Evaluation of Voigt Drive Alignment Options
Technical Memorandum
July 25, 2011

Prepared by:
The San Diego Association of Governments (SANDAG)
Introduction

The San Diego Association of Governments (SANDAG), in partnership with the Federal Transit Administration (FTA), is initiating the preliminary engineering (PE) and environmental review phase of the Mid-Coast Corridor Transit Project. The project, as defined in the Locally Preferred Alternative (LPA) reaffirmed by the SANDAG Board of Directors in July 2010, provides for physical and operating improvements to the existing San Diego Metropolitan Transit System (MTS) Trolley system. The physical improvements would consist of a new double-track alignment extending from a point just south of the San Diego River and north of the existing Old Town Transit Center to a terminus at the University Towne Center (UTC) Transit Center in University City. The project would include eight new light rail transit (LRT) stations, located at Tecolote Road, Clairemont Drive, Balboa Avenue, Nobel Drive, the University of California, San Diego (UCSD) West, UCSD East, Executive Drive, and the UTC Transit Center. The project includes consideration of an additional station at the Veteran’s Administration (VA) Medical Center to be reviewed during development of the Draft Supplemental Environmental Impact Statement and Subsequent Environmental Impact Report (SEIS/SEIR). The project is the Build Alternative as evaluated in the Draft SEIS/SEIR.

The LPA approved by the SANDAG Board of Directors includes consideration of three alignment options between the UCSD West Station and the UTC Transit Center. The three alignment options were evaluated in the Comparative Evaluation of Alternatives Report (SANDAG, July 2010), along with a range of LRT alignments and alternative transit modes for the Mid-Coast Corridor. The report recommended that LRT Alternative 1 (combined LRT Alternatives 1, 4, and 5 from the Comparative Evaluation of Alternatives Report) and the No-Build Alternative be carried forward for evaluation in the Draft SEIS/SEIR. It was identified in the report that the three alignment options in the vicinity of Voigt Drive will allow for the selection of a specific alignment to avoid potential environmental impacts that may be discovered during the environmental review process.

Since the LPA was reaffirmed by the SANDAG Board of Directors in July 2010, SANDAG has undertaken additional engineering and environmental studies to support the application to FTA for approval to enter PE and the preparation of the Draft SEIS/SEIR. Additionally, further coordination has occurred with the project stakeholders, including UCSD, the California Department of Transportation (Caltrans), and MTS. This memorandum describes the three alignment options and the results of the evaluation of the options based on the additional studies and stakeholder comments. The purpose of the evaluation is to determine if any of the alignment options should be eliminated from further study, or if all the alignment options should be carried forward for further refinement and evaluation in the Draft SEIS/SEIR. The federal and state requirements for screening of alternatives prior to the completion and circulation of the environmental document also are described, along with the conclusions and recommendation based on the results of the evaluation.

Federal and State Environmental Requirements for Screening of Alternatives

Federal requirements under the National Environmental Policy Act and state requirements under the California Environmental Quality Act (CEQA) require that the environmental document include an evaluation of all reasonable or feasible alternatives. However, this does not preclude agencies from eliminating some alternatives prior to release of the environmental document. In fact, requirements encourage that the project development process involve a narrowing down of alternatives for evaluation in the environmental document.
Figure 1: Locally Preferred Alternative

Source: SANDAG, 2011
According to 23 Code of Federal Regulation, Part 771, alternatives analysis should clearly indicate why and how the particular range of project alternatives was developed, including what kind of public and agency input was used. In addition, alternatives analysis should explain why and how alternatives were eliminated from consideration. It must be made clear what criteria were used to eliminate alternatives, at what point in the process the alternatives were removed, who was involved in establishing the criteria for assessing the alternatives, and the measures for assessing the alternatives' effectiveness.

Title 14, Section 15126.6 of the California Code of Regulations (CEQA Guidelines) sets forth the requirements for screening alternatives for environmental documents. According to this section, the primary goal of alternative screening is to “avoid or substantially lessen any of the significant effects of the project” (Section 15126.6(a)). This requirement applies to both project alternatives and alternate locations of the project. The lead agency, which in this case is SANDAG, is responsible for determining which feasible alternatives or alternate locations are examined in the environmental document, but must publicly disclose why other alternatives were not included. Various factors can be used when assessing the feasibility of an alternative, including site suitability, availability of infrastructure, consistency with other plans or regulatory limitations, and whether the proponent can acquire or have access to the alternative site (15126.6(f)(i)). Lastly, the environmental document does not need to consider every conceivable alternative, but rather a “reasonable range that will foster informed decision making and public participation” (Section 15126.6(a)).

Description of LPA and Voigt Drive Alignment Options

The LPA and alignment options between the UCSD West Station and the UTC Transit Center are defined in detail in the Final Definition of Alternatives Report (SANDAG, June 2010). This report also describes the No-Build Alternative and the Transportation Systems Management or New Starts Baseline Alternative.

