



Cost Proposal

# Interstate 15 Nichols Road Interchange Improvement Project Project Study Report-Project Development Support

City Project No. Z10082

City of Lake Elsinore Engineering Department

December 2022





## VALUE ADDED

HDR is working closely with the City during the development of the PSR to identify challenges and solutions as it pertains to grading, environmental, and construction costs.



## STAKEHOLDERS INVOLVED



### FIRMS INVOLVED:

HDR, GUIDA

### STAFF MEMBERS:

- Uyenlan Vu\*
- Angie Kung
- Sarah Barrera

### RELEVANT FEATURES:

- Environmental Constraints Study

\* Key Personnel  
All staff are HDR unless otherwise noted



## VALUE ADDED

The HDR Team has extensive information along the corridor that allows for a comprehensive review of the alternatives. This project bookends the Ethanac Expressway and gives the HDR team a complete understanding of the ultimate corridor vision.



## STAKEHOLDERS INVOLVED



### FIRMS INVOLVED:

MBI, F&P, HDR

### STAFF MEMBERS:

- Jason Pack (F&P)\*
- Brad Losey (MBI)\*
- Julian Hernandez\*
- Mark Hager
- Jim Starick

### RELEVANT FEATURES:

- Alternative Development
- Establish Purpose and Need
- Life Cycle Cost Analysis (LCCA)
- SWDR
- PEAR
- CAPTI Requirements

## I-215 Ethanac Road Interchange PSR-PDS

TLMA | Riverside County, CA

**MBI** was the prime consultant responsible for the PSR-PDS for improvements to the existing I-215/Ethanac Road Interchange. The purpose of the PSR-PDS per Appendix S of the Caltrans Project Development Procedures Manual is to scope the requirements of the PA&ED Phase. There is a need for interchange improvements and to determine the potential alternatives to address the need, as well as to determine the capital and support costs for PA&ED, PS&E, and construction.

**F&P** is preparing the TEPA. Additionally, they will be working with the project team to complete the Vehicle-Miles Traveled Decision Document (VMTDD).

\* Key Personnel  
All staff are HDR unless otherwise noted

An aerial photograph of Interstate 15, a multi-lane highway. A concrete bridge spans across the highway. Several vehicles, including cars, a bus, and a semi-truck, are visible on the highway. The surrounding landscape is arid with dry grass and hills in the background.

Proposal

# Interstate 15 Nichols Road Interchange Improvement Project Project Study Report-Project Development Support

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City of Lake Elsinore Engineering Department

September 2022





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# LETTER OF TRANSMITTAL

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# 01



September 29, 2022

City of Lake Elsinore Engineering Department

Remon Habib, PE, City Engineer

130 South Main Street

Lake Elsinore, CA 92530

**RE: HDR Engineering, Inc. (HDR) Proposal for Interstate 15 (I-15) Nichols Road Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS), City Project No. Z10082**

Dear Mr. Habib and the Selection Panel Members,

In response to the Request for Proposal (RFP), HDR has assembled a team with local delivery experience working with regional agencies on similar projects. Our proposal highlights our project understanding and experience in the City of Lake Elsinore (City) and Southwest Riverside County which is one of the fastest growing areas in the region. The I-15 corridor has both regional and local significance as a primary north-south corridor connecting other regional centers and communities. As a result, the area experiences high levels of traffic congestion which results in substantial delays for retail business patrons and residents. Due to this congestion, many Elsinore Valley residents use Nichols Road as a bypass route into the City and to enter the Outlets at Lake Elsinore or to gain access to the lake. Nichols Road provides entry to other recreation destinations like the Cleveland National Forest as well as connectivity to Southern Orange County via the State Route (SR)-74 crossing. The City, along with California Department of Transportation (Caltrans) District 8, Riverside County Transportation and Land Management Agency (TLMA), and Riverside County Transportation Commission (RCTC), are partnering to develop the I-15 Nichols Road Interchange Improvement Project PSR-PDS (Project) to improve local street network access and regional interchange operations to access the growing developments in this portion of Lake Elsinore at the I-15 Nichols Road Interchange. The City is seeking a team that has knowledge delivering PSR-PDSs. The HDR Team has that experience and offers the following:

**A Cohesive Team with a History of Success in the Inland Empire**



HDR has teamed with sub-consultant partners, Environmental Review Partners, Inc., Fehr & Peers, Guida Surveying, Inc., Michael Baker International, Inc., and PaleoWest, LLC, to round out the HDR Team. As seen in **Table 1.1, we have worked together for more than 10 years** delivering similar projects throughout the Inland Empire, including the RCTC I-15 Express Lanes Project - Southern Extension (ELPSE) Project Approval and Environmental Document (PA&ED) and TLMA Ethanac Expressway Project Initiation Document (PID). The HDR Team is also working with the City on key assignments, including the I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, Temescal Canyon Bridge Replacement Over Temescal Creek PS&E, and Auto Center Drive/Casino Drive Bridge Seismic Retrofit Project. Our collective knowledge of the Project area and team synergy will be key factors to the Project's success.

### A Local Project Manager Leading a Team with Extensive Caltrans District 8 Experience



Our Project Manager, **Brooke Bannasch**, is dedicated, committed, and available to deliver this Project with the help of her team. Brooke has a strong understanding of the area through her technical support and reviews of the City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED and her Deputy Project Manager role on the RCTC I-15 ELPSE PA&ED. She is a dedicated, hands-on natural collaborator who works with her team to develop the best results for her clients. Brooke brings technical knowledge and understanding of the Caltrans process having worked with Caltrans her entire 20 year career. She has delivered both planning and final designs of complex projects by performing close coordination with cities, agencies, and Caltrans. Brooke will be supported by **Julian Hernandez**, Engineering Lead, **Brad Losey (MBI)**, Drainage/Stormwater Lead, **Uyenlan Vu**, Environmental Lead, **Jason Pack (F&P)**, Traffic Study Lead, and **Daniel Weddell**, Structures Lead. Our key personnel are trusted by Brooke to be available and committed to the City.

### A Deep Understanding of the City's Goals and Vision for the Project and Surrounding Area



The City is looking to improve regional access for its residents and businesses, while planning for future growth. HDR has been delivering projects in the Inland Empire for more than 20 years. The local experience of the HDR Team helps our team to recognize and meet the City's goals and vision for the Interchange and surrounding area. Our work with the City and stakeholders like Caltrans District 8, TLMA, RCTC, Western Riverside Council of Governments (WRCOG), Federal Highway Administration (FHWA), Riverside County Flood Control and Water Conservation District (RCFC&WCD), and Federal Emergency Management Agency (FEMA) gives us the proficiency to deliver the Project while accommodating the goals of the stakeholders. Our expertise in preparing previous studies within the Project limits such as the RCTC I-15 ELPSE PA&ED **will save the City time on schedule** and understanding of Caltrans District 8 expectations **will result in the smooth and timely delivery of the PSR-PDS**.

We appreciate your consideration of our proposal for the Project and look forward to the opportunity to present our qualifications and approach to you. If you have questions or need additional information, please contact me or our Project Manager, Brooke Bannasch, at 714.679.5431 or Brooke.Bannasch@hdrinc.com. Thank you for considering our team for this exciting opportunity.

Sincerely,  
**HDR Engineering, Inc.**



Thomas T. Kim, PE (#57374)  
Senior Vice President



Brooke Bannasch, PE (#70332)  
Project Manager

**Table 1.1 Sub-consultant Partners and their Working Experience with HDR**

LEGAL COMPANY NAME	PROPOSED PROJECT ROLE	CONTACT PERSON'S NAME ADDRESS   PHONE	WORKING RELATIONSHIP
<b>Environmental Review Partners, Inc. (ERP)</b> <b>DBE, DVBE</b>	Air Quality and Noise	Keith Cooper 1752 W Adams Boulevard, Suite 201 Los Angeles, CA 90018   310.439.3424	<ul style="list-style-type: none"> <li>TLMA, Markham Street Extension PA&amp;ED (sub-consultant to HDR)</li> <li>City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&amp;ED (sub-consultant to HDR)</li> <li>Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor Agency, Central Coast Layover Facility Expansion PA&amp;ED (sub-consultant to HDR)</li> </ul>
<b>Fehr &amp; Peers (F&amp;P)</b>	Traffic Study (Traffic Engineering Performance Assessment/ Intersection Control Evaluations Step 1)	Jason Pack, PE 3750 University Avenue, Suite 225 Riverside, CA 92504   949.308.6312	<ul style="list-style-type: none"> <li>City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&amp;ED (sub-consultant to HDR)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (sub-consultant to HDR)</li> <li>City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&amp;ED (sub-consultant to HDR)</li> </ul>
<b>Guida Surveying, Inc. (GUIDA)</b> <b>SBE, WBE</b>	Survey and Mapping (Optional Task)	Lisa Spivak, PLS 3536 Concours Street, Suite 201 Ontario, CA 91764   949.777.2010	<ul style="list-style-type: none"> <li>City of Lake Elsinore, Temescal Canyon Bridge Replacement Over Temescal Creek PS&amp;E (sub-consultant to HDR)</li> <li>City of Lake Elsinore, Auto Center Drive/Casino Drive Bridge Seismic Retrofit (sub-consultant to HDR)</li> <li>City of Lake Elsinore, La Strada Extension PSR (sub-consultant to HDR)</li> </ul>
<b>Michael Baker International, Inc. (MBI)</b>	Hydrology/Drainage, Stormwater, Flood Plain Evaluation	Brad Losey, PE 3536 Concours Street, Suite 100 Ontario, CA 91764   949.855.7082	<ul style="list-style-type: none"> <li>City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&amp;ED (sub-consultant to HDR)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (sub-consultant to HDR)</li> <li>TLMA, Ethanac Expressway PID (Prime to HDR)</li> </ul>
<b>PaleoWest, LLC (PW)</b>	Paleontological/Cultural Studies	Jessica DeBusk 301 9th Street, Suite 114 Redlands, CA 92374   909.254.4035	<ul style="list-style-type: none"> <li>City of Yucaipa, I-10/Wildwood PSR and PA&amp;ED (sub-consultant to HDR)</li> <li>LA Metro, I-605 Corridor Improvement Project PA&amp;ED (sub-consultant to HDR)</li> <li>Orange County Transportation Authority (OCTA), Santa Ana/Garden Grove Fixed Guideway (OC Streetcar) Program Management Consultant (PMC) Services (sub-consultant to HDR)</li> </ul>

**CONTACT INFORMATION**

<b>PROPOSAL CONTACT</b>	Brooke Bannasch, PE - Project Manager 2280 Market Street, Suite 100, Riverside, CA 92501 <b>C: 714.679.5431 E: Brooke.Bannasch@hdrinc.com</b>
<b>CONTRACTUAL RESPONSIBILITY</b>	Thomas T. Kim, PE - Senior Vice President
<b>IDENTIFICATION OF OFFEROR</b>	HDR Engineering, Inc. Local Address: 2280 Market Street, Suite 100, Riverside, CA 92501 P: 951.320.7300 F: 951.320.7301 E: Tom.Kim@hdrinc.com Corporate Address: 1917 South 67th Street, Omaha, NE 68106

**ACKNOWLEDGMENTS**

✓	HDR acknowledges that no Addenda was received.
✓	This proposal shall remain valid for a period of not less than 180 calendar days from the date of submittal.
✓	This proposal is signed by Thomas T. Kim, PE, Senior Vice President of HDR, and he is authorized to bind the firm to the terms and conditions of the RFP and related contract.
✓	HDR attests that to the best of our knowledge the information submitted with the proposal is true and correct.



# TECHNICAL PROPOSAL

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# 02



## **A. Qualifications, Related Experience and References of Offeror**

# A. Qualifications, Related Experience and References of Offeror

## HDR Firm Profile

Founded in 1917 in Omaha, Nebraska, HDR is a 100 percent employee-owned corporation. We have been a part of the Southern California business landscape since 1973. Locally, HDR has more than 500 professionals specializing in engineering and planning disciplines, including highway/roadway, structures, traffic, utilities, drainage, environmental, construction management, architecture, and right-of-way (R/W) services. We are supported by over 11,000 employee-owners in 200+ locations worldwide. Our local resources and proximity allow us to respond to your requests with little notice.

Our Riverside office, which houses 53 staff, was established in 2000. For more than 20 years, we have been working with key Inland Empire agency partners, including the City, Caltrans District 8, RCTC, and TLMA, to help deliver their programs to meet the needs of our community. We have dedicated ourselves to solving problems, large and small, to keep your projects moving forward.

We have strong, established working relationships with the City and stakeholders involved and possess an invaluable understanding of the concerns and challenges in delivering the needs of this Project.

Recent HDR projects in the City include:

- City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED
- City of Lake Elsinore, Temescal Canyon Bridge Replacement Over Temescal Creek PS&E
- City of Lake Elsinore, Auto Center Drive/Casino Drive Bridge Seismic Retrofit Project
- RCTC, I-15 Railroad Canyon Road Interchange PA&ED and PS&E
- RCTC, I-15 ELPSE PA&ED

## HDR Financial Condition

Since becoming employee-owned in 1996, HDR has not merged with or been acquired by any other companies. We take pride in this strategic plan to remain independent, subsequently bringing consistency and strength to our operational efficiency. We have a focused approach to sustain our clients' satisfaction by providing permanence in our leadership and providing empowered and motivated staff to work on your projects.

HDR has the financial stability, capacity, and resources to successfully deliver for our clients. As an employee-owned firm, our assets are managed and invested with exceptional care. Our financial statements are prepared and audited annually by Ernst & Young LLC, including a Federal Acquisition Regulation audit. We are financially sound with gross revenues of \$2.8B, a current working capital ratio of 2.2, and stockholders' equity of \$0.59B (2021).

## HDR Experience Performing Similar Services

HDR offers a vast range of roadway capabilities from simple local roadway improvements to the most complex highways, interchanges and structures. From developing feasibility studies to preparing final design plans, we have the experience, knowledge and understanding to ensure to the City that we are providing viable solutions.

HDR's depth of experience, knowledge and understanding of Caltrans policies, procedures, and standards is evident by our successful delivery and involvement directly with Caltrans on numerous contracts. Our understanding of the Caltrans project development process encompasses all phases.

This team, led by our **Project Manager, Brooke Bannasch**, has demonstrated a long-standing commitment to the City and local agency and stakeholder success around the Inland Empire through her work on the City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED and RCTC I-15 ELPSE PA&ED. She is extremely knowledgeable of this Project and the area. Our insight into the technical challenges, stakeholder concerns, and agency goals will expedite the process of reading and digesting previous work products. We are immediately ready to work.

1917

year founded



Organization Type  
Corporation



11K+

employees at HDR



200+

offices nationwide and 8 local offices with 500+ staff: Riverside, Irvine, Santa Ana, Claremont, San Diego (2), Los Angeles, and Long Beach

## HDR QUICK FACTS



53

local Riverside staff

## Sub-consultant Partners to Provide You with the Best Resources

HDR has partnered with sub-consultants that have experience working with the City and local agencies within the Inland Empire, including Caltrans District 8, RCTC, and TLMA. We have formed strong working relationships with these firms over the last 10 years and they have become our trusted partners due to their consistent delivery of quality work. They will provide additional resources required to successfully complete the required Scope of Work for this Project.



### **Role: Air Quality and Noise**

ERP is a California-based environmental planning and consulting firm that has subject-matter expertise in resource areas that require high levels of technical proficiency and expert knowledge of complex regulatory environments that are constantly evolving. With specialization in transportation and infrastructure projects, they prepare technical studies that enable clients to meet California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) environmental review requirements.

**They have expert knowledge of Caltrans Local Assistance Program environmental review procedures for air quality, greenhouse gas (GHG)/climate change, energy resources, and noise.** ERP is a Disadvantaged Business Enterprise (DBE) and Disabled Veteran Business Enterprise (DVBE) firm.



### **Role: Traffic Study (TEPA/ICE Step 1)**

F&P is passionate about transforming transportation consulting through innovation and creativity. They derive inspiration by partnering with communities to understand and shape local transportation futures objectively tailored to diverse needs. They maintain a focus on transportation consulting, including transportation forecasting and operations, transportation engineering, transit planning, active transportation, communications and engagement, land use and transportation, and emerging technologies. F&P has completed more than 350 projects on the state highway system that required some level of oversight by Caltrans. **In Caltrans District 8, they have completed approximately 25 projects with about ten of those being PSR-PDS efforts.**



### **Role: Survey and Mapping (Optional Task)**

GUIDA is a multi-disciplined land surveying firm that provides project-based and on-call geomatics services throughout California. Their team experience includes providing a full suite of land surveying and mapping services, delivering quality and innovative products on time and within budget. **They offer direct working experience on projects with the City and is familiar with the City's standards and procedures.** They also bring experience with Caltrans District 8, RCTC, City of Menifee, SBCTA, and many other transportation and municipal agencies throughout California. GUIDA is a Small Business Enterprise (SBE) and Woman-Owned Business Enterprise (WBE) firm.



### **Role: Hydrology/Drainage, Stormwater, Flood Plain Evaluation**

MBI is a leading global provider of engineering and consulting services, which include transportation, planning, architectural, environmental planning and permitting, program management, construction, and full life-cycle support services. They have a successful, decades-long history of working with Caltrans' Districts statewide and bring in-depth knowledge and understanding of Caltrans standards, procedures, manuals, and policies to this Project. **They have been extensively involved with Caltrans and Federal Highway Administration (FHWA) staff on the development of complex hydrologic design, stormwater and floodplain analysis for every phase of project development.**



### **Role: Paleontological/Cultural Studies**

PW is the largest cultural resource-only firm in the nation and has carried out over 4,000 projects. Their cultural resource services cover many aspects of the discipline, including historic and prehistoric archaeology, osteology, paleontology, archival research, architectural history, maritime archaeology/remote sensing, public outreach, and GIS services. PW has extensive experience with Caltrans projects in Districts 3, 4, 6, 7, 8, 10, and 11. **Their qualified team of Cultural Resource Management (CRM) specialists have prepared numerous technical studies in accordance with Caltrans' Standard Environmental Reference (SER) and have supervised construction monitoring for trail, roadway, and bridge maintenance or construction throughout the state.**

## Demonstrated Competence in the Services Identified in the Scope of Work

The HDR Team recognizes the local and regional operation needs of the I-15 Nichols Road Interchange and can work efficiently, effectively, and successfully to deliver the PID Phase to address the following topics:

- Determine practical interface points for local and regional traffic along Nichols Road with regional connectivity to I-15 and the future Ethanac Expressway
- Perform vehicle miles traveled (VMT) screening and Intersection Control Evaluations (ICE) Step 1 for the I-15 ramp terminals and local street intersection of Collier Street and Nichols Road
- Integrate and work efficiently with surrounding local and regional projects completed by the HDR Team and other agencies:
  - City of Lake Elsinore I-15 and SR-74 (Central Avenue) Interchange to the south
  - RCTC I-15 ELPSE corridor improvements passing through this interchange
  - TLMA future Ethanac Expressway
  - Surrounding developments and local changes to the land use plan
- Develop context-sensitive solutions that minimize the impact to environmental resources identified in the studies mentioned above and knowledge of surrounding floodplains
- Identify creative solutions with operational advantages while leveraging comprehensive designs to meet the immediate and future transportation needs for the City, TLMA, Caltrans District 8, and FHWA (if-needed) in conjunction with pedestrian pathways and bicycle lanes

The HDR Team understands the constraints and opportunities associated with I-15 Nichols Road Interchange and the local growth and development in the Elsinore Valley and Western Riverside County through our long-term working experiences and local team of experts. Currently, many of our proposed team members are delivering the RCTC I-15 ELPSE by advancing PA&ED collaboratively with RCTC, Caltrans District 8, TLMA, and the City as stakeholders along the corridor. Close coordination with the I-15 mainline improvements is critical for the team to recognize, considering the regional interface of traffic relative to the existing streets and future corridors in this area. Additionally, other team members are completing the PA&ED for the City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project and our team has successfully completed the PID Phase for the Ethanac Expressway with TLMA. **The HDR Team’s local City experience provides comprehensive knowledge that will expedite delivery while providing the City and Caltrans District 8 with practical solutions.**

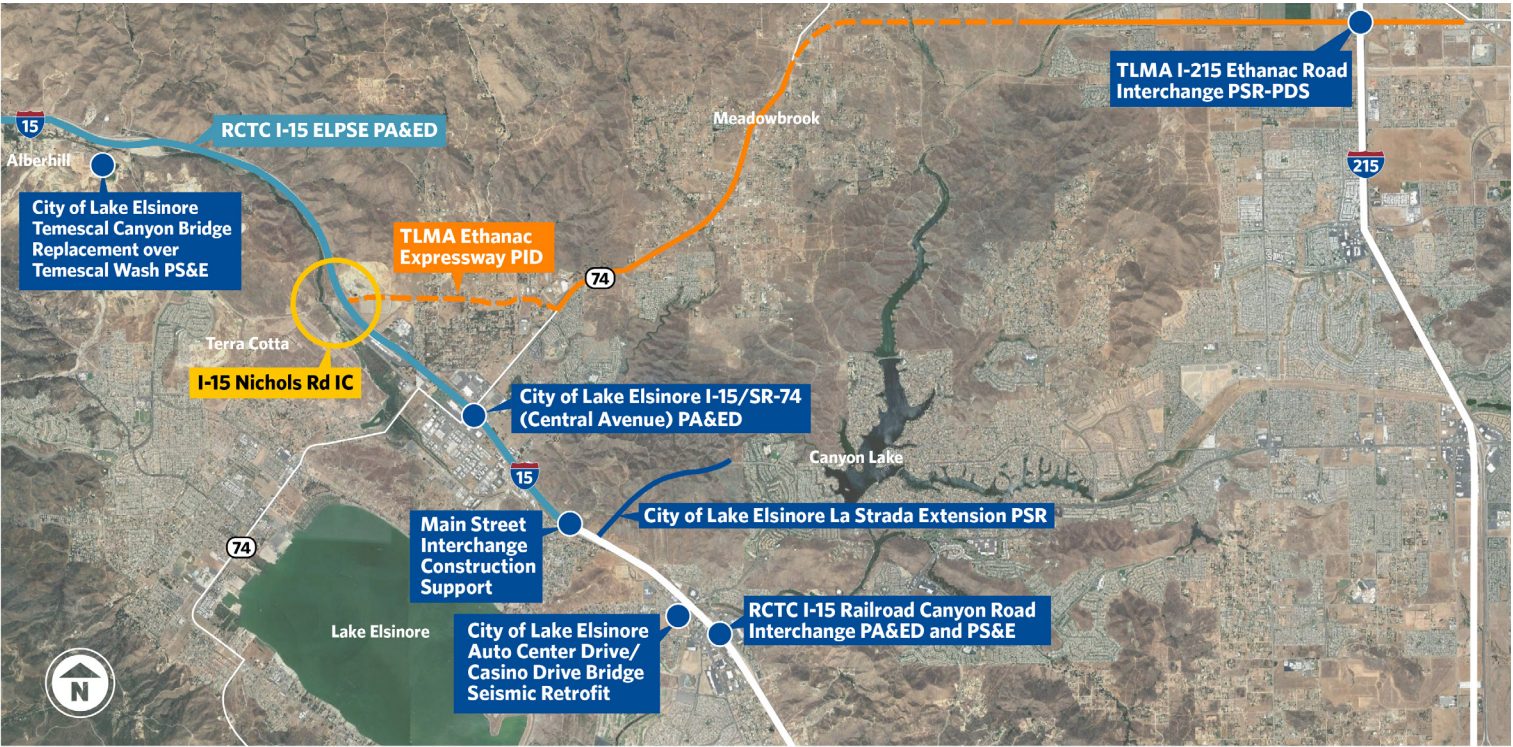
**The collective knowledge our team possesses will allow the City’s planning work to start immediately with Caltrans District 8.** Select staff of this HDR Team have recently completed a PSR with Caltrans District 8. Our team has successfully dealt with the recent changes to the delivery effort, including a Climate Action Plan for Transportation Infrastructure (CAPTI), Complete Street Decision Documents, and multi-modal elements that are now an integral part of the PID Phase delivery efforts. Local area knowledge coupled with recent proven success in delivery by the HDR Team will allow the City complete this work successfully with a holistic transportation perspective for the area while providing the most relevant and best-qualified local team to perform the work.

The local City experience map (**Figure 2.A.1**) and relevant project experience matrix (**Table 2.A.1**) demonstrate the HDR Team’s experience with the Scope of Work elements and local City experience. On the following pages, we highlight select projects that demonstrate our team’s ability to work together.

Table 2.A.1 Relevant Project Experience Matrix

AGENCY, PROJECT	FIRMS INVOLVED
City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED	HDR, F&P, MBI
RCTC, I-15 ELPSE PA&ED	HDR, F&P, GUIDA, MBI
City of Lake Elsinore, Temescal Canyon Bridge Replacement Over Temescal Creek PS&E	HDR, GUIDA
City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED	HDR, ERP, F&P, MBI, PW
TLMA, Ethanac Expressway PID	MBI, F&P, HDR
City of Lake Elsinore, La Strada Extension PSR	HDR, GUIDA
TLMA, I-215 Ethanac Road Interchange PSR-PDS	MBI, F&P, HDR
RCTC, I-15 Railroad Canyon Road Interchange PA&ED and PS&E	HDR
City of Lake Elsinore, Auto Center Drive/Casino Drive Bridge Seismic Retrofit	HDR, GUIDA
City of Laguna Beach, SR-133 (Laguna Canyon Road) PSR-PDS	HDR, GUIDA

Figure 2.A.1 Local City Experience Map



SCOPE OF WORK SERVICES																			
GEOMETRIC ALTERNATIVES	LOCAL/ARTERIAL STREET DESIGN	ENVIRONMENTAL STUDIES	DRAINAGE, STORMWATER, FLOODPLAIN	STRUCTURES	GEOTECHNICAL	UTILITIES	NOISE	CULTURAL, PALEONTOLOGICAL	TRAFFIC OPERATIONS	ICE	SIGNAGE	MULTI-MODAL PLANNING	CAPTI	BIOLOGICAL	COST ESTIMATE	RIGHT-OF-WAY	AGENCY COORDINATION		
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## VALUE ADDED

HDR developed a context-sensitive solution that minimized capital costs and eliminated right-of-way impacts to local businesses, saving the City more than \$25M. Our team has demonstrated a successful partnership with the City and key stakeholders.



## STAKEHOLDERS INVOLVED



# I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED

City of Lake Elsinore | Lake Elsinore, CA

**HDR** is leading the effort to finish the PA&ED Phase of this project in the business district of the City on the I-15 corridor. HDR worked with the City and Caltrans District 8 to screen multiple alternatives and focus on key alternatives that delivered a viable project while minimizing right-of-way impacts. Given that the project is located in the business district area of the City, minimization of right-of-way impacts is key to the project's success. This is a convergence point for north-south travel through the county on I-15, and SR-74 is one of the key east-west corridors through Riverside County (connecting to Orange County).

HDR recently completed the Administrative Draft Initial Study/Environmental Assessment (IS/EA) for the project. Caltrans District 8 is the lead agency under CEQA and NEPA, as assigned by the FHWA. HDR leveraged our existing relationships with Caltrans District 8 environmental staff to obtain early concurrence on scope expectations, minimizing potential delays to the project delivery schedule as result of scope creep. HDR also recently completed a Determination of Biologically Equivalent or Superior Preservation (DBESP) to analyze and address potential project impacts to biological resources, including resources covered under the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP). The DBESP provides an assessment of the proposed project's consistency with the Western Riverside County MSHCP and demonstrates that the proposed mitigation for impacts on Western Riverside County MSHCP covered resources is biologically equivalent or superior to the existing conditions on the project site if left undisturbed. The DBESP is currently in review with the Western Riverside County MSHCP Joint Project Review Team.

**F&P** collected new traffic volume data to evaluate the project area. Their Traffic Operations Analysis Report (TOAR) is based on traffic forecasts and traffic capacity analysis for the design year for the interchange. The TOAR analysis was conducted using SimTraffic simulation in Synchro. F&P is performing the initial assessment of various interchange layouts and failure assessments. **MBI** was responsible for the Location Hydraulic Study (LHS), Summary Floodplain Evaluation Report (SFER), Rapid Stability Assessment (RSA), and Stormwater Data Report (SWDR). They assisted with the preparation of the PA&ED Phase deliverables for reconfiguring this existing tight diamond interchange to improve traffic circulation and access to the retail centers adjacent to the interchange.

### FIRMS INVOLVED:

HDR, F&P, MBI

### STAFF MEMBERS:

- Brooke Bannasch\*
- Julian Hernandez\*
- Uyenlan Vu\*
- Jason Pack (F&P)\*
- Brad Losey (MBI)\*
- Mark Hager
- Angie Kung
- Jason Brown
- Jim Starick
- Jessica Slater
- Irene Shin

### RELEVANT FEATURES:

- Compliance with MSHCP
- Alternative Analysis
- R/W Take Minimization
- Traffic Operational Analysis
- Modified Access Report for FHWA
- Environmental Technical Studies
- Mainline and Interchange Operations
- Caltrans District 8 Oversight

\* Key Personnel

All staff are HDR unless otherwise noted



## VALUE ADDED

HDR's experience in making subtle refinements to express lane access locations and incorporating supporting auxiliary lanes can result in dramatic operational benefits to general-purpose (GP) lanes and the ability to better serve local interchanges and optimize design features for compatibility with future toll operations.



## STAKEHOLDERS INVOLVED



# I-15 Express Lanes Project - Southern Extension PA&ED

RCTC | Riverside County, CA

**HDR** is leading the collective effort to construct new lanes along I-15 in Riverside County. The primary component of the I-15 ELPSE is the addition of two tolled express lanes in both the northbound and southbound directions within the median of I-15 from SR-74 (Central Avenue) in the City, through the unincorporated Riverside County community of Temescal Valley, to El Cerrito Road in the City of Corona for a distance of approximately 16 miles. The project would also add a southbound auxiliary lanes between both the Main Street Off-Ramp and SR-74 (Central Avenue) On-Ramp, between SR-74 (Central Avenue) Off-Ramp and Nichols Road On-Ramp, and a segment of auxiliary lane prior to the Nichols Road Off-Ramp.

The I-15 ELPSE project includes development of the Project Report to support the consideration for construction of an additional 15 miles of express lanes within the median of the corridor. Design includes an Advance Planning Study (APS) and Structure Preliminary Geotechnical Report (SPGR) for the widening of 30 structures; 15 APS for median bridge widenings; eight of the bridges over existing waterways; drainage studies and treatment areas for water quality needs; staging and traffic control; existing and future utility mapping to determine avoidance measures or protection/relocation costs; construction areas; right-of-way evaluation, including permanent takes as well as both permanent and temporary easements; tolling infrastructure, including California Highway Patrol (CHP) enforcement and tolling gantries; recommended ingress/egress locations to meet current and future traffic demands; and traffic volume forecasts and operational analysis taking into account existing and future land use. Additionally, the project also includes a Managed Lanes Engineering Study and a Toll Concept Report to evaluate operational characteristics of the facility while providing consistency with overhead signage, tolling features, and agency policies of the adjacent express lane systems.

**F&P** coordinated with RCTC and Caltrans District 8 to prepare the TOAR for the I-15 ELPSE PA&ED analysis from Cajalco Road to SR-74. **GUIDA** provided surveying and mapping services for the PA&ED Phase of this project which included aerial photogrammetric mapping in accordance with the Caltrans A-B-C process, control and alignment surveys in cooperation with Caltrans District 8, initial land net surveys and mapping, and supplemental topographic surveys to support the preliminary design. **MBI** prepared eight LHS and SFER, a PHR, and a RSA.

### FIRMS INVOLVED:

HDR, F&P, GUIDA, MBI

### STAFF MEMBERS:

- Brooke Bannasch\*
- Julian Hernandez\*
- Jason Pack (F&P)\*
- Brad Losey (MBI)\*
- Uyenlan Vu\*
- Jessica Slater
- Mark Hager
- Kristine Kono-Woo
- Irene Shin
- Angie Kung
- Jason Brown
- Jim Starick

### RELEVANT FEATURES:

- Local Project Delivery Team
- Express Lanes Delivery
- Caltrans District 8 Oversight
- Traffic Operations
- Environmental Clearance
- Right-Sizing/Value Engineering
- Mainline Operations
- Tolling Coordination
- Early Actions

\* Key Personnel

All staff are HDR unless otherwise noted



## VALUE ADDED

Working with the City, HDR developed a context-sensitive bridge aesthetic design that balances with the surrounding environment. It was critical to the City to have the new bridge blend in with the natural surroundings. The Temescal Canyon Bridge would be a showcase for the adjacent future development, providing both vehicular and pedestrian mobility. These enhancements elevated the visual appeal of the bridge, a value that the HDR Team can also provide on the Project.



## STAKEHOLDERS INVOLVED



# Temescal Canyon Bridge Replacement Over Temescal Creek PS&E

City of Lake Elsinore | Lake Elsinore, CA

The Highway Bridge Program (HBP)-funded Temescal Canyon Bridge Replacement Over Temescal Creek Project PS&E proposes to realign Temescal Canyon Road between Bernard Street and Lake Street and construct a new bridge over Temescal Creek. The project will replace the existing structurally and hydraulically deficient bridge with a new bridge that will meet the City's current design standards and accommodate local requirements. The bridge is a three-span, four-lane structure over the natural bottom Temescal Creek. The bridge design uses a precast girder superstructure founded on nine-foot-diameter cast-in-drilled-hole piles which minimizes construction impacts on the environmentally sensitive natural bottom creek. The bridge is designed for up to 19 feet of scour which eliminates the need for scour protection at the piers, further reducing the environmental impacts.

**HDR** is preparing the final design and bid documents and will provide construction support services. Final DBESP and Hazardous Materials Management Plan documents, hydraulic analysis and Federal Emergency Management Agency (FEMA) floodplain mapping revisions, and utility relocations are required for the project. **GUIDA** performed topographic surveys and provided cross-sections every 100 feet in the channel that cover the creek grading, roadway realignment, and connection points to existing Temescal Canyon roadway.

### FIRMS INVOLVED:

HDR, GUIDA

### STAFF MEMBERS:

- Daniel Weddell\*
- Rebecca Shum
- Uthaya Sandira

### RELEVANT FEATURES:

- Water Crossing
- Permitting
- Coordination and Agency Oversight
- Caltrans Local Assistance
- Funding Support

\* Key Personnel

All staff are HDR unless otherwise noted



## VALUE ADDED

HDR partnered with Caltrans District 8 to develop interchange and local roadway alternatives for this new interchange while avoiding impacts to the Wildwood Safety Roadside Rest Area (SRRA). The HDR Team will utilize the effective Concept Alternative screening and consensus-building approach that was successfully used for the I-10/Wildwood Canyon Road Interchange PID and PA&ED.



## STAKEHOLDERS INVOLVED



## I-10/Wildwood Canyon Road Interchange PID and PA&ED

City of Yucaipa | Yucaipa, CA

The City of Yucaipa selected **HDR** to perform the PID for interchange development options for a new connection to I-10 at Wildwood Canyon Road. Our team was selected based on our dedicated local experts, familiarity with the project area, experience working with the City of Yucaipa and its staff as well as with SBCTA and Caltrans District 8, and innovative interchange design concepts to provide compatibility with the local roadway network in the City of Yucaipa and regional interface with I-10. Upon completion of the PID Phase in October 2021, HDR was selected to continue services for PA&ED with the City of Yucaipa. The team recently completed the Public Scoping Meeting and community outreach as the initial efforts of the PA&ED process. During this phase, HDR will finalize the traffic operational analysis, alternative analysis, and environmental technical studies to support the draft and final environmental document based on the project footprint.

**ERP** was responsible for preparing CEQA/NEPA air quality and GHG emissions, and transportation conformity analysis and documentation. **F&P** completed the Traffic Study in support of the PSR for the I-10/Wildwood new connection. Specifically, they developed a calibrated VISSIM microsimulation model to test traffic operations with and without the new interchange. After completing the traffic work in support of the PSR, F&P has continued their support into the PA&ED Phase of the project. As part of that effort, they are leading the VMT assessment, including development and coordination with a Delphi panel to develop different land use assumptions with and without the interchange. This information will be included in the VMT assessment in support of the VMT analysis as part of the environmental document. **MBI** was responsible for developing the Conceptual Drainage Study, onsite and offsite drainage layout, preliminary drainage estimates, and preparation of the preliminary SWDR. Additional MBI services included Preliminary Drainage Study, preliminary drainage layout, preliminary SWDR, and preparation of the PSR and New Connection Report. **PW** conducted desktop Cultural and Paleontological Resources Studies as required for the Preliminary Environmental Analysis Report (PEAR). Upon approval of the Preliminary Environment Study, PW was contracted to prepare a Historic Property Survey Report (HPSR), Historical Resources Evaluation Report (HRER), and Archaeological Survey Report (ASR) to further analyze impacts to cultural resources and determine appropriate minimization and mitigation measures to reduce potential impacts.

