. If a reduction in the pool of bidders is evident, explain the potential offsetting benefits resulting from the use of the requirement.

(4) Describe and quantify how the relevant contracting requirement would lead to increases in the effectiveness and efficiency of Federal funds for the project.

(5) Describe and quantify how the experimental contracting technique would protect the integrity of the competitive bidding process either in connection with the particular contract or when considered over the long term for that agency’s program.

(6) Describe whether or not the proposed contracting requirement has been the subject of litigation or whether litigation surrounding the use of the requirement has been threatened.

For contracts involving the use of local and other geographic labor hiring preferences, economic-based labor hiring preferences, and/or labor hiring preferences for veterans, FHWA may approve, at the request of the agency, the use of such requirements for a specific contract, a specific group of, or on a more general programmatic basis. The use of other contracting requirements may be approved by FHWA after coordination with the USDOT Office of General Counsel.

Additional SEP-14 Work Plan examples can be found in the link below:

http://www.fhwa.dot.gov/programadmin/contracts/sep14list.cfm
Sample Local Labor Hiring Preference SEP-14 Workplan

This workplan is provided for illustrative purposes only. Recipients must use contract provisions that are consistent with their own procurement policies and requirements.

Special Experimental Project No. 14 (SEP-14) Workplan to Evaluate the Use of Local Labor Hiring Preferences

City of Hometown, Kansas

Location: Main Street, from Walnut Street to Market Street

Federal-aid Project Number: STP-4444(51)

Local Project Number: xxxx-5555

A. Introduction

[Provide a brief general statement that introduces the basis for the SEP-14 proposal.]

The City of Hometown submits this work plan for FHWA review and approval as a design-bid-build project incorporating a Local Labor Hiring Preference (LLHP) contract provision. This workplan is provided under the Notice: Contracting Initiative announced in the March 6, 2015 Federal Register.

Historically, FHWA prohibited its recipients from using LLHP provisions that do not directly relate to the bidder’s performance of work. The City of Hometown has successfully used LLHP contract provisions for many years on its city-funded contracts, and is requesting FHWA’s approval for the use of these provisions on a Federal-aid project for the reconstruction of Main Street under the experimental authorities under 23 U.S.C. 502 and SEP-14.

B. Purpose

[Provide a description of the reason for developing the proposal.]

Many local governments recognize the importance of encouraging local hiring through their capital program construction contracts. While FHWA has viewed such requirements as a constraint on competition, the Contracting Initiative announced in March 2015 provides Federal-aid recipients with an opportunity to evaluate such requirements on federally assisted construction projects on a pilot-project basis. These requirements have a variety of worthwhile local objectives, such as ensuring that the communities in which the projects are located benefit from the jobs that result from the investment of their funds, particularly for workers in low income areas.
This pilot project will enable the City of Hometown to evaluate the effectiveness and efficiency of the use of Federal-aid and local funds in achieving the desired objectives.

C. Scope

[Provide a description of the project(s) covered by the proposal. If the proposal is for all projects meeting specific criteria, provide a description of the criteria to be used.]

The reconstruction of Main Street, from Walnut Street to Market Street, is an approximate $7 million reconstruction project involving extensive grading, drainage, paving, sidewalk work as well as utility relocation and roadway lighting work. Approximately, $5.6 million of the total project amount will be funded by FHWA. This project is typical of other City street reconstruction projects completed over the past ten years and will provide a suitable project for comparison purposes.

In addition, the City proposes to use a contract provision that requires 20% of all contract labor hours that are performed by Kansas residents are to be performed by residents of the City of Hometown. The Contractor will receive an incentive of $3.50 per hour for each local labor hour used on the project with a not to exceed incentive amount of $50,000. See Attachment A for additional details.

D. Schedule:

[Provide key dates for the project(s). If specific projects are not known at the time of the proposal, provide anticipated dates and describe the methods to be used to track projects meeting the criteria.]

An estimated schedule for the project follows:

- Advertisement: August 1, 2015
- Letting: September 1, 2015
- Award: October 1, 2015
- Project completion: October 1, 2016

E. Evaluation Measures:

[An important part of the pilot is to measure and evaluate the effectiveness and efficiency of the proposed local preferences. The following six criteria must be addressed within the proposal. Items 1-5 were taken directly from the Federal Register Notice that established the pilot program.]

The City of Hometown will evaluate the following criteria (as referenced in USDOT Q&A #21), to determine the effectiveness and efficiency of this pilot project:

1) Describe the project(s), including the amount of FHWA funding involved in the as well as the estimated total project cost.

See the “Scope” section above.
2) Describe the proposed contracting requirement that may otherwise be found to be inconsistent with the general requirement for full and open competition.

The City of Hometown has been utilizing a LLHP contract provision on its City-funded projects for many years. Previous discussions with State DOT and FHWA staff have indicated that the use of such provisions were limited by the competitive bidding requirements of Title 23 U.S.C.; however, the City is interested in evaluating this requirement on a Federal-aid project on a pilot project basis under SEP-14. The project will utilize a requirement that 20% of all contract labor hours performed by Kansas residents are to be performed by residents of the City of Hometown (see the attached contract provision for details). Contract labor hours performed by non-Kansas residents will not be restricted.

3) Describe how the applicant will evaluate the effects of relevant contracting requirements on competitive bidding. In doing so, the applicant should, at a minimum, provide comparisons of bids received for the projects utilizing the relevant contract requirements to other projects of similar size and scope and in the same geographic area not utilizing such requirements. If a reduction in the pool of bidders is evident, explain the potential offsetting benefits resulting from the use of the requirement.

As this project is similar in size and scope to other City street reconstruction projects, a comparison with similar size and scope projects (projects using the preference and projects not using the preference) will be provided based on the following evaluation criteria:

- **The number of bidders (including the location of the home office)** - An explanation will be provided for the apparent increase or decrease in the average number of bidders. Specific competitive reasons (e.g. other bidding opportunities, apparent risk, etc.) will be provided for the increase / decrease in competition. The evaluation will discuss the impact on the number of bids received by local and non-local firms.
- **A comparison of unit bid prices** - An evaluation of the unit prices for five bid items with the highest total value on the pilot project will be compared to unit prices for projects with a similar size and scope.
- **A comparison of the impact of the LLHP requirement on the workforce** will be made by comparing the percentage of total local labor hours on the pilot program with the percentage typically achieved on a similar Federal-aid project that did not use the LLHP provision. An explanation of any significant differences will be provided.
4) **Describe and quantify how the proposed contracting requirement would lead to increases in the effectiveness and efficiency of Federal funding for the project(s).**

An analysis of the effectiveness and efficiency of the LLHP requirement will be made through an analysis of the following information:

- The prime contractor will be interviewed at the conclusion of the contract to obtain its opinion of the effectiveness and efficiency of the LLHP provision on its construction operations and to discuss any potential concerns or recommendations for the program. This will provide one measure of the relative efficiency of the contractor in meeting the contract requirements.
- The City will provide an evaluation of the net economic benefit of employing additional City residents by analyzing the potential monetary benefits that might be related to the receipt of funds from other federally assisted programs (e.g. reductions in the City’s unemployment rolls, payments for uninsured health insurance costs, etc.). The economic analysis will address the extent to which other Federal funds may be impacted by reducing unemployment in the City’s workforce.
- The City will provide an evaluation of the potential increase in the pool of skilled labor available to all contractors.

5) **Describe and quantify how the proposed experimental contracting technique would protect the integrity of the competitive bidding process either in connection with the particular contract or when considered over the long term for that agency’s program.**

The City of Hometown is committed to maintaining the integrity of the competitive bidding process. To that end, the Kansas Department of Transportation (KDOT), in cooperation with the FHWA, has approved the City’s project administration procedures, thus allowing the City to administer its own state and federally-funded projects with oversight from KDOT. The administration encompasses the project development process from “cradle to grave”, and in particular, addresses the process from PS&E approval through project letting and award of contract. See Section 15 of the Local Public Authority (LPA) Project Development Manual.

The City of Hometown has used the Local Labor Hiring Preference on a number of its State and locally funded projects, and has not encountered issues in maintaining the integrity of its competitive bidding process. Should there be issues with this project, the City is confident that its approved project administration process, with KDOT to assist if necessary, will provide satisfactory safeguards.
6) Describe whether or not the proposed contracting requirement has been the subject of litigation or whether litigation surrounding the use of the requirement has been threatened.

The City’s LLHP requirements have not been subject to litigation.

F. Reporting

[Periodic reporting on the status of the SEP-14 proposal is important. Flexibility is provided to the proposer to determine the frequency of reporting. At a minimum, initial and final reports are required.]

The City of Hometown will prepare and submit initial and final evaluation reports for the project. The initial report will be prepared shortly after the award of contract. The initial report will include a description of any concerns raised by stakeholders following approval of the proposal and any identifiable effects on the bids received.

A final report will be submitted upon completion of the contract. The final report will contain an overall evaluation of the contracting technique along with any suggestions and recommendations for improving the process.
Attachment A – Contract Provision

NOTICE TO BIDDERS

1. 20% of all Construction Worker Hours performed by Kansas residents must be performed by Hometown Residents.

2. Throughout the course of the contract, the prime contractor and all subcontractors shall submit certified payroll reports documenting all construction worker hours performed on the project.

3. The Contractor will receive an incentive of $3.50 per hour for each local labor hour used on the project with a not-to-exceed incentive amount of $50,000.00.
### Table A

<table>
<thead>
<tr>
<th>JOB CATEGORIES</th>
<th>TOTAL EMPLOYED</th>
<th>TOTAL RACIAL/ETHNIC MINORITY</th>
<th>BLACK or AFRICAN AMERICAN</th>
<th>HISPANIC OR LATINO</th>
<th>AMERICAN INDIAN OR ALASKA NATIVE</th>
<th>ASIAN</th>
<th>NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER</th>
<th>TWO OR MORE RACES</th>
<th>WHITE</th>
<th>APPRENTICES</th>
<th>ON THE JOB TRAINEES</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFICIALS</td>
<td>M 0 F 0 M 0 F 0</td>
<td>M 0 F 0 M 0 F 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUPERVISORS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOREMEN/WOMEN</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLERICAL</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EQUIPMENT OPERATORS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MECHANICS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUCK DRIVERS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRONWORKERS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CARPENTERS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEMENT MASONS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELECTRICIANS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PIPEFITTER/PLUMBERS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAINTERS</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LABORERS-SEMI SKILLED</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LABORERS-UNSKILLED</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table B

#### Table C (Table B data by racial status)

<table>
<thead>
<tr>
<th></th>
<th>WHITE</th>
<th>APPRENTICES</th>
<th>ON THE JOB TRAINEES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
</tr>
</tbody>
</table>

|            | 0 0   | 0 0         | 0 0                 |

### Table C

#### B. PREPARED BY:
(Signature and Title of Contractors Representative)  

#### B. DATE

#### 10. REVIEWED BY:
(Signature and Title of State Highway Official)  

#### 11. DATE

Form FHWA-1391 (Rev. 09-13)  
PREVIOUS EDITIONS ARE OBSOLETE
Small Business and Disabled Veteran Business Enterprise Certification Workshops

September 24, 2015

From 10 a.m. - 12 p.m. or 2 - 4 p.m.
Training Location:
Caltrans District 11 Offices
Gallegos Room - 1-134

Register for the workshops at this link:
www.dgsworkshop.eventbrite.com

Presented by Mr. Michael Aguillio from the California Department of General Services. In addition, High Speed Rail will be providing a program overview.

For more information please contact:
Cheri Gouthier
(619)688-670
cheri.gouthier@dot.ca.gov

California Department of Transportation
District 11 District Office
4050 Taylor Street
San Diego, CA 92110
DRAFT REGIONAL TRANSIT ORIENTED DEVELOPMENT STRATEGY

Introduction

SANDAG is preparing a Regional Transit Oriented Development (TOD) Strategy to support and incentivize sustainable development throughout the region. In conjunction with the adoption of the 2050 Regional Transportation Plan and its Sustainable Communities Strategy (2050 RTP/SCS) in 2011, the Board of Directors approved six commitments involving programs and initiatives to help implement the SCS. The TOD Strategy is the final commitment of the six to be completed.

The Regional TOD Strategy, entitled Regional Transit Oriented Districts: A Strategy for the San Diego Region, will help implement the 2050 RTP/SCS as well as San Diego Forward: The Regional Plan (Regional Plan) by recommending actions that can be taken to assist the region in creating TOD projects and districts in association with the region’s existing and future public transit network. These TOD projects and districts can help reduce greenhouse gas emissions; increase transit ridership, walking, and biking; and provide a greater mix of housing and employment opportunities for all of the region’s residents.

A draft of the Regional TOD Strategy has been prepared for discussion by the Regional Planning Technical Working Group (TWG), Regional Planning Committee, and Transportation Committee.

Discussion

The draft Regional TOD Strategy includes 13 strategies and associated actions aimed at facilitating the creation of transit-oriented districts – areas that are conveniently accessible within five minutes of transit stations by foot, bike, or car. It builds on the substantial body of work the region has accomplished to date to better connect transportation and land use, and proposes strategies and actions that can be taken by SANDAG, the transit agencies, local jurisdictions, and developers to overcome barriers to implementation through coordinated, supportive land use policies and regulations, and public and private investment.

The draft Regional TOD Strategy is organized to address the challenges that hinder successful implementation of more transit-oriented districts. The objectives are to:

---

1 Funded in part by the California Strategic Growth Council Sustainable Communities Planning Grant Program.
• Attract investment and enable development near transit so that these areas become centers of activity

• Increase transit ridership by increasing the number of people that live and work near transit and enhancing accessibility to transit

• Reduce vehicle miles traveled per capita and contribute to the goals of the Regional Plan

• Meet the challenges of regional growth by creating capacity near transit by using strategic investments and making selected TOD areas “ready” for new development

• Build upon the existing foundation for TOD in the San Diego region by identifying supportive policies, targeted regulations, and assertive actions to create transit-oriented districts

• Align and coordinate efforts of SANDAG, local governments, transit agencies, developers, community members, and others with an interest in TOD

The recommended strategies are briefly summarized below. Actions that should be considered or continued can be found in the draft Regional TOD Strategy (Attachment 1).

1. Continue to implement a compact and highly interconnected diversity of land uses and activities in the Smart Growth Opportunity Areas, consistent with the land use targets identified in the SANDAG Smart Growth Concept Map.

2. Consider coordinated planning of TODs along single corridors or interconnected networks of transit lines to better connect people to jobs by taking into account the characteristics of stations and surrounding land uses along a corridor.

3. Continue to promote walking and biking within transit-oriented districts to bridge the first-last mile gap by placing a priority on supportive walking and biking infrastructure, amenities, and connections within the core of transit-oriented districts.

