FIRST AMENDMENT TO AGREEMENT NO. 33938

33938

THIS FIRST AMENDMENT TO AGREEMENT NO. 33938 is made and entered, in duplicate, as of December 10, 2015 for reference purposes only, pursuant to a minute order adopted by the City Council of the City of Long Beach at its meeting on June 9, 2015, by and between HDR ENGINEERING, INC., a Nebraska corporation ("Consultant"), with a place of business at 3230 El Camino Real, Suite 200, Irvine, California 92602, and the CITY OF LONG BEACH, a municipal corporation ("City").

WHEREAS, City requires specialized services requiring unique skills to be performed in connection with engineering and architectural design services for the final design bid documents, construction bidding and support for the Shoemaker Bridge replacement project; and

WHEREAS, the parties entered Agreement No. 33938 whereby Consultant agreed to provide these services; and

WHEREAS, the parties desire to decrease the Agreement amount by $739,654.27 for a total not to exceed amount of $3,960,345.73 and attach a revised scope of work and a revised rate sheet;

NOW, THEREFORE, in consideration of the mutual terms, covenants, and conditions herein contained, the parties agree as follows:

1. Section 1.A. of Agreement No. 33938 is hereby amended to read as follows:

"A. Consultant shall furnish specialized services more particularly described in Exhibit "A", attached to this Agreement and incorporated by this reference, in accordance with the standards of the profession, and City shall pay for these services in the manner described below, not to exceed Three Million Nine Hundred Sixty Thousand Three Hundred Forty-Five Dollars and Seventy-Three Cents ($3,960,345.73), at the rates or charges shown in Exhibit "B".

2. The Scope of Work in Exhibit "A" to the Agreement is hereby

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
333 West Ocean Boulevard, 11th Floor
Long Beach, CA 90802-4664

amended in accordance with Exhibit "A-1", attached hereto and incorporated by this reference.

3. The Rates/Fees in Exhibit "B" to the Agreement are hereby amended in accordance with Exhibit "B-1", attached hereto and incorporate by this reference.

4. Except as expressly modified herein, all of the terms and conditions contained in Agreement No. 33938 are ratified and confirmed and shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused this document to be duly executed with all formalities required by law as of the date first stated above.

HDR ENGINEERING, INC., a Nebraska corporation

_____, 20__ By _____
Name THOMAS T. KIM
Title SR. VICE PRESIDENT

_____, 20__ By _____
Name _____
Title _____

"Consultant"

CITY OF LONG BEACH, a municipal corporation

3/29, 2016 By _____
City Manager

"City"

This First Amendment to Agreement No. 33938 is approved as to form on 1/19, 2016.

CHARLES PARKIN, City Attorney

By _____
Deputy

OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
333 West Ocean Boulevard, 11th Floor
Long Beach, CA 90802-4664

CERTIFICATE

The undersigned hereby certifies that she is the Assistant Secretary of HDR Engineering, Inc., a Nebraska corporation (the "Corporation"), and that, as such, has custody of the minute books of the Corporation, and that, by Consent and Agreement of the Board of Directors dated May 20, 2015, the following resolution was unanimously adopted:

> **"RESOLVED,** that effective as indicated, and until June 20, 2016, or until termination of said individual from the Corporation, or until recision by the Corporation's Board of Directors, whichever occurs first, the following individuals are hereby granted the nondelegable authority to execute or approve on behalf of the Corporation, contracts for engineering services and architectural services incidental to engineering services to be rendered by the Corporation, . . . , or releases of claim or lien in connection with such services, such contracts or releases so executed or approved shall be binding upon the Corporation:
>
> . . . Brent R. Felker – Executive Vice President . . .
> . . . Amy A. Gilleran – Senior Vice President . . .
> . . . Sharon M. Greene – Senior Vice President . . .
> . . . Thomas T. Kim – Senior Vice President . . .
> . . . David A. Ludwin – Senior Vice President . . .
> . . . Michael I. Schneider – Senior Vice President . . .
> . . . Randy N. Altshuler – Vice President . . .
> . . . Kip D. Field – Vice President . . .
> . . .Jonny B. Rohrer – Authorized Representative . . .

The undersigned further certifies that the foregoing resolution has been spread in full upon the minute books of the Corporation and is in full force and effect.

DATED July 1, 2015.

(CORPORATE SEAL)

HDR ENGINEERING, INC. CORPORATE SEAL NEBRASKA CORPORATION

Bonnie J. Kudron

Bonnie J. Kudron, Asst. Secretary

EXHIBIT "A-1"

Scope of Work

Scope of Services

Amendment 1

The Shoemaker Bridge Replacement Project, Engineering and Architectural Services for the Preparation of Final Design (PS&E)/Bid Documents, Construction Bidding and Support

Phase 1 – Prepare/Update Project Report, Environmental Document and Prepare 30% Plans

Scope of Services

The City of Long Beach has requested that HDR prepare a "Phase 1" scope of services for the Shoemaker Bridge Replacement Project that includes the following major work elements:

- Work with the City to refine the current project build alternatives as described in HDR's original scope of services to better reflect the City's vision for the project, including the park, local circulator road layout and geometrics, and park elements. It is assumed that up to two (2) potential refined build alternatives could be developed as part of this work element with three (3) concepts per alternative. This will include the completion of a Value Analysis Study of the refined build alternatives.
- Update the current Administrative Draft Project Report and Environmental Document prepared by URS/AECOM as necessary to reflect these refined build alternatives and circulate to the Caltrans and the public for review and comment.
- Develop Final Project Report and Environmental Document to reflect Caltrans and public comments and preferred project alternative and obtain the necessary approvals.

All subsequent project activities (including type selection of the selected bridge alternative), which encompass final design of the project, will be deferred until Phase 2.

The Phase 1 scope of services included below includes the activities that make up these three major work elements. The tasks and activities listed below were extracted from HDR's original scope of services as appropriate and modified to fit the City's current 2 phase approach to project implementation. The estimated duration of the Phase 1 work as described below is assumed to be 28 months from Notice to Proceed. Phase 1 and Phase 2 estimated duration is 3 years with some overlapping of the phases.

1 Task 1 – Complete Project Report and Environmental Document

1.1 Update and Prepare Environmental Technical Studies

Objective: To update the technical Studies including Natural Environment Study, Biological Assessment, Historic Property Survey Report, Archaeological Survey Report, Community Impact Report, Section 4(f) Evaluation, Visual Impact Assessment, Draft Paleontological Impact Report/ Evaluation Report, Initial Site Assessment, Noise Study Report, Traffic Volumes, Traffic Operations Analysis Report (using HCM and Synchro), Air Quality Analysis, Storm Water Data Report, Jurisdictional Delineation Report, Location Hydraulic Study Background Report, Water Quality Evaluation Report, and Noise Abatement Decision Report to reflect the refined build alternatives and prepare the Final technical studies to support in Environmental Document and Project Report.

Key assumption: For the purpose of developing this scope and fee it is assumed that the existing document (s) has addressed previous comments from prior reviews. If comments have not been addressed and/or project scope and limits have significantly changed, the HDR team and the City will need to re-evaluate the scope and the level of effort needed to complete the report(s).

Key understanding and activities: HDR will update the technical Studies to reflect the refined/new build alternatives developed as part of Phase 1, which may include updates and/or modifications to the following technical studies:

- Natural Environment Study
- Biological Assessment
- Historic Property Survey Report
- Archaeological Survey Report
- Community Impact Report
- Section 4(f) Evaluation
- Visual Impact Assessment
- Draft Paleontological Impact Report/ Evaluation Report
- Initial Site Assessment
- Noise Study Report
- Traffic Volumes
- Traffic Operations Analysis Report (using HCM and Synchro)
- Air Quality Analysis
- Storm Water Data Report
- Jurisdictional Delineation Report
- Location Hydraulic Study Background Report
- Water Quality Evaluation Report
- Noise Abatement Decision Report

HDR will submit the updated technical studies to the City, Caltrans, and FHWA, as appropriate, for review and approval. In addition to preparing the technical studies, HDR will also conduct the CEQA and NEPA public involvement process. HDR will identify likely permits, prepare permit applications, and assist Caltrans and the City in coordinating approvals with permitting agencies.

Deliverables: Deliverables include first Draft, second Draft, and final document of the following technical studies:

- Natural Environment Study
- Biological Assessment
- Historic Property Survey Report
- Archaeological Survey Report
- Community Impact Report
- Section 4(f) Evaluation
- Visual Impact Assessment
- Draft Paleontological Impact Report/ Evaluation Report
- Initial Site Assessment
- Noise Study Report
- Traffic Volumes
- Traffic Operations Analysis Report (using HCM and Synchro)
- Air Quality Analysis
- Storm Water Data Report
- Jurisdictional Delineation Report
- Location Hydraulic Study Background Report

- Water Quality Evaluation Report
- Noise Abatement Decision Report

1.2 and 1.3 Prepare Draft and Final Project Report

Objective: To update the Draft Project Report to reflect the refined/new project build alternatives and submit to Caltrans for review/comment, and approval. To prepare the Final Project Report to record/reflect the selected preferred build alternative.

Key understanding and activities: Once the refined build alternatives have been fully developed and the appropriate engineering technical studies have been completed, HDR will update the Administrative Draft Project Report accordingly to address the new build alternatives including all necessary attachments. HDR will assume three submittals of the Draft Project Report to Caltrans; an Administrative Draft, Draft, and Final Draft. After each of the first two submittals, HDR will prepare formal responses to agency comments and document these responses in a series of comment-response tables (one for each reviewing agency). After concurrence has been obtained from the reviewing agencies on the disposition of each comment, HDR will update the PR as necessary to address the comments received. HDR will then circulate the Draft Project Report for formal approval and signatures.

Once a preferred build alternative has been selected by the City and Caltrans, HDR will prepare the Final Project Report to record the selection. HDR anticipates two submittals of the Final PR to Caltrans and the City to ensure all comments are adequately addressed and to obtain formal approval.

Key assumption: For the purpose of developing this scope and fee it is assumed that the existing document (s) has addressed previous comments from prior reviews. If comments have not been addressed and/or project scope and limits have significantly changed, the HDR team and the City will need to re-evaluate the scope and the level of effort needed to complete the report(s).

Deliverables:

- Draft Project Report,
- Revised DPR
- Revised DPR
- Final DPR
- Admin Final PR
- Revised Final PR
- Final PR

1.4 and 1.5 Prepare Draft and Final Environmental Document

Objective: To update the Draft Environmental Documents to reflect the refined build alternatives, circulate for public comment, and prepare the Final Environmental Document to incorporate and address the comments received.

Key assumption: For the purpose of developing this scope and fee it is assumed that the existing document (s) has addressed previous comments from prior reviews. If comments have not been addressed and/or project scope and limits have significantly changed, the HDR team and the City will need to re-evaluate the scope and the level of effort needed to complete the report(s).

Key understanding and activities: An Administrative Draft Environmental Impact Report/Environmental Assessment (EIR/EA) has been prepared for this project to date with an anticipated Mitigated Negative Declaration/Finding of No Significant Impact (MND/FONSI). HDR will update the Environmental Document to reflect the refined/new build alternatives developed as part of Phase 1.

HDR will submit the DED to the City, Caltrans, and FHWA, as appropriate, for review and approval. In addition to preparing the environmental documentation, HDR will also conduct the CEQA and NEPA public involvement process. HDR will identify likely permits, prepare permit applications, and assist Caltrans and the City in coordinating approvals with permitting agencies.

