

AMENDMENT NO. 1 TO AGREEMENT
NO. 18-3618 BETWEEN THE CITY OF LOS ANGELES
AND MARK THOMAS & COMPANY, INC.

This Amendment No. 1 to Agreement No. 18-3618 ("Agreement") by and between the City of Los Angeles ("City") and Mark Thomas & Company, Inc. ("Mark Thomas") is entered into with respect to the following:

Whereas, on or about November 29, 2018, the City of Los Angeles by its Board of Harbor Commissioners and Mark Thomas entered into the Agreement for preparation of the State of California Department of Transportation (Caltrans) Plans, Specifications, and Estimates (PS&E) for the State Route (SR-47)/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration Project for the amount of \$2,999,986 for a three-year term.

Whereas, additional professional engineering services related to the following: discovery of unforeseen soil conditions were discovered that will require additional geotechnical settlement mitigation analysis, design and monitoring during construction, site drainage, landscaping, architectural wall treatment design, providing design support for non-standard retaining wall design, additional surveys, and additional stakeholder and project team coordination, which were unanticipated.

Whereas, the additional professional engineering services will require the additional amount of \$1,997,887 which will require the amount of Compensation under the Agreement to change to \$4,997,873.

Wherefore, for valuable consideration, City and Mark Thomas enter into this Amendment No. 1 on the following terms and conditions:

1. Section 5.1 of the Agreement is amended by deleting the first full sentence of said Section and replacing it with: "For the full and satisfactory performance of the Scope of Work, City shall pay Consultant and Consultant shall accept a sum not to exceed Four Million Nine Hundred Ninety-Seven Thousand Eight Hundred Seventy-Three Dollars (\$4,997,873) to be paid as specified in 'Exhibit F-1'."
2. Exhibits. The exhibits to the Agreement are changed as follows:
 "Exhibit A" to the Agreement is replaced with "Exhibit A-1," a copy of which is attached hereto. References to "Exhibit A" within the Agreement are replaced with "Exhibit A-1".
 "Exhibit B" to the Agreement is replaced with "Exhibit B-1," a copy of which is attached hereto. References to "Exhibit B" within the Agreement are replaced with "Exhibit B-1".
 "Exhibit F" (including all previous revisions) to the Agreement is replaced with "Exhibit F-1" a copy of which is attached hereto. References to "Exhibit F" within the Agreement are replaced with "Exhibit F-1."

“Exhibit G” to the Agreement (including all previous revisions) is replaced with “Exhibit G-1,” a copy of which is attached hereto. References to “Exhibit G” within the Agreement are replaced with “Exhibit G-1.”

3. Except as provided herein, all provisions of the Agreement shall remain unchanged. All capitalized terms in this Agreement that are not defined herein have the same meaning as defined in the Agreement.

THE CITY OF LOS ANGELES, by its
Board of Harbor Commissioners

By _____
EUGENE D. SEROKA
Executive Director

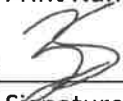
Attest _____
AMBER M. KLESGES
Board Secretary

MARK THOMAS & COMPANY, INC.

By 
Signature of Officer

Rob Himes, President

Print Name/Title of Officer

Attest 
Signature of Officer

Zach Siviglia, Vice President

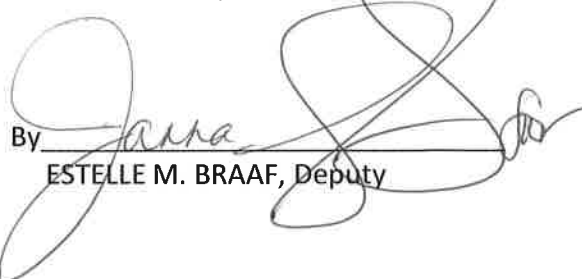
Print Name/Title of Office

APPROVED AS TO FORM AND LEGALITY

Feb 25, 2021

MICHAEL N. FEUER, City Attorney

JANNA B. SIDLEY, General Counsel

By 
ESTELLE M. BRAAF, Deputy

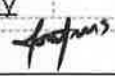

Account#	54220	W.O. #	2533400
Ctrl/Div#	1172	Job Fac. #	203-7700
Proj/Prog#	000		
	Budget FY:	Amount:	
	Prior Years	1,609,590.56	
	20/21	503,670.00	
	21/22	2,884,612.44	
	TOTAL	\$4,997,873.00	
For Acct/Budget Div. Use Only			
Verified by:		Digitally signed by Joanna Ames Date: 2021.02.23 11:43:56 -0800	
Verified Funds Available:		Digitally signed by Frank Liu Date: 2021.02.23 11:55:03 -0800	
Date Approved:	2/23/21		