There are two major highway projects in the study corridor that may affect the LPA alignment: the I-5 North Coast High Occupancy Vehicle (HOV)/Managed Lane Project and the Interstate (I-) 5/Genesee Avenue Interchange Project. The I-5 North Coast HOV/Managed Lane Project is included in SANDAG’s 2030 San Diego Regional Transportation Plan: Pathways for the Future. This project would include HOV direct access ramps (DARs) that connect to the north side of Voigt Drive. The grade of these ramps may require lowering the current elevation of Voigt Drive, such that reconstruction of the overcrossing may be required. Additionally, the overcrossing would be widened to accommodate the additional traffic to and from the DAR. The project also proposes to realign Voigt Drive to connect to Genesee Avenue, and realign Campus Point Drive to connect to Voigt Drive.

The I-5/Genesee Avenue Interchange Project proposes to widen the existing Genesee Avenue overcrossing at I-5 and provide for operational improvements on the freeway. The ultimate widening would require reconstruction of the Voigt Drive overcrossing which would have to be reconstructed at the location required for the Voigt Drive DAR. Collectively, these two projects are referred to as the I-5 projects.

The conceptual plan and profile/cross section drawings and station site plans for the LPA and alignment options are presented in the Conceptual Plan Set (SANDAG, June 2010). In these
documents, the three alignment options are referred to as Design Options 1, 4, and 5. The naming convention is used in reference to the alignment options in this memorandum.

The three alignment options as described in the Final Definition of Alternatives Report would extend from the UCSD West Campus, and then east along one of the following three alignment options to a terminus at the UTC Transit Center:

• An at-grade alignment in the median of Voigt Drive and an aerial alignment on Genesee Avenue (Design Option 1)
• An aerial alignment along the south side of Voigt Drive and on Genesee Avenue (Design Option 4)
• An at- and below-grade alignment south of Voigt Drive and an aerial alignment on Genesee Avenue (Design Option 5)

The three design options are shown in Figure 2. As shown in the figure, the alignment options share a common general alignment to the UCSD West Station and from Genesee Avenue east of Regents Road to the UTC Transit Center. Between these two points, the LPA alignment differs under each design option. The three design options are described below.

**Design Option 1: At-Grade Alignment on Voigt Drive**

Upon leaving the UCSD West Station, this LRT alignment option would enter a short tunnel north of the station, turn east, and exit the tunnel in the median of Voigt Drive. In order to accommodate the LRT in the median, Voigt Drive would be widened and realigned. The alignment would run at grade in the center of the roadway, crossing over I-5 on the reconstructed Voigt Drive overcrossing that is planned as part of the I-5 projects. The at-grade UCSD East Station would be located in the median of Voigt Drive, just west of the realigned Campus Point Drive. The LRT alignment would continue at grade to Genesee Avenue, where it would turn south and transition to an aerial structure just before the intersection of Genesee Avenue and Regents Road. The LRT crossings at the Voigt Drive intersections with Gilman Drive, planned future DARs, realigned Campus Point Drive, and Genesee Avenue would be traffic signal controlled. The LRT alignment would continue south in an aerial configuration to the Executive Drive Station and the UTC Transit Center.

**Design Option 4: Aerial Alignment along the South Side of Voigt Drive**

From the UCSD West Station, this LRT alignment option would enter a short tunnel just north of the station, turn east, and exit the tunnel along the south side of Voigt Drive. The alignment would immediately transition to an aerial structure and travel adjacent to the eastbound lanes of Voigt Drive, crossing over Gilman Drive, I-5, and the proposed future Voigt Drive DAR. The aerial alignment would continue east to the aerial UCSD East Station located east of the realigned Campus Point Drive.

From the UCSD East Station, the LRT alignment would continue in an aerial configuration, crossing the UCSD East Campus parking lots, Regents Road, and southbound lanes of Genesee Avenue. The aerial LRT alignment would then continue south in the median of Genesee Avenue to aerial stations at Executive Drive and the UTC Transit Center.
Figure 2: Voigt Drive Design Options

Source: SANDAG, 2011
Design Option 5: Alignment South of Voigt Drive

The UCSD West Station would be located slightly south of the station site described for the other options. After leaving the UCSD West Station, the LRT alignment would enter a short tunnel, turn east between Warren Field and student housing, and ascend to an aerial structure to cross over both Gilman Drive and I-5. The LRT alignment would descend back to grade near the south end of the existing baseball field parking lot and continue east where the alignment would transition to a cut-and-cover tunnel to cross under the planned future soccer fields and the realigned Campus Point Drive, as proposed by the I-5 projects.

East of the realigned Campus Point Drive, the LRT alignment would transition to an at-grade configuration and enter the UCSD East Station, which would be located in the southeast quadrant of the realigned Voigt Drive and Genesee Avenue intersection.

After leaving the UCSD East Station, the LRT alignment would travel parallel to Genesee Avenue and transition to an aerial configuration prior to crossing Regents Road and entering the median of Genesee Avenue. The aerial alignment would then continue south in the median of Genesee Avenue to the Executive Drive Station and the UTC Transit Center.