HDR will review the public comments received as part of the circulation of the DED and will work with appropriate agency staff to prepare responses and identify potential project mitigations to address the comments received. HDR will prepare the Final Environmental Document to include the public comments, responses, and mitigations as appropriate. HDR will submit the Administrative FED to the City and Caltrans for review and comment. HDR will prepare responses to any comments received and update the FED accordingly for final circulation and agency approvals.

Deliverables:

- Updated DED
- Revised DED
- Revised DED
- Final DED
- Revised Admin FED
- Revised FED
- Revised FED
- Final FED

1.6 Notice of Preparation, Initial Study and Public Scoping Meeting *(NEW)*

HDR will prepare the required Notice of Preparation (NOP) and Initial Study (IS) Checklist as required under CEQA. We will also work with City and Caltrans staff to conduct one Public Scoping meeting.

HDR will work with the City to develop a project description and establish the project footprint. After reaching consensus on the description and footprint, HDR will prepare and submit the Draft NOP and IS Checklist to the City for review and comment. Caltrans, as the Responsible CEQA agency, will also be afforded the opportunity to review and comment on the NOP. HDR will participate in one review meeting with the City and one with Caltrans. After receiving comments on the Draft NOP from the City and Caltrans, HDR will revise the Draft NOP and IS Checklist and resubmit to the City and Caltrans for final approval. HDR will work with City staff to develop a mailing list and distribute the NOP and IS Checklist to the appropriate parties as required by CEQA. Once approved, the NOP and IS Checklist will be issued to notify the State Clearinghouse, the general public and local agencies that the City is preparing an EIR for the project.

The scoping process includes a formal public scoping meeting. HDR anticipates the meeting will follow the "Open House" format with several information stations where residents can ask questions. There will also be a comment

station to allow for public comments. HDR will work with the City to develop exhibits of the project area and potential project Alternatives. The exhibits will be conceptual in nature and will be marked as "preliminary subject to change". The City will prepare the mailing list of residents in or near the project area and mail the public meeting notice. The HDR team will participate in two preparation meetings with the City and Caltrans to plan the scoping meeting. The HDR team will have four attendees at the Public Scoping Meeting. Comments from the Scoping Meeting will be documented in the EIR.

Deliverables:

- Master Distribution List (.pdf electronic file, Microsoft Word file)
- Draft Notice of Preparation and IS Checklist (PDF electronic file, Microsoft Word file)
- Final Notice of Preparation and Initial Study Checklist (PDF electronic file, Microsoft Word file)
- Draft and Final Scoping Meeting exhibits mounted on boards. (Two copies of each of the four exhibits mounted on foam core boards)
- Draft and Final Scoping Meeting flyer. (PDF electronic file, Microsoft Word file)

Key Understandings:

- The City will mail the public notice letters.
- As CEQA Lead Agency, the City of Long Beach will be responsible for leading the AB-52 Native American notifications and consultations.
- The City will lead the public outreach and communications effort.
- The City will develop the database of residents within the project area and mail the meeting notices.
- The HDR team will have four representatives at the Scoping Meeting.
- The City will provide a location for the Public Scoping Meeting.
- The Scoping Meeting will not include a formal presentation.

2 Task 2 – Engineering/Architectural Development

2.1 Project Management

HDR will provide overall project management, coordination, and supervision of the project staff to facilitate the performance of the work in accordance with the scope and requirements of the City of Long Beach, Caltrans, Metro and other jurisdictional agencies.

This task involves the work related to managing the project on behalf of HDR, including the preparation of the required project initiation documentation, conducting internal and external meetings and coordination, the development and implementation of appropriate project controls, and the preparation of monthly invoices and progress reports.

2.1.1 Project Management Plan

Objective: To assist the City of Long Beach and the HDR team by defining a procedural framework for the management and control of services provided by the contract. This reference document will be distributed to the City and the HDR team at project initiation to be used as an administrative and technical guide for the completion of the work of the project.

Key understanding and activities: HDR's Project Manager will prepare a Project Management Plan for this contract within the first month of the project initiation, which will outline the following information related to the work:

- Presents the operating procedures linking the City of Long Beach, Caltrans, and the HDR project team for project implementation
- Assigns roles and responsibilities to the project team for performance and management of the technical work
- Defines the project assignments and deliverables to be prepared
- Defines the production schedule for the project deliverables
- Defines the communication channels between the City, their partner agencies, HDR, and its subconsultants
- Defines the document control procedures and filing system to be implemented
- Provides formatting standards for both drawing and report preparation
- Development of Stakeholder list

The Project Management Plan is a framework. It provides a structured approach to completing the defined tasks of the project, promotes communications, and facilitates consistency in deliverables.

Included with the Project Management Plan will be a critical path method (CPM) baseline project schedule prepared as part of Task A.3. This document will be distributed to all project team members and the City. It will be updated periodically to reflect changes in protocol or other information included and redistributed.

Deliverables:

- Project Management Plan

2.1.2 Prepare and Implement QA/QC Plan

Objective: To establish and define a specific and detailed set of quality assurance and control procedures to be implemented to facilitate the development of the project deliverables.

Key understanding and activities: The Shoemaker Bridge Replacement Project Design Quality Plan will provide direction and guidance to the project team (including subconsultants) for completion of the project by defining the specific quality control and assurance procedures that will be implemented. A designated Quality Assurance Manager will be responsible for presenting the defined quality control procedures to the project staff at project initiation and conducting audits of deliverables throughout the project to check that the specified quality control procedures have been implemented and documented.

The Shoemaker Bridge Replacement Project Design Quality Plan will identify a designated quality control reviewer for each deliverable. It will also identify the estimated start and end dates that each Quality Control (QC) review will be completed based on the baseline schedule. This information will be input into HDR's project controls monitoring system, Inquire, so that these QC reviews can be tracked and monitored to check that they are being completed and documented.

Key assumptions: Subconsultants will be responsible for implementing the quality control procedures as defined in the Shoemaker Bridge Replacement Project Design Quality Plan for any deliverables for which they are responsible.

Deliverables:

- QA/QC Plan

2.1.3 Prepare and Maintain Project Schedule

Objective: To develop a CPM baseline project schedule for the completion of the work included within this scope of services at project initiation to establish critical milestone dates and track progress. This schedule will be periodically updated and included in the PMP.

Key understanding and activities: HDR will develop a CPM baseline project schedule similar to the one included as an attachment to this scope, which will be prepared using Microsoft Project and presented in Gantt chart format. The format will identify the anticipated start/end dates and durations for each task identified within the scope of work and will identify the anticipated critical path. Key project milestone dates will be identified, and logic ties will be built into the schedule to show the relationship between linked tasks.

Once prepared, the baseline schedule will be submitted to the City and its project partners for review and approval. Once approved, the project baseline will be set, with subsequent schedule updates compared against the baseline for reference. Monthly status schedules will be prepared in conjunction with each progress report to track the current status of the project schedule against the baseline and to identify potential schedule issues regarding upcoming work items and deliverables.

Key assumptions: Monthly status schedules will be provided for the duration of this phase, which is assumed to be 27 months.

Deliverables:

- Monthly Project Schedule

2.1.4 Project Meetings

Objective: to facilitate regular coordination within the project team, and between the project team and the project stakeholders during the execution of the project to expedite decision making and issue resolution.

Key understanding and activities: HDR anticipates the need for three distinct levels of regular project coordination throughout the duration of the design phase of the project:

- Weekly internal project team meetings: these meetings will be attended by project discipline leads to review the status of ongoing work and to facilitate interdisciplinary coordination. A project action items list will be prepared at project initiation and updated/maintained for the project. The action items list will be reviewed with the project team to identify and track action items against the project schedule.
- Biweekly City meetings: The HDR Project Manager will meet with the City's project manager on a biweekly (every other week up to 48 meetings) basis to review the project status from a technical and contractual standpoint and to discuss issues of concern.
- Monthly PDT meetings: At project initiation, HDR will work with the City to identify the appropriate Caltrans District 7 staff and any additional outside agencies or stakeholders (i.e., Port of Long Beach, US Army Corps of Engineers) to include in the Project Development Team. HDR will work with the City to establish the appropriate agency contacts and invite them to participate in the PDT. PDT meetings will be held on a

monthly basis throughout Phase 1 (up to 27 meetings). Draft meeting agendas will be prepared by HDR at least three days prior to each PDT meeting and submitted to the City's project manager and the Caltrans project lead for review and comment.

- Agency and stakeholder focused technical meetings: Meetings will be conducted with the City, Caltrans, and other stakeholders to address specific technical issues affecting the project's scope and design up.

Key assumptions: These regular coordination meetings are assumed to occur throughout the duration of preliminary design, with a total estimated duration of 27 months and up to 27 technical meetings. Regular coordination with impacted utility owners is covered under Task I.5.6.

Deliverables:

- Meeting agendas
- Minutes
- Presentation materials

2.1.5 Progress Reports and Invoices

Objective: To develop and utilize tools to manage and track cost control, schedule management, contract compliance, and document control and to facilitate regular payment by the City for work completed.

Key understanding and activities: Invoices will be generated on a monthly basis in accordance with the City's invoicing guidelines. HDR will work with City staff at project initiation to develop an appropriate invoicing template. This template will be included within the Draft Project Management Plan and will be used by subconsultants as well as HDR. Progress reports will be generated to accompany each invoice, which will include the following information:

- Work completed over the reporting period by task
- Work to be completed over the upcoming reporting period by task
- Progress schedule which will compare the status of each activity against the baseline
- Earned value curves and narrative analysis of curve data.
- Identification of issues or concerns related to the schedule or budget.

Similar to invoices, a standard progress reporting template will be developed at project initiation and submitted to the City for format approval. The approved progress reporting template will be included in the Project Management Plan. Monthly status schedules will be included with each progress report which will compare the current status of the schedule against the baseline.

Project filing will be done electronically to the extent possible utilizing HDR's standard ProjectWise project filing system. Project information including accounting, background technical information, meeting information, and working technical and drawing files will be stored and maintained within ProjectWise. Access to certain folders within ProjectWise will be provided to subconsultants and City staff for easy access of relevant project information. Incoming and outgoing information shared between the project team and externally will be recorded into the document control log by the Project Coordinator and filed in ProjectWise.

Key assumptions: Monthly progress reports and invoices will be generated throughout the duration of Phase 1. Additional progress reports and invoices will be generated throughout the bidding and construction phases to capture

any support service work completed during that time. Both invoicing and progress reporting templates will be submitted to the City for review and concurrence at project initiation prior to implementation.

Deliverables:

- Progress reports

2.2 Update and Evaluate Existing Information

2.2.1 Assemble Existing Information

Objective: To obtain the background materials related to the project in order to obtain an understanding of the project's history and evolution and of existing project constraints. This understanding will be key in helping to identify the path forward and in facilitating project delivery.

Key understanding and activities: HDR understands and appreciates the significant efforts that have been expended to date by the City and Metro in the development of potential improvements along the I-710 Corridor, including the proposed Shoemaker Bridge Replacement Project that is an early action component of these ultimate improvements. As part of these past and ongoing efforts, significant background information has been obtained and generated by other project teams. This includes reports and technical documents as well as project plans/drawings. HDR staff will work collectively with the City and its partner agencies to obtain this existing available information. Once obtained, HDR will develop a log of information received and store the information on ProjectWise for access by the project team.