### FIRMS INVOLVED:

HDR, ERP, F&P, MBI, PW

### STAFF MEMBERS:

- Brooke Bannasch\*
- Julian Hernandez\*
- Uyenlan Vu\*
- Jason Pack (F&P)\*
- Brad Losey (MBI)\*
- Mark Hager
- Angie Kung
- Sarah Barrera
- Jim Starick
- Jason Brown
- Kristine Kono-Woo
- Roberta Thomas (PW)

### RELEVANT FEATURES:

- Traffic Operational Analysis
- Environmental Technical Studies
- Draft and Final Environmental Document
- Alternative Analysis
- Community Outreach

\* Key Personnel

All staff are HDR unless otherwise noted



## VALUE ADDED

Through extensive public outreach within Western Riverside County, we understand the interests, benefits, and concerns that infrastructure brings to the local area. This area is growing rapidly and this project experience provides the most up-to-date information about development growth, traffic, and other projects planned for the area. This provides our team with an extensive understanding of the City's design standards, circulation element, and current and planned development.



## STAKEHOLDERS INVOLVED



## Ethanac Expressway PID

TLMA | Riverside County, CA

**MBI** is leading the collective effort to establish the likely corridor alignment and modal opportunities for creating this connection. Once completed, SR-74 from the Hemet/San Jacinto area will be directly connected to I-15 via Ethanac, the existing SR-74 alignment in Riverside County, and Nichols Road. TLMA has identified cross-county connectivity as a critical mobility component for its residents. As such, they have identified the CETAP corridors to look at those potential connections between I-15 and I-215. Two major components of that connectivity currently being contemplated are the Cajalco Road widening project (in the environmental stage right now) and the Ethanac Expressway corridor.

The comprehensive Corridor Vision Study is providing recommendations for the number of lanes, intersection spacing, bicycle lanes, bus stop routes, future public transit uses, pedestrian uses, and multi-use trails for the entire 12-mile Ethanac Expressway. The study is evaluating multi-modal options, including transit and active transportation concepts, as these mobility options are essential components of a comprehensive system. The extension of Ethanac Road as a direct route would require building an approximately two-mile "missing link" from where the road terminates at the east bank of the San Jacinto River westerly to connect to SR-74 in Meadowbrook. Engineering and environmental assessments will be completed for the two-mile Nichols Road gap, and two-mile Ethanac Road gap to scope future project development phases.

**MBI** completed the Preliminary Drainage Study, Preliminary Drainage Layout, and Preliminary SWDR. **F&P** completed a comprehensive transportation assessment to extend Ethanac to SR-74 (both to the west and via a grade separation to the east) and extend Nichols Road to connect to SR-74 to the east. They completed a multitude of travel demand forecasts to assist in identifying when parallel infrastructure degrades operationally and to develop a delivery strategy for the County.

**HDR** completed the geometric design, provided corridor-wide utility research, developed cost estimates and right-of-way needs, and led a site tour with elected county and city staff to explain the roadway alignments considered in the PID Phase.

### FIRMS INVOLVED:

MBI, F&P, HDR

### STAFF MEMBERS:

- Julian Hernandez\*
- Jason Pack (F&P)\*
- Brad Losey (MBI)\*
- Mark Hager
- Jason Brown

### RELEVANT FEATURES:

- Corridor Vision Study
- Multi-modal
- Transit
- Active Transportation
- Public Outreach
- Multiple Stakeholder Coordination

\* Key Personnel

All staff are HDR unless otherwise noted



## VALUE ADDED

HDR partnered with the City and Caltrans District 8 staff to deliver the PS&E one month ahead of the baseline schedule. The project was successfully completed and opened to traffic in early 2022.



## STAKEHOLDERS INVOLVED



## I-15 Railroad Canyon Road Interchange PA&ED and PS&E

RCTC | Lake Elsinore, CA

**HDR** was selected by RCTC to widen I-15, reconstruct the existing Railroad Canyon Road Interchange, and construct a new Type L-1 interchange approximately 0.22 miles north of the existing Franklin Street to reduce local street congestion and freeway ramp congestion, and accommodate projected growth in the area. The project limits are from approximately 1.50 miles south of Railroad Canyon Road to Main Street. Due to limited funding and the requirement to serve the existing and projected traffic demands, the project was divided into two segments with logical termini.

One of the project challenges was developing an extensive environmental re-validation due to additional freeway work beyond the initial Area of Potential Effects. The team authored the re-validation and obtained Caltrans District 8 approval of the document. The I-15/Railroad Canyon Road Interchange provided a ramp intersection directly across from a local business. We maintained close coordination with Caltrans District 8 to obtain the necessary approvals for this configuration, optimizing access to the business. The team led the process to obtain Caltrans Headquarters' geometric concurrence by demonstrating that full access could be provided to the property while obtaining the highest traffic level of service for ramp operations. The team also conducted several in-field focus meetings with the various utility companies to collaborate on utility impacts and relocation concepts.

### FIRMS INVOLVED:

HDR

### STAFF MEMBERS:

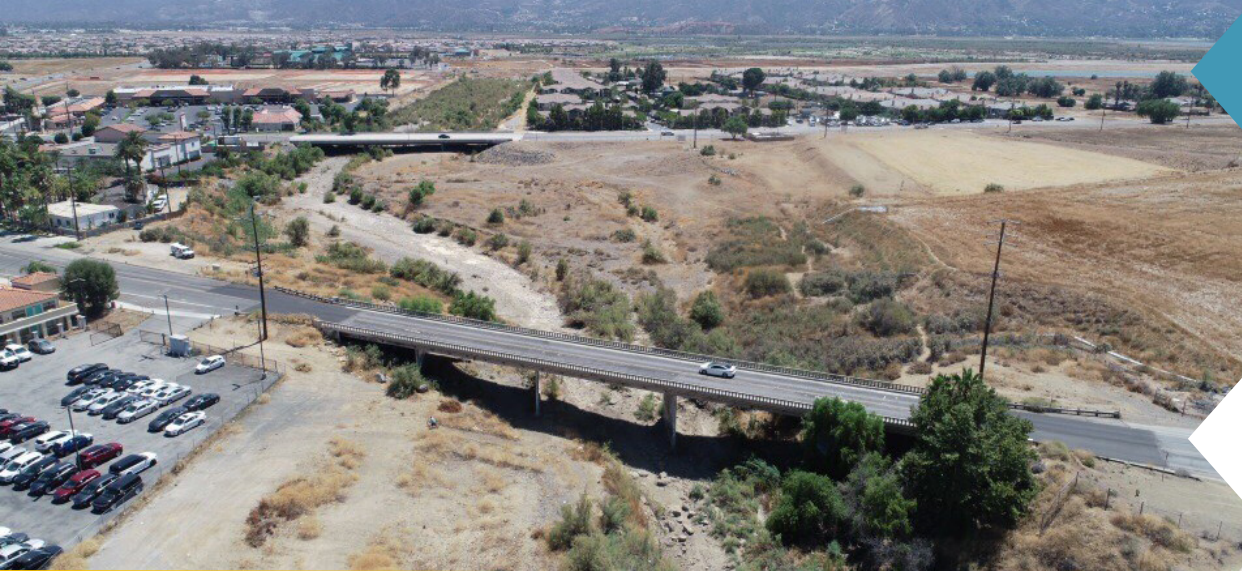
- Daniel Weddell\*
- Rebecca Shum

### RELEVANT FEATURES:

- Interchange Ramp Design
- Local Street Design
- Southern California Edison (SCE) Power Pole Relocation Coordination and Design
- Corridor Widening
- Environmental Re-Validation
- Structure Design
- Multi-Agency Coordination

\* Key Personnel

*All staff are HDR unless otherwise noted*



## VALUE ADDED

Our experience with modifying the Auto Center Drive bridge design around sensitive biological resources allows our team to develop cost-effective roadway alignments and corresponding bridge types which can be environmentally cleared during subsequent phases.



## STAKEHOLDERS INVOLVED



# Auto Center Drive/Casino Drive Bridge Seismic Retrofit

City of Lake Elsinore | Lake Elsinore, CA

The existing Auto Center Drive bridge was constructed in 1957 over the San Jacinto River and is owned and maintained by the City. Auto Center Drive is a critical link in the City's transportation network. A significant four-lane, north-south highway parallel to I-15 and Lakeshore Drive, this street carries approximately 7,400 vehicles per day and links commercial and residential districts to the Railroad Canyon Road Interchange. This bridge has been identified by Caltrans District 8 for formal seismic evaluation, including safety improvements which incorporate barrier railing upgrades and sidewalk additions.

**HDR** is responsible for performing technical studies, preliminary analyses, and coordinating meetings to determine the seismic retrofit strategy. Once the final project scope is selected, the PS&E documents will be prepared for contract bidding. We will also provide construction support services to ensure complete and accurate construction of the seismic retrofit strategy and full compliance with environmental commitments and permit requirements. **GUIDA** provided topographic and record Landnet surveys for the purpose of the Auto Center Drive Bridge Seismic Retrofit and Deck Rehabilitation.

### FIRMS INVOLVED:

HDR, GUIDA

### STAFF MEMBERS:

- Daniel Weddell\*
- Uyenlan Vu\*
- Uthaya Sandira
- Lisa Spivak (GUIDA)

### RELEVANT FEATURES:

- Work Within Natural Creek
- Hydraulic and Scour Challenges
- Seismic Analysis of Existing Bridge
- Staged Construction Required

\* Key Personnel

All staff are HDR unless otherwise noted



## VALUE ADDED

HDR delivered a multi-modal, complete streets-oriented corridor plan in 18 months while gaining Caltrans' approval of methodology and ultimate configuration. This plan incorporated the new state policies on complete streets and considered the latest Senate Bill (SB) 743 VMT guidelines which discouraged the addition of general purpose capacity.



## STAKEHOLDERS INVOLVED



## SR-133 (Laguna Canyon Road) PSR-PDS

City of Laguna Beach | Laguna Beach, CA

The project proposes to construct improvements along the SR-133 corridor. This portion of SR-133, also known as Laguna Canyon Road (LCR), consists of a two-lane highway with a center turn lane and limited shoulders. The right-of-way is constrained by residential and light commercial land uses, as well as various trails, park uses, institutional uses, and open space. LCR is further constrained by SCE's overhead transmission and distribution line poles in close proximity to the travel way within the Clear Recovery Zone (CRZ) that pose potential safety concerns.

Furthermore, the existing roadway lacks pedestrian paths, sidewalks, or a designated bikeway, forcing pedestrians and bicyclists to use the limited shoulders to gain access to the various businesses, schools, recreational trails, and transit stops along LCR. Traffic demand is already at capacity during weekday AM and PM peak hours and during most summer weekends and holidays due to the proximity to the Pacific Ocean, as well as multiple adjacent recreational facilities and trails. This high-traffic demand and resulting vehicle queuing, coupled with the lack of traffic breaks, protected left-turn movements, and inadequate shoulders, contributes to a high concentration of accidents within the project limits. The implementation plan of traffic improvements includes complete streets elements such as dedicated pedestrian paths/sidewalks and bicycle lanes as well as safety improvements.

**HDR** developed some state-of-the-art multi-modal traffic operations analysis techniques based on the latest Highway Capacity Manual 6th Edition methodologies that allowed for the alternative analysis of multi-modal improvements and allowed the project development team to compare the set of improvements and determine which alternative would provide the highest level of benefits to the modes within the corridor. Ultimately, the final set of alternatives included improved geometrics with safety features, pedestrian and bicycle facilities, and transit improvements that would increase the utility of transit in the corridor. **GUIDA** provided aerial topographic mapping for this project, working with Caltrans Survey Division to coordinate standards and collect existing mapping and as-builts before conducting survey work. The surveys were performed in accordance with the current Caltrans Survey Manuals. Work not covered by the manuals was performed in accordance with accepted professional surveying standards as approved by Caltrans.

### FIRMS INVOLVED:

HDR, GUIDA

### STAFF MEMBERS:

- Brooke Bannasch\*
- Uyenlan Vu\*
- Jessica Slater
- Angie Kung
- Sarah Barrera
- Irene Shin
- Steve Crouch

### RELEVANT FEATURES:

- Multi-Modal Complete Streets Analysis and Development
- State Highway Development
- SCE Undergrounding
- Traffic Corridor Studies
- Multi-modal Mobility Analysis
- Performance Measures
- Roadway Geometric Design and Safety
- Traffic Control and Signalization Technologies
- Traffic Flow and Queuing
- Roadway
- R/W

\* Key Personnel

All staff are HDR unless otherwise noted

## HDR References

We partner with our clients to develop the best solutions possible, year after year, project after project. The significant majority of our work comes from repeat clients. Our references are listed below.

### Reference 1: David Thomas | Toll Program Director (RCTC)



Project: I-15 ELPSE PA&ED

Client: RCTC

Name and Title: **David Thomas, PE | Toll Program Director**

Address: 4080 Lemon Street, 3rd Floor, Riverside, CA 92502

Telephone: 951.205.4956

Key Personnel Involved: Brooke Bannasch ● Julian Hernandez ● Uyenlan Vu ● Jason Pack (F&P) ● Brad Losey (MBI)

### Reference 2: Paul Melocoton | Project Manager (SBCTA)



Project: I-10 Eastbound Truck Climbing Lane (TCL) PA&ED and PS&E

Client: SBCTA

Name and Title: **Paul Melocoton | Project Manager**

Address: 1170 W. 3rd Street, 2nd Floor, San Bernardino, CA 92410

Telephone: 909.884.8276

Key Personnel Involved: Brooke Bannasch ● Julian Hernandez ● Uyenlan Vu ● Jason Pack (F&P) ● Brad Losey (MBI)

### Reference 3: Landon Kern | Assistance City Engineer (City of Yucaipa)



Project: I-10/Wildwood Canyon Road Interchange PID and PA&ED

Client: City of Yucaipa

Name and Title: **Landon Kern, PE | Assistant City Engineer**

Address: 34272 Yucaipa Boulevard, Yucaipa, CA 92399

Telephone: 909.797.2489 ext. 288

Key Personnel Involved: Brooke Bannasch ● Julian Hernandez ● Uyenlan Vu ● Jason Pack (F&P) ● Brad Losey (MBI)



## **B. Proposed Staffing and Project Organization**

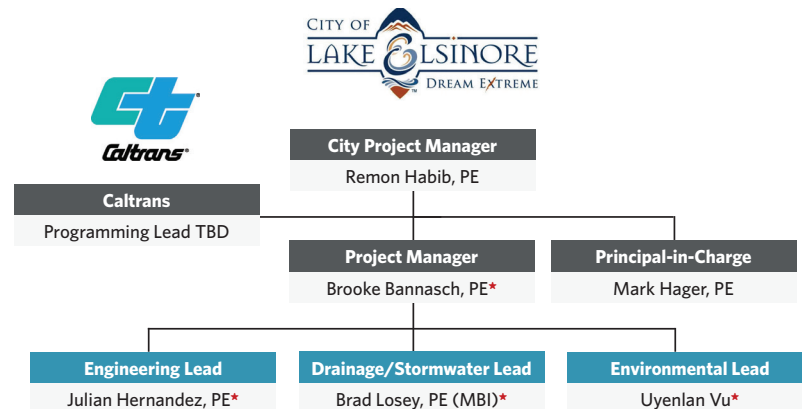
## B. Proposed Staffing and Project Organization

### Project Organization

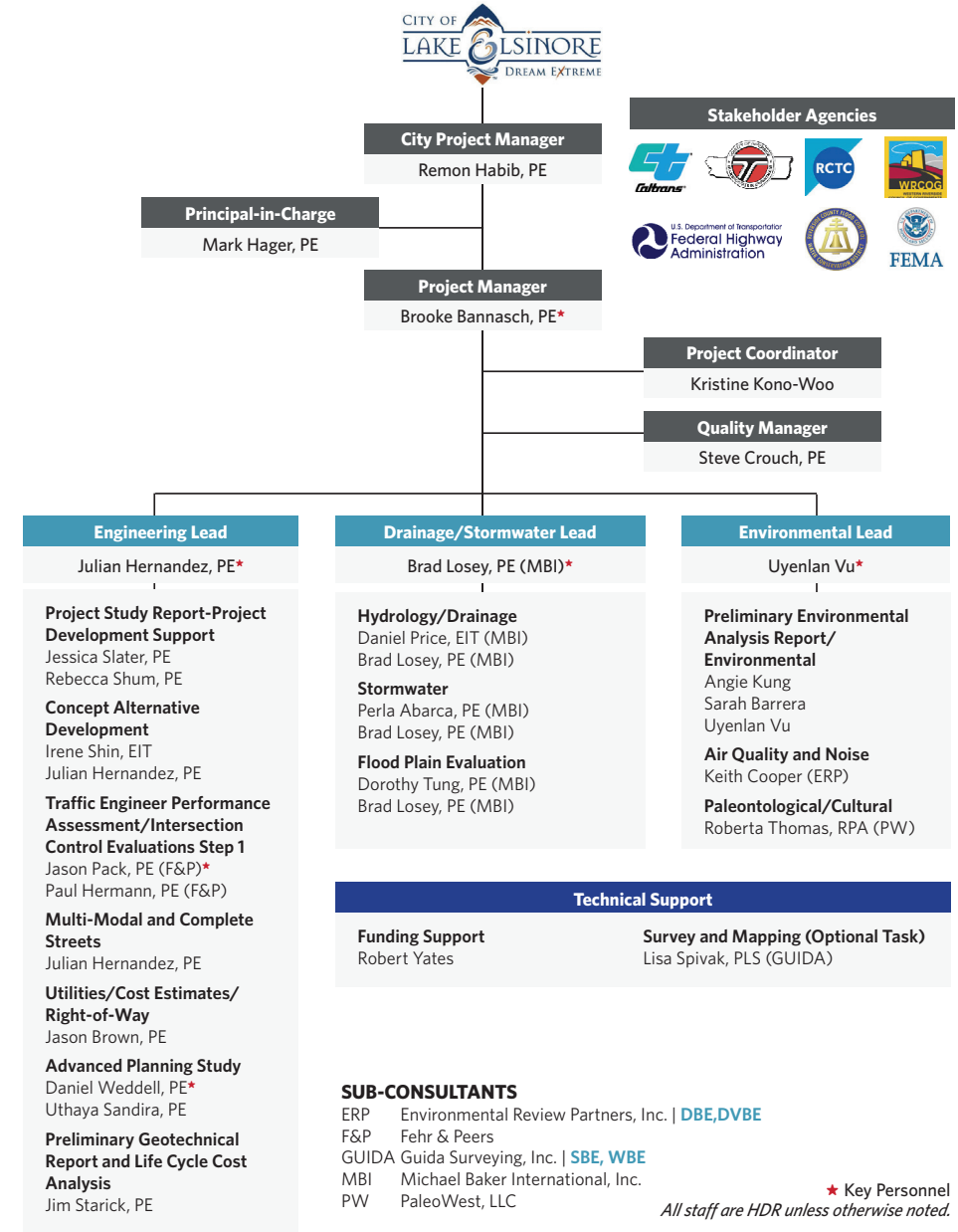
The organization chart on **Figure 2.B.1** illustrates our full team and the communication/reporting relationships among Project staff. The depth and range of HDR's hand-selected team include industry experts and sub-consultant partners to meet the City's objectives and deliver the Project efficiently and effectively. We proactively bring together the right people for each assignment and have chosen a comprehensive team of professionals with complementing expertise to assist HDR in successfully completing this contract. Key personnel will be available to the extent proposed for the duration of the Project, acknowledging that no person designated as "key" to the Project shall be removed or replaced without the prior written concurrence of the City.

The second organization chart below on **Figure 2.B.2** illustrates the proposed communication/reporting relationship between Project, City, and Caltrans District 8 staff. **Brooke Bannasch**, will be our single-point of contact for the City's Project Manager, Remon Habib, PE, and City and Caltrans District 8 staff. She will be supported by **Julian Hernandez**, Engineering Lead, **Brad Losey (MBI)**, Drainage/Stormwater Lead, and **Uyenlan Vu**, Environmental Lead. Brooke will work with the team to drive the schedule and make certain deliverables are completed with the level of quality that the City has come to expect from the HDR Team. Our key personnel will be available to start working on the Project when Notice to Proceed (NTP) is expected in November 2022.

**Figure 2.B.2 Communication Structure - Second Organization Chart**



**Figure 2.B.1 Organization Chart**



## Key Personnel Qualifications

The HDR Team will be led by our Project Manager, **Brooke Bannasch**. She has demonstrated a long-standing commitment to completing Caltrans projects in cooperation with cities and local stakeholders within the Inland Empire. She will be supported by key personnel that have a history of working with Brooke on various projects in the area. The HDR Team will bring their knowledge and expertise needed to successfully deliver the PID Phase of this Project. The team was chosen according to their ongoing work and understanding of the I-15 corridor and will be committed to the City for the duration of the Project. Assignments and references for key personnel are outlined in **Table 2.B.1** on the following page. Resumes are provided in the following section and copies of their professional credential licenses are included in the Appendix.

### Brooke Bannasch is a Project Manager the City Can Rely On

Leveraging 20 years of experience, Brooke's expertise includes the planning and design of complex transportation and corridor projects throughout Southern California. **Brooke has extensive experience providing program and project management, and preparing PSRs, PA&EDs, and PS&Es for Caltrans projects.** She has served as Project Manager for a number of Caltrans highway projects.



- I am a hands on Project Manager with an attention to detail and a desire to proactively anticipate the Project's needs
- Having previously worked on the client side, my project management experience gives me a unique understanding of the importance of proactive coordination with project stakeholders and consensus building
- Due to my extensive final design experience, I am able to recognize the importance of design decisions as they are first identified in the planning phase and how they influence the project through delivery process
- I have worked in the Inland Empire for the past 16 years
- I am local, responsive, and available

#### BROOKE'S CALTRANS EXPERIENCE



6

Number of PSRs Completed



5

Number of PA&EDs Completed



35+

Number of PS&Es Completed




“

***Brooke Bannasch's role as Project Manager for the RCTC I-15 Corridor Operations Project (COP) PA&ED and PS&E and Deputy Project Manager for the RCTC I-15 ELPSE PA&ED has been instrumental to our progress. Her highway design experience, familiarity of the project stakeholders, and ability to pivot when challenges arise has preserved the project schedule and cost, which is of great value."***


**Nisa Hester**  
**Project Delivery Manager**  
**Bechtel - RCTC Measure A**

Julian Hernandez, PE | Engineering Lead




Julian has more than 15 years of experience as a Roadway Engineer coordinating with Caltrans District 8 on Inland Empire projects. **He is an expert in identifying geometric design solutions based on site constraints while balancing Caltrans standards.** His experience includes preliminary and final design on projects for agencies such as Caltrans District 8, RCTC, TLMA, SBCTA, and the Cities of Lake Elsinore, Chino Hills, Highland, Industry, San Bernardino, Los Angeles, and Yucaipa. Julian is currently supporting the City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED as a Roadway Engineer.

Brad Losey, PE (MBI) | Drainage/Stormwater Lead




Brad has 23 years of experience in water resources and drainage projects. **His involvement in those projects included hydrologic and hydraulic studies, computer modeling, project reports, storm drain design, and detailed floodplain analysis.** He has completed projects for public and private sector clients, including Caltrans District 8, TLMA, and various cities throughout California. Brad is currently supporting the City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED as a Drainage Manager.

Uyenlan Vu | Environmental Lead




Uyenlan has 17 years of experience in preparing and managing the completion of CEQA/NEPA environmental documents and technical studies for complex roads and highway projects in Southern California. She has successfully delivered projects for the City, Caltrans District 8, and RCTC. **She has developed key relationships with the City, TLMA, RCTC, as well as environmental staff at Caltrans District 8 that help streamline the environmental review process.** Uyenlan is currently supporting the City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED as a Environmental Deputy Project Manager.

Jason Pack, PE (F&P) | Traffic Study Lead



Jason brings 23 years of experience in travel demand forecasting, traffic operations assessment (including microsimulation assessment), VMT analysis, big data analysis, transit ridership forecasting, and transportation impact studies involving NEPA and CEQA. **He has worked on approximately 25 projects within Caltrans District 8 on the state highway system and assisted in developing the City General Plan.** Jason is currently supporting the City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED as QC for Traffic.

Daniel Weddell, PE | Structures Lead



Daniel has 25 years of experience managing numerous structural design projects involving interchanges, grade separations, overcrossings, and under crossings, as well as other bridge structures. He is a recognized expert in designing complex bridge projects following Caltrans standards and is able to expeditiously process bridge and highway projects through Caltrans due to his thorough understanding of design procedures and plan production. **Daniel is currently supporting the City of Lake Elsinore Temescal Canyon Bridge Replacement Over Temescal Creek PS&E as Lead Bridge Engineer.**

Table 2.B.1 Key Personnel Assignments and References

NAME	FIRM TENURE	CURRENT ASSIGNMENTS (DURATION)	AVAIL. UPON NTP	REFERENCE #1	REFERENCE #2
Brooke Bannasch, PE	7 Years	RCTC, I-15 COP PA&ED and PS&E (Ongoing through 02/2025) ● RCTC, I-15 ELPSE PA&ED (Ongoing through 02/2025) ● City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED (Ongoing through 04/2023) ● City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED (Ongoing through 03/2025) ● SBCTA, I-10 Eastbound TCL PA&ED and PS&E (Ongoing through 10/2022)	80%	Stephanie Blanco, Capital Projects Manager (Toll) RCTC   4080 Lemon Street, 3rd Floor P.O. Box 12008, Riverside, CA 92502 951.787.4019 RCTC, I-15 COP PA&ED and PS&E	Justine Niu, PE, Design Oversight Caltrans District 8   464 West 4th Street, San Bernardino, CA 92401 909.665.3707 RCTC, I-15 ELPSE PA&ED
Julian Hernandez, PE	6 Years	City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED (Ongoing through 04/2023) ● City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED (Ongoing through 03/2025) ● SBCTA, I-215/University Parkway PA&ED and PS&E (Ongoing through 02/2023) ● SBCTA, I-10 Eastbound TCL PA&ED and PS&E (Ongoing through 10/2022)	65%	Junior Abella, Design “H” Oversight Caltrans District 8   464 W 4th Street, San Bernardino CA 92401 909.388.7193 City of Lake Elsinore, I-15/SR-74 Interchange Improvement Project PA&ED	Landon Kern, PE, Assistant City Engineer City of Yucaipa   34272 Yucaipa Blvd, Yucaipa CA 92399 909.797.2489 Ext. 288 City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED
Brad Losey (MBI), PE	18 Years	City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED (Ongoing through 10/2023) ● LA Metro, I-405 PS&E (Ongoing through 03/2024) ● TLMA, Rancho California Road Roundabouts (Ongoing through 06/2023)	40%	Alan Bisi, PE, Branch Chief, Hydraulics Caltrans District 8   464 W 4th Street, San Bernardino, CA 92401 909.383.4624 SBCTA, I-10 Eastbound TCL PA&ED and PS&E	Catherine Wampler, PE, Engineering Project Manager, Transportation ADA Coordinator TLMA   14th Street Annex Building, 3525 14th Street, Riverside, CA 92501 951.955.6803, TTY: 711 TLMA, Rancho California Road Roundabouts
Uyenlan Vu	5 Years	City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED (Ongoing through 04/2023) ● RCTC, I-15 ELPSE PA&ED (Ongoing through 06/2025) ● City of Yucaipa, I-10/ Wildwood Canyon Road Interchange PID and PA&ED (Ongoing through 04/2025)	75%	David Castro, Associate Transportation Planner TLMA   525 14th Street, Riverside, CA, 92501 951.955.9719 TLMA, Markham Street Extension PA&ED	Landon Kern, PE, Assistant City Engineer City of Yucaipa   34272 Yucaipa Blvd, Yucaipa CA 92399 909.797.2489 Ext. 288 City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED
Jason Pack (F&P), PE	23 Years	RCTC, I-15 ELPSE PA&ED (Ongoing through 12/2022) ● SBCTA, San Bernardino Transportation Analysis Model (SBTAM) Update (Ongoing through 10/2023) ● SBCTA, Multiple Task Orders (Ongoing through 12/2024) ● WRCOG, VMT Mitigation Bank (Ongoing through 03/2023) ● Various PSR/PDS Documents (Ongoing through 03/2023)	30%	Stephanie Blanco, Capital Projects Manager (Toll) RCTC   4080 Lemon Street, 3rd Floor P.O. Box 12008, Riverside, CA 92502 951.787.4019 RCTC, I-15 ELPSE PA&ED	Chris Tzeng, Program Manager WRCOG   3390 University Avenue, Suite 200, Riverside, CA 92501 951.405.6711 WRCOG, VMT Mitigation Bank
Daniel Weddell, PE	13 Years	City of Lake Elsinore, Auto Center Drive/Casino Drive Bridge Seismic Retrofit (Ongoing through 12/2023) ● City of Ventura, Main Street Bridge Replacement PA&ED (Ongoing through 12/2023) ● City of Camarillo, Camarillo Hills Drain Replacement (Ongoing through 12/2024)	40%	Andrew Grubb, PE, Principal Civil Engineer City of Camarillo   601 Carmen Drive, Camarillo, CA 93010 805.388.5344 City of Camarillo, Camarillo Hills Drain Replacement	Roberto Machuca, Senior Director Highway Programs LA Metro   One Gateway Plaza, Los Angeles, CA 90012 213.418.3467 LA Metro/City of Industry, SR-57/SR-60 Interchange Improvements PS&E

## **Key Personnel Resumes**



I have technical knowledge and an understanding of the Caltrans process having delivered both planning and final designs of complex projects by performing close coordination with cities, agencies, and Caltrans to obtain agreements and approvals. My attention to detail and commitment to clients' needs as the highest priority is demonstrated through my most recent experience in the local area."



## Brooke Bannasch, PE

### PROJECT MANAGER

Leveraging 20 years of experience, Brooke's expertise includes the planning and design of complex transportation and corridor projects throughout Southern and Central California. She has extensive experience providing program and project management, and preparing PS&E, PA&ED, and PSRs for Caltrans projects. Her design experience includes complex Caltrans roadway facilities, grade separations, and local roads. She has served as Project Manager for a number of Caltrans highway projects and she understands the coordination between civil design and the various disciplines due to her diverse technical background in geometrics, drainage, structures, tolling infrastructure, staging, and stormwater. In addition, she has experience implementing Caltrans codes and regulations for her projects. Her ability to anticipate client needs and her exceptional project management, technical, and communication skills make her the best person to lead the Project team.

#### FIRM

HDR

#### EDUCATION

BS, Civil Engineering, California State University, Fullerton

#### REGISTRATIONS

Professional Engineer - Civil, CA, No. 70332

#### INDUSTRY TENURE

20 Years

#### FIRM TENURE

7 Years

#### RELEVANT EXPERIENCE

##### **RCTC, I-15 COP PA&ED and PS&E, Corona, CA. Project Manager.**

Brooke is responsible for leading a team of engineers and planners in preparation of the concurrent PA&ED and PS&E, providing coordination with other disciplines' designers, environmental specialists, sub-consultants, geotechnical engineers, surveyors, stakeholders, cities, and agencies. The project proposes to remove a lane drop along the southbound I-15 and add an auxiliary lane from Cajalco Road to Weirick Road by widening within the median. Responsibilities include scope development, budget tracking, invoice preparation, project schedule development, and technical reviews and coordination of design, field testing and report and plan preparation. The project includes two bridge widenings, drainage improvements, stormwater devices, and sound walls.

##### **City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, Lake Elsinore, CA. QC Reviewer.**

Brooke is responsible for reviewing the geometric alternatives and associated environmental constraints for compliance with Caltrans requirements. The City, in cooperation with Caltrans District 8, is proposing to improve the I-15/SR-74 Interchange. Caltrans District 8 is the lead agency under CEQA and NEPA, as assigned by FHWA. HDR worked with the City and Caltrans District 8 to screen multiple alternatives and focus on key alternatives that delivered a viable project while minimizing right-of-way impacts.

##### **RCTC, I-15 ELPSE PA&ED, Riverside County, CA. Deputy Project Manager.**

Brooke was responsible for leading a team of engineers and planners in preparation of the PA&ED, providing coordination with other disciplines' designers, environmental specialists, sub-consultants, geotechnical engineers, surveyors, stakeholders, cities and agencies. She also assisted in scope development, public outreach, project schedule development, and technical reviews and coordination of design, field testing, and report preparation. The project proposes to increase capacity by adding two tolled express lanes in both directions within the I-15 median for an additional 15 miles extending from SR-74 (Central Avenue) in the City to Cajalco Road in Corona.

##### **SBCTA, I-10 Corridor Express Lanes Project Management/ Construction Management (PM/CM) Services Contract No. 1, San Bernardino, CA. Senior Program Manager.**

Brooke's responsibilities include reviewing the proposed design from the Geometric Approval Drawings (GAD) to assess the impacts to utilities, drainage systems, private properties, and right-of-way. She prepared Design Decision Documents, participated in constructability reviews and created design concepts for drainage and roadway construction and to minimize impacts to private properties. The project proposes to add express lanes in both directions of the I-10 corridor between the Los Angeles/San Bernardino County Line and the I-15.

## **BROOKE BANNASCH, PE (CONTINUED)**

### **Caltrans District 12, I-5 Managed Lanes PSR, Orange County, CA. Deputy Project Manager.**

Brooke's responsibilities included scheduling, budgeting, invoicing, staffing, coordination with sub-consultants and outside agencies, Project Development Team (PDT) meetings, and coordinating design between disciplines. The project proposes to improve 14 miles of I-5 by constructing two high-occupancy vehicle (HOV) lanes in each direction between the SR-55 and the Los Angeles County line and converting to two high-occupancy toll (HOT) lanes in each direction. The project includes both the SR-55/ I-5 and SR-57/SR-22/I-5 freeway to freeway interchanges and direct access connector ramps at Grand Ave, Gene Autry, and Disney Way.

### **SBCTA, I-10 Eastbound TCL PA&ED and PS&E, San Bernardino, CA. Project Engineer.**

Brooke is responsible for reviewing and coordinating the PS&E portion and assisting on the Ready to List certification for the project. The project will extend the Eastbound TCL from 16th Street overcrossing to County Line Road Interchange, for a distance of nearly three miles through the City of Yucaipa up to the San Bernardino and Riverside County Line.

### **Transportation Corridor Agencies (TCA), Corridor Management Group (CMG) Program Management of Bowerman/Jeffrey Road PSR-PDS, Irvine, CA. Project Manager.**

Brooke's responsibilities included coordination with the County of Orange, City of Irvine, and the Irvine Company, and oversight of environmental and design consultants. This was a project study for a new interchange along either the SR-133 or SR-241 to accommodate the trucks entering and exiting the Frank R. Bowerman Landfill. The landfill access is currently off Portola via a private road, Bees Canyon Access Road, owned by Orange County Waste and Recycling.

### **TCA, CMG Program Management, Orange County, CA. Deputy Project Manager.**

Brooke assisted in writing the RFPs and Invitation for Bids (IFBs) for multiple projects, scope, and contracts for multiple phases of work, including design, construction management, and construction. She was a Program Manager responsible for overseeing design, project coordination, schedules, and budget tracking for the TCA. Her responsibilities include oversight

of consultants, coordination with other agencies (Caltrans District 12, FHWA, OCTA, RCTC, County of Orange, and various cities), obtaining encroachment permits, reviewing consultant's submittals for completeness and adherence to standards, scheduling/staging construction activities, including work windows, and compliance with environmental practices.

### **OCTA, I-405 Improvement Program Management, Orange County, CA. Deputy Design Manager/Civil Lead.**

Brooke's responsibilities included coordinating civil design between the various task force leads, writing technical provisions and contractual documents, and coordinating closely with Orange County Flood Control District (OCFCD), Orange County Sanitation District (OCSD), corridor cities, Caltrans District 12, and OCTA. Brooke also led the task force meetings and agency meetings. The program involved preparing the RFP for design build, development of technical provisions, attachments, and conceptual design for 16 miles of widening for the I-405 between the SR-73 and I-605. The project will add a GP lane and additional HOV lane that will be converted to an express lane in the future, including replacing 17 overcrossings and one undercrossing.

### **City of Bakersfield, Centennial Corridor Project Phase 1 PS&E, Bakersfield, CA. Design Manager.**

Brooke's responsibilities included leading a team of engineers in the preparation of PS&E, providing coordination with other disciplines' designers, sub-consultants, geotechnical engineers, surveyors, Caltrans District 6 and agencies, as well as permitting. The project consisted of improvements along 3.5 miles of SR-58 from SR-99 to Cottonwood Road, 3.5 miles of improvements along Westside Parkway from Calloway Road to Truxtun, and interchange and ramp improvements at Rosedale Highway and Ming Avenue along SR-99. It also included nine structures with two crossing the Kern River and approximately 35,000 feet of retaining and sound wall structures. This is the first of two construction phases for the Centennial Corridor, which will extend SR-58 and provide a continuous route through Bakersfield from Westside Parkway to existing SR-58 and will ultimately create a new freeway to freeway interchange at SR-99. Scope of work included delivery of GADs, Supplemental Fact Sheets, and PS&E construction package.