Evaluation of Alignment Options

This section describes the results of the evaluation of transportation, engineering, environmental, and cost/financial considerations, focusing on identifying the major differences or similarities among the alignment options. This evaluation is not intended to represent the more detailed analyses being conducted as part of the environmental studies supporting the preparation of the Draft SEIS/SEIR. This evaluation is conducted at a level to support the screening of alternatives. The criteria used in the evaluation are the same as used in the Comparative Evaluation of Alternatives Report and presented to the public during CEQA scoping for the project.

Transportation Considerations

The at-grade alignment on Voigt Drive (Design Option 1) would have potentially negative effects on reliability for transit users in comparison to the two grade-separated alignments (Design Options 4 and 5). Under Design Option 1, transit users may experience reduced reliability because of the at-grade alignment operating through signalized intersections on Voigt Drive. At this time, it is unknown if Caltrans would allow LRT signal priority at the future signalized DAR intersection located on the Voigt Drive overcrossing. Similarly, the City of San Diego may not concur with LRT signal priority at the future intersection of realigned Voigt Drive and Genesee Avenue. Without such priority, the reliability of Trolley operations would be reduced for transit users.

Design Option 1 also would reduce access and egress to the UCSD East Station and to driveways for adjacent properties. The UCSD East Station would be located in the median of Voigt Drive, which is planned to be widened to four lanes and function as a major collector road. Because mid-block pedestrian crossings are undesirable for traffic flow, all LRT patrons accessing the station would have to walk to the nearest signalized intersection and cross the street to access the station platform in the median of Voigt Drive. This restricts the potential location of a station and station access. The at-grade Design Option 1 would have negative
effects on property access compared to Options 4 and 5 as it would prohibit mid-block left turns into driveways and also could prevent emergency vehicles from crossing the roadway median.

In comparison, Design Options 4 and 5 would be grade separated at roadway intersections and LRT reliability would not be affected by the signalized intersections. Additionally, passengers boarding or alighting at the UCSD East Campus Station could be provided with multiple access points to the platform. Both of these design options would have reduced impacts on property access.

**Engineering Considerations**

Each of the three design options under consideration would require non-standard geometrics in order to enter Pepper Canyon where the UCSD West Station would be located; and then again to leave the canyon to turn onto Voigt Drive or to the south of Voigt Drive. Design Options 1 and 5 would require the greatest number of tight radius curves where the design speed would be reduced to less than 20 miles per hour (mph), which would be less than desirable. The tight radius curves could result in additional wear on the wheels and rails as vehicles would have to accelerate and decelerate around the curves. A description of the alignment along the tight radius curves under each design option is presented below. None of the three LPA design options would preclude the improvements proposed by the I-5 projects.

**Design Option 1: At-grade Alignment on Voigt Drive and Aerial Alignment on Genesee Avenue**

After passing the VA Medical Center, the alignment would enter 300- and 250-foot radius reversing curves with an operating speed of 20 mph. This alignment would then leave the UCSD West Station and begin a 130-foot-radius curve to enter the median of Voigt Drive. The operating speed through this curve would be restricted to 15 mph.

After leaving the UCSD East Station, the alignment would enter reversing 300- and 100-foot-radius curves to reach Genesee Avenue. Speeds would be restricted to 20 and 10 miles mph, respectively. The 100-foot-radius curve under this alignment would have the slowest operating speed and the tightest curve of the three alignment options under consideration. A similar curve also would occur with Design Option 5.

**Design Option 4: Aerial Alignment along the South Side of Voigt Drive and on Genesee Avenue**

After passing the VA Medical Center, the alignment would enter 300- and 200-foot radius reversing curves. The operating speeds through these curves would be reduced to 20 and 15 mph, respectively.

This alignment would leave the UCSD West Station and enter a 300-foot-radius curve to align with the south side of Voigt Drive. Speed would be restricted to 20 mph on this curve.

After crossing I-5, the alignment would have four more horizontal curves with radii ranging from 420 to 1,300 feet, with operating speeds ranging between 25 and 35 mph.

**Design Option 5: At- and Below-Grade Alignment South of Voigt Drive and an Aerial Alignment on Genesee Avenue**

After passing the VA Medical Center, the alignment would enter 300- and 200-foot radius reversing curves with operating speeds of 20 and 15 mph, respectively.
The alignment would leave the UCSD West Station via a 150-foot-radius curve and extend along the south side of the existing Warren Field. The alignment would be restricted to an operating speed of 15 mph. A 6 percent vertical grade would be required to achieve the necessary vertical clearance over Gilman Drive. The combination of grade and tight horizontal radius could be an issue for train operators and result in additional maintenance requirements.

The geometry at the UCSD East Station would have similar constraints to those at the UCSD West Station. The radius of the horizontal curve leaving the UCSD East Station would be 100 feet, with an operating speed of 10 mph. This horizontal curve overlaps with a vertical curve climbing to 6 percent grade, with problems similar to those noted at UCSD West Station. The alignment would enter Genesee Avenue using two 400-foot-radius reversing curves with operating speeds restricted to 20 mph.

