Friday, June 14, 2013
10 a.m. to 12 noon
SANDAG Board Room
401 B Street, 7th Floor
San Diego

AGENDA HIGHLIGHTS

• OPTIONS FOR ENHANCED BOARD INVOLVEMENT IN CONTRACT APPROVAL PROCESS

PLEASE TURN OFF CELL PHONES DURING THE MEETING

YOU CAN LISTEN TO THE BOARD OF DIRECTORS MEETING BY VISITING OUR WEBSITE AT WWW.SANDAG.ORG

MESSAGE FROM THE CLERK

In compliance with Government Code §54952.3, the Clerk hereby announces that the compensation for legislative body members attending the following simultaneous or serial meetings is: Executive Committee (EC) $100, Board of Directors (BOD) $150, and Regional Transportation Commission (RTC) $100. Compensation rates for the EC and BOD are set pursuant to the SANDAG Bylaws and the compensation rate for the RTC is set pursuant to state law.

MISSION STATEMENT

The 18 cities and county government are SANDAG serving as the forum for regional decision-making. SANDAG builds consensus, makes strategic plans, obtains and allocates resources, plans, engineers, and builds public transit, and provides information on a broad range of topics pertinent to the region's quality of life.

San Diego Association of Governments  ·  401 B Street, Suite 800, San Diego, CA 92101-4231
(619) 699-1900  ·  Fax (619) 699-1905  ·  www.sandag.org
Welcome to SANDAG. Members of the public may speak to the Board of Directors on any item at the time the Board is considering the item. Please complete a Speaker’s Slip, which is located in the rear of the room, and then present the slip to the Clerk of the Board seated at the front table. Members of the public may address the Board on any issue under the agenda item entitled Public Comments/Communications/Member Comments. Public speakers are limited to three minutes or less per person. The Board of Directors may take action on any item appearing on the agenda.

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 e-mail request to webmaster@sandag.org.

Public comments regarding the agenda can be forwarded to SANDAG via the e-mail comment form available on the website. E-mail comments should be received no later than 12 noon, two working days prior to the Board of Directors meeting. *Any handouts, presentations, or other materials from the public intended for distribution at the Board of Directors meeting should be received by the Clerk of the Committee no later than 12 noon, two working days prior to the meeting.*

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BOARD OF DIRECTORS  
Friday, June 14, 2013

ITEM #  | RECOMMENDATION
--- | ---
1. | PUBLIC COMMENTS/COMMUNICATIONS/MEMBER COMMENTS

Public comments under this agenda item will be limited to five public speakers. Members of the public shall have the opportunity to address the Board on any issue within the jurisdiction of SANDAG that is not on this agenda. Other public comments will be heard during the items under the heading “Reports.” Anyone desiring to speak shall reserve time by completing a “Request to Speak” form and giving it to the Clerk of the Board prior to speaking. Public speakers should notify the Clerk of the Board if they have a handout for distribution to Board members. Public speakers are limited to three minutes or less per person. Board members also may provide information and announcements under this agenda item.

CHAIR’S REPORT (2)

2. | RECOGNITION OF PHILLIP JOHNSTON, RETIRING SANDAG OFFICE SERVICES SPECIALIST III

REPORTS (3)

+3. | OPTIONS FOR ENHANCED BOARD INVOLVEMENT IN CONTRACT APPROVAL PROCESS (Laura Coté, Jim Linthicum, and Colleen Windsor)

The existing Board-approved policies authorize the Executive Director to enter into agreements and take other actions necessary to implement the SANDAG Program Budget. At the April Board Policy meeting, staff was directed to review current Board policies and agency practices with respect to contracting authority and to provide options that could provide for more Board involvement in the contracting process. Additional information regarding the capital project budget process, use of social media in public outreach and involvement, and written reports also will be presented.

4. | CONTINUED PUBLIC COMMENTS

If the five speaker limit for public comments was exceeded at the beginning of this agenda, other public comments will be taken at this time. Subjects of previous agenda items may not again be addressed under public comment.

5. | UPCOMING MEETINGS

The next Board Business meeting is scheduled for Friday, June 28, 2013, at 9 a.m. The next Board Policy meeting is scheduled for Friday, July 12, 2013, at 10 a.m.