I truly enjoy developing viable design alternatives that meet the client's needs and minimize impacts. My previous experience working on the City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED has been great. It has allowed me to establish strong working relationships with the City and Caltrans District 8 and has given me the background knowledge necessary to develop context-sensitive solutions."



#### FIRM

HDR

#### EDUCATION

MS, Business Administration,  
California State Polytechnic  
University, Pomona

BS, Civil Engineering, California  
State Polytechnic University,  
Pomona

#### REGISTRATIONS

Professional Engineer - Civil, CA,  
No. 79062

#### INDUSTRY TENURE

15 Years

#### FIRM TENURE

6 Years

## Julian Hernandez, PE

### ENGINEERING LEAD

Julian has more than 15 years of experience as a roadway engineer with Caltrans District 8. He is the mind behind the layout and constraints-based design and is key in project delivery. He is an expert at identifying design solutions, especially in physically-constrained conditions. His experience includes preliminary and final design on projects for agencies such as Caltrans District 8, RCTC, TLMA, SBCTA, and the Cities of Lake Elsinore, Chino Hills, Highland, Industry, San Bernardino, Los Angeles, and Yucaipa.

#### RELEVANT EXPERIENCE

**City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, Lake Elsinore, CA. Engineering Lead.** Julian has worked on the preliminary geometric design for different interchange alternatives developed based on existing and future traffic demands, cost-effectiveness, and the reduction of impacts to the surrounding properties and existing utilities. He has also worked on utility coordination, cost estimates, GADs, technical studies, and reports, including support for the development of a Modified Access Report (MAR) for FHWA. The City, in cooperation with Caltrans District 8, is proposing to improve the I-15/SR-74 interchange. Caltrans District 8 is the lead agency under CEQA and NEPA, as assigned by FHWA. HDR worked with the City and Caltrans District 8 to screen multiple alternatives and focus on key alternatives that delivered a viable project while minimizing right-of-way impacts.

**City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED, Yucaipa, CA. Engineering Lead.** During the PID Phase Julian completed the conceptual geometric design for different interchange alternatives, including a diverging diamond interchange, utility coordination, cost estimates, and utility coordination, and supported the development of technical studies and reports, including the New Connection Report (NCR) for FHWA and the PSR for Caltrans District 8. The project would construct a new interchange on I-10 at Wildwood Canyon Road, between the Live Oak Canyon Road/Oak Glen Road Interchange and the County Line Road

Interchange in Yucaipa. Associated improvements include new connecting roadways and/or realignment of existing roadways, overcrossing bridge structures, signage, and expanded utility systems. The project received PID approval from Caltrans District 8 and FHWA in 2021 and is currently in the PA&ED Phase.

**RCTC, I-15 ELPSE PA&ED, Riverside County, CA. Roadway Engineer.** Julian has assisted with the preliminary design, attended public scoping meetings, performed the Highway Safety Manual (HSM) Safety Performance Function analysis for a segment of the project, initiated the Draft Project Report as well as the Design Standard Decision Document (DSD), and the Managed Lanes Engineering Study Report. The project proposes to increase capacity by adding two tolled express lanes in both directions within the I-15 median for an additional 15 miles extending from SR-74 (Central Avenue) in the City to Cajalco Road in Corona.

**TLMA, Ethanac Expressway PID, Riverside County, CA. Roadway Engineer.** Julian's responsibilities included preparing horizontal and vertical alignments, striping, grading, right-of-way definition, and utility coordination for the Ethanac Road segment of the Corridor Development Report. The Ethanac segment proposes to close a two-mile gap between Ethanac Road and SR-74, and HDR worked as a sub-consultant firm to MBI. The other segment for this corridor study includes improvements to

## **JULIAN HERNANDEZ, PE (CONTINUED)**

SR-74 and Nichols Road up to the I-15 interchange. The proposed corridor would provide a new east-west route and connect the Cities of Hemet, San Jacinto, Menifee, Perris, and Lake Elsinore and the unincorporated communities of Winchester, Homeland, Romoland, Good Hope, Meadowbrook, and Warm Springs. The CDR was approved in 2018 and the project is currently in the PID Phase.

**SBCTA, I-215/University Parkway PA&ED and PS&E, San Bernardino, CA. Roadway Engineer.** Julian's responsibilities include preliminary engineering, utility coordination, preparing GADs, cost estimates, technical studies, and reports. SBCTA, in cooperation with Caltrans District 8 and the City of San Bernardino, is proposing to improve the I-215/University Parkway Interchange in the City of San Bernardino. The project will reconfigure the existing diamond interchange to a diverging diamond interchange to improve the traffic flows. The project also addresses active transportation elements consistent with the General Plan to serve bicyclists and pedestrians frequenting CSU San Bernardino. The PA&ED Phase was completed in 2020. The project is currently in the PS&E Phase and is expected to be in construction in 2023.

**SBCTA, I-10 Eastbound TCL PA&ED and PS&E, Yucaipa, CA. Roadway Engineer.**

Julian completed the preliminary and final engineering design, including utility coordination, cost estimate, Project Report, DSDD, and other studies and reports. The project will extend the Eastbound TCL from 16th Street Overcrossing to County Line Road Interchange, for a distance of nearly three miles through the City of Yucaipa up to the San Bernardino and Riverside County Line.

**SBCTA, I-10 Corridor Express Lanes PM/CM Services Contract No. 1, Los Angeles and San Bernardino, CA. Engineering Support.** Julian's responsibilities included reviewing the proposed design from the GADs to assess impacts to utilities, drainage systems, private properties, and right-of-way. Julian participated in the constructability review of the project and created concepts for stage construction and to minimize impacts to private properties. The project proposes to add express lanes in both directions of the I-10 corridor between the Los Angeles/San Bernardino County Line and the I-15.

**City of Highland, 3rd and 5th Street Improvements PS&E, Highland, CA. Roadway Engineering Support.** Julian worked on updating the signing and striping plans for phases two and three of the project (task completed). HDR performed environmental, right-of-way, and final design services for the City of Highland's Street Improvement Program. The work included roadway and drainage improvements along 3rd Street and 5th Street to improve safety and local roadway circulation.

**California High-Speed Rail Authority (CHSRA), Environmental/Engineering Services for Palmdale to Burbank and San Jose to Merced Sections of the California High-Speed Rail (HSR), Palmdale, CA. Roadway Engineer.** Julian's responsibilities included reviewing and updating the roadway geometric design, grading, striping, plan preparation, quantities, and coordination for improvements to highways and streets required by the high-speed rail project. HDR was part of an interdisciplinary Regional Consultant (RC) team providing preliminary engineering, environmental clearance, and preliminary engineering for procurement services for the Palmdale to Burbank (P-B) Section of the proposed California HSR System. The P-B Section will be a critical link under phase one of the system, providing connections between the counties and cities from the Bay Area to Los Angeles and Anaheim.

**LA Metro, I-605 Corridor Improvement Project PA&ED, Los Angeles County, CA. Roadway Engineer.** Julian's responsibilities included preparing the preliminary design for horizontal and vertical alignments, striping, HOT lanes, and right-of-way definition for the GADs. LA Metro, in cooperation with the Gateway Cities Council of Governments (GCCOG), San Gabriel Valley Council of Governments (SGVCOG), Caltrans District 7, and the County of Los Angeles, selected HDR to complete the PA&ED for improvements along I-605 from Slauson Avenue to I-10. Improvements would help to reduce congestion, freeway operations, enhance safety, and improve local and system interchange operations.



I take great pride in my working relationships with Caltrans District 8 and RCF&WCD. Transportation drainage is my specialty and focus. I really enjoy seeing my personal thumbprint on our built environment."



## Brad Losey, PE

### *DRAINAGE/STORMWATER LEAD*

Brad has 23 years of experience in water resources and drainage projects ranging from small subdivisions to large highway projects. His involvement in those projects includes hydrologic and hydraulic studies, computer modeling, project reports, storm drain design, and detailed floodplain analysis. He has completed projects for public and private sector clients, including Caltrans District 8, TLMA, County of Los Angeles, County of Orange, County of Ventura, and various cities throughout California. Brad specializes in the development of flood control and runoff management solutions for transportation projects involving both public and private sector projects.

#### RELEVANT EXPERIENCE

##### FIRM

MBI

##### EDUCATION

BS, Civil Engineering, University of California, Irvine

##### REGISTRATIONS

Professional Engineer – Civil, CA, No. 65140

##### INDUSTRY TENURE

23 Years

##### FIRM TENURE

18 Years

#### **City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, Lake Elsinore, CA. Drainage**

**Manager.** Brad was responsible for the LHS, SFER, RSA, and SWDR preparation. MBI, as a sub-consultant to HDR, assisted with the preparation of the PA&ED Phase deliverables for reconfiguring this existing tight diamond interchange to improve traffic circulation and access to the retail centers adjacent to the interchange. The City, in cooperation with Caltrans District 8, is proposing to improve the I-15/SR-74 Interchange. Caltrans District 8 is the lead agency under CEQA and NEPA, as assigned by FHWA.

#### **RCTC, I-15 ELPSE PA&ED, Riverside County, CA. Drainage Manager.**

For the project, Brad prepared eight LHSs and SFERs, a PHR, and a RSA. This included a one-dimensional HEC-RAS analysis for bridges over Temescal Creek and tributaries using existing electronic models provided by RCF&WCD or FEMA. Project documentation was also prepared in compliance with CEQA and NEPA. The project proposes to increase capacity by adding two tolled express lanes in both directions within the I-15 median for an additional 15 miles extending from SR-74 (Central Avenue) in the City to Cajalco Road in Corona.

#### **City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED, Yucaipa, CA. Drainage Manager.**

Brad was responsible for developing the Conceptual Drainage Study, Onsite and Offsite Drainage Layout, Preliminary Drainage Estimates, and preparation of the Preliminary SWDR. The proposed project would construct a new interchange on I-10 at Wildwood Canyon Road, between the Live Oak Canyon Road/Oak Glen Road Interchange and the County Line Road Interchange in Yucaipa. Associated improvements include new connecting roadways and/or realignment of existing roadways, overcrossing bridge structures, signage, and expanded utility systems. The project received PID approval from Caltrans District 8 and FHWA in 2021 and is currently in the PA&ED Phase.

#### **TLMA, Ethanac Expressway PID, Riverside County, CA. Drainage Manager.**

Brad was responsible for preparation of the Preliminary Drainage Report. MBI provided a comprehensive Planning Study for the proposed 12-mile corridor improvements to the Ethanac Expressway. These improvements will connect the cities of Hemet, San Jacinto, Menifee, Perris, and Lake Elsinore, and other unincorporated communities in Riverside County. As part of the study, MBI conducted extensive public outreach efforts to inform the public of the upcoming projects, as well as a comprehensive Traffic Study to recommend phasing and sequencing of the improvements.

## **BRAD LOSEY, PE (CONTINUED)**

### **SBCTA, I-10 Eastbound TCL PA&ED and PS&E, Yucaipa, CA. Drainage Manager.**

Brad was responsible for the LHS, SFER, RSA, SWDR, and Noise Study Report preparation during PA&ED. MBI also prepared final PS&E documents for the project, including drainage report, drainage plans, and SWDR, and performed permitting activities with local and regional agencies. Permits included the Section 401, 404, 1602, and San Bernardino County Flood Control Department for both the geotechnical investigation and for the construction phase. The project was unique because the existing bridge over Wilson Creek was found to be scour vulnerable during the PS&E Phase and a scour countermeasure was designed to protect the existing and widened I-10 bridges over Wilson Creek. The project will extend the Eastbound TCL from 16th Street Overcrossing to County Line Road Interchange, for a distance of nearly three miles through the City of Yucaipa up to the San Bernardino and Riverside County Line and is expected to be in construction in 2023.

**City of Indio, I-10/Monroe Street and I-10/Jackson Street Interchanges PSR-PDS, Indio. Drainage Manager.** Brad was responsible for overseeing preparation of the Location Hydraulic Study for the Avenue 50 Bridge over the Coachella Valley Stormwater Channel. MBI prepared two PSR-PDS documents to streamline the PID phase. One PSR-PDS was prepared for each interchange. The documents followed the new PDPM Appendix S guidelines. Three alternatives were evaluated for each interchange, including the no-build alternative. The build alternatives would address the existing capacity deficiencies, remove the existing bottlenecks, and accommodate growth and development utilizing context-sensitive solution design, such as a Neighborhood Electric Vehicle path. The PSR-PDS documents identified the need for interchange improvements and determined the capital and support costs for the PA&ED, PS&E, and construction.

**City of Ontario, Archibald Avenue Improvement Project, Ontario, CA. Drainage Manager.** Brad is responsible for preparing the LHS, Preliminary Drainage Assessment Report, Water Quality Scoping Questionnaire, and final PS&E in accordance with Caltrans standards. MBI provided design and environmental services for proposed improvements on Archibald Avenue between East Oak Hill Drive and Monticello Place near the SR-60 interchange. For the project, MBI developed the PSR-PDS deliverable, the PA&ED, and PS&E package for the proposed improvements. It also provided utility coordination and construction support.

### **SBCTA, I-15 HOT Lanes PA&ED, Orange and Riverside Counties, CA. Drainage**

**Manager.** Brad was responsible for preparation of the location hydraulic study and summary floodplain evaluation report for the I-15 crossing of East Etiwanda Creek Channel and Day Creek Channel. He was also responsible for the preparation of preliminary hydraulics reports in support of the advance planning studies for the same two bridges. MBI supported the PA&ED Phase for a five-mile segment of the I-15 Corridor Project from Baseline Road to Duncan Canyon interchanges, including the I-15/SR-210 interchange. The project is studying express lanes from the San Bernardino/Riverside County line to I-15/Duncan interchange. MBI prepared geometric approval drawings and supporting technical documents, including advance planning studies, design exception fact sheets, and cost estimate within its segment. Additionally, MBI prepared preliminary drainage, location hydraulic studies, and water quality reports for the entire corridor.

### **SBCTA, I-10 Express Lanes Design-Build, San Bernardino, CA. Drainage Manager.**

Brad is responsible for leading and coordinating four drainage teams preparing the final drainage plans, specifications, and estimates for the corridor. MBI is serving as lead designer for SBCTA's I-10 Corridor Express Lanes Project. As part of the project, the team will manage the overall design process, which includes ensuring the design meets the 52-month schedule and established design criteria, as well as interfacing directly with the design-build contractor to integrate design and construction. The team is also responsible for roadway, structure, drainage, maintenance of traffic and Intelligent Transportation System (ITS), utility relocation design, tolling, signals, lighting, landscape architecture, and survey activities throughout the corridor.



My recent work experience on City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED and City of Yucaipa I-10/Wildwood Canyon Road Interchange PID and PA&ED has allowed me to be at the forefront of the latest environmental laws and regulations. Preparing NEPA and CEQA compliant environmental documents and technical studies and helping clients and stakeholders navigate through the environmental process is my passion."



## Uyenlan Vu

### ENVIRONMENTAL LEAD

Uyenlan has 17 years of experience in preparing and managing the completion of CEQA/NEPA environmental documents and technical studies for complex roads and highway projects in Southern California, including City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, RCTC I-15 ELPSE PA&ED, City of Yucaipa I-10/Wildwood Canyon Road Interchange PID and PA&ED, City of Laguna Beach SR-133 (Laguna Canyon Road) PSR-PDS, and LA Metro I-605 Corridor Improvement Project PA&ED. She has developed key relationships with the City, TLMA, RCTC, as well as environmental staff at Caltrans District 8 that help streamline the environmental review process. Her work experience has included the successful completion of PEAR, as well as Environmental Impact Report/Environmental Impact Statement (EIR/EIS), IS/EA, Initial Study/Mitigated Negative Declaration (IS/MND), and Categorical Exemption/Categorical Exclusion (CE/CE).

#### FIRM

HDR

#### EDUCATION

MS, Urban and Regional Planning, University of Wisconsin-Madison

MS, Water Resources Management, University of Wisconsin-Madison

BA, Environmental Analysis and Design/Social Ecology, University of California, Irvine

#### INDUSTRY TENURE

17 Years

#### FIRM TENURE

5 Years

#### RELEVANT EXPERIENCE

**City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, Lake Elsinore, CA. Environmental Deputy Project Manager.** Uyenlan is overseeing the preparation of the IS/EA and supporting technical studies. She is also responsible for the Quality Control (QC) review of the Water Quality Assessment Report (WQAR) and preparation of the ISA. By leveraging her existing relationships with Caltrans District 8 environmental staff, she was able to obtain early concurrence on scope expectations, minimizing potential delays to the schedule as result of scope creep. The City, in cooperation with Caltrans District 8, is proposing to improve the I-15/SR-74 Interchange. Caltrans District 8 is the lead agency under CEQA and NEPA, as assigned by FHWA. HDR worked with the City and Caltrans District 8 to screen multiple alternatives and focus on key alternatives that delivered a viable project while minimizing right-of-way impacts.

**City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED, Yucaipa, CA. Environmental Deputy Project Manager.** Uyenlan oversaw the preparation of the PEAR and supporting technical studies in support of the PSR. She also prepared the Initial Site Assessment. For the PA&ED Phase, Uyenlan is serving as the Environmental Deputy

Project Manager where she provides day-to-day management and technical oversight of the EIR/EA and associated technical studies. The proposed project would construct a new interchange on I-10 at Wildwood Canyon Road, between the Live Oak Canyon Road/Oak Glen Road Interchange and the County Line Road Interchange, in Yucaipa. Associated improvements include new connecting roadways and/or realignment of existing roadways, overcrossing bridge structures, signage, and expanded utility systems. The project received PID approval from Caltrans District 8 and FHWA in 2021 and is currently in the PA&ED Phase.

**RCTC, Corridor A Feasibility Study, Riverside County, CA. Environmental Task Lead.** Uyenlan authored the PEAR and provided oversight of supporting technical studies. She also authored the Hazardous Waste/Materials Technical Memorandum. The project entailed constructing a new four lane (six lane ultimate) facility between SR-241 and I 15, running parallel to SR-91, and realignment of on and off ramps. The purpose of the project was to improve current traffic operations, accommodate forecasted traffic demand, and to improve the overall mobility between Orange and Riverside Counties.

## UYENLAN VU (CONTINUED)

**City of Laguna Beach, SR-133 (Laguna Canyon Road) PSR-PDS, Laguna Beach, CA. Environmental Document and Technical Support.** Uyenlan co-authored the PEAR in support of the PSR-PDS. She also prepared the Initial Site Assessment Memorandum and Community Impact Assessment Memorandum to support the PEAR. The City of Laguna Beach, in cooperation with Caltrans District 12, is proposing to construct improvements along the SR-133 corridor extending approximately 2.5 miles from Canyon Acres Drive (PM 0.96) to El Toro Road (PM 3.41) in Orange County.

**RCTC, I-15 ELPSE PA&ED, Riverside County, CA. Environmental Deputy Project Manager.** Uyenlan is assisting in the oversight of HDR technical studies and associated sections within the environmental document. She is also serving as the Technical Lead for the WQAR and the ISA for the project. HDR's extensive contributions in public outreach efforts resulted in the ability of the project team to move up the scoping period by 4 months. The project proposes to increase capacity by adding two tolled express lanes in both directions within the I-15 median for an additional 15 miles extending from SR-74 (Central Avenue) in the City to Cajalco Road in Corona.

**RCTC, I-15 COP PA&ED and PS&E, Corona, CA. Environmental Deputy Project Manager.** For the PA&ED Phase, Uyenlan is serving as the Environmental Deputy Project Manager where she provides day-to-day management and technical oversight of the environmental document and supporting technical studies. The project proposes to remove a lane drop along the southbound I-15 and add an auxiliary lane from Cajalco Road to Weirick Road by widening within the median. Responsibilities include scope development, budget tracking, invoice preparation, project schedule development, and technical reviews and coordination of design, field testing, and report and plan preparation. Project includes two bridge widenings, drainage improvements, stormwater devices, and sound walls.

**TLMA, Markham Street Extension PA&ED, Riverside County, CA. Environmental Lead.** Uyenlan is currently managing and providing oversight in the preparation of the IS/MND and associated supporting technical studies. TLMA is proposing improvements to Markham Street by extending the roadway between Roosevelt Street and Wood Road for approximately 1.3 miles in the community of Woodcrest in unincorporated Riverside County. The County is serving as the CEQA lead for the project.

**SBCTA, I-10 Eastbound TCL PA&ED and PS&E, Yucaipa, CA. Environmental Document and Technical Support.** Uyenlan provided support in the preparation and review of the IS/EA and supporting technical studies during the PA&ED Phase. During the PS&E Phase, Uyenlan had prepared a CEQA/NEPA Re-Validation Form due to project design changes. The project will extend the Eastbound TCL from 16th Street Overcrossing to County Line Road Interchange, for a distance of nearly three miles through the City of Yucaipa up to the San Bernardino and Riverside County Line.

**SBCTA, I-215/University Parkway PA&ED and PS&E, San Bernardino, CA. Hazardous Waste/Materials Specialist and Environmental Support.** Uyenlan prepared the Initial Site Assessment to support the Initial Study/Categorical Exclusion (IS/CE). She also provided environmental support in the review of the IS/CE and of the technical studies. SBCTA, in cooperation with the Caltrans District 8 and the City of San Bernardino, is proposing to improve the I-215/University Parkway Interchange in the City of San Bernardino. Caltrans District 8 is the lead agency under CEQA and NEPA. The project will reconfigure the existing diamond interchange to a diverging diamond interchange to improve the traffic flows. The PA&ED Phase was completed in 2020 and is currently in the PS&E Phase and is expected to be in construction in 2023.

**SBCTA, West Valley Connector Project, Los Angeles and San Bernardino Counties, CA. Environmental Task Lead.** Uyenlan served as the environmental task lead and provided day-to-day management and technical oversight of the EIR/EA and associated technical studies. SBCTA, in cooperation with FTA and Omnitrans, proposes to construct a 35-mile-long bus rapid transit project that traverses the cities of Pomona, Montclair, Ontario, Rancho Cucamonga, and Fontana. The project includes up to 55 BRT stations (center- and side-running stations) and 3.5 miles of dedicated bus-only lanes that will require road widening.



I have dedicated the past 14 years of my career helping to improve communities in the Inland Empire. I have strong and successful working relationships with the City, RCTC, TLMA, and Caltrans District 8. Helping to improve Inland Empire communities is what I love to do."



## Jason Pack, PE

### TRAFFIC STUDY LEAD

Jason is actively involved in a wide variety of project work, but also finds time to lead F&P's research and development efforts in emergency evacuation assessment. Jason has an extensive background in travel demand forecasting, traffic operations assessment (including microsimulation assessment), VMT analysis, big data analysis, transit ridership forecasting, and transportation impact studies involving NEPA and CEQA. His focus is to utilize his experience and the technical resources of the company to help clients answer their toughest questions related to mobility. His recent work has included forecasting and operations assessment for large infrastructure improvements, developing recommendations for SB 743 implementation (California's new requirements to consider VMT as an impact metric under CEQA), assisting agencies with establishing VMT banks/exchanges, emergency evacuation assessment to respond to new legislative requirements (SB 99 and AB 747), and development of innovative transportation policies to assist the City's advancing transportation into the future.

Jason has worked on Inland Empire infrastructure projects with a focus on PID and PA&ED Phases. This has provided him with direct experience, credibility, and trusted relationships with stakeholders in the area, including the City, RCTC, TLMA, and Caltrans District 8. For instance, staff at Caltrans District 8 have contacted him directly to discuss concerns and identify innovation. In addition, Jason has extensive experience with RIVCOM, applying it on dozens of land use and transportation projects in the County. He has worked on approximately 25 projects within Caltrans District 8 on the state highway system and assisted in developing the City General Plan. Not only has this provided excellent experience and contacts at Caltrans District 8, but has also allowed him to expand his relationships with key stakeholders in the area, including the City, TLMA, and RCTC.

#### RELEVANT EXPERIENCE

##### **City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, Lake Elsinore, CA. QC for Traffic.**

As a sub-consultant to HDR, F&P collected new traffic volume data to evaluate the project area. The TOAR is based on traffic forecasts and traffic capacity analysis for the design year for the interchange. The TOAR analysis was conducted using SimTraffic simulation in Synchro. F&P is performing initial assessment of various interchange layouts and failure assessments. This process is being included in the ICE process for the project. Based on the traffic forecasts and the results of the ICE review, F&P is assisting the project team in developing up to three project alternatives for consideration in the traffic analysis. The City, in cooperation with Caltrans District 8, is proposing to improve the I-15/SR-74 Interchange. Caltrans District 8 is the lead agency under CEQA and NEPA, as assigned by FHWA.

**RCTC, I-15 ELPSE PA&ED, Riverside County, CA. Traffic Lead.** As a sub-consultant to HDR, Jason coordinated with RCTC and Caltrans District 8 to prepare the TOAR for the I-15 ELPSE PA&ED analysis from Cajalco Road to SR-74. The project proposes to increase capacity by adding two tolled express lanes in both directions within the I-15 median for an additional 15 miles extending from SR-74 (Central Avenue) in the City to Cajalco Road in Corona. Jason led the developed traffic simulation models for the study corridor and calibrated and validated the simulation model to existing conditions. INRIX speed data and StreetLight origin/destination (O-D) data were used to assist in identifying travel patterns and potential managed lane users in the area. The validated simulation model was used to develop the future year simulation models under both opening year and design year conditions. In addition to completing the ELPSE effort, F&P also assisted

#### **FIRM**

F&P

#### **EDUCATION**

BS, Civil Engineering, University of California at Davis

#### **REGISTRATIONS**

Professional Engineer - Traffic, CA, No. 2402

#### **INDUSTRY TENURE**

23 Years

#### **FIRM TENURE**

23 Years

## JASON PACK, PE (CONTINUED)

HDR and RCTC in completing the I-15 COP which will extend the southbound outside GP lane drop that occurs between El Cerrito and Cajalco as a trap lane to Weirick Road. F&P efforts included assisting with the Interim COP (ICOP) project that, prior to implementation of COP, would provide an auxiliary lane between the Cajalco and Weirick Ramps in the southbound direction.

**TLMA, Ethanac Expressway PID, Riverside County, CA. Traffic Lead.** F&P completed a comprehensive transportation assessment to extend Ethanac to SR-74 (both to the west and via a grade separation to the east) and extend Nichols Road to connect to SR-74 to the east, essentially creating a new cross-county corridor connecting I-215 to I-15. As part of this effort, they completed a multitude of travel demand forecasts to assist in identifying when parallel infrastructure degrades operationally and to develop a delivery strategy for TLMA. The work included multiple public outreach meetings and extensive coordination with decision makers along the corridor, including TLMA, RCTC, and the Cities of Lake Elsinore, Perris, and Menifee.

**City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&ED, City of Yucaipa, CA.** F&P, as a sub-consultant to HDR, completed the Traffic Study in support of the PSR for the I-10/Wildwood new connection. Specifically, they developed a calibrated VISSIM microsimulation model to test traffic operations with and without the new interchange. The analysis reviewed the adjacent two interchanges in addition to the freeway mainline to support the purpose and need of the project in addition to verifying the design requirements for the new interchange. After completing the traffic work in support of the PSR, F&P has continued their support into the PA&ED Phase of the project. As part of that effort, they are leading the VMT assessment, including development and coordination with a Delphi panel to develop different land use assumptions with and without the interchange. This information will go into the VMT assessment in support of the VMT analysis as part of the environmental document. The proposed project would construct a new interchange on I-10 at Wildwood Canyon Road, between the Live Oak Canyon Road/Oak Glen Road Interchange and the County Line Road Interchange in Yucaipa. Associated improvements include new connecting roadways and/or realignment of existing roadways, overcrossing bridge structures, signage, and expanded utility systems. The project received PID approval from Caltrans District 8 and FHWA in 2021 and is currently in the PA&ED Phase.

## **TLMA, I-215/Ethanac Road Interchange PSR-PDS, Riverside County, CA. Traffic**

**Lead.** F&P is completing the TEPA for improvements to the I-215/Ethanac Road Interchange Project. This work is being coordinated by TLMA, but the PSR-PDS will focus on setting the footprint of the interchange, scoping out the PA&ED Phase of the project, and completing a Step 1 ICE assessment. Additionally, they will be working with the project team on completing the VMTDD. F&P's work will primarily consist of high level operations assessment using available information (including that completed as part of the Ethanac Corridor Study), completing some model assessment to assist with the VMTDD, and completing a Step 1 ICE assessment for the interchange alternatives that come out of the PSR-PDS.

In addition to the projects noted above, Jason has extensive experience processing Caltrans District 8 documents. These projects, along with other relevant corridor studies, are summarized below:

- I-15 COP PA&ED, Corona, CA
- I-15 ICOP PA&ED, Corona, CA
- I-15 CARM Feasibility Study, Riverside County, CA
- I-10 Eastbound TCL PA&ED and PS&E, Yucaipa, CA
- I-10 Mt. Vernon PA&ED, Colton, CA
- SR-60 Archibald PSR-PDS, PA&ED, and PS&E, Ontario, CA
- I-10/Alabama PSR-PDS and PA&ED, Redlands, CA
- SR-210 Victoria PA&ED, Highland, CA
- I-10 Cherry Valley PA&ED, Calimesa, CA
- I-10 Monroe PSR-PDS and PA&ED, Indio, CA
- I-10 Jackson PSR-PDS and PA&ED, Indio, CA
- SR-60 Rubidoux PSR-PDS, Jurupa Valley, CA
- SR-60 Redlands PSR-PDS, Moreno Valley, CA
- I-215 Harley Knox PA&ED, Perris, CA
- I-215 McCall PSR-PDS and PA&ED, Menifee, CA
- I-215 Garbani PSR-PDS, Menifee, CA
- Monterey Avenue Signal Coordination Study, Palm Desert, CA



I bring a holistic approach to the development of bridge scoping based on my extensive experience managing bridge and highway projects from the planning phase through final PS&E and construction support. I excel at developing bridge solutions for projects with multiple site constraints, including engineering aspects such as hydraulics and staging requirements as well as environmental constraints such as avoidance of biological impacts or changes to the floodplains.”



## Daniel Weddell, PE

### STRUCTURES LEAD

Daniel has 25 years of experience managing numerous structural design projects involving interchanges, grade separations, overcrossings, and under crossings, as well as other bridge structures. He is a recognized expert in designing complex bridge projects following Caltrans standards and is able to expeditiously process bridge and highway projects through Caltrans due to his thorough understanding of design procedures and plan production. Daniel has served the Cities of Lake Elsinore, Bakersfield, Camarillo, Santa Ana, Los Angeles, Ventura, and others. He has completed HBP applications to obtain funding for several bridges over Los Angeles River. Recently, he assisted the City of Los Angeles in preparing several HBP funding applications and 24 project study report equivalent (PSRE) documents as part of the City-wide Bridge Improvement Program, resulting in \$54M in funding. Over the past 15 years, he has obtained over \$280M in HBP funding and has been responsible for the design of over \$100M in bridge project construction improvements using federal funding.

#### FIRM

HDR

#### EDUCATION

MS, Structural Engineering,  
University of California, Berkeley

BS, Structural Engineering,  
University of California, San Diego

#### REGISTRATIONS

Professional Engineer - Civil, CA,  
No. 59834

#### INDUSTRY TENURE

25 Years

#### FIRM TENURE

13 Years

#### RELEVANT EXPERIENCE

##### **City of Lake Elsinore, Temescal Canyon Bridge Replacement Over Temescal Creek PS&E, Lake Elsinore, CA. Lead Bridge Engineer.**

Daniel was responsible for the bridge design for the HBP-funded PS&E for the new Temescal Canyon Bridge Over Temescal Creek. The bridge is a three-span four-lane structure over the natural bottom of Temescal Creek. The bridge design uses a precast girder superstructure founded on nine-foot-diameter CIDH piles which minimizes construction impacts on the environmentally sensitive natural bottom creek. The bridge is designed for up to 19 feet of scour which eliminates the need for scour protection at the piers, further reducing the environmental impacts.

##### **City of Oxnard, Rice Avenue/Fifth Street Grade Separation PA&ED and PS&E, Oxnard, CA. Structures Lead.**

Daniel was responsible for the structure APS at the PSR phase for the Rice Avenue Grade Separation over 5th Street and Union Pacific Railroad (UP). HDR was responsible for delivering the PA&ED and the 100% PS&E to elevate Rice Avenue over the Santa Barbara Subdivision of UP and SR-34 in the City of Oxnard and County of Ventura. The project scope involved developing feasible design alternatives, preparation of Project Report, and ensuring the design parameters followed the UP-BNSF Guidelines for Railroad Grade Separation

Projects. The team coordinated with the City of Oxnard as the lead agency, Caltrans District 7, Ventura County Transportation Commission (VCTC), County of Ventura, UP, California Public Utilities Commission (CPUC), Federal Railroad Administration (FRA), and other stakeholders for reviews and approvals required for the project. HDR also communicated with over 14 major utility companies impacted by the project to coordinate utility agreements, relocation requirements, costs, and anticipated relocation schedules.

##### **City of Bakersfield, Manor Street Bridge over Kern River PS&E, Bakersfield, CA. Structures Lead.**

Daniel was responsible for the seismic retrofit strategy and HBP-funded widening. The project consists of two parallel two-lane bridges with 13 spans founded on pier walls within the Kern River. The bridge is located within sensitive habitats requiring retrofit and widening solutions that minimize disturbance to the river bottom. To accomplish this, a retrofit strategy was developed which did not require additional footing work to carry the widening. Daniel coordinated these permits from California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), and the Regional Water Quality Control Board (RWQCB) for both the geotechnical field borings and PS&E.

**DANIEL WEDDELL, PE (CONTINUED)**

**City of Camarillo, Camarillo Hills Drain Replacement at Ventura Boulevard PA&ED and PS&E, Camarillo, CA. Project Manager.** Daniel was responsible for the scoping, environmental document, and PS&E for the replacement of the Camarillo Hills Drain under Ventura Boulevard and Las Posas Road. Daniel oversaw the scoping study to determine the most feasible replacement, which included structure analysis, traffic studies, and staging concepts as the Reinforced Concrete Box (RCB) runs diagonally under the intersection of Ventura Boulevard and Las Posas Road which cannot be closed during replacement. Daniel is currently leading the CEQA and NEPA clearance as well as the preliminary engineering.

**City of San Dimas, Foothill Boulevard over San Dimas Wash, San Dimas, CA. Project Manager.** Daniel was responsible for the PS&E of the Foothill Boulevard widening over San Dimas Wash. The project includes the design of a single-span slab bridge widening over the San Dimas Wash on both sides of Foothill Boulevard, widening the roadway approaches, channel improvements, modification to the channel maintenance access points at three locations, and removal of portions of the existing bridge over the wash. Daniel coordinated the various design tasks with the Los Angeles County Department of Public Works and USACE on the maintenance roads, right-of-way, stormwater quality, channel modifications, and structure review.

**City of Ventura, US-101 California Street Off-Ramp Realignment (PA&ED), Ventura, CA. Structure Lead.** Daniel is responsible for the structure APSs in support of the PSR/PR. The project includes moving the existing California Street off-ramp to Oak Street. As a result, the team is preparing an APS for replacement of the existing California Street bridge that will be extended to accommodate two exit lanes under the east end. An APS is also needed for a 300-foot-long special retaining wall needed along an existing business parking lot to reduce project impacts to the local businesses.







**LA Metro/City of Industry, SR-57/SR-60 Interchange Improvements PS&E, Industry and Diamond Bar, CA. Engineering Lead.** Daniel was responsible for the proposed improvements of the Grand Avenue Interchange on SR-60, and the associated freeway mainline and connector improvements on the SR-60 and SR-57 confluences. The project involves preparing the PID, PA&ED documents, and final PS&E for the \$316M improvements to implement a long-term fix on the SR-60 and SR-57 segments where the two freeways share a common alignment at Grand Avenue. The project is being developed by LA Metro and City of Industry in cooperation with the City of Diamond Bar and Caltrans District 7.

**City of Ventura, Main Street Bridge over Ventura River Replacement (Scoping and PA&ED) Document, Ventura, CA. Project Manager.** Daniel is responsible for preparing the Preliminary Engineering, Environmental Documents, and 35 percent Plans Scoping Document for the Main Street Bridge over Ventura River. Main Street Bridge is comprised of two separate but adjoining 1,200-foot CIP bridges, which are supported by 20 reinforced concrete piers, with an average pier spacing of 60 feet, constructed over spread footings. Though the bridge is in relatively good shape for an 85-year-old structure, the bridge suffered an extreme settlement event in the 1997 flood, causing a span to drop three feet. In the scoping phase, we prepared a Caltrans-approved bridge replacement as the scour countermeasure. The project is currently in the PA&ED Phase.