**Environmental Considerations**

Environmental impacts among the three alignment options are similar. The differences are generally limited to the area of disturbance, effects of operation changes, and effects of an aerial or at-grade vertical alignment. None of the differences would result in significant adverse effects.

**Right-of-Way**

Design Option 4 would have the least right-of-way impact of the options under consideration. This design option would require a Voigt Drive cross-section of approximately 80 feet with the LRT alignment on aerial structure. Additional right-of-way would be required for the station. In comparison, Design Option 1 would require a Voigt Drive cross-section of approximately 120 feet to accommodate the at-grade LRT alignment. Design Option 5 would result in UCSD land being converted from park, medical, sports, and recreational uses to right-of-way for the LRT alignment.

**Visual**

Design Option 1 would have minimal visual effects resulting from catenaries and at-grade features. The aerial structure under Design Option 4 would add a new visual element along Voigt Drive that would dominate nearby views. These views are not highly visually sensitive because the primary viewers are roadway users in motion and adjacent institutional uses that are mostly set back or not oriented toward the alignment. The addition of the aerial structure would not be inconsistent with Voigt Drive as a transportation corridor in an urban setting. Under Design Option 5, the cut-and-cover tunnel south of Voigt Drive would not have substantial visual impacts.

**Noise**

Under Design Option 1, the LRT vehicles would sound warning horns when approaching at-grade roadway intersections and stations. Because there would be no at-grade roadway intersections under Design Options 4 and 5, warning horns would only be sounded when the LRT vehicles approach stations.

**Land Use**

While Design Option 1 would be in the median of an existing transportation corridor, the wider street cross section would require converting more campus uses to transportation uses. Design Option 4 could allow some recreational uses to continue below the aerial structure. East of I-5, Design Option 5 would enter a cut-and-cover tunnel and the embankment could affect some
existing and planned recreational uses, which may be considered inconsistent with the University’s development plans.

**Recreational Facilities**
Design Options 1 and 4 would require land from the north side of UCSD’s Warren Field as the alignments turn onto Voigt Drive. Design Option 5 would use land from the south side of Warren Field, as well as the proposed UCSD East Campus Recreation Area.

**Air Quality and Energy**
In comparison to the other two options, Design Option 1 may slightly increase energy use and air pollution as a result of possible additional traffic delay and automobiles idling at intersections.

**Ecological Impacts**
There would be no potential ecological impacts under Design Options 1 or 4. Under Design Option 5, the LRT alignment would be located within existing open space identified within the UCSD Park, an integrated system of open spaces on the UCSD campus. The canyon on the east side of I-5 that the alignment would pass through is classified as restoration land because it has been disturbed by erosion, invasive vegetation, and past military use. The canyon contains existing southern riparian scrub.

**Cost and Financial Considerations**
Capital cost estimates for the each of the three alignment options were presented in the Comparative Evaluation of Alternatives Report (SANDAG, 2010). The methodology used for the development of the cost estimates is described in the Mid-Coast Corridor Transit Project Draft Capital Cost and Methodology Report (SANDAG, 2011), and is consistent with the FTA guidelines. Although the project cost estimates have been updated for the PE application submitted to FTA, the cost estimates from the Comparative Evaluation of Alternatives Report are the most recent set of comparable cost estimates for the three design options.

Table 1 presents the estimated total capital costs and annualized costs for each of the three design options. The capital costs are presented by FTA Standard Cost Category. All costs are presented in 2009 dollars.

The total capital cost for three alignment options range from approximately $1.18 billion for Design Option 5 to $1.22 billion for Design Option 4. Design Option 1 has an estimated cost of $1.19 billion. The estimated costs of the three alignment options are all within a range of 5 percent, which is considered insignificant. These costs exclude escalation and finance charges.

Operating and maintenance (O&M) costs for the three alignment options are estimated to be similar because the alignments would not differ significantly in length or in number of vehicles required to operate the service.

SANDAG plans to fund the project with TransNet funds and FTA New Starts funds, with each source providing 50 percent. Because the capital and O&M costs for the three alignment options would not differ significantly, all three options would be similar in cost effectiveness and should qualify for New Starts funds. Thus, all three options would be financially feasible.
Table 1. Capital Costs (2009 dollars in millions)

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<th>Standard Cost Category</th>
<th>Option 1 – At-Grade on Voigt</th>
<th>Option 4 – Aerial South of Voigt</th>
<th>Option 5 – At- and Below-Grade South of Voigt</th>
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Source: SANDAG, 2011

Stakeholder Comments

During CEQA scoping on the project, comments were received from the project stakeholders, including UCSD, Caltrans, and MTS. Comments also were received from the general public. Since the LPA was reaffirmed by the SANDAG Board of Directors in July 2010, further coordination has occurred with the project stakeholders. The substantive comments received from the project stakeholders on the alignment options are summarized below. All referenced letters are included in the attachment to this memorandum.

