S.0 EXECUTIVE SUMMARY

S.1 Introduction

The Federal Transit Administration (FTA) and the San Diego Association of Governments (SANDAG) are preparing a Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR) for the Mid-Coast Corridor Transit Project in San Diego, California. FTA is serving as lead agency for the National Environmental Policy Act (NEPA) and SANDAG is serving as lead agency for the California Environmental Quality Act (CEQA).

The Draft SEIS/SEIR will build upon and update previous transit planning, engineering, and environmental studies and decisions for the Mid-Coast Corridor. These include:

- Adoption, in 1995, of a Locally Preferred Alternative (LPA) – an 11-mile extension of the Trolley light rail transit (LRT) system from the Old Town Transit Center (OTTC) to University City.
- The Final Environmental Impact Statement (FEIS) for the first portion of the LPA extending from OTTC to Balboa Avenue completed in 2001.
- An update to the 1995 LPA alignment, adopted in December 2003, to serve the University of California San Diego (UCSD) campus on both sides of Interstate 5 (I-5) and to connect the Trolley with the University Towne Centre (UTC) Transit Center.
- Inclusion of the project in the extension of TransNet, approved by voters in November 2004.

The Draft SEIS/SEIR will include an analysis of changed conditions in the Mid-Coast Corridor since the previous environmental studies were completed.

The Mid-Coast Corridor LRT Project is included in the 2030 San Diego Regional Transportation Plan: Pathways for the Future (RTP) (SANDAG 2007) under both the Revenue Constrained and the Reasonably Expected Revenue Scenarios. TransNet will provide 50 percent of the project’s capital cost, with the remaining 50 percent assumed to come from the FTA Section 5309 New Starts program. Securing these funds will require successfully completing the FTA New Starts requirements.

S.2 Purpose of the Report

The first step in preparing the Draft SEIS/SEIR was the development and evaluation of alternatives for public and resource agency consideration during CEQA scoping, which will occur in spring 2010. The corridor’s transportation needs were defined, and transit alternatives were identified for meeting these needs. These alternatives were then
evaluated against the project goals, objectives, and criteria. This Draft Comparative Evaluation of Alternatives Report summarizes this process, presents the evaluation results, and recommends a smaller set of alternatives for consideration in CEQA scoping. NEPA scoping was carried out in conjunction with the previous AA/DEIS/DEIR completed in 1995.

In the CEQA scoping process, SANDAG will inform the public and involved agencies about the project. It will describe the transportation problems and needs to be addressed, the alternatives under consideration, the criteria to be used for evaluating the alternatives, and the environmental issues to be studied. The goal of scoping is to encourage active two-way communication of issues and concerns to help shape the scope of the Draft SEIS/SEIR.

Three LRT alternative alignments are recommended for presentation at scoping. Each alternative would extend the existing Trolley system from OTTC north to University City, with service to UCSD and UTC. As required by NEPA and CEQA, the No-Build Alternative will serve as the basis for comparing the build alternatives in the Draft SEIS/SEIR.

This report also recommends eliminating the Transportation System Management (TSM), bus rapid transit (BRT), and Commuter Rail alternatives prior to scoping because they do not satisfy the project goals and objectives. Most importantly, these alternatives would generate significantly less ridership and mobility benefits than LRT. The BRT and Commuter Rail alternatives were found not to be sufficiently cost effective to be candidates for FTA New Starts funding. Two of the LRT alignment alternatives also are recommended for elimination because, compared to the other LRT alternatives, their costs were higher and/or potential adverse impacts were greater and benefits less.

The alternatives recommended to be carried forward, and the alternatives recommended for elimination, will be presented for review and comment at scoping. Once all comments have been considered, the SANDAG Board of Directors and FTA will decide upon the alternatives to be carried forward for further evaluation in the Draft SEIS/SEIR. The scoping results and the decision on the alternatives to be evaluated in the Draft SEIS/SEIR will be documented in the Final Comparative Evaluation of Alternatives Report.

