CASCADIA HIGH SPEED RAIL

U of O Class Project
Special Studies Summer 2010

THE PROJECT:
The project will consist of architecture, landscape architecture and urban planning students who will help study high-speed rail alignments between Eugene and Vancouver, Washington. Students will develop aerial perspective drawings of the Willamette Valley and two phases of model building for the corridors from Tualatin to the Rose Quarter, and Vancouver WA to a new Rose Quarter Transit Center. Development studies will also be explored at the station areas for multi-model transportation connections and mixed use.

CASCADIA CORRIDOR:
The Cascadia Corridor is home to over 8 million people. Population growth causes stress on physical, educational, social and cultural infrastructures. The “new regionalism,” conscious of a certain quality of life and growing within a restricted geography, will require a commitment to create stronger ties throughout the Northwest. A new series of “highways” is needed to efficiently connect the region's government, businesses and people. One of those “highways” will be high-speed rail trains traveling over 110 miles/hr and connecting all cities between Vancouver, BC and Eugene, Oregon. Nothing could do more to make the movement of goods and people easier while at the same time preserving our livability by reducing congestion and air pollution.

The Cascadia Corridor from Eugene to Vancouver, BC has been designated as one of several potential high-speed rail passenger corridors in the country. This system would be fully electrified on new double tracks mostly on a separate corridor as an alternative to Oregon Department of Transportation's proposals on the existing Amtrak/freight train corridor. Such a system could effectively offer an energy saving alternative to both automobile and airplane travel for the given distances between Eugene, Portland, Seattle and Vancouver, BC. The system would become an economic development corridor that would link new business opportunities and other alternative modes of transportation in the region.

The proposed high-speed station site in Portland would be moved to the east side of the river to eliminate two major river bridge crossings. The facility would be a through station assuring a smooth flow of high-speed regional trains and metro commuter trains. The historic railroad station on the west bank would become a public market similar to the Pike Place Market in Seattle. The new east bank facility would be connected to the present light-rail network, Portland streetcar, the Interstate Freeway system, the proposed bikeways and river taxi.
LOCATION:
Cascadia HSR Corridor – Eugene to Vancouver B.C.
Cascadia HSR Connections – Eugene, Albany, Salem, Tualatin, Portland, Vancouver WA, Olympia, Tacoma, Seattle, Bellingham, Vancouver B.C.
Cascadia HSR Study Area - Eugene to Vancouver WA
Cascadia HSR Model Area - Tualatin, Portland, Vancouver WA (commuter corridors)

PRODUCTS:
Students will build a model showing landscape, contours, buildings, and other man-made structures to use as a base for alternative corridors for high speed rail (HSR). Major priority will be given to the corridor from the Rose Quarter to 39th Avenue viaduct over the Burlington Northern SF train yards in Vancouver WA. Second priority will be the corridor from the Rose Quarter to Tualatin. Third priority will be from Tualatin to Eugene. The HSR platform for station areas will be opportunity areas for exploring mixed-use development potential.

RESEARCH:
Topics of research will be applied to land in the I-5 corridor from Eugene to Vancouver WA. The Columbia River Crossing research needs to be included regarding current I-5 and BNSF train bridge structural condition studies to today’s plans and environmental studies regarding new rail and auto bridges.

PARTICIPANTS:
Guests will be invited to give lectures, offer information and be a part of group discussions. These leaders in the community will represent topics related to politics, geology, railroads, land-use planning, history, real estate, architecture, engineering, landscape design, environment, ports, transportation planning, neighborhoods, bikeways, bridge design, land owners, Rose Quarter and public involvement. We will have different experts talk, show power points or documentaries of various aspects of HSR.

CLASS STRUCTURE:
Depending on the size of the class, we will have three or four teams specializing in research of described topics, model building, HSR and bikeway corridor analysis and station with mixed-use development. This will be the first term of possible two to three terms of work.

INSTRUCTORS:
James Pettinari of U of O
Lloyd Lindley of U of O
Brad Perkins of Cascadia High Speed Rail