Key assumptions: It is assumed that HDR will have access to all relevant project information generated by Metro, the City of Long Beach, and their respective consultants.

Deliverables:

- Technical memorandum of the list of the existing information and a summary of the content

2.2.2 Evaluate Existing Information

Objective: To review the information received as part of Task I.1 to gain an understanding of the project's history, evolution, and important issues and to identify additional information that may be needed by the project team to facilitate this understanding.

Key understanding and activities: The intent of the data collection and review activities completed as part of this project is to capitalize on the recent work done to date related to this project and the overall improvements along the I-710 Corridor.

HDR technical leads will review the information obtained as part of Task I.2. As part of this review, each will be asked to develop pertinent questions for the City and Metro regarding the work completed to date and to identify additional data needs that may be available. HDR will review the as-built information provided and identify potential missing or additional as-built information that may be required. HDR will generate a technical memorandum that summarizes the questions compiled as part of this review and the additional data needs identified. This memo will be reviewed with the City, Metro, Caltrans and other participating agencies to collectively determine the availability of the additional information requested. Any additional information that is determined to be available will be obtained and reviewed by HDR as part of this task. Additional data received will be logged and filed as described in Task I.1.

Key assumptions: As noted as part of Task 1.1, it is assumed that all participating agencies and stakeholders will be forthcoming in providing available information in order to expedite the data collection and review process.

Deliverables:

- Technical memorandum of baseline and approach moving forward

2.2.3 Complete Field Review

Objective: To provide an opportunity for all technical leads to investigate the project in person and to collectively identify key project constraints, challenges, and opportunities based upon this review.

Key understanding and activities: HDR project team technical leads will conduct a field review of the project site with the intent of identifying key existing features that could pose challenges or act as constraints or opportunities as part of project implementation. These features will be photographed in the field and documented. A field review summary technical memorandum will be subsequently prepared to identify and document the critical issues observed in the field.

Deliverables:

- Field assessment technical memorandum

2.2.4 Conduct Existing Utilities Investigation *(MODIFIED)*

The City will be performing all of the activities associated with the Existing Utilities Investigation work (original Task 2.2.4). HDR will provide a supporting role to the City in completing these activities on an as-needed basis throughout the Phase 1 duration of the Project. Supporting services may include, but not be limited to, the following:

- Providing independent oversight and/or quality control reviews of task deliverables including utility notification letters, existing utility composite maps and/or master inventory matrix, existing utilities plans, and the existing utility assessment technical memorandum.
- Attending meetings with City staff working on the task to review work/deliverable status, provide feedback on work completed, to discuss work plan, and to provide suggestions/direction on the completion of upcoming work.
- Provide input and suggestions on the need for potholing, if needed, as part of Phase 1.
- Provide assistance in the identification of potential utility conflicts and potential mitigation strategies.
- Attend utility owner coordination meetings, as requested, with City staff to facilitate discussion or to prepare meeting summaries.
- Providing assistance and direction in meeting Caltrans CADD and plan formatting standards for the preparation of the existing utility plans.

This work will be completed on an as needed basis. The new budget for the completion of the support services described above will be allocated to a new subtask (Task 2.2.4.7), and hours will be charged/tracked accordingly against this new subtask.

Deliverables:

- Existing utility records that HDR has been able to obtain for the project.

- Comments on plans or relocation strategies.

Key Understandings

- The City will be responsible for all the Phase 1 utility tasks (Original Task 2.2.4.1 through Task 2.2.4.6).
- HDR will support the Phase 1 utility work as requested by the City and the City's Program Manager.

2.3 Architectural Concepts

Objective: To support the City in the development of a cohesive vision for the project, to obtain stakeholder consensus on how this vision is incorporated to various elements of the project, and to modify the project's design to include these features as part of the preliminary design package.

Key understanding and activities: The following is a detailed description of the five step process defined in the HDR's Statement of Qualifications as it relates to defining and developing the City's vision for the project.

2.3.1 Initial Theme Development and Scoping

HDR will conduct a kickoff meeting with City staff to discuss the City's vision and goals for the project. Input will be solicited from representatives from the various City departments that have a stake in the project including City Planning, Parks & Recreation, Public Works, Traffic, and the Mayor's Office. This input will serve as the foundation for aesthetic, recreational, and urban design themes that are to be carried forward. HDR will develop baseline geometrics and configurations for 3 span arrangements of bridge alternatives (multi-span, two span and clear span) consistent with the general options presented for the new crossing. HDR will supplement this development with preliminary hydraulics analyses for backwater profiles across the field of options that combine the new bridge options with the repurposing options. HDR will join the City in presenting initial options and potential impacts to the USACE for discussion of likely 408 permit conditions, and to solicit USACE input on likely criteria and constraints for the various alternatives. HDR will work as an extension of City staff to facilitate the development of a cohesive project vision that takes into account likely permit constraints along with City objectives (including financial) and the concerns of the various city departments and strikes the best possible balance to address each department's desires and concerns.

Deliverables:

- Initial theme technical memorandum

2.3.2 Initial Stakeholder Workshop and Constraints Identification

After a short project start-up and data collection period, HDR will conduct an initial collective workshop with the four key stakeholders to share the City's project vision and design themes, and to extract from each stakeholder input regarding their relevant criteria, concerns, and applicable standards affecting the design of the LA River Bridge and other project features. HDR will discuss all applicable site constraints and present the proposed approach for the alternatives development and review process as it relates to soliciting input from the stakeholders and building consensus.

Deliverables:

- Prepare and conduct workshops and constraints assessment technical memorandum

2.3.3 (includes 2.3.7) Prepare Conceptual Plan to Develop/Connect Cesar Chavez and Drake Parks and Conceptual Landscaping Treatment Plan (Included as part of Steps 2 through 4 of 5-Step Project Refinement Process)

The Shoemaker Bridge Replacement project will be the anchor for a series of open space, parks and natural areas along the LA River. The project will link Drake and Cesar Chavez parks with recreation fields, a nature center, natural bio-retention basins, community gardens and gathering areas and even a green access across the river from the reuse of the old bridge. The legacy Shoemaker Bridge will potentially be transformed into an amenity that would provide a safe connection for bikes and pedestrians to the west bank of the LA River while providing a public meeting, entertainment and recreation space with spectacular views of the new bridge.

Objective: To develop a conceptual master plan to be implemented as part of the project that incorporates the new bridge design, the potential adaptive reuse of the existing bridge, and the geometric design refinements to the series of connector roads along the east side of the LA River resulting from the work done as part of Task I.

Key understanding and activities: With the replacement of the Shoemaker Bridge, the City of Long Beach has an opportunity to transform an open space into a vibrant community space that will revitalize the area and re-connect the City with the LA River. Our urban design and landscape architecture scope of work includes the following elements:

- The conceptual landscape component for the development of a park on the re-purposed existing Shoemaker Bridge
- Pedestrian and bicycle roads and trails concepts connecting Golden and Cesar Chavez Parks with Drake Park, the repurposed Shoemaker Bridge, the regional bicycle trails along the LA River and local City street network
- The conceptual design of a new park that encompasses Golden and Cesar Chavez Park.
- Streetscape improvements on designated streets leading into the new park
- Design concepts for anticipated bio-retention basins and the development of an integrated naturalized landscape surrounding the basins

The team will identify elements of the park's plans through the design process described below but, for the purpose of defining this scope, the team will assume the following elements will be included in the design concepts:

- Pedestrian and bicycle roads and trails
- Public gathering areas like plazas and outdoor seating areas
- Food or Café outdoor eating areas
- An amphitheater
- Specialty landscape areas including a dog park, a healing garden and a community garden
- A great lawn area
- Streetscape improvements
- Landscape restoration and mitigation
- Park planting and irrigation
- Site furnishings
- Landscape lighting
- Wayfinding and interpretive signage
- General landscape structures and construction items like small retaining walls and overhead trellis structures.

As part of the 5 step vision development and project refinement process, the urban design and landscape architecture team will develop conceptual park concepts mirroring steps 1, 2 and 3 of the implementation process. This work will include the following sub-tasks:

- Project visioning and programming with City staff

- Prepare preliminary site plan alternatives based on approved program
- Present alternatives to stakeholders
- Integrate City and stakeholder comments and prepare a preferred conceptual alternative plan
- Present preferred alternative to all stakeholders
- Integrate comments into a final conceptual park plan

The team will coordinate and collaborate with the larger, multi-disciplinary design team in development of the final conceptual plan. Coordination items include:

- Bridge structure and design
- Parking
- Security and safety lighting
- Grading and drainage
- Utilities
- Retaining walls
- Bicycle and pedestrian bridges
- Traffic counts and studies
- Active transportation study
- Street improvement plans
- Signage
- Stormwater bio-retention basins
- Environmentally sensitive areas
- Low impact development
- Cost estimation

Also as part of Steps 4 and 5 of this process, the urban design and landscape architecture team will further develop the final conceptual park concept to the preliminary design development, including the following:

- Confirm program elements with City staff
- Prepare design development plans to preliminary level
- Coordinate with all team disciplines
- Present any major adjustments to City Staff and Stakeholders
- Integrate City and stakeholder comments into plan
- Prepare preliminary Design Development Plans

Key assumptions: The landscape/park concepts are to be consistent with the city of Long Beach's proposed municipal Urban Stormwater Treatment (M.U.S.T.) facility, Drake Soccer Fields, and Cesar Chavez/Drake Master Plan. It is assumed that up to two (2) potential refined build alternatives could be developed as part of this work element with three (3) concepts per alternative. A total of three (4) stakeholder workshops are assumed to be needed to obtain consensus on a preferred refined project alternative that will be carried forward into detailed design. The stakeholders that could potentially participate in the defined workshops are:

- Planning Division
- Parks, Recreation & Marine Department
- Asset Management Bureau
- Traffic Division
- Business Services
- Harbor Department
- Bicycle Coordinator
- Finance
- Harbor Department Bike Contact
- Water Department
- Gas & Oil Department
- Willmore City Heritage Association
- DLBA

- Long Beach Unified School District
- Bike Stakeholders
- Hilton Long Beach
- Word Trade Center
- Camping/Trailer Park
- I-710 Aesthetics Committee
- County Bike Coordinator
- NEPA Environmental (Caltrans District 7 – Fed Delegate)
- US Army Corp of Engineers
- US Coast Guard
- California Resource Corporation
- (Formerly OXY – THUMS Long Beach)
- Gateway Cities
- Metro
- California Coastal Commission
- California Department of Fish & Game
- California Air Resources Board
- State Water Resources Control Board
- California Public Utilities Commission
- California Department of Water Resources
- Caltrans Bike Coordinator
- Alameda Corridor Transportation Authority
- Los Angeles County Flood Control
- County of LA – Department of Public Works
- County of LA – Sanitation Districts
- US Environmental Protection Agency
- US Fish & Wildlife Service
- NOAA National Marine Fisheries Service
- Caltrans Bike Coordinator
- State Clearinghouse
- Cable TV
- So Cal Edison
- Surfrider Foundation – LB Chapter

Deliverables:

- Conceptual Park Plans
- Conceptual Landscape Plans

2.3.4 Alternatives Development

Based on the stakeholder input received as part of Step 2, the HDR design team will begin the development of up to 3 alternative design concepts based upon the design vision and theme identified as part of Step 1. For the bridge, three different "levels of iconicity" will be considered related to structure type and aesthetics, providing the stakeholders with a rough order of magnitude range of potential costs associated with the bridge construction. A

decision matrix will be developed and utilized to facilitate decision making that will compare each alternative against the range of variables identified within HDR's Statement of Qualifications and any others considered by the group to warrant consideration. HDR envisions sharing their concepts and findings in a series of 3 stakeholder workshops with the alternatives being refined throughout the process to reflect stakeholder input. At the end of Step 3, the goal is to arrive at a selection of alternatives to be carried forward for detailed analyses (APS) and vetted through the environmental process. The City may wish to solicit public and/or City Council input on the alternatives as part of this step so that these opinions can be factored into the decision making process.