6. | ADJOURNMENT

+ next to an agenda item indicates an attachment
OPTIONS FOR ENHANCED BOARD INVOLVEMENT IN CONTRACT APPROVAL PROCESS

Introduction

On April 12, 2013, the Board of Directors directed staff to review the following programs and processes and to return with information for the Board’s consideration:

1. Options for enhanced Board involvement in the contract approval process
2. Budgeting options that provide more specificity
3. Use of social media within the public outreach and involvement program
4. Alternatives to the way reports are written in order to enhance their readability

Discussion

Delegation of Contracting Authority

At the Board meeting in April, staff was directed to review current Board policies and agency practices with respect to contracting authority and to provide options for the Board to consider that could provide for more Board involvement in the contracting process. The current contracts process follows Board Policy No. 017: Delegation of Authority, which authorizes the Executive Director to approve all solicitations and subsequent contracts, task orders and contract amendments as long as sufficient funds are in the Board-approved project budget(s).

In support of the Board’s discussion regarding Board Policy No. 017, information was compiled in order to illustrate the number of procurement solicitations conducted in a typical year and the total dollar value and percentage that these represent. Approximately 80 percent of all solicitations conducted annually by SANDAG can be categorized into professional services or construction. The remaining 20 percent include agreements such as intergovernmental memoranda of understanding/agreement, Service Bureau agreements, grants, and purchase orders.

The Board of Directors is asked to review and discuss the proposed options for enhanced involvement in the contract approval process for professional services and construction contracts.
Professional Services

Professional services solicitations establish contracts for projects or needs and are evaluated based on the best value. Examples include consultants for architecture, engineering, planning, communications, legal, financial services, technical services/research, temporary services/staffing, employee training, auditors, office services, software development and support, model development, and motorist aid services, among others.

As shown in Table 1 below, based on dollar value, approximately 84 percent of professional services solicitations in calendar year 2012 were valued at $5 million or more.

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<th>Amount</th>
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<th>Contracts</th>
<th>Number of Solicitations</th>
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The Board of Directors could consider increasing its involvement and approval of contracts for professional services in the following manner:

- Review scope of work for all professional services solicitations valued at $5 million or more and authorize staff to conduct the procurement process. For these solicitations:
  - Approve final award of contracts
  - Approve contract amendments that would increase the original solicitation value
- Approve contract amendments that result in a cumulative solicitation value of $5 million or more

Construction

Construction solicitations establish contracts for specific capital improvement projects that are evaluated based on the lowest responsible bidder or best value, depending upon the procurement method selected. Procurement methods include design-bid-build (DBB), job order contracts (JOC), design-build (DB), and construction manager/general contractor (CM/GC).
The Board receives a monthly Delegated Actions report, which includes the following milestone notifications:

- Plans, specifications, and estimates (PS&E)
- Right-of-way transfers
- Right-of-way payments
- Relocation assistance payments
- Relief from maintenance/acceptance of work
- Protests

As shown in Table 2 below, based on dollar value, approximately 91 percent of construction solicitations in calendar year 2012 were valued at $5 million or more.

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<tr>
<th>Amount</th>
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<th>Number of Solicitations</th>
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<td>0</td>
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<td><strong>11</strong></td>
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The Board of Directors could consider increasing its involvement and approval of contracts for construction projects in the following manner:

- Review a summary of bids and approve final award for solicitations valued at $5 million or more. For these solicitations:
  - Any contract change orders would be processed consistent with the procedures set forth in Board Policy No. 024: Procurement and Contracting – Construction, under which the Board of Directors must approve any change order in excess of 25 percent of the solicitation value.