## Proposed Support Personnel

The HDR Team provides the City with a depth of experts and resources. Our proposed support personnel, including major areas of sub-consultant work, are highlighted in **Table 2.B.2** below. Copies of their professional credential licenses are included in the Appendix.

**Table 2.B.2 Proposed Personnel**

NAME	PROJECT ROLE	INDUSTRY AND FIRM TENURE	EDUCATION	PROFESSIONAL CREDENTIALS	RELATIVE EXPERIENCE
 <b>Mark Hager, PE</b>	Principal-in-Charge	26 Years   13 Years	BS, Civil Engineering, California State Polytechnic University, Pomona  AAS, Technology, Community College of the Air Force Maxwell AFB	Professional Engineer - Civil, CA, No. 67659	<ul style="list-style-type: none"> <li>City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&amp;ED (Project Manager)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (Project Manager)</li> <li>City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&amp;ED (Project Manager)</li> </ul>
 <b>Kristine Kono-Woo</b>	Project Coordinator	18 Years   4 Years	N/A	N/A	<ul style="list-style-type: none"> <li>RCTC, I-15 ELPSE PA&amp;ED (Senior Project Accountant)</li> <li>City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&amp;ED (Senior Project Accountant)</li> <li>RCTC, I-15 COP PS&amp;E (Senior Project Accountant)</li> </ul>
 <b>Steve Crouch, PE</b>	Quality Manager	37 Years   10 Years	Coursework, Civil/Structural, California State University, Long Beach	Professional Engineer - Civil, CA, No. 59969	<ul style="list-style-type: none"> <li>City of Laguna Beach, SR-133 (Laguna Canyon Road) PSR-PDS (Project Engineer/Deputy Project Manager)</li> <li>RCTC, I-15 Express Lanes Project (Senior Project Engineer)</li> <li>Caltrans District 7, On-Call Design Services (Task Order Manager)</li> </ul>
 <b>Jessica Slater, PE</b>	PSR-PDS	10 Years   5 Years	BS, Civil Engineering, California Polytechnic State University, San Luis Obispo	Professional Engineer - Civil, CA, No. 84282	<ul style="list-style-type: none"> <li>City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&amp;ED (QA/QC Review)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (Project Engineer)</li> <li>LA Metro, I-605 Corridor Improvement Project PA&amp;ED (Highway Engineer)</li> </ul>
 <b>Rebecca Shum, PE</b>	PSR-PDS	11 Years   5 Years	BS, Civil Engineering, University of California, Irvine	Professional Engineer - Civil, CA, No. 83512	<ul style="list-style-type: none"> <li>City of Lake Elsinore, Temescal Canyon Bridge Replacement Over Temescal Creek PS&amp;E (Roadway Lead)</li> <li>RCTC, I-15 Railroad Canyon Road Interchange PA&amp;ED and PS&amp;E (Roadway Lead)</li> <li>OCTA, SR-91 Improvement Project Segment 2 (Senior Highway Engineer)</li> </ul>
 <b>Irene Shin, EIT</b>	Concept Alternative Development	15 Years   2 Years	BS, Civil Engineering, California State University, Fullerton	Engineer in Training, CA, No. 126587	<ul style="list-style-type: none"> <li>City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&amp;ED (Senior Designer)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (Senior Designer)</li> <li>City of Laguna Beach, SR-133 (Laguna Canyon Road) PSR-PDS (Senior Designer)</li> </ul>

NAME	PROJECT ROLE	INDUSTRY AND FIRM TENURE	EDUCATION	PROFESSIONAL CREDENTIALS	RELATIVE EXPERIENCE
 Paul Hermann, PE (F&P)	TEPA/ICE Step 1	11 Years   11 Years	BS, Civil Engineering, California State Polytechnic University, Pomona	Professional Engineer - Traffic, CA, No. 2797	<ul style="list-style-type: none"> <li>City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&amp;ED (Traffic Manager)</li> <li>City of Menifee, I-15 and McCall Interchange Improvement PA&amp;ED (Project Manager)</li> <li>City of Temecula, I-15 Congestion Relief Auxiliary Lane Project (Project Manager)</li> </ul>
 Jason Brown, PE	Utilities/Cost Estimates/R/W	10 Years   8 Years	BS, Civil Engineering, California State Polytechnic University, Pomona	Professional Engineer - Civil, CA No. 84914	<ul style="list-style-type: none"> <li>City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&amp;ED (Highway Engineer)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (Staging and Engineers Estimate)</li> <li>TLMA, Ethanac Expressway PID (Highway Engineer)</li> </ul>
 Uthaya Sandira, PE	APS	34 Years   5 Years	MS, Structural Engineering, University of Nevada, Reno  BS, Civil Engineering, University of Peradeniya	Professional Engineer - Civil, CA, No. 61444	<ul style="list-style-type: none"> <li>City of Lake Elsinore, Temescal Canyon Bridge Replacement Over Temescal Creek PS&amp;E (Preliminary Design)</li> <li>City of Lake Elsinore, Auto Center Drive/Casino Bridge Drive Bridge Seismic Retrofit Project (Senior Project Engineer)</li> <li>SBCTA, I-15 Express Lane PS&amp;E (Senior Design Engineer)</li> </ul>
 Jim Starick, PE	Preliminary Geotechnical Report and Life Cycle Cost Analysis	14 Years   9 Years	MS, Civil Engineering, California State Polytechnic University, Pomona  BS, Civil Engineering, California State Polytechnic University, Pomona	Professional Engineer - Civil, CA, No. 77738	<ul style="list-style-type: none"> <li>City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&amp;ED (Senior Geotechnical Engineer)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (Geotechnical Oversight Reviews and Life Cycle Cost Analysis)</li> <li>City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&amp;ED (Senior Geotechnical Engineer)</li> </ul>
 Daniel Price, EIT (MBI)	Hydrology/Drainage	5 Years   5 Years	BS, Civil Engineering (Water Resources), University of California, Irvine	Engineer in Training, CA, No. 19-540-79	<ul style="list-style-type: none"> <li>SBCTA, I-10 Eastbound TCL PA&amp;ED and PS&amp;E (Civil Associate)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (Civil Associate)</li> <li>SBCTA, I-10 Corridor Express Lanes (Civil Associate)</li> </ul>
 Perla Abarca, PE (MBI)	Stormwater	24 Years   3 Years	BS, Civil Engineering, University of California, Irvine	Professional Engineer - Civil, California, No. 66884	<ul style="list-style-type: none"> <li>RCTC, I-15 ELPSE PA&amp;ED (Project Engineer)</li> <li>SBCTA, I-10 Eastbound TCL PA&amp;ED and PS&amp;E (Drainage)</li> <li>SBCTA, I-10 Corridor Express Lanes (QA/QC Engineer)</li> </ul>
 Dorothy Tung, PE (MBI)	Flood Plain Evaluation	7 Years   4 Years	BSCE, Civil Engineering/Environmental/ Water Resources, University of California, Irvine	Professional Engineer - Civil, CA No. 94171	<ul style="list-style-type: none"> <li>RCTC, I-15 ELPSE PA&amp;ED (Project Engineer)</li> <li>SBCTA, I-10 Eastbound TCL PA&amp;ED and PS&amp;E (Project Engineer)</li> <li>TLMA, I-10 Monroe Street Engineering and Planning Services (Project Engineer)</li> </ul>

NAME	PROJECT ROLE	INDUSTRY AND FIRM TENURE	EDUCATION	PROFESSIONAL CREDENTIALS	RELATIVE EXPERIENCE
 <b>Angie Kung</b>	PEAR/Environmental	20 Years   8 Years	BA, Biological Sciences, University of California, San Diego	N/A	<ul style="list-style-type: none"> <li>City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&amp;ED (Environmental Lead)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (Environmental Task Manager)</li> <li>City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&amp;ED (Environmental Lead)</li> </ul>
 <b>Sarah Barrera</b>	PEAR/Environmental	22 Years   7 Years	MS, Conservation Biology, Victoria University and Macquarie University  BS, Animal Science, University of California, Davis	N/A	<ul style="list-style-type: none"> <li>City of Lake Elsinore, I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&amp;ED (Senior Biologist)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (Senior Biologist)</li> <li>City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&amp;ED (Senior Biologist)</li> </ul>
 <b>Keith Cooper (ERP)</b>	Air Quality and Noise	24 Years   2 Years	MBA, Mount Saint Mary's University  MA, Urban Planning, University of California, Los Angeles  BS, Business Administration, California State University, Dominguez Hills	N/A	<ul style="list-style-type: none"> <li>Caltrans District 8, On-Call Environmental Services Contracts 08A1169, 08A1521, 08A2107, 08A2597, and 08A3114 (Air Quality/Climate Change Technical Lead)</li> <li>Caltrans District 8/RCTC, SR-60 Truck Lanes Project (Air Quality/Climate Change Technical Lead)</li> <li>SBCTA, I-15 Corridor Project (Air Quality/Climate Change Technical Lead)</li> </ul>
 <b>Roberta Thomas, RPA (PW)</b>	Paleontological/Cultural	15 Years   5 Years	MA, Anthropology, California State University, Long Beach  BA, Anthropology, University of Oklahoma	Register of Professional Archaeologists, No. 3749430	<ul style="list-style-type: none"> <li>City of Yucaipa, I-10/Wildwood Canyon Road Interchange PID and PA&amp;ED (Senior Archaeologist)</li> <li>San Bernardino County, Route 66 Bridge Replacement Project (Co-Principal Investigator)</li> <li>Caltrans District 7, LA-27 Corridor Improvement Project (Co-Principal Investigator)</li> </ul>
 <b>Robert Yates</b>	Funding Support	31 Years   4 Years	BASc, Geography, State University of New York College at Buffalo  AAS, Applied Horticulture and Horticultural Business Services, State University of New York College of Agriculture and Technology at Cobleskill	N/A	<ul style="list-style-type: none"> <li>RCTC, Coachella Valley-San Geronimo Pass Rail Corridor Service Development Plan - Multi-modal Project Discretionary Grant (MPDG) Grant Application (Project Manager)</li> <li>RCTC, Transit Oriented Communities (TOC) Federal Transit Administration (FTA) Grant Application (Project Manager)</li> <li>City of Beverly Hills, North Portal RAISE Grant Application (Project Manager)</li> </ul>
 <b>Lisa Spivak, PLS (GUIDA)</b>	Survey and Mapping (Optional Task)	34 Years   5 Years	BS, Surveying Engineering, California State University, Fresno	Professional Land Surveyor (PLS), CA, No. 7177	<ul style="list-style-type: none"> <li>City of Lake Elsinore, Temescal Canyon Bridge Over Temescal Creek Replacement Project PS&amp;E (QA/QC Manager)</li> <li>City of Lake Elsinore, Auto Center Drive Bridge, Lake Elsinore, CA (Survey Mapping Lead)</li> <li>RCTC, I-15 ELPSE PA&amp;ED (Survey Mapping Lead)</li> </ul>



## **C. Project Understanding and Approach**

## C. Project Understanding and Approach

In this section, the HDR Team will demonstrate our understanding of the Project's local setting and constraints, our approach to identify and develop solutions to meet Project objectives, and our work plan to execute the required scope to obtain PID Phase approval resulting in PSR-PDS concurrence with Caltrans District 8.

### Project Understanding

I-15 through western Riverside County was originally constructed in 1980. At that time, Nichols Road was realigned to the south and the I-15 Nichols Road Interchange, ramps and the overcrossing at I-15 were completed. When Nichols Road was shifted to the south, a triple Reinforced Concrete Box culvert was placed under the roadway at the Temescal Creek crossing to convey flows in the creek, and the intersection with Collier Avenue was improved.



**Based on preliminary traffic findings, the existing I-15 Nichols Road Interchange may be preserved as a diamond interchange as the team evaluates interim and ultimate operational needs.**

I-15 has both regional and local significance as a primary north-south corridor connecting other regional centers and communities to new housing developments which continue to emerge in the foothills along the I-15 and Nichols Road corridors. I-15 and the adjacent interchange at I-15/SR-74 (Central Avenue) experience high levels of traffic congestion, most notably during the peak hours and on weekends, where volumes are the highest, resulting in substantial delays for retail business patrons and residents. Due to this congestion, many Elsinore Valley residents use Nichols Road as a bypass route into the City and to enter the Outlets at Lake Elsinore or to gain access to the lake. Nichols Road provides access to recreation destinations like the Cleveland National Forest as well as connectivity to Southern Orange County via the SR-74 crossing.

As identified in the TLMA Ethanac Expressway PID Project, Nichols Road would ultimately be realigned and connect eastward to SR-74, which is defined ultimately as a six-lane facility. This, combined with the extension of Ethanac Expressway to SR-74, will connect critical infrastructure to provide east-west connectivity in this area of Western Riverside County. This corridor will become even more important in the future when Ethanac Road will be grade separated from the railroad that parallels I-215 and connect to SR-74 to the east, providing a continuous east-west corridor connecting the San Jacinto/Hemet area directly to Lake Elsinore.

The east-west connectivity noted above will be further supported by other key I-15 corridor improvements, including the extension of express lanes from South Corona to Lake Elsinore (the I-15 ELPSE that is currently in the environmental review stage with Caltrans District 8 and RCTC) and the future extension of HOV lanes on I-15 from the ELPSE terminus to Temecula. RCTC is also considering implementing a freeway corridor adaptive ramp metering (CARM) system that would monitor freeway mainline congestion and would implement and actively adjust on-ramp metering rates to manage mainline congestion. The CARM system will be phased on I-15 and implemented in the southbound direction along the Nichols Road On-ramp. The Project should include considerations related to CARM implementation in this area.

All of the above regional activities combined with locally planned development around the I-15 Nichols Road Interchange support the need to plan for the future and begin the process to validate the interchange is appropriately designed to serve this connectivity.

Under the proposed Project, the City, along with Caltrans District 8, TLMA, and RCTC, will improve local street network access and regional interchange operations to access the growing developments in this portion of Lake Elsinore at I-15 and the I-15 Nichols Road Interchange to enhance multi-modal connectivity and provide more efficient local circulation. Transportation planning between local and regional facilities is important to adequately plan for future development with the high rate of growth occurring in the area and establish the appropriate access control limits.

**The HDR Team can streamline the delivery process for the City. Our team's collective local and I-15 corridor knowledge, staff continuity and availability can be leveraged along with our current working relationships with Caltrans District 8, RCTC and TLMA to provide context-sensitive solutions at Project kick-off.**



The City is committed to studying the I-15 Nichols Road Interchange to serve continued development. Under the recommendation of this Project, the City looks to improve regional access for its residents and businesses, while planning for future growth. The local experience of the HDR Team recognizes the City's goals and vision for the I-15 Nichols Road Interchange and surrounding area to address the following goals:

- Relieve congestion by improving traffic operations
- Increase local access with improved reliability for City residents and visitors by reducing congestion in the vicinity of I-15 and Nichols Road
- Accommodate planned housing and commercial developments
- Minimize impacts to local businesses and residents
- Improve safety for both bicyclists and pedestrians by adding sidewalks and bicycle paths
- Upgrade the I-15 Nichols Road Interchange for compatibility with future Ethanac Expressway and I-15 ELPSE traffic volumes
- Relieve heavy AM and PM peak hour volumes in the northbound and southbound directions of I-15, respectively



**Nichols Road will become a major east-west corridor with the future extension of Ethanac Expressway.**

The HDR Team has worked with similar local road and traffic circulation constraints associated with the I-15/SR-74 (Central Avenue) Interchange and will leverage our experience to identify opportunities associated with the I-15 Nichols Road Interchange. Currently, our proposed team members are delivering the RCTC I-15 ELPSE and City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement projects by completing PA&ED collaboratively with the City, RCTC and Caltrans District 8, which provides the City with continuity in decisions made both locally and regionally.



**HDR has experience assisting clients in identifying funding opportunities including low water crossings.**

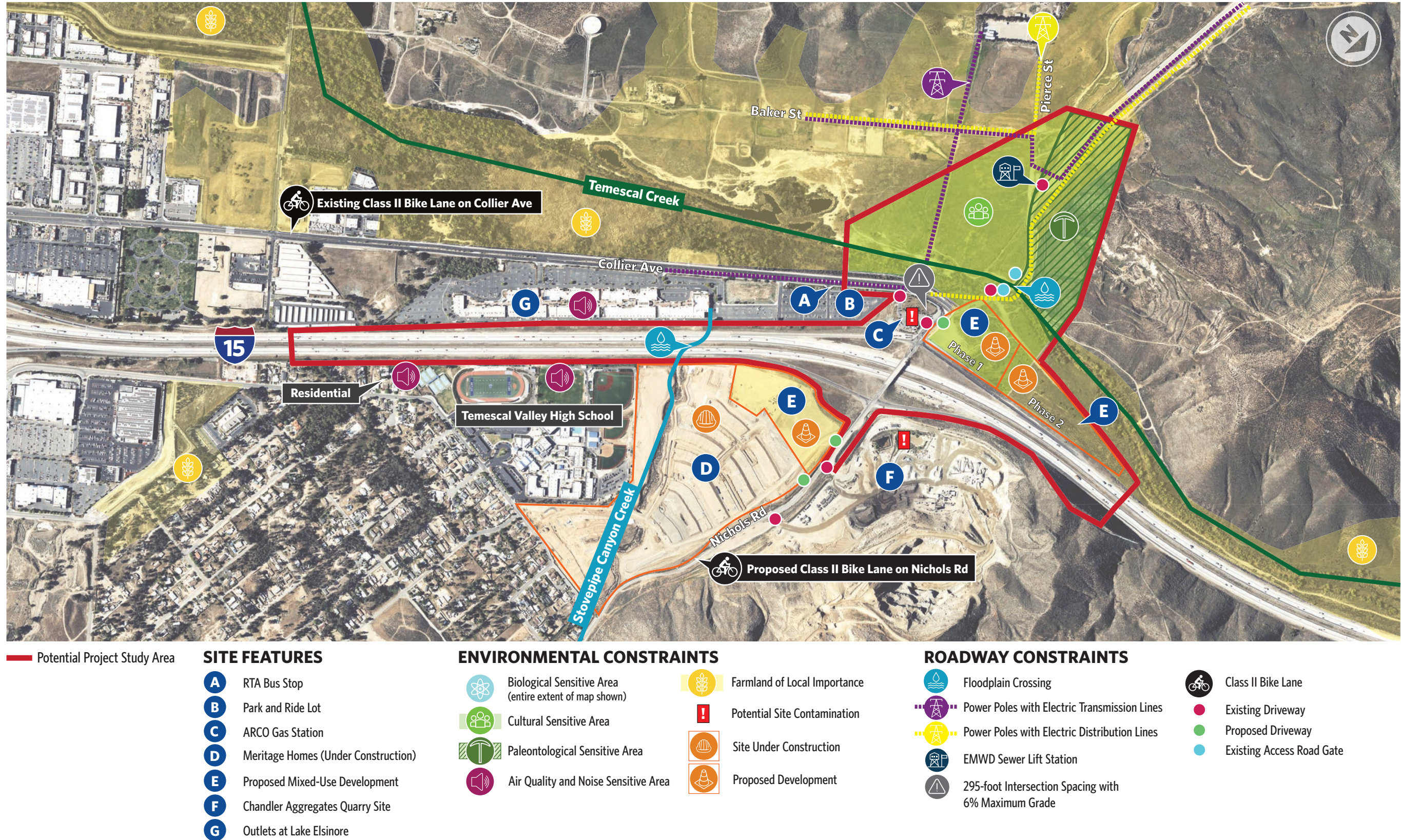
Our team is also completing the City of Lake Elsinore Temescal Canyon Bridge Replacement Over Temescal Creek PS&E Project, just upstream of the Nichols Road crossing with Temescal Creek, which provides consistency in identifying flow rates, conveyance requirements, and water surface elevations and flow regimes which influence the bridge design over Temescal Creek for the Project. Close coordination with the adjacent I-15/SR-74 (Central Avenue) Interchange, Ethanac Expressway and the I-15 ELPSE Project by the HDR Team will balance freeway operations on this segment of I-15 within Riverside County to meet the needs of local and regional traffic traveling in this area. Additionally, our team is poised with collective local knowledge and personnel continuity, along with key personnel availability, which will contribute to streamlining the delivery of the PSR-PDS with our immediately available expertise and knowledge, including our recent working relationships with Caltrans District 8, RCTC and TLMA.

Since the City has a fully executed Cooperative Agreement already signed with Caltrans District 8, the HDR Team can start evaluating the Project area upon NTP. The HDR Team has information we have already collected on sensitive noise receptors in the area, the existing flow information we have already obtained for Temescal Creek, existing topographic mapping and elevations that we can utilize for our geometric alternatives as well as previous environmental studies in the area, and traffic planning from neighboring projects in the area that our HDR Team can use to validate for this Project. The HDR Team has been working together on a consistent basis for many years in this area and understands the City's need to plan the I-15 Nichols Road Interchange for future development needs. The City, in conjunction with RCTC, TLMA, and Caltrans District 8, is moving forward with the Project and the HDR Team is prepared to deliver this Project, in partnership with the stakeholders.

Site Location and Constraints

The HDR Team is best suited for the Project because of our knowledge and understanding of the local area. From the team’s understanding of traffic, noise-sensitive receptors, environmental constraints and future express lane tolling compatibility from our work on the RCTC I-15 ELPSE PA&ED, TLMA Ethanac Expressway PID, and City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, and our understanding of Temescal Creek from our adjacent bridge work just downstream of the Project. The HDR Team has knowledge of the existing area and planned future projects, an established working relationship, experience on similar Caltrans District 8 projects, and information compiled from our current projects we can utilize from day one, to expedite the start of the Project. Based on our local understanding, we have identified constraints related to the expected improvements scoped for this Project and have developed the following Project Constraints Map shown on **Figure 2.C.1**.

Figure 2.C.1 Project Constraints Map



## SITE CONSTRAINTS

Vehicles exit I-15 at Nichols Road and head west to access the Outlets at Lake Elsinore, the Park & Ride lot, as a bypass route into the City from SR-74 (Central Avenue), entry into residential neighborhoods along Lake Street, and to access launch ramps and campsites at Lake Elsinore for recreation. The future Nichols Road is planned to be a major east-west connection between the I-15 and I-215 freeways. With the residential and retail development planned immediately adjacent to the I-15 Nichols Road Interchange, future traffic demands and land-use changes will need to be understood to properly plan for this interchange.

Along Nichols Road, on the east end of the I-15 Interchange, there is an existing quarry, Chandler Aggregates Inc., in operation with large trucks entering and exiting from a driveway along the north side of the road. On the southern side of the road on the same side of the interchange, a residential community is being constructed by Meritage Homes as well as a mixed commercial development that will be developed adjacent to the northbound exit ramp.

On the western side of the I-15 Nichols Road Interchange, there is an ARCO gas station on the southern side of the road near the intersection of Nichols Road with Collier Avenue which has high right-in/right-out movements from both Nichols Road and Collier Avenue with a raised median separating traffic in each direction. Due to the large difference in the floodplain elevations along Collier Avenue and the ARCO station, preservation of traffic and pedestrian circulation for the site will be important for not only this location but for other future property owners in the area. Directly across from the intersection of Collier Avenue with Nichols Road, another development is planned to open in 2023 that will be a phased development with a



**Existing businesses such as the Outlets at Lake Elsinore generate a high demand for traffic along Nichols Road.**



**Multiple transmission and distribution overhead lines are located within the Project limits which will be evaluated for protection and relocation.**

planned 7-11, fast food and retail. With many future developments planned in the area, many driveways will be in proximity of the intersections of both Collier Avenue and the I-15 ramps along Nichols Road. Driveway access and coordination with property owners is important for the Project's successful delivery.

Moving farther west from the intersection of Collier Avenue and Nichols Road, Temescal Creek is a low water crossing that is prone to flooding during larger storm events and is closed to traffic a few times per year. The creek is in a FEMA regulatory floodway that cannot have fill placed within specific limits and needs to accommodate 100- and 500-year flows. It is our understanding that the City would like to replace this low water crossing with a structure in part because the RCBs under the roadway that convey creek flows, are no longer acceptable to Western Riverside County Regional Conservation Authority (RCA). After crossing the floodplain to the west there is an existing sewer pump station at the intersection with Pierce Street that need to be preserved. Also running throughout this entire area are numerous overhead transmission and distribution utility lines that will need to be identified and coordinated when evaluating preliminary geometry alternatives.

Preservation of the creek's wildlife corridors and reduction of floodplain impacts will be used in evaluating project alternatives as well as analyzing traffic and future planned development. Installing bicycle routes and ADA-compliant pedestrian access throughout the Project consistent with the City's Active Transportation Plan, Active LE is another important aspect of the Project. Our teams' relationships with stakeholders will be key in beginning early coordination for these important project features. We also have working relationships with RCFC&WCD, TLMA, RCTC and Caltrans District 8 to coordinate and obtain solutions early in the PID process.



**The HDR Team understands the importance of maintaining pedestrian and vehicular access to key sites such as the ARCO gas station.**



**Temescal Creek is a sensitive regulatory floodplain where jurisdictional water impacts will be minimized when evaluating bridge and roadway alignments.**

## Proposed Project

The proposed Project will provide improved connectivity and increase multi-modal access for residents within the City and accommodate the City's planned economic development around the area of proposed interchange improvements, support efficient goods movement through the I-15 corridor, improve emergency vehicle access and provide additional evacuation routes for the surrounding community. These components are consistent with the Climate Action Plan for Transportation Infrastructure (CAPTI) goals as developed by the California State Transportation Agency.

The primary purpose of the Project is to improve access to I-15, local roads, businesses and planned developments adjacent to the Nichols Road Interchange. Additionally, the interchange improvements will reduce congestion and improve traffic operations on Nichols Road and at the intersection of Collier Avenue.

The Traffic Study for the I-15 Nichols Road Interchange will consider current, and future (2050) travel demands on the I-15 corridor, and the local street network in Lake Elsinore. The HDR Team recognizes many underlying issues in the area, as we are working on the RCTC I-15 ELPSE PA&ED, City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, and the City of Lake Elsinore Temescal Canyon Bridge Replacement Over Temescal Creek PS&E, all within the immediate area. Our team is uniquely aware of several factors that influence the traffic circulation of this area and are discussed in this proposal.

The Project is intended to achieve the following:

- Operational acceptability
- Integration of the future planned projects in the area
- Minimization of impacts in the Temescal Creek floodplain and other environmental resources
- ICE (Step 1)
- Complete streets and multi-modal planning
- Estimate and program the capital outlay support cost necessary to complete the studies and work needed during PA&ED

## CONCEPT ALTERNATIVE DEVELOPMENT




The HDR Team proposes to develop three feasible build alternatives as outlined in the Scope of Work following development of various concepts and input from the PDT and stakeholders under the PID Phase. HDR will develop independent interchange and local street/intersection solutions that can be combined to compliment operational benefits for both local and regional traffic demands. Alternative development will be based on a context-sensitive solution approach given our collective knowledge of environmental resources from other studies we have completed locally as a team and understanding of right-of-way and local development, while being aware of the need to meet onsite treatment of stormwater prior to discharge into the local creek/floodplain. Initial screening of potential alternatives will be conducted qualitatively to evaluate impacts, potential costs and benefits as well as intersection control evaluations to assess the most practical interface of traffic circulation elements.

Interchange concepts and local road concepts will initially be evaluated independently to address their individual site constraints and complexities and then thoughtfully combined into feasible alternatives to address the Project's purpose and need. Validating the early build alternative concepts against traffic data and operational assessments will provide the City and Caltrans District 8 the confidence to proceed with a focused Project footprint and efficient build alternatives.


Early identification and discussion of geometric design challenges is critical. Some challenges include the required minimum spacing between the Nichols Road On- and Off-Ramp intersections, local intersections and driveways. Even more important is the ability to implement practical and acceptable solutions that minimize impacts to the floodplain.

The HDR Team has developed concepts as part of this proposal to minimize the Project footprint, maximize operational benefits, and provide technical transparency of our ideas while we meet and, in some cases, balance the Caltrans Highway Design Manual standards with expected operational influences that we have already studied in the area.



**HDR's experience on key adjacent projects such as the City of Lake Elsinore I-15/SR-74 (Central Avenue) PA&ED, TLMA Ethanac Expressway PID, and the RCTC I-15 ELPSE PA&ED provides consistency and understanding of local and regional traffic needs in this area.**

**The HDR Team has the unique ability to provide coordination and updates to the City on adjacent projects. Concepts need to be compatible with the RCTC planned Express Lanes and adjacent I-15/SR-74 improvements in this corridor which the HDR Team leads.**



INTERCHANGE CONCEPTS

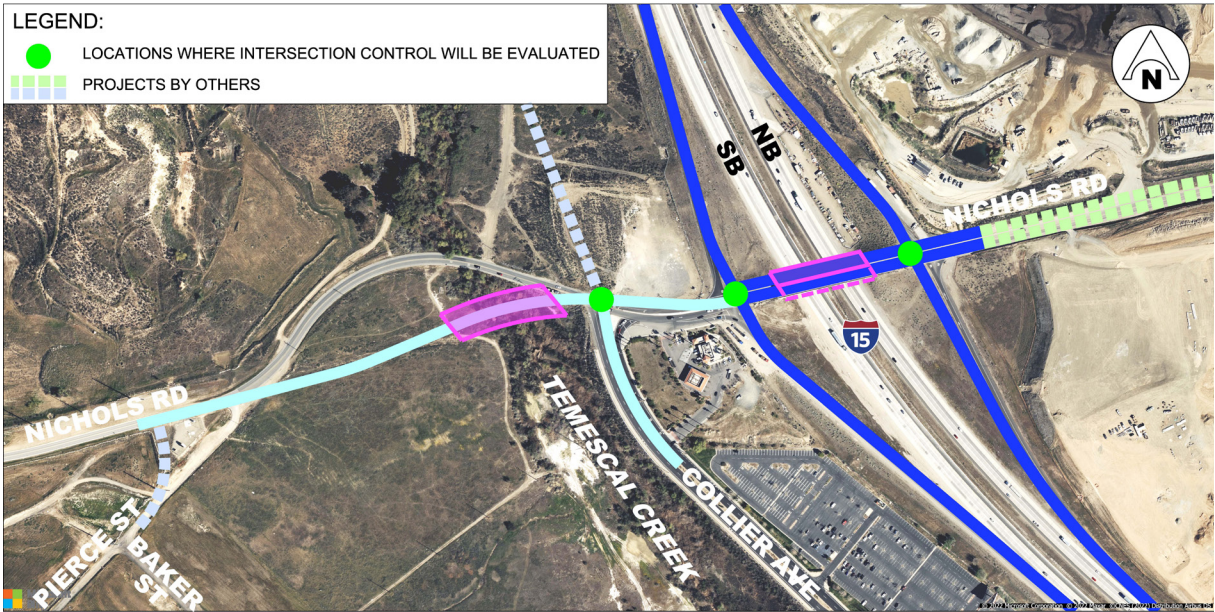
The HDR Team has prepared several preliminary interchange concepts during this proposal period. We considered the utility of an interchange that can be phased to meet the delivery and growth timeline of the City. HDR's interchange concepts, detailed on **Figure 2.C.2**, will lead to the development and early screening of alternatives and support the Project purpose and need by:

- Accommodating existing and future local and regional traffic operations
- Enhancing safety along congested off-ramps and at the adjacent local intersections
- Improving operations on Nichols Road and I-15 to meet the needs of a growing area serving both local and regional traffic demands
- Maintaining access to local roads and businesses adjacent to Nichols Road
- Minimizing right-of-way impacts to existing and future developments
- Reducing impacts to sensitive environmental resources such as the Temescal Creek floodplain
- Eliminating utility impacts such as avoiding the transmission towers and adjacent sewer lift station
- Providing roadway alignment alternatives with bridge structures that clear the Temescal Creek floodplain and the resulting roadway alignment influence on the I-15 ramps, overcrossing, and existing intersection at Collier Avenue and Nichols Road
- Compatibility with future planned projects
- Providing fundable and cost efficient alternatives

Interchange concepts on this page and the following pages were developed and objectively evaluated by our team. Benefits and Challenges have been identified to optimize the circulation elements directly related to local and regional traffic interfaces at I-15.

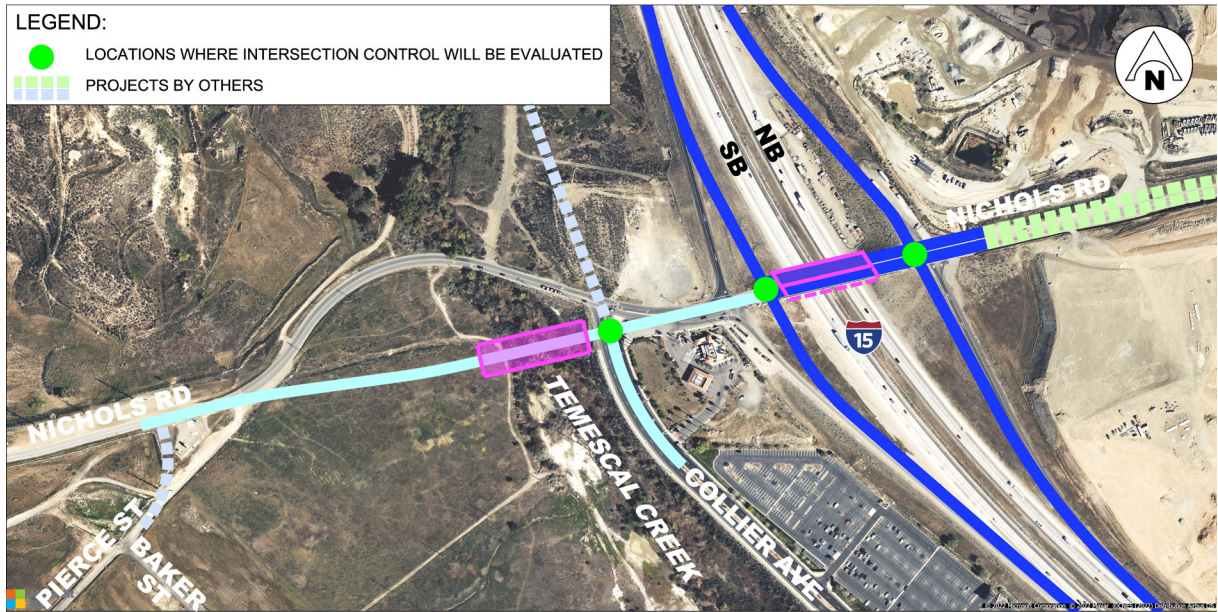
Various combinations of interchange configurations and local road concepts can be combined based on inter-compatibility with developed concept alternatives.