Deliverables:

- Conceptual Alternatives

2.3.5 Complete Active Transportation Study

Objective: The objective of this task is to develop an understanding of the existing active transportation network to facilitate development of potential strategies for improving walking and biking connections associated with the Shoemaker Bridge Project.

Key understanding and activities: The HDR team will inventory existing pedestrian and bicycle infrastructure within the project area and adjacent regional connections. This will include collecting GIS and other data from the City and other stakeholders. As part of this task, the HDR team will also review and develop maps that provide information about the existing active landscape in the project area. The HDR team will use the existing data to understand the location of resources for active living, such as parks, community centers, and schools and existing active transportation connections to these resources. The HDR team will inventory existing programs, plans, and policies that support and encourage walking and biking.

The HDR team will also analyze the existing walking and biking network infrastructure to identify local and regional system gaps and deficiencies and will provide clear and implementable strategies to improve the active transportation system, promote active transportation, and increase overall system use. The HDR team will provide both immediately achievable strategies as well as long-term and ongoing goals and will cover infrastructure (engineering) and non-infrastructure (education, encouragement, enforcement, evaluation, and equity) areas.

The goals, objectives, and recommendations will be vetted by the City and refined as necessary. After one (1) round of revision of consolidated comments, a final version will be submitted for incorporation into the final existing conditions document.

Deliverables:

- Draft active transportation study
- Final active transportation study

2.3.6 Prepare Construction Staging/Phasing Preliminary Plans

Objective: To update the conceptual staging exhibits included in the current version of the Project Report to reflect the refined/new project build alternatives. To develop a staging approach for the selected preferred build alternative in coordination with City and Caltrans staff that enhances constructability while minimizing impacts to the traveling public.

Key understanding and activities: Once a refined set of build alternatives has been developed, HDR will update/amend the conceptual staging exhibits included in the current Administrative Draft Project Report to reflect

them. The Draft Project Report will be updated to include these new exhibits, and the narrative within the report will be updated as necessary.

In the development of these staging concepts, HDR will work closely with City and Caltrans staff to determine the criteria that will affect project staging related to the maintenance of access into and out of Downtown Long Beach from I-710. The need to maintain circulation and the potential feasibility of long term access closures will be evaluated to establish a baseline from which a staging approach can be developed. HDR will then establish potential staging concepts for each build alternative which will be depicted graphically on strip maps with an accompanying bullet point narrative describing the work to be completed, closures, and facilities to be kept open during each stage. HDR will present these initial staging concepts to Caltrans and the City in a workshop to obtain input and/or concurrence.

Upon selection of the preferred build alternative, additional workshops will be held if needed to further develop the staging approach that addresses each agency's concerns regarding maintenance of traffic and traveler impacts.

Once consensus has been obtained, HDR will prepare preliminary staging plans for the preferred alternative based on the agreed upon approach. These will be prepared at a scale of 1"=200' (half size) and will schematically show the proposed limits of construction, closures, and maintenance of access during each stage. Typical cross sections will be included on the layout sheets or on separate sheets to help define the proposed staging strategy. Bullet point descriptions will be included on the plans to describe these elements. The plans will be included as an element of the preliminary design package to be prepared as part of Task I.3.

Key assumptions: A maximum of three (3) staging workshops are assumed for the purpose of the fee estimate for this task. Preliminary staging plans will be prepared for the selected build alternative only.

Deliverables:

- Conceptual staging plans

2.3.7 Prepare Conceptual Landscaping Treatment Plan (see 2.3.3)

2.3.8 Stakeholder Consensus on Conceptual Alternatives

Team will obtain stakeholder consensus on conceptual alternatives developed during the vision process listing decisions made in the process and a technical memorandum detailing the alternatives moving forward.

Deliverables:

- Consensus Building Technical Memorandum and Decision Log

2.3.9 City/USACE Review

As part of the vision process the team will move forward the alternatives concurred with by the stakeholders and submit those alternatives to the City and USACE for review, comments and approval. The City and USACE will review and concur with conceptual alternatives that will be presented to Caltrans.

Deliverables:

- Approved conceptual alternatives

2.3.10 thru 2.3.12 Preliminary Design Plans and Magnitude of Cost

Having obtained stakeholder, city, USACE concurrence on alternatives, the team will prepare and submit first draft preliminary design plans, second draft preliminary design plans, final preliminary design plans design plans and magnitude of cost to the City and Caltrans for review.

Deliverables:

- First draft preliminary design plans and magnitude of cost
- Second draft preliminary design plans and magnitude of cost
- Final draft preliminary design plans and magnitude of cost

2.3.13 Complete Value Analysis Study (*MODIFIED*)

Objective: To evaluate the refined project build alternatives against a set of key project performance attributes to determine if potential design changes could provide greater project value by improving its performance while reducing costs.

Key understanding and activities: The value analysis process has been developed by Caltrans as an effective problem solving and quality assurance tool that can facilitate Caltrans goals to maximize safety, mobility, delivery, stewardship, and service on large scale transportation improvement projects on state facilities. Value analysis (VA) studies are required to be completed on any project with a total project cost of $50 million or more. The purpose of the VA study is to:

- Improve a project's performance while maximizing quality
- Identify and develop strategies to mitigate or avoid risks and associated costs
- Identify opportunities which promote context-sensitive solutions
- Validate the project's scope, purpose & need, and baseline design

Once the data collection, traffic forecasting, P&N refinement (if needed) have been completed and the build alternatives to be considered as part of PA/ED have been adequately defined, the HDR Team will participate in the multi-day VA workshop. The results and recommendations of the study will be summarized in a report prepared by the City or others. The HDR team will work collectively with Caltrans and City staff to determine which improvements should be incorporated into the project's build alternatives.

Deliverable:

- Participate in one (1) 5-day workshop
- Updated geometric strip maps per VA recommendations

2.4 Structures

2.4.1 Assessment of Existing Bridge

Objective: To assess the structural feasibility and develop concepts for the repurposing of the existing Shoemaker Bridge structure to convert it to a park amenity that can accommodate landscaping/trees, bicycles and pedestrians.

Key understanding and activities: The HDR team structural engineers will work closely with the City staff and project team urban designers and architects to evaluate the feasibility and issues associated with the potential adaptive reuse of the existing Shoemaker Bridge as a feature that can be incorporated into the park elements of the project. This will entail the structural and seismic evaluation of the existing bridge to evaluate its current condition, structural

integrity, and its ability to accommodate the dead loading of potential park elements such as planters, trees, soil, landscaping etc. The feasibility associated with the potential partial removal of bridge superstructure as part of its adaptive reuse will also be assessed. A detailed evaluation for two partial removal scenarios will be developed under this scope.

Based on the outcome of this evaluation, the HDR team will prepare an assessment report and develop concepts and an order of magnitude construction cost estimate for bridge modifications needed to accommodate its adaptive reuse.

Key assumptions: It is assumed for the purpose of the fee estimate that the existing bridge will be repurposed as a park element as described above. The HDR team will rely on prior Caltrans maintenance inspection reports for the existing bridge to determine the condition state of the bridge and required repair work.

Deliverables:

- Draft bridge assessment report
- Final bridge assessment report

2.4.2 Prepare Advance Planning Studies

Objective: To develop conceptual designs and associated construction cost estimates for the Los Angeles River bridge types selected as part of Task I.3.4 to be included as part of the refined build alternatives.

Key understanding and activities: Upon receiving concurrence from the City and Caltrans and other relevant stakeholders in the bridge concepts to be carried forward for consideration (up to 3 bridge concepts per alternative) within the Project Report as part of the build alternatives (up to two alternatives), HDR will prepare Structures Advance Planning Studies (APS) for each bridge in accordance with Caltrans structural requirements and procedures. These Draft APS documents will be submitted to Caltrans Headquarters Structures (OSFP) for review and comment. The documents will be revised as necessary to reflect comment received and revised as necessary. The revised APS documents will be included in the Draft Project Report.

Deliverables:

- Draft APS
- Second draft APS
- Final APS

2.4.3 Hydraulic Report/River Assessment

Objective: To determine impacts to the flow characteristics and water surface elevation within the Los Angeles River associated with the construction of a new I-710 connector bridge and conduct hydraulic.

Key understanding and activities: Any changes in the Los Angeles River flood risk management channel or the right-of-way requires approval from several divisions/departments of both the Los Angeles County Flood Control District (LACFCD) and the U.S. Army Corps of Engineers (USACE).

The HDR team recently obtained the current HEC-RAS model and supporting documentation from the USACE. The HDR team ran the base model to check that the information was consistent with what the USACE concluded. HDR prepared a preliminary scope of work for our hydraulic analysis and met with the key USACE hydraulic and design

members to discuss our overall approach and methodology to analyze the impacts of a new Shoemaker Bridge while exploring options to keep all or part of the existing bridge. The HDR team proposed to develop a detailed scope, much like the USACE would do if this was their project, and provide this to them for review during Step 2 of the 5 step process outlined in their SOQ. The USACE agreed to the review and incremental approval for design of the alternatives and selection of the preferred one.

HDR will use a 3 phased approach:

1. 1D HEC-RAS modeling for each alternative
2. 2D ADH modeling, as needed
3. 3D Physical model, if needed (not included in this scope)

Our team would start with the 1D model and progress to the other 2 only if needed to satisfy the USACE that the existing water surface elevation could be maintained. The LACFCD and the USACE require the analysis of several alternative designs for the bridge.

The USACE directive has long been that modifications or replacement of bridges must result in 0% change in water surface elevation. The HDR team will first model the changes in the water surface elevation for various alternative designs and reduce the impact as much as possible. Then, the HDR team would explore offsetting or compensating the net water surface elevation change by modifying the channel walls or adding higher walls on top of the levees. Our assumption is that USACE would be open to further discussion of this approach. Meeting with the LACFCD and the USACE regarding modeling would be conducted during Steps 3 and 4 of the 5 step process outlined in HDR's SOQ. The desired outcome would be conceptual approval of the preferred alternative based on the preliminary design. This is the most crucial element related to obtaining the approvals from the LACFCD and the USACE. Designs that result in a 0% change in the water surface elevation would likely be considered minor modifications to the flood risk management project and would be approved at the local District offices.

Modifications to the channel geometry or heights of the parapet walls would likely be deemed major and would require the local District to submit the design and complete package to the regional and then national headquarters for approvals. Major modifications would require an additional 6-12 months for reviews at the higher headquarters. Such major work is not included in this scope of work.

Similar to the Section 214 agreement process, close coordination with the LACFCD and the USACE is critical to gaining responses from the two agencies. The first meeting would be to brief the project and schedule and discuss the agencies' expectations. The second meeting would review the computer modeling, designs, findings to date and options on how to compensate for a rise in water surface elevation. A third meeting would review the changes ensuing from the agencies comments from the second meeting. Finally, a meeting would be established to obtain conceptual approval of the preferred design. Notes of the discussion, key points, decisions and action items would be prepared within 7 days of each meeting. HDR would incorporate the action items into the tracking matrix for the project.