**Project Budget Process**

The budget for a capital project evolves as the project is developed. The need for a particular project or improvement is usually first identified in the Regional Transportation Plan, a long-range plan. The costs for these projects are estimated at a high level since details such as the project alignment and the need for major structures may not yet be identified. A project is further defined as it moves into the Regional Transportation Improvement Program (RTIP), a five-year program of proposed projects for major public transit, highway, arterial, and bikeway and pedestrian projects. The RTIP is reviewed and approved by the Board as well as by state and federal agencies.
A feasibility study will review project alternatives and refine the various components of the project budget, including construction, environmental, design, right-of-way, construction support, and vehicles, if applicable:

- **Construction** - covers all the major construction cost components
- **Environmental** - includes all environmental work including permitting
- **Design** - includes the engineering to develop the plans and specifications
- **Right-of-Way** - when property or easements are needed for a project, money is set aside under “Right-of-Way Support” to pay for such things as mapping and appraisals and under “Right-of-Way Capital” to pay for the actual acquisition
- **Construction Support** (also known as “Construction Management”) - covers the inspectors in the field who work with SANDAG contractors
- **Vehicles** - if the project requires the purchase of trains or buses

Currently communications and public outreach efforts occur in one or more of each of the phases of the project – environmental, design, and construction – and are included in those budget line items.

The budget line items listed above are a roll-up of what can be dozens of individual budgeted items of work for a particular project. For example, the Construction Capital line item is a summation of all the individually bid physical items of work to be performed by the contractor. And, in addition to communications and public outreach, the project budget may include funds for legal services and transit agency support. This work is usually a small fraction of the overall project’s capital budget and therefore is not shown in a separate budget line item.

A sample of a capital project budget, as shown in the Final Program Budget document, is attached for the Mid-Coast Light Rail Transit (LRT) project (Attachment 1). However, if the Board would like to see more detail within each phase of a project, a sample budget for the Mid-Coast LRT project is attached (Attachment 2). While it is possible to detail each of the more than 100 capital projects at this level, the feasibility and cost/benefit should be weighed. Another option that would still provide the budget totals for communications and public outreach and for legal services would be to budget them by project total, rather than in each phase (Attachment 3).

The Board of Directors is asked to review and discuss the proposed options for capital project budgets.

**Use of Social Media in Public Outreach and Involvement**

SANDAG proactively uses social media to inform the public by providing positive, reliable, timely, and interesting information about our:

- Mission and milestones
- Programs and projects
- Meetings and workshops
- Construction-related activities and road closures
- Photos albums and videos
- Publications
- Project-related promotions
- Employment opportunities
- Websites, including 511sd.com, 511sd.com/iCommute, and KeepSanDiegoMoving.com
The agency’s overarching goal for social media continues to be to gain a significant number of engaged followers so that the channels emerge as formidable public information and marketing tools reaching the region’s residents. As of May 2013, the SANDAG Facebook page had 1,400+ likes, which represents an increase of approximately 650 likes since May 2012. SANDAG began Tweeting in June 2012 and now has almost 1,000 followers.

Future social media goals include creating a more “social” relationship with our fans and followers by increasing our level of responsiveness and interaction. We could explore the possibility of creating program and project specific channels in order to narrow content focus and reach segments of the population most affected. For example, SANDAG could create new channels for projects and programs such as iCommute, San Diego Forward: The Regional Plan, the Mid-Coast Corridor Transit Project, the Regional Bike Corridor Program, and/or the North Coast Corridor program.

In addition, the Communications Division is actively investigating opportunities to broaden the agency’s outreach programs by using innovative and creative web-based tools, such as virtual public meetings, interactive public review and comment of materials on expanded project web pages, and in-meeting tools that allow participants to interact via smart phones and other devices.

**Written Reports at SANDAG**

The Communications Division is analyzing the agency’s process for writing and reviewing Board/Policy Advisory Committee reports and is researching best practices with the goal of making the reports easier to read and understand. Staff would be ready to provide options for the Board’s consideration in the fall.

**Next Steps**

Based on the input from the Board of Directors on the options outlined in this report for the delegation of contracting authority and budgeting options, staff would return to the Board with (1) proposed amendments to Board Policy No. 017: Delegation of Authority as well as proposed amendments to other Board policies, if necessary; and (2) proposed amendments to project budgets, as needed.

