Environmental/ Water

The San Elijo Lagoon provides an enticing challenge to construct a bridge while minimizing environmental harm to the rich ecosystem of the Lagoon that is home to some endanger species within San Diego. This will be done with proper shielding deconstruction method and evaluating a reasonable time to perform construction work while maintaining the necessary SWPPP requirements.

Structural

The bridge is designed of structural steel and follows the AASHTO bridge design codes. Corrosion is a factor that will be considered. The codes encompass all appropriate loading factors such as design truck, seismic, wind, etc. Proper detailing of all members and connections have been determined as well.

Project Overview

The Civil Creations team is taking a unique approach to redesigning and constructing the bridge over San Elijo Lagoon. We will be implementing the Slide-in bridge method and pre-fabricating the bridge components in order to significantly reduce closure time.

Civil Creations

The Team

DENA ABRAHIM
JULIA RECKER
JAKE ESPINOZA

KAMRAN AZHAND
AMIR BATTA
JOSIAH IMPERIAL

Geotechnical

The goal for the geotechnical aspect of the bridge is to determine the correct depth and width for the piles supporting the bridge. By determining the short- and long-term capacity we are then able to determine the largest allowable load that the piles can hold without failure.

Construction

The two main tasks to follow in the construction are carefully handling the demolition of the existing bridge and assembling the new bridge. Civil Creations will feature the Slide-in-bridge method, use cold-formed steel, and use precast concrete to help accelerate the bridge process.

Transportation

The plan view has been created with keeping all factors in mind such as the specific railing type of 80SW, drainage details, and slab approach. Signing and striping will be implemented in order to accommodate for the four lanes as well as bike lanes/pedestrian walkways.

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