Deliverables:

- Draft scour analysis assessment report and draft results from the HEC-RAS model runs for alternative bridge designs
- Final scour analysis assessment report and final results from the HEC-RAS model runs for alternative bridge designs

2.5 Base Geometrics

2.5.1 Roadway

Prepare Preliminary Geometric Plans (Included as part of Steps 3 and 4 of 5-Step Project Refinement Process)

Objective: To refine the current build alternative geometrics included in the current Administrative Draft PR and/or develop new build alternative design concepts to better address the City's project vision, to incorporate the new bridge configurations selected as part of the project refinement process, and to enhance connectivity between I-710 and Downtown Long Beach.

Key understanding and activities: HDR will develop potential geometric refinements to the current project build alternatives or develop new build alternatives to address the key project drivers as described in HDR's Statement Qualifications. This could include the development of multiple geometric design concepts for a range of potential alternatives considered in support of this initial project refinement process. These initial geometric concepts will be prepared and presented in strip map type format to the City and other stakeholders and will be developed to a conceptual level to facilitate decision making between alternatives. This could include the development of conceptual layouts, profiles, and typical sections.

Once the refined build alternatives are selected for inclusion into the revised PR, HDR will prepare preliminary geometric roadway design plans for each alternative to include the PR document. These plans will include 1"=50' scale layouts, profiles, and typical sections similar to the current plans included in the Administrative Draft PR. Proposed grading concepts will be depicted in the typical sections with the approximate grading limits depicted in the layouts. Prior to preparing the preliminary plans, the build alternative designs will be revised as necessary to reflect the Value Analysis recommendations.

Key assumptions: Initial geometric design concepts and preliminary plans will be developed for up to three (2) project alternatives. A single set of roadway plans will be prepared formatted in accordance with Caltrans plan preparation guidelines for all jurisdictional elements of the project; It is assumed that separate plans/formatting will be not be utilized for the roadway elements outside of Caltrans jurisdiction. Refinements to the preliminary plans may be necessary as part of 35% PS&E submittal (Phase 2) if changes have occurred between the development of the plans for the Project Report and the completion of the PA&ED phase.

Deliverables: Strip maps depicting initial design concepts, preliminary design plans for selected build alternatives. The scale of the strip maps is to be determined.

2.5.1.1.1 Alternatives Refinement

HDR will develop the design of the bridge alternatives to a sufficient level to confirm its viability and its construction cost to a reasonable level of confidence (APS). Concurrent with the bridge design development will be the development of the parkway and open space elements of the project based upon the initial input received in the previous steps to a level that will allow for City and stakeholder concept approval. Urban design, park, and landscaping concepts are developed as part of Task I.3. The goal at the completion of this step is to obtain formal City and stakeholder approval of the approved concept for inclusion in the PR and ED.

Deliverables:

- Draft refined alternatives (reflecting updated studies)

- Refined alternatives with comment response matrix
- Final/concurred alternatives with finalized comment response matrix

2.5.1.1.2 Prepare Preliminary Hydrology

Objective: To update and amend the hydrology and drainage studies completed as part of the current Project Report to address the refined project build alternatives and to amend the studies to reflect the refined project alternative that is developed as an outcome of the work completed as part of Task I.3.

Key understanding and activities: Once the agreed upon refinements have been incorporated into the geometric design concepts for the build alternatives, HDR drainage engineers will review the refined concepts against the preliminary hydrology and drainage summary reports prepared to support the current Project Report. HDR will update and revise these study documents to reflect the new/refined build alternatives and will submit to the City and Caltrans for review and comment.

HDR will update the preliminary hydrology study under pre- and post-project conditions to reflect the refined preferred alternatives developed as part of Task I.3. The study will delineate watersheds for project areas tributary to the project limits and will compute flow rates to existing and proposed on-site storm drain inlets. The hydrology study will consist of Rational Method analysis performed in accordance with the appropriate City of Long Beach and County of Los Angeles hydrology manuals in effect upon receipt of NTP.

Key assumptions: Copies of the preliminary hydrology and drainage reports completed to date will be made available to HDR. These documents will be amended as part of this task; it is assumed that completely new documents will not be prepared. The draft documents will be revised to address pertinent comments received and will be submitted for approval prior to initiating any detailed drainage analysis and design to be completed as part of Phase 2.

Deliverables:

- First draft drainage /hydrology report
- Second draft drainage /hydrology report
- Final drainage /hydrology report

2.5.1.1.3 Conduct Phase 1 Site Assessments

Objective: To amend the Phase 1 Initial Site Assessment (ISA) prepared as part of the PA/ED work completed to date to reflect as necessary the refined build alternatives developed as part of Phase 1. The Phase I ESA needs to be updated and prepared in accordance with ASTM-1527-13 and will be submitted to the City and Caltrans for review. To evaluate the properties identified as part of the Phase 1 ISA for the preferred build alternative that potentially contain hazardous substances or petroleum projects to check for their presence; and if so, to develop mitigation requirements for these substances that can be included in the PS&E deliverables.
Key understanding and activities: Once the refined project build alternatives have been developed, HDR will make a determination as to whether the Phase 1 ISA's previously completed needs to be amended to reflect the new build alternatives. If needed, additional studies will be completed as necessary to amend the Phase 1 ISA and include in the refined Environmental Document.

The main objective of the Phase 2 Site Assessment (SI) is to provide an assessment of potentially contaminated sites to evaluate whether there would be an apparent impact from the potential contaminants identified from the Phase 1 ISA. The Phase 2 scope will be determined when the ISA Phase 1 is complete.

Key assumptions: Phase 1 ISA activities through report preparation will be performed under the supervision of a California Professional Geologist, a Certified Engineering Geologist, or a California Professional Engineer.

Deliverables:

- Draft phase I site assessment
- Final phase I site assessment

2.5.1.1.5 Preliminary Occidental Oil Field Impact Assessment and Facility Relocation Plan
Objective: To identify and assess any project impacts to the California Resource Corporation (CRC) Oil Facility associated with the preferred build alternative, work with CRC Oil to develop the necessary mitigations and associated costs.

Key understanding and activities: A key project goal will be to minimize or avoid impacts to the existing CRC Oil facility located between the I-710 Corridor and the LA River.

Evans and Walker will support the HDR team in identifying the value of potentially impacted wells early on the design development process. If project impacts cannot be avoided, Evans and Walker will work with the City, the design team and both CRC Oil and Long Beach Gas and Oil to identify specific impacts to their facilities and develop the appropriate mitigations. This will include the development of the appropriate mitigation costs to not only cover the physical mitigations but also the loss of future revenue. HDR will summarize the assessment completed as part of this task, the proposed mitigations, and associated mitigation costs in a relocation plan technical memorandum and submit to the City for review and concurrence. It is assumed that any negotiations with CRC Oil and Long Beach Gas and Oil on mitigation costs will be conducted by the City, although HDR can provide technical support during this process.

Key assumptions: This study will be conducted for the selected preferred build alternative only. The detailed design and construction of any mitigation for the CRC Oil facility will be completed separately by CRC Oil Inc.'s own contractor. This work will not be part of the City's Shoemaker Bridge Replacement final design and/or construction contract.

Deliverables:

- Oil field assessment and relocation report

2.5.1.1.6 Prepare Constructability Review
Objective: To complete a conceptual constructability evaluation of the selected project build alternatives and to identify issues and concerns that could potentially impact the feasibility and cost of alternatives being considered.

Key understanding and activities: HDR's construction services staff will provide general support during the alternative development and consideration process included as part of Task I.3 to identify potential constructability issues and concerns that may impact the feasibility and costs of alternatives being considered. Once a preferred alternative is selected, HDR staff will perform a constructability review of the preliminary project plans, construction schedule, and construction cost estimate and identify potential design changes that would enhance overall constructability. Review comments will be prepared, formalized in a memorandum, and submitted to the City and Caltrans for review. The reviewer will subsequently participate in a workshop with the HDR design team and appropriate agency staff to review and discuss comments in detail and to facilitate obtaining consensus on the implementation of any suggested

design changes. A draft version of the review memo will be generated to address pertinent agency comments received or to address the discussion at the review workshop.

Agreed-upon project changes resulting from the constructability review will be incorporated into the design package during the subsequent final design phase.

Key assumptions: The constructability review described above will be conducted on the selected project alternative only.

Deliverables:

- Constructability assessment report

2.5.1.1.7 Preliminary Geometric Plans of Preferred Alternative

Objective: After public circulation the HDR team will respond to public comments and the PDT will meet to select the preferred alternative. The preliminary geometric plans for this preferred alternative will be further developed and include any revisions that have occurred since the alternatives were finalized for the draft project report.

Key Assumption: At this stage will further develop the preferred alternative.

Deliverables:

- Draft preliminary geometric plans of preferred alternative
- Final preliminary geometric plans of preferred alternative with comment matrix
- Final /concurred geometric plans of preferred alternative with comment matrix

2.5.1.2 Fact Sheets

Objective: To identify the nonstandard design features and necessary design exceptions needed for the selected build alternative, and to obtain formal Caltrans design exception approval of the nonstandard features included in the selected preferred project alternative.

Key understanding and activities: As part of the completion of the Draft Project Report, HDR proposes to obtain Caltrans concurrence on an expedited geometric approval approach that would only involve the development and approval of design exception fact sheets for the selected preferred build alternative only. As part of the Draft Project Report, HDR intends to develop a risk table that identifies the nonstandard features associated with each build alternative, the necessary design exceptions that would be needed, and the estimated probability of Caltrans approving each design exception. This risk table will be developed in close coordination with Caltrans design staff and will be included within the document.

As part of this process, the refined build alternatives will be evaluated against the latest version of the Caltrans Highway Design Manual and Design Information Bulletin 82-05 in effect at NTP. The intent of this review will be to determine if any current design standards affect the design. If any design elements are impacted, these elements will be tabulated with an explanation as to the rationale for the nonstandard design element. HDR will assess whether design changes can be implemented to meet the current design standards; and if so, what are the impacts to the overall design and project cost. HDR will determine based upon this assessment if the impacts of meeting current standards could potentially warrant the request for a design exception.

If it is determined by HDR and/or Caltrans that any newly identified nonstandard features can be mitigated through design changes, HDR will revise the project's design accordingly as part of the preliminary roadway design plans prepared as part of this task.

HDR engineers will work closely with Caltrans District 7 staff to facilitate concurrence that design exceptions (if necessary) are warranted and will be granted prior to initiating final design. If so, HDR will prepare Supplemental Mandatory and/or Advisory Fact Sheets per Caltrans requirements for the selected preferred build alternative to document these nonstandard features to facilitate obtaining Caltrans formal approval. If any new design exceptions are found by the HDR team to be warranted during Phase 2, HDR will present their findings to the City; upon concurrence by the City, the finding would be presented to Caltrans District 7 staff. If concurrence on the need for any design exceptions is obtained by Caltrans, HDR will prepare Supplemental Advisory and/or Mandatory Fact Sheets to document these design exceptions and submit to Caltrans for approval.

Key assumptions: The HDR fee estimate assumes that an Exception to Design Standards Advisory and Mandatory Fact Sheet may need to be prepared to obtain Caltrans approval of the preferred project alternative.