GARY L. GALLEGOS
Executive Director

Attachments: 1. Sample capital budget (Mid-Coast LRT project)
2. Sample capital budget with public outreach and legal services within each project phase (Mid-Coast LRT project)
3. Sample capital budget with public outreach and legal services for total project (Mid-Coast LRT project)

Key Staff Contacts: Laura Coté, (619) 699-6947, laura.cote@sandag.org
Colleen Windsor, (619) 699-1960, colleen.windsor@sandag.org
Jim Linthicum, (619) 699-1970, jim.linthicum@sandag.org
Sample Capital Budget

**Project Number:** 1257001  
**RTIP Number:** SAN23  
**Project Name:** Mid-Coast Light Rail Transit (LRT)  
**Project Manager(s):** Leslie Blanda/Greg Gastelum  
**Project Director:**  
**PM Phone Number:** (619) 699-6907 / (619) 699-7378

**PROJECT LIMITS**

On and along existing Coastal Rail corridor from Old Town Transit Center to Gilman Drive, along I-5 from Gilman Drive to the University of California, San Diego (UCSD), and along Voigt Drive and Genesee Avenue to University Town Center (UTC).

**SITE LOCATION**

Draft environmental document is 100 percent complete.

**PROGRESS TO DATE**

New LRT service with stations planned at Tecolote Road, Clairemont Drive, Balboa Avenue, Nobel Drive, VA Medical Center, UCSD West, UCSD East, Executive Drive, and UTC.

**MAJOR MILESTONES**

- Draft Environmental Document: Apr-13
- Final Environmental Document: Apr-14
- Ready to Advertise: May-15
- Begin Construction: Aug-15
- Open to Public: Dec-18
- Close-Out: Dec-24

**SANDAG EXPENDITURE PLAN (5000)**

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<th>TASK</th>
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<th>FY 13</th>
<th>FY 14</th>
<th>FY 15</th>
<th>FY 16</th>
<th>FY 17</th>
<th>FY 18</th>
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<th>FY 20</th>
<th>FY 21</th>
<th>FY 22+</th>
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**Total SANDAG** $33,128 $18,536 $47,810 $159,921 $256,757 $369,780 $424,525 $255,792 $65,163 $35,353 $37,235 $1,704,000

**CALTRANS EXPENDITURE PLAN (5000)**

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**Total CalTrans** $0 $0 $0 $0 $0 $0 $0 $0 $0 $0 $0 $0 $0

**Total SANDAG & Caltrans** $33,128 $18,536 $47,810 $159,921 $256,757 $369,780 $424,525 $255,792 $65,163 $35,353 $37,235 $1,704,000

**FUNDING PLAN (5000)**

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**LOCAL:**

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- 91000100 TransNet-MC 52 $0 $0 $0 $0 $0 $0 $0 $0 $0 $0 $852,000

**TOTAL** $33,128 $18,536 $47,810 $159,921 $256,757 $369,780 $424,525 $255,792 $65,163 $35,353 $37,235 $1,704,000

*FTA has indicated that the annual appropriations from the New Starts program will likely be limited to $100 million per year. In such an event, SANDAG anticipates issuing bonds to cover the difference (grant anticipation or similar mechanism) in the affected years. Such borrowing is allowed under the program.*
Sample Capital Budget with Public Outreach and Legal Services within Each Project Phase

Attachment 2

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<th>John Haggerty</th>
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**PROJECT LIMITS**

- **SITE LOCATION:**
  - Draft environmental document is 100 percent complete.

**PROJECT SCOPE**

- New LRT service with stations planned at Tecolote Road, Clairemont Drive, Balboa Avenue, Nobel Drive, VA Medical Center, UCSD West, UCSD East, Executive Drive, and UTC.

**MAJOR MILESTONES**

- Draft Environmental Document: Apr-13
- Final Environmental Document: Apr-14
- Ready to Advertise: May-15
- Begin Construction: Aug-15
- Open to Public: Dec-18
- Close-Out: Dec-24

**SANDAG EXPENDITURE PLAN ($000)**

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**CALTRANS EXPENDITURE PLAN ($000)**

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**Total SANDAG & Caltrans**

- SANDAG: $33,128
- Caltrans: $18,536
- Total: $51,664

**FUNDING PLAN ($000)**

**FUNDING SOURCE**

| FEDERAL: | $129 |
| Future Federal* | 0 |
| LOCAL: | 91000100 TransNet-MC AC | 32,947 |
| 91000100 TransNet-MC | 52 |
| **TOTAL** | $33,128 |