4. Consider ways to provide vehicular connections and manage parking within transit-oriented districts to connect transit stations to job centers and homes where walking or biking distances are impractical.

5. Continue to engage a broad range of stakeholders in the planning and design of transit-oriented districts and support methods for public involvement.

6. Continue to work toward the creation of clear rules that provide a predictable development process and focus on removing regulatory barriers.

7. Continue to explore opportunities to streamline California Environmental Quality Act guidelines and processes to facilitate development projects in transit-oriented districts.

8. Continue to update transportation impact analysis methodologies to provide refined travel forecasting for infill projects in transit-oriented districts.

9. Consider focusing infrastructure and community facilities to support the success of transit-oriented districts.
10. Continue to encourage and monitor public-private partnerships and explore emerging tools for financing development projects to help fill gaps in project financing.

11. Consider directing affordable housing resources to transit-oriented districts to maximize the benefits of locating affordable and workforce housing in proximity to transit.

12. Continue and consider new ways to promote market readiness and development feasibility of TODs by sharing information, showcasing successful case studies, highlighting emerging opportunities, and identifying trends over time.

13. Consider developing an online, interactive tool to evaluate the TOD readiness of sites and districts that can be used by SANDAG, local jurisdictions, transit agencies, developers, community groups, and others.

Next Steps

The draft Regional TOD Strategy was discussed by the TWG on July 9, and is being discussed by both the Transportation and Regional Planning Committees on July 17. Input will be solicited from stakeholders during the months of August and September.

The final strategy is scheduled to be presented to the Board of Directors in September for acceptance, and will be included as an appendix of the Regional Plan.

CHARLES “MUGGS” STOLL
Director of Land Use and Transportation Planning

Attachment: 1. Draft Regional Transit Oriented Districts: A Strategy for the San Diego Region

Key Staff Contact: Susan Baldwin, (619) 699-1943, susan.baldwin@sandag.org
# Table of Contents

Introduction......................................................................................................................... 1
Summary of Recommendations............................................................................................... 5
Context of TODs in the San Diego Region ............................................................................ 8
The Case for TOD .................................................................................................................. 17
Big Ideas................................................................................................................................. 25
Strategies............................................................................................................................... 32
INTRODUCTION

Transit Oriented Districts: A Strategy for the San Diego Region (“Regional TOD Strategy”) strives to create vibrant communities throughout the region by increasing access to the existing and planned regional transit network and overcoming barriers to implementation through coordinated, supportive land use policies and regulations, and public and private investment.

This strategy will support and help to implement San Diego Forward: The Regional Plan, the San Diego region’s Regional Transportation Plan and Sustainable Communities Strategy. It is intended to reinforce the regional strategy of creating sustainable communities by focusing future residential and employment growth and development in existing urbanized areas of the region near existing and planned transportation infrastructure. This strategy will help protect sensitive habitat and open space, provide residents mobility options and reduce greenhouse gas emissions. This Regional TOD Strategy is designed for the particular attributes of the San Diego region, its development patterns, economic base, unique urban topography, and diverse community contexts. The fundamental premises of the strategy are:

• The San Diego region has developed at a relatively low density with dispersed job centers, not unlike a number of major metropolitan areas in the United States. Except for a few locations such as Downtown San Diego, the conventional definition of TOD as “Transit-Oriented Development” -- development immediately adjacent to an existing or planned transit station alone -- would not result in development capacity and vibrant communities serviced by transit called for in San Diego Forward. “Transit Oriented Districts”, generally described as places within 5 minutes of existing and planned transit stations, would allow communities to consider larger areas for reinvestment and to tailor development to meet community goals. The working definition for a Transit Oriented District set forth in this strategy is 0.25 miles by walking (at 3 mph), 0.75 miles by biking (at 9 mph), and 2.0 miles by vehicle (at 25 mph) from a transit station. These 5-minute access areas vary based on the local topography and physical context of each transit oriented district.

• Existing and future transit oriented districts have varied geographies that offer a mixture of uses, building types, parcel sizes and configurations, and development opportunities at different scales for different types of investors, depending on the particular location and public support. All districts should, however, emphasize quality environments for walking and biking, planned to be compatible with vehicles, and well-designed connections within the district and to adjacent neighborhoods and workplaces.
Purpose of the TOD Strategy

Creating vibrant communities that are accessible to transit is at the foundation of the region’s coordinated land use and transportation planning.

As the San Diego region and its transportation system continue to evolve, with almost 925,000 more people and 460,000 more jobs anticipated in the region by 2050, local jurisdictions have made great strides in planning for more compact development near transit and a large majority of future growth is expected to occur near existing and planned transit stops. In addition to the strides made by local jurisdictions, the region also has made great strides in planning for a more robust transit network as shown in the 2050 Regional Transportation Plan and its Sustainable Development Strategy (October 2011) and now in the most recent plan San Diego Forward: The Regional Plan, of which this strategy is an appendix.

Planning and implementing transit oriented districts in the region can give more people a choice to take transit, walk, or ride bicycles more, and drive less, reducing dependency on vehicles that generate greenhouse gas (GHG) emissions as they go about their daily activities. Transit oriented districts also provide an opportunity to create vibrant community centers and neighborhoods that evolve into mixed-use walkable districts where people can live, work, shop, and recreate.

This Regional TOD Strategy sets forth an approach and recommends strategies to create communities serviceable by transit; implement successful supportive infrastructure; and facilitate development of homes, workplaces, and services that contribute to a rich mix of living, working, and mobility choices. The San Diego region has several successful transit oriented communities, but will need more as the region grows.
Objectives

This Strategy is organized to address the challenges that hinder successful implementation of more transit oriented districts. The objectives are to:

- Attract investment and enable development near transit so that these areas become centers of activity.
- Increase transit ridership by increasing the number of people that live and work near transit and enhancing accessibility to transit.
- Reduce vehicle miles traveled per capita and contribute to the goals of San Diego Forward: The Regional Plan.
- Meet the challenges of regional growth by creating capacity near transit by using strategic investments and making selected TOD areas “ready” for new development.
- Build upon the existing foundation for TOD in the San Diego region by identifying supportive policies, targeted regulations, and assertive actions to create transit oriented districts.
- Align and coordinate efforts of SANDAG, local governments, transit agencies, developers, community members, and others with an interest in transit oriented development.
What Are “Transit Oriented Districts”? 

Transit oriented districts are areas, neighborhoods, or communities that are conveniently accessible to transit. Districts are larger areas where some people are close enough to walk or bike to and from a transit station while others can get dropped off, carpool, or use shared mobility options.

“TOD” is typically an acronym for “Transit Oriented Development.” This definition focuses on real estate development projects next to transit stations, often as public-private partnerships. However, this report approaches the “D” in TODs in this report stands for “District” to reflect the importance of the relationship between transit stations and the surrounding community. Thinking of TODs in a larger context enables a range of development opportunities that meet various needs, while remaining market feasible.

Each community in the San Diego region is distinct, varying by topography, community characteristics, the pattern and concentration of residential and employment activity, and other site-specific factors. However, transit oriented districts can serve as the center of each community in a unique way, while still having a relative concentration of residential, commercial, and mixed-use development served by high-quality transit.

Development opportunities may include a range of uses from small lot housing and town homes, to low-rise and loft housing, flats and residential towers, main-street commercial, urban flex and campus space, visitor-serving uses, institutional facilities, and taller residential, office, and mixed-use buildings – all within mixed-use environments near transit, most of which are accessible by walking or biking. The mix of uses and densities will depend on the existing fabric and future plans for the district and will vary from place to place. A few examples, among several, include downtown San Diego, smaller city downtowns, and urban centers in larger cities such as downtown Oceanside and Chula Vista, and University City. Many neighborhood districts at smaller scales exist along transit corridors.

Benefits of TODs

Transit oriented districts have many benefits including:

- Creating neighborhoods that contribute less to greenhouse gas emissions.
- Increasing transit ridership.
- Providing transportation choices.
- Supporting walking, biking, and other mobility options.
- Reducing the number of cars on the road.
- Facilitating housing and employment opportunities for all residents in the region.
- Improving performance of the street, highway, and freeway system by providing mobility options.
SUMMARY OF RECOMMENDATIONS

Below is a summary of the recommendations that SANDAG, the transit agencies, local jurisdictions, and developers can take to facilitate the creation of more vibrant transit oriented districts throughout the region. These recommendations are described in more detail on pages 31 through 54 of the strategy.

1. Continue to implement a compact, and highly interconnected diversity of land uses and activities in the Smart Growth Opportunity Areas, consistent with the land use targets identified in the regional Smart Growth Concept Map. Consideration should be given to a range of local planning regulatory mechanisms, such as specific plans and overlay zones, and reduced parking ratios, where appropriate.

2. Consider coordinated planning of TODs along single corridors or inter-connected networks of transit lines to better connect people to jobs by taking into account the characteristics of stations and surrounding land uses along a corridor. Coordinated development along a network of TODs can help create housing at costs that are consistent with the wages of industries and jobs within the same network. This would help to create job growth in transit oriented districts and support workforce housing, and help build the market for TODs.

3. Continue to promote walking and biking within transit oriented districts to bridge the first-last mile gap, by placing a priority on supportive walking and biking infrastructure, amenities, and connections within the core of transit oriented districts. The TransNet Active Transportation and Smart Growth grant programs and Local Streets and Road funds provide funding for these types of improvements.

4. Consider ways to provide vehicular connections and manage parking within transit oriented districts to connect transit stations to job centers and homes where walking or biking distances are impractical. Vehicles can extend people’s ability to get to and from home and work by carpooling, vanpooling, taking a shuttle, or using a car share or ride share service. Parking supply, pricing, and management tools found in the Parking Management Tool Kit also are important mechanisms to get people to and from transit stations. The creation of mobility hubs can help implement this recommendation.

5. Continue to engage a broad range of stakeholders in the planning and design of transit oriented districts and support methods for public involvement. SANDAG can continue its role in presenting examples of successful TODs within and outside the region, including field trips; the ongoing Smart Growth Outreach program; and could consider a testimonial on-line video program of people who use transit, live and work in TODs, and are employers in TODs.
6. Continue to work toward the creation of clear rules that provide a predictable development process and focus on removing regulatory barriers. Reducing risk from the entitlement process, including time delay and political risk, is essential to attracting investors and developers. Each jurisdiction has its own structure for land use regulation and design review; however, priority can be given to context-sensitive design that produces predictable results that are embraced by the public.

7. Continue to explore opportunities to streamline California Environmental Quality Act (CEQA) guidelines and processes to facilitate development projects in transit oriented districts. The region’s local jurisdictions should consider amendments to their General Plan policies, traffic impact analysis procedures, and locally adopted CEQA guidelines and significance thresholds to take advantage of recent changes in state law to facilitate infill development and CEQA review.

8. Continue to update transportation impact analysis methodologies to provide refined travel forecasting for infill projects in transit oriented districts. SANDAG transportation models that incorporate walking, biking, and access to transit should continue to be developed and refined with training on their use provided to local jurisdictions and consultants.

9. Consider focusing infrastructure and community facilities to support the success of transit oriented districts. Transit oriented districts may require significant investments to accommodate new development and changes in land uses, and to provide sufficient capacity and necessary public amenities. Enhanced Infrastructure Financing Districts; special facility districts such as single or dis-contiguous TOD community facilities districts, property-based BIDs, storm-water districts, and mobility districts; TOD-specific standards for impact fees; and directed local capital improvement plan investments are among the local mechanisms available.

10. Continue to encourage and monitor public-private partnerships and explore emerging tools for financing development projects and value-capture techniques to help fill gaps in project financing. Leveraging transit agency and publicly owned land near transit stations; investing in a regional pooled fund focused on TOD; utilizing incentive zoning and development agreements, and capitalizing on federal, state, and local grant programs are all ways of catalyzing development.
11. Consider directing affordable housing resources to transit oriented districts to maximize the benefits of locating affordable and workforce housing in proximity to transit. Community Development Block Grant (CDBG), HOME, and other funding can provide supportive infrastructure; sites can be positioned for tax credits and affordable housing grants and bond criteria; and identified as priority receiving areas for inclusionary housing in-lieu fees and housing trust fund expenditures.

12. Continue and consider new ways to promote market readiness and development feasibility of TODs by sharing information, showcasing successful case studies, highlighting emerging opportunities, and monitoring trends over time. Consider working with industry associations and non-governmental organizations (NGOs) to prepare market performance information for development within the region’s transit oriented districts and regularly publish a “Market State of TODs” report to inform potential developers and investors (locally and nationally).

13. Consider developing an on-line, interactive tool to evaluate the TOD readiness of sites and districts – a TOD Readiness Dashboard - that can be used by SANDAG, local jurisdictions, transit agencies, developers, community groups, and others.
CONTEXT OF TODs IN THE SAN DIEGO REGION

As the San Diego region and its transit system continue to evolve, SANDAG and local governments have made strides in planning for compact development near transit and in planning for more transit.

Our Changing Growth Patterns

In just 15 years, our planned development patterns have shifted significantly – toward more growth in the western and more urbanized areas of our region that are close to our existing and planned transportation network, allowing us to preserve 55 percent of the region (nearly 1.5 million acres) as open space, parks, protected habitat, and farmland.

The first map (on the left) shows the growth patterns that were planned in 1999 when the region’s plans called for extensive development in the eastern part of the county (Series 9 Regional Growth Forecast). Since then, plans have changed due to actions by our local cities and county. The second map (on the right) shows our new vision for the future (Series 13 Regional Growth Forecast).

1999 Planned Land Use

2015 Planned Land Use
Smart Growth Concept Map

In 2004, SANDAG adopted the Regional Comprehensive Plan (RCP) for the San Diego region. The RCP provides a vision for the region based on smart growth and sustainability. A key component of the RCP is the “Smart Growth Concept Map” illustrating the location of existing, planned, and potential smart growth areas. These areas are potential locations for higher density mixed-use development near existing and planned public transit.

The Concept Map contains more than 200 locations in seven smart growth “place types”: the Metropolitan Center, Urban Centers, Town Centers, Community Centers, Rural Villages, Mixed Use Transit Corridors, and Special Use Centers, reflecting the principle that smart growth is not a “one-size-fits-all” endeavor but a series of land use, design, and mobility strategies that are applicable in varied contexts.

Local Governments

During the last decade, more than half of local jurisdictions have updated their land use plans and zoning ordinances, collectively moving the region’s vision of the future toward compact development near transit and greater open space preservation. Focusing housing and job opportunities in existing urbanized areas has replaced previous assumptions of more dispersed development patterns (as shown in the maps above). Transit oriented communities will play an important role in accommodating the region’s future population, housing, and employment growth, but challenges remain in market readiness and potential capacity for transit oriented communities throughout the San Diego region.