**UCSD**

In a letter dated May 25, 2010, UCSD provided comments on each of the Voigt Drive alignment options. UCSD stated in the letter that the at-grade alignment (Design Option 1) could impact campus recreation land, vehicular circulation, the visibility of pedestrians and bicyclists, the safety of pedestrians at Preuss School, and access to the UCSD Medical Center by emergency vehicles at Campus Point Drive. However, UCSD also acknowledged that this alignment could have fewer impacts to sensitive biological resources.

Regarding the aerial alignment along the south side of Voigt Drive (Design Option 4), the UCSD letter of May 25, 2010, stated the alignment could impact campus recreation lands and that access to the UCSD Medical Center and East Campus would need to be coordinated. However, the alignment could minimize impacts to sensitive biological resources, minimize circulation impacts to the East Campus, and reduce right-of-way impacts. An elevated station could allow for flexibility of land uses. Additionally, UCSD indicated regional access to the UCSD East Station could be more easily accommodated with the aerial alignment.

Regarding the at- and below-grade alignment south of Voigt Drive (Design Option 5), the potential impacts to the following resources were noted: UCSD Park, sensitive biological resources, Sixth College student housing, and future East Campus development sites. However, the alignment could have the following benefits: avoidance of Voigt Drive and
independence from development of proposed DAR; avoidance of impacts at the Preuss School; accommodation of regional access to the East Campus; minimized impact to baseball field; and elimination of impact to UCSD Medical Center entry from Campus Point Drive.

In a letter dated September 28, 2010, UCSD indicated that it does not support an at-grade, median-running option on Voigt Drive and finds it “particularly problematic” for campus users for the same reasons stated in its May 25, 2010, letter. Through meetings with university staff, UCSD indicated that it does not support Design Option 1 and is specifically concerned about the loss of high-demand recreational areas. In these coordination meetings, UCSD has also indicated that Design Option 5 or similar alternatives would impact campus recreational facilities as well as create a visual barrier in an area not designated as a transportation corridor.

**Caltrans**

In a letter dated June 1, 2010, Caltrans stated it did not have any major concerns with locating the Mid-Coast Corridor Transit Project within its right-of-way as planned. Caltrans stated that any work performed within its right-of-way required discretionary review and approval by Caltrans and should be included in the project’s environmental document. The identification of avoidance and/or mitigation measures would be a condition of Caltrans encroachment permit approval as well as the procurement of any necessary regulatory and resource agency permits.

In a meeting on September 22, 2010, Caltrans voiced concerns with a median-running LRT alignment (Design Option 1) at the ramp-terminal intersections for the I-5 HOV DARs at Voigt Drive. Caltrans also indicated that environmental clearance and approval of the planned improvements for DARs to I-5 and reconfiguration of Voigt Drive to connect to the ramps would not be completed by the anticipated completion of the environmental process for the Mid-Coast Corridor Transit Project. In addition, reconstruction of the Voigt Drive bridge over I-5 and widening and realignment of Voigt Drive between I-5 and Genesee Avenue that would be required for the at-grade design are not currently planned and programmed to be completed at the time of construction of the Mid-Coast Corridor Transit Project.

**California Public Utilities Commission**

In its scoping letter of June 1, 2010, the State of California Public Utilities Commission (CPUC) noted that it has exclusive power over the design, alteration, and closure of rail crossings of public roadways. The CPUC requested that SANDAG consider grade separation for major thoroughfares and study pedestrian and vehicle traffic at the crossings. It could be interpreted from the comments that the CPUC would have greater issue with the at-grade crossings under Design Option 1 than the grade-separated alignments under Design Options 4 and 5.

**General Public**

Two UCSD employees, commenting as private citizens, submitted letters relating to the alignment through UCSD. Both citizens expressed concern that some alignments, particularly the one running at-grade through UCSD (Design Option 1), would split the campus. Another citizen expressed concern that this option would make pedestrian and bicycle travel more dangerous.
Conclusions/Recommendation

Based on the results of the evaluation of the three alignment options, and review of comments from the project stakeholders, it is recommend that Design Option 4 be selected for further refinement and evaluation in the Draft SEIS/SEIR and that Design Options 1 and 5 be eliminated from further study. The conclusions from the evaluation and the basis for the recommendation are provided below:

- **Design Option 1** has received negative comments from UCSD because of potential impacts to access and circulation, as well as concerns from Caltrans related to the LRT at-grade crossings at intersections with the planned DARs and coordination of the Mid-Coast Corridor Transit Project with the I-5 projects. Because the at-grade alignment under Design Option 1 would be located in the median of Voigt Drive, this alignment would be dependent on the Voigt Drive widening and realignment and overcrossing reconstruction planned as part of the I-5 projects. CPUC also has requested SANDAG consider grade separation of the guideway at intersections. Therefore, it is recommended that Design Option 1 be eliminated from further consideration.

- **Design Option 5** would have the least compatibility with current and planned land uses. UCSD has commented on its incompatibility with existing and future land uses and potential impacts with the UCSD Park and sensitive biological resources. This alignment option also would have the greatest engineering, operating, and maintenance issues. Therefore, it is recommended that Design Option 5 be eliminated from further consideration.