*FTA has indicated that the annual appropriations from the New Starts program will likely be limited to $100 million per year. In such an event, SANDAG anticipates issuing bonds to cover the difference (grant anticipation or similar mechanism) in the affected years. Such borrowing is allowed under the program.
### Project Number: 1257001
#### RTIP Number: SAN23
#### Project Name: Mid-Coast Light Rail Transit (LRT)
#### Project Director: John Haggerty
#### Project Manager(s): Leslie Blanda/Greg Gastelum
#### Phone Number: (619) 699-6907 / (619) 699-7378

#### Site Location:
- Draft environmental document is 100 percent complete.

### Project Scope:
- New LRT service with stations planned at Tecolote Road, Clairemont Drive, Balboa Avenue, Nobel Drive, VA Medical Center, UCSD West, UCSD East, Executive Drive, and UTC.

### SANDAG Expenditure Plan ($000)

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<th>FY 13</th>
<th>FY 14</th>
<th>FY 15</th>
<th>FY 16</th>
<th>FY 17</th>
<th>FY 18</th>
<th>FY 19</th>
<th>FY 20</th>
<th>FY 21</th>
<th>FY 22+</th>
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### CALTRANS Expenditure Plan ($000)

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### FUNDING Plan ($000)

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<td>(34,837)</td>
<td>(64,647)</td>
<td>(114,636)</td>
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<tr>
<td>TransNet -MC</td>
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<td>$52</td>
<td>$0</td>
<td>$0</td>
<td>$59,921</td>
<td>$100,000</td>
<td>$211,710</td>
<td>$324,525</td>
<td>$155,792</td>
<td>0</td>
<td>$852,000</td>
<td></td>
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<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$33,128</strong></td>
<td><strong>$18,536</strong></td>
<td><strong>$47,810</strong></td>
<td><strong>$159,921</strong></td>
<td><strong>$256,757</strong></td>
<td><strong>$369,780</strong></td>
<td><strong>$424,525</strong></td>
<td><strong>$255,792</strong></td>
<td><strong>$65,163</strong></td>
<td><strong>$35,353</strong></td>
<td><strong>$37,235</strong></td>
</tr>
</tbody>
</table>

*FTA has indicated that the annual appropriations from the New Starts program will likely be limited to $100 million per year. In such an event, SANDAG anticipates issuing bonds to cover the difference (grant anticipation or similar mechanism) in the affected years. Such borrowing is allowed under the program.*
June 12, 2013

Board of Directors
San Diego Association of Governments
(For the Board meeting of June 14, 2013, Public Comments Item)

Dear Jack Dale, Chair

During the last meeting of SANDAG’s Transportation Committee meeting, June 7, 2013, there was some discussion on how our region’s economy is influenced by transportation systems. CNFF would like to bring to the attention of the Board the following information:

- For each $ spent on gas, 85 cents of it leaves the region
- For each $ spent on transit 85 cents stays in the region
- $1 of public funds invested in public transportation returns up to $6 in economic benefits for urban regions.

Cost of Owning and Using a Car

- A car costs $5,000 to $10,000 a year to own & operate.
  (Information can be found at: www.edmunds.com/tco.html)
- Even with an older used car, the cost is at least $5,000 a year
- If you did not have to have that car, it’s like a net pay increase of $2.48 an hour. (8 Hr. x 21 days/Mo. = 168 Hr. /Mo. x 12 Mo. = 2016 Hr/year $5,000 divided by 2,016 Hr. equals $2.48)

Transit development helps our region’s economy much more than freeway expansion. It also leads to better jobs and quality of life. Attached is a quick one page summary of the economic benefits of transit development.

Sincerely

Jack K. Shu
President

Attachment
How Does Transit Impact the Economy?

Historically, growth in San Diego County has been in an outward direction, consisting of sprawl development on previously undeveloped lands. This kind of growth is not only expensive to the homeowners of such development projects, but also costs taxpayers a considerable amount of money to add public services in areas that do not have any infrastructure. For example, studies demonstrate that sprawl development (on undeveloped land) compared to infill development (in developed areas) will increase local road lane-miles by an average of 10%, which in San Diego would require tax-payer money to fund. According to the County of San Diego, additional public service costs (roads, sewer, water, schools, parks, etc.) associated with residential development require an estimated $1.42 in expenses to the public for every dollar such projects generate in tax revenues, and that such costs are 74% greater for low-density semi-rural development.