Figure 2.C.2 Interchange Concepts



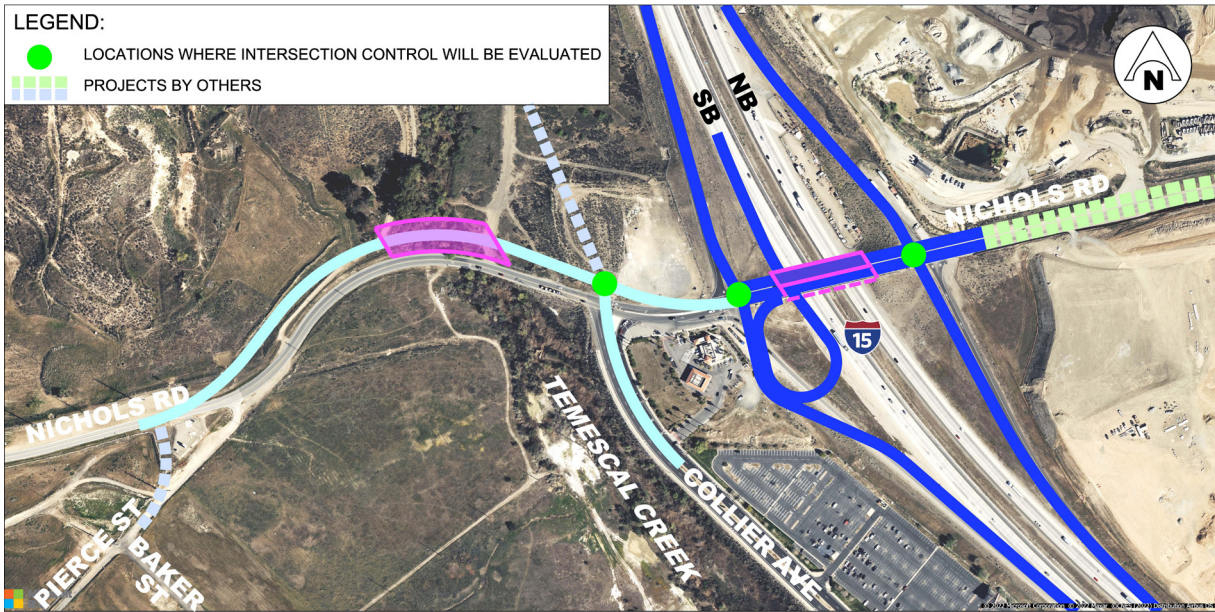
INTERCHANGE CONCEPT 1 - DIAMOND INTERCHANGE

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>▪ Low capital cost</li><li>▪ Utilizes existing Nichols Road OC</li><li>▪ Remains within existing CT R/W</li><li>▪ Limited environmental impacts</li></ul>	<ul style="list-style-type: none"><li>▪ Maintains business access</li><li>▪ Streamlines constructibility</li><li>▪ Requires no FHWA approval</li></ul> <ul style="list-style-type: none"><li>▪ Non-standard intersection spacing</li><li>▪ Limits operational improvements</li></ul>



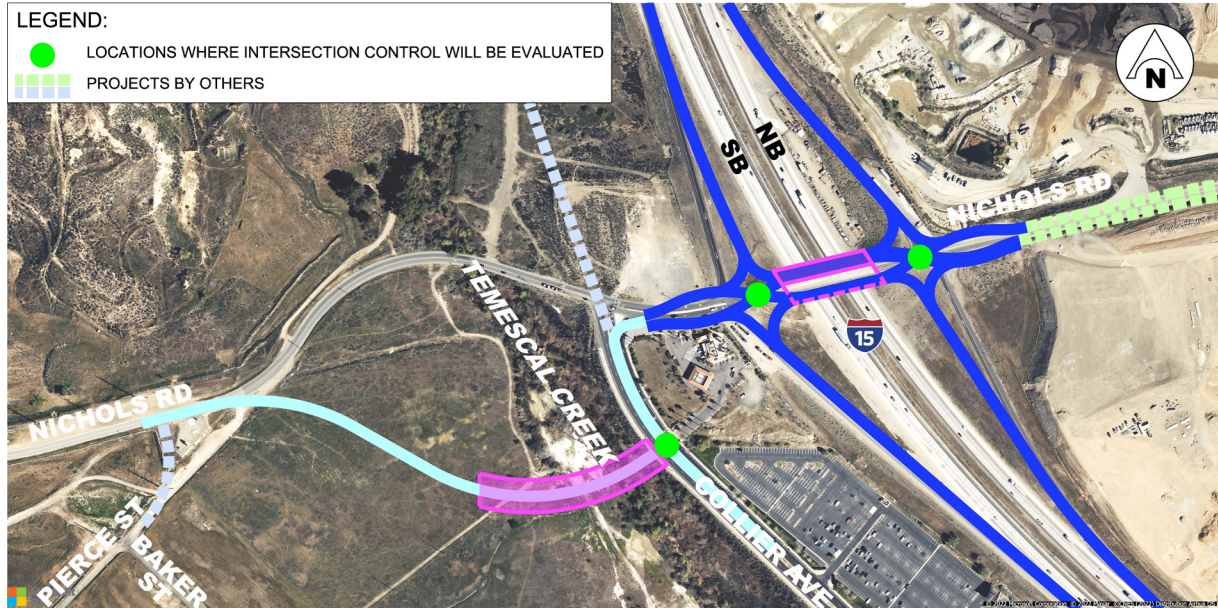
INTERCHANGE CONCEPT 2 - TIGHT DIAMOND INTERCHANGE

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>▪ Increases intersection spacing</li><li>▪ Low capital cost</li><li>▪ Utilizes existing Nichols Rd OC</li><li>▪ Remains within existing CT R/W</li></ul>	<ul style="list-style-type: none"><li>▪ Limited environmental impacts</li><li>▪ Maintains business access</li><li>▪ Streamlines constructibility</li><li>▪ Requires no FHWA approval</li></ul> <ul style="list-style-type: none"><li>▪ Non-standard intersection spacing</li><li>▪ Limits operational improvements</li><li>▪ Reduces corner sight distance</li></ul>



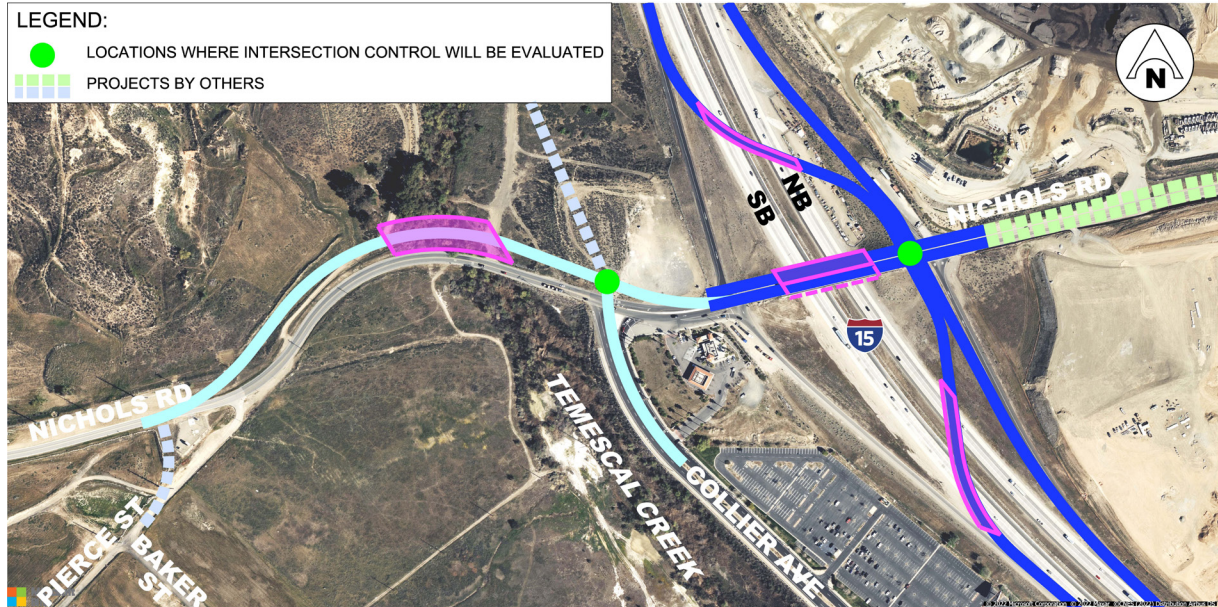
INTERCHANGE CONCEPT 3 - DIAMOND INTERCHANGE WITH SB LOOP OFF-RAMP

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>▪ Optimizes connectivity to Ethanac Expressway</li><li>▪ Improves operations by removing SB off-ramp left turn</li></ul>	<ul style="list-style-type: none"><li>▪ Utilizes existing Nichols Rd OC</li><li>▪ Maintains business access- Streamlines constructibility</li></ul> <ul style="list-style-type: none"><li>▪ Increases capital cost</li><li>▪ Non-standard intersection spacing</li><li>▪ Environmental &amp; R/W impacts to ARCO</li><li>▪ FHWA approval required</li></ul>



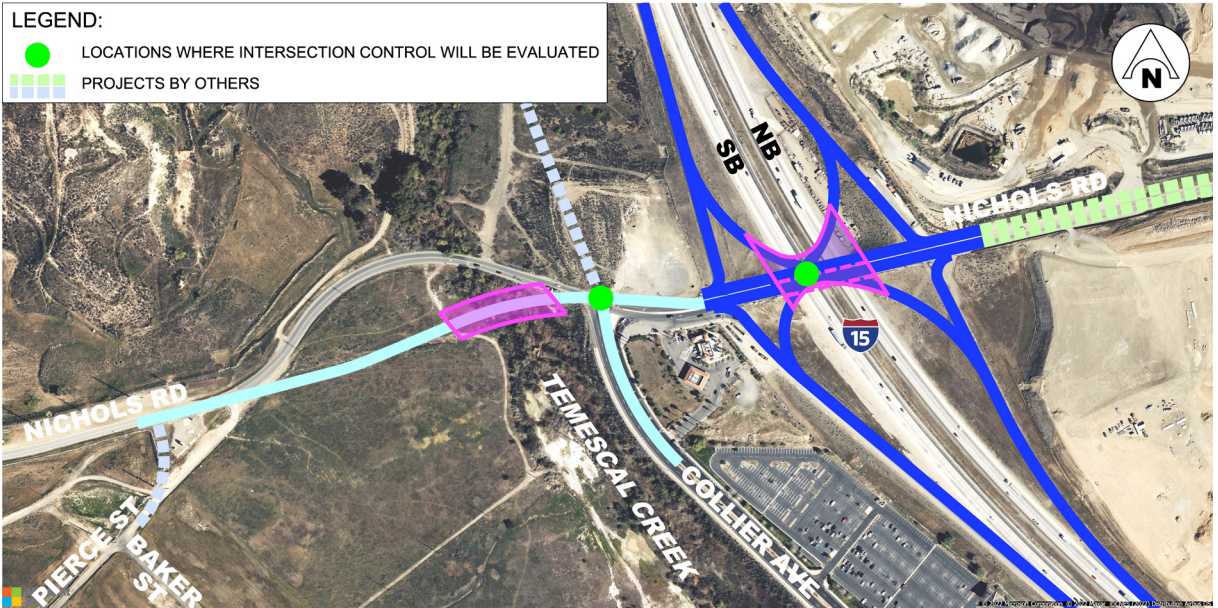
INTERCHANGE CONCEPT 4 - DIVERGING DIAMOND INTERCHANGE

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>Two-phase signal improves operations</li><li>Increases intersection spacing</li><li>Optimizes connectivity to Ethanac Expressway</li><li>Utilizes existing Nichols Road OC</li><li>Increases safety by reducing conflict points</li><li>Limited FHWA oversight</li></ul>	<ul style="list-style-type: none"><li>High Capital cost</li><li>Increases R/W impacts</li><li>Limits business access during construction</li><li>Complicated construction staging</li></ul>



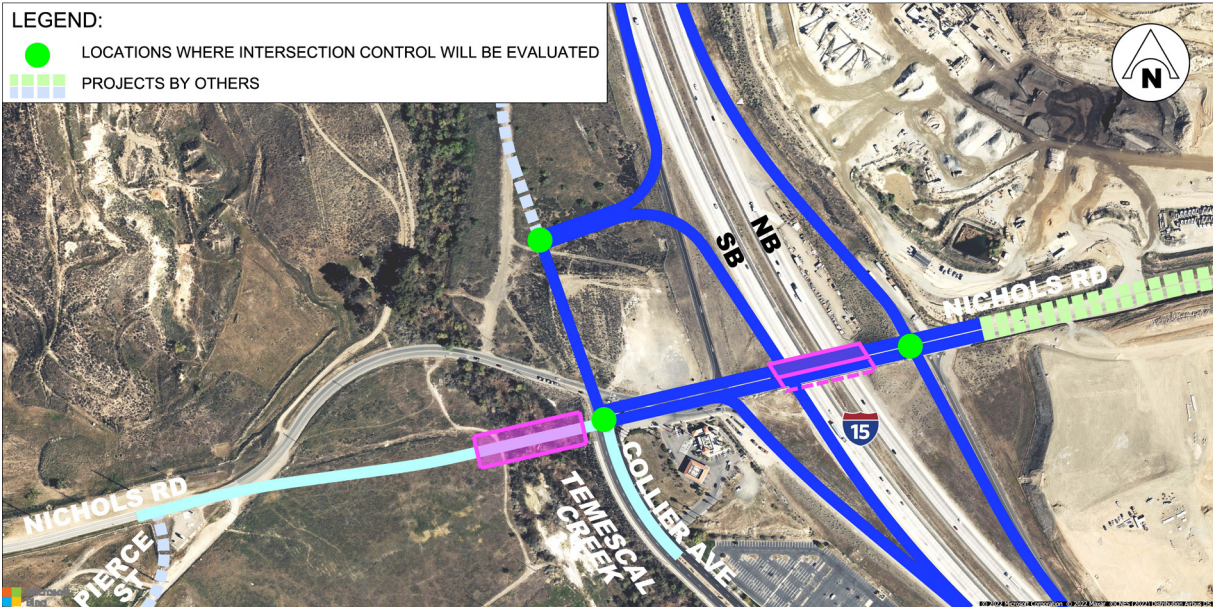
INTERCHANGE CONCEPT 6 - INTERCHANGE WITH SB RAMP FLYOVERS

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>Standard intersection spacing</li><li>Utilizes existing Nichols Road OC</li><li>Remains within existing CT R/W</li><li>Maintains business access</li><li>Limited FHWA oversight</li></ul>	<ul style="list-style-type: none"><li>Very high capital cost</li><li>Complicated stage construction</li><li>Larger Project footprint</li><li>Concentrated conflict points</li><li>Environmental visual impacts</li></ul>



INTERCHANGE CONCEPT 5 - SINGLE-POINT URBAN INTERCHANGE

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>Three-phase signal improves operations</li><li>Standard intersection spacing</li><li>Increases safety by reducing conflict points</li><li>Remains within existing CT R/W</li><li>Limited environmental impacts</li><li>Limited FHWA oversight</li></ul>	<ul style="list-style-type: none"><li>Requires bridge replacement</li><li>High capital cost</li><li>Limits business access during construction</li><li>Complicated construction staging</li></ul>



INTERCHANGE CONCEPT 7 - INTERCHANGE WITH SB HOOK RAMPS

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>Improves storage capacity</li><li>Standard intersection spacing</li><li>Utilizes existing Nichols Road OC</li><li>Maintains business access</li><li>Limited FHWA oversight</li></ul>	<ul style="list-style-type: none"><li>Changes future development access</li><li>Modifies CT R/W access control</li><li>High capital cost</li><li>Complicated construction staging</li><li>Larger Project footprint</li></ul>

## LOCAL ROADS CONCEPTS

Nichols Road will be upgraded to an Urban Arterial per the City's General Plan, which provides three lanes in each direction for traveling vehicles and Class II bicycle routes and sidewalks throughout the Project area. Similar to the interchange concepts and outside Caltrans District 8 access control limits, local roads will be evaluated using a context-sensitive solution approach, while minimizing impacts to the floodplain and future developments. The local road concepts and interchange concepts can be combined based on the effectiveness of each independently. A preferred local road concept will be selected with input from Project stakeholders and combined with the preferred interchange concept to create the best overall solution to accommodate future growth and traffic at this location. The HDR Team has included local road geometric concepts, shown as **Figure 2.C.3**, on the following page to demonstrate how comprehensively we have looked at the Project area. Our emphasis focused on innovative solutions to develop compact yet effective options for consideration by the City and Caltrans District 8.



**Nichols Road will become a major east-west corridor where operational efficiencies are critical when evaluating local access and intersection spacing.**



**The HDR Team has considered multiple alignment options to optimize bridge spans and profile needs over Temescal Creek. Locations of intersections and driveways have been evaluated based on the need to raise the future roadway profile grade.**

## ALTERNATIVE SCREENING

The HDR Team has already obtained the required information needed to evaluate the Project, collected from working in the area over recent years, which has provided us with location-specific knowledge to understand the local and future circulation of the area and local constraints. The HDR Team has developed multiple interchange and local road concepts during this proposal period. The concepts we considered can be phased to meet the delivery and growth timeline of the City as well as the expenditure plan for the community and its residents while evaluating the existing and future needs of the City. HDR's Interchange and local road concepts, illustrated in this proposal and detailed in **Figure 2.C.2** and **Figure 2.C.3**, will lead to the development, early screening, and support of viable alternatives that will meet the Project purpose and need.



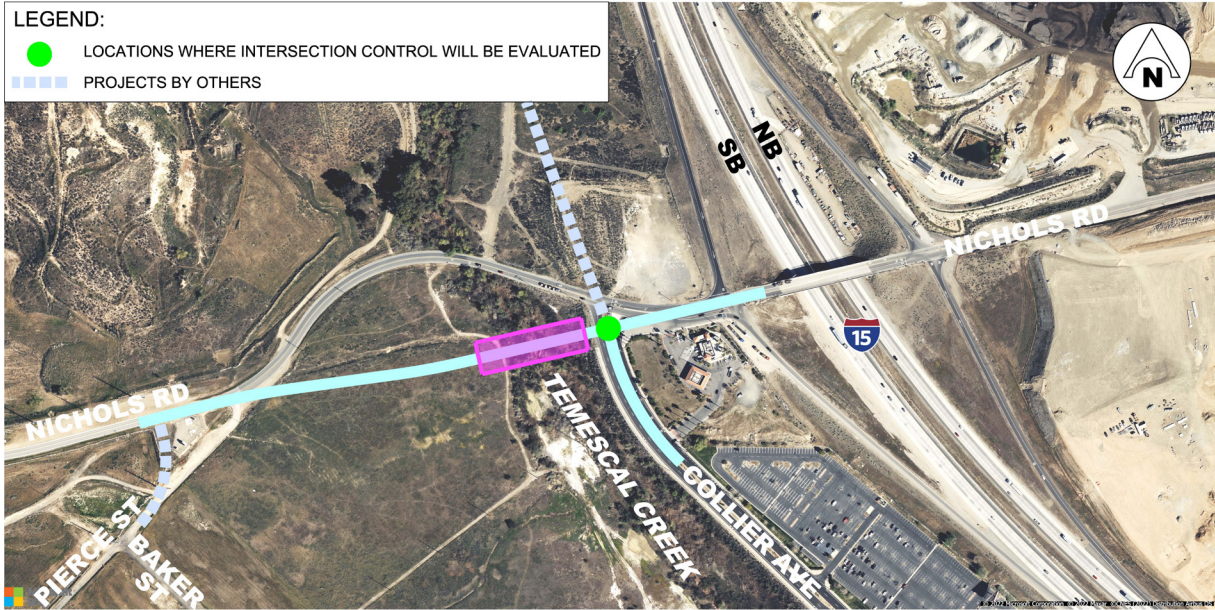
Interstate 215 University Parkway - DDI Design Variation (DV) Selection Table  
September 2017



Rankings - 1 (lowest) / 5 (highest)							
Comparison Categories	Factor Weights	DV-1A Ranking (5' Shoulders, 8' pedestrian pathway, 1 shy distance to abutment wall) Core Lane Widths: 11'-12'   12'-11'-11'	DV-1A Score	DV-1 Ranking (4.5' On-street bike lane & 8' pedestrian pathway, no shy distance to abutment wall) Core Lane Widths: 12'-12'   12'-12'-12'	DV-1 Score	DV-2 Ranking (10' Multi-purpose pathway, 1.5' interior shy distance & 2' shy distance to abutment wall) Core Lane Widths: 12'-12'   12'-12'-12'	DV-2 Score
Design Speed	1	5	5	5	5	5	5
Through Movement Operations	1.25	4	5	4	5	5	6.25
On-Ramp Operations	1.25	5	6.25	5	6.25	5	6.25
Off-Ramp Operations	1.25	5	6.25	5	6.25	5	6.25
Sight Distance for Ramps	1	4	4	2	2	5	5
Shy Distance to Abutment/Barriers	1	4	4	3	3	4	4
ROW Impacts	1	5	5	5	5	4	4
Utility Impacts	1	5	5	5	5	5	5
Pedestrian Safety	1.25	5	6.25	4	5	3	3.75
Pedestrian Operations	1	5	5	5	5	5	5
Bicycle Safety	1.25	3	3.75	2	2.5	4	5
Bicycle Operations	1	5	5	4	4	2	2
Queue Storage for Through Traffic	1.25	5	6.25	4	5	2	2.5
Crossover Design	1.5	4	6	3	4.5	5	7.5
Construction Cost	1	4	4	4	4	3	3
Design Exceptions Required	1	5	5	3	3	4	4
Business Access	1.25	5	6.25	5	6.25	4	5
(Weight Factor) x (Ranking)			88		76.75		79.5

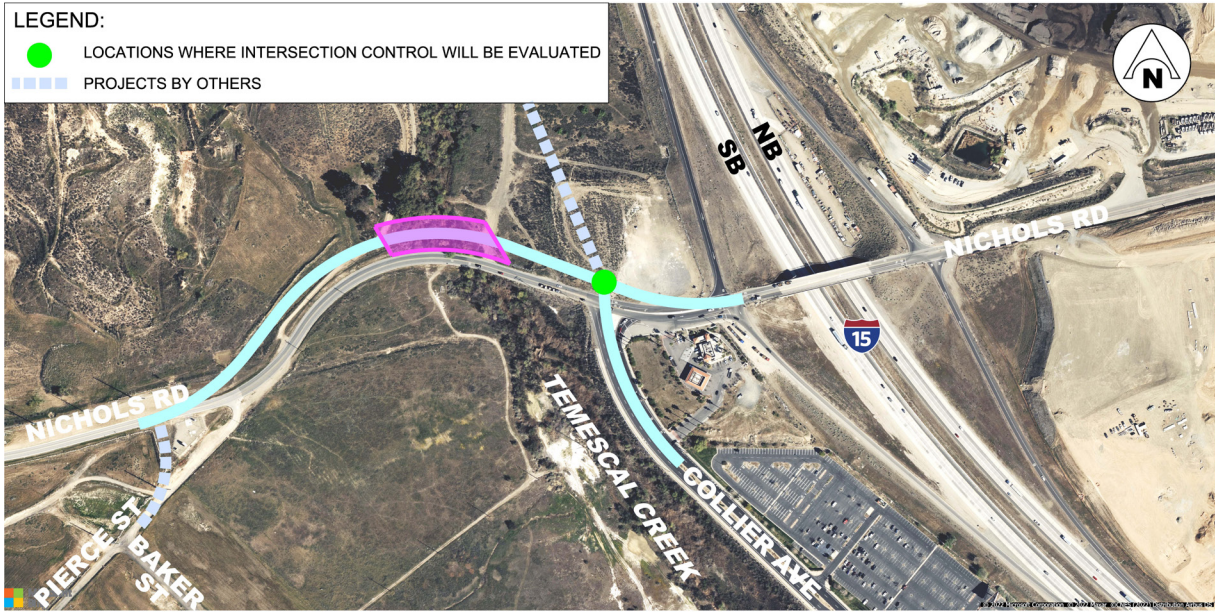
**A matrix similar to the one above can be leveraged to qualitatively rank the interchange concepts and carry forward the best build alternatives. This was a very effective tool the HDR Team has used for SBCTA I-215/University Parkway and City of Yucaipa I-10/Wildwood Canyon Road Interchange PDTs.**

Figure 2.C.3 Local Roads Concepts



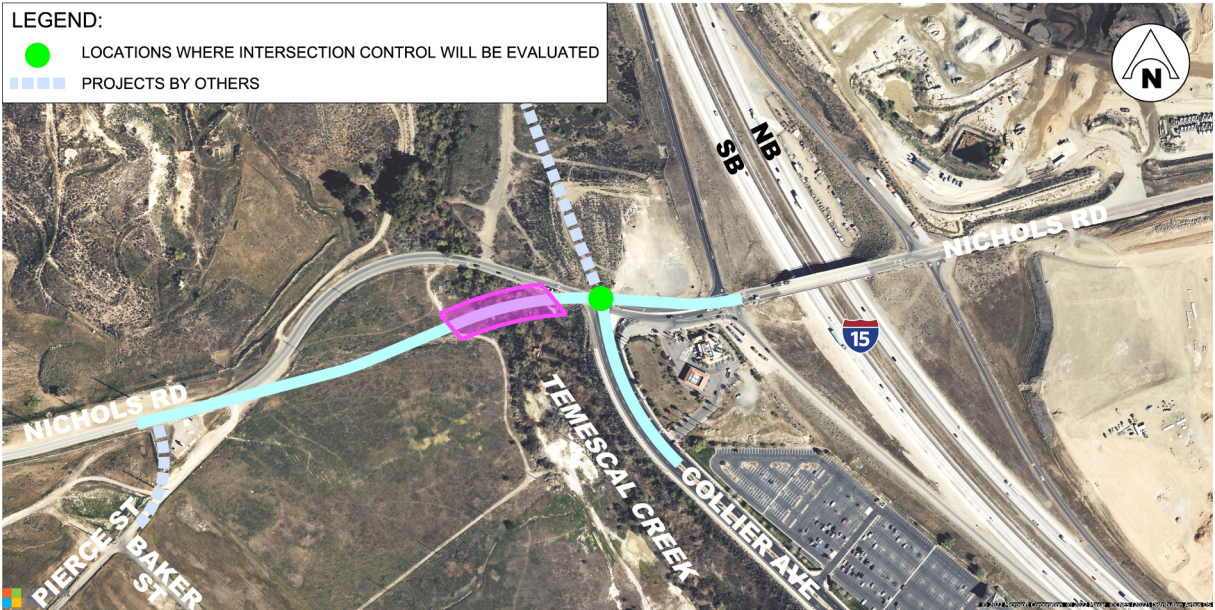
CONCEPT 1 - STRAIGHT ALIGNMENT

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>▪ Simplifies construction with off-alignment bridge</li><li>▪ Minimal impacts to ARCO and future development</li><li>▪ Minimizes power line corridor impacts</li><li>▪ Limits regulatory floodway impacts</li></ul>	<ul style="list-style-type: none"><li>▪ Bridge structure within intersection limits</li><li>▪ Increased capital cost due to long span over creek</li></ul>



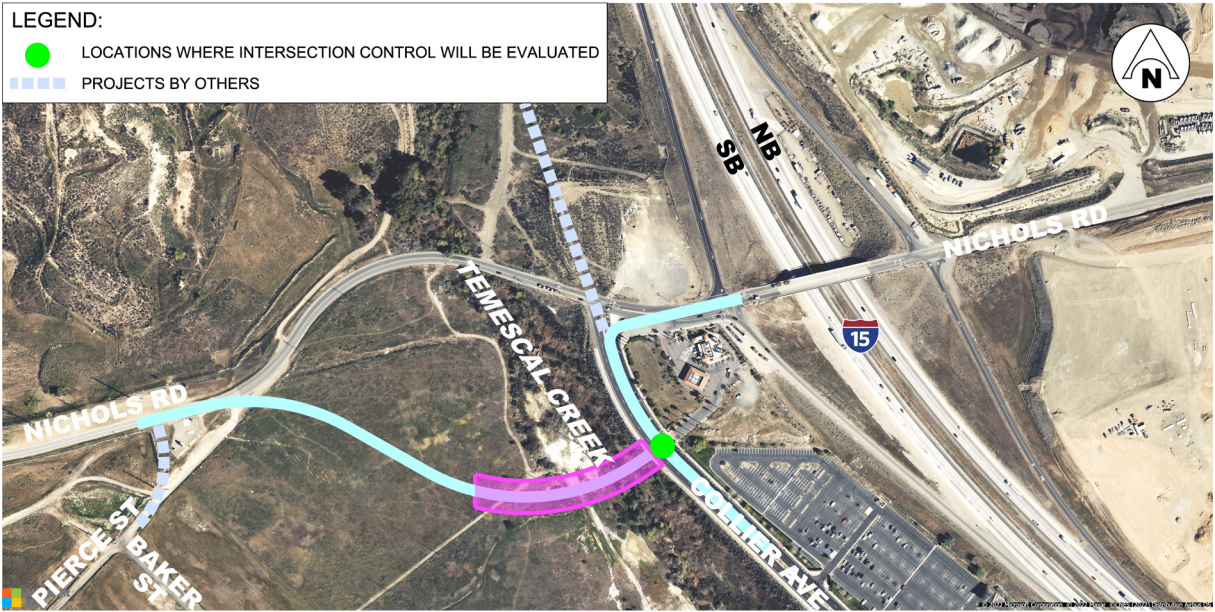
CONCEPT 3 - NORTH ALIGNMENT

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>▪ Lower capital cost with short span over creek</li><li>▪ Crosses floodplain at most narrow location</li><li>▪ Minimal impact to ARCO</li><li>▪ Intersection flexibility to prioritize the highest traffic volume</li></ul>	<ul style="list-style-type: none"><li>▪ Potential impact to future development</li><li>▪ Complicated construction with on-alignment bridge</li><li>▪ Impacts to flood channel with on-alignment bridge</li><li>▪ Conflicts with power line corridor</li><li>▪ Impacts to future development</li></ul>



CONCEPT 2 - OFFSET ALIGNMENT

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>▪ Profile grades maximized with intersection shift</li><li>▪ Simplifies construction with off-alignment bridge</li><li>▪ Minimal impacts to ARCO and future development</li><li>▪ Reduces impacts to existing power line corridor</li><li>▪ Limits regulatory floodway impacts</li></ul>	<ul style="list-style-type: none"><li>▪ Increased capital cost due to long span over creek</li><li>▪ Minimizes power line corridor impacts</li></ul>



CONCEPT 4 - SOUTH ALIGNMENT

BENEFITS	CHALLENGES
<ul style="list-style-type: none"><li>▪ Minimal impact to ARCO and future development</li><li>▪ Improves driveway grade to ARCO</li><li>▪ Standard intersection spacing to SB ramps</li></ul>	<ul style="list-style-type: none"><li>▪ Increased capital cost due to long span over creek</li><li>▪ Impacts to regulatory flood channel with long span</li><li>▪ Impacts to overhead and underground utilities</li><li>▪ Complicated construction staging</li><li>▪ Raises profile along Collier Ave</li></ul>

## Technical Approach and Work Plan

The HDR Team’s strategy and approach to the completion of the PID Phase is to fully understand the key issues that influence the planning, traffic operations, environmental impacts, site constraints, economic limitations, construction considerations, and quality of life in the community while expanding on key decisions that are relevant in this planning phase.

The primary objectives of the PID Phase completed by the HDR Team will include the following:

- Develop a clear purpose and need for the I-15 Nichols Road Interchange that is acceptable to Caltrans District 8 and is complementary of the City’s General Plan
- Identify sensitive areas (e.g., Temescal Creek, floodplain, biological, cultural, and paleontological sensitive areas) and major transverse or longitudinal utilities early in the process to enable the engineering team to account for impacts which could escalate Project costs, delay environmental document approval, and trigger regulatory permitting
- Build consensus through appropriate coordination of the interchange build alternatives to be considered in the PSR and make recommendations for the best alternatives to be further evaluated during PA&ED
- Define risks for design exceptions with early discussion of applicable standards related to interchange, intersection, local roads and driveway spacing
- Identify preliminary costs and additional impacts to meet design standards for existing and proposed nonstandard features
- Prepare construction cost estimates using phased construction periods consistent with local and regional traffic demands
- Provide sustainable and incremental improvements using “build year” dollars in determining phase costs for the ramps, local roads, and the Temescal Creek and freeway bridge structures
- Rank mainline, ramp, and local roadway benefits such as ICE options, LOS, and safety analyses for viable phased alternatives through early interchange screening and qualitative scoring

**The primary step in this strategy is having the right team of dedicated experts who know the issues, and have worked in the local area**, including I-15 ELPSE and the local traffic interface at existing or proposed interchanges, and most importantly, have interchange design experience with Caltrans District 8, critical knowledge of the adjacent projects, and operational elements. Additionally, the HDR Team understands the delivery obligations associated with the Project and the processes in order to set up a solid product eligible for potential funding sources during the PA&ED Phase. It is critical for the Project Manager and the team to understand the required elements in design and construction to develop a reasonable environmental footprint for the improvements. Combined with HDR’s commitment to quality and project control, our technical approach will result in at least three interchange concepts and a local road concept for further evaluation during the PA&ED Phase. We are committed to the stakeholders with a dedicated team to deliver a comprehensive PSR-PDS to evaluate and screen several build alternatives for further study.

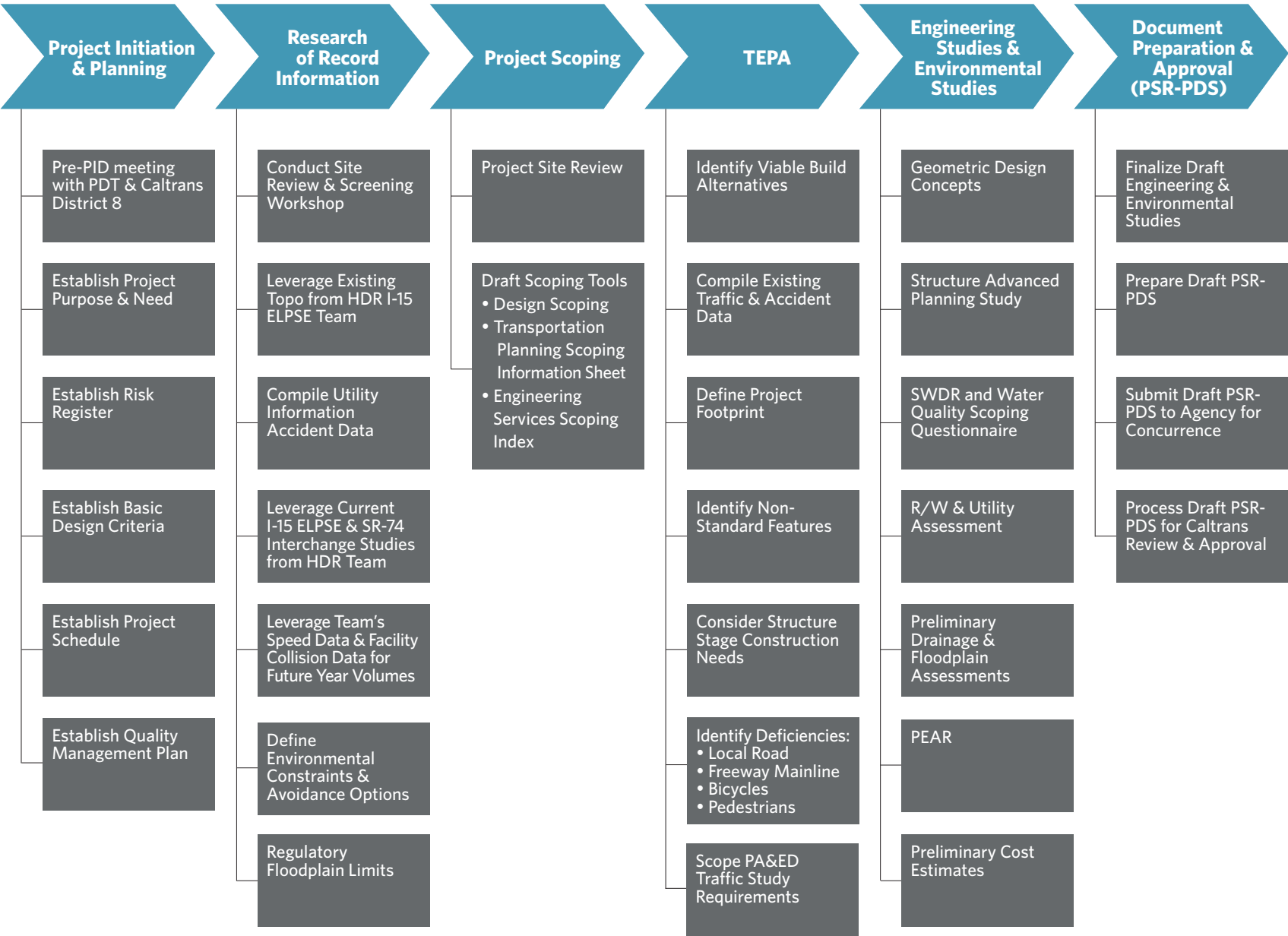
The delivery of the PSR-PDS will follow a logical six-step work plan process which we have illustrated to the right on **Figure 2.C.4** to summarize the efforts we will carry out for the City in conjunction with the stakeholders for the PID Phase.

Specifically developed for this Project, the Task Listing and Responsibility Matrix shown as **Table 2.C.1** on page 37 incorporates our work plan tasks and provides a sequential “road map” for the successful completion of the Project. Each work element corresponds to a defined task within the City’s Scope of Work and is correlated to a Caltrans Work Breakdown Structure (WBS) code. Additional deliverables not defined in the scope that must be completed as part of this PID Phase are also included. The diagram depicts the following key information related to the Project’s work flow:

- The dependence and relationship between work elements
- The points within the workflow where Caltrans District 8 must be engaged in order to gain concurrence or approval
- The path of the proposed workflow depicted by a series of blue arrows connecting the work elements

Work elements, which if not engaged or completed properly, have the potential to disrupt or delay the completion of the PID Phase. Additionally, critical elements are divided by discipline so team members can be more aware of the discipline-specific deliverables that are key in the workflow for the Project.

Figure 2.C.4 HDR’s Six-Step Work Flow Diagram



The HDR Team has successfully used this Six-Step process to deliver PID Phase projects throughout California including the recently completed I-10 Wildwood Interchange.



