

PLANNING FOR A TRANSPORTATION CORRIDOR IN SAN LUIS OBISPO CA

Summary of work by Cal Poly Class CE 424, Fall 2007, about alternative transportation.
Instructor Eugene Jud, Fellow Life ITE

Task for the five student's groups including the final public exhibition

1. Objective

Climate change now is a highly relevant political topic. It was discussed at the Energy Summit of the authorities at Cal Poly in August, 2007. For this project we assume a **dramatic shift** in the public opinion **towards alternative transportation** modes as well as a possible long term population of the Paso/Maria Region of 1,000,000 people.

Therefore the groups propose the following:

1.1 A very short term access to the airport by **CONVENTIONAL BUSES**.

1.2 **ALTERNATIVE TRANSPORTATION NETWORK** for the **CORRIDOR** Airport-Downtown- Cal Poly, long term and in phases.

1.3 A **DESIGN** of a facility in connection with the airport for the long or intermediate term.

2. Deliverables

2.1 Short Term Access to the Airport by **CONVENTIONAL BUSES**

Provide a map illustrating smaller changes to the existing system.

2.2 Alternative Transportation Network for the **CORRIDOR**

- Map of *Activity centers* within the corridor with schematic sketch of different *rail functions/Bus Rapid Transit (BRT)*.
- *Detailed maps up to year 2050 with explanations.*

2.3 **DESIGN** of a Facility

At least two posters with an explanation and cross sections, longitudinal profiles, time space diagrams, perspectives or models as appropriate.

3. Final Exhibition

The exhibition must contain easy to read posters/maps that are self-explanatory.

PLANNING EXHIBITION FOR THE CAL POLY-DOWNTOWN-AIRPORT CORRIDOR

With emphasis on public transportation and a vision for the long-term future

Date: Thursday, November 15, 2007

Time: 3:45 – 5:30pm

Location: City/County Library, 995 Palm Street (Corner of Osos & Palm)

Come and discuss the proposals of Cal Poly Civil Engineering students.
Everyone invited!



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Task for Students

Make a proposal for public transportation serving the Broad St. corridor and providing access to the Airport using City, County, and intercity transportation addressing:

- Goals and objectives, assuming some sort of long term advanced public transportation between Paso Robles and Santa Maria
- General idea for light rail and/or bus rapid transit serving main activity centers
- Engineering design for future access to the new Airport terminal to be built soon
- Short-term access to San Luis Obispo Regional Airport by bus.

This work effort is being presented with the collaboration of Airport Management and other City and Regional Agencies. We appreciate their assistance in this process. Although final outcomes may differ from those presented by the students, the creativity and problem solving effort is applauded and useful to local decision makers.

SUMMARY OF GROUP WORK

BRT means Bus Rapid Transit as working already in several towns such as Eugene, OR

Note: Full reports, PowerPoint presentations, and animations exist on a special diskette available from Eugene Jud, Cal Poly, Building 4, Room 3.

Group 1

The Visionary Consultants propose a phased scheme. Initially, extend SLO Transit Route 3 further south on Broad Street to provide access to the airport using public transportation. By 2020, implement Phase I, which includes the following: a bus rapid transit (BRT) line extending from the airport to Cal Poly, additional SLO Transit bus loops that cross Broad Street and have preferential treatment, and six activity centers along this main corridor. Additionally, the BRT will run in a counterclockwise rotation through the airport providing direct access to the airport terminal. By 2050, implement Phase II, which includes replacing the BRT system with a light rail transit (LRT) along the same right-of-way as the BRT and relocating the San Luis Obispo heavy rail station. At Cal Poly and south of the airport the LRT will use the same alignment as the Pacific Coast Heavy Rail Line and extend from Santa Maria to Paso Robles.