While highway-based sprawl development costs taxpayers money, transit can actually generate money for communities. Research demonstrates that over time, every $10 million invested in transit saves more than $15 million in transportation costs to highway and transit users due to reduced operating, fuel, and congestion costs. In addition, long-term transit investments have been shown to generate $31 million in business output and personal income for every $18 million invested. A specific example of this is the 4.7-mile loop of the Portland Streetcar, which generated an estimated $1.4 billion in just five years.

In addition, public transit helps to increase economic development, because reducing automobile use and switching to public transit saves individuals a great amount of money, thereby increasing individual purchasing power. Studies demonstrate that a household with two adults that use transit rather than automobiles for their primary mode of transportation saves an average of $6,251 every year. By saving thousands of dollars per year on transit, households have more money available to spend (purchasing power), which can contribute directly to further economic development.

Given the current economic crisis that San Diego faces, it seems necessary that we focus on directing funds into projects that will continue to enhance the economy, such as transit rather than allocating tax dollars to fund highways that service sprawl development projects. Get involved with the Urban Area Transit Strategy to make this happen!!!

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Support Climate Stabilization

Objective or Requirement?

Mike Bullock
Sierra Club San Diego Transportation Chair
mike_bullock@earthlink.net
760-754-8025

From SANDAG Agenda May 10, 2013

• Some San Diego Forward Objectives
  • Housing choices
  • Habitat and open space preservation
  • Clean air
  • Energy reliability
  • Climate change and adaptation
  • Shoreline preservation
  • Variety of jobs
From SANDAG Agenda May 10, 2013

• Some San Diego Forward Objectives
  • Housing choices
  • Habitat and open space preservation
  • Clean air
  • Energy reliability
  • Climate change (???) and adaptation
  • Shoreline preservation
  • Variety of jobs
From SANDAG Agenda May 10, 2013

• Some San Diego Forward Objectives
  • Housing choices
  • Habitat and open space preservation
  • Clean air
  • Energy reliability
  • Minimize Climate change (???)
  • Adaptation
  • Shoreline preservation
  • Variety of jobs
From SANDAG Agenda May 10, 2013

• Some San Diego Forward Objectives
  • Housing choices
  • Habitat and open space preservation
  • Clean air
  • Energy reliability
  • Support Climate Stabilization (Achieve S-3-05)
  • Adaptation
  • Shoreline preservation
  • Variety of jobs

From SANDAG Agenda May 10, 2013

• Some San Diego Forward Objectives
  • Housing choices
  • Habitat and open space preservation
  • Clean air
  • Energy reliability
  • Achieve S-3-05 (Help avoid extinction)
  • Adaptation
  • Shoreline preservation
  • Variety of jobs
Hypothetical List of Objectives
*Maiden Voyage of the Titanic*

• Clean sheets
• Not hitting an iceberg and sinking
• Nutritious meals
• Good entertainment
More Appropriate List of Objectives
*Maiden Voyage of the Titanic*

- Clean sheets
- Nutritious meals
- Good entertainment

**Operational System Requirement**
Not hitting an iceberg and sinking

From SANDAG Agenda May 10, 2013

- Appropriate San Diego Forward Objectives
  - Housing choices
  - Habitat and open space preservation
  - Clean air
  - Energy reliability
  - Adaptation

**Transportation and Land-Use System Requirement**
Achieve S-3-05
*Help avoid human extinction.*
San Diego County Democratic Party Central Committee Resolution, Feb. 19, 2013

• Long-Range Plans *Should* Support Climate Stabilization
  – Regional Transportation Plans
  – Climate Action Plans
  – General Plan Updates

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**The Climate Problem**

*Any Earth Science text book* contains the following facts:

• Atmospheric CO2 traps heat
  – CO2 Molecules absorb and then emit, in a random direction, infrared radiation, heat given off by the Earth’s surface
  – This effect is significant