Smart Growth Concept Map Minimum Land Use and Transportation Targets

<table>
<thead>
<tr>
<th>Smart Growth Place Type</th>
<th>Minimum Residential Target</th>
<th>Minimum Employment Target</th>
<th>Minimum Transit Service Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Center</td>
<td>75 du/ac</td>
<td>80 emp/ac</td>
<td>Commuter Rail, Express Light Rail Transit (LRT), or Bus Rapid Transit (BRT)</td>
</tr>
<tr>
<td>Urban Center</td>
<td>40 du/ac</td>
<td>50 emp/ac</td>
<td>LRT or Rapid Bus</td>
</tr>
<tr>
<td>Town Center</td>
<td>20 du/ac</td>
<td>30 emp/ac</td>
<td>LRT, Rapid Bus, or Streetcar/Shuttle*</td>
</tr>
<tr>
<td>Community Center</td>
<td>20 du/ac</td>
<td>N/A</td>
<td>High-Frequency Peak-Period Local Bus or Streetcar/Shuttle within Urban Area Transit Strategy Boundary</td>
</tr>
<tr>
<td>Rural Village</td>
<td>10.9 du/ac</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Special Use Center</td>
<td>Optional</td>
<td>45 emp/ac</td>
<td>LRT, Rapid Bus, or Peak BRT</td>
</tr>
<tr>
<td>Mixed-Use Transit Corridor</td>
<td>24 du/ac</td>
<td>N/A</td>
<td>High-Frequency Peak-Period Local Bus or Streetcar/Shuttle</td>
</tr>
</tbody>
</table>

du/ac = dwelling units per acre emp/ac = employees per acre

* In Town Centers, areas can be connected to LRT and/or Rapid Bus by a local transit connection or Streetcar/Shuttle Service.
Smart Growth Tool Box

Implementation is a key goal of the Smart Growth Concept Map. The primary ways that SANDAG supports implementation is to provide incentives and assistance to local member agencies to encourage smart growth development in the areas identified on the Smart Growth Concept Map. The SANDAG Smart Growth Tool Box includes the following planning and financing tools:

Planning Tools:

• Smart Growth Concept Map
• Visualization Tools and Photo Library
• Smart Growth Design Guidelines
• Smart Growth Trip Generation/Parking Study
• San Diego Regional Bicycle Plan
• Planning and Designing for Pedestrians
• Integrating Transportation Demand Management Into the Planning and Development Process - A Reference for Cities
• Transportation Demand Management Parking Study and Inventory
• Regional Parking Management Toolbox

Financing Tools:

• TransNet Smart Growth Incentive Program (SGIP)
• Transportation Development Act/TransNet Bicycle, Pedestrian, and Neighborhood Safety Program (now Active Transportation Grant Program)
Smart Growth Concept Map – October 2014
Existing and Planned Transit System

Transit oriented districts depend on high-quality transit service. The speed, frequency of service, number and spacing of stops, and ability to access employment centers and other major destinations are all key factors to making transit an integral part of the everyday life of communities. The Trolley (Blue Line, Orange Line, and Green Line), COASTER, and SPRINTER are the foundation of the region’s transit network and each of the stations along these lines presents an opportunity to create different types of transit oriented districts. Rapid bus service, and local bus service along key corridors and at major stops, also plays an important role in supporting TODs along key corridors.

San Diego Forward: The Regional Plan envisions an expanded and more efficient public transit system, and identifies a number of investments that will create new opportunities for TODs.

Major improvements to the San Diego region’s public transit system identified in San Diego Forward: The Regional Plan include:

- Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor: The COASTER, AMTRAK, and Metrolink rail corridor provides premier passenger rail services, connecting San Diego to Los Angeles and other points north and east. The Regional Plan builds on this corridor by adding more track capacity and improved stations.

- Trolley/SPRINTER/Rapid Service: These routes offer fast and reliable rail and bus travel with limited stops in key travel corridors. The Trolley and SPRINTER operate on their own dedicated rail lines, while Rapid services operate on freeway managed lanes and on local streets.

- Mid-Coast Trolley extending service from Santa Fe Depot in Downtown San Diego to the University City community, serving Old Town, the University of California San Diego (UC San Diego), and Westfield University Towne Center.

- SPRINTER double-tracking, which will enable higher frequency service, and the extension of service from Escondido south to Westfield North County.

- A new Trolley line from San Ysidro to Carmel Valley along the I-805/I-15 corridors via Chula Vista, National City, Southeastern San Diego, Mid-City, Mission Valley, Kearny Mesa, University City and Sorrento Valley.

- A new Trolley line from Pacific Beach to the El Cajon Transit Center, via Clairemont, Kearny Mesa, Mission Valley, and San Diego State University (SDSU).

- A new Trolley line from Downtown San Diego to SDSU, along Park Boulevard and El Cajon Boulevard corridors via Balboa Park, North Park, and City Heights.

- A new Trolley line from University City to Sorrento Valley, which will include a connection to the COASTER.

- New Rapid service from Otay Mesa to Downtown San Diego, along State Route 125 (SR 125)/East Palomar/I-805 corridors via Otay Ranch, eastern Chula Vista, and National City.

- New Rapid service for commuters. This will offer peak period service to key regional job centers along the Managed Lanes of key freeway corridors, including South Bay to Kearny Mesa/University City/Sorrento Mesa via the SR 52 and I-805 corridors; East County
to Downtown San Diego via the SR 94 corridor; South County/Mid-City to Palomar Airport Road corridor via the I-805/I-5 corridors; and Downtown San Diego to Kearny Mesa along the SR 163 corridor.

- New Rapid service on arterials. This will operate on arterial roadways and provide limited-stop, high-speed service along several key corridors throughout the region, supplementing existing local bus services.

- Streetcars/Shuttles: Streetcars would operate in several neighborhoods in and around Downtown San Diego, connect North Park with Downtown San Diego, and link La Jolla with Mission Beach via Pacific Beach.

- Local Bus Services: Local bus services remain the backbone of the regional transit system. Most routes will see service frequencies increased to every 10 minutes all day, creating a network of convenient local bus service for short-distance trips and access to rail and Rapid services.

### Transit Stations with the Highest Ridership in the San Diego Region - 2014

<table>
<thead>
<tr>
<th>Transit Station</th>
<th>Average Total Weekday Boardings &amp; Alightings</th>
</tr>
</thead>
<tbody>
<tr>
<td>12th &amp; Imperial Transit Center</td>
<td>25,456</td>
</tr>
<tr>
<td>San Ysidro / Intl Border</td>
<td>18,060</td>
</tr>
<tr>
<td>City College Station</td>
<td>12,734</td>
</tr>
<tr>
<td>Old Town Transit Center</td>
<td>12,650</td>
</tr>
<tr>
<td>El Cajon Transit Center</td>
<td>9,705</td>
</tr>
<tr>
<td>Santa Fe Depot</td>
<td>9,465</td>
</tr>
<tr>
<td>Palomar Street Station</td>
<td>9,031</td>
</tr>
<tr>
<td>Grossmont Transit Center</td>
<td>7,114</td>
</tr>
<tr>
<td>Iris Avenue Station</td>
<td>6,740</td>
</tr>
<tr>
<td>SDSU Transit Center</td>
<td>6,709</td>
</tr>
</tbody>
</table>

Source: SANDAG. FY2014 Ridership by Route and Stop.
Real Estate Market

Transit access is one factor that can help make a location more attractive for new development. However, the introduction of new transit alone does not fundamentally change existing real estate market conditions. In a station area with a weak real estate market, there may be insufficient demand to support new, higher-intensity development even with the introduction of transit, especially if the station area is a considerable distance from an employment center or other major activity node. In other station areas, there may be a strong demand for new development but changes to local development standards may be required in order for development to occur near transit stations. In addition to real estate market strength, studies of development patterns near transit have found that the availability of appropriate development opportunity sites and local connectivity, infrastructure, and place-making needs can also affect the potential for development in any given transit station area. Key characteristics of the San Diego residential and office market are:

- **Developers have found that renters are willing to pay a premium for proximity to a rail transit station.** According to developers who participated in focus groups and interviews, apartments located close to a rail transit station can command a price premium. In some markets, particularly in the eastern and southern suburbs where rents tend to be lower, proximity to a transit station may help make a project financially feasible that would otherwise not be.

- **Research has found that single-family homes and condominiums in the San Diego metro area experience a significant price premium associated with proximity to rail transit.** A recent series of studies on property values around San Diego’s Trolley stations found that all else being equal, a condominium located within a quarter-mile of a station was worth 16 percent more than a condominium located a mile away from a station, while a single-family home located within a quarter-mile of a station was worth 6 percent more than one located a mile away. Property value premiums were generally higher near transit stations located in more pedestrian-oriented neighborhoods and in higher-density zoning districts.

- **Many of the region’s larger and higher-rent office markets currently have limited transit service, and development patterns that make providing frequent service challenging.** Service to many of the major employment centers in North City and North County Coastal, including Sorrento Valley, Torrey Pines, University Town Center (UTC), the I-5 Corridor, and Carlsbad, is provided by the COASTER, which provides limited service with long headways. The new Rapid services provide some access to employment areas in the I-15 corridor, Kearny Mesa and Sorrento Mesa, but first mile, last mile connections are difficult given the spread out, low density land uses. Other areas like much of the Carlsbad market, Encinitas, Torrey Pines, and Carmel Valley have little or no transit given the low employment densities and/or auto-oriented development patterns that make it challenging to provide efficient, high-frequency service.

- **Future transit investments could help support growth by reducing congestion and increasing access to jobs.** Freeways and arterials in many major employment centers in North City and North County are already congested, and traffic is expected to worsen as population and employment continue to grow in UTC and other major nodes. Employers in Sorrento Valley, Torrey Pines, UTC, and other nearby job centers already run shuttles to the Sorrento Valley COASTER Station during commute hours. Planned transit investments such as the Mid-Coast Corridor have the potential to support future growth while providing additional transportation choices.
THE CASE FOR TOD

Many trends that are shaping the San Diego region reinforce the importance and likely appeal of transit oriented options, including an aging population, strong knowledge-based industry sectors, a growing share of millennials, and the rising number of small, non-family households.

The San Diego region had approximately 3.25 million residents in 2014 and is projected to increase to nearly 3.5 million by 2020, and 3.85 million by 2035.

Source: SANDAG, U.S. Census Bureau; SANDAG, 2050 Series 13 Regional Growth Forecast (data extracted on: 05/2015).
Approximately 25 to 35 percent of U.S. households would prefer to live in a transit oriented community.\(^2\) The extent of demand for development near transit in any particular region depends on demographic characteristics, as well as local preferences.

Of San Diego residents, 68 percent are small households and households without children. These groups are considered most likely to locate near transit. The San Diego region has a high and growing number of households that are more likely to locate near transit.\(^3\)

Millennial (people born in the 1980s and 1990s) and Baby Boomer (people born between 1946 and 1964) Generations account for the largest shares of the region’s population and are expected to drive housing demand in the coming decade.

As the millennials come into adulthood and the Baby Boomers enter retirement, these demographic groups are particularly interested in access to transit, amenity-rich neighborhoods, and shorter commutes.\(^4\) Demographic shifts will continue to change preferences for housing in the San Diego region. Given the ready access to amenities and services, TOD settings with a mixture of housing types and densities support vibrant, dynamic neighborhoods that appeal to younger residents and enable people to age in place within their communities, creating multi-generational neighborhoods.

Source: SANDAG, 2050 Series 13 Regional Growth Forecast (data extracted on: 05/2015).
The region will see a dramatic shift toward multi-family housing development over the coming decades. SANDAG projects that by 2050, multi-family housing is expected to account for 46 percent of the county’s total housing stock, compared to 36 percent in 2010. To meet this projection, multi-family units will need to account for nearly 80 percent of new units built between 2010 and 2035, and more than 90 percent of new units between 2035 and 2050. In comparison, only 40 percent of new units built in San Diego County between 2000 and 2010 were in multi-family buildings.

Source: SANDAG, 2050 Series 13 Regional Growth Forecast (data extracted on: 05/2015).
Businesses increasingly choose locations based on factors such as local quality of life and the productivity and education levels of the local workforce. Firms in the professional, scientific, financial services, information, and other “knowledge-based” industries are especially likely to locate near transit.5

Changes to the economy in the San Diego region are changing where people work. Knowledge-based industries that can work in more concentrated work environments have proven to be a key driver of demand for TODs in other cities. The knowledge-based industry group, which includes professional and scientific services, finance and real estate, information, and management and administration support services, accounted for over 300,000 jobs in 2010, or approximately 21 percent of total employment in San Diego County, and was the largest employment sector. National research has shown that firms in these knowledge-based industries have the greatest propensity to locate near transit, and that workers in these industries are most likely to take transit to work.7
The transit system in the San Diego region continues to grow, serving more neighborhoods and providing better access to jobs.
By 2050, it is estimated that nearly 72% of people living in the San Diego region could access a transit stop to and from home within 5-minutes.

In 2012, 5.5% of people could walk between a transit stop to and from home within 5-minutes; and, 21.3% of people could ride a bike between a transit stop to and from home within 5-minutes.

By 2050, it is estimated that 15.7% of people could walk between a transit stop to and from home within 5-minutes (an increase of 268%); and 49.1% could ride a bike between a transit stop to and from home within 5-minutes (an increase of 199%).
By 2050, it is estimated that nearly 80% of people working in the San Diego region could access a transit stop to and from work within 5-minutes.

In 2012, 10.4% of people could walk between a transit stop to and from work within 5-minutes; and, 26.4% of people could ride a bike between a transit stop to and from work within 5-minutes.

By 2050, it is estimated that nearly 25% of people could walk between a transit stop to and from work within 5-minutes (an increase of 222%); and, 56% could ride a bike between a transit stop to and from work within 5-minutes (an increase of 185%).

Access within 5-Minutes

- **Number of Jobs within 5-Minute Walking Access to a Transit Stop (Approximately 0.25 miles @ a walking speed of 3 miles per hour)**
- **Number of Jobs within 5-Minute Biking Access to a Transit Stop (Approximately 0.75 miles @ biking speed of 9 miles per hour)**
- **Number of Jobs within 5-Minute Access by Car to a Transit Stop (Approximately 2.0 miles @ a driving speed of 25 miles per hour)**
- **Remainder of the Number of Jobs in the San Diego Region without Access to a Transit Stop within 5-Minutes to and from Work**

BIG IDEAS

Several overarching ideas have driven the development of the Regional TOD Strategy. These ideas define an approach to looking at transit oriented districts in the San Diego region and have informed specific strategies and actions.