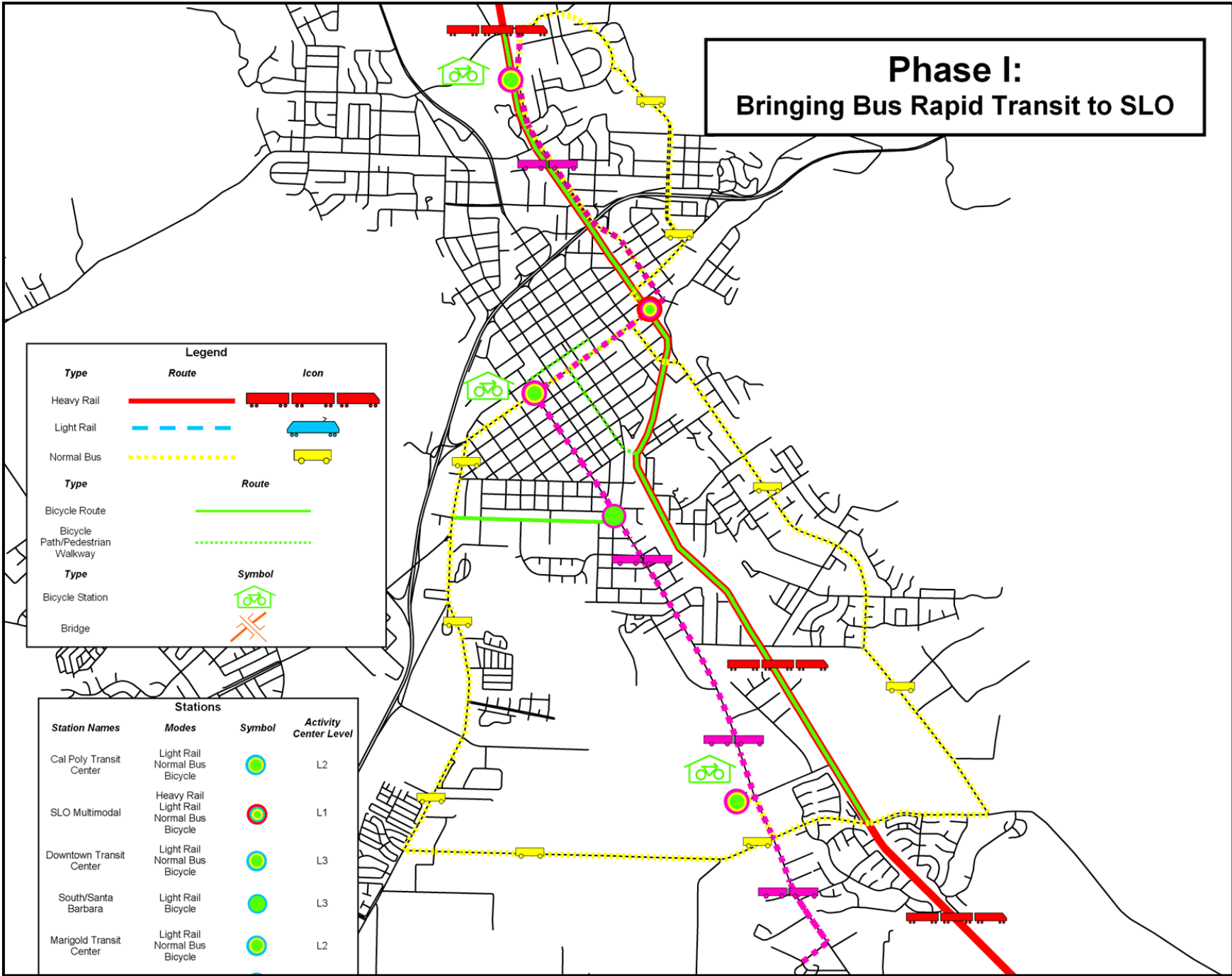


Marigold Transit Center and Marigold Transit Oriented Development looking west.

Phase I: Bringing Bus Rapid Transit to SLO

Legend		
Type	Route	Icon
Heavy Rail		
Light Rail		
Normal Bus		
Type	Route	
Bicycle Route		
Bicycle Path/Pedestrian Walkway		
Type	Symbol	
Bicycle Station		
Bridge		

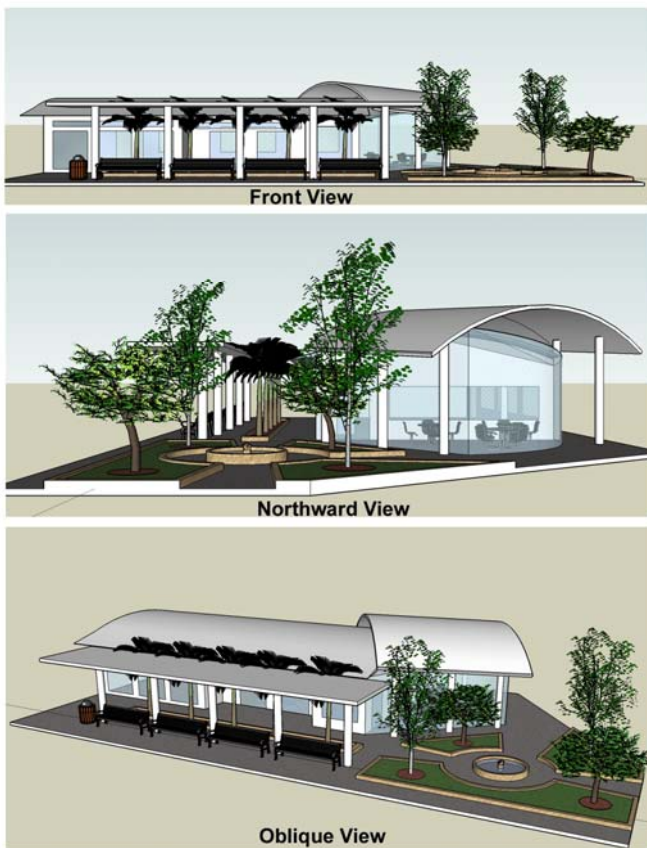
Stations			
Station Names	Modes	Symbol	Activity Center Level
Cal Poly Transit Center	Light Rail Normal Bus Bicycle		L2
SLO Multimodal	Heavy Rail Light Rail Normal Bus Bicycle		L1
Downtown Transit Center	Light Rail Normal Bus Bicycle		L3
South/Santa Barbara	Light Rail Bicycle		L3
Marigold Transit Center	Light Rail Normal Bus Bicycle		L2