This Executive Summary is a synopsis of the Draft Comparative Evaluation of Alternatives Report. It is organized into four sections: Purpose and Need, Alternatives Considered, Analysis and Evaluation of Alternatives, and Recommendations.

S.3 Purpose and Need

The purpose and need for the Mid-Coast Corridor Transit Project focuses on improving mobility and accessibility and attracting transit-supportive land uses and economic development to smart growth centers in the Mid-Coast Corridor.

The study area for the project, shown in Figure S-1, extends from OTTC on the south to the I-5/Interstate 805 (I-805) interchange on the north, and is bound by the Pacific Ocean on the west and the I-805 and State Route 163 (SR 163) on the east. More broadly, the term “Mid-Coast Corridor” refers to a larger geographic area that includes not only the project study area but also Downtown San Diego and the area between downtown and Old Town.
Figure S-1. Project Study Area
S.3.1 Description of the Mid-Coast Corridor

The Mid-Coast Corridor is anchored by University City on the north and Downtown San Diego on the south. University City is a designated Urban Center and mixed-use core and has the second most dense land uses in San Diego County. In addition to the UCSD campus, the Westfield UTC shopping center, and four regional hospitals, the University City area contains several high-density residential developments and is a significant employment center for the region with numerous high- and mid-rise office developments in the vicinity of UTC. Downtown San Diego, at the south end of the Mid-Coast Corridor, is the region’s only identified Metropolitan Center, and has the region’s densest land uses and high-rise development.

Significant growth is projected in the Mid-Coast Corridor. By 2030, SANDAG projects that the Mid-Coast Corridor’s population will exceed a quarter million, 14 percent more than in 2003. Employment in the corridor also is projected to increase by 14 percent, to almost 200,000 jobs. Increased population and employment will lead to increased travel demand in the corridor. Additionally, the SANDAG Regional Comprehensive Plan (RCP) (SANDAG 2004) identified for both the Downtown San Diego and University City areas as places of high residential and employment densities.

The SANDAG RTP envisions that the dense population and employment centers anchoring both the northern and southern ends of the corridor would be served by improved transit. This improved system would attract new transit riders with service that has greater frequency, speed, and reliability than is possible with the current system composed of buses, commuter rail, and LRT extending only to the OTTC. The existing COASTER commuter rail service has widely spaced stations and therefore, provides limited service to the specific areas of transit opportunity within the study area. The speed and reliability of bus service are hindered by roadway congestion. With increased congestion projected to occur in the future, the level of service, reliability, and efficiency of the existing transit system will decrease, with no additional priority improvements for transit.

S.3.2 Goals and Objectives

The SANDAG RTP was developed to meet the region’s long-term mobility needs, better connect transportation and land use policy decisions, and create a transportation network that will serve the people of this region well into the 21st century. Adopted by SANDAG in 2007, the RTP specifies seven policy objectives to guide the further planning and development of the transportation system:

- **Livability**—Focus transit improvements in areas with compatible land uses that support an efficient transit system. Use regional transportation funding as an incentive for smarter-growth land uses.
- **Mobility**—Tailor transportation modal improvements to reflect supporting land uses in major travel corridors. Prioritize TransNet Early Action Program commitments and high-ranking projects and corridors for regional transportation funding. Minimize drive-alone travel by making it fast, convenient, and safe to carpool, vanpool, walk, and bike. Improve goods movement.
• **Efficiency**—Measure the performance of the regional transportation system on a regular basis and manage its efficiency. Develop cost effective, voluntary incentive programs for major employers, schools, and residential areas.

• **Accessibility**—Increase transit mode share during peak periods with competitive transit travel time to major job centers. Encourage walkability and better bicycle access within local communities.

• **Reliability**—Apply new technologies and management strategies to make transit service more reliable, convenient, and safe and to reduce congestion.

• **Sustainability**—Focus roadway and transit improvements in urban/suburban areas, away from the region’s rural areas. Improve air quality, reduce greenhouse gas (GHG) emissions, and limit impacts to sensitive habitats. Evaluate all reasonable non-capital transportation improvement strategies before pursing major expansions to roadway or fixed-guideway capacity.

