Locations for Future Intercity Passenger Rail Maintenance or Layover Facilities in CA

A study on decision-making criteria for locating such facilities and how those criteria impact the performance of the rail system.

WHAT IS THE NEED?

California Department of Transportation (Caltrans) is responsible for providing maintenance and servicing passenger railcars and locomotives that are in use for intrastate and intercity travel. It coordinates and funds projects that benefit freight rail transportation, and supports the intrastate, intercity passenger rail system through its contracts and working relationships with Amtrak California and three Joint Powers Authorities (JPAs) in the state.

Maintenance and layover facilities are vital in operating and maintaining passenger rail systems, and having robust design and construction criteria will help build the optimal facilities to meet California’s current and future needs.

Since these facilities must mechanically maintain a large variety of rolling stock equipment, their designs and operations are critical to the proper maintenance of the new Department owned locomotives and railcars. There exists little research on where in the United States (US) these new facilities were recently built, and what design criteria were considered to accommodate the new generation of rolling stock equipment.

WHAT ARE WE DOING?

Department of Rail and Mass Transportation (DRMT) is responsible for designing the construction of maintenance and layover facility for its passenger rail service. Office of Rail Equipment of DRMT is interested in knowing the types of most recently-built passenger rail maintenance and layover facilities in the US. These facilities are vital in maintaining a fleet of railcars, locomotives, and other rail equipment that make the rail
transportation network function. Thus, the research team will investigate where and when the most recent intercity passenger rail maintenance and layover facilities were built in the US. They will also study the new engineering and construction methods that were used to build the new facilities.

WHAT IS OUR GOAL?

Collaborating with the DRMT staff, the researchers will identify project parameters and other facility characteristics to study; and the criteria on selecting the locations for future intercity passenger rail maintenance or layover facilities. They will also review California’s existing and proposed rail network to further develop the new design and construction criteria and how they can be applied.

The research team will document the recently constructed facilities, the contributors to their engineering and construction success and failure, discuss how these factors may work in the California, and recommend new design criteria in the final report.

WHAT IS THE BENEFIT?

The research findings will complement and support the goals of Caltrans’ Rail Fleet Management Plan and the California State Rail Plan. A desired research product should investigate the new methodologies, such as engineering and design criteria, the construction types of the passenger rail maintenance, and layover facilities recently built throughout the US.

Furthermore, it should list or stratify the new engineering and design criteria, and the new methods used to construct these new facilities. The new methodologies could then be used to design all future maintenance and/or layover facility in California.

WHAT IS THE PROGRESS TO DATE?

Task 1 - Literature Review is near completion. Researchers have visited Amtrak Oakland Maintenance Facility and Altamont Corridor Express Rail Maintenance Facility. Next, they will visit Regional Transportation District in Denver and Brightline in Florida.