## Existing Key Information

The HDR Team will leverage the existing information to the maximum extent possible to prepare the PSR-PDS:

- Traffic Counts from I-15 ELPSE PA&ED and I-15/SR-74 (Central Avenue) PA&ED
- Caltrans Transportation Concept Reports
- County of Riverside General Plans
- City of Lake Elsinore General Plan
- City of Lake Elsinore General Plan Circulation Element
- Ethanac Expressway Traffic Study
- City of Lake Elsinore Active Transportation Plan, Active LE
- Engineering and Environmental Studies prepared for I-15 ELPSE PA&ED and I-15/SR-74 (Central Avenue) PA&ED
- Right-of-Way and Topographic Mapping from I-15 ELPSE PA&ED and I-15/SR-74 (Central Avenue) PA&ED
- Caltrans As-Builts
- County/City As-Builts
- Utility Information from I-15 ELPSE PA&ED and I-15/SR-74 (Central Avenue) PA&ED

## Traffic

### TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT

The purpose of the TEPA is twofold: (1) to assist in establishing the interchange footprint that will be used in the PEAR and carried into the environmental phase of the Project, and (2) to scope the transportation assessment requirements that will be used during the environmental phase of the Project. Given the purpose of the TEPA, Caltrans District 8 does not require extensive traffic forecasting or transportation analysis, rather it requires us to utilize recent and available information as part of the process. The HDR Team is uniquely qualified to utilize the available information, including our work on the TLMA Ethanac Expressway PID, City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, and RCTC I-15 ELPSE PA&ED. As such, the TEPA will borrow extensively from these projects to assist in defining an interchange footprint that meets the design requirements anticipated for the area.

Working with the Project team, we will utilize the available traffic information to identify potential interchange configurations that would satisfy the purpose and need for the Project. The TEPA will complete Step 1 of a two-step ICE assessment process for this PID Phase of the

Project. The final component of the TEPA is to scope the transportation analysis that will be refined during the PA&ED process, including the methodologies and assumptions for the TOAR. The TEPA will also complete a Step 1 ICE assessment to look at potential traffic control devices at the interchange and screen the potential for innovative traffic control (such as roundabouts, DDIs, or other control considerations). Any potential traffic control devices that are not screened out during this phase of the ICE will be carried into the PA&ED Phase and included in the Step 2 ICE assessment.

The final consideration within the TEPA will be a preliminary assessment for SB 743 compliance. Specifically, Caltrans District 8 will require the completion of a VMT Decision Document that will need to be included in the documentation that will be used to inform the next phase of the Project. Although this will not directly be documented within the TEPA, it will be coordinated within the overall PSR-PDS document and will rely heavily on information coordinated through the TEPA.

### MULTI-MODAL PLANNING

The objectives of the Multi-Modal Analysis Report are to assess the existing, future, or potential capabilities of alternative modes of transportation to reduce or relieve traffic on freeway and arterial facilities within the Project area, as well as to understand the relationships between various multi-modal improvements. A multi-modal analysis will be completed and data on other modes of transportation and information will be collected and summarized for the Project area. One option would be to provide a future Bus Rapid Transit (BRT) station at the existing bus stop along Collier Avenue. With the future I-15 ELPSE terminating just north of the I-15 Nichols Road Interchange and the high traffic demands for the Outlets at Lake Elsinore and local businesses, there is an opportunity at this location to provide BRT service.



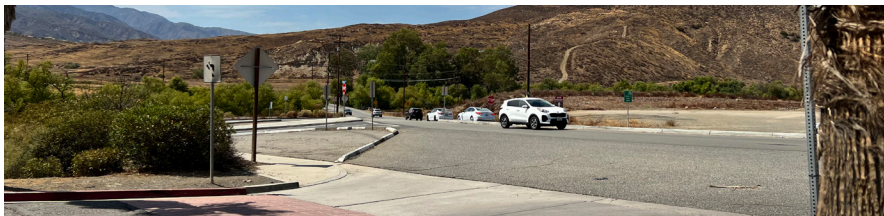
Existing Bus Stop along Collier Avenue.

## INTERSECTION CONTROL EVALUATION

The Traffic Operations Policy Directive (TOPD) 13-2 for ICE requires the evaluation of possible intersection traffic to justify the intersection configuration, which could include traffic signals, yield control (roundabouts), or multi-way stop controls. HDR will work closely with the Caltrans District 8 ICE Coordinator, Joe Fernandez, so that the ICE procedures and steps are implemented to achieve an effective outcome for the Project. The ultimate intersection configurations will require Conceptual Approval from the Caltrans District 8 ICE Coordinator. An example of how an intersection evaluation could provide a possible change in configuration is reconfiguring the Collier Avenue and Nichols Road Intersection to a roundabout configuration. The roundabout will be further analyzed if it is found to provide safety and operational benefits to the intersection.

## BICYCLE ROUTES AND SIDEWALKS

A Complete Streets Decision Document is required to be completed and attached to the PSR-PDS. Nichols Road and Collier Avenue are identified as Class II bicycle lanes in the City's Active Transportation Plan, Active LE. Currently a striped bicycle lane and sidewalks are present on Collier Avenue in each direction, but no bicycle lane facilities are provided on Nichols Road. A sidewalk is located only on the southern side of the Nichols interchange up until the intersection with Collier Avenue.



**Adding sidewalks and bicycle paths throughout the Project area will improve safety for both bicyclists and pedestrians.**

## Preliminary Structural Analysis - Advance Planning Studies

In support of the development of the PSR-PDS, an APS will be developed for each of the two bridges. The purpose of these APSs is to define the scope of the structure work required, estimate the construction cost, and identify the major constraints to construction at each location, including identifying environmental impacts that will need to be avoided or mitigated.

The deliverable will include an APS drawing for each structure which will depict the proposed structure layout, superstructure and substructure types, temporary and permanent clearances to traveled ways or waterways, requirements for falsework during construction, approach slabs, slope paving, barriers, etc.

In addition to the APS drawings, we will prepare a Preliminary Foundation Report and a Preliminary Hydraulics Report (where applicable), and a Design Memorandum summarizing the assumptions and findings included in the preparation of the APS. Finally, an APS Checklist will be completed to ensure that the requirements of the APS as stipulated by the Caltrans Office of Special Funded Projects (OSFP) have been addressed and included in the package.

All of these deliverables will be prepared in accordance with OSFP procedures and submitted to the City and Caltrans District 8 for review and approval.

## NICHOLS ROAD OVERCROSSING WIDENING

A primary consideration to the constructability of the Nichols OC is traffic staging, both on the bridge and under the bridge. The total widening width will influence the possible structure types, as well as whether the widening is on one side or widening occurs on both sides of the bridge. Existing vertical clearance over I-15 is shown as 18'-3" minimum on the Caltrans Bridge Inspection Report clearance diagram. Widening to one side of approximately 60 feet with a 2 percent cross slope, and 0.5 percent freeway grade results in a reduced clearance of about 18", for a final clearance of 16'-8", just over the minimum vertical clearance of 16'-6".



**The Nichols Road overcrossing will be widened to the ultimate section featuring six lanes consistent with the City General Plan.**

However, during the APS effort, another check for constructability includes reviewing falsework needs and clearances. With falsework estimated to be 2'-11", the resulting clearance is only 13.7' compared to the required 15'. Reducing the bridge depth to achieve the required minimum vertical clearance gives a depth-to-span ratio of 0.34, much too shallow for a prestressed concrete box girder bridge. Precast girders do not require falsework, but would also be too deep to provide adequate permanent vertical clearance. A potential solution is to design a hybrid superstructure; shifting traffic away from the center bent would allow a cast-in-place

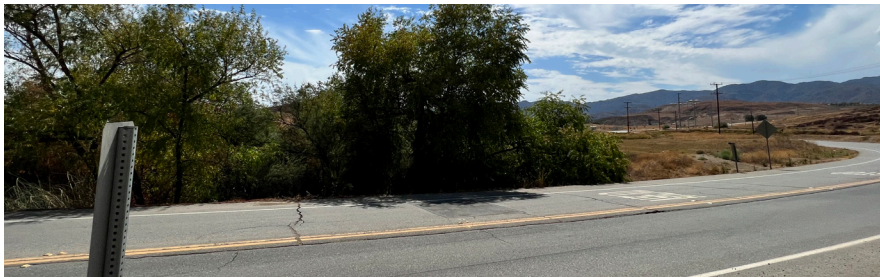
hammerhead, and then using shorter precast girders over the traffic lanes which do not need falsework. HDR has designed similar bridges using hybrid cast-in-place end precast girders, including for the SR-22 separation over I-5 for Caltrans District 12 in Orange County.

For widenings of existing bridges, consideration will be given to the need for potential seismic retrofit. For sliver widenings, it is sometimes necessary to retrofit the existing bridge when it is found to be seismically deficient. For more substantial widenings, it is often possible to use the widening itself to enhance the performance of the overall structure, thereby reducing or eliminating the need to retrofit the existing bridge components.

Aesthetic features will be included in the APS cost estimate, including the additional weight of a sign similar to the Lake Elsinore design on the existing structure, as well as concrete finishes on the barriers and abutment faces. We will use our experience on the many Caltrans bridge designs to evaluate the feasibility of each alternative roadway alignment and provide feedback on the structure feasibility, cost and constructability challenges.

### **NICHOLS ROAD BRIDGE OVER TEMESCAL CREEK**

The Project also requires a new City-owned bridge over Temescal Creek. The roadway profile, span configuration, and bridge type are interrelated. Each potential alignment alternative will evaluate possible span configurations and their impacts on the other design elements such as roadway profile, and changes to the water surface elevation. Based on our experience on other water crossings in Riverside County, our goal will be to minimize ground disturbances within the creek and avoid significant water surface changes, while developing a safe roadway alignment and cost-effective bridge configuration. For instance, on Temescal Canyon Road over Temescal Creek, we developed a bridge substructure using cast-in-drilled-hole piles in lieu of the originally planned spread footings, drastically reducing the construction footprint within the creek.



**A new bridge would be required and the Nichols Road alignment would need to be raised to span the 100- and 500- year regulatory floodplain over Temescal Creek.**

Waterways crossing bridges require special additional considerations, including the following:

- Freeboard requirements of 2 feet for 50-year storm events and 0 feet for 100- and 500-year storm events
- Temporary and permanent construction impacts within the waterway
- Water surface elevation changes due to construction of new piers
- Streambed scour and degradation evaluation
- Requirements for slope protection such as rip rap
- Construction equipment access to the waterway
- Allowable construction schedule windows based on flow requirements and/or environmental constraints such as bird nesting or fish spawning
- Long-term maintenance costs

## **Drainage Evaluation and Stormwater Data Report**

The drainage work for a PID Phase evaluation of an interchange project lays the groundwork for the PA&ED and is similarly divided into supporting two tasks: environmental (providing data for the PEER), and engineering (performing preliminary work to establish the cost estimate).

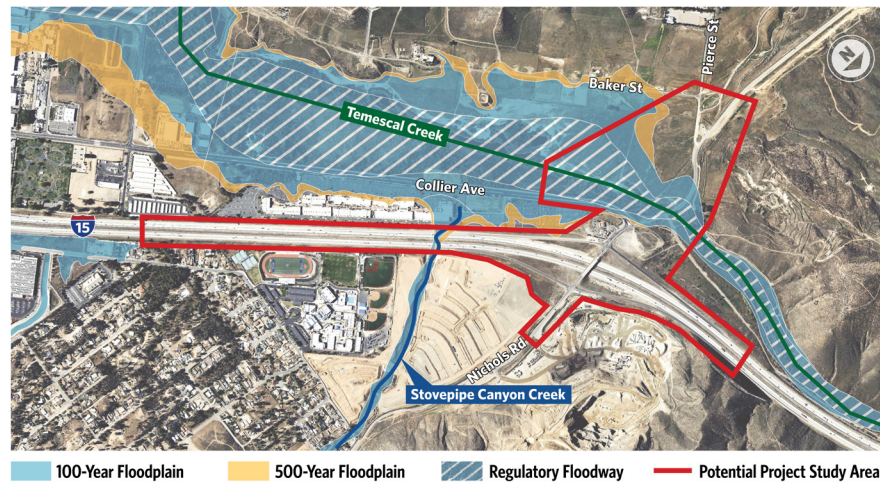
On the environmental side, two tasks are required. First is a floodplain evaluation. The floodplain evaluation will involve a literature review of the available floodplain information such as the FEMA Flood Insurance Rate Map (as seen in **Figure 2.C.5** on the following page), the Flood Insurance Study, and the California Department of Water Resources data. This information will be compiled

into a memorandum to assist the author of the Preliminary Environmental Studies (PES) to understand the floodplain associated with Temescal Creek and other floodplains that are identified during the research. The second task is preparation of the Water Quality Scoping Questionnaire. This document compiles the relevant water quality information into a single document that the environmental team uses to draft the water quality portion of the PES Form.



**Floodplain evaluation will consider mitigation measures that would need to be taken to maintain the floodplain water surface elevations changes within the established limits.**

**Figure 2.C.5 FEMA Flood Insurance Rate Map**



For the engineering tasks, a Drainage Assessment and a PID Phase SWDR are required. The Drainage Assessment reviews the existing drainage patterns and existing drainage features. Exhibits are prepared to document the drainage and to show the probable layout of proposed drainage features to support the PID Phase alternatives. Hydrology and hydraulics are not typically prepared; instead, record information or engineering judgment is applied to provide preliminary pipe sizes. **For the crossing of Temescal Creek, the floodplain and floodway information available on the FIRM will be used to help establish bridge soffit elevation (freeboard) and abutment locations to avoid impacts to the regulatory floodway.** The results of the Drainage Assessment are summarized in a letter report with the exhibits. Cost estimates are provided as part of the conceptual construction estimate. The SWDR prepared at the PID Phase to document existing water quality features and issues, will contain information related to Total Maximum Daily Loads (TMDLs), Clean Water Act Section 303(d) list of impaired waterbodies, and the constituents of concern. Existing treatment Best Management Practices (BMPs) are researched and documented for the Project record. Proposed treatment BMPs are conceptually sited and sized to reserve budget and right-of-way for the follow-on project development phases.

## Right-of-Way Data Sheet and Utility Coordination



For a PID Phase level of effort, the Right-of-Way Data Sheet is a vital, but often under-considered document, especially for a PSR-PDS. The HDR Team will prepare the Right-of-Way Data Sheet, including input from our qualified Right-of-Way consultant, per the Caltrans Right-of-Way Manual. Our team has the experience, not only in preparation, but in the disciplines necessary for proper cost estimation related to property impacts and related to temporary and permanent needs and potential issues with prior rights for major utilities, such as the distribution and transmission overhead lines running along each side of Nichols Road. The HDR Team is aware of the large transmission towers and sewer lift station both adjacent to Nichols Road and Pierce Street, which the developed concepts will protect in place.



**Concepts will prioritize avoiding the transmission towers and sewer lift station, both adjacent to Nichols Road.**

All coordination and contact to obtain record maps, rights documentation, and as-built records for public and municipal-owned facilities along this segment of I-15 will be accomplished in the utility tracking matrix as part of the PID Phase. The utility tracking matrix can be carried directly into PA&ED for owner coordination. Future utility openings for potential relocations into the widened or new Nichols Road Overcrossing can be accommodated and will be coordinated with Caltrans District 8. Our team's outreach to owners under previous projects, as well as with the ongoing I-15 ELPSE with RCTC and Caltrans District 8, allows us to seamlessly communicate and maintain continuity within the PDT while engaging the same owners in coordinating facility information from the PSR-PDS while quickly determining and considering utility impacts from day one.

## Cost Estimates and Funding Support

Cost estimates are one of the primary products of a PSR-PDS, allowing the Project to be funded and programmed within the Federal Transportation Improvement Program (FTIP) financially constrained regional air quality model. Preliminary cost estimates will be prepared for each alternative and be broken down in terms of roadway, bridge structures, right-of-way, utilities, support services, and contingencies. Cost estimates will be reviewed by HDR's construction contractor and adjusted where required. Roadway cost estimates will be developed using locally accepted pavement materials designs coupled with construction year pricing for materials and life cycle comparisons. Costs will be escalated from current year dollars to build year(s) dollars.

Bridge structures will be estimated separately based on a square foot cost, depending on if the bridge is widened or replaced, including bridge removal. Utilities will be identified separately, and cost estimated with advice from HDR's construction contractor. Support costs and contingencies will be based on a percentage of the construction cost estimate. Right-of-way cost estimates will use the scoping tools within the PSR preparation guidelines, and costs will be based on recent land valuations in the Project area.

## Additional Optional Tasks

### TOPOGRAPHIC MAPPING

The HDR Team has the ability to expedite the development of the Project alternatives with extensive use of existing data. HDR has the topographic mappings, surveying, aerial photogrammetry, and right-of-way mapping available along I-15 in the vicinity of Nichols Road that contain adequate information to complete the PSR-PDS level of detail. Additional mappings may be obtained from Caltrans District 8 and the City to augment available mapping, if needed. Using existing mapping would provide cost and immediate time savings to the City.

### ACCESS MODIFICATION REQUEST

Based on preliminary traffic findings, the Project team believes the current interchange configuration will be maintained with the tight diamond configuration. If an alternative interchange configuration is determined to be feasible, a Modified Access Report (MAR) will be prepared to document new connection points to I-15. FHWA has a two-step process in their review of projects that generally coincides with Caltrans' review process to address ramp connection changes.

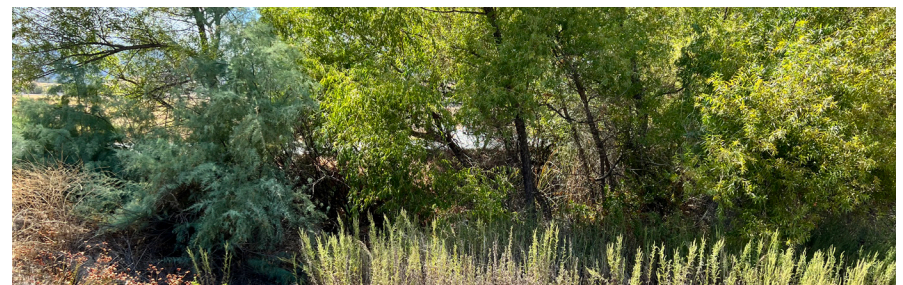
A PSR-PDS does not typically provide enough detail for Caltrans or FHWA to determine conceptual acceptability but a Modified Access Report (MAR) for Engineering and Operational Acceptability Determination (Step 1) can be prepared during the PID Phase. During the PA&ED Phase, the Project would obtain the Approval of the Modified Access Report and FHWA Finding of Acceptability (Step 2). The team must coordinate with FHWA early in the PID Phase process to determine the type and extent of analysis required and the appropriate Project development and approval process.

## Environmental

Environmental staff proposed on this Project have long-standing relationships with the environmental staff at Caltrans District 8. The HDR Team will leverage these existing working relationships, their experience from the preparation of numerous reports for Caltrans District 8 and local cities with Caltrans District 8 oversight, and existing knowledge of the Project area due to the work on the RCTC I-15 ELPSE PA&ED and City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED to deliver an approved PEAR within HDR's proposed PSR-PDS schedule of 12 months.

### ENVIRONMENTAL CONSIDERATIONS

Based on the review of the existing area, information available from the RCTC I-15 ELPSE PA&ED and City of Lake Elsinore I-15/SR-74 (Central Avenue) Interchange Improvement Project PA&ED, and prior knowledge of the Project area, the HDR Team has identified the following key environmental constraints surrounding the area between Nichols Road and SR-74 within the Project area. Key environmental constraints within the Project area, as previously shown in **Figure 2.C.1**, are discussed below.



**Our biological team has 15 years of experience observing site conditions and evaluating riparian habitat in Riverside County and complying with the Western Riverside County MSHCP.**

## BIOLOGICAL RESOURCES

The Project is located within the Western Riverside County MSHCP Area. MSHCP survey areas identified for the Project include the Criteria Area Species Survey Area, Narrow Endemic Plant Species Survey, and Burrowing Owl Survey Area. Based on a review of database records, aerial photographs and familiarity with the Project area, rare plants, special status wildlife species, including least Bell's vireo and southwestern willow flycatcher, have the potential to occur in the Project area. In addition, riparian/riverine jurisdictional areas associated with Temescal Creek are located within the Project area. Nichols Road is an MSHCP-Covered Road and will require compliance with MSHCP BMPs and design guidelines. Because of the Project area's inclusion in the MSHCP Criteria Area, the Project may also be subject to MSHCP criteria regarding siting and wildlife crossings.

## CULTURAL RESOURCES

The Project crosses Temescal Creek and is located within proximity to Lake Elsinore, which increases the likelihood of prehistoric- and historic-period archaeological sites to be present. Additionally, historic aerial photographs indicate increased activity in the area from the late 1960s into the 1970s – evidenced by what appear to be off-road vehicle tracks. However, the area was significantly disturbed by the development of I-15 in the late 1970s. As such, the likelihood of encountering cultural resources on the surface within and immediately adjacent to the freeway is low to none; however, depending on the depths of disturbance, there is still a possibility to encounter buried archaeological resources. The archaeological sensitivity increases near Temescal Creek and west of the creek.

## PALEONTOLOGICAL RESOURCES

Sensitive paleontological soils, identified as the Silverado Formation (Tsi), are exposed and underlie the Project area. The Silverado Formation consists of marine to nonmarine rocks composed of a basal conglomerate unit overlain by a sequence of sandstone, siltstone, and claystone. Several invertebrate and plant localities have been identified within the Silverado Formation, including specimens of gastropod, bivalve, silicified wood, and carbonized leaves.

## NOISE ASSESSMENT

Sensitive noise receptors are located adjacent to the Project area. These include residential properties and recreational land uses associated with Temescal Valley High School, located immediately adjacent to and east of the I-15 corridor.



**Our team has previously evaluated potential noise and air quality impacts at Temescal Valley High School which can be applied to this Project.**

## PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT

Several key environmental constraints have been identified within the Project area and will be addressed in the PEAR prepared in compliance with Caltrans' Guidelines Standard Environmental Reference (SER) for preparing a PEAR and using the latest Caltrans PEAR template (last revised June 2020). The PEAR will identify potential environmental resources and constraints associated with the Project and will assess how such impacts might impact the design, schedule, and associated costs anticipated during the PA&ED and PS&E Phases of the Project. The PEAR will also provide a preliminary determination for the level of environmental documentation during PA&ED, and will identify technical studies and agency permits and approvals needed to environmentally clear the Project. Supporting technical memorandums will be prepared in support of the PEAR, as part of the PSR-PDS. The PEAR will also address potential impacts to farmlands of local importance, hazardous waste sites, floodplains associated with the location of the Project area within 100- and 500-year floodplains, visual resources associated with the I-15 designation as a state-eligible scenic highway within the Project area, and planned Class II bicycle lanes along Nichols Road and Collier Avenue as identified in the City's General Plan and Active Transportation Plan, Active LE.

**The HDR Team delivered a concise PEAR for the City of Yucaipa I-10/Wildwood Canyon Road Interchange PSR where only minor comments were received from Caltrans District 8, which can also be done for the City for this Project.**

## Delivery Approach

### PROJECT MANAGEMENT

Strong project management is critical to a successful project. **Brooke Bannasch** is a hands-on Project Manager that will leverage HDR's proven Project Management Plan (PMP) on **Figure 2.C.6** to meet the City and Caltrans District 8 expectations for delivery of the Project. Brooke understands that consistent and disciplined management is dependent on frequent monitoring and tracking of budget, schedule, quality, risk management, project resources and effective communication. HDR's PMP focuses on four key components of project delivery.

**Operations Plan** Brooke will work closely with HDR Project Coordinator, Kristine Kono-Woo, to accurately track and report on the Project's progress. A project Critical Path Method (CPM) schedule will be developed and will be tracked on a monthly basis. HDR will include status reports in our monthly invoices that will report an estimate of physical progress and provide an outline of delivery trends. Proactive project management involves anticipating probable risks and using knowledge, experience and tools, to minimize those risks for the City, stakeholders and the Project. HDR will use a risk register to identify and assess risks, establish a mitigation plan, and track potential risks.

**Communication Plan** One of the most important project management tools is an effective and open Communication Plan. Clients who have worked with Brooke often note how well she keeps them informed about project details. Brooke will develop a project Communication Plan to establish the communication protocol to ensure that Project concerns, issues, and directions will be handled promptly and effectively to avoid delays and re-work. The Communication Plan will include team member contact information, and communication procedures, including guidelines for email distribution lists.

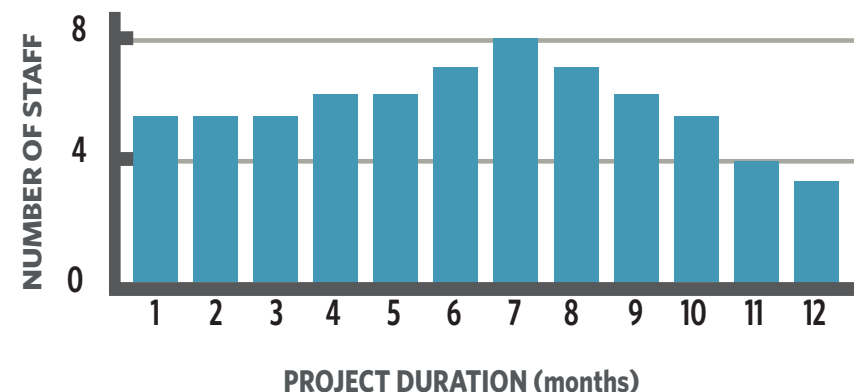
**Quality Management Plan** HDR's commitment to quality deliverables starts with the development of a project-specific Quality Management Plan (QMP). The QMP will utilize well-established and documented quality procedures that will be performed for each project deliverable. HDR Quality Manager, Steve Crouch, will partner with Brooke to actively administer the HDR QMP on each project deliverable.

**Production Plan** Brooke will work with each discipline lead to establish project design standards that will be utilized on deliverables. HDR will develop a project Staffing Plan that corresponds to the schedule to identify staffing needs so personnel can be appropriately scheduled for project activities. The Staffing Plan shown in **Figure 2.C.7** utilizes a 12-month delivery schedule.

**Figure 2.C.6 HDR's Proven Project Management Plan**



**Figure 2.C.7 Staffing Plan Utilizes a 12-Month Delivery Schedule**



PROJECT TASKS AND RESPONSIBILITIES

The Task Listing and Responsibility Matrix shown in **Table 2.C.1** below provides a breakdown of tasks required for the completion of the PID phase of the Project and identifies the personnel within the HDR Team that will be responsible for each task. The matrix also identifies the Caltrans WBS codes and City Scope of Work tasks associated with each deliverable or activity, as well as key goals and objectives.

Table 2.C.1 Task Listing and Responsibility Matrix

WBS CODE	CITY TASK	TASK NAME	DELIVERABLES/ACTIVITIES	RESPONSIBLE PERSON	KEY GOALS & OBJECTIVES
100.05	1, 10, 11, 12	PROJECT MANAGEMENT			
100.05.05		Project Initiation and Planning	<i>Project Communication Plan</i>	Brooke Bannasch/Steve Crouch	<ul style="list-style-type: none"><li>With open communication, provide a framework to the Project team and the City for the completion of the Project, as well as provide progress reporting and schedule updates</li><li>Clearly define the quality assurance and control procedures to be followed and implemented in the preparation of project deliverables</li><li>Develop project Risk Management Plan establishing risk assessments, ownership and mitigation strategies</li><li>Maintain oversight focus on key delivery issues and schedule</li></ul>
			<i>Risk Assessment/Risk Management Plan</i>		
			<i>QMP</i>		
100.05.10		Execution and Control	<i>Project Schedule</i>	Brooke Bannasch/Kristine Kono-Woo/Mark Hager	
			<i>Monthly Progress Reports/Invoicing</i>		
			<i>Deliverables Matrix</i>		
			<i>Meetings (Agenda/Minutes)</i>		
			<i>Coordination</i>		
150.05	2, 3	PROBLEM DEFINITION			
150.05.05		Review of Existing Reports, Studies and Mapping	<i>Review of Existing Reports, Studies and Mapping</i>	Full Team	<ul style="list-style-type: none"><li>Leverage survey and basemaps prepared by this team for the I-15 ELPSE</li><li>Identify project purpose and need statement to facilitate screening of Concept Alternatives</li><li>Develop TPSIS and Design Scoping Index to identify project delivery requirements</li><li>Validate existing traffic model information</li></ul>
150.05.25		Traffic Forecasting	<i>Traffic Forecasting/Modeling</i>	Jason Pack/Paul Hermann	
150.05.30		Surveys and Maps	<i>Surveying and Topographic Mapping (optional task)</i>	Lisa Spivak	
150.05.35		Transportation Problem Definition and Site Assessment	<i>Purpose and Need Statement</i>	Jessica Slater	
			<i>Transportation Planning Scoping Information Sheet (TPSIS)</i>	Jessica Slater	
			<i>Design Scoping Index</i>	Jessica Slater	
150.10	3, 7	INITIAL ALTERNATIVES DEVELOPMENT			
150.10.05		Public/Local Agency Input	<i>Public/Local Agency Input</i>	Brooke Bannasch/Robert Yates	<ul style="list-style-type: none"><li>Facilitate necessary agency coordination to reach consensus on the scope of the proposed interchange</li><li>Develop context-sensitive Concept Alternatives that address the project purpose and need statement</li></ul>
150.10.15		Concept Alternatives Development	<i>Concept Alternatives</i>	Julian Hernandez/Irene Shin	
150.15	3, 4, 6	ALTERNATIVES ANALYSIS			
150.15.05		Right of Way Data Sheets	<i>Preliminary Right-of-Way Requirements</i>	Jason Brown	<ul style="list-style-type: none"><li>Leverage engineering technical studies prepared by this team for the I-15 ELPSE</li><li>Determine capital costs for Concept Alternatives</li><li>Determine right-of-way impacts (including utilities) and costs</li><li>Clarify geological elements in the area that may influence designs</li><li>Evaluate pavement information to identify preliminary pavement cost</li><li>Develop the necessary bridge general plan to identify capital cost for required bridge structure(s)</li><li>Evaluate opportunities to include multi-modal components</li><li>Assess drainage and floodplain impacts and mitigation measures</li><li>Determine traffic assumptions and evaluate traffic operations for Concept Alternatives</li><li>Evaluate non-standard features to assess risk for approval</li><li>Prepare PSR-PDS DES Scoping Checklist to assist Caltrans District 8 in identifying oversight support efforts</li></ul>
150.15.10		Utility Relocation Requirements Assessment	<i>Utility Assessment</i>	Jason Brown	
150.15.20		District Preliminary Geotechnical Report (DPGR)	<i>Preliminary Geotechnical Assessment</i>	Jim Starick	
150.15.25		Preliminary Materials Report	<i>LCCA Assessment</i>	Jim Starick	
150.15.30		Structures Advance Planning Study	<i>PSR-PDS Division of Engineering Services Scoping Checklist</i>	Daniel Weddell/Julian Hernandez	
			<i>Preliminary Structures Assessment</i>	Daniel Weddell/Uthaya Sandira	
150.15.35		Multi-modal Review	<i>Complete Streets Decision Document</i>	Julian Hernandez	
150.15.40		Hydraulic Review	<i>Preliminary Drainage Assessment</i>	Brad Losey	
150.15.45		Traffic Capacity Analysis	<i>ICE (Step 1)</i>	Jason Pack/Paul Hermann	
150.15.50		Traffic Studies	<i>TEPA</i>	Jason Pack/Paul Hermann	
150.15.55		Construction Estimates	<i>Conceptual Cost Estimates</i>	Jason Brown	
150.15.99		Other Alternatives Analysis Products	<i>Risk Assessment for Non-Standard Features</i>	Julian Hernandez	

**Black Italicized**= Deliverable **Blue Italicized**= Activity

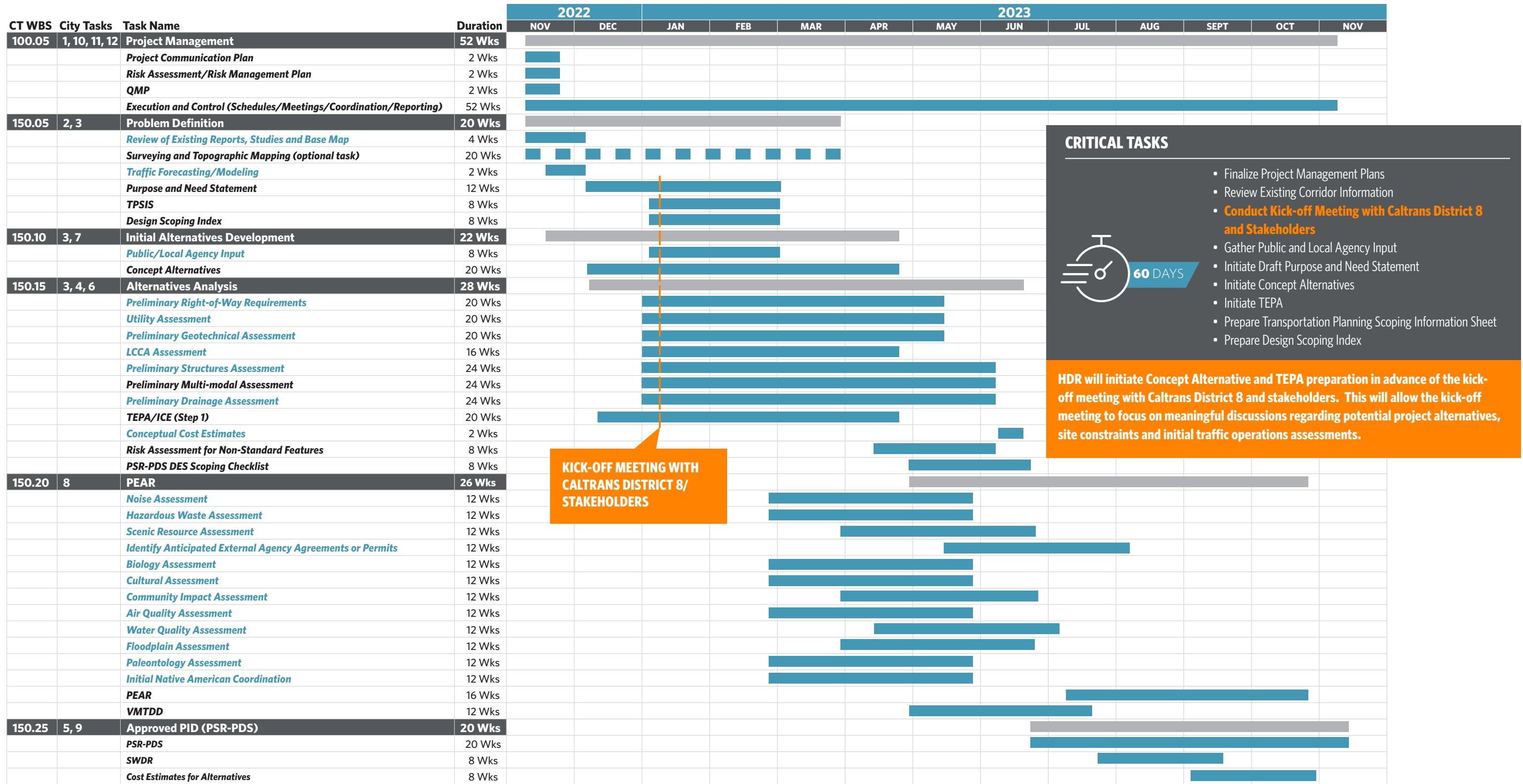
WBS CODE	CITY TASK	TASK NAME	DELIVERABLES/ACTIVITIES	RESPONSIBLE PERSON	KEY GOALS & OBJECTIVES
150.20	8	PEAR			
150.20.05		Initial Noise Study	Noise Assessment	Keith Cooper	<ul style="list-style-type: none"><li>▪ Leverage environmental technical studies prepared by this team for the I-15 ELPSE</li><li>▪ Evaluate environmental impacts for noise, hazardous waste, scenic resources, biological, cultural, community, air quality, water quality, floodplain, paleontological, Native American resources to inform the development of the PEAR</li><li>▪ Prepare the VMTDD to assess potential VMT impacts and budgets for potential mitigation measures</li><li>▪ Prepare PEAR to summarize the environmental assessments into a single, comprehensive planning document consistent with Caltrans District 8 requirements</li><li>▪ The PEAR will also include the Environmental Document recommendation, an Environmental Studies Checklist that will identify the appropriate environmental technical studies to be completed in PA&amp;ED and the PA&amp;ED schedule</li></ul>
150.20.10		Hazardous Waste Initial Site Assessments/Investigations	Hazardous Waste Assessment	Uyenlan Vu	
150.20.15		Scenic Resource and Landscape Architecture Review	Scenic Resource Assessment	Uyenlan Vu	
150.20.20		Initial NEPA/404 Coordination	Identify External Agency Coordination Anticipated for Agreements or Permits	Angie Kung	
150.20.25		Initial Biology Study	Biology Assessment	Sarrah Barrera	
150.20.30		Initial Records and Literature Search for Cultural Resources	Cultural Assessment	Roberta Thomas	
150.20.40		Initial Community Impact Analysis, Land Use, and Growth Studies	Community Impact Assessment	Uyenlan Vu	
150.20.45		Initial Air Quality Study	Air Quality Assessment	Keith Cooper	
150.20.50		Initial Water Quality Studies	Water Quality Assessment	Uyenlan Vu	
150.20.55		Initial Floodplain Study	Floodplain Assessment	Brad Losey	
150.20.60		PEAR Preparation	PEAR	Uyenlan Vu	
150.20.65		Initial Paleontology Study	Paleontology Assessment	Roberta Thomas	
150.20.70		Initial Native American Coordination	Native American Coordination	Roberta Thomas	
150.20.99		Other PEAR Products	VMTDD	Angie Kung Jason Pack	
150.25	5, 9	APPROVED PID (PSR-PDS)			
150.25.05		Draft PID	PSR-PDS	Jessica Slater Rebecca Shum	<ul style="list-style-type: none"><li>▪ Prepare PSR to summarize the engineering technical assessments into a single, comprehensive planning document consistent with Caltrans District 8 requirements</li><li>▪ Prepare SWDR to assess water quality impacts and identify potential construction and permanent BMPs</li><li>▪ Prepare capital cost estimates for Concept Alternatives to facilitate programming as the Project moves through the delivery process</li><li>▪ RTP and FTIP</li></ul>
150.25.15		Approved Access Modification Request	Access Modification Request (optional task)	Jessica Slater	
150.25.25		SWDR	SWDR	Brad Losey Perla Abarca	
150.25.30.05		Cost Estimates for Alternatives	Cost Estimates for Alternatives	Jason Brown	

**Black Bold** = Deliverable **Blue Italicized** = Activity

PROJECT SCHEDULE

Our comprehensive project delivery approach illustrates our overall implementation strategy to advance completion and approval of the PSR-PDS. A focus on Critical Tasks in the first 60 days that includes a meaningful kick-off meeting with Caltrans District 8 and stakeholders will be key in meeting the proposed 12-month PSR-PDS delivery schedule shown on **Figure 2.C.8**.