Group 2

The intermediate (year 2020) phase will include the addition of two new bus routes: one along Tank Farm Road and one further down Broad Street to service the Edna Area. Also, there will be new bicycle infrastructure as well as an extensive BRT system running from Paso Robles to Santa Maria.

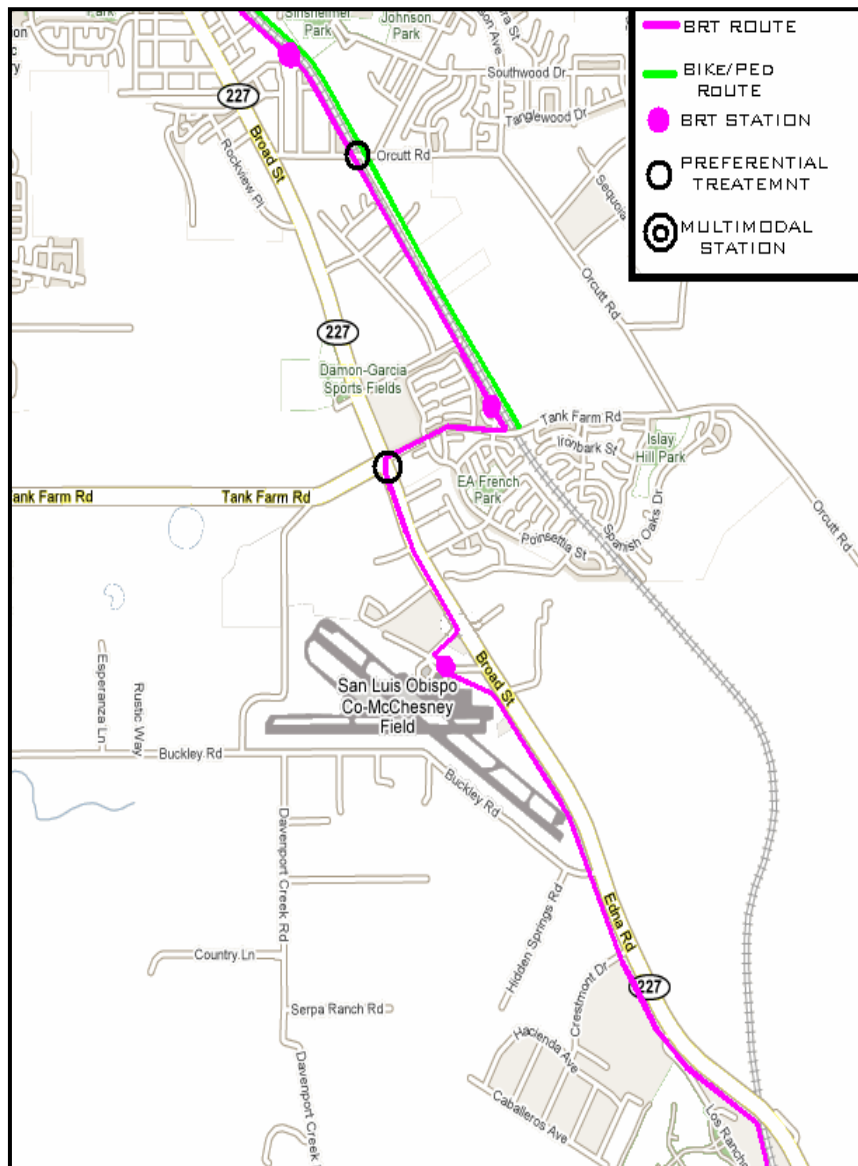
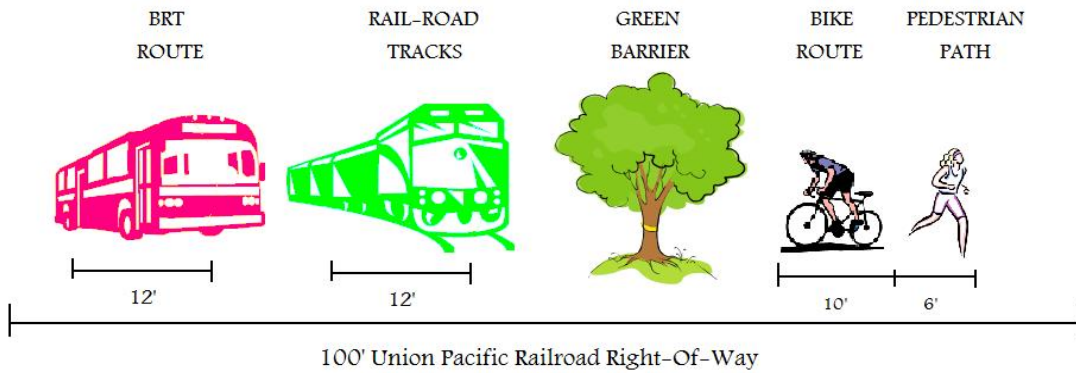
In the future (year 2050) phase, a new light rail system will be implemented that will replace the previously constructed BRT system. Some bus routes will be eliminated because they will be better served by the light rail and seven intersections will be retrofitted with preferential treatment in order to speed up the buses. Also, two new bicycle stations will be built and three downtown streets will be closed to vehicular traffic to make room for pedestrians, bicyclists, and the new light rail system.