• Combustion of fossil fuels greatly increases our Earth’s levels of atmospheric CO2
  – The amount of CO2 in the atmosphere is well known
  – Our yearly emissions are well known

Governor’s Executive Order S-3-05

Slide 1 of 4

- Signed in 2005
- Greenhouse gas (GHG) Emission Trajectory
  - 2000 levels by 2010
  - 1990 levels by 2020*
  - 80% below 1990 levels by 2050
- Achieved by Plans & Status

* AB 32 law mandate. Prop 23 would have suspended this.

http://www.dot.ca.gov/hq/energy/ExecOrderS-3-05.htm

Mike Bullock, 2012; Engineers for a Sustainable World, National Conference; Workshop 2223

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Governor’s Executive Order S-3-05

Slide 2 of 4

The world is currently above its trajectory. The world will need to get emissions below the trajectory to make up for this.

Mike Bullock, 2012; Engineers for a Sustainable World, National Conference; Workshop 2223
How Bad Could it Get?

• *Scientific American* June 2008 issue
  – 550 PPM CO2 possible in several decades
  – This could (5% probability) lead to 8 Deg. Celsius of warming
  – 8 Deg. Celsius could lead to “a devastating collapse of the human population, perhaps even to extinction”

• December 24/31 2012 Issue of Nation magazine:
  
  A recent string of reports from impeccable mainstream institutions—the International Energy Agency, the World Bank, the accounting firm of PricewaterhouseCoopers—have warned that the Earth is on a trajectory to warm by at least 4 Degrees Celsius
  
  [4 Degrees Celsius] would be incompatible with continued human survival.

Winter, *UU World* magazine (p. 57) “Lags in the replacement of fossil-fuel use by clean energy use have put the world on a pace for 6 degree Celsius by the end of this century. Such a large temperature rise occurred 250 million years ago and extinguished 90 percent of the life on Earth. The current rise is of the same magnitude but is occurring faster. We must reduce or eliminate all uses of fossil fuels.”

Climate Data

• Keeling Curve:
  
  http://en.wikipedia.org/wiki/An_Inconvenient_Truth#Scientific_basis

Atmospheric Carbon Dioxide

Measured at Mauna Loa, Hawaii
Our Climate Crisis


- Current Level of CO₂ is 400 PPM
- S-3-05’s goal is to cap CO₂ at 450 PPM

- Mike Bullock, 2012; Engineers for a Sustainable World, National Conference; Workshop 2223

Our Climate Crisis

- Earth & Space Research (ESR) website: [http://www.esr.org/outreach/climate_change/mans_impact/man1.html](http://www.esr.org/outreach/climate_change/mans_impact/man1.html)

- Current level = 400 PPM
- S-3-05’s Goal is to cap CO₂ at 450 PPM, which is off this chart.

Mike Bullock, 2012; Engineers for a Sustainable World, National Conference; Workshop 2223
SB 375, Passed in 2008

- Authored by Speaker Pro Tem Darrell Steinberg
- Only for cars and Light-duty trucks
- Key provision
  - California Air Resources Board (CARB) Provides vehicle-miles-travelled (VMT) reduction targets
    - For years 2020 and 2035
    - To Metropolitan Planning Organizations (MPO)
    - Computed in Regional Transportation Plans (RTP)
    - Local MPO, San Diego Association of Governments (SANDAG), produced the first post-SB375 RTP

How to Solve a Problem

- Define the solution: at least S-3-05
- Compute what is needed (driving reduction)
- List attainment strategies

We can’t just “do real good”. The physical world doesn’t care about our problems. It will kill us if we fail here.
Trajectories to Support Calculations

Purple (Low carbon fuel), Green (CO2/Mile), & Gold (S-3-05)

From Communities Tackle Global Warming, A Guide to SB 375 comes the words and plot shown as Figure 1.

In San Diego County, 41% of GHG emissions come from cars and light-duty trucks.

