

## ABC Project Highlights

Project Name: 11400 South; State Street to Bangerter Highway; New I-15 Interchange  
Project #/PIN #: SP-15-7(156)293 / 2421  
Year Constructed: 2009  
ABC Element(s): Full Depth Deck Panels / Half Depth Deck Panels / Prefab Ped Bridge  
Placement Method:  
Contracting Method: Design-Build

Project Description: The 11400 South; State Street to Bangerter Highway; New Interchange is a joint venture partnership with A&W Highway Contractors and HDR Engineering Inc, to complete the \$150 million design-build of a new SPUI interchange for I-15 at 11400 South Street, and construction of about five miles of five-lane urban arterial westward of the new interchange through South Jordan, Draper, and Sandy cities in Salt Lake County. The design required bridges over the 11400 South SPUI, the Jordan River, railroad crossings, and several canal crossings. The team successfully collaborated on a sequencing plan to maintain all current lanes of traffic along I-15 throughout construction. The team also made extensive efforts to work directly with third parties, such as the railroad and utility companies, to develop engineering solutions that minimized impacts, such as adjusting profile grades, re-sequencing of construction, and providing protection in lieu of relocation.

Preparation of drainage plans involved extensive coordination. The team incorporated the features of existing drainage plans and permitting requirements across the various jurisdictions of the project, including the three cities, private canal companies, Salt Lake County Flood Control, and the U.S. Army Corps of Engineers (USACE). HDR utilized Bentley StormCad software for the hydraulic design of the storm sewer systems; HEC-RAS software was used to analyze and design the new cross drainage structures at Midas and Willow Creeks, both of which have regulatory floodplains. To evaluate bridge spans and pier skew for the proposed Jordan River bridge, HDR evaluated the FEMA regulatory model and completed a sequence of models to demonstrate impacts to the floodplain and floodway. This modeling supported the design process and balanced structural, hydraulic, environmental, and regulatory considerations.

The aesthetic treatment for structures and landscaping developed by HDR celebrates Utah's abundant outdoor recreational opportunities, natural resources, and scenic beauty. HDR also provided right-of-way design and appraisals. Our value-added approach to right-of-way services included a proprietary web-based Parcel Tracking System that provided up-to-date status of every parcel to the entire project team, a 24-hour hotline for property owners, and neighborhood ROW information open houses.