Group 3

A Bus Rapid Transit System will serve the Airport. The BRT will be built within the Union Pacific 100 ft Right-of-Way and will parallel the rail tracks for most of its route, featuring stations along the route. When the BRT does mix with street traffic, it will receive preferential treatment. This group also proposes a new multi-modal transportation station at Monterey Street, near downtown San Luis Obispo.

TYPICAL CROSS SECTION



Southern Portion of Proposed BRT and Bicycle/Pedestrian Path.

Group 4

An LRT line became the cornerstone of SLO Vision's design. It was also determined that for funding, infrastructure, and political purposes, San Luis Obispo would implement the system in three phases. The first phase would provide immediate public transit service to the airport via SLO Transit and the conversion of regular buses to express buses. These would be entirely separate routes to specifically serve the airport from as far north as Cal Poly. The second phase, occurring around 2030, would involve the first infrastructure construction of the project. Along the current Union Pacific Railroad right-of-way, a BRT route would be built. This requires only concrete, no rails. The BRT line would be the intermediate step, serving along the same route as the future LRT line, but without the cost and construction required for LRT. Finally, the third phase, by 2050, would be the completion of the LRT rails along the BRT route. It would initially extend only from Cal Poly to the airport, but ultimately run County-wide, as far north as Paso Robles, and as far south as Santa Maria.



Cross section at Broad Street.



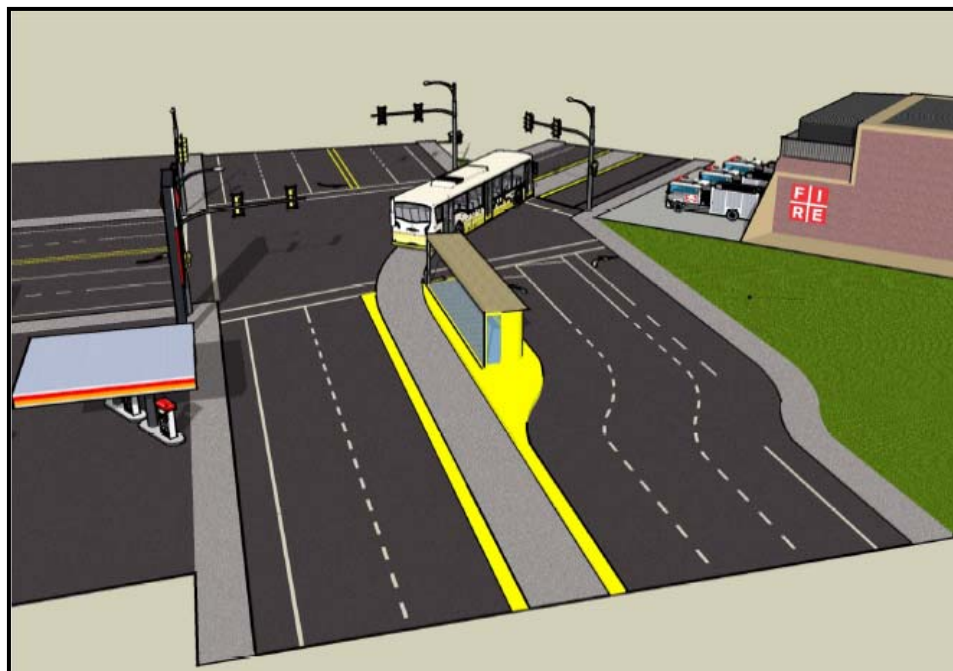
LRT Station at Airport looking west.