Exhibit A-1

EXHIBIT A-1 PROJECT DESCRIPTION (revised January 13, 2021)

1. PROJECT DESCRIPTION

1.1 Project Goals and Objectives

The proposed project is illustrated in Attachment 1, and entails the following:

- Remove the existing westbound (WB) SR 47/Vincent Thomas Bridge off-ramp (south of the Vincent Thomas Bridge) with Harbor Boulevard;
- Construct a new WB SR 47/Vincent Thomas Bridge off-ramp (north of the Vincent Thomas Bridge) with Front Street; including a new and/or modified traffic signal at the intersection Front Street and Knoll Drive (directly opposite of the West Basin Container Terminal Entrance). The new ramp is currently envisioned to be constructed on fill material and retaining walls, tying into the existing off-ramp abutment that extends from the Vincent Thomas Bridge;
- Realign Knoll Drive (south) north of the intersection at Front Street and Knoll Drive, reversing travel direction to westbound (WB);
- Realign existing eastbound (EB) SR 47/Vincent Thomas Bridge on-ramp (south of the Vincent Thomas Bridge) from Harbor Boulevard further to the west to increase EB merge length on the bridge approach. This realigned ramp would be entirely on fill and retaining walls;
- Modify existing westbound (WB) SR 47/Vincent Thomas Bridge off-ramp to Harbor Boulevard to add an auxiliary exit lane;
- Modify Front Street from Knoll Drive to Harbor Boulevard;
- Modify and/or relocate existing Port Police Cruise Terminal Truck Inspection facility (located adjacent to Port police K-9 dog training area) within project limits; and
- Protect in place existing sewer pump station.

The successful project shall propose minimal impacts to the existing sewer pump station, truck inspection facility, and Los Angeles Department of Water and Power (LADWP) facilities.

Project Need:

Currently, westbound SR-47 traffic and southbound I-110 traffic exit at Harbor Boulevard, creating safety and operational issues due to significant weaving as traffic approaches the intersection. Non-standard weaving exists as merging traffic approaches the intersection from both the westbound SR-47 off ramp and the Southbound I-110 off ramp. Non-standard merging also exists on the eastbound SR-47 on-ramp from Harbor Boulevard as traffic approaches the Vincent Thomas Bridge. Vehicles routinely back up onto both off-ramps during the peak period as a result of the two freeways (I-110 & SR-47) terminating at the same point. With the projected future growth and the development of the

Waterfront, the Harbor Department anticipates that traffic congestion will increase and greatly reduce the operational efficiency of the interchange.

To mitigate this operational deficiency, the Harbor Department proposes to relocate the existing westbound SR-47 off-ramp north of the Vincent Thomas Bridge and opposite of Knoll Drive at Front Street. Relocating the off-ramp to the north will separate the traffic from both freeways into two different exits (Harbor Boulevard/Swinford Street and Front Street/Knoll Drive), allowing for efficient movement of vehicles through the interchange that are destined for the cruise terminal, Waterfront Development, and other recreational facilities.

Project Purpose:

This project will reduce delay, potential for crashes/non-recurrent congestion, and emissions with the following improvements:

- Eliminates a non-standard weave on the existing off-ramp to Harbor Boulevard as traffic exits via the westbound SR-47 off ramp and southbound I-110 off-ramp. New off-ramp configuration will separate truck traffic from passenger vehicle traffic reducing significant delays, upstream ramp queues onto I-110 and SR-47, and crash potential.
- Improves operational conditions on the off-ramps and the intersection of Harbor Boulevard from unacceptable to an acceptable Level of Service (LOS) as defined by Caltrans and the City of Los Angeles. The existing condition is expected to worsen as traffic volumes increase in the area due to anticipated growth in cargo volumes and non-containerized traffic generated by Ports O'Call, LA Cruise facility, and the San Pedro community.
- Improves a non-standard eastbound SR-47 on-ramp merge to the Vincent Thomas Bridge from the intersection of Harbor Boulevard.

EXHIBIT B-1

EXHIBIT B-1 SCOPE OF WORK (revised January 13, 2021)

2. SCOPE OF WORK

The following provides details on the principal work elements. The Consultant and the Harbor Department jointly developed the details included herein.

Task 1. Project Management & Coordination

The Consultant shall provide project management services throughout the project. This project management effort shall be provided for the following processes: project initiation, project planning and scheduling, project controls, project execution, and project administration and closing. The Consultant shall address project issues including, but not limited to, project integration, project scope development, project management, cost management, quality assurance and control issues, human resource requirements, project communications, and project risk management. The Consultant shall initiate, plan, execute, direct, control, and administer the project by effectively organizing, staffing, directing, integrating, and coordinating the required project tasks and services. These services shall be performed in a professional manner as per current project management principals, guidelines, and standards promoted by recognized project management organizations and institutions.