Deliverables:

- First draft fact sheets
- Second draft fact sheets
- Final Fact Sheets

2.5.1.3 Finalize 30% PS&E

Objective: Preliminary geometric plans of the preferred alternative will be advanced to the 30% plans as defined per Caltrans 30% PS&E checklist.

Key Assumptions: In order to advance the preliminary geometric plans of the preferred alternative to 30% PS&E plans, it is understood that final design survey needs to be accomplished and incorporated to maintain the accuracy of the design features required for final design.

Deliverables:

- Draft 30% PS&E
- Final 30% PS&E with comment response matrix

2.5.1.3.4 Prepare Preliminary Cost Estimate

Objective: To develop a preliminary estimate of probable project cost for the implementation of the refined project build alternatives that are developed as part of Task I.3 including roadway, structures, urban design/park elements, right of way acquisition, and implementation "soft" costs.

Key understanding and activities: HDR will prepare a preliminary cost estimate template and present it to the City for review and concurrence along with a short narrative describing the costing methodology to be utilized as the basis of this preliminary estimate. Once approved, HDR will populate the template with the appropriate cost items and associated unit costs for the roadway/civil and urban design elements to be included/calculated in the estimate. The structures costs will be calculated separately as part of Task I.3.2 and summarized in this estimate. Quantities will be developed based upon the preliminary roadway and urban design concepts prepared as part of Task I.3 and shown in the preliminary design plans. Costs for project elements not yet designed will be included as lump sum items (i.e.

drainage, traffic, etc.), typically calculated as percentage of the subtotal roadway and/or structures costs. Project implementation costs will also be covered as lump sum costs, typically calculated as a percentage of the project construction and/or right of way cost. Project Report Cost Estimates for the refined build alternatives will be prepared separately using the standard Caltrans six-page planning level cost estimating templates included within the Project Development Procedures Manual.

Key assumptions: Cost items covered in the estimate as lump sum items due to lack of information will be reviewed with City staff for concurrence prior to finalizing the estimate. Typical lump sum cost percentages utilized in Caltrans planning level cost estimating templates will be incorporated as appropriate.

Deliverables: Total preliminary estimate of probable project cost including construction, right of way, and additional implementation "soft" costs will be prepared for current and future construction costs.

2.5.1.3.5 Prepare Right of Way Needs Maps for Each Impacted Parcel

Objective: To identify preliminary right of way needs and associated costs for the construction of the preferred project alternative.

Key understanding and activities: Based upon the preliminary roadway design described above, HDR will prepare a set of preliminary right of way needs maps for the preferred project alternative. These maps will identify permanent right of way needs (in both easement and fee) and temporary right of way needs for the completion of construction (Temporary Construction Easements or TCE's). Each type of right of way need will be identified separately through the use of a colored coding systems to differentiate between permanent fee takes, permanent easements, and TCE's.

HDR engineers will work collectively with their right of way services group to develop a set of preliminary costs for the acquisitions/easement shown in the plans. HDR's right of way staff will research property information in the area and develop a series of unit costs that can be applied to each of various acquisition types shown on the plans to develop a preliminary right of way cost estimate. This estimate will be itemized by parcel number and type of take and will include the impacted parcels shown on the plans to provide a summary of total costs.

Key assumptions: Although HDR's right of way services staff can provide general support throughout the development of a preferred project alternative as part of Task I.3 with respect to right of way impacts and costs, a right of way cost estimate will be developed for the selected preferred alternative only. Unit costs will be based on comparable right of way acquisition cost data for similar parcels in the area.

Deliverables: Preliminary right of way needs maps and summary cost estimate.

2.6 Public Outreach, Funding Assistance, Permits and Agreements

2.6.1 Obtain E-76 Authorization (*REMOVED*)

Objective: To obtain the necessary State and Federal authorization to utilize Federal funds for construction and right of way activities.

Key understanding and activities: The City will perform the activities associated with Obtaining E-76 Authorization.

2.6.2 Thru 2.6.5 Identify Permitting Needs (*MODIFIED*)

Objective: To identify the various jurisdictional agency permitting requirements for construction.

Key understanding and activities: HDR will conduct an evaluation of these permitting requirements and document them in a technical memorandum. The memorandum will be organized by jurisdictional agency (City, Caltrans, and USACE etc.) and will identify the information needed to process each permit, the estimated approval timeline, and when within the project workflow the processing of each permit should be initiated. These permitting requirements will be built into the project schedule so that they can be tracked in relation to the critical path. The technical memorandum will serve as a guide to HDR and City project managers to facilitate the processing and approval of the project permits.

At project initiation, HDR will work the City and with Caltrans District 7 staff to facilitate obtaining the necessary "parent" encroachment permit needed to complete field reviews and other activities within Caltrans right of way during the course of the project. Additional permits may be required under the parent permit to authorize special tasks within Caltrans right of way that may require traffic control or temporary closures. The HDR team will work closely with Caltrans District 7 staff to identify any specialized work activities that may trigger the need for any supplemental permits.

The City will perform the activities associated with the execution of a cooperative agreement between City and Caltrans to complete Project Approval (PA/ED), final design, and construction.

Section 214 Agreement with US Army Corps of Engineers (USACE)
The HDR team will provide the City a draft Section 214 agreement using the current model from the USACE. The Section 214 agreement would provide the City with the mechanism to fund the USACE for their staff time to meet, discuss, review, and make decisions on the repairs/replacement of the Shoemaker Bridge. Section 214 agreements are not required for all actions; rather they provide funding to establish a priority for attention and actions on the part of the USACE. Without this funding mechanism, the project will be dealt with as any other unfunded project; and the USACE will meet, discuss, and review as they have time. Recent experience indicates having an agreement saves months of time for each action on a project. Caltrans/LA Metro currently have a Section 214 agreement with the USACE in place for the I-710 Corridor Project EIR/EIS that could potentially be expanded to include Shoemaker Bridge.

The HDR team and the City will meet with USACE and several other key reviewers of the project to discuss the City's proposed project, alternatives, and schedule. Key reviewers would include specific members from hydraulics, hydrology, design, structural, geotechnical, environmental, regulatory, asset management, operations, and counsel. The HDR team will address questions from the USACE to assist them in preparing an estimate for their time to participate in meetings, discuss items on the phone or in person, read and review products, have internal meetings and prepare their decision papers/documents. The appropriate USACE staff will prepare their estimates for their Sections.

Section 214 agreements typically require several months to process. The coordination with the USACE would be initiated immediately after issuance of the NTP and the kick-off/scoping with the City and the HDR team during Step 1 of the 5-Step process.

Deliverables:

- Permitting needs technical memorandum
- Encroachment permits

- Section 214 agreement

2.6.6 Funding Assistance (Optional) (*REMOVED*)

Objective: To evaluate and prepare funding applications to potentially fund multiple components of the Shoemaker Bridge Replacement Project.

Key understandings and activities: The City will perform activities associated with obtaining additional funding.

2.6.7 Public Outreach (Project Website and Maintenance)

Objective: To support the City in conducting the necessary community outreach to obtain public input and support for the project as part of the completion of the Draft Environmental Document.

Key understandings and activities: HDR understands the importance of effective community outreach on a project such as this which has the potential to benefit and enrich the local community in a myriad of ways. It is important that the local community has an opportunity to contribute and provide input as to how they envision the project best integrating into the fabric of the surrounding area. HDR technical leads will be available to attend public outreach and community group meetings to present or answer questions. HDR staff can also assist the City in the development of boards and exhibits to facilitate this public outreach effort.

Key assumptions: Based upon the scope of services included in the Statement of Qualifications, it is assumed that the City will be leading the public outreach effort for the project, and the HDR Team will be merely providing technical support. The budget for this task included in HDR's fee proposal is based upon this assumption. HDR does have a public outreach consultant on the project team that can lead this effort if desired by the City, which can be included as part of the project budget as an added service. The budget included for this task includes attendance by six (6) HDR staff at a total of two (2) meetings (concept development meeting and a public circulation meeting) and the development and support of a project website during phase I.

Deliverables:

- Website and maintenance

EXHIBIT "B-1"

Rates or Charges

Shoemaker Bridge Replacement
Exhibit 2 - Earned Value Work Breakdown Structure

WBS	Task Name	Deliverable	Responsible Party	Cost	Start	Finish	Comments
Task 1 - Complete Project Report and Environmental Document							
1	**Task 1 - Complete Project Report and Environmental Document**				9/24/2015	5/2/2017	
1.1.1	First Draft Tech Studies (NES, BA, HPSR/ASR, CIA, Section 4(f) Evaluation,VIA, PIR/PER, ISA, and NSR)	First Draft NES, BA, HPSR/ASR, CIA, Section 4(f) Evaluation,VIA, PIR/PER, ISA, and NSR	HDR, GPA	$70,140.73	11/19/2015	12/23/2015	
1.1.2	Agency Review of tech studies (NES, BA, HPSR/ASR, CIA, Section 4(f) Evaluation,VIA, PIR/PER, ISA, and NSR)		Caltrans	$0.00	12/24/2015	1/20/2016	
1.1.3	Second Draft tech studies (NES, BA, HPSR/ASR, CIA, Section 4(f) Evaluation,VIA, PIR/PER, ISA, and NSR)	Second Draft NES, BA, HPSR/ASR, CIA, Section 4(f) Evaluation,VIA, PIR/PER, ISA, and NSR	HDR, GPA	$20,000.00	1/21/2016	2/17/2016	
1.1.4	Agency Review/Approval of Final tech studies (NES, BA, HPSR/ASR, CIA, Section 4(f) Evaluation,VIA, PIR/PER, ISA, and NSR)	Final NES, BA, HPSR/ASR, CIA, Section 4(f) Evaluation,VIA, PIR/PER, ISA, and NSR	HDR, GPA	$10,000.00	2/18/2016	3/16/2016	
1.1.5	**Update Traffic Volumes**				9/24/2015	2/10/2016	
1.1.5.1	Volume Counts			$0.00	9/24/2015	10/7/2015	
1.1.5.2	First Draft traffic volumes/study	First Draft Traffic Volumes Report	LIN	$12,000.00	11/19/2015	12/9/2015	
1.1.5.3	Agency review of traffic volumes/study			$0.00	12/10/2015	12/30/2015	
1.1.5.4	Second Draft traffic volumes/study	Second Draft Traffic Volumes Report	LIN	$2,000.00	12/31/2015	1/20/2016	
1.1.5.5	Agency Review/Approval of Final Traffic Volumes/Study	Final Traffic Volumes Report	LIN	$1,000.00	1/21/2016	2/10/2016	
1.1.6	**Update Traffic Operations Report**				12/31/2015	3/16/2016	
1.1.6.1	First Draft Traffic Operations Report	First Draft Traffic Operations Report	LIN	$36,000.00	12/31/2015	1/20/2016	
1.1.6.2	Agency Review of TOR			$0.00	1/21/2016	2/3/2016	
1.1.6.3	Second Draft TOR	Second Draft TOR	LIN	$8,000.00	2/4/2016	2/24/2016	
1.1.6.4	Agency Review/Approval of Final TOR	Final TOR	LIN	$2,000.00	2/25/2016	3/16/2016	
1.1.7	**Update Air Quality Report**				12/31/2015	3/16/2016	
1.1.7.1	First Draft Air Quality Report	First Draft AQR	HDR, GPA	$22,000.00	12/31/2015	1/20/2016	
1.1.7.2	Agency Review of AQR			$0.00	1/21/2016	2/3/2016	
1.1.7.3	Second Draft AQR	Second Draft AQR	HDR, GPA	$5,000.00	2/4/2016	3/2/2016	
1.1.7.4	Agency Review/Approval of Final AQR	Final AQR	HDR, GPA	$2,000.00	3/3/2016	3/16/2016	
1.1	**Update Environmental Studies**			**$190,140.73**			