Big Idea: Connecting Jobs and Housing along a Network of TODs

While connectivity to the surrounding context is critical for each TOD, a successful network of TODs throughout the region should have coordinated land uses. Most TODs have a mixture of uses, to varying degrees, that include a combination of mixed-use buildings and single-use buildings within a mixed-use district. However, some TODs serve as primarily employment or special-use centers, some as residential centers, and others as entertainment or cultural centers. Coordinating uses along the same line can help build a market for real estate within the individual TODs, reinforcing each other.

For example, if one TOD on a line is a major employment center and other TODs along the same line focus on housing, they are reinforced when the housing is at a price-point mix that is consistent with the wages paid by employers in the employment center. If a TOD is an institutional center, such as a medical and hospital district or a university, an opportunity exists to provide housing along the line not just for workers, but for customers as well—senior housing in the case of medical needs, and student and faculty housing in the case of universities. This reinforces the institution, while the institution creates demand for the specialty housing. The direct access to a workforce and customers attracts employers to TOD locations along the line. The direct access to jobs and services attracts residents to TOD locations along the same line. The attraction of employers and residents creates demand for real estate, which attracts investors and developers to implement TODs—if the appropriate urban form, densities, and land use regulations are in place. The base of workers and customers creates demand for commercial-retail development within a TOD area and along the line.
Big Idea: Transit’s Important Role in the Region’s Transportation System

Transit is a component of a comprehensive and efficient regional transportation system. A successful transit system helps support other modes of transportation, such as walkable districts, bicycle networks, and car sharing. An effective transit system also supports a well-functioning highway and freeway network. The difference between a congested roadway and one where traffic can flow freely is at the margin. It is the last few cars entering the system that reduce travel speeds and can eventually lead to congestion. Several factors increasingly limit the ability to expand roadway capacity, including the diminishing supply and rising cost of land for right-of-way, inconsistency with mixed-use and pedestrian-oriented urban forms envisioned in many of the general plans adopted by local jurisdictions in the San Diego region, and the external environmental and health costs of air pollution and GHG emissions associated with more driving. A good transit system can play a role in addressing travel congestion by enabling the roadway system to operate more efficiently and achieving complementary benefits, such as improved regional air quality. In a successful, complete transportation network with competitive options, equilibrium can be achieved as people choose the option—walking, biking, transit, driving, or combination—that best meets their needs that day and time.

Big Idea: 5-Minute Access by Walking, Biking, or Driving

Transit oriented districts depend on convenient accessibility to transit by foot, bike, and car (whether driving alone, carpooling, taking a shuttle, or car sharing). No two districts are the same, and the area that is conveniently accessible is often different for each district given their distinct context and geography.

Defining the “catchment areas” for each transit station can help identify what areas are conveniently accessible within 5-minutes of each transit station by foot, bike, and car. Measuring access within 5-minutes can help identify areas where people are most likely to take transit and areas where travel time on transit may be most comparable to driving.

Models that identify “catchment areas” should reflect the unique characteristics of a site and the existing roadway networks (and their suitability, or lack of, for pedestrians and bicyclists), as well as other physical and natural constraints such as topography that can affect the time it takes to get to a transit station. Using realistic assessments of accessibility can help identify clear areas of priority for infrastructure that improve access to a transit station and can identify areas where new development can contribute most to TODs. A broad range of residential and employment choices can be compatible with the access- and amenity-rich environments associated with TODs.

5-Minute Access to a Transit Stop by Mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Approximate Distance and Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking Access</td>
<td>Approximately 0.25 miles @ a walking speed of 3 miles per hour</td>
</tr>
<tr>
<td>Biking Access</td>
<td>Approximately 0.75 miles @ a biking speed of 9 miles per hour</td>
</tr>
<tr>
<td>Access by Car</td>
<td>Approximately 2.0 miles @ a driving speed of 25 miles per hour</td>
</tr>
</tbody>
</table>
Example Of “5-Minute Catchment Area” For Civic Center - Vista Sprinter Station
Access is defined as follows:

TOD Transit Network includes:

- All rail stops (2012: Trolley, Sprinter, Coaster).
- All rapid bus stops. (2012: I-15 BRT, Mid-City BRT, Rapid Express Services)
- All other bus stops with two or more routes, with 15 minute peak period frequency, with ridership > 400/day.
- Identified stations that meet thresholds for current 2012, and planned service in 2020, 2035, and 2050.

5-minute access sheds for walking, biking, and driving for each station are based on:

- 0.25 miles at a walking speed of 3 mph
- 0.75 miles at a biking speed of 9 mph
- 2 miles at a driving speed of 25 mph
Access is defined as follows:

TOD Transit Network includes:
- All rail stops (2012: Trolley, Sprinter, Coaster).
- All rapid bus stops. (2012: I-15 BRT, Mid-City BRT, Rapid Express Services)
- All other bus stops with two or more routes, with 15 minute peak period frequency, with ridership > 400/day.
- Identified stations that meet thresholds for current 2012, and planned service in 2020, 2035, and 2050.

5-minute access sheds for walking, biking, and driving for each station are based on:
- 0.25 miles at a walking speed of 3 mph
- 0.75 miles at a biking speed of 9 mph
- 2 miles at a driving speed of 25 mph
Access is defined as follows:
TOD Transit Network includes:
- All rail stops (2012: Trolley, Sprinter, Coaster).
- All rapid bus stops. (2012: I-15 BRT, Mid-City BRT, Rapid Express Services)
- All other bus stops with two or more routes, with 15 minute peak period frequency, with ridership > 400/day.
- Identified stations that meet thresholds for current 2012, and planned service in 2020, 2035, and 2050.

5-minute access sheds for walking, biking, and driving for each station are based on:
- 0.25 miles at a walking speed of 3 mph
- 0.75 miles at a biking speed of 9 mph
- 2 miles at a driving speed of 25 mph
Access is defined as follows:

**TOD Transit Network includes:**
- All rail stops (2012: Trolley, Sprinter, Coaster).
- All rapid bus stops. (2012: I-15 BRT, Mid-City BRT, Rapid Express Services)
- All other bus stops with two or more routes, with 15 minute peak period frequency, with ridership > 400/day.
- Identified stations that meet thresholds for current 2012, and planned service in 2020, 2035, and 2050.

5-minute access sheds for walking, biking, and driving for each station are based on:
- 0.25 miles at a walking speed of 3 mph
- 0.75 miles at a biking speed of 9 mph
- 2 miles at a driving speed of 25 mph
STRATEGIES

If TODs are to be successful, integral to the region’s Sustainable Communities Strategy, and transformative for the region’s management of future growth, they should become a priority of all parties involved in their implementation.

Implementation of this Regional TOD Strategy requires the coordination of multiple parties - SANDAG (who plans, designs, funds, and constructs the regional transit network), the San Diego Metropolitan Transportation System (MTS) and North County Transportation District (NCTD) (who operate the transit system and own some land near stations), local jurisdictions (who have land use, infrastructure financing, and development approval authority), the investor and development community (who finance and build the housing, workplaces, and commercial projects within a TOD), major employers (who choose where to locate and are the major market driver for TODs along a transit line), and the public (who are the consumers of TODs as users, residents, workers, and visitors).

The following are the major strategies and actions identified as part of this Regional TOD Strategy to support the San Diego region as its transit oriented districts continue to evolve into the future. These strategies and actions are focused on overcoming common barriers in the five key areas of TOD implementation as described in the working papers that were prepared to inform this strategy. These five key areas include: Urban Form, Density, and Land Use; Connections: Travel Options, Mobility Management and Access Enhancements; Housing Choices and Affordability; Financing Infrastructure and Community Facilities; and CEQA Streamlining and Travel Forecasting.

The strategies and actions address the many factors that affect the feasibility of TOD implementation, including availability and size of parcels, property and project costs, market rents, available financing, regulations and entitlement processes, the type and scale of development permitted, and community support.
Strategy #1

Ensure that core areas within transit oriented districts have a compact, diverse, and highly interconnected range of land uses and activities, consistent with targets identified in SANDAG’s Smart Growth Concept Map.

The urban form of transit oriented districts is different in each transit oriented community. A mix of land uses surrounding a transit station can facilitate more housing, access to employment, and neighborhood serving retail to support people living and working nearby. Public open space, civic and institutional uses, and other special use centers also provide strong anchors for transit oriented districts. Parcel configuration, block size, building massing, scale of buildings in relation to the street and people, and the amount of parking relative to active street frontage, and other factors are critical to the success of transit oriented districts. Increasing the number of people that live and work near transit provides more people with convenient access to transit. At the same time, as more people live and work near transit, ridership will increase. Planning policies and regulations that shape urban form, density, and land use, including zoning codes, engineering standards, and design guidelines can have a significant influence on transit oriented districts.

Actions to Continue/Consider by SANDAG:

- Continue to use the Smart Growth Concept Map as a foundation for future planning efforts that link land use and transportation and a foundation for planning transit oriented districts.
- Continue to promote the use of Designing for Smart Growth, Creating Great Places in the San Diego Region as a tool for local governments and developers.
- Consider ways to facilitate the coordination of land use, housing, and economic development strategies along transit lines and corridors.

Actions to Continue/Consider by Local Governments:

- Continue to develop station area plans that identify a vision for future development, specify appropriate uses, set targets for minimum and maximum density and intensity and include development standards, design guidelines, and other policy tools.
- Consider evaluating proposed developments using the Smart Growth Scorecard included in the Designing for Smart Growth, Creating Great Places in the San Diego Region.
- Consider tailoring zoning ordinances (i.e., new zoning districts or overlay zones), subdivision ordinances, development standards, and parking requirements within transit oriented districts.
- Consider ways to coordinate land use, housing, and economic development strategies along corridors.

Actions to Continue/Consider by Transit Agencies:

- Consider creating a survey of properties owned, a plan for disposition, and a policy for development with transit oriented districts.
Strategy #2
Connect people to jobs in transit oriented districts.

People who work near a transit station are more likely than people who live near a transit station to commute by transit, and employment density is much more highly correlated with transit ridership than is residential density. Access to employment is a key driver of transit oriented districts and is a challenge for the San Diego region. Transit corridors and systems that provide direct connections to downtown or major employment centers are significantly more likely to attract new development compared to transit lines that do not serve a central business district or major employment concentration. In addition to attracting more development, transit corridors and systems that connect to employment centers are also likely to support higher ridership.10

Actions to Continue/Consider by SANDAG:

- Continue to leverage future transportation investments identified in San Diego Forward: The Regional Plan to enhance connections to jobs; and, to consider access to employment as part of the Transportation Project Evaluation Criteria and Ranking for transit services.11
- Continue to build on the ongoing Regional Mobility Hubs Implementation Plan to enhance connectivity to jobs by different modes of transportation, including walking, biking, ridesharing, and public transit.12
- Continue to assess access to employment density as part of alternative analysis planning studies conducted for future transportation projects, consistent with the Federal Transportation Administration New and Small Starts Evaluation and Rating Process.13
- Continue to support local employer investment in vanpools, shuttle services and other Transportation Demand Management (TDM) strategies.

Actions to Continue/Consider by Local Governments:

- Continue to work toward bridging the first-last mile gap to provide access to jobs, consistent with Strategy 3 and Strategy 4.
- Consider measuring and monitoring jobs-housing balance within transit oriented districts.
- Consider encouraging employers participation in regional TDM programs that promote transit use by employees.
Strategy #3
Promote walking and biking within transit oriented districts to bridge the first-last mile gap.

Walking and biking can extend the catchment areas around a transit station to provide connections to and from home and work, without the need for a car, and allow more people to take transit. For walking and biking to be viable ways of accessing transit stations, infrastructure improvements may be needed to provide enhanced access to transit that is safe and convenient.

Actions to Continue/Consider by SANDAG:

- Continue to support the implementation of the Regional Complete Streets Policy as part of the development of all SANDAG transportation infrastructure projects.14
- Continue to leverage investments identified in the Regional Bike Plan Early Action Program (EAP) to enhance connectivity to transit.15
- Continue to include relation to transit, bicycle facilities, and walkability as ranking criteria for TransNet Smart Growth Incentive Program Capital Grants;16 consider including stronger criteria for relation to transit, bicycle facilities, and walkability as ranking for TransNet Smart Growth Incentive Program Planning Grants.17
- Continue to include connection to transit as a criterion for the SANDAG Active Transportation Grant Program; consider including criteria related to Smart Growth Opportunity Areas and transit oriented districts.18
- Consider building on the Regional Safe Routes to Transit Plan and developing focused studies for Safe Routes to Transit in areas of need (like the Kearny Mesa Rapid Safe Routes to Transit project).19
- Consider seeking additional funding specifically for Complete Streets plans and investments that link to transit stations.
- Consider expanding grant funding programs to include mobility management as an eligible activity and to increase funding for access improvements critical to TODs.
Actions to Continue/Consider by Local Governments:

- Continue to adopt and implement Complete Streets policies to ensure that roads are safe and accessible in transit oriented districts.

- Continue to implement the requirements of the California Complete Streets Act of 2008 when updating circulation elements.²⁰

- Consider how thresholds for significance established for compliance with the CEQA can be adapted to reflect walking and biking, and consider how exemptions and streamlining may be used to implement infrastructure improvements for walking and biking.

- Consider using capital improvement programs (CIPs) to prioritize biking and walking improvements within transit oriented districts.
Strategy #4

Provide access for vehicles, and manage parking within transit oriented districts to bridge the first-last mile gap.

It is important to take an active role in providing policies, programs, and facilities that provide a range of transportation choices and shape transportation decisions. Carpooling, vanpooling, taking a shuttle or circulator, or using car sharing or ridesharing, kiss and rides (passenger drop off) and other vehicular based transportation modes can help complement public transit by extending the ability for people to get to and from home and work. Parking supply, pricing, and other management tools are also important ways of shaping how people get to and from transit stations.

Actions to Continue/Consider by SANDAG:

- Continue to build on the ongoing Regional Mobility Hubs Implementation Plan to enhance connectivity to jobs by different modes of transportation, including walking, biking, ridesharing, and public transit.21
- Continue to promote other transportation demand management (TDM) measures that can increase the range of transportation options and shape transportation decisions.
- Continue to support local jurisdictions seeking to implement parking management programs.
- Consider promoting services and technology that provide on-demand mobility options and shared-use mobility that can facilitate carpooling, vanpooling, car sharing, and bike sharing.