• **Equity**—Provide equitable levels of transportation services for low-income, minority, and elderly and disabled persons.

The Mid-Coast Corridor’s current transportation system does not satisfactorily meet these RTP policy objectives. To enhance the performance of the transportation system, the following needs have been identified:

• Transportation capacity needs to be expanded
• Alternatives to congested freeways and roadways need to be provided
• Improvements that complement and integrate with existing transit systems need to be provided
• Transit improvements that minimize dependence on auto travel are needed
• Transit needs to be reliable and competitive with the auto in terms of travel time
• Transit needs to effectively serve the UCSD and the University City areas
• Transit needs to better support -- and be supported by -- planned development and growth in the corridor

Project goals have been established to help identify alternatives that address these needs and to guide the evaluation of these alternatives. Table S-1 summarizes the need for the proposed Mid-Coast Corridor Transit Project and presents project goals for evaluating alternative modes and alignments.

Further objectives were established to account for other regional policy objectives that were not fully reflected in the project need, but have a bearing on the evaluation (Table S-2).

### S.4 Alternatives Considered

The conceptual alternatives include a No-Build Alternative and several build alternatives consisting of a relatively low-cost TSM Alternative, seven LRT alternatives, four BRT alternatives, and one Commuter Rail Alternative.
Table S-1. Mid-Coast Corridor Transit Project Goals

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<th>Project Need</th>
<th>Project Goals</th>
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<td>Transportation Capacity Needs to be Expanded</td>
<td>• Increase the overall capacity of the transportation system serving the study area</td>
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<td>Alternatives to Congested Highways and Roadways Need to be Provided</td>
<td>• Reduce auto person trips and vehicles miles traveled (VMT) and vehicle hours traveled (VHT)</td>
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<td>Improvements that Complement and Integrate With Existing Transit Systems Need to be Provided</td>
<td>• Link study area transit services with existing transit facilities and services to improve regional connectivity and mobility</td>
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<td>Transit Improvements that Minimize Dependence on Auto Travel Need to be Provided</td>
<td>• Increase transit ridership and mode share</td>
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<td>Transit Needs to be Reliable and Competitive with the Auto Travel Time</td>
<td>• Increase transit on-time performance</td>
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<td>• Reduce the disparity between highway and transit speeds and travel times</td>
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<tr>
<td>Transit Needs to Effectively Serve the UCSD and University City Areas</td>
<td>• Provide fast and efficient transit service to the University City area</td>
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<td>• Provide direct transit connections to UCSD West Campus</td>
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<tr>
<td>Transit Needs to Better Support -- and be Supported by -- Planned Development and Growth in the Corridor</td>
<td>• Provide high-capacity and quality transit service to those parts of the study area with existing or planned density and other transit friendly characteristics</td>
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<td>• Help shape local land use planning to help foster transit-oriented development (TOD) near stations</td>
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Table S-2. SANDAG Regional Policy Objectives

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<th>Regional Goals</th>
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<td>Livability: Focus transit investments in areas with compatible land uses that support an efficient transit system</td>
<td>• Consistency with regional and local plans</td>
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<td>Sustainability: Improve air quality and reduce GHG emissions</td>
<td>• Reduce GHG emissions</td>
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<td></td>
<td>• Limit impacts to sensitive habitats</td>
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<tr>
<td>Equity: Provide equitable levels of transportation service and avoid disparate impacts</td>
<td>• Improve access for low-income, minority, elderly, and disabled persons.</td>
</tr>
<tr>
<td></td>
<td>• Avoid adverse impacts to low-income, minority, elderly, and disabled persons</td>
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In identifying the range of alternatives, consideration was given to changed conditions since the previous LPA was adopted in 1995 and updated in 2003. One such change is the planned widening of I-5 to accommodate high-occupancy vehicle (HOV) lanes and direct access ramps (DARs) at Voigt Drive in University City. Recognizing the emergence of BRT as a transit mode, several BRT alternatives were identified for serving the corridor. The Independent Transit Planning Review Services Report (SANDAG 2006) recommended that a commuter rail alternative also be studied. As a result, the transit modes considered in the initial alternatives included LRT, BRT, commuter rail, and rapid bus. Figure S-2 identifies the major characteristics of the technologies considered.