Figure 2.C.8 Schedule



■ Task    **Deliverable** = Deliverable    **Activity** = Activity



## **D. Required Forms**

## D. Required Forms

The forms listed below are included on the following pages for HDR and our sub-consultants.

- Signature Authorization Form, including Addenda acknowledgment
- Non-Collusion Affidavit Form
- Debarment and Suspension Certification

CITY OF LAKE ELSINORE

**ACKNOWLEDGMENT OF ADDENDA RECEIVED**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

The Bidder shall acknowledge the receipt of addenda by placing an "X" by each addendum received.

***No addenda was released***

Addendum No. 1 \_\_\_\_\_

Addendum No. 2 \_\_\_\_\_

Addendum No. 3 \_\_\_\_\_

Addendum No. 4 \_\_\_\_\_

If an addendum or addenda have been issued by the City and not noted above as being received by the Bidder, the Bid Proposal may be rejected.



\_\_\_\_\_  
Bidder's Signature

09/29/2022

\_\_\_\_\_  
Date

Thomas T. Kim

\_\_\_\_\_  
Print Name

Senior Vice President

\_\_\_\_\_  
Title

CITY OF LAKE ELSINORE

**NON-COLLUSION AFFIDAVIT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

STATE OF CALIFORNIA )  
COUNTY OF Orange ) SS

(NAME) Thomas T. Kim

affiant being first duly sworn, deposes and says:

That he or she is Senior Vice President of  
(sole owner, partner or other proper title)

HDR Engineering, Inc. the party making the foregoing Bid, that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the Bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company associations, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid. (Public Contract Code Section 7106)

Address: 3230 El Camino Real, Suite 200, Irvine, CA 92602

Telephone No.: (714) 730-2300

Print Name: Thomas T. Kim

Signature: 

Title: Senior Vice President

Date: 09/08/2022

**SIGNING INSTRUCTIONS TO THE CONTRACTOR**

Non-Collusion Affidavit must be accompanied by notary certificates for signature. Note the description of the document on the notary certificate. Attach notary certificate immediately following this page. If the Bidder fails to properly sign or omits the required signature, the bid will be considered non-responsive and will be rejected.

CALIFORNIA JURAT

GOVERNMENT CODE § 8202

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Orange

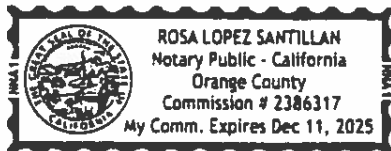
Subscribed and sworn to (or affirmed) before me on

this 8<sup>th</sup> day of September, 2022, by  
Date Month Year

(1) Thomas T. Kim

(and (2) \_\_\_\_\_),  
Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.



Place Notary Seal and/or Stamp Above

Signature [Signature]  
Signature of Notary Public

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Non-Collusion Affidavit

Document Date: September 8, 2022 Number of Pages: one

Signer(s) Other Than Named Above: no other signers

CITY OF LAKE ELSINORE

**DISQUALIFICATION OR DEBARMENT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

Has your firm, any officer of your firm, or any employee who has a proprietary interest in your firm ever been disqualified, removed, or otherwise prevented from bidding on, performing work on, or completing a federal, state or local project because of a violation of law or a safety regulation?

YES / **NO** (circle one)

If yes, provide the following information (if more than once, use separate sheets):

Date: N/A Entity: N/A

Location: N/A

Reason: N/A

\_\_\_\_\_  
\_\_\_\_\_

Provide Status and any Supplemental Statement: \_\_\_\_\_

N/A

\_\_\_\_\_  
\_\_\_\_\_

Has your firm been reinstated by this entity?

YES / NO (circle one) N/A

Notes: Providing false information may result in criminal prosecution or administrative sanctions. The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.



09/29/2022

Signature

Date

Thomas T. Kim

Senior Vice President

Print Name

Title

HDR Engineering, Inc.

Contractor Name



CITY OF LAKE ELSINORE

**ACKNOWLEDGMENT OF ADDENDA RECEIVED**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

The Bidder shall acknowledge the receipt of addenda by placing an "X" by each addendum received.

***No addenda was released***


Addendum No. 1 \_\_\_\_\_

Addendum No. 2 \_\_\_\_\_

Addendum No. 3 \_\_\_\_\_

Addendum No. 4 \_\_\_\_\_

If an addendum or addenda have been issued by the City and not noted above as being received by the Bidder, the Bid Proposal may be rejected.

  
\_\_\_\_\_  
Bidder's Signature

Keith B. Cooper  
\_\_\_\_\_  
Print Name

09/29/2022  
\_\_\_\_\_  
Date

CEO  
\_\_\_\_\_  
Title

CITY OF LAKE ELSINORE

**NON-COLLUSION AFFIDAVIT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

STATE OF CALIFORNIA                     )  
  ) SS  
COUNTY OF LOS ANGELES            )

(NAME) Keith B. Cooper  
affiant being first duly sworn, deposes and says:

That he or she is CEO of  
(sole owner, partner or other proper title)

Environmental Review Partners, Inc the party making the foregoing Bid, that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the Bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company associations, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid. (Public Contract Code Section 7106)

Address: 1752 W Adams Blvd, Ste 201, Los Angeles, CA 90018

Telephone No.: (310) 439-3424

Print Name: Keith B. Cooper

Signature: 

Title: CEO Date: 9/27/2022

**SIGNING INSTRUCTIONS TO THE CONTRACTOR**

**Non-Collusion Affidavit must be accompanied by notary certificates for signature. Note the description of the document on the notary certificate. Attach notary certificate immediately following this page. If the Bidder fails to properly sign or omits the required signature, the bid will be considered non-responsive and will be rejected.**

**CALIFORNIA JURAT WITH AFFIANT STATEMENT**

**GOVERNMENT CODE § 8202**

- ☐ See Attached Document (Notary to cross out lines 1–6 below)  
☐ See Statement Below (Lines 1–6 to be completed only by document signer[s], *not* Notary)

*[Handwritten Signature]*

Signature of Document Signer No. 1

Signature of Document Signer No. 2 (if any)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Los Angeles

Subscribed and sworn to (or affirmed) before me

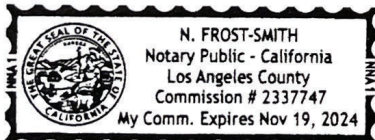
on this 27th day of September, 2022,  
by Date Month Year

(1) Keith Cooper

(and (2) \_\_\_\_\_),  
Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence  
to be the person(s) who appeared before me.

Signature *[Handwritten Signature]*  
Signature of Notary Public



Seal  
Place Notary Seal Above

**OPTIONAL**

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

**Description of Attached Document**

Title or Type of Document: Nm - Collusion Affidavit Document Date: \_\_\_\_\_

Number of Pages: \_\_\_\_\_ Signer(s) Other Than Named Above: \_\_\_\_\_

CITY OF LAKE ELSINORE

**DISQUALIFICATION OR DEBARMENT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

Has your firm, any officer of your firm, or any employee who has a proprietary interest in your firm ever been disqualified, removed, or otherwise prevented from bidding on, performing work on, or completing a federal, state or local project because of a violation of law or a safety regulation?

YES / **NO** (circle one)

If yes, provide the following information (if more than once, use separate sheets):

Date: N/A Entity: N/A

Location: N/A

Reason: N/A

\_\_\_\_\_  
\_\_\_\_\_

Provide Status and any Supplemental Statement: \_\_\_\_\_


N/A

\_\_\_\_\_

Has your firm been reinstated by this entity?

YES / NO (circle one) NOT APPLICABLE

Notes: Providing false information may result in criminal prosecution or administrative sanctions.  
The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

	09/29/2022
Signature	Date
Keith B. Cooper	CEO
Print Name	Title

Environmental Review Partners, Inc.

Contractor Name



CITY OF LAKE ELSINORE

**ACKNOWLEDGMENT OF ADDENDA RECEIVED**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

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***No addenda was released***

Addendum No. 1 \_\_\_\_\_

Addendum No. 2 \_\_\_\_\_

Addendum No. 3 \_\_\_\_\_

Addendum No. 4 \_\_\_\_\_

If an addendum or addenda have been issued by the City and not noted above as being received by the Bidder, the Bid Proposal may be rejected.

  
\_\_\_\_\_  
Bidder's Signature

09/29/2022  
\_\_\_\_\_  
Date

Jason Pack  
\_\_\_\_\_  
Print Name

Principal  
\_\_\_\_\_  
Title

CITY OF LAKE ELSINORE

**NON-COLLUSION AFFIDAVIT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

STATE OF CALIFORNIA )  
 ) SS  
COUNTY OF Riverside )

(NAME) Jason Pack

affiant being first duly sworn, deposes and says:

That he or she is Principal of  
(sole owner, partner or other proper title)

Fehr & Peers the party making the foregoing Bid, that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the Bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company associations, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid. (Public Contract Code Section 7106)

Address: 3750 University Avenue Suite 225, Riverside, CA 92501

Telephone No.: 951.274.4800

Print Name: Jason D. Pack, P.E.

Signature: 

Title: Principal

Date: 9/27/2022

**SIGNING INSTRUCTIONS TO THE CONTRACTOR**

Non-Collusion Affidavit must be accompanied by notary certificates for signature. Note the description of the document on the notary certificate. Attach notary certificate immediately following this page. If the Bidder fails to properly sign or omits the required signature, the bid will be considered non-responsive and will be rejected.

CALIFORNIA JURAT

GOVERNMENT CODE § 8202

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Riverside

Subscribed and sworn to (or affirmed) before me on

this 27 day of September, 2022, by  
Date Month Year

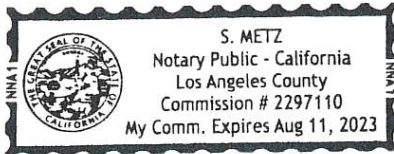
(1) Jason D. Pack

(and (2) \_\_\_\_\_),  
Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

Signature \_\_\_\_\_  
Signature of Notary Public

Place Notary Seal and/or Stamp Above



OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Non Collusion Affidavit

Document Date: 9/27/22 Number of Pages: 1

Signer(s) Other Than Named Above: \_\_\_\_\_

CITY OF LAKE ELSINORE

**DISQUALIFICATION OR DEBARMENT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

Has your firm, any officer of your firm, or any employee who has a proprietary interest in your firm ever been disqualified, removed, or otherwise prevented from bidding on, performing work on, or completing a federal, state or local project because of a violation of law or a safety regulation?

YES / **NO** (circle one)

If yes, provide the following information (if more than once, use separate sheets):

Date: N/A Entity: N/A

Location: N/A

Reason: N/A

\_\_\_\_\_

\_\_\_\_\_

Provide Status and any Supplemental Statement: N/A


\_\_\_\_\_

\_\_\_\_\_

Has your firm been reinstated by this entity?

YES / NO (circle one) N/A

Notes: Providing false information may result in criminal prosecution or administrative sanctions.  
The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

	09/29/2022
Signature	Date
Jason Pack	Principal
Print Name	Title
Fehr & Peers	
Contractor Name	

CITY OF LAKE ELSINORE

**ACKNOWLEDGMENT OF ADDENDA RECEIVED**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

The Bidder shall acknowledge the receipt of addenda by placing an "X" by each addendum received.

***No addenda was released***

Addendum No. 1 \_\_\_\_\_

Addendum No. 2 \_\_\_\_\_

Addendum No. 3 \_\_\_\_\_

Addendum No. 4 \_\_\_\_\_

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\_\_\_\_\_  
Bidder's Signature

\_\_\_\_\_  
Bernie McNally, PLS

\_\_\_\_\_  
Print Name

09/29/2022

\_\_\_\_\_  
Date

\_\_\_\_\_  
Executive Vice President

\_\_\_\_\_  
Title

CITY OF LAKE ELSINORE

**NON-COLLUSION AFFIDAVIT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

STATE OF CALIFORNIA )  
COUNTY OF Orange ) SS  
)

(NAME) Bernie McNally, PLS

affiant being first duly sworn, deposes and says:

That he or she is Executive Vice President of  
(sole owner, partner or other proper title)

Guida Surveying, Inc. the party making the foregoing Bid, that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the Bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company associations, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid. (Public Contract Code Section 7106)

Address: 220 Commerce, Suite 150, Irvine, CA 92602

Telephone No.: 949.777.2000

Print Name: Bernie McNally, PLS

Signature: 

Title: Executive Vice President

Date: 09/22/2022

**SIGNING INSTRUCTIONS TO THE CONTRACTOR**

Non-Collusion Affidavit must be accompanied by notary certificates for signature. Note the description of the document on the notary certificate. Attach notary certificate immediately following this page. If the Bidder fails to properly sign or omits the required signature, the bid will be considered non-responsive and will be rejected.

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

**CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California )  
County of Orange )  
On September 22, 2022 before me, Bridgette Kathleen Slovik, Notary Public,  
Date Here Insert Name and Title of the Officer  
personally appeared Bernie McNally  
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature [Signature]  
Signature of Notary Public

Place Notary Seal Above

**OPTIONAL**

*Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: \_\_\_\_\_

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

☐ Individual ☐ Attorney in Fact

☐ Trustee ☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

Signer's Name: \_\_\_\_\_

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

☐ Individual ☐ Attorney in Fact

☐ Trustee ☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

CITY OF LAKE ELSINORE

**DISQUALIFICATION OR DEBARMENT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

Has your firm, any officer of your firm, or any employee who has a proprietary interest in your firm ever been disqualified, removed, or otherwise prevented from bidding on, performing work on, or completing a federal, state or local project because of a violation of law or a safety regulation?

YES / **NO** (circle one)

If yes, provide the following information (if more than once, use separate sheets):

Date: N/A Entity: N/A

Location: N/A


Reason: N/A

Provide Status and any Supplemental Statement: N/A

Has your firm been reinstated by this entity? N/A

YES / NO (circle one)

Notes: Providing false information may result in criminal prosecution or administrative sanctions.  
The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

	09/29/2022
Signature	Date
Bernie McNally, PLS	Executive Vice President
Print Name	Title
Guida Surveying, Inc.	
Contractor Name	

CITY OF LAKE ELSINORE

**ACKNOWLEDGMENT OF ADDENDA RECEIVED**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

The Bidder shall acknowledge the receipt of addenda by placing an "X" by each addendum received.

***No addenda was released***

Addendum No. 1 \_\_\_\_\_

Addendum No. 2 \_\_\_\_\_

Addendum No. 3 \_\_\_\_\_

Addendum No. 4 \_\_\_\_\_

If an addendum or addenda have been issued by the City and not noted above as being received by the Bidder, the Bid Proposal may be rejected.



Bidder's Signature

09/29/2022

Date

Darren Riegler

Senior Vice President

Print Name

Title

CITY OF LAKE ELSINORE

**NON-COLLUSION AFFIDAVIT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

STATE OF CALIFORNIA                    )  
  ) SS  
COUNTY OF ORANGE                    )

(NAME) Darren Riegler  
  affiant being first duly sworn, deposes and says:

That he or she is Senior Vice President of  
  (sole owner, partner or other proper title)

Michael Baker International, Inc. the party making the foregoing Bid, that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the Bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company associations, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid. (Public Contract Code Section 7106)

Address: 5 Hutton Centre Drive, Suite 500, Santa Ana, CA 92707

Telephone No.: 949-472-3484

Print Name: Darren Riegler

Signature: 

Title: Senior Vice President

Date: September 22, 2022

**SIGNING INSTRUCTIONS TO THE CONTRACTOR**

Non-Collusion Affidavit must be accompanied by notary certificates for signature. Note the description of the document on the notary certificate. Attach notary certificate immediately following this page. If the Bidder fails to properly sign or omits the required signature, the bid will be considered non-responsive and will be rejected.

CALIFORNIA ACKNOWLEDGMENT

CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

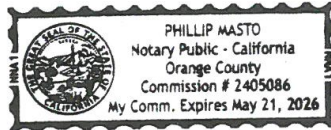
State of California

County of ORANGE

On September 22, 2022 before me, Phillip Masto, Notary Public  
Date Here Insert Name and Title of the Officer

personally appeared Darren Riegler  
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Phillip Masto  
Signature of Notary Public

Place Notary Seal and/or Stamp Above

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Non-Collusion Affidavit

Document Date: September 22, 2022 Number of Pages: 1

Signer(s) Other Than Named Above: \_\_\_\_\_

Capacity(ies) Claimed by Signer(s)

Signer's Name: \_\_\_\_\_ Signer's Name: \_\_\_\_\_

☐ Corporate Officer – Title(s): \_\_\_\_\_ ☐ Corporate Officer – Title(s): \_\_\_\_\_

☐ Partner – ☐ Limited ☐ General ☐ Partner – ☐ Limited ☐ General

☐ Individual ☐ Attorney in Fact ☐ Individual ☐ Attorney in Fact

☐ Trustee ☐ Guardian or Conservator ☐ Trustee ☐ Guardian or Conservator

☐ Other: \_\_\_\_\_ ☐ Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_ Signer is Representing: \_\_\_\_\_

CITY OF LAKE ELSINORE

**DISQUALIFICATION OR DEBARMENT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

Has your firm, any officer of your firm, or any employee who has a proprietary interest in your firm ever been disqualified, removed, or otherwise prevented from bidding on, performing work on, or completing a federal, state or local project because of a violation of law or a safety regulation?

YES / **NO** (circle one)

If yes, provide the following information (if more than once, use separate sheets):

Date: N/A Entity: N/A

Location: N/A

Reason: N/A

Provide Status and any Supplemental Statement: \_\_\_\_\_

N/A

Has your firm been reinstated by this entity?

YES / NO (circle one) **N/A**

Notes: Providing false information may result in criminal prosecution or administrative sanctions. The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.



09/29/2022

Signature

Date

Darren Riegler

Senior Vice President

Print Name

Title

Michael Baker International, Inc.

Contractor Name

CITY OF LAKE ELSINORE

**ACKNOWLEDGMENT OF ADDENDA RECEIVED**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

The Bidder shall acknowledge the receipt of addenda by placing an "X" by each addendum received.

***No Addenda was released***

Addendum No. 1 \_\_\_\_\_

Addendum No. 2 \_\_\_\_\_

Addendum No. 3 \_\_\_\_\_

Addendum No. 4 \_\_\_\_\_

If an addendum or addenda have been issued by the City and not noted above as being received by the Bidder, the Bid Proposal may be rejected.

  
\_\_\_\_\_  
Bidder's Signature

Jessica DeBusk

\_\_\_\_\_  
Print Name

09/29/2022

\_\_\_\_\_  
Date

Regional Principal

\_\_\_\_\_  
Title

CITY OF LAKE ELSINORE

**NON-COLLUSION AFFIDAVIT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

STATE OF Virginia )  
 ) SS  
COUNTY OF James City )

(NAME) Jessica Debusk

affiant being first duly sworn, deposes and says:

That he or she is Regional Principal of  
(sole owner, partner or other proper title)

PaleoWest, LLC the party making the foregoing Bid, that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the Bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company associations, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid. (Public Contract Code Section 7106)

Address: 517 S. Ivy Avenue

Telephone No.: 626.408.8006

Print Name: Jessica DeBusk

Signature: Jessica DeBusk

Title: Regional Principal

Date: 9/27/2022

**SIGNING INSTRUCTIONS TO THE CONTRACTOR**

**Non-Collusion Affidavit must be accompanied by notary certificates for signature. Note the description of the document on the notary certificate. Attach notary certificate immediately following this page. If the Bidder fails to properly sign or omits the required signature, the bid will be considered non-responsive and will be rejected.**

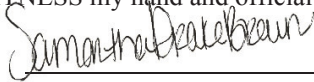
Please see the attached page for Notarial Statement.

C-11

Certificate of Acknowledgement  
Commonwealth of Virginia  
County of James City

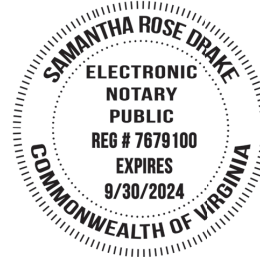
On 9/27/2022, before me, Samantha Drake Brown, personally appeared, Jessica DeBusk,  
proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the  
within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized  
capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf  
of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal



I was commissioned as Samantha Rose Drake  
My commission expires, September 30 20 24.

Completed via Remote Online Notarization using 2way Audio/Video Technology.



CITY OF LAKE ELSINORE

**DISQUALIFICATION OR DEBARMENT**

**I-15/Nichols Interchange Improvement Project  
Project Study Report-Project Development Support (PSR-PDS)  
City Project No. Z10082**

Has your firm, any officer of your firm, or any employee who has a proprietary interest in your firm ever been disqualified, removed, or otherwise prevented from bidding on, performing work on, or completing a federal, state or local project because of a violation of law or a safety regulation?

YES / **NO** (circle one)

If yes, provide the following information (if more than once, use separate sheets):

Date: **N/A** Entity: **N/A**

Location: **N/A**


Reason: **N/A**

Provide Status and any Supplemental Statement: **N/A**

Has your firm been reinstated by this entity?

YES / NO (circle one) **N/A**

Notes: Providing false information may result in criminal prosecution or administrative sanctions. The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

	<b>09/29/2022</b>
Signature	Date
<b>Jessica DeBusk</b>	<b>Regional Principal</b>
Print Name	Title
<b>PaleoWest, LLC</b>	
Contractor Name	



## **E.** Cost Proposal



## E. Cost Proposal

Per the RFP instructions, the cost proposal has been submitted separately from the proposal on PlanetBids.



## **F.** Insurance

# F. Insurance Requirements

Page 1 of 1



## CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
06/02/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Willis Towers Watson Midwest, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	<b>CONTACT NAME:</b> Willis Towers Watson Certificate Center <b>PHONE (A/C, No, Ext):</b> 1-877-945-7378 <b>FAX (A/C, No):</b> 1-888-467-2378 <b>E-MAIL ADDRESS:</b> certificates@willis.com
--	--

<b>INSURED</b> HDR Engineering, Inc. 1917 South 67th Street Omaha, NE 68106	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">INSURER(S) AFFORDING COVERAGE</th> <th style="text-align: left;">NAIC #</th> </tr> <tr> <td>INSURER A: Liberty Mutual Fire Insurance Company</td> <td>23035</td> </tr> <tr> <td>INSURER B: Ohio Casualty Insurance Company</td> <td>24074</td> </tr> <tr> <td>INSURER C: Liberty Insurance Corporation</td> <td>42404</td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Liberty Mutual Fire Insurance Company	23035	INSURER B: Ohio Casualty Insurance Company	24074	INSURER C: Liberty Insurance Corporation	42404	INSURER D:		INSURER E:		INSURER F:	
INSURER(S) AFFORDING COVERAGE	NAIC #														
INSURER A: Liberty Mutual Fire Insurance Company	23035														
INSURER B: Ohio Casualty Insurance Company	24074														
INSURER C: Liberty Insurance Corporation	42404														
INSURER D:															
INSURER E:															
INSURER F:															

**COVERAGES**

**CERTIFICATE NUMBER:** W24977699

**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY		TB2-641-444950-032	06/01/2022	06/01/2023	EACH OCCURRENCE \$ 2,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR	DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000				
	<input checked="" type="checkbox"/> Contractual Liability	MED EXP (Any one person) \$ 10,000				
	GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input checked="" type="checkbox"/> LOC OTHER:	PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMPI/OP AGG \$ 4,000,000				
A	<b>AUTOMOBILE LIABILITY</b>		AS2-641-444950-042	06/01/2022	06/01/2023	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000
	<input checked="" type="checkbox"/> ANY AUTO	BODILY INJURY (Per person) \$				
	<input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	BODILY INJURY (Per accident) \$				
		PROPERTY DAMAGE (Per accident) \$				
B	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR		EVO (23) 57919363	06/01/2022	06/01/2023	EACH OCCURRENCE \$ 5,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 0	AGGREGATE \$ 5,000,000				
C	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b>		WA7-64D-444950-012	06/01/2022	06/01/2023	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	E.L. EACH ACCIDENT \$ 1,000,000				
	If yes, describe under DESCRIPTION OF OPERATIONS below	E.L. DISEASE - EA EMPLOYEE \$ 1,000,000				
		E.L. DISEASE - POLICY LIMIT \$ 1,000,000				
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)						

**CERTIFICATE HOLDER**  

Sample

**CANCELLATION**  

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE  


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ACORD 25 (2016/03)

The ACORD name and logo are registered marks of ACORD

SR ID: 22658058

BATCH: 2547319



## CERTIFICATE OF LIABILITY INSURANCE

6/1/2023

DATE (MM/DD/YYYY)  
6/1/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000 kctsu@lockton.com		<b>CONTACT</b> NAME: PHONE (A/C, No, Ext): E-MAIL: ADDRESS:		<b>FAX</b> (A/C, No):
<b>INSURED</b> 1429583 HDR ENGINEERING, INC. 1917 SOUTH 67TH STREET OMAHA NE 68106		<b>INSURER(S) AFFORDING COVERAGE</b> INSURER A: Lloyds of London INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:		<b>NAIC #</b>

**COVERAGES \*** **CERTIFICATE NUMBER:** 18584305 **REVISION NUMBER:** XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX DAMAGE TO RENTED PREMISES (Ea occurrence) \$ XXXXXXXX MED EXP (Any one person) \$ XXXXXXXX PERSONAL & ADV INJURY \$ XXXXXXXX GENERAL AGGREGATE \$ XXXXXXXX PRODUCTS - COMP/OP AGG \$ XXXXXXXX \$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			NOT APPLICABLE			COMBINED SINGLE LIMIT (Ea accident) \$ XXXXXXXX BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$			NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX AGGREGATE \$ XXXXXXXX \$ XXXXXXXX
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y <input type="checkbox"/> N If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	NOT APPLICABLE			PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ XXXXXXXX E.L. DISEASE - EA EMPLOYEE \$ XXXXXXXX E.L. DISEASE - POLICY LIMIT \$ XXXXXXXX
A	ARCH & ENG PROFESSIONAL LIABILITY	N	N	P001412200	6/1/2022	6/1/2023	PER CLAIM: \$1,000,000 AGGREGATE: \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

<b>CERTIFICATE HOLDER</b> 18584305 SAMPLE	<b>CANCELLATION</b> See Attachment  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
---	---

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Attachment Code: D608624 Master ID: 1429583, Certificate ID: 18584305

**This endorsement, effective:** 06/01/2022 12:01 A.M.

**Forms a part of policy no.:** P001412200

**Issued to:** HDR, Inc

**By:** Lloyd's of London

---

#### **NOTICE OF CANCELLATION TO CERTIFICATE HOLDERS ENDORSEMENT**

Except respect cancellation non-payment premium (10 day notice cancellation), the **Insurer** shall give day notice cancellation the Certificate Holder(s) set forth herein, provided that:

The **First Named Insured** is required by contract give notice cancellation the Certificate Holder, and

Prior the **Insurer** sending notice cancellation the **First Named Insured** the **First Named Insured** shall provide the **Insurer** in writing, either directly or through the **First Named Insured** broker record, the name each person or organization requiring notice cancellation and the corresponding address such person or other employee responsible receipt of notice of cancellation on behalf of such organization.

Notice cancellation be sent in accordance the terms and conditions the policy, except that the **Insurer** may provide written notice individually or collectively the Certificate Holders by email at the current email address given by the **First Named Insured** Proof sending the notice of cancellation by email shall be sufficient proof of notice.

Any failure provide notice cancellation the Certificate Holder due inaccurate or incomplete information provided by the **First Named Insured** shall remain the sole responsibility the **First Named Insured**

The following definitions apply to this endorsement:

1. **First Named Insured** means the Named Insured shown in Item 1. of Declarations.
2. **Insurer** means the insurance company shown in the header on the Declarations.

All other terms and conditions of the policy remain the same



# APPENDIX



---




## Copies of Professional Credential Licenses

# Copies of Professional Credential Licenses


		<p><b>ISSUANCE DATE</b> JUNE 23, 2006</p> <p><b>EXPIRATION DATE</b> SEPTEMBER 30, 2024</p> <p><b>CURRENT DATE / TIME</b> SEPTEMBER 29, 2022 8:5:16 AM</p>
	<p><b>BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS</b></p>	
<p><b>LICENSING DETAILS FOR: 70332</b></p>		
<p><b>NAME:</b> BANNASCH, JENNIFER BROOKE</p> <p><b>LICENSE TYPE:</b> CIVIL ENGINEER</p> <p><b>LICENSE STATUS:</b> CLEAR </p>	<p><b>ADDRESS</b></p> <p>3230 EL CAMINO REAL 200 IRVINE CA 92602 ORANGE COUNTY</p> <p><a href="#">MAP</a></p>	
		
	<p><b>BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS</b></p>	<p><b>ISSUANCE DATE</b> DECEMBER 28, 2011</p> <p><b>EXPIRATION DATE</b> MARCH 31, 2024</p> <p><b>CURRENT DATE / TIME</b> SEPTEMBER 19, 2022 3:40:20 PM</p>
<p><b>LICENSING DETAILS FOR: 79062</b></p>		
<p><b>NAME:</b> HERNANDEZ, JULIAN</p> <p><b>LICENSE TYPE:</b> CIVIL ENGINEER</p> <p><b>LICENSE STATUS:</b> CLEAR </p>	<p><b>ADDRESS</b></p> <p>PO BOX 8524 MORENO VALLEY CA 92552 RIVERSIDE COUNTY</p> <p><a href="#">MAP</a></p>	
		
	<p><b>BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS</b></p>	<p><b>ISSUANCE DATE</b> APRIL 25, 2003</p> <p><b>EXPIRATION DATE</b> SEPTEMBER 30, 2023</p> <p><b>CURRENT DATE / TIME</b> SEPTEMBER 19, 2022 3:42:2 PM</p>
<p><b>LICENSING DETAILS FOR: 65140</b></p>		
<p><b>NAME:</b> LOSEY, BRADLEY MICHAEL</p> <p><b>LICENSE TYPE:</b> CIVIL ENGINEER</p> <p><b>LICENSE STATUS:</b> CLEAR </p>	<p><b>ADDRESS</b></p> <p>14672 CHESHIRE PL TUSTIN CA 92780 ORANGE COUNTY</p> <p><a href="#">MAP</a></p>	
		
	<p><b>BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND GEOLOGISTS</b></p>	<p><b>ISSUANCE DATE</b> JANUARY 26, 2007</p> <p><b>EXPIRATION DATE</b> JUNE 30, 2023</p> <p><b>CURRENT DATE / TIME</b> SEPTEMBER 19, 2022 3:41:23 PM</p>
<p><b>LICENSING DETAILS FOR: 2402</b></p>		
<p><b>NAME:</b> PACK, JASON D.</p> <p><b>LICENSE TYPE:</b> TRAFFIC ENGINEERS</p> <p><b>LICENSE STATUS:</b> CLEAR </p>	<p><b>ADDRESS</b></p> <p>101 PACIFICA, SUITE 300 IRVINE CA 92618 ORANGE COUNTY</p> <p><a href="#">MAP</a></p>	





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JULY 23, 1999  
**EXPIRATION DATE**  
DECEMBER 31, 2023  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
3:42:43 PM

**LICENSING DETAILS FOR: 59834**

**NAME:** WEDDELL, DANIEL SCOTT  
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**LICENSE STATUS:** CLEAR 


**ADDRESS**  
1851 E FIRST ST #1400  
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ORANGE COUNTY  
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**ISSUANCE DATE**  
JANUARY 21, 2005  
**EXPIRATION DATE**  
JUNE 30, 2023  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
3:43:24 PM

**LICENSING DETAILS FOR: 67659**

**NAME:** HAGER, MARK  
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**ADDRESS**  
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RIVERSIDE COUNTY  
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**ISSUANCE DATE**  
FEBRUARY 4, 2000  
**EXPIRATION DATE**  
JUNE 30, 2024  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
3:46:19 PM

**LICENSING DETAILS FOR: 59969**

**NAME:** CROUCH, STEPHEN  
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**LICENSE STATUS:** CLEAR 


**ADDRESS**  
182 S CRAIG DRIVE  
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ORANGE COUNTY  
[MAP](#)



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**ISSUANCE DATE**  
MAY 28, 2015  
**EXPIRATION DATE**  
SEPTEMBER 30, 2023  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
3:46:59 PM

**LICENSING DETAILS FOR: 84282**

**NAME:** SLATER, JESSICA  
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**LICENSE STATUS:** CLEAR 

**ADDRESS**  
18841 VISTA PORTOLA  
TRABUCO CANYON CA 92679  
ORANGE COUNTY  
[MAP](#)



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**LICENSING DETAILS FOR: 83512**

**NAME:** SHUM, REBECCA  
**LICENSE TYPE:** CIVIL ENGINEER  
**LICENSE STATUS:** CLEAR

**ADDRESS**  
230 W ORANGE GROVE AVE  
ARCADIA CA 91006  
LOS ANGELES COUNTY  
[MAP](#)

**ISSUANCE DATE**  
DECEMBER 17, 2014  
**EXPIRATION DATE**  
MARCH 31, 2023  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
3:47:30 PM



**BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND  
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**LICENSING DETAILS FOR: 2797**

**NAME:** HERRMANN, PAUL TYLER  
**LICENSE TYPE:** TRAFFIC ENGINEERS  
**LICENSE STATUS:** CLEAR

**ADDRESS**  
1387 CRESTWOOD DR  
REDLANDS CA 92373  
SAN BERNARDINO COUNTY  
[MAP](#)

**ISSUANCE DATE**  
OCTOBER 12, 2016  
**EXPIRATION DATE**  
MARCH 31, 2023  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
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**BOARD FOR PROFESSIONAL ENGINEERS, LAND SURVEYORS, AND  
GEOLOGISTS**

**LICENSING DETAILS FOR: 84914**

**NAME:** BROWN, JASON  
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**ADDRESS**  
19250 MARMALADE CT  
RIVERSIDE CA 92508  
RIVERSIDE COUNTY  
[MAP](#)

**ISSUANCE DATE**  
DECEMBER 15, 2015  
**EXPIRATION DATE**  
MARCH 31, 2024  
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**LICENSING DETAILS FOR: 61444**

**NAME:** SANDIRASEGARAM, UTHAYAKUMAR  
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[MAP](#)

**ISSUANCE DATE**  
JANUARY 26, 2001  
**EXPIRATION DATE**  
JUNE 30, 2023  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
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### LICENSING DETAILS FOR: 77738

**NAME:** STARICK, JAMES  
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**ADDRESS**  
3230 EL CAMINO REAL STE 200  
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ORANGE COUNTY  
[MAP](#)

**ISSUANCE DATE**  
JANUARY 7, 2011  
**EXPIRATION DATE**  
JUNE 30, 2023  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
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### LICENSING DETAILS FOR: 66884

**NAME:** ABARCA, PEARL  
**LICENSE TYPE:** CIVIL ENGINEER  
**LICENSE STATUS:** CLEAR

**ADDRESS**  
325 N MAPLE AVE APT B  
MONTEBELLO CA 90694  
LOS ANGELES COUNTY  
[MAP](#)

**ISSUANCE DATE**  
JUNE 25, 2004  
**EXPIRATION DATE**  
SEPTEMBER 30, 2024  
**CURRENT DATE / TIME**  
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### LICENSING DETAILS FOR: 94171

**NAME:** TUNG, DOROTHY  
**LICENSE TYPE:** CIVIL ENGINEER  
**LICENSE STATUS:** CLEAR

**ADDRESS**  
8432 CONNER CIRCLE  
WESTMINSTER CA 92683  
ORANGE COUNTY  
[MAP](#)

**ISSUANCE DATE**  
JULY 29, 2022  
**EXPIRATION DATE**  
DECEMBER 31, 2022  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
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### LICENSING DETAILS FOR: 7177

**NAME:** SPIVAK, LISA M HENSTRIDGE  
**LICENSE TYPE:** LAND SURVEYOR  
**LICENSE STATUS:** CLEAR

**ADDRESS**  
55 NIGHT BLOOM  
IRVINE CA 92602  
ORANGE COUNTY  
[MAP](#)

**ISSUANCE DATE**  
JULY 14, 1995  
**EXPIRATION DATE**  
DECEMBER 31, 2023  
**CURRENT DATE / TIME**  
SEPTEMBER 19, 2022  
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### Member profile details

Membership level	RPA (Founding)
First name	Roberta
Last name	Thomas
Highest Degree	M.A.