Actions to Continue/Consider by Local Governments:

- Continue to form public-private partnerships to develop mobility options, such as bike share, car share or employer-provided shuttles.
- Continue to integrate TDM measures, such as provision of bike and pedestrian facilities, carpool, vanpool and shuttle services, in the planning and development process.22
- Continue to include transportation demand management measures in conditions of approval or development agreements for reduced trip generation rates, reduced parking requirements, and lower impact fees as part of enhanced entitlements for projects.23
- Consider integrating TDM measures, such as investment in transit services, and transit pass incentives for workers and residents in the planning and development process.
• Continue to consider transportation demand management measures to avoid, reduce, or mitigate transportation impacts identified through CEQA by reducing trip generation rates or lowering parking demand.

• Consider the evaluation and implementation of strategies in SANDAG’s Parking Management Toolbox to improve mobility in transit oriented districts, including unbundled parking.24

Actions to Continue/Consider by Transit Agencies:

• Consider providing parking for carshare and bikeshare at transit stations.
Strategy #5

Develop tools, techniques, and resources to engage a broad range of stakeholders and perspectives in the design and planning of transit oriented districts.

No two transit oriented districts in the San Diego region are the same, and each one will continue to evolve into a distinct place. Public participation is critical for the success of transit oriented districts and can help ensure that opportunities and constraints within each transit oriented district are reflected in plans, policies, and regulations that apply to development projects in transit oriented districts. Public participation can help ensure that urban form, density, and height are compatible with the surrounding community, while still allowing incremental and context sensitive growth.

Actions to Continue/Consider by SANDAG:

- Continue to provide support to member agencies smart growth planning and development efforts.25
- Consider developing and hosting an online, interactive tool to evaluate the TOD readiness of sites and districts that can be used by SANDAG, local jurisdictions, transit agencies, developers, community groups, and others (see Strategy #12).
- Consider showcasing existing transit oriented districts online, through SANDAG publications, field trips, and other information and knowledge exchange forums.
- Consider developing an outreach and information program using videos, social media, internet tools, traditional public meetings, and other platforms to showcase the benefits of transit oriented districts highlighting places near transit, testimonials of users of transit, people who live and work in transit oriented districts, and major employers located in transit oriented districts.

Actions to Continue/Consider by Local Governments:

- Continue to facilitate robust public participation and community involvement efforts during the planning process.
- Continue to set expectations for future development when preparing general plans, station area plans, and specific plans that will shape the overall character of a transit oriented district.
- Continue to communicate the importance of transit oriented districts in meeting community goals, improving community character, expanding housing choices, providing a variety of opportunities for people to live, work and play.
Strategy #6
Create clear rules that provide a predictable development process, and focus on removing regulatory barriers.

Encouraging quality, predictable, context-sensitive design outcomes can lower risk not only for the investor or developer, but also for the public and community (including entitlement, time delay, and political risk). Reactive or negotiated zoning approaches can introduce uncertainty and cause project delays or even denial of a project after significant predevelopment investment. Consistent format and procedural requirements can provide predictability and establish an entitlement process that also results in good design. Good plans and policies can also reduce the risk of asset value erosion by ensuring that other properties nearby are subject to similar standards of quality.

Actions to Continue/Consider by SANDAG:

- Continue to fund the preparation of specific plans to guide development in transit oriented districts through TransNet Smart Growth Incentive Program Planning Grants.26, 27
- Continue to support updates to local general plans, specific plans, and zoning that implement transit oriented districts through the Intergovernmental Review (IGR) process.
- Continue to promote the use of Designing for Smart Growth, Creating Great Places in the San Diego Region for design and planning strategies that support transit oriented districts.

Actions to Continue/Consider by Local Governments:

- Continue to prepare specific plans, update zoning, development standards, development review process, and design guidelines to establish standards for development with transit oriented districts.
- Consider whether tools such as form based zoning codes would be helpful in facilitating development within transit oriented districts.
- Continue to prepare Program EIRs for specific plans and zoning updates for transit oriented districts; allow subsequent projects to tier-off Program EIRs.
- Consider establishing a multi-disciplinary TOD action team to coordinate transportation, development, housing, environmental, and infrastructure policies and to develop integrated strategies to promote transit oriented projects specific to each jurisdiction.
- Consider allowing through the use of policy and regulations a mixture of uses within a TOD, without requiring each building to be mixed-use in every location; a variety of densities and building types; flex-space whose use can change over time; height regulated by stories rather than feet, shared parking districts; and reduced minimum parking requirements within TODs.
Strategy #7

Explore opportunities to streamline CEQA guidance and processes.

Recent state legislation lays out opportunities for CEQA streamlining for infill projects. However, many local governments are not able to fully implement the benefits of the legislation because their comprehensive planning documents, traffic impact review procedures, and locally adopted CEQA guidance have not been updated to reflect changes in state law. Transit oriented districts present opportunities to facilitate development and infrastructure projects through streamlined environmental review processes.

Actions to Continue/Consider by SANDAG:

- Continue to support and explore opportunities to streamline California Environmental Quality Act (CEQA) guidelines and processes to facilitate development projects in transit oriented districts and support implementation of the SCS.

Actions to Continue/Consider by Local Governments:

- Continue to prepare Program EIRs to cover projects consistent with specific plans and zoning for transit oriented districts; allow subsequent projects to tier-off Program EIR. (Also included in Strategy #6.)
- Continue updating and/or adopting revised CEQA processing and significance criteria guidelines that reflect the most recent legislation related to streamlining and that facilitate transit oriented districts.
Strategy #8
Update transportation impact methodology.

With the passage of recent legislation, vehicle miles traveled (VMT) has become one recommended method for measuring transportation impacts. Recent state legislation seeks to streamline infill and transit oriented projects by shifting how transportation impacts are measured—away from conventional trip generation/roadway level of service (LOS) analyses and toward more substantive approaches that incorporate a project trip’s length, duration, quality and purpose. LOS standards only ration existing roadway capacity.

Actions to Continue/Consider by SANDAG:

- Continue to support the transition to travel model tools that support non-LOS-based performance standards.
- Continue to validate the travel model’s suitability through before-and-after scenarios within the model stream before its application for estimating development projects in transit oriented districts.
- Continue to develop documentation materials and provide outreach and support to help local communities understand and defend the enhanced capabilities of the travel model specifically related to the analysis of development projects in transit oriented districts.
- Consider exploring the idea of adding specific variables and modeling procedures to improve the model’s estimation of impacts of development projects in transit oriented districts.
- Consider assisting local jurisdictions by developing a post-processing toolbox that takes the travel model outputs and reports performance measures geared toward development projects in transit oriented districts and their area of influence.

Actions to Continue/Consider by Local Governments:

- Consider updating local CEQA significance criteria with the focus toward VMT-based thresholds.
Strategy #9
Paying for community facilities and infrastructure.

The success of transit oriented districts, as with all communities, depends on adequate infrastructure and public facilities. Transit oriented districts may require significant investments in infrastructure and community facilities to support new development, including high-quality transit; increased utility capacity; the replacement of aging infrastructure systems; public spaces; mobility and place-making improvements, such as sidewalks, bike lanes, and streetscapes; and public facilities and services. The ability to prioritize discretionary infrastructure spending can assist in filling financing gaps by directing public investment to enhance transit supportive areas.

Actions to Continue/Consider by SANDAG:

- Continue to include relation to transit, bicycle facilities, and walkability as ranking criteria for TransNet Smart Growth Incentive Program Capital Grants; consider including stronger criteria for relation to transit, bicycle facilities, and walkability as ranking for TransNet Smart Growth Incentive Program Planning Grants. (Also included in Strategy #3.)
- Continue to include connection to transit as a criterion for SANDAG Active Transportation Grant Program; consider including criteria related to Smart Growth Opportunity Areas and transit oriented districts. (Also included in Strategy #3.)
- Consider seeking additional funding specifically for Complete Streets plans and investments that link to transit stations.
- Consider including mobility management and access improvements critical to TODs as eligible activities in local grant programs.

Actions to Continue/Consider by Local Governments:

- Consider using the Capital Improvement Program (CIP) process to give priority to community facilities and infrastructure projects in transit oriented districts.
- Consider evaluating the feasibility of establishing Enhanced Infrastructure Financing Districts (EIFDs) or districts for tax increment generation.
- Consider developing facilities financing plans that identify sources of funding for improving, or increasing the capacity of, infrastructure, parks and open space, necessary services, and other public realm improvements within transit oriented districts.
Consider forming a regional Community Facilities District (CFD) in transit oriented districts, in cooperation with willing jurisdictions, to generate revenue for supportive public facilities and infrastructure. A CFD could either be a dis-contiguous district or a contiguous district connected by transit, with a nexus established by the transit connections.

Consider transitioning existing parking districts into mobility districts and creating new mobility districts in transit oriented districts that allow funds collected to be used for a wider variety of mobility solutions.

Consider using value capture techniques; either as part of a community plan or zoning code update that increases density, as an incentive or bonus zoning program; or as part of a negotiated development agreement to provide a way to pay for extraordinary community facilities and infrastructure that benefit the community.
Strategy #10

Encourage public-private partnerships and explore emerging tools for financing development projects.

Private developer-investor equity, combined with debt, is the conventional form of financing a development project. Targeted federal, state, and local grants can also help provide additional sources of financing for real estate development projects. Other emerging tools, such as pooled investment funds also offer financing for development projects in transit oriented districts. Other forms of public-private partnership can also be effective, such as reduced impact fees, land assembly, and conveying land that is already entitled to help subsidize development costs to catalyze development in transit oriented districts.

Actions to Continue/Consider by SANDAG:

- Continue to provide support for projects seeking financing through the Affordable Housing and Sustainable Communities Grant Program.
- Continue working with other public, non-profit, and private sector stakeholders to explore establishing a public-private pooled investment fund focusing on development projects in transit oriented districts.

Actions to Continue/Consider by Local Governments:

- Continue to partner with developers to participate in the California Affordable Housing and Sustainable Communities Program.

Actions to Continue/Consider by Transit Agencies:

- Consider leveraging joint development and land disposition policies in transit oriented districts.

Actions to Continue/Consider by Developers:

- Continue exploring public-private partnerships.
- Continue to partner with public agencies to participate in the California Affordable Housing and Sustainable Communities Program.
Strategy #11
Maximize the benefits of locating affordable housing and workforce housing in transit oriented districts.

Residents of affordable housing are more likely to use transit and less likely to own a car. In addition, the combined cost of housing and transportation can provide a more complete understanding of affordability; and, providing more housing near transit can reduce the cost of housing and transportation for households in transit oriented districts. Affordable housing developers may not be able to compete with market-rate builders for development sites. Local height and density limits, high parking ratios, and other regulatory requirements can also pose barriers to affordable (as well as market-rate) development near transit.

Actions to Continue/Consider by SANDAG:

- Continue to advocate for block grants provided through the California Affordable Housing and Sustainable Communities program, to maximize benefit and ensure consistency with SANDAG’s Sustainable Communities Strategy.
- Continue to include affordable housing as an important criterion in the TransNet Smart Growth Incentive Program (SGIP) for Planning Grants and Capital Grants.
- Consider developing a regional affordable housing parking demand study, as was done in the City of San Diego, to evaluate feasibility of lower parking requirements for affordable housing.
- Consider working with other public, non-profit, and private sector stakeholders to explore establishing a public-private pooled investment fund focusing on affordable housing in transit oriented districts (whether with financial resources, technical assistance, or other forms of support).

Actions to Continue/Consider by Local Governments:

- Continue to consider lower parking requirements for affordable housing and unbundled parking in transit oriented districts.
- Continue to use the Housing Element update process to identify opportunities for affordable housing development on publicly owned land within transit oriented districts.
- Consider establishing zoning districts that accommodate affordable housing.
• Consider focusing Community Development Block Grant (CDBG) and HOME allocations and other public facility funding programs on affordable housing in transit oriented districts.

• Continue to monitor the process for competitive grants issued by U.S. Department of Housing and Urban Development (HUD), U.S. Department of Transportation (DOT), and U.S. Environmental Protection Agency (EPA).

• Consider using underutilized or surplus land near transit for affordable housing development or other community development purposes.

Actions to Consider by Transit Agencies:

• Consider how underutilized or surplus land near transit could be used for affordable housing.
Strategy #12
Promote market readiness and development feasibility.

Sharing information about the real estate development market throughout the San Diego region can help showcase successful case studies, highlight emerging opportunities, and identify trends that emerge over time.

Actions to Continue/Consider by SANDAG:

- Consider developing market studies, marketing to developers, hosting development summits, and identifying ready sites, tools and technical assistance to support development in transit oriented districts.

- Consider developing an online TOD readiness tool for property owners, developers, investors, lenders, and the general public to use to identify potential near-, mid-, and long-term opportunities.

- Consider creating and updating regularly a regional TOD performance database of market performance (occupancy and absorption), rents and prices per square foot, and development costs by building types, parking ratio categories, and location, and publishing an annual “Market State of TODs.”

- Consider every three years, commissioning a random sample survey of residents and employees within TODs regarding their use of transit and active transportation to reach their destinations and parking.

Actions to Continue/Consider by Local Governments:

- Consider analyzing aggregate property and sales tax revenue by major use categories in TODs within the jurisdiction annually to assess trends over time.
Actions to Continue/Consider by Transit Agencies:

- Continue to identify sites, including air-rights, available for public-private partnerships for development projects in transit oriented districts.
- Continue to work with local jurisdictions to entitle sites, and proactively promote the sites to the development community and investors.
- Consider coordinating with SANDAG to create a “readiness” tool showcasing development opportunities in transit oriented districts.

Actions to Consider by Developers:

- Consider through industry associations, preparing TOD case studies to inform public agencies, the public, and the industry about lessons learned.
Strategy #13

Prioritize “ready” transit oriented districts.

Given the scarcity of resources, the region should focus on places of high readiness and high potential benefit—that is, transit oriented districts that can “move the needle” in the near- to mid-term with targeted actions. Places that are ready today—in terms of transit connectivity, market strength, available land, supportive regulations, and local support—may need little more than visibility and marketing to attract private investment. Places that are generally ready, but lack a key ingredient or two, are targets for gap-filling public investment and/or actions that can help overcome the remaining barriers to TOD.

Actions to Continue/Consider by SANDAG:

- Consider readiness metrics included in this Regional TOD Strategy to help policy makers, local jurisdictions, communities, and private investors evaluate and prioritize opportunities for development in transit oriented districts.
- Consider developing an on-line, interactive tool to evaluate the TOD readiness of sites and districts that can be used by SANDAG, local jurisdictions, transit agencies, developers, community groups, and others.
- Consider creating an online information clearinghouse to showcase existing development projects in transit oriented districts, highlight proposed projects, and share other resources.
- Consider using/promoting the readiness dashboard and an online information clearinghouse as a resource for stakeholders.