The Consultant shall administer all subconsultant work effort on this project. All subconsultant requests for information, questions, clarifications, invoices, etc. shall be processed through the Consultant. The Consultant shall provide project management services in conjunction with all other phases, project elements, and tasks covered under the proposed agreement. The Harbor Department will not provide any separate compensation for the performance of project management. All compensation for project management work shall be included in the compensation for the other tasks. This task includes but is not limited to, the following:

Task 1.1 Project Management Plan

The Consultant shall provide a detailed project management plan (PMP) including information on coordination with appropriate agencies to ensure timely completion of the Plans, Specifications, and Estimates (PS&E) package. This plan shall include a schedule for milestone completion and an hourly breakdown for each task and subtask and costs associated with each task and subtask. The PMP shall be delivered within 30 days of the first Notice to Proceed (NTP).

Deliverable(s): Project Management Plan

2 hard-copies and 1 electronic file of each above deliverable

Task 1.1.1 Quality Control/Quality Assurance Plan

In conjunction with the PMP, the Consultant shall also prepare a quality control/quality assurance (QC/QA) plan for this project within 30 days of the first NTP. The QC/QA Plan shall be prepared in accordance with the Harbor Department's and Caltrans' minimum requirements, and shall identify procedures for reviewing and checking computations, design drawings, and other submittals specific to the design phase for both the Consultant and subconsultants. The plan shall also identify roles and

responsibilities for implementing and monitoring quality control and quality assurance.

Deliverable(s): QC/QA Plan

2 hard-copies and 1 electronic file of each above deliverable

Task 1.1.2 Prepare Project Schedule

The Consultant shall develop a computerized critical path method (CPM) schedule using Microsoft Project. This schedule shall be created in close coordination with the Harbor Department's Project Manager. The initial schedule shall be submitted 30 days after the first NTP. The schedule shall initially focus on design phase activities, including significant milestones, permits, utility coordination and related tasks in order to allow for effective planning, monitoring, and reporting throughout the project. It shall combine activities related to cost, planning and design, reviews, delivery, and approvals and shall provide uniform guidance for planning, scheduling, budgeting, and coordinating efforts. Updates to the schedule should coincide with the monthly Project Development Team (PDT) Meeting, where reporting shall take place.

Deliverable(s): Baseline Project Schedule

2 hard-copies and 1 electronic file of each above deliverable

Task 1.1.3 Coordination

The project will require coordination and approval from Caltrans and the City of Los Angeles during the entire project duration. These projects will require a number of permits and approvals from other regulatory agencies. The Consultant's studies and design shall meet the requirements of those agencies. There will also be coordination with other engineering firms that are preparing development plans in the vicinity. Consultant shall provide coordination with in-house Harbor Department staff design teams. Collaboration among various project team member's files will be coordinated via cloud platform system. Electronic copies of all project documents, plans, specifications, and estimates to be available via cloud platform system.

Deliverable(s): Cloud Platform System

Task 1.2 Monthly Progress Status Reports and Schedule Updates

The Consultant shall prepare monthly progress status reports that will include, but not be limited to, an update to the key milestone delivery schedule and status and percent completion of each task worked on during that period. Consultant shall maintain CPM schedule. The schedule will be reviewed in close coordination with the Engineering Division. A monthly schedule shall be issued for project progress meetings and other public meetings where the project status and schedule may be an agenda item. The CPM schedule shall also be updated each month to show progress.

Deliverable(s): Monthly Progress Reports

Updates to the CPM schedule

Monthly Invoicing

2 hard copies and 1 electronic file of each above deliverable

Task 1.3 Project Development Team (PDT), Kick-off, and Focus Meetings

The Consultant team shall attend monthly PDT meetings and focus meetings with project stakeholders throughout the project's duration. It is anticipated that forty-eight (48) PDT meetings, five

(5) kick-off meeting, and twenty-eight (28) focus meetings shall be held. The Consultant's Project Manager shall attend each meeting. It is anticipated that various other members of the project team, including subconsultants shall attend the meetings, as needed. The Consultant shall prepare an agenda and distribute meeting notes, as well as track design contract action items. Monthly progress reports shall be presented and discussed at this meeting.

Deliverable(s): Meeting Notes
 Meeting Agenda
 2 hard-copies and 1 electronic file of each above deliverable

Task 1.4 Subconsultant Administration

The Consultant shall administer all subconsultants work effort on this project. All subconsultant requests for information, questions, clarifications, invoices, etc. shall be processed through the Consultant.