### Preferred Contact Information

Employer	PaleoWest Archaeology
Professional Title	Senior Archaeologist/Project Manager
City	Monrovia
US State or Canadian Province	California
Zip Code / Postal Code	91016
Country	United States
RPA Reg Number	3749430
I affirm that I will abide by the Register's Code of Conduct and Standards of Research Performance	<a href="#">I agree</a>



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## I-15 Nichols Road IC PSR/PDS

## Firm Fixed Price Summary

<u>WBS</u>	<u>Description</u>	<u>HDR</u>	<u>ERP</u>	<u>F&amp;P</u>	<u>MBI</u>	<u>Paleo West</u>	<u>Subtotals</u>	<i>Optional Mapping Guida</i>	<u>Total Cost per Task</u>
100.05	Project Management	\$ 96,316.74					\$ 96,316.74		
100.05	Meetings	\$ 68,060.19		\$ 9,428.60	\$ 8,263.36		\$ 85,752.15		\$ 182,068.89
150.05	Problem Definition	\$ 35,280.83		\$ 2,720.66			\$ 38,001.49	\$50,500.00	\$ 88,501.49
150.10	Initial Alternatives Development	\$ 63,079.09					\$ 63,079.09		\$ 63,079.09
150.10	Public and Community Outreach	\$ 40,281.31					\$ 40,281.31		\$ 40,281.31
150.15	Alternative Analysis	\$111,406.02		\$27,275.27	\$ 36,990.26		\$ 175,671.54		\$ 175,671.54
150.20	Preliminary Environmental Analysis Report (PEAR)	\$117,816.70	\$5,580.00	\$ 7,865.03	\$ 51,473.56	\$12,255.00	\$ 194,990.28		\$ 194,990.28
150.25	Approved PID (PSR/PDS) & SWDR	\$ 79,248.94			\$ 37,837.28		\$ 117,086.22		\$ 117,086.22
<b>Subtotals</b>		<b>\$611,489.81</b>	<b>\$5,580.00</b>	<b>\$47,289.55</b>	<b>\$134,564.46</b>	<b>\$12,255.00</b>	<b>\$ 811,178.82</b>		<b>\$ 861,678.82</b>

# **Interstate 15 Nichols Road Interchange Improvement Project Project Study Report-Project Development Support (PSR-PDS)**

## **Scope of Work**

CONSULTANT will prepare PSR-PDS in accordance with Caltrans Guidelines and Procedures, California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). The purpose of the PSR-PDS is to scope the PA&ED phase relative to CEQA/NEPA and program the project for funding relative to construction and capital supports costs.

### **WBS 100.05 Task A: PROJECT MANAGEMENT**

#### **A.1 PROJECT INITIATION AND PLANNING**

CONSULTANT will schedule a Pre-PID meeting with Caltrans per Appendix S of the PDPM. CONSULTANT and CITY will meet with CALTRANS to communicate a shared view of the PROJECT and to establish an understanding of the procedures, roles, and responsibilities of the PROJECT. The meeting will begin the process to prepare and enter into an agreement with Caltrans for reimbursable work. CONSULTANT will review the PSR-PDS and PID development processes with CALTRANS and set the framework of the design concept and scope, as well as the purpose and need for the PROJECT. CONSULTANT will develop agenda and meeting minutes for the meeting.

##### Deliverables:

- Pre-PID Meeting Agenda, handouts, and meeting minutes

#### **A.2 COORDINATION AND MEETINGS**

CONSULTANT will be responsible for overall project management, liaison with CALTRANS and other affected agencies, and progress monitoring and maintenance of PROJECT files. CONSULTANT will supervise, coordinate, monitor and review project for conformance with Caltrans and City/County standards, policies, and procedures. CONSULTANT will develop a project schedule for delivery of major milestones of the PSR-PDS, PA&ED (Begin Environmental, Circulate ED, and PA&ED), Design and Construction. A 12-month schedule is anticipated for scoping purposes. CONSULTANT will attend a kick-off meeting, lead monthly Project Development Team (PDT) meetings, coordinate with sub-consultants as needed, coordinate with the City and Caltrans, utility companies, and all other pertinent stakeholders as needed.

##### Deliverables:

- Monthly (12) PDT Meetings and Agendas/Minutes
- Two (2) Stakeholder Meetings and Presentations
- Project Schedule
- Monthly Progress Reports and Invoices

#### **A.3 QUALITY MANAGEMENT PLAN**

CONSULTANT Project Manager will prepare and implement a Quality Management Plan (QMP). CONSULTANT will prepare a responsibilities matrix outlining responsibilities of independent

Quality Control on respective tasks within this scope of work herein. Refer to Chapter 5, Article 9 of the PDPM Appendix S for general guidance on the Quality Management Plan.

Deliverables:

- QMP
- Project Communication Plan

#### **A.4 RISK ASSESSMENT**

CONSULTANT will prepare the Risk Register in accordance with PDPM Appendix S. Since the reduced amount of data that is required for the PSR-PDS transfers risks to future phases and it is important to identify the risk, define the probability, define the severity, identify who or what the risk will impact, and identify the ownership of the risk. CONSULTANT will coordinate with the CITY and project team members to jointly identify, assess, quantify, prepare a response to, monitor, and control capital project risks within the Risk Register. Potential risks will be evaluated and discussed by the PDT, and ownership of the risks will be identified. CONSULTANT will summarize project risks in the PSR-PDS.

Deliverables:

- Risk Assessment
- Summary of Risks in PSR-PDS

### **WBS 150.05 Task B: PROBLEM DEFINITION**

#### **B.1 REVIEW OF EXISTING REPORTS/ DATA GATHERING**

COUNTY and CITY will provide existing reports, studies, mapping, and other information for the PROJECT. CONSULTANT will review all provided information and obtain any other available and necessary information for preparation of PSR-PDS. CONSULTANT will obtain as-builts, utility information, Transportation Concept Report/Route Concept Report (TCR/RCR), Corridor System Management Plan (CSMP), Regional Transportation Plan (RTP), Congestion Management Program (CMP), 10-Year SHOPP, the State Implementation Plan, County of Riverside General Plan, City General Plan, local development plans, other reports.

Deliverables:

- Photographs, Exhibits, Inventory List of related studies, mapping, and reports
- Caltrans Encroachment Permit

#### **B.2 MAPPING (OPTIONAL TASK)**

The PSR-PDS will utilize available aerial mapping provided by the CONSULTANT. CONSULTANT will utilize available GIS right of way mapping. New or additional aerial mapping, survey, topographic mapping, or right of way mapping for the PROJECT may be required (optional task) for this phase of the work. CONSULTANT will obtain Caltrans Encroachment Permit for general field and non-ground disturbing activities to obtain information for the project, such as field photography, traffic data, etc.

Deliverables:

- Supplemental Topographic Mapping (Optional Task)

### **B.3 TRAFFIC FORECASTS**

Per the PSR-PDS guidelines the Traffic Engineering Performance Assessment (TEPA) will be limited to an assessment of readily available information. The TEPA will be based on information obtained from the

- Ethanac Road/Highway 74/Nichols Road Expressway Traffic Operations Report (Fehr & Peers, May 2018)
- Interstate 15 & State Route 74 Central Avenue Interchange Project Project Approval/Environmental Document Traffic Operations Analysis Report (EA: Riv 08-0F310) (Fehr & Peers, March 2022)
- I-15 Express Lanes Project Southern Extension (ELPSE) Project Approval and Environmental Document (EA 0J0820) Final Traffic Operations Analysis Report (Fehr & Peers, February 2022)

Data collected and found in these reports are representative of pre-pandemic conditions and considered the most comprehensive available data for use in the PSR-PDS. Other additional and available data will be referenced if needed.

#### **B.3.1 Analysis Scenario**

- Existing Conditions
- Design Year (2045) Conditions – No Build Alternative
- Design Year (2045) Conditions – Build Alternatives (up to three build alternatives)

#### **B.3.2 Intersections**

- Nichols Road/Collier Road
- Nichols Road/Bedrock Road (future road)
- Nichols Road Road/Southbound I-15 Ramps
- Nichols Road Road/Northbound I-15 Ramps

Deliverables:

- Traffic forecast volumes

### **B.4 PROBLEM DEFINITION**

CONSULTANT will establish the PROJECT need and purpose in accordance with Caltrans guidelines in the PDPM and Environmental Documentation requirements. The analysis will summarize the information on capacity and operational deficiencies, congestion levels, future traffic levels of service (LOS), queuing analysis, and accident data provided by Caltrans and PROJECT scoping. CONSULTANT will complete the Scoping Tools including the Transportation Planning Scoping Information Sheet (TPSIS attachment) and Design Scoping Index as outlined in

Section 5, Article 2 and 4 of the PSR-PDS guidelines (Appendix S) within the Project Development Procedures Manual (PDPM).

Deliverables:

- Purpose and Need Statement
- Transportation Planning Scoping Information Sheet (attachment to PSR-PDS)
- Design Scoping Index

## **WBS 150.10 TASK C: PRELIMINARY ENGINEERING AND INITIAL ALTERNATIVES DEVELOPMENT**

### **C.1 CONCEPT ALTERNATIVES DEVELOPMENT**

CONSULTANT will identify three (3) alternative concepts for the PSR-PDS. The three (3) alternative concepts will be agreed upon through an alternative screening process. The alternative screening process will consist of comparing up to five (5) alternatives through various criteria that will be developed and coordinated with CALTRANS and the CITY. One (1) alternative screening workshop will be held to determine the three (3) alternative concepts that will be considered in the PSR-PDS and future phases. Each alternative studied will go through a constructability review to determine feasibility. CONSULTANT will prepare layout schematics in 11x17 format at 1" = 500' scale for three (3) alternative concepts as Caltrans standard cut sheets including title block. The layout schematics will illustrate proposed ramp configurations and include proposed lane configurations, shoulders, and right of way for each alternative. Right of way requirements, retaining wall and sound wall locations will be shown (if applicable).

Deliverables:

- Alternative Screening Matrix with up to five (5) alternatives
- One (1) alternative screening workshop
- Layout schematic and typical section sheet (2 total) for three (3) alternative concepts

### **C.3 PUBLIC/LOCAL AGENCY INPUT**

CONSULTANT shall use available information as collected from other involved agencies to prepare a compatible interchange design with existing and future conditions. Involved agencies include, but will not necessarily be limited to the following:

- Caltrans
- Riverside County Transportation Department (COUNTY)
- City of Lake Elsinore (CITY)
- Western Riverside County Regional Conservation Authority
- United States Fish and Wildlife Service
- California Department of Fish and Wildlife

#### **C.4 PERFORM PUBLIC AND COMMUNITY OUTREACH**

The CONSULTANT will support the City by executing an abbreviated but strategic public outreach program to explain the proposed project, understand community/business concerns, offer opportunities for community feedback and two-way dialogue, and discuss the purpose and need for the project. Outreach activities will support the technical team, with materials designed to be bi-lingual and "user friendly" to confirm that the public understands the Project Initiation Document (PID) phase and how to provide valuable input to the delivery team. The CONSULTANT will conduct community analytics research in producing a demographic and conditional elements report to help tailor strategies and tactics to support all communications and outreach efforts now and throughout the project's life.

The CONSULTANT will organize and attend one (1) public outreach workshop to inform the community of roadway improvement concepts being considered within the project area, to inform the public and responsible agencies about the proposed project and the environmental process, and to solicit input from local residents and businesses that can be obtained during the planning and concept evaluation stage of the PSR-PDS. The workshop will be advertised through various channels to ensure community attendance. The CONSULTANT will create a distribution plan to boost participation in those areas most impacted and within disadvantaged communities.

The CONSULTANT will attend one (1) City Council Meeting to support the project team's presentation of the roadway improvement concepts considered within the project area to the City Council. The outreach component of this presentation will assist the City and the project team to better understand the public concerns and will provide the team with an opportunity to address community concerns as the project moves forward in the planning phase.

Clear and concise project information will be produced through an equity lens and distributed by hand at meetings, through mailings, and electronically through email, web, and social as necessary. The CONSULTANT will facilitate developing and distributing a Fact Sheet in English and Spanish for the Public Outreach Workshop and presentation at the City Council meeting. The English/Spanish Fact Sheet and FAQ document will be prepared in close collaboration with the technical team, followed by one update. The information produced can be provided to City staff to be uploaded on the existing City hosted website for additional ongoing public access during the project's planning phase. The informational materials will explain and illustrate the viable conceptual design alternatives to be studied further in PA&ED, the purpose and need, anticipated project delivery timeline, potential funding sources, and ways to obtain more information and provide feedback on the proposed project. The CONSULTANT will produce a PowerPoint presentation for stakeholder briefings and as visuals for use at the public outreach workshop. It is assumed that any public outreach sessions will occur at a City-owned facility and no local law enforcement would be required. If law enforcement presence is desired, it would be coordinated and provided by the City staff.

##### **DELIVERABLES:**

- Community Analytics Report
- Attendance and participation at one (1) Public Outreach Meeting
- Attendance and participation at one (1) City Council Meeting
- Stakeholder Contact Database / Project Distribution List (1 electronic copy);
  - Public Input/Comment Acknowledgment
- Project Fact Sheet in both English and Spanish (1 electronic copy and up to 100 color printed 8.5 x 11 copies)
- Visual displays for Public Outreach Meeting (up to 5 color printed)

- Preparation of PowerPoint presentation for presentation at a City Council Meeting

## **WBS 150.15 TASK D: ALTERNATIVES ANALYSIS**

### **D.1 RIGHT OF WAY CONCEPTUAL COST ESTIMATE**

CONSULTANT will summarize the anticipated right of way, and utilities impacts for the three (3) build alternatives within the PSR-PDS using the Conceptual Cost Estimate Request/Right of Way Component in accordance with Section 5, Article 7 of the PSR-PDS guidelines (Appendix S) within the PDPM.

CONSULTANT will utilize available GIS preliminary mapping showing the property boundaries and right of way requirements to estimate the number, area, and magnitude of parcels required for acquisition and the likely number of easements needed. CONSULTANT will identify existing utilities and potential relocation activities using existing, available information (e.g., permit search, as-built drawings, field review). CONSULTANT will prepare "Conceptual Cost Estimate – Right-of-Way Component" to develop an order of magnitude cost estimate and to identify additional studies that may be needed during PA&ED. CONSULTANT will coordinate with the COUNTY to assess per square foot unit costs and associated right of way costs relative to impacts to adjacent properties. The square foot unit costs will be developed in coordination with COUNTY and comparable properties within the vicinity of the project.

#### Deliverables:

- Preliminary Right of Way Requirement Exhibits for three (3) build alternatives
- Utility and Assessment
- Conceptual Cost Estimate – Right-of-Way Component

### **D.2 PRELIMINARY STRUCTURES ASSESSMENT**

Using available as-built information for the existing structure facilities along the corridor, CONSULTANT will identify proposed structure improvements for each of the three (3) build alternatives in support of the cost estimate for the PSR-PDS. CONSULTANT will use a streamlined estimating process, such as square-footage costs to develop a "Structure PSR-PDS Cost Estimate" for inclusion into the PSR-PDS document when bridge and/or nonstandard retaining wall work is necessary. CONSULTANT will prepare the Division of Engineering Services (DES) Scoping Checklist in coordination with Project Liaison Engineer. For a PSR-PDS, the level of detail in the DES Scoping Checklist and "Structure PSR-PDS Cost Estimate" is limited to information required to develop accurate work plans for the PA&ED phase.

#### Deliverables:

- Structures PSR-PDS Cost Estimate
- DES Scoping Checklist

### **C.2 PRELIMINARY GEOTECHNICAL ASSESMENT & LIFE CYCLE COST ANALYSIS**

Using available Geotechnical information, the CONSULTANT will assess the existing data in the area. CONSULTANT will prepare a Life Cycle Cost Analysis (LCCA) for the PID phase of the proposed project. A preliminary materials report (PMR) is not anticipated to be required for the PID phase of work and excluded from the scope of work. The LCCA will be divided into three different pavement scenarios:

- Pavement Scenario 1 – worst case ramp 20/40-year Flexible & Rigid
- Pavement Scenario 2– worst case Nichols Road 20/40-year Flexible & Rigid
- Pavement Scenario 3– worst case outside auxiliary lane 20/40-year Flexible & Rigid

CONSULTANT will review existing geotechnical maps and reports in order to develop preliminary pavement sections based on highly simplified pavement assumptions. It is assumed that Caltrans Mechanistic-Empirical calculations will not be required for this preliminary planning phase. CONSULTANT will also Perform geotechnical analysis of the collected data and develop LCCA calculations and prepare a preliminary LCCA report presenting findings and preliminary pavement recommendations for the proposed improvements.

Deliverables:

- Draft and Final LCCA Report

### **D.3 PRELIMINARY DRAINAGE ASSESSMENT**

Freeway, County, and City drainage systems will be reviewed and the impacts of the proposed three (3) build alternatives on these facilities will be assessed. Necessary replacements and/or improvements including incorporation of Water Quality Best Management practices will be reflected in the cost estimates. Detailed hydraulic/hydrologic calculations are outside the scope of this scope of work. CONSULTANT will identify permits for design, construction, and operations of drainage facilities.

Deliverables:

- Identification of impacts to major drainage facilities
- Preliminary cost estimates to affected major drainage facilities

### **D.4 TRAFFIC CAPACITY ANALYSIS**

CONSULTANT will evaluate the project in accordance with Caltrans Traffic Operations Policy Directive 13-02: Intersection Control Evaluation. CONSULTANT will evaluate intersection variations based on the first step of the screening process. CONSULTANT will document evaluation in an ICE Technical Memorandum to identify the preferred intersection control for the three (3) build alternatives within the PSR-PDS.

Deliverables:

- Intersection Control Evaluation Technical Memorandum (Step 1)

### **D.5 TRAFFIC ENGINEERING PERFORMANCE ASSESSMENT**

In coordination with the CITY and other project-related engineers, CONSULTANT will utilize available transportation reports for the corridor, performance monitoring systems, local agency transportation studies to complete the Traffic Engineering Performance Assessment (TEPA) as required within Section 5, Article 5 of the PSR-PDS guidelines (Appendix S) within the PDPM. CONSULTANT will estimate the scope and magnitude of the Traffic Engineering studies (i.e., Travel Forecasting; Traffic Analysis; Infrastructure Evaluation; Warrant Analysis; and Safety Review) that need to be performed during the subsequent Project Approval & Environmental Document (PA&ED) phase. To meet the purpose of the PSR-PDS, it is intended that the

preliminary traffic engineering studies should be limited to an assessment of readily available information and data, and macro-level analysis and evaluation. This effort will produce preliminary traffic engineering findings and estimates to inform and advise the PDT on:

- The potential scope of work and features (especially the traffic "elements" referenced above)
- Potential performance benefits and deficiencies
- The scope and magnitude of traffic engineering work (traffic forecasting, modeling, analysis, and evaluation) to be performed during the Project Approval and Environmental Document phase

CONSULTANT will identify the traffic forecasting and traffic engineering studies needed to analyze, evaluate, and more accurately predict or estimate operational and safety performance of the proposed improvements during the future PA&ED phase. Future studies may require new data collection and forecasting. CONSULTANT will perform a macro-level analysis at the study intersections and locations using Synchro software and HCM methodology. Microsimulation is not assumed under this task. Traffic analysis will be conducted under existing conditions, design year (2045) no build conditions, and design year (2045) with two build alternatives conditions. The analysis will present delay and level of service at each study intersection and freeway mainline. The analysis will be used to determine three (3) build alternatives for the PSR-PDS. Detailed analysis (FREQ, CORSIM, VISSIM, etc.) will not be performed as part of this scope of work. CONSULTANT will summarize the assessment and key findings and estimates and incorporated into the PSR-PDS document.

Deliverables:

- Traffic Engineering Performance Assessment
- Preliminary traffic assessment of three (3) build alternatives
- Summary of traffic engineering studies and scope for PSR-PDS

## **D.7 CONSTRUCTION ESTIMATES**

CONSULTANT will prepare a "Capital Outlay Project Estimate" in accordance with Section 4 of the PSR-PDS guidelines (Appendix S) within the PDPM. The cost estimate will be in the format of Appendix AA of the PDPM to support the PSR-PDS. A cost estimate will be prepared for three (3) build alternatives within the PSR-PDS. For the PSR-PDS capital cost estimates, an order of magnitude cost estimate will be prepared. CALTRANS will prepare the "Capital Outlay Support Estimate" to identify level of staff support for PA&ED

Deliverables:

- Capital Outlay Project Estimates for three (3) build alternatives

## **D.8 EXCEPTIONS TO DESIGN STANDARDS DEVELOPMENT**

Fact Sheets for exceptions to advisory and mandatory Highway Design Manual standards are not required and excluded from this scope of work. CONSULTANT will evaluate three (3) build alternatives using Design Information Bulletin 82-01 "Design Checklist". Deviations from design standards will be identified and described in the PSR-PDS. CONSULTANT will perform a non-standard feature risk assessment to indicate a level of risk for conceptual acceptability of the build alternatives. The design standards risk assessment is a list of design standards that will likely not

be met for each alternative and the probability of approval for each proposed non-standard feature. CONSULTANT will attend a Design Exception Risk Assessment meeting with CALTRANS design staff to obtain approval of risk assessment.

A Multi-Modal Decision document will be prepared and coordinated with the CITY and CALTRANS for approval.

Deliverables:

- List of non-standard features for three (3) build alternatives
- Risk assessment for approval for non-standard features
- Design Exception Risk Assessment Meeting
- Multi-Modal/Complete Streets Decision Document

**WBS 150.20 TASK F: PRELIMINARY ENVIRONMENTAL ANALYSIS (PEAR)**

**F.1 PEAR PREPARATION**

CONSULTANT will prepare a draft and final Preliminary Environmental Analysis Report (PEAR), per CALTRANS Standard Environmental Reference Guidelines and the PEAR Handbook. Caltrans guidelines for the PEAR will follow the guidance available as of contract date. The PEAR will identify the anticipated Environmental Document, anticipated impacts, the future technical studies, and anticipated mitigations. The PEAR will also estimate the scope, schedule and preliminary costs associated with completing environmental compliance. The PEAR will also present and discuss the results of preliminary environmental studies in order to identify environmental analyses that may affect design. The information contained in the PEAR will serve as a foundation to begin studies for the PA&ED phase.

In addition, cumulative impacts and context sensitive solutions will be summarized in the Technical Summaries section of the PEAR, but will not have a separate technical memoranda prepared.

The PEAR will also include:

- Purpose and Need Statement
- A discussion of environmental resources and a description of the potential PROJECT issues or impacts, which could delay the PROJECT or affect any PROJECT alternative.
- Description of studies that are needed to complete an environmental evaluation (noting as necessary any seasonal constraints for these studies).
- A recommended environmental determination/documentation and a tentative schedule for its completion.
- Required or anticipated permits or approvals.

Deliverables:

- Initial Site Assessment (ISA) Checklist
- Draft and Final PEAR

## **F.2 VEHICLE MILES OF TRAVEL DECISION DOCUMENT (VMTDD) ASSISTANCE**

CONSULTANT will assist the project team in filling out the VMTDD that is now required as part of the PSR/PDS phase of the project. CONSULTANT will include preliminary forecasting to assist in estimating VMT and coordination with the project team to derive information needed for the document. CONSULTANT to prepare information for, coordinate on, and respond to comments.

### Deliverables:

- VMT Decision Document

## **WBS 150.25 TASK G: APPROVED PSR-PDS & SWDR**

### **G.1 DRAFT PSR-PDS**

CONSULTANT will prepare a Draft PSR-PDS Report to document the geometric assumptions, initial studies, methodology, alternatives, findings, FHWA coordination and involvement, anticipated design exceptions with general PROJECT strategy of how to address within PA&ED phase (no fact sheets anticipated), stakeholder meetings and involvement and results in accordance with the requirements outlined as outlined within PDPM Appendix S.

### Deliverables:

- Draft PSR-PDS

### **G.2 FINAL PSR-PDS**

CONSULTANT will prepare the Final PSR-PDS based on any comments received from Caltrans and schedule a focus meeting on first review comments. Response to comments will be prepared to address all the Caltrans comments received on the Draft PSR-PDS. The Final PSR-PDS will establish the scope, schedule, and estimated costs of the alternative concepts to the PROJECT. The document will also include a tabulation of estimated project support costs and capital costs by project phase and fiscal year. CONSULTANT will coordinate and obtain final approvals of the PSR-PDS. CONSULTANT will update the FTIP and coordinate with RCTC on the project description, funding, and schedule.

### Deliverables:

- Approved Final PSR-PDS
- Cost Estimates for Alternatives
- Updated FTIP Description

### **G.3 STORMWATER DOCUMENTATION**

CONSULTANT will prepare stormwater documentation in accordance with Section 5, Article 3 of the PSR-PDS guidelines (Appendix S) within PDPM. Since the main purpose of the PSR-PDS is only to estimate the resources needed to complete PA&ED, the expected level of stormwater information for a PSR-PDS is much less than a regular Project Study Report or Project Report. The PSR-PDS evaluation will mainly focus on determining if there will be any

significant impacts to the three (3) build alternatives, right-of-way needs, or PROJECT costs due to the need to incorporate treatment Best Management Practices (BMPs) for compliance with stormwater requirements.

Deliverables:

- Storm Water Data Report

The scope assumes the Project Initiation Proposal and Cooperative Agreement with Caltrans is completed by others prior to NTP. Public outreach and utility coordination are not required by Caltrans procedures during the PID phase and therefore are not required in this phase of work. Utility coordination will be conducted via Dig-Alert. Coordination is assumed to occur virtually, final reports will be printed and mailed as needed.

## HDR

[illegible]



## Fehr and Peers

Task	Description	Jason Pack, P.E. - Principal / Project Manager	Paul Hermann, P.E. - Operations Lead	Sr. Engineer/Planner	Engineer/Planner	Graphics Support	Admin Support	Billing/Accounting Support	TOTAL LABOR HOURS	TOTAL LABOR DOLLARS	Total ODC	Mileage	Technology Charge	Reproduction	Parking	TOTAL COST
Project Study Report / Prelim Env Analysis Report																
WBS 100	Project Management and Coordination															
100.05	Project Management								0	\$0.00	\$0.00					\$0.00
	Invoicing, budget tracking, project coordination	2					10	10	0	\$3,611.89	\$0.00					\$3,611.89
	Meetings (6 assumed)	12	6		6				24	\$5,816.71	\$0.00	\$0.00				\$5,816.71
									0	\$0.00	\$0.00		0			\$0.00
									0	\$0.00	\$0.00			0		\$0.00
									0	\$0.00	\$0.00		0			\$0.00
									0	\$0.00	\$0.00					\$0.00
									0	\$0.00	\$0.00					\$0.00
TOTAL LABOR		14	6	0	6	0	10	10	24							\$0.00
TOTAL DOLLAR		\$ 4,597.11	\$ 1,219.66	\$ -	\$ 656.67	\$ -	\$ 1,469.77	\$ 1,485.38		\$ 9,428.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,428.60
WBS 150									0							
150.05.05	Review of Existing Reports, Studies and Mapping	2	4		6	4			16	\$2,720.66	\$0.00					\$2,720.66
150.15.50	Traffic Studies								0	\$0.00	\$0.00					\$0.00
	TEPA	4	40	8	50	20			122	\$19,050.85	\$0.00					\$19,050.85
	ICE Step I	4	12		30	8			54	\$8,224.42	\$0.00					\$8,224.42
	VMTDD	10	10	10	10				40	\$7,865.03	\$0.00			0		\$7,865.03
									0	\$0.00	\$0.00					\$0.00
									0	\$0.00	\$0.00					\$0.00
									0	\$0.00	\$0.00					\$0.00
									0	\$0.00	\$0.00					\$0.00
									0	\$0.00	\$0.00					\$0.00
									0	\$0.00	\$0.00					\$0.00
									0	\$0.00	\$0.00					\$0.00
TOTAL LABOR		20	66	18	96	32	0	0	232							\$0.00
TOTAL DOLLAR		\$ 6,567.31	\$ 13,416.27	\$ 2,617.49	\$ 10,506.65	\$ 4,753.23	\$ -	\$ -		\$ 37,860.95	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37,860.95

## Guida

		Sr. Project Surveyor	Project Surveyor	Sr. Survey Analyst	Survey Analyst	Survey Technician	Project Coordinator	TOTAL LABOR HOURS	TOTAL LABOR DOLLARS	Total ODC	Mileage	Aerial Mapping	Reproduction	Parking	TOTAL COST
Task	Description	Survey Project Manager													
Project Study Report / Prelim Env Analysis Report															
WBS 100	Project Management and Coordination														
								0	\$0.00	\$0.00					\$0.00
100.05	Project Management and Coordination							0	\$0.00	\$0.00					\$0.00
								0	\$0.00	\$0.00	\$0.00				\$0.00
								0	\$0.00	\$0.00		\$0.00			\$0.00
								0	\$0.00	\$0.00			\$0.00		\$0.00
								0	\$0.00	\$0.00		\$0.00			\$0.00
								0	\$0.00	\$0.00					\$0.00
								0	\$0.00	\$0.00					\$0.00
<b>TOTAL LABOR</b>		0	0	0	0	0	0	0							\$0.00
<b>TOTAL DOLLAR</b>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ -	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WBS 150								0							
								0	\$0.00	\$0.00					\$0.00
150.05.30	Research and Record information	4	16			48	4	88	\$16,800.00	\$200.00	\$150.00		\$50.00		\$17,000.00
150.05.30	Survey and Mapping - Aerial Mapping	2	8				2	28	\$7,560.00	\$15,100.00	\$100.00	\$15,000.00			\$22,660.00
150.05.30	Survey and Mapping - Supplemental Topo	2	4			24	2	48	\$10,740.00	\$100.00	\$100.00				\$10,840.00
								0	\$0.00	\$0.00			\$0.00		\$0.00
								0	\$0.00	\$0.00					\$0.00
								0	\$0.00	\$0.00					\$0.00
								0	\$0.00	\$0.00					\$0.00
								0	\$0.00	\$0.00					\$0.00
								0	\$0.00	\$0.00					\$0.00
								0	\$0.00	\$0.00					\$0.00
<b>TOTAL LABOR</b>		8	28	0	24	48	0	8	164						\$0.00
<b>TOTAL DOLLAR</b>		\$ 1,880.00	\$ 5,460.00	\$ -	\$ 3,960.00	\$ 6,960.00	\$ -	\$ 1,000.00	\$ 35,100.00	\$15,400.00	\$350.00	\$15,000.00	\$50.00	\$0.00	\$50,500.00

Michael Baker International

Task	Description	Principal - Brad Losey	Technical Manager - Perla Abarca	Technical Manager - Terrence Chen	Design Engineer / Senior Designer - Nora Jans	Project Engineer / Project Surveyor - Garrett Ribas	Design Engineer / Senior Designer - Daniel Price	Project Coordinator	Design Technician / Environmental Analyst	Assistant Engineer / Planner	Office Support / Clerical	1 - Person Survey Crew	Total ODC	Mileage	Aerial Mapping	Reproduction	Parking	TOTAL COST
Project Study Report / Prelim Env Analysis Report																		
WBS 100	Project Management and Coordination																	
													\$0.00					\$0.00
100.05	Project Management and Coordination		32										\$400.00	\$400.00				\$8,263.36
													\$0.00	\$0.00				\$0.00
													\$0.00		\$0.00			\$0.00
													\$0.00			\$0.00		\$0.00
													\$0.00		\$0.00			\$0.00
													\$0.00					\$0.00
													\$0.00					\$0.00
													\$0.00					\$0.00
TOTAL LABOR		0	32	0	0	0	0	0	0	0	0	0						\$0.00
TOTAL DOLLAR		\$ -	\$ 7,863.36	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$400.00	\$400.00	\$0.00	\$0.00	\$0.00	\$8,263.36
WBS 150																		
													\$0.00					\$0.00
150.15.40	Preliminary Drainage Assessment	10	14			56	160						\$200.00	\$200.00				\$36,990.26
150.20.50	Initial Water Quality Assessment	6		20	120								\$200.00	\$200.00				\$27,428.48
150.20.55	Initial Floodplain Assessment	10	16			40	80						\$200.00	\$200.00				\$24,045.08
150.25.25	Storm Water Documentation	6		28			40						\$200.00	\$200.00		\$0.00		\$37,837.28
													\$0.00					\$0.00
													\$0.00					\$0.00
													\$0.00					\$0.00
													\$0.00					\$0.00
													\$0.00					\$0.00
													\$0.00					\$0.00
TOTAL LABOR		32	30	48	120	96	280	0	0	0	0	0						\$0.00
TOTAL DOLLAR		\$ 9,509.76	\$ 7,371.90	\$ 13,341.60	\$ 19,886.40	\$ 14,019.84	\$ 38,850.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$800.00	\$800.00	\$0.00	\$0.00	\$0.00	\$126,301.10

## Paleo West

Task	Description	Principal In Charge	Principal Investigator	Project Manager	Senior Technical Experts	Technical Experts	Field Technicians	Senior GIS Specialists	GIS Specialists	Technical Editor	Office Support / Clerical	TOTAL LABOR HOURS	TOTAL LABOR DOLLARS	Total ODC	Mileage	EIC Fees	Museum/Science Center Fees	Parking	TOTAL COST
Project Study Report / Prelim Env Analysis Report																			
WBS 100	Project Management and Coordination																		
100.05	Project Management and Coordination											0	\$0.00	\$0.00					\$0.00
												0	\$0.00	\$0.00					\$0.00
												0	\$0.00	\$0.00	\$0.00				\$0.00
												0	\$0.00	\$0.00		\$0.00			\$0.00
												0	\$0.00	\$0.00			\$0.00		\$0.00
												0	\$0.00	\$0.00		\$0.00			\$0.00
												0	\$0.00	\$0.00					\$0.00
												0	\$0.00	\$0.00					\$0.00
												0	\$0.00	\$0.00					\$0.00
												0	\$0.00	\$0.00					\$0.00
TOTAL LABOR		0	0	0	0	0	0	0	0	0	0	0							\$0.00
TOTAL DOLLAR		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	-	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WBS 150	PEAR											0							
												0	\$0.00	\$0.00					\$0.00
150.20	Preliminary Paleontological Resource Assessment	2			15		4		2	1		24	\$3,095.00	\$285.00	\$65.00		\$220.00		\$3,380.00
150.20	Preliminary Cultural /Native American Resource Assessment		3	24	4	13		8	6	1	4	62	\$7,930.00	\$945.00	\$65.00	\$880.00			\$8,875.00
												0	\$0.00	\$0.00					\$0.00
												0	\$0.00	\$0.00			\$0.00		\$0.00
												0	\$0.00	\$0.00					\$0.00
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												0	\$0.00	\$0.00					\$0.00
												0	\$0.00	\$0.00					\$0.00
												0	\$0.00	\$0.00					\$0.00
												0	\$0.00	\$0.00					\$0.00
TOTAL LABOR		2	3	24	19	13	4	8	8	2	4	86							\$0.00
TOTAL DOLLAR		\$ 410.00	\$ 540.00	\$ 3,360.00	\$ 2,565.00	\$ 1,437.50	\$ 380.00	\$ 1,080.00	\$ 712.50	\$ 180.00	\$ 360.00		\$ 11,025.00	\$1,230.00	\$130.00	\$880.00	\$220.00	\$0.00	\$12,255.00



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