Alternative alignments also were identified, responding to both the changed conditions and to stakeholder input from UCSD, Metropolitan Transit System (MTS), the California...
### Figure S-2. Transit Technology Alternatives under Consideration

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| **Rapid Bus**              | - Operates at grade in mixed-flow lanes  
- Clean fuel (compressed natural gas or CNG) powered bus with rubber tires  
- 60 mph maximum or posted speed  
- Up to 60-foot long articulated bus  
- Capacity: Up to 84 passengers per bus, with standees  
- Approximate station spacing: 0.75 mile  
- Station length: Varies |
| **Bus Rapid Transit**      | - Operates at grade, below grade, or above grade in exclusive, semi-exclusive, and shared lanes  
- Clean fuel (CNG) powered bus with rubber tires  
- 65 mph maximum speed  
- Up to 65-foot long articulated bus  
- Capacity: Up to 100 passengers per bus, with standees  
- Approximate station spacing: 1 to 5 miles  
- Station length: 200 feet |
| **Light Rail Transit**     | - Operates at grade, below grade, or above grade in exclusive lanes or fixed-guideway  
- Electrically powered via overhead power contact system  
- 55 mph maximum speed  
- Maximum four cars per train  
- Capacity: 600 passengers per three-car train, with standees  
- Approximate station spacing: 1 to 2 miles  
- Station length: 360 feet |
| **Commuter Rail Transit** | - Operates at grade, below grade, or above grade  
- Tracks shared with intercity and freight trains  
- Diesel propelled locomotives  
- 79 mph maximum speed  
- Trains generally consist of up to five double-deck passenger cars  
- Capacity: 675 seated passengers per train  
- Approximate station spacing: 4 to 5 miles  
- Station length: 500 feet |
Department of Transportation (Caltrans), North County Transit District (NCTD) and the City of San Diego. Consideration was given to alignments along major arterials, the I-5 corridor, the MTS/San Diego Northern Railway (SDNR) right-of-way, and routings independent of any existing facility.

S.4.1 No-Build Alternative

The No-Build Alternative includes existing transit services and the highway and transit improvements from the RTP Revenue Constrained Scenario. Within the Mid-Coast Corridor, the major capital improvement projects in the No-Build Alternative (and in each of the other alternatives) are shown in Figure S-3 and listed below:

- HOV lanes on I-5, from Interstate 8 (I-8) north to I-805 and beyond, with DARs at Voigt Drive
- HOV lanes on I-805, from I-5 to Carroll Canyon Road, and Managed Lanes on I-805, from Carroll Canyon Road to South Bay with DARs at Carroll Canyon Road and Nobel Drive
- Double tracking the SDNR tracks within the MTS/SDNR right-of-way

In addition to these capital improvements, transit operating improvements are included in the No-Build Alternative. These include modifying the existing Route 150 of the MTS bus system, which operates between Downtown San Diego and University City. The modified route would operate within the planned I-5 HOV lanes, from OTTC north to Nobel Drive, and would serve UCSD and UTC with 15-minute service during peak periods and 30-minute service during the mid-day or off-peak period.

Improvements to the existing Trolley service also are included in the RTP Revenue Constrained Scenario. Based on the RTP, the No-Build Alternative provides for 7.5-minute frequencies all day on all lines except the Trolley Orange Line, which would operate at 7.5-minute frequencies during peak periods and 15-minute frequencies during the off-peak.