Group 5

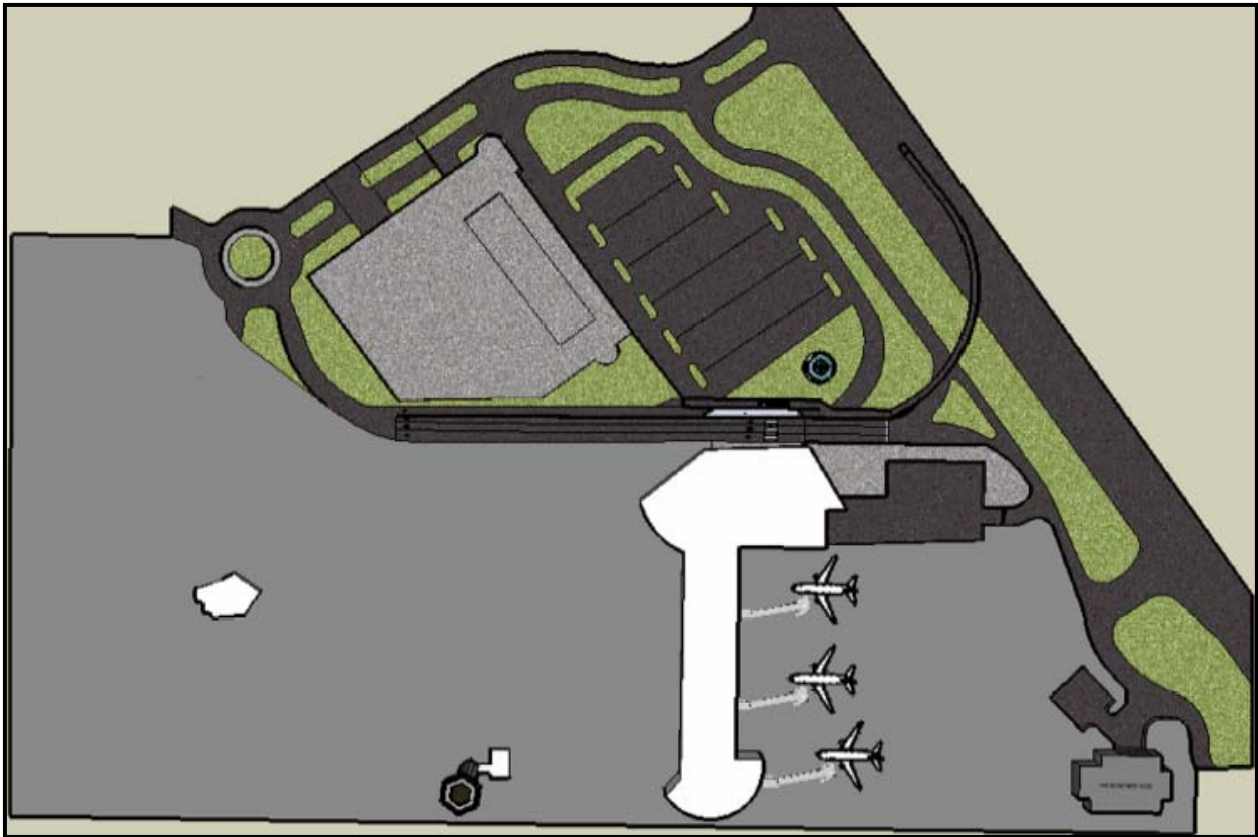
The system plan was separated into phases in order to build up to the end goal of a countywide Light Rail Transit system in attainable intermediate steps. The first step was to introduce a conventional bus line that would provide short term access to San Luis Obispo Regional Airport from downtown San Luis Obispo. By 2015, conventional buses would be replaced by a Bus Rapid Transit system which would serve the corridor from the Airport to Cal Poly. The final phase would be to implement a Light Rail Transit serving the same corridor by the year 2030.



BRT in Eugene, Oregon.



BRT Station at Broad and Santa Barbara Streets.



Plan view of new airport terminal and LRT station in front of it, including off-ramp to Broad Street.