- **Design Option 4** would have fewer potential impacts on property access and traffic circulation than the at-grade option of Design Option 1. Whereas Design Option 1 is dependent on the I-5 projects, and would be at risk if the projects are not environmentally cleared prior to construction of the Mid-Coast Corridor Transit Project, the alignment under Design Option 4 could be designed to accommodate the Voigt Drive realignment and widening and overcrossing reconstruction, as well as the existing Voigt Drive alignment. Design Option 4 also would be more compatible with existing and future land uses, and would avoid or minimize impacts to sensitive biological resources under Design Option 5. In addition, the alignment would have fewer operating and maintenance issues because it minimizes the number of tight radius curves compared to Design Options 1 and 5. The capital cost of Design Option 4 is similar to the other alignment options and has less opposition from stakeholders. Therefore, it is recommended that Design Option 4 be carried forward for further refinement and evaluation in the Draft SEIS/SEIR.
Attachment 1 – Stakeholder Letters

May 25, 2010

Anne Steinberger
SANDAG Marketing Manager
Mid-Coast Corridor Transit Project Work Group
401 B Street, Suite 800
San Diego, CA 92101

SUBJECT: UC San Diego response to Scope of Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR) for the Mid-Coast Corridor Transit Project

Dear Ms. Steinberger:

Thank you for the opportunity to comment on the alternatives under consideration by the San Diego Association of Governments (SANDAG) with respect to the Mid-Coast Corridor Transit Project. Bringing additional alternative transportation options to our growing campus and to the San Diego region is critical to a healthier environment and the region’s economic vitality. This new access, both to and from the campus, will change the transportation paradigm for our students, staff and faculty as soon as operations begin, and ridership will surely increase over time. Extending the Light Rail Transit (LRT) to our West and East campuses as soon as possible is imperative to allow our campus to minimize its impact on San Diego’s freeways, local roads and intersections.

I would like to acknowledge the excellent working relationship that UC San Diego has enjoyed with SANDAG, the California Department of Transportation (Caltrans), the San Diego Metropolitan Transit System (MTS), and the North County Transit District (NCTD). These partnerships are critical to achieve the common goal of using alternative transportation rather than relying on single occupancy vehicles. The Chancellor has and will continue to strongly support this goal at UC San Diego.

I understand and support the strategy that in July 2010 the SANDAG Board of Directors may be prepared to choose one of the three alternative alignments proposed during public scoping. This will allow SANDAG to immediately seek matching Federal funding through the Federal Transit Administration and thereby accelerate the project schedule. Our campus stands ready to continue working with SANDAG on the project design to ensure that the selected alignment serves both the campus and the community, and that any potential impacts are effectively mitigated.
We intend to be an engaged partner to ensure the safety and security of our campus community, including the students in Sixth College, adjacent to the Pepper Canyon station. This West campus station was included in the University Center/Sixth College Neighborhood Plan that was adopted by the campus in 2004. Safety and security is also a critical component for the students who attend the Preuss School, our charter middle and high school on the East campus, along with preservation of emergency and non-emergency access to the UC San Diego Medical Center. In general, safe and effective pedestrian, bicycle and vehicular circulation to, from, and on the campus are top concerns and priorities. Based upon these concerns and others, the campus has developed a very detailed list of issues that must be addressed and mitigated by the project. Those issues include, but are not limited to, noise, vibration, safety, security, circulation, biology, construction staging, electromagnetic fields, and aesthetic impacts.

We look forward to engaging SANDAG in an iterative design process that allows us to play an active role in the development of the project located on the UC San Diego campus. Prior to developing the final alignment and station design, the campus needs to review and approve concept renderings. It is our expectation that this analysis will begin early in the process to allow sufficient time for the evaluation of how the project is integrated into the urban fabric of our campus. More specially, we are looking for renderings/three-dimensional drawings of the project (including the type of structure, its relationship to topography, existing and future buildings, and circulation network). This information is critical to fully evaluate the project and determine what is best for the campus setting.

To continue to foster our partnership, I ask that meetings of the staff, which include representatives from UC San Diego, SANDAG, and MTS, be expanded to include Caltrans and occur on biweekly basis to ensure steady progress. The work of this group will continue to include the development of plans and agreements related to security and safety (pedestrians, bicycles and vehicular), station locations and design, track elevations (aerial versus at-grade versus tunnels), integration with Caltrans’ planned widening of Interstate 5, the proposed Voigt Drive Direct Access Ramp (DAR), a future Gilman Drive bridge crossing Interstate 5, and use of campus land for the Mid-Coast Corridor Transit Project right-of-way and stations. Please note that the information developed by this work group will continue to be reviewed by standing campus committees, such as the Campus/Community Planning Committee, Open Space Committee, and the Design Review Board, for their review, input and recommendations to the Chancellor.