S.4.2 TSM Alternative

The TSM Alternative is designed to address the same needs as the build alternatives, without constructing a fixed guideway and with a lower capital investment. The TSM Alternative would improve bus services by modifying Route 150 to provide a high frequency (7.5 minutes peak/off-peak) express route between downtown and University City via Pacific Highway and the planned I-5 HOV lanes, with an intermediate stop at OTTC. In addition, between Downtown San Diego and Balboa Avenue, a new rapid bus route (Route 156) would operate limited-stop service at 15- and 30-minute frequencies (peak/off-peak periods) along Pacific Highway and Morena Boulevard. Between Balboa Avenue and Nobel Drive, the new express service would operate in the planned I-5 HOV lanes. From Nobel Drive, the two routes would have local service with five stops in University City at Nobel Drive, UCSD West, UCSD East, Executive Drive, and the UTC Transit Center (Figure S-4).
Figure S-4. TSM Alternative
S.4.3 Light Rail Transit Alternatives

Seven potential LRT alternatives were identified for extending the Trolley system from OTTC north to University City. Each would use the existing Trolley tracks from the Santa Fe Depot north past OTTC, to a point just south of the San Diego River. From there, the alternatives would follow the MTS/SDNR right-of-way to near SR 52 in University City. Stations would be located within the MTS/SDNR right-of-way along Morena Boulevard at Tecolote Road, Clairemont Drive, and Balboa Avenue. Figure S-5 shows the proposed LRT alignment alternatives and station locations from OTTC north to SR 52.

North of SR 52, several LRT alignment alternatives were identified for service to University City (Figure S-6). LRT Alternatives 1 and 2 are refinements of LPA options adopted by the SANDAG Board of Directors in 2003. These two alternatives would follow the I-5 corridor north to the UCSD west campus and then turn east along Voigt Drive and Genesee Avenue or Regents Road and Executive Drive to a terminal station at the UTC Transit Center terminus. Stations would be located at Nobel Drive, UCSD West, UCSD East, Executive Drive, and the UTC Transit Center.

LRT Alternatives 4 and 5 are variations of LRT Alternative 1 to avoid the potential conflict with the planned DAR at Voigt Drive. LRT Alternative 4 would provide for an aerial alignment along the south side of Voigt Drive, while LRT Alternative 5 would provide for an alignment to the south and away from Voigt Drive.

Two additional LRT alternatives were developed to avoid Voigt Drive. LRT Alternative 6 would leave the UCSD West Campus and cross over to the east side of I-5 north of Gilman Drive. On the UCSD East Campus, this alternative would include a station at Thornton Hospital instead of on Voigt Drive. LRT Alternative 7 would continue along the east side of I-5 to Thornton Hospital instead of crossing over to the west side of I-5. Like LRT Alternative 6, LRT Alternative 7 would include a UCSD East Station at Thornton Hospital. This alternative is the only LRT alternative without a UCSD West Station.

LRT Alternative 3 was developed to avoid potential conflicts with the planned I-5 widening to accommodate the future HOV lanes. Although it was evaluated in the 1995 AA/DEIS/DEIR, the planned I-5 widening merited its reconsideration. Unlike the other LRT alternatives, LRT Alternative 3 would follow the existing MTS/SDNR right-of-way east to Genesee Avenue. At this point, LRT Alternative 3 would exit the MTS/SDNR right-of-way and transition below grade (via a new tunnel), which would proceed north under Genesee Avenue and then turn west under Executive Drive, rising to grade west of Regents Road on the UCSD East Campus. The alternative would continue west, with a terminal station on the UCSD West Campus. Within University City, this alternative would include a below-grade station at the UTC Transit Center and at-grade stations at UCSD East (at Thornton Hospital) and UCSD West. This alternative would minimize right-of-way acquisitions by using the existing MTS/SDNR right-of-way east to Genesee Avenue.