Actions to Continue/Consider by Local Governments:

- Consider prioritizing “ready” areas through Capital Improvement Programs (CIPs).
- Continue developing station area plans, updating zoning, and preparing Program Environmental Impact Reports (EIRs).
- Consider how all of the actions included in the Regional TOD Strategy can be applied to help make Smart Growth Opportunity Areas “ready.”
Assessing Project Readiness

Readiness Framework

The figure below illustrates the intersection of TOD readiness and potential benefit. The intent of this two-dimensional framework is to identify Smart Growth Opportunity Areas that are ready or emerging and that offer potentially high or medium benefit—that is, locations that fall under Priorities 1 and 2.

Through application of these readiness metrics to the roughly 200 Smart Growth Opportunity Areas in the region, agencies can identify the best near- and mid-term opportunities. Other users, such as investors, developers, and community interests, could adjust the weighting of factors to reflect their individual priorities.

To create a set of metrics that help identify high-readiness/high-benefit TOD opportunities, it is necessary to establish three parameters: the appropriate unit of geographic measurement; the appropriate time horizons for defining “readiness”; and distinct metrics for TOD readiness and TOD benefits. In principle, the highest-priority locations for public intervention and/or private investment would be those that rate high on both dimensions.
Geographic Unit of Measurement

SANDAG’s Smart Growth Concept Map, first adopted in 2006 and updated most recently in October 2014, identifies over 200 Smart Growth Opportunity Areas that illustrate the location of existing, planned, and potential smart growth areas. The Smart Growth Opportunity Areas are categorized by seven smart growth “place types”: the Metropolitan Center, Urban Centers, Town Centers, Community Centers, Rural Villages, Mixed Use Transit Corridors, and Special Use Centers. The different place type designations are based on whether the areas meet minimum housing, employment and transportation targets.

Time Horizons and Future Transit Projects

This Regional TOD Strategy is focused on “ready” TOD sites in the near-term and opportunities over the mid-term 2015-2030 time frame. Transit projects that are projected for implementation during this time period would be considered when assessing project readiness for TODs. In addition to the recently implemented I-15 Rapid and Mid-City Rapid, examples of other projects that are projected for implementation by 2020 are the Mid-Coast Light Rail Line and South Bay Rapid, along with frequency enhancements to existing local and express bus services.

It is understood that San Diego Forward: The Regional Plan includes three time horizons used to measure progress toward key performance indicators: 2020, 2035, and 2050. However, for purposes of measuring TOD readiness and thereby helping to focus public and private implementation efforts where TOD has the best chance of taking root, the closer mid-term horizon of 2025 was chosen.

Three broad time horizon categories have been identified: ready, emerging, and future.

- **Ready (near-term):** These are areas where, based on existing conditions, significant TOD could be under construction by the end of 2020. For this purpose, existing conditions include major transit improvements that are expected to complete construction and enter service by 2020, such as the Mid-Coast Light Rail Extension.

- **Emerging (mid-term):** These are areas that score in the middle range of the readiness metrics, suggesting they could have significant new or expanded TOD underway by around 2025, a decade from now. By that time, the San Diego regional market will be more experienced with TOD, and additional transit improvements listed in San Diego Forward: The Regional Plan will have advanced to construction.

- **Future (long-term):** The remaining Smart Growth Opportunity Areas will be ranked as Future. These areas may have land, market, and regulatory disadvantages compared to the Ready and Emerging locations, or they may depend on transit improvements not expected to be implemented until 2030 or beyond.
Level of Readiness Metrics

An area is TOD-ready to the degree that it enjoys a favorable combination of transit service, economic submarket strength, developable property, and local government support. Readiness metrics that differentiate the time horizon and whether a TOD is a ready (near-term), emerging (mid-term), or future (long-term) opportunity include:

**Location in the Transit Network**
- Type of Transit Service
- Access to Employment
- Catchment Area Connectivity (access to surrounding area)
- Daily Ridership

**Local Market Readiness**
- Station Area Density
- Residential Market Performance
- Commercial Market Performance
- Development Activity

**Land Resource**
- Developable Area
- Pattern of Land Ownership
- TOD Fabric (suitable streets, sidewalks, utilities, open spaces, etc.)
- Major Site Constraints

**Government and Regulatory Support**
- TOD District Designation (by local government)
- Zoning
- Environmental Review Status
- Infrastructure and Facilities Funding

Level of Benefit Metrics

A high-benefit TOD opportunity is one that can create, expand, or intensify a transit oriented community of substantial scale. Metrics that differentiate higher-benefit TOD opportunities could include:

<table>
<thead>
<tr>
<th>Level of Benefit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Place Typology</td>
<td></td>
</tr>
<tr>
<td>Multimodalism</td>
<td></td>
</tr>
<tr>
<td>Planned Housing Density</td>
<td></td>
</tr>
<tr>
<td>Planned Employment Density</td>
<td></td>
</tr>
<tr>
<td>Developable Area</td>
<td></td>
</tr>
</tbody>
</table>
Endnotes

3. Center for Transit-Oriented Development. (September 2004). Hidden in Plain Sight: Capturing the Demand for Housing Near Transit.
6. Ibid.
22. Ibid.


APPENDIX

A. Supporting Documents
B. Local Stakeholder Feedback
C. Policy Context-State, Regional, Local
Supporting Documents

Background documents have been prepared to support development of the Strategy.

A Context Report offers a snapshot of the current policies, growth patterns, demographic trends, market characteristics, and ongoing initiatives that will continue to shape TOD opportunities in the San Diego region.

An Economic Context Report also was prepared that presents new market data and financial feasibility analysis, builds on literature review findings on local and regional best practices for facilitating TOD, incorporates findings from stakeholder focus groups convened for this project.

Working Papers focus on issues associated with implementing TODs in the region, including common challenges, exemplary practice examples, and ideas for consideration. The Working Papers address the following topic areas:

- Urban Form, Density and Land Use
- Financing Infrastructure and Community Facilities
- Housing Choices and Affordability
- CEQA Streamlining and Travel Forecasting
- Connections: Travel Options, Mobility Management and Access Enhancements
- Readiness Criteria: Metrics for Transit Oriented Districts
Local Stakeholder Feedback

As part of the TOD Strategy for the San Diego Region, SANDAG conducted a series of focus group interviews with stakeholders representing non-profit organizations, local governments, public agencies, transit providers, and the private sector. The purpose of these sessions was to gather targeted, specific feedback on TOD challenges and opportunities in the region.

While participants noted specific challenges to TOD implementation, they also saw positive opportunities to develop transit oriented projects and neighborhoods in the region. Comments also generally reflected an understanding that increased density and improved transit system connectivity will play an important role in accommodating the region’s growth and maintaining its future economic competitiveness.

TOD Implementation Forum: National and local leaders participated in a two-day forum to discuss implementation challenges and identify opportunities to create TOD projects in the San Diego region. The forum included presentations and a video highlighting the TOD experiences of other metropolitan areas and the applicability of these practices in addressing implementation challenges in the San Diego region.

Key Findings from Stakeholder Input

- Community opposition can pose a major challenge for TOD implementation
- There is growing recognition that changing demographics and shifts in market preferences support more compact communities and vibrant city and town centers
- Connecting housing to jobs is important to both employers and residents
- TOD projects can provide more low- to moderate-income housing opportunities, but there are continued obstacles to delivering affordable housing
- The region has promising areas for TOD projects
- Successful TOD is about the thoughtful design and planning of the broader setting and transportation network
- The state regulatory environment, in particular how the California Environmental Quality Act (CEQA) is applied, can create barriers
- The market economics for TOD remain challenging but flexibility and predictability can help to reduce barriers
- It is important for the regional strategy to set priorities and focus.
Policy Context
State, regional, and local policies have set a foundation for the future of TOD in the San Diego region.

The Sustainable Communities and Climate Protection Act of 2008 (SB 375)
State mandates for GHG emission reductions have built significant momentum behind transit oriented planning. Senate Bill (SB) 375 directs the California Air Resources Board (CARB) to set regional targets for reducing GHG emissions from passenger vehicle use. SANDAG, as the designated Metropolitan Planning Organization (MPO) for the region, is required to develop a Sustainable Communities Strategy (SCS) as an element of its Regional Transportation Plan (RTP). San Diego Forward: The Regional Plan includes strategies that integrate transportation, land use, and housing policies to achieve demonstrable reductions in GHG emissions per capita.

2050 Regional Transportation Plan and Sustainable Communities Strategy
The SANDAG Board of Directors approved the 2050 Regional Transportation Plan and its Sustainable Communities Strategy (2050 RTP/SCS) for the San Diego region, becoming the first large region in California to prepare an RTP under SB 375. The 2050 RTP/SCS demonstrates how development patterns and the transportation network, policies, and programs will work together to achieve the GHG emission reduction targets.

In combination, the 2050 RTP/SCS results in the following accomplishments:

- Meets the state’s GHG reduction targets;
- Focuses growth in the western third of the region;
- Preserves more than half of regional land as open space;
- Provides $214 billion of planned transportation investments;
- Provides more than 150 new miles of trolley service;
- Doubles the region’s transit service miles, and
- Accommodates housing to meet the region’s projected growth.

San Diego Forward: The Regional Plan
SANDAG is spearheading a broad-based community effort to create San Diego Forward: The Regional Plan. It will combine a big picture vision for regional growth over the next 35 years with an implementation program to help make that vision a reality. SANDAG is working in close partnership with all of the region’s cities and the county government to create an innovative plan for the growth of communities.

San Diego Forward: The Regional Plan will unite two major SANDAG planning efforts into one document and will build upon local planning efforts, emphasizing the link between land use planning and transportation planning.

Other SANDAG Plans
The TOD strategy builds on and complements numerous other SANDAG studies that promote expanded accessibility and mobility choices in the region.

**Urban Area Transit Strategy (UATS).** Prepared as part of the 2050 RTP/SCS, the UATS seeks to maximize transit ridership in the greater urbanized area of the region and to test the role of the transit network to reduce vehicle miles traveled (VMT) and GHG emissions. The 2050 RTP/SCS added 60 additional miles of light rail transit and other transit service because of this project.

**Light Rail Advanced Planning Study.** This study conducts advance planning on the four new rail lines outlined in the 2050 RTP/SCS, providing a detailed analysis of ridership potential, capital and operating costs, system infrastructure needs, and potential alignments and station locations.

**Regional Housing Needs Assessment (RHNA) Plan.** SANDAG conducted the RHNA process for the fifth housing element cycle in conjunction with the 2050 RTP/SCS. The RHNA Plan allocates RHNA numbers in four income categories to each of the region’s 19 jurisdictions, incorporating local plans that call for higher density housing in urbanized areas adjacent to transit, protection of environmental and agricultural resources, and significant increases in the region’s multifamily housing capacity since the 2030 Regional Growth Forecast.

**San Diego Regional Bicycle Plan.** The Regional Bike Plan, adopted in May 2010, establishes a network of regional bikeway corridors for intercommunity bicycle travel and proposes a comprehensive set of programs to support bicycling to make the bicycle a practical means of transportation in the San Diego region.

**Regional Complete Streets Policy.** The SANDAG Board of Directors adopted a Regional Complete Streets Policy in 2014. Implementation actions include a project development checklist to ensure all projects implemented by SANDAG consider local mobility plans and accommodate the needs of all travel modes.

**Safe Routes to School Programs.** At the local level, a number of jurisdictions have initiated comprehensive Safe Routes to School programs to encourage more walking and bicycling to school. SANDAG approved a Regional Safe Routes to School Strategic Plan to guide future SANDAG involvement in promoting walking and bicycling to school as safe and attractive travel choices.

**Safe Routes to Transit.** The Safe Routes to Transit Program prioritizes projects and develops programs that provide bicycle and pedestrian access around existing and planned transit stops and stations. SANDAG works closely with the local jurisdictions to identify opportunities to complement projects and programs identified in their bicycle and pedestrian plans.

**First and Last Mile.** Transit can get riders close but not close enough for many trips. SANDAG’s goal is to increase transit accessibility and ridership by improving access to and from stations. To move toward this goal, SANDAG completed the First Mile and Last Mile Solutions for Transit Centers Study to identify potential pilot projects that would bridge the access gap between home and the transit station (first mile), and between the transit station and work (last mile).

**Initiatives Underway**

**TransNet.** TransNet is the regional half-cent sales tax collected to finance transportation improvements. The extension approved in 2004 provides for a $280 million smart growth incentive fund to support capital projects such as sidewalks, plazas, streetscape enhancements, and improvements to transit stations, as well as general plan updates, specific plans, and zoning regulations. In addition, approximately $5 million a year of the available funds will go to bicycle paths and facilities, pedestrian improvements, neighborhood safety projects, and the Regional Bike Plan Early Action Program.
**TransNet Smart Growth Incentive Program (SGIP).** The TransNet SGIP provides funding to the cities and County of San Diego for transportation-related infrastructure and planning projects that support smart growth and transit oriented development in Smart Growth Opportunity Areas (SGOAs) as shown on the Smart Growth Concept Map. The goal of this competitive grant program is to fund projects that catalyze compact, mixed use development around transit. An estimated $280 million is expected to be available over the 40 year lifetime of TransNet. Three cycles of funding have taken place since the program started.

**TransNet Active Transportation Grant Program (ATGP).** The TransNet ATGP provides funding to the cities and County of San Diego for projects that encourage the increased use of active modes of transportation, including biking and walking. Through competitive grants the ATGP funds capital improvements, planning projects, and programs that educate, encourage, and raise awareness about biking and walking as viable alternatives to get to work, shopping, and other daily activities. An estimated $280 million is expected to be available over the 40 year lifetime of TransNet. Three cycles of funding have taken place since the program started.

**Regional Bike Plan Early Action Program (EAP).** The Bike EAP is a $200 million initiative to expand the bike network countywide and finish high-priority projects within a decade. The EAP comprises 42 projects totaling about 77 miles of new bikeways, with projects prioritized based on several key criteria, such as proximity to smart growth areas.

**Regional Mobility Hubs.** Mobility hubs are places of enhanced connectivity where different modes of transportation, including walking, biking, ridesharing, and public transit, come together around concentrations of employment, housing, retail, and other services. Multiple mobility options, including carshare, bikeshare, Lift, Uber, taxi, shuttle, jitneys, and other modes, can bridge the distance between transit and individual origin or destination points. SANDAG has received a state transportation planning grant from Caltrans to develop a San Diego County and Imperial Valley Regional Mobility Hubs Implementation Plan. Working with the Imperial County Transportation Commission, SANDAG will lead the plan to develop conceptual designs and strategies for different mobility hub station place types within the region.
San Diego Regional Benchmarking Study Group

In 2012, the American Society of Civil Engineers (ASCE) published the San Diego County Infrastructure Report Card, which graded our regional infrastructure. The overall grade given was a “C.” As economic growth in California improves, many public agencies are increasing their capital improvement programs (CIPs) to address their deteriorating or inadequate infrastructure.