Please accept the following attachment as a broad display of concerns, impacts and general comments that have been collected from various meetings, people, and discussions over time as the campus has contemplated and discussed the concept of the LRT. These comments are based on the SANDAG Draft Comparative Analysis Report released on March 12, 2010. As aforementioned, we are ready to engage at a deeper and more detailed level as soon as possible.
Thank you, once again, for this opportunity to work on this exciting project that will provide a new mode of transportation for UC San Diego and other Mid-Coast locations.

Sincerely,

[Signature]

Gary C. Matthews
Vice Chancellor

Attachment

cc: Supervisor Ron Roberts, Chair - Mid-Coast Corridor Project Working Group
    Executive Director Gary Gallegos - SANDAG
    CEO Paul Jablonski - Metropolitan Transit System
    Director Laurie Berman – Caltrans District 11
Attachment

The following is a brief summary of advantages and disadvantages as noted by the UC San Diego community for each alignment that has advanced into public scoping. Once the SANDAG Board of Directors acts in July 2010, the campus will focus much more intensively on the details of the chosen alignment(s) with the proposed LRT work group and campus standing committees.

Alternative 1
[SANDAG staff has consolidated alignments 1, 4 and 5 into Alternative 1]

Alignment 1
Advantages
- Impacts to sensitive biological resources are minimized

Disadvantages
- Several at-grade crossings, impacting vehicular circulation as well as visibility of pedestrians and bicyclists
- Separates Warren Field and Canyonview Pool recreation complexes along Voigt Drive
- Integration of LRT and proposed DAR at-grade along Voigt Drive creates a complex issue for construction phasing and operation
- Impacts to Preuss School, including safety of pedestrians
- Impacts to campus recreation lands
- Impacts to Campus Point Drive intersection at entry to UCSD Medical Center and for emergency vehicles

Alignment 4
Advantages
- Impacts to sensitive biological resources are minimized
- Aerial alignment on East Campus minimizes circulation impacts
- Potential for reduced LRT right-of-way requirements
- Regional access to East Campus station more easily accommodated at this location
- Elevated station allows for flexibility of land uses
- Aerial alignment may better integrate with proposed DAR improvements

Disadvantages
- Separates Warren Field and Canyonview Pool recreation complexes along Voigt Drive
- Impacts to campus recreation lands
- Integration of LRT and proposed DAR along Voigt Drive with Campus Point Drive realignment is critical during design, construction and operation
- Coordination with access to UCSD Medical Center and East Campus needed

Alignment 5
Advantages
- Avoids Voigt Drive; ensures ability to advance LRT independent of proposed DAR
- Reduced impacts to Preuss School
- Regional access to East Campus station more easily accommodated at this location
- Minimizes impact to baseball field
- Eliminates impact to Campus Point Drive intersection at entry to UCSD Medical Center and for emergency vehicles
Disadvantages
- Impacts to UCSD Park and sensitive biological resources
- Impacts to recreations lands
- Additional impacts to Sixth College student housing on north
- Potential impacts to future East Campus development sites
- Campus Point Drive realignment as part of proposed DAR still being studied; may impact feasibility of this alignment

Alternative 3
Advantages
- Avoids Voigt Drive; ensures ability to advance LRT independent of proposed DAR
- Avoids impacts to Preuss School
- Avoids impacts to campus recreation lands
- East Campus station location most proximate to UCSD Medical Center
- Avoids impacts to UCSD Medical Center and East Campus access

Disadvantages
- Impacts to UCSD Park and sensitive biological resources south of Thornton Hospital
- East Campus station location not desirable for regional access
- Potential impacts to Mesa Housing and Science Research Park
- Constrained design opportunities for future I-5/Gilman Drive bridge project

Alternative 6
Advantages
- Avoids Voigt Drive; ensures ability to advance LRT independent of proposed DAR
- Avoids impacts to Preuss School
- East Campus station location most proximate to UCSD Medical Center
- Avoids impacts to UCSD Medical Center and East Campus access

Disadvantages
- Impacts to UCSD Park and sensitive biological resources south of Thornton Hospital
- Additional impacts to Sixth College student housing on north
- East Campus station location not desirable for regional access
- Impacts to Health Sciences buildings to be constructed on East Campus (Office Buildings and CTRI Phase 2)
- Potential impacts to planned I-5/Gilman Drive Bridge
September 28, 2010

Greg Gastelum  
Project Development Program Manager  
SANDAG  
401 B Street, Suite 800  
San Diego, CA 92101

Subject: Mid-Coast Corridor Transit Project - Option B

Dear Greg:

Thank you for your presentation at our work group meeting on September 22, 2010. As you could tell by the turnout and discussion, the campus is engaged and excited about the extension of the light rail to serve UC San Diego.

As indicated at the meeting, the campus does not support Option B (previously identified as Alternative 1). This at-grade, median-configured option is particularly problematic as it relates to pedestrian/vehicular circulation, separation of recreation uses, safety for Preuss School students, and emergency vehicle access to the UC San Diego Medical Center. We understand that this was included in the alignments adopted by the San Diego Association of Government's Board of Directors in July 2010, and as a result, you may be obligated to carry it forward in the environmental document. Nonetheless, our campus Mid-Coast LRT Work Group will focus on the other alignments, which will provide a more viable design that can be supported by the campus community.