Each of the LRT alternatives would operate as an extension of the Trolley Blue Line to University City. The extended Blue Line would operate a single line from the existing San Ysidro Transit Center Station on the south to University City on the north, with stops at all intermediate stations. The LRT line would operate every 7.5 minutes during peak
Figure S-5. LRT Alternative Alignment between OTTC and SR 52
Figure S-6. LRT Alternative Alignments within University City

Legend:
- Green Line: Light Rail Line
- COASTEN Line
- LRT Station
- COASTER Station
- Transit Center
- Alignment Extension At-Grade
- Alignment Extension Cut-and-Cover
- Alignment Extension Aerial
- Proposed Station
- Proposed Parking
and off-peak periods. By extending the Trolley Blue Line to University City, the LRT alternatives would connect the major travel markets in University City with Downtown San Diego, South San Diego, and South Bay without a transfer in downtown.

S.4.4 Bus Rapid Transit Alternatives

The BRT alternatives would introduce new high quality bus service operating in exclusive bus lanes, semi-exclusive bus or HOV lanes, and shared lanes from Downtown San Diego north to University City. Four BRT alternatives (BRT Alternatives 1 through 4) were identified, ranging from high to low in the amount of exclusive lane miles, and from high to low in capital costs (Figure S-7 and Figure S-8). The alternatives are approximately 16 miles long and include 15 stations: Broadway at 5th Avenue, State Street, and Kettner Boulevard (the Santa Fe Depot Station); Pacific Highway at Cedar Street, Palm Street, and Enterprise Street; OTTC; Morena Boulevard at Tecolote Road, Clairemont Drive, and Balboa Avenue; Nobel Drive; UCSD West; UCSD East; Executive Drive; and the UTC Transit Center.

BRT Alternative 1 would have the most miles of exclusive bus lanes and would provide the fastest travel times and highest reliability. Exclusive bus lanes would be provided along Pacific Highway from downtown to OTTC, within the MTS/SDNR right-of-way between OTTC and SR 52, and along the I-5 corridor from SR 52 to the UCSD West Campus. From the UCSD West Campus to the UTC Transit Center, exclusive bus lanes also would be provided along Voigt Drive and Genesee Avenue.

BRT Alternative 2 is similar to BRT Alternative 1, except it would have semi-exclusive bus lanes on Pacific Highway from downtown to I-5 and would operate in regular highway lanes to OTTC. From OTTC, buses would operate in regular lanes on Taylor Street, Morena Boulevard, West Morena Boulevard, and Morena Boulevard to Tecolote Road. From this point north to Clairemont Drive, where it would enter the MTS/SDNR right-of-way, BRT Alternative 2 would have semi-exclusive lanes. The alignment north of Clairemont Drive would be the same as BRT Alternative 1.

BRT Alternative 3 would have the fewest miles of exclusive bus lanes. It would follow the BRT Alternative 2 alignment between Downtown San Diego and Clairemont Drive. Instead of constructing new exclusive lanes north of Clairemont Drive, however, buses would operate in semi-exclusive lanes on Morena Boulevard north to Balboa Avenue, and would use the planned I-5 HOV lanes from Balboa Avenue to the I-5/Nobel Drive interchange in University City. This alternative also would include a new DAR at Balboa Avenue to access the I-5 HOV lanes and the proposed Balboa Avenue Transit Center. From Nobel Drive, the alternative would operate in shared lanes to the UCSD West Campus. From the UCSD West Campus to UTC, the alternative would be the same as BRT Alternatives 1 and 2.

BRT Alternative 4 would provide exclusive bus lanes only in Old Town and UTC, the most congested areas of the Corridor outside of Downtown San Diego. In other parts of the corridor, BRT Alternative 4 alignment would be lower-cost, shared or semi-exclusive lanes where BRT buses could operate with traffic at relatively higher speeds.
Figure S-8. BRT Alternatives 3 and 4
The BRT alternatives would consist of a new express bus route, overlaid on existing bus services, running between Downtown San Diego and University City. Buses would stop at all intermediate stations. The new BRT service would operate every 7.5 minutes during peak and off-peak periods, the same as the LRT alternatives.