Regionally, San Diego is geographically isolated with Mexico to the south, the Pacific Ocean to the west, and desert areas east. Many public agencies believe because of our unique location it costs us more to construct than other areas in California.

In addition, public agencies are continuing to be asked to do more with fewer resources. This includes providing detailed information on how they are estimating their project budgets, increasing their efficiency in delivering services by exploring alternative delivery methods, employing best management practices, implementing continuous training programs, and developing best-in-class capabilities.

In 2014 San Diego Regional Construction Procurement Committee (RCPC) initiated the San Diego Regional Benchmarking Study (Study) in an effort to share the collective CIP implementation cost data of seven member agencies (Agencies) in San Diego region for the purpose of understanding and establishing cost guidelines for determining the project delivery costs and sharing best management practices to enhance programmatic efficiencies. The Study provides a forum for the Agencies to share cost information with a focus on project delivery costs as a ratio of the soft project administrative/development costs to hard construction costs. The purpose of this collaboration is to share the best ideas of the group for the benefit of all and to gather insight on how to address challenges that might appear to be new, but which others have already faced and addressed successfully.
CONTENTS

A. Introduction .......................................................................................................................... 3
B. Performance Benchmarking ................................................................................................. 3
C. Performance Database ........................................................................................................ 3
D. Characteristics of Data Analyzed ......................................................................................... 5
E. Regression Analyses ........................................................................................................... 7
F. Project Delivery Percentages as Ranges of TCC ................................................................. 7
G. Other Considerations ........................................................................................................... 8
H. Conclusions ......................................................................................................................... 8

Appendix A – Questionnaire

Tables:

Table 1 ................................................... Project Counts by Project Type (DBB and DB)
Table 2 ................................................................ Project Counts by Project Type (DBB)
Table 3 ................................................................... Project Counts by Project Type (DB)
Table 4 ................. Average Project Delivery Costs by Project Type (DBB) – Full Range
Table 5 ............Average Project Delivery Costs by Project Type (DB) – Full Range
Table 6 .................. Average Project Delivery Costs by Project Type (DBB) – 80% Range
Table 7 .................. Average Project Delivery Costs by Project Type (DB) – 80% Range
Table 8 ............. Project Delivery Performance and Consultant Usage by Agency (DBB)
Table 9 ............Project Delivery Performance and Consultant Usage by Agency (DB)
Table 10 ......................... Overall Project Delivery Percentages for Project Types (DBB)
Table 11 ............................ Overall Project Delivery Percentages for Project Types (DB)

CONTRIBUTORS

City of San Diego ......................... James Nagelvoort, Mohsen Maali, Rex Dunn
County of San Diego .............. Ramin Abidi, Terrence Rayback, Orelia DeBraal
Caltrans ................................................................. Lou Melendez, Ross Cather
Water Authority ........................................................ Vic Baines, Jeff Shoaf
Airport Authority ........................................................ Iraj Ghaemi, Michael Tilley
City of Carlsbad ........................................................................ Patrick McGarry
SANDAG ................................................................. Bill Prey, Veronica Serrano
NAVFAC ............................................................................................ Tom Clark
A. Introduction

In 2012, the American Society of Civil Engineers (ASCE) published the San Diego County Infrastructure Report Card, which graded our regional infrastructure. The overall grade given was a “C.” As economic growth in California improves, many public agencies are increasing their capital improvement programs (CIPs) to address their deteriorating or inadequate infrastructure. Regionally, San Diego is geographically isolated with Mexico to the south, the Pacific Ocean to the west, and desert areas east. Many public agencies believe because of our unique location it costs us more to construct than other areas in California.

In addition, public agencies are continuing to be asked to do more with fewer resources. This includes providing detailed information on how they are estimating their project budgets, increasing their efficiency in delivering services by exploring alternative delivery methods, employing best management practices, implementing continuous training programs, and developing best-in-class capabilities.

In 2014 San Diego Regional Construction Procurement Committee (RCPC) initiated the San Diego Regional Benchmarking Study (Study) in an effort to share the collective CIP implementation cost data of seven member agencies (Agencies) in San Diego region for the purpose of understanding and establishing cost guidelines for determining the project delivery costs and sharing best management practices to enhance programmatic efficiencies. The Study provides a forum for the Agencies to share cost information with a focus on project delivery costs as a ratio of the soft project administrative/development costs to hard construction costs.

The purpose of this collaboration is to share the best ideas of the group for the benefit of all and to gather insight on how to address challenges that might appear to be new, but which others have already faced and addressed successfully. This data is contained in a Microsoft Excel® database that serves as both a repository of the Agencies’ projects and a tool for data analysis and discussion.

Seven public agencies were selected that had sufficient project information and could take the lead in developing the templates and process. The public agencies are the City of San Diego, County of San Diego, Caltrans, San Diego Water Authority, San Diego County Regional Airport Authority, City of Carlsbad, SANDAG, and NAVFAC. Unfortunately, despite initial interest and participation, NAVFAC did not submit the required cost data due to the technical difficulties in extracting the cost data.

B. Performance Benchmarking

Performance benchmarking involves collecting documented project costs and plotting the administrative and development component costs of project delivery against the Total Construction Cost (TCC). The objective is to develop relationships between variables by performing statistical analyses. Over time, we hope that the results coupled with a larger and more diverse database will yield significantly better correlation compared to current year of the Study.

C. Performance Database

The data is collected from the Agencies using a Performance Questionnaire. The data is compiled, reviewed, vetted, and compiled in a customized Microsoft Excel® database. A copy of the current
Performance Questionnaire can be found in Appendix A. In the future, a Microsoft Access® database will be used to not only serve as a repository for the data collected, but also allow for data analysis using built-in functions. The database will provide specific reports and tables for easy data interpretation.

The database contains 660 projects for years as far back as 1996. However, submittals from only 320 met the minimally complete criteria from all participants for the years 2010 to 2013. These were used in the calculations as shown in tables 1, 2, and 3. The distribution of DBB project types used in the study is as shown in Figure 1.

**Figure 1 – DBB Project Types Distribution**

In addition, projects delivered by alternative delivery methods are excluded from the analysis but included in the database for future analysis. The projects selected do not include projects delivered by alternative delivery mechanisms such as Job Order Contracting (JOC) and Construction Management At Risk (CMAR) except Design-Build (DB).

It is recommended that at least 10 projects per classification and a minimum data set of 2,000 projects distributed evenly among classifications, ranges of TCC, to achieve statistically-significant results. For this study, Agencies self identified the outlier projects in their databases. In the future, we may have to analyze outliers using statistical techniques to ensure consistency in the selection of outlier data points. Therefore, the submittal may include more projects than needed to ensure an even distribution of projects amongst all classifications and the number of projects analyzed could be significantly lower due to the criteria selected for the inclusion of projects in the analyses.

The Agencies acknowledge that it is vital to the success of the Study to continue increasing the size of the data set, thereby increasing the confidence, consistency, and reliability of results.
As indicated in the attached summary tables, the project types include:

1. **Municipal Facilities**
   - Libraries
   - Police/Fire Stations
   - Community Buildings/ Recreational Centers
2. **Streets**
   - Widening/New Grade Separation
   - Bridges
   - Road Reconstruction
   - Bike/Pedestrian
   - Signals
3. **Pipe Systems**
   - Gravity Systems
   - Pressure Systems
4. **Parks**
   - Playgrounds
   - Sports Fields
   - Restrooms
5. **Airport**
   - Airport Construction
   - Vertical Construction
   - Bus Terminal/Shelter Construction
6. **Railroad**
   - Railways/Roadbed/Signal/Track
   - Heavy Horizontal

### D. Characteristics of Data Analyzed

Project performance data are analyzed at the Project Type level and for various years. Tables 1, 2, and 3 summarize characteristics of the projects included in the analyses by project completion year.

Tables 4 and 5 show trends in the average TCC values, median TCC values, design costs, construction management costs, and overall project delivery costs. The median value is the value at which 50% of the values are above and 50% of the values are below.

Projects belonging to the Municipal Facilities project type have the lowest average project type delivery percentage while the Airport category had the highest project delivery percentage. The Pipe Systems category has the maximum number of projects (111 projects). The Streets category also has a similar number of projects in the database (100 projects). The average Design-Bid-Build (DBB) project delivery percentages (Tables 8 & 9) for the overall dataset are approximately 41% (DBB) and 25% (DB) considering the full range of TCC. See Figure 2.

![Figure 2 – DBB Project Delivery Costs](image)

For future reports, we will monitor and study project size fluctuations, project delivery costs measured as a percentage of the TCC over years looking for trends and possible reasons e.g., the “Below Market Rate” bids, Prevailing Wages, and Lead Certifications. In addition, factors such as Agency personnel turnover...
and major organizational changes which impact productivity and efficiency will also be monitored to determine any deviations.

Tables 4 and 5 show project delivery cost by each DBB project category for the full range of TCC. The average project type delivery percentage for a category is the arithmetic average of the project type delivery percentages of the individual projects grouped under that category. See Figure 2 for a summary of the project delivery cost by each DBB project type.

**Figure 3 - Average Project Delivery Costs by Project Type (DBB) - Full Range**

![Bar chart showing average project delivery costs by project type (DBB) - Full Range.]

**Figure 4 - Average Project Delivery Costs by Project Type (DBB) – 80% Range**

![Bar chart showing average project delivery costs by project type (DBB) – 80% Range.]
Table 6 and 7 show project delivery costs by each project type for the 80th percentile projects subset by TCC. This subset generally characterizes the projects in the category being examined. This evaluation was done because it was generally believed that project delivery for the very large projects did not characterize the typical projects in the type being examined. Though the trends in the project delivery costs for the projects in the 80th percentile subset of TCC follow that of the projects in the full range of TCC; project delivery costs are higher for projects that fall in the 80th percentile subset of TCC.

Project delivery performance and consultant usage by agency are presented in Tables 8 and 9. For DBB (Design Bid Build) projects, an average of approximately 58% of the design work and approximately 52% of the construction management efforts are completed in-house by the Agencies. Consultants account for an average of approximately 42% of the total project delivery costs while in-house efforts by the Agencies accounts for the remaining 48% of the project delivery costs. For the limited available data, a clear relationship between the level of in-house effort and project delivery costs cannot be established at this time.

The project delivery percentage for a category is the arithmetic average of the project delivery percentages of the individual projects grouped under that category.

Tables 10 and 11 summarize the overall project delivery percentages for project types for full range and 80th percentile sublet data.

E. Regression Analyses

The projects included in this analysis followed the following criteria:

- Outliers are excluded by the Agencies prior to submittal
- Projects with TCC greater than $100,000 are only included
- Analysis does not include nor mixes alternative delivery projects

In the future as more data is incorporated, a statistically-sound method for outlier analysis (e.g., linear trend line regression with the upper and lower bounds of a 95% confidence interval) will be used. This method will allow us to predict a higher degree of accuracy as compared to the current analysis.

F. Project Delivery Percentages as Ranges of TCC

Based on experience and the California Multi-Agency CIP Benchmarking Study, Agencies believe the results will reflect that on a percentage basis, projects with lower TCCs are more expensive to deliver than projects with higher TCCs. In the future, the modeling methodology will be further refined by analyzing the data in two ranges of TCC (i.e., small and large projects), in addition to evaluating the projects by a smaller 80% subset, to evaluate the project delivery percentages on smaller subsets.
The project delivery percentage as a range of TCC analysis will not replace or supersede the regression analysis results. The project delivery percentage as a range of TCC analysis will be an alternative way to group and analyze the projects to evaluate trends. These results should be viewed in conjunction with the regression analysis to better understand trends.

G. Other Considerations

1. Size of the Database

Increasing the size of the project database can be a major challenge if the group decides on a 5-year rolling window criterion for project completion dates. As new projects are added, old projects will be excluded from analyses that fall within the 5 year window of time. The Agencies will need to identify as many completed projects as possible that meet the criteria. The benefits of projects delivered via alternative delivery techniques need to be quantified by including them for analysis in the project database. However, due to the significant difference in delivery mechanisms, those projects will have to be analyzed separately from the rest of the projects in the database.

2. Best Management Practices (BMP) Implementation and Project Delivery Costs

A desired goal for Agencies is for project delivery cost percentages to decrease as agencies implement BMPS resulting in enhanced programmatic efficiencies. However, project variations, Agency procedures along with market conditions and other factors affect results. Although for this preliminary study, no BMPs were discussed, the Agencies plan to identify BMPs as part of the study expansion in the future.

Each year the Agencies will look at industry changes in order to identify new BMPs. Occasionally, existing BMPs will be reworked by the Agencies to address specific challenges encountered during implementation. BMPs will be added or modified to reflect relevant experiences by the participants. Each Agency’s implementation of these selected practices will be tracked during the Study.

While it is not possible to quantify all the benefits of the BMPs, the participating Agencies will need to develop an approach to identify the major benefits associated with each BMP. This can be accomplished by assigning a Perceived Value to each BMP believed to directly influence cost, schedule, communication, and customer service aspects of either design or construction management, and, ultimately, project delivery efficiency.

H. Conclusions

1. Performance Benchmarking

This first round of Performance Benchmarking involved analysis of 319 projects for projects delivered using the traditional design-bid-build method and also design-build method separately. It is a good “first step” in capturing project data to help determine future trends in the region and to assist public agencies in evaluating their current performance and enhance their own internal efficiencies. For future studies, the Agencies may decide to collect costs data for projects delivered via other “Alternative Delivery Methods” for analysis when sufficient project data is collected to facilitate meaningful analyses.
Although the results of the performance analyses are based on historical data provided, there are several factors that could affect project delivery percentages and are not captured in the performance model. These external factors include personnel turnover in the Agencies, competitive bids, prevailing wages, LEED certifications, major system and organizational change implementations, etc. which impact project delivery. Since such factors are not captured in the performance model, the reader is cautioned that the results of the analyses can only be used as a reference and not for prediction of performance. It is also recommended that the reader use their best judgment in the context of the current economic conditions when using the results for planning and budgeting.

2. Best Management Practices

The Agencies will continue to exchange ideas regarding strategies for developing and implementing various BMPs.

3. Online Discussion Forum

The open dialog among Agencies continues to be an important feature for Study participants. Active, meaningful exchanges occur along with important issues being addressed resulting in changes to policy, approach, or BMP implementation. Participants continue sharing information via conference calls, e-mails and during the face-to-face meetings and once the RCPC website is launched, through the Online Discussion Forum. The interesting outcomes of these discussions are presented to the public through the Study reports. The continued sharing of challenges and solutions through the Online Discussion Forum is expected to be a remarkable benefit to all participants.