Task 1.5 Additional Requirements

The Consultant shall be responsible for the engineering design, final PS&E (or Construction Documents) and related approvals for the project. The Consultant's services will include identification of required permits and licenses; topographic survey of the project site; geotechnical investigation; coordination with responsible agencies and parties impacted by the construction of the project; and such other services that are necessary for the completion of the project. Project design shall meet the standards and requirements of the City of Los Angeles, conform to current Federal and State regulations, and meet recognized design standards, including those of the California Department of Transportation (Caltrans), City of Los Angeles, and the "GREENBOOK" (Standard Specifications for Public Works Construction). The design of this new interchange is subject to the review and approval of Caltrans and various City of Los Angeles Departments.

Task 1.5.1 Design Standards

Design shall be in accordance with the latest American Association of State Highway Transportation Officials' (AASHTO) A Policy on Geometric Design of Highways and Streets, latest edition; Latest California Manual on Uniform Traffic Control Devices, Caltrans' Bridge Design Specifications Manual, Caltrans Highway Design Manual (HDM) Caltrans Standard Plans and Specifications, Caltrans Design Memos, City Standard Drawings, and City Master Plan of Streets, City Mobility Plan, City Complete Streets Manual, City Circulation Element; and City standard practices.

Specifications shall be in accordance with the latest City standard bid documents and Caltrans Standard Specifications, latest edition.

All dimensions shall be in English Units.

Task 1.5.2 Administration

The Consultant shall prepare supporting documents (e.g. project scope) for required Cooperative Agreements with Caltrans. The Consultant shall also prepare the following Caltrans forms and documents: Request for Authorization for preliminary engineering; Request for Authorization for Right-of-Way (ROW); Request for Authorization for Utilities; Request for Authorization for Construction; supporting documents (e.g. project scope) for Construction Cooperative Agreement with Caltrans; and supporting documents for the Maintenance and Traffic Signal Maintenance Agreements with Caltrans and the City.

Deliverables: Project Scope for Cooperative Agreement
 Request for Authorization for Preliminary Engineering
 Request for Authorization for Right-of-Way (ROW)
 Request for Authorization for Utilities
 Request for Authorization for Construction
 Supporting Documents for Maintenance and Traffic Signal Maintenance
 Agreement with Caltrans and the City

Task 1.5.3 Cost Estimate

The Consultant shall compile and prepare the Cost Estimate based on all biddable construction items identified throughout the design package, conforming to Caltrans Project Development Procedures Manual, Chapter 20 "Project Development Cost Estimate". The Consultant shall be required to submit updated cost estimates.

The Consultant's final construction cost estimate shall be based upon, and in agreement with, the final estimated quantities. Computations showing estimated quantities and costs for each location of work, as well as the sum totals, shall be submitted to the City for review. Submission of computations does not relieve the Consultant's responsibility for submitting an accurate estimate of quantities.

Deliverable(s): Cost Estimate
 2 hard-copies and 1 electronic file of each above deliverable

NOTE: Project Management and coordination services and costs are included within all major scope of services Tasks (Tasks 2.0 – 10.0) and are not broken out separately as Task 1.0.

Task 2. Collect Existing Data and Field Investigations

Task 2.1 Geotechnical Analysis and Reports

Consultant shall investigate the soil and subsurface conditions at the project site and provide geotechnical recommendations for design of the project. This task will be performed during Tasks 3 through 8, as required. The Geotechnical Work shall include, but is not limited to, the following:

A. Review and Analysis of Existing Information:

1. Collect and review existing geotechnical reports, boring logs, and other geotechnical information from adjacent and nearby projects, as well as from previously performed Geotechnical Work in the project area.
2. Review and represent the site geology on plan, section, and profiles. Summarize soil parameters as presented in existing data.
3. Inspect site to determine existing site conditions.

B. Field Investigation:

1. Following review of available geotechnical information, Consultant shall develop a geotechnical work plan, including determination of the number of borings, cone penetration tests (CPT), hollow-stem auger (HSA), or other data acquisition and testing required for design of the project.

2. Submit a boring plan indicating the location and depths of all borings and CPTs/HSAs for approval by the Engineer prior to sampling. Boring plan shall indicate substructures in the vicinity of the proposed borings. It will be the responsibility of the Consultant to obtain encroachment permits, notify Underground Service Alert and provide traffic control.
3. Detailed planning of field investigation:
 - a. Arrange for and schedule drillers
 - b. Make preparations for sample handling, transportation, and testing
 - c. Locate test borings
 - d. Locate utilities and other onsite interferences and mark location on the ground
 - e. Obtain necessary permits
 - f. Schedule field staff
 - g. Preliminary Foundation Report in accordance with Caltrans requirements;
4. Perform borings and other fieldwork as necessary for the