S.4.5 Commuter Rail Alternative

The Commuter Rail Alternative would provide new commuter rail service to the University Center area using existing or planned double tracks in the MTS/SDNR right-of-way to Genesee Avenue. It would require the construction of a tunnel under Genesee Avenue and a deep underground station at the UTC Transit Center. A new station would also be located at Balboa Avenue. The commuter rail service would operate as a shuttle from the Santa Fe Depot in Downtown San Diego to the new station at the UTC Transit Center in University City, as shown in Figure S-9.

The Commuter Rail Alternative would use the existing and/or planned SDNR tracks from the Santa Fe Depot to Genesee Avenue. With the rail double tracking anticipated in the RTP and included in the No Build Alternative, it is anticipated that the Commuter Rail Alternative could operate at an acceptable frequency without hindering the Amtrak, COASTER, or Burlington Northern Santa Fe (BNSF) freight service operations.

The proposed Commuter Rail Alternative operating plan provides for the operation of service between Downtown San Diego and University City, with intermediate stops at OTTC and Balboa Avenue. In 2030, service would operate every 15 minutes during peak periods and every 30 minutes during off-peak periods.

S.5 Analysis and Evaluation of Alternatives

This section summarizes the results of the analysis and evaluation. It presents the results of the ridership forecasting and cost estimating analyses, describes how well the alternatives meet the project purpose and need, and provides information on each alternative’s potential environmental and transportation effects, cost effectiveness, and financial feasibility.

The LRT alternatives will attract substantially more “new riders” to transit than would the other modes, and would have the highest mobility benefits. There are a number of reasons for the increase in transit riders and user benefits including elimination of a transfer between the major travel markets of South Bay and University City, improved travel times, and improved reliability of service. Higher ridership translates to fewer automobile trips, fewer pollutant emissions, and less energy consumption. The TSM, BRT, and Commuter Rail alternatives are projected to attract no more than 35 percent of the new riders attracted to the LRT alternatives.

Other than the TSM Alternative, all of the alternatives involve a substantial capital investment. The LRT alternatives would require an investment of more than $1 billion, as would the Commuter Rail Alternative. The BRT alternatives range in cost from approximately $740 million to more than $2 billion. The operations and maintenance (O&M) cost of the BRT alternatives is estimated to be $10 million per year more than the other alternatives.
Figure S-9. Commuter Rail Alternative
Table S-3 summarizes the evaluation of alternatives. In general, the build alternatives (LRT, BRT and Commuter Rail) would meet the project goals and objectives more effectively than the TSM Alternative. The build alternatives would improve mobility and transportation system accessibility and/or connectivity between major travel markets. They also would provide transit improvements supportive of TOD, economic development, and local community plans. The TSM Alternative would enhance service and be cost-effective, but it would not substantially improve travel time, ridership and reliability. As a consequence, the TSM Alternative would be a less effective catalyst for attracting transit-supportive land uses and economic development to designated smart growth areas.

The LRT alternatives would be more effective than the BRT alternatives or the Commuter Rail Alternative in achieving the project goals and objectives. The greater effectiveness of the LRT alternatives is due to their substantially higher ridership and mobility benefits. The LRT alternatives would offer better connections between the Mid-Coast Corridor and major travel markets, leading to significantly higher benefits for users of the transit system.

Compared to the BRT and Commuter Rail alternatives, the LRT alternatives would be most competitive with auto travel. The Commuter Rail Alternative would not “provide direct transit connections to UCSD” (a project goal) because it would not have a station on the UCSD campus.

The LRT alternatives also would be significantly more cost effective than the BRT or Commuter Rail alternatives. The cost effectiveness of the LRT alternatives would range from $24.10 to $26.60, compared to a cost effectiveness of no higher than $135.20 for the BRT and Commuter Rail alternatives. Only the LRT alternatives are competitive for FTA New Starts funds, giving SANDAG an opportunity to leverage TransNet revenues. Although the LRT alternatives would require a substantial local investment, they are financially feasible or well within the range of being financially feasible.