4. Planning for Next Update

Over the course of study, the Project Team identified a number of activities to consider next year. These activities include:

- Continue discussions on how to develop, implement, and track BMPs;
- Continue collecting data on projects delivered via alternative delivery techniques;
- Continuing meaningful exchanges of ideas and discussion on current topics;
- Complete construction of the Online Discussion Forum;
- Secure the services of a Consultant for facilitating and coordinating the future studies; and
- Compare our results with other benchmarking data from other areas.
# QUESTIONNAIRE

## Regional Construction Procurement Committee Project Cost Template

<table>
<thead>
<tr>
<th>Asset Type:</th>
<th>Project ID:</th>
</tr>
</thead>
<tbody>
<tr>
<td>New/Rehab:</td>
<td></td>
</tr>
<tr>
<td>Const Contract Type:</td>
<td></td>
</tr>
<tr>
<td>LEED Green Building?</td>
<td></td>
</tr>
<tr>
<td>Prevailing Wages?</td>
<td></td>
</tr>
<tr>
<td>Construction Completion Date:</td>
<td></td>
</tr>
<tr>
<td>Number of Bids Received:</td>
<td></td>
</tr>
</tbody>
</table>

## Project Description:

### Cost Categories

<table>
<thead>
<tr>
<th>Development Phase</th>
<th>Construction Phase</th>
<th>All Phases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>% of TCC*</td>
</tr>
<tr>
<td>AGENCY LABOR - SOFT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONSULTANT CONTRACTS - SOFT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION CONTRACT - HARD (AWARDED AMOUNT)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION CONTRACT - HARD (FINAL AMOUNT)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>AGENCY PROVIDED MATERIALS/EQUIPMENT - HARD</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION LABOR (AGENCY CREWS) - HARD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION WORK BY OTHERS - HARD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(A) SUBTOTAL - SOFT  -  
(B) SUBTOTAL - HARD (TCC)  -  
(A) + (B) TOTAL PROJECT COST*  -

Note: Land and ROW related costs are excluded.
### Table 1
Project Count by Project Type (DBB and DB)

<table>
<thead>
<tr>
<th>Project Completion Date (CY)</th>
<th>Count By Project Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Airport Construction</td>
<td>Municipal Facilities</td>
</tr>
<tr>
<td>2010 Totals</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>2011 Totals</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>2012 Totals</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>2013 Totals</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>(Totals)</td>
<td>23</td>
<td>44</td>
</tr>
</tbody>
</table>

#### By Construction Contract Type

<table>
<thead>
<tr>
<th></th>
<th>D-B-B</th>
<th>JOC</th>
<th>DB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Construction</td>
<td>23</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Municipal Facilities</td>
<td>26</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Parks</td>
<td>8</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Pipe Systems</td>
<td>104</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Railroad Construction</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Streets</td>
<td>98</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>259</td>
<td>14</td>
<td>46</td>
</tr>
</tbody>
</table>

(Totals)
### Table 2
Project Counts By Project type (DBB) (CY 2010-2013)

<table>
<thead>
<tr>
<th>Project Completion Date (CY)</th>
<th>Count By Project Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Airport Construction</td>
</tr>
<tr>
<td>2010 Totals</td>
<td>8</td>
</tr>
<tr>
<td>2011 Totals</td>
<td>4</td>
</tr>
<tr>
<td>2012 Totals</td>
<td>5</td>
</tr>
<tr>
<td>2013 Totals</td>
<td>6</td>
</tr>
<tr>
<td>ALL</td>
<td>23</td>
</tr>
</tbody>
</table>

#### By Construction Contract Type

<table>
<thead>
<tr>
<th>Contract Type</th>
<th>D-B-B</th>
<th>JOC</th>
<th>DB</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-B-B</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>JOC</td>
<td>0</td>
<td>5</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>DB</td>
<td>0</td>
<td>8</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>ALL</td>
<td>23</td>
<td>49</td>
<td>18</td>
<td>112</td>
</tr>
</tbody>
</table>
### Table 3
#### Project Count (DB)

<table>
<thead>
<tr>
<th>Project Completion Date (CY)</th>
<th>Airport</th>
<th>Municipal Facilities</th>
<th>Parks</th>
<th>Pipe Systems</th>
<th>Railroad</th>
<th>Streets</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 Totals</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>2011 Totals</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>2012 Totals</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2013 Totals</td>
<td>0</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>(Totals)</td>
<td>0</td>
<td>18</td>
<td>8</td>
<td>11</td>
<td>7</td>
<td>2</td>
<td>46</td>
</tr>
</tbody>
</table>

#### By Construction Contract Type

<table>
<thead>
<tr>
<th></th>
<th>D-B-B</th>
<th>JOC</th>
<th>DB</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 Totals</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>2011 Totals</td>
<td>26</td>
<td>5</td>
<td>18</td>
<td>49</td>
</tr>
<tr>
<td>2012 Totals</td>
<td>8</td>
<td>2</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>2013 Totals</td>
<td>104</td>
<td>5</td>
<td>11</td>
<td>120</td>
</tr>
<tr>
<td>(Totals)</td>
<td>98</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>98</td>
<td>0</td>
<td>7</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>259</td>
<td>14</td>
<td>46</td>
<td>319</td>
</tr>
</tbody>
</table>
### Table 4 (CY 2010-2013)
**Average Project Delivery Costs By Project Type (DBB) - Full Range**

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Design</th>
<th>Construction Management</th>
<th>Total % of TCC</th>
<th>Median Total Construction Cost ($M)</th>
<th>Number of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Construction</td>
<td>34%</td>
<td>20%</td>
<td>54%</td>
<td>0.99</td>
<td>23</td>
</tr>
<tr>
<td>Municipal Facilities</td>
<td>11%</td>
<td>13%</td>
<td>24%</td>
<td>0.83</td>
<td>26</td>
</tr>
<tr>
<td>Parks</td>
<td>31%</td>
<td>18%</td>
<td>49%</td>
<td>0.49</td>
<td>8</td>
</tr>
<tr>
<td>Pipe Systems</td>
<td>17%</td>
<td>21%</td>
<td>38%</td>
<td>1.45</td>
<td>104</td>
</tr>
<tr>
<td>Streets</td>
<td>19%</td>
<td>23%</td>
<td>42%</td>
<td>0.99</td>
<td>98</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>22%</td>
<td>19%</td>
<td>41%</td>
<td>0.95</td>
<td>259</td>
</tr>
</tbody>
</table>

### Table 5 (CY 2010-2013)
**Average Project Delivery Costs By Project Type (DB) - Full Range**

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Design</th>
<th>Construction Management</th>
<th>Total % of TCC</th>
<th>Median Total Construction Cost ($M)</th>
<th>Number of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Construction</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Municipal Facilities</td>
<td>4%</td>
<td>11%</td>
<td>15%</td>
<td>0.77</td>
<td>18</td>
</tr>
<tr>
<td>Parks</td>
<td>22%</td>
<td>17%</td>
<td>39%</td>
<td>0.35</td>
<td>8</td>
</tr>
<tr>
<td>Pipe Systems</td>
<td>13%</td>
<td>13%</td>
<td>26%</td>
<td>2.01</td>
<td>11</td>
</tr>
<tr>
<td>RR Construction</td>
<td>22%</td>
<td>16%</td>
<td>37%</td>
<td>4.96</td>
<td>7</td>
</tr>
<tr>
<td>Streets</td>
<td>13%</td>
<td>8%</td>
<td>22%</td>
<td>0.15</td>
<td>2</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>15%</td>
<td>13%</td>
<td>27%</td>
<td>1.65</td>
<td>46</td>
</tr>
</tbody>
</table>
### Table 6 (CY 2010-2013)
**Average Project Delivery Costs By Project Type (DBB) - 80% Range**

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Design</th>
<th>Construction Management</th>
<th>Total % of TCC</th>
<th>Median Total Construction Cost ($M)</th>
<th>Number of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Construction</td>
<td>46%</td>
<td>26%</td>
<td>72%</td>
<td>0.80</td>
<td>18</td>
</tr>
<tr>
<td>Municipal Facilities</td>
<td>27%</td>
<td>23%</td>
<td>50%</td>
<td>0.69</td>
<td>21</td>
</tr>
<tr>
<td>Parks</td>
<td>32%</td>
<td>19%</td>
<td>51%</td>
<td>0.44</td>
<td>6</td>
</tr>
<tr>
<td>Pipe Systems</td>
<td>28%</td>
<td>18%</td>
<td>46%</td>
<td>1.18</td>
<td>84</td>
</tr>
<tr>
<td>Streets</td>
<td>33%</td>
<td>25%</td>
<td>59%</td>
<td>0.63</td>
<td>78</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>33%</td>
<td>22%</td>
<td>55%</td>
<td>0.75</td>
<td>207</td>
</tr>
</tbody>
</table>

### Table 7 (CY 2010-2013)
**Average Project Delivery Costs By Project Type (DB) - 80% Range**

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Design</th>
<th>Construction Management</th>
<th>Total % of TCC</th>
<th>Median Total Construction Cost ($M)</th>
<th>Number of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Construction</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Municipal Facilities</td>
<td>9%</td>
<td>23%</td>
<td>33%</td>
<td>0.65</td>
<td>14</td>
</tr>
<tr>
<td>Parks</td>
<td>25%</td>
<td>22%</td>
<td>47%</td>
<td>0.27</td>
<td>6</td>
</tr>
<tr>
<td>Pipe Systems</td>
<td>23%</td>
<td>15%</td>
<td>38%</td>
<td>1.51</td>
<td>9</td>
</tr>
<tr>
<td>RR Construction</td>
<td>22%</td>
<td>29%</td>
<td>51%</td>
<td>3.76</td>
<td>5</td>
</tr>
<tr>
<td>Streets</td>
<td>14%</td>
<td>14%</td>
<td>29%</td>
<td>0.10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>19%</td>
<td>21%</td>
<td>40%</td>
<td>1.26</td>
<td>35</td>
</tr>
</tbody>
</table>
## Table 8 (CY 2010-2013)
Project Delivery Performance and Consultant Usage by Agency (DBB)

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>DESIGN</th>
<th>CONSTRUCTION MANAGEMENT</th>
<th>PROJECT DELIVERY</th>
<th>TCC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In-House</td>
<td>Consultants</td>
<td>Total % of TCC</td>
<td>In-House</td>
</tr>
<tr>
<td>Agency A</td>
<td>$(38.2)</td>
<td>71%</td>
<td>$15.4</td>
<td>29%</td>
</tr>
<tr>
<td>Agency B</td>
<td>$(10.8)</td>
<td>55%</td>
<td>$7.4</td>
<td>38%</td>
</tr>
<tr>
<td>Agency C</td>
<td>$(23.7)</td>
<td>100%</td>
<td>-</td>
<td>0%</td>
</tr>
<tr>
<td>Agency D</td>
<td>$(7.3)</td>
<td>32%</td>
<td>$15.3</td>
<td>68%</td>
</tr>
<tr>
<td>Agency E</td>
<td>-</td>
<td>0%</td>
<td>$(32.9)</td>
<td>100%</td>
</tr>
<tr>
<td>Agency F</td>
<td>$(0.9)</td>
<td>16%</td>
<td>$4.8</td>
<td>84%</td>
</tr>
<tr>
<td>Agency G</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Overall</td>
<td>$(81.0)</td>
<td>52%</td>
<td>$(75.8)</td>
<td>48%</td>
</tr>
</tbody>
</table>

Notes:
1. In-House and Consultant costs are expressed as percentages of total agency Design, CM (Construction Management), and PD (Project Delivery) costs.
2. Total Construction Cost (TCC) is the sum of construction contract award, change orders, utility relocation cost, and agency construction forces construction cost.
### Table 9 (CY 2010-2013)
Project Delivery Performance and Consultant Usage by Agency (DB)

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>DESIGN</th>
<th>CONSTRUCTION MANAGEMENT</th>
<th>PROJECT DELIVERY</th>
<th>TCC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In-House</td>
<td>Consultants</td>
<td>Total % of TCC</td>
<td>In-House</td>
</tr>
<tr>
<td>Agency A</td>
<td>5.13</td>
<td>83%</td>
<td>1.07</td>
<td>17%</td>
</tr>
<tr>
<td>Agency B</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Agency C</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Agency D</td>
<td>1.45</td>
<td>28%</td>
<td>3.80</td>
<td>72%</td>
</tr>
<tr>
<td>Agency E</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Agency F</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Agency G</td>
<td>0.83</td>
<td>11%</td>
<td>6.81</td>
<td>89%</td>
</tr>
<tr>
<td>Overall</td>
<td>7.41</td>
<td>39%</td>
<td>11.68</td>
<td>61%</td>
</tr>
</tbody>
</table>

**Notes:**
1. In-House and Consultant costs are expressed as percentages of total agency Design, CM (Construction Management), and PD (Project Delivery) costs.
2. Total Construction Cost (TCC) is the sum of construction contract award, change orders, utility relocation cost, and agency construction forces construction cost.
### Table 10 (CY 2010-2013)
Overall Project Delivery Percentages for Project Type (DBB)

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Full Range</th>
<th>80th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Construction</td>
<td>54%</td>
<td>72%</td>
</tr>
<tr>
<td>Municipal</td>
<td>24%</td>
<td>50%</td>
</tr>
<tr>
<td>Parks</td>
<td>49%</td>
<td>51%</td>
</tr>
<tr>
<td>Pipeline Systems</td>
<td>38%</td>
<td>46%</td>
</tr>
<tr>
<td>Streets</td>
<td>42%</td>
<td>59%</td>
</tr>
<tr>
<td>Average</td>
<td>41%</td>
<td>55%</td>
</tr>
</tbody>
</table>

### Table 11 (CY 2010-2013)
Overall Project Delivery Percentages for Project Type (DB)

<table>
<thead>
<tr>
<th>(Design Build Only)</th>
<th>Project Delivery Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Type</td>
<td>Full Range</td>
</tr>
<tr>
<td>Airport Construction</td>
<td></td>
</tr>
<tr>
<td>Municipal</td>
<td>39%</td>
</tr>
<tr>
<td>Parks</td>
<td>26%</td>
</tr>
<tr>
<td>Pipeline Systems</td>
<td>26%</td>
</tr>
<tr>
<td>Rail-Road</td>
<td>37%</td>
</tr>
<tr>
<td>Streets</td>
<td>22%</td>
</tr>
<tr>
<td>Average</td>
<td>27%</td>
</tr>
</tbody>
</table>