Shoemaker Bridge Replacement
Exhibit 2 - Earned Value Work Breakdown Structure

WBS	Task Name	Deliverable	Responsible Party	Cost	Start	Finish	Comments
1.2.1	**Update and Submit Draft Project Report**				1/21/2016	3/2/2016	
1.2.1.1	Update DPR	Draft Project Report	HDR	$41,421.00	1/21/2016	2/10/2016	
1.2.1.2	Agency Review #1 of DPR			$0.00	2/11/2016	3/2/2016	
1.2.2	**Final Draft Project Report**				3/10/2016	4/27/2016	
1.2.2.1	Revise DPR	Revised DPR	HDR	$18,000.00	3/10/2016	3/23/2016	
1.2.2.2	Agency Review #2 of DPR			$0.00	3/24/2016	4/6/2016	
1.2.2.3	Revise DPR	Revised DPR	HDR	$6,579.00	4/7/2016	4/18/2016	
1.2.2.4	Agency Review#3/Approval of DPR	Final DPR	HDR	$4,000.00	4/19/2016	4/27/2016	
1.2	**Draft Project Report**			**$70,000.00**			
1.3.1	**Administrative Final Project Report**				6/14/2016	9/5/2016	
1.3.1.1	Revise Administrative Final Project Report	Admin Final PR	HDR	$17,139.00	6/14/2016	8/8/2016	
1.3.1.2	Agency Review #1 of Administrative Final PR			$0.00	8/9/2016	9/5/2016	
1.3.2	**Final Project Report**				9/6/2016	5/2/2017	
1.3.2.1	Revise Final Project Report	Revised Final PR	HDR	$10,000.00	9/6/2016	11/8/2016	
1.3.2.2	Agency Review #1/ Approval of Final PR	Final PR		$0.00	4/5/2017	5/2/2017	
1.3	**Final Project Report**			**$27,139.00**			
1.4.1	**Update and Prepare Draft Environmental Document**				1/14/2016	3/8/2016	
1.4.1.1	Update DED	Updated DED	HDR	$68,490.00	1/14/2016	2/2/2016	
1.4.1.2	Agency (City) Review #1 DED			$0.00	2/3/2016	2/16/2016	
1.4.2	**Finalize Draft Environmental Document**				3/9/2016	7/25/2016	
1.4.2.1	Revise DED	Revised DED	HDR	$20,000.00	3/9/2016	3/29/2016	
1.4.2.2	Agency Review #2 DED and NEPA Review			$0.00	3/29/2016	3/29/2016	
1.4.2.3	Revise DED per NEPA Review	Revised DED	HDR	$8,000.00	3/30/2016	4/12/2016	
1.4.2.4	Agency Review#3/ Approval of DED	Final DED	HDR	$3,491.00	4/13/2016	4/26/2016	
1.4.2.5	Public Circulation			$0.00	4/29/2016	7/25/2016	For Information Only
1.4.2.5.1	Public Circulation			$0.00	4/29/2016	6/13/2016	For Information Only
1.4.2.5.2	Public Meeting			$0.00	5/13/2016	5/13/2016	For Information Only
1.4.2.5.3	Respond to comments			$0.00	6/14/2016	7/11/2016	For Information Only
1.4.2.5.4	Selection of Preferred Alternative			$0.00	7/25/2016	7/25/2016	For Information Only
1.4	**Draft Environmental Document**			**$99,981.00**			
1.5.1	**Administrative Final Environmental Document**				6/14/2016	9/5/2016	
1.5.1.1	Revise Administrative Final Environmental Document	Revised Admin FED	HDR	$40,441.00	6/14/2016	8/8/2016	
1.5.1.2	Agency Review of Administrative Final ED			$0.00	8/9/2016	9/5/2016	
1.5.2	**Final Environmental Document**				9/6/2016	5/1/2017	
1.5.2.1	Revise Final Environmental Document	Revised FED	HDR	$10,000.00	9/6/2016	10/31/2016	
1.5.2.2	NEPA Review of Final ED			$0.00	11/1/2016	12/5/2016	
1.5.2.3	Revise Final ED per NEPA Review	Revised FED	HDR	$2,000.00	12/6/2016	1/2/2017	
1.5.2.4	Agency Review /Approval of Final ED	Final FED	HDR	$2,000.00	4/4/2017	5/1/2017	
1.5	**Final Environmental Document**			**$54,441.00**			
1.6.1 *NEW*	NOP	Notice of Preparation	HDR	$67,402.00	12/3/2015	3/29/2016	
1.6	**Notice of Preparation**			**$67,402.00**			
Task 1 Total				$509,103.73			

Shoemaker Bridge Replacement
Exhibit 2 - Earned Value Work Breakdown Structure

WBS	Task Name	Deliverable	Responsible Party	Cost	Start	Finish	Comments
Task 2 - Engineering/Architectural Development							
2	**Task 2 - Engineering/Architectural Development**				9/24/2015	12/25/2017	
2.1.1	Prepare Project Management Plan	Project Management Plan	HDR	$37,922.00	9/24/2015	11/4/2015	To be invoiced T&M
2.1.2	Prepare and Implement QA/QC Plan	QA/QC Plan	HDR	$53,662.00	9/24/2015	1/27/2016	To be invoiced T&M
2.1.3	Prepare and Maintain Project Schedule	Monthly Schedule	HDR	$45,075.00	9/24/2015	11/15/2017	To be invoiced T&M
2.1.4	Project Meetings	Technical focused meetings with agencies and stakeholders (27 Meetings), Biweekly Client Meetings (48 Meetings),Monthly PDT Meetings (24 Meetings), Meeting Minutes	HDR, GPA, TYL, RCH		9/24/2015	11/15/2017	To be invoiced T&M
2.1.4.1	Technical focused meetings with agencies and stakeholders (27 Meetings)		HDR, GPA, TYL, RCH, Alta	$205,916.00	9/24/2015	11/15/2017	To be invoiced T&M
2.1.4.2	Biweekly Client Meetings (48 Meetings)		HDR	$146,218.00	9/24/2015	11/15/2017	To be invoiced T&M
2.1.4.3	Monthly PDT Meetings (24 Meetings)		HDR, TYL, RCH	$188,862.00	9/24/2015	11/15/2017	To be invoiced T&M
2.1.5	Progress Reports and Invoices	Progress Report	HDR	$91,575.00	9/24/2015	11/15/2017	To be invoiced T&M
2.1	**Project Management**			**$769,230.00**			
2.2.1	Assemble Existing Information	Technical Memorandum of the list of the existing information and a summary of the content	Phase I Team	$53,764.00	10/8/2015	11/4/2015	
2.2.2	Evaluate Existing Information	Technical Memorandum of Baseline and Approach moving forward	Phase I Team	$73,400.00	10/15/2015	11/18/2015	
2.2.3	Complete field review	Field Assessment Technical Memorandum	Phase I Team	$53,893.00	11/19/2015	12/2/2015	

Shoemaker Bridge Replacement
Exhibit 2 - Earned Value Work Breakdown Structure

WBS	Task Name	Deliverable	Responsible Party	Cost	Start	Finish	Comments
2.2.4 *MODIFIED*	Conduct existing utilities investigation (Optional - Includes up to 25 potholes)		City		11/5/2015	11/21/2016	
2.2.4.1	Compile available existing utilities information	Existing Utilities Assessment Technical Memorandum	City	$0.00	11/5/2015	12/2/2015	
2.2.4.2	Prepare composite map and matrix	Utility Exhibit and Matrix	City	$0.00	12/3/2015	12/30/2015	
2.2.4.3	Conduct Major utility investigation/ potholing if needed	Potholing Report	City	$0.00	10/25/2016	11/21/2016	
2.2.4.4	Prepare utility contact list	Utility List of Contacts	City	$0.00	12/3/2015	12/30/2015	
2.2.4.5	Prepare utility notification letters	Copy of Notification Letters	City	$0.00	12/31/2015	1/20/2016	
2.2.4.6	Obtain owner responses and update map/matrix	Copy of Owner Responses and Updated Exhibit and Matrix	City	$0.00	2/18/2016	3/9/2016	
2.2.4.7	Utility Support and Coordination	Utility Support	HDR	$20,000.00	12/3/2015	3/23/2016	
2.2	**Update and Evaluate Existing Information**			**$201,057.00**			
2.3.1	Initial Theme Development and Scoping	Initial Theme Technical Memorandum	HDR, TYL, RCH, Alta	$100,000.00	1/5/2016	6/29/2016	
2.3.2	Initial Stakeholder Workshop and Constraints Identification	Prepare and Conduct Workshops and Constraints Assessment Technical Memorandum	HDR, TYL, RCH	$70,000.00	1/5/2016	6/29/2016	
2.3.3	Prepare conceptual plan to develop/connect Cesar Chavez and Drake Parks	Conceptual Park Plans	HDR, RCH	$44,626.00	7/26/2016	9/5/2016	
2.3.4	Alternatives Development	Conceptual Alternatives	HDR, Alta	$200,000.00	11/19/2015	1/13/2016	
2.3.5	Complete Active Transportation Study				12/31/2015	3/9/2016	
2.3.5.1	Prepare Draft Active Transportation Study	Draft Active Transportation Study	Alta	$30,000.00	12/31/2015	2/10/2016	
2.3.5.2	Agency Review			$0.00	2/11/2016	2/24/2016	
2.3.5.3	Final Active Transportation Study	Final Active Transportation Study	Alta	$11,148.00	2/25/2016	3/9/2016	
2.3.6	Prepare construction staging/phasing preliminary plans	Conceptual Staging Plans	HDR	$94,402.00	7/26/2016	8/22/2016	
2.3.7	Prepare conceptual landscaping treatment plan	Conceptual Landscape Plans	HDR, RCH	$124,365.00	7/26/2016	9/19/2016	
2.3.8	Stakeholder consensus on conceptual alternatives	Consensus Building Technical Memorandum and Decision Log	HDR, TYL, RCH	$70,349.00	1/14/2016	5/18/2016	
2.3.9	City/USACE review/approval of conceptual alternatives	Approved Conceptual Alternatives	HDR, TYL, RCH	$40,000.00	1/14/2016	9/12/2016	
2.3.10	Prepare/submit First Draft Preliminary Design Plans and Magnitude of Cost to City and Caltrans	First Draft Preliminary Design Plans and Magnitude of Cost	HDR, TYL, RCH	$100,000.00	9/13/2016	10/24/2016	