SB 375’s Per-Capita VMT Reduction for 2035, to Support S-3-05

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Definition</th>
<th>Taken From</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>net factor of the emissions of Greenhouse Gas</td>
<td>Gold Line(^1)</td>
</tr>
<tr>
<td>f_Pavley</td>
<td>factor of the average statewide mileage</td>
<td>Green Line(^1)</td>
</tr>
<tr>
<td>f_Fuel</td>
<td>factor of the reduction of GHG due to low-carbon fuels</td>
<td>Purple Line(^1)</td>
</tr>
<tr>
<td>f_Population</td>
<td>factor of the population in the region of interest</td>
<td>CARB(^2)</td>
</tr>
<tr>
<td>f_PerCapitaVMT</td>
<td>factor of per capita driving</td>
<td>Computed</td>
</tr>
</tbody>
</table>

\(^1\)From the Chart constructed by Steve Winkleman, as shown in the “Guide to SB 375” report.


\[ f = f_{\text{PerCapitaVMT}} \times f_{\text{Population}} \times f_{\text{Pavley}} \times f_{\text{Fuel}} \]

\[ f_{\text{PerCapitaVMT}} = f / (f_{\text{Population}} \times f_{\text{Pavley}} \times f_{\text{Fuel}}) \]
Per-Capita VMT Reduction for 2035, as Required by S-3-05

\[ f_{\text{PerCapitaVMT}} = \frac{f}{(f_{\text{Population}} \times f_{\text{Pavley}} \times f_{\text{Fuel}})} \]

\[ f_{\text{PerCapitaVMT}} = \frac{0.525}{(1.313 \times 0.685 \times 0.9)} \]

\[ f_{\text{PerCapitaVMT}} = 0.649 \]

This is a 35.1% decrease in per-capita VMT.

The population factor of 1.313 is specific to San Diego County.

Because \(0.649 \times 1.313 = 0.8515\), in 2035, the people in San Diego County must drive 15% less than they did in 2005, even with the 31.3% increase in population. Therefore, why add lanes?

Status of Regional Transportation Plan

- As shown, a 35.1% driving reduction is needed
- The RTP, approved on 10/28/11, achieves 13%
- Need new policies to get an additional 22.1%
Strategies to Get 22% More

<table>
<thead>
<tr>
<th>Estimated Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2%</td>
</tr>
</tbody>
</table>

- Stop expanding freeways
  - No need; we must drive less
  - Eliminate congestion with following strategies

- Reallocate freeway-expansion funds to transit 2%

- Pricing, to increase fairness & choice 15%
  - Parking demonstration projects to unbundle cost
  - Legislation
    - Unbundle the cost of all “free” or underpriced parking
    - Equitable and environmentally-sound road-use fees

- Smart growth, complete streets, bike classes 3%
  *The state must do this; it is infeasible and would go in the APS. 22%*

---

A Plan to Efficiently and Conveniently Unbundle Car Parking Costs
Simple Example: 10 Employees and $5 Per Day to Park

• All 10 drive: $50 per day collected
  – Each employee gets $50/(10 employees) = $5
  – Each employee pays $5 to park
  – Each employee breaks even

• If only 9 drive: $45 per day collected
  – Each employee gets $45/(10 employees) = $4.50
  – Each driver losses 50 cents
  – The non driver get $4.50

Simple Example: 10 Employees and $5 Per Day to Park

• If 9 drivers losing 50 cents bothers the employer
  – Employer could give all employees that need it, an “add in”
  – Earnings (here $4.50) plus “Add in” (here $.50) = Parking Charge (feels like “free parking” to drivers)
  – This is unfair to non-drivers (lose $.50, because the lost wage for everyone is $5 per day)
  – However, this is less unfair to the non driver than “free parking”, which costs the non-driver $5 per day
  – Unbundling has cut the non-drivers loss 90%
A Climate-Killing Regional Transportation Plan Winds Up in Court: Background and Remedies

Paper 2013-A-13309-AWMA

Mike R. Bullock
Retired Satellite Systems Engineer (36 years) and the Transportation Chair for the San Diego Chapter of the Sierra Club, 1800 Bayberry Drive, Oceanside, CA 92054

Thank you for the opportunity to speak and thanks to Mr. Phillip Johnston for all his help, over the years.

Mike R. Bullock
Retired Satellite Systems Engineer (36 years) and the Transportation Chair for the San Diego Chapter of the Sierra Club, 1800 Bayberry Drive, Oceanside, CA 92054