Please do not hesitate to contact us if you have any questions.

Sincerely,

Brad Werdick, Co-Chair  
UCSD Mid-Coast LRT Work Group  
Director of Physical Planning

cc:  L. Blanda  
    B. Gregory  
    B. Hellmann  
    G. Matthews  
    M. Phegley

Nigel Calcutt, Co-Chair  
UCSD Mid-Coast LRT Work Group  
Academic Senate
June 1, 2010

Ms. Anne Steinberger
San Diego Association of Governments
401 B Street, Suite 800
San Diego, CA 92101

Dear Ms. Steinberger:

The California Department of Transportation (Caltrans) appreciates the opportunity to review and comment on the Notice of Preparation (NOP) for the Mid-Coast Corridor Transit Project (SCH 2010051001) to be located in and around Interstate 5 (I-5) from Interstate 8 (I-8) to University of California, San Diego (UCSD). Caltrans has the following comments:

Caltrans supports the Mid-Coast Corridor Transit Project. The proposed light rail transit extension from Old Town to University City will provide new travel options and improve mobility within the congested I-5 corridor.

Caltrans has worked successfully with the Metropolitan Transit Development Board, North County Transit District and SANDAG to accommodate and permit portions of other regional light rail transit projects within or crossing the Caltrans right-of-way (R/W) while maintaining the R/W needed for future highway improvements. Such projects include the recently completed Trolley Green Line extension to San Diego State University and the SPRINTER. The experience gained from these past successes can be utilized in the coordination and permitting efforts necessary for the planning, design and construction of the Mid-Coast Corridor Transit Project.

Based on the coordination that has occurred over the years between Caltrans and SANDAG, Caltrans has no major concerns with locating the proposed Mid-Coast Corridor Transit Project within the Caltrans R/W as planned. Continued cooperation as the details of the I-5 proposed highway improvement projects and the Mid-Coast Corridor Transit Project are defined is anticipated to allow for the successful completion both projects thus improving transportation capacity and options in the I-5 corridor.

Any work performed within R/W requires discretionary review and approval by Caltrans and must be clearly identified and included in the environmental document. The identification of avoidance and/or mitigation measures will be a condition of the Caltrans encroachment permit approval as well as the procurement of any necessary regulatory and resource agency permits.

Improvement plans for construction within the State Highway R/W must include the appropriate engineering information consistent with the State code, and signed and stamped by a professional.
Ms. Anne Steinberger  
June 1, 2010  
Page 2

engineer registered in the State of California. The Caltrans Permit Manual contains a listing of  
typical information required for project plans. All design and construction must be in  
conformance with the Americans with Disabilities Act (ADA) activities.

Caltrans looks forward to continuing our coordination efforts with SANDAG staff on the Mid-
Coast Corridor Transit Project. If you have any questions regarding these comments, please  
contact Trent Clark at (619) 688-3140.

Sincerely,

JACOB M. ARMSTRONG, Branch Chief
Development Review Branch

“Caltrans improves mobility across California”
June 1, 2010

Anne Steinberger
San Diego Association of Governments
401 B Street, Suite 800
San Diego, CA 92101

Subject: SCH#2010051001: Comments to Mid-Coast Corridor Transit Project

Dear Ms. Steinberger:

The California Public Utilities Commission (Commission) has regulatory and safety oversight over railroad crossings in California. The California Public Utilities Code requires Commission approval for the construction or alteration of crossings and grants the Commission with exclusive power on the design, alteration, and closure of crossings. Rail Crossing Engineering Section (RCES) staff is in receipt of the San Diego Association of Governments Notice of Preparation (NOP) for the Mid-Coast Corridor Transit Project and has reviewed the document for impacts to rail crossing safety.

The proposed project would provide for transit improvements within the Mid-Coast Corridor, defined as the area centering on Interstate 5 and extending from downtown San Diego on the south to University City on the north. The corridor is bound by the Pacific Ocean on the west and Interstate 805 and State Route 163 on the east.

The purpose of the proposed project is to implement a transit project that addresses the identified transportation needs for the Mid-Coast Corridor. The Mid-Coast Corridor Transit Project would improve public transit services between University City, Old Town, and downtown San Diego and would connect corridor residents with other Trolley lines, thereby enhancing direct public access to other regional activity centers. The project would improve travel options to employment, education, medical, and retail centers for corridor residents, commuters, and visitors.

In the development of the environmental document, SANDAG should analyze impacts to highway-rail crossings. Commission approval is required for the construction of any new crossing. SANDAG should consider grade separations for major thoroughfares and study pedestrian and vehicle traffic at the crossings. During the process, SANDAG should be in contact with staff to discuss any relevant concerns or issues.

If you have any questions, you may contact me at (213) 576-7076 or ldi@.cpuc.ca.gov.

Sincerely,

Laurence Michael, PE
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection and Safety Division