Generally, the LRT alternatives are equally effective in meeting project goals and objectives. One difference is that LRT Alternative 7 would have only one station on the UCSD campus, the UCSD East Station at Thornton Hospital, and would attract fewer riders and produce fewer mobility benefits than the other LRT alternatives which would serve both the UCSD West and East Campuses. Thus, the effectiveness of this alternative in serving UCSD, a major project goal, would be reduced.

Although an alternative may be effective in meeting the project goals and objectives, it may have potential environmental or other impacts that could result in it not being carried forward into scoping. Differences in potential environmental impacts among the LRT alternatives include ecosystems/biological resources and visual and aesthetic considerations. The potential ecological resource impacts would be greater under LRT Alternative 3 than the other LRT alternatives. This alternative would have a greater potential for impacts to sensitive habitat and wetlands. LRT Alternatives 1 through 5, with the most aerial structure, would have the highest potential for visual and aesthetic impacts. LRT Alternative 2 would have greater potential traffic impacts than the other
## Table S-3: Summary of Evaluation of Alternatives

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<th>Project Need</th>
<th>TSM</th>
<th>LRT 1</th>
<th>LRT 2</th>
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<th>LRT 5</th>
<th>LRT 6</th>
<th>LRT 7</th>
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<td>• Increase transit on-time performance</td>
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<td>• Reduce the disparity between highway and transit speeds and travel times</td>
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<td>• Provide fast and efficient transit service to the University City area</td>
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<td>• Provide direct transit connections to UCSD West Campus</td>
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<td>• Provide high capacity and quality transit service to those parts of the study area with existing or planned density and other transit friendly characteristics</td>
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<td>• Help shape local land use planning to help foster TOD near stations</td>
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<td>• Be consistent with regional and local plans</td>
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<td>• Reduce GHG emissions</td>
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<td>• Improve access for low-income, minority, elderly, and disabled persons</td>
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<td>• Likelihood of securing FTA New Starts funding</td>
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- ○: More effective
- ☐: Equal effectiveness
- ●: Less effective
LRT alternatives. LRT Alternative 2 would require a gated mid-block crossing of Regents Road, south of Genesee Avenue, and would eliminate two through-traffic lanes on Executive Drive. In addition, this alternative would impact private property access on Executive Drive. LRT Alternatives 6 and 7 would eliminate one traffic lane on Executive Drive and potentially impact property access.

S.6 Recommendations

Of the seven LRT alternatives considered, five are recommended for presentation at CEQA scoping: LRT Alternatives 1, 3, 4, 5, and 6. The five LRT alternatives effectively meet project goals, improve regional mobility, are cost-effective or near cost effective and are anticipated to be competitive for FTA New Starts funding. It also is recommended that LRT Alternatives 1, 4, and 5 be combined into a single alternative with alignment options, as they have similar routes and effectiveness. The two remaining LRT alternatives (LRT Alternatives 2 and 7) are recommended for elimination. LRT 1 and LRT 2 alignments are similar with the exception that LRT 2 is aligned on Regents Road and Executive Drive rather than continuing on Genesee Avenue. While similar, LRT2 is higher in capital costs, lower in user benefits and lower in cost effectiveness than LRT 1. In addition, the alignment on Regents Road and Executive Drive would have greater potential impacts on traffic and property access, therefore LRT 2 is recommended for elimination. LRT Alternative 7 would not be as effective as the other LRT alternatives, as evidenced by ridership and user benefits and travel time savings. LRT Alternative 7 would not provide direct service to the UCSD West Campus, thus, it would less effectively meet an important project goal.

It also is recommended that the TSM Alternative, all four of the BRT alternatives, and the Commuter Rail Alternative be eliminated from further consideration. Compared to the LRT alternatives, these alternatives would not be as effective in meeting the project goals and in improving regional mobility and accessibility. Furthermore, the BRT and Commuter Rail alternatives are not cost effective and are unlikely to be competitive for FTA New Starts funds. As a baseline to address the FTA New Starts criteria, the TSM Alternative would be carried forward into the next phase of the project, but it would no longer be considered a build alternative.