Shoemaker Bridge Replacement
Exhibit 2 - Earned Value Work Breakdown Structure

WBS	Task Name	Deliverable	Responsible Party	Cost	Start	Finish	Comments
2.3.11	Caltrans/City review of Preliminary Design Plans and Magnitude of Cost	Second Draft Preliminary Design Plans and Magnitude of Cost	HDR, TYL, RCH	$29,791.00	10/25/2016	11/21/2016	
2.3.12	Final Preliminary Design Plans and Magnitude of Cost per City and Caltrans comments	Final Preliminary Design Plans and Magnitude of Cost	HDR, TYL, RCH	$58,338.00	11/22/2016	12/19/2016	
2.3.13 *MODIFIED*	Value Analysis				7/26/2016	9/16/2016	
2.3.13.1	Value Analysis Workshop	Prepare and Conduct one (1) 5-day Workshop	HDR	$10,000.00	7/26/2016	8/1/2016	
2.3.13.2	Draft Value Analysis Results and Report	Draft Value Analysis Report	City	$0.00	8/2/2016	8/22/2016	
2.3.13.3	Agency Review			$0.00	8/23/2016	9/7/2016	
2.3.13.4	Final Value Analysis Report	Final Value Analysis Report	City	$0.00	9/8/2016	9/16/2016	
2.3.13.5	Revise/Update Preliminary Geometrics to address VA recommendations	Updated Geometric Strip Maps per VA recommendations	HDR	$20,000.00	8/29/2016	9/16/2016	
2.3	**Architectural Concepts**			**$1,003,019.00**			
2.4.1	Assessment of Existing Bridge		TYL		11/19/2015	2/20/2017	
2.4.1.1	Prepare Draft Bridge Assessment Report for improvements to existing bridge	Draft Bridge Assessment Report	TYL	$130,667.00	12/14/2015	2/19/2016	
2.4.1.2	Final Bridge Assessment Report	Final Bridge Assessment Report	TYL	$100,000.00	12/27/2016	2/20/2017	
2.4.2	Advanced Planning Studies		TYL		7/26/2016	12/26/2016	
2.4.2.1	First Draft APS	First Draft APS	TYL	$192,631.00	7/26/2016	10/3/2016	
2.4.2.2	Agency Review of APS			$0.00	10/4/2016	10/31/2016	
2.4.2.3	Second Draft APS	Second Draft APS	TYL	$60,000.00	11/1/2016	11/28/2016	
2.4.2.4	Agency Review/Approval of Final APS	Final APS	TYL	$20,000.00	11/29/2016	12/26/2016	
2.4.3	Hydraulic Report/ River Assessment		HDR, RVA		12/27/2016	4/3/2017	
2.4.3.1	Conduct Draft hydraulic/Scour analysis of LA River for alternative bridge scenarios	Draft River Hydraulic Analysis Report including Draft Scour Analysis Assessment Report and Draft Results from the HEC-RAS Model Runs for Alternative Bridge Designs	HDR, RVA	$30,000.00	12/27/2016	2/20/2017	
2.4.3.2	Agency Review			$0.00	2/21/2017	3/6/2017	
2.4.3.3	Final hydraulic/Scour analysis of LA River for alternative bridge scenarios	Final River Hydraulic Analysis Report including Final Scour Analysis Assessment Report and Final Results from the HEC-RAS Model Runs for Alternative Bridge Designs	HDR, RVA	$8,746.00	3/7/2017	4/3/2017	
2.4	**Structures**			**$542,044.00**			

Shoemaker Bridge Replacement
Exhibit 2 - Earned Value Work Breakdown Structure

WBS	Task Name	Deliverable	Responsible Party	Cost	Start	Finish	Comments
2.5.1	**Roadway**				7/26/2016	12/25/2017	
2.5.1.1	Roadway Design and Engineering Studies				7/26/2016	8/7/2017	
2.5.1.1.1	Alternatives Refinement				9/19/2016	1/20/2017	
2.5.1.1.1.1	Prepare Draft Alternatives refinement to reflect updated studies	Draft Refined Alternatives (Reflecting Updated Studies)	HDR	$170,000.00	9/19/2016	10/28/2016	
2.5.1.1.1.2	Agency Review of Alternatives refinements			$0.00	10/31/2016	11/25/2016	
2.5.1.1.1.3	Refined Alternatives per Agency Comments	Refined Alternatives with Comment Response Matrix	HDR	$50,000.00	11/28/2016	12/23/2016	
2.5.1.1.1.4	Finalize and concurrence of Alternative Refinements	Final/Concurred Alternatives with Finalized Comment Response Matrix	HDR	$30,281.00	12/26/2016	1/20/2017	
2.5.1.1.2	Prepare preliminary hydrology report		HDR		12/20/2016	4/3/2017	
2.5.1.1.2.1	First Draft Drainage/Hydrology Report	First Draft Drainage/Hydrology Report	HDR	$68,052.00	12/20/2016	1/16/2017	
2.5.1.1.2.2	Agency Review of Drainage/Hydrology Report			$0.00	1/17/2017	2/13/2017	
2.5.1.1.2.3	Second Draft Drainage/Hydrology Report	Second Draft Drainage/Hydrology Report	HDR	$20,000.00	2/14/2017	3/13/2017	
2.5.1.1.2.4	Review/Approve of Final Drainage/Hydrology Report	Final Drainage/Hydrology Report	HDR	$10,000.00	3/14/2017	4/3/2017	
2.5.1.1.3	Conduct Phase I Site Assessment		HDR		12/20/2016	3/27/2017	
2.5.1.1.3.1	Prepare Phase I Site Assessment	Draft Phase I Site Assessment	HDR, Leighton	$12,000.00	12/20/2016	1/30/2017	
2.5.1.1.3.2	Agency Review			$0.00	1/31/2017	2/27/2017	
2.5.1.1.3.3	Final Conduct Phase I Site Assessment	Final Phase I Site Assessment	Leighton	$6,194.00	2/28/2017	3/27/2017	
2.5.1.1.4	Conduct Phase II Site Assessment		Leighton	$0.00	3/28/2017	5/22/2017	
2.5.1.1.5	Complete Occidental Oil Field impact assessment and facility relocation plan	Oil Field Assessment and Relocation Report	Evans&Walker	$40,000.00	7/26/2016	9/5/2016	
2.5.1.1.6	Prepare constructability plan	Constructability Assessment Report	HDR	$47,167.00	9/6/2016	10/31/2016	

Shoemaker Bridge Replacement
Exhibit 2 - Earned Value Work Breakdown Structure

WBS	Task Name	Deliverable	Responsible Party	Cost	Start	Finish	Comments
2.5.1.1.7	Preliminary Geometric Plans of Preferred Alternative		HDR		4/4/2017	8/7/2017	
2.5.1.1.7.1	Draft Preliminary Geometric Plans of Preferred Alternative	Draft Preliminary Geometric Plans of Preferred Alternative	HDR	$80,000.00	4/4/2017	5/15/2017	
2.5.1.1.7.2	Agency Review of Draft Geometric Plans of Preferred Alternative			$0.00	5/16/2017	6/12/2017	
2.5.1.1.7.3	Final Preliminary Geometric Plans of Preferred Alternative per Agency Comments	Final Preliminary Geometric Plans of Preferred Alternative with Comment Matrix	HDR	$40,000.00	6/13/2017	7/10/2017	
2.5.1.1.7.4	Finalize and concurrence of Final Preferred Alternative Geometrics	Final/Concurred Geometric Plans of Preferred Alternative with Finalized Comment Response Matrix	HDR	$29,208.00	7/11/2017	8/7/2017	
2.5.1.2	Fact Sheets		HDR		7/26/2016	12/26/2016	
2.5.1.2.1	First Draft Fact Sheets for Preferred Alternative	First Draft Fact Sheets	HDR	$45,532.00	7/26/2016	9/5/2016	
2.5.1.2.2	Agency Review of Fact Sheets			$0.00	9/6/2016	10/3/2016	
2.5.1.2.3	Second Draft Fact Sheets	Second Draft Fact Sheets	HDR	$15,000.00	10/4/2016	10/31/2016	
2.5.1.2.4	Agency Review/Approval of Final Fact Sheets	Final Fact Sheets	HDR	$8,000.00	11/1/2016	12/26/2016	
2.5.1.3	Finalize 30% PS&E				7/25/2017	12/25/2017	
2.5.1.3.1	Draft 30% Plans	Draft 30% Plans & Estimate		$121,904.00	8/8/2017	9/4/2017	
2.5.1.3.2	Agency review of Draft 30% PS&E			$0.00	9/5/2017	10/2/2017	
2.5.1.3.3	Final 30% PS&E per Agency Comments	Final 30% Plans & Estimate with Comment Response Matrix	HDR		10/3/2017	11/6/2017	
2.5.1.3.4	Prepare Preliminary Cost Estimate	Preliminary Cost Estimate	HDR	$32,316.00	7/25/2017	8/21/2017	
2.5.1.3.5	Prepare right of way needs maps for each impacted parcel		HDR		10/3/2017	12/25/2017	
2.5.1.3.5.1	Prepare Draft PD-26 Submittal	Draft PD-26	HDR	$14,120.00	10/3/2017	11/6/2017	
2.5.1.3.5.2	Agency Review of PD-26 Submittal			$0.00	11/7/2017	11/27/2017	
2.5.1.3.5.3	Revise/Approve of Final PD-26 Submittal	Final and Approved PD-26	HDR	$10,000.00	11/28/2017	12/25/2017	
2.5	**Base Geometrics**			**$849,774.00**			

Shoemaker Bridge Replacement
Exhibit 2 - Earned Value Work Breakdown Structure

WBS	Task Name	Deliverable	Responsible Party	Cost	Start	Finish	Comments
2.6.1 *REMOVED*	Obtain E76 authorization	E76 Application for right of way activities		$0.00	4/4/2017	6/12/2017	
2.6.2	Identify permitting needs	Permitting Needs Technical Memorandum	HDR, RVA	$16,652.00	7/26/2016	8/22/2016	
2.6.3	Obtain Caltrans encroachment permits for design phase	Encroachment Permits	HDR	$10,416.00	7/26/2016	10/3/2016	
2.6.4 *REMOVED*	Facilitate development of cooperative agreement between City and Caltrans	Cooperative Agreement		$0.00	7/26/2016	8/22/2016	
2.6.5	Execute Section 214 agreement between City/Metro and USACE	Section 214 Agreement	RVA	$9,050.00	7/26/2016	8/22/2016	
2.6.6 *REMOVED*	Funding Assistance (Optional)	Funding Applications, Technical Memorandum		$0.00	9/24/2015	3/22/2016	
2.6.7	Public Outreach (Project Website and Maintenance)	Website and Maintenance	MBI	$50,000.00	3/30/2016	12/6/2016	
2.6	**Public Outreach, Funding Assistance, Permits & Agreements**			**$86,118.00**			
3.1	Identify additional survey needs			$0.00	7/26/2016	8/15/2016	For Information Only
3.2	Complete additional topographical and field surveys			$0.00	8/16/2016	10/10/2016	For Information Only
3.3	Review/update right of way base map			$0.00	7/26/2016	9/5/2016	For Information Only
3	**Design Surveys**			**$0.00**			
Task 1 Total				$509,103.73			
Task 2 Total				$3,451,242.00			
Grand Total				$3,960,345.73			

Legend

NES	Draft Natural Environment Study
BA	Draft Biological Assessment
AQR	Draft Air Quality Report
HPSR	Draft Historic Property Survey Report
CIA	Draft Final Community Impact Assessment
VIA	Draft Final Visual Impact Assessment
PIR/PER	Draft Paleontological Impact Report/Paleontological Evaluation Report
ASR	Archeological Survey Report
ISA	Initial Site Assessment
NADR	Noise Abatement Decision Report
TOR	Draft Traffic Operational Analysis Report
NSR	Draft Noise Study Report
DED	Draft Environmental Document
FED	Final Environmental Document
DPR	Draft Project Report
PR	Final Project Report
SWDR	SWDR
APE	Area of Potential Effects Map
LHS	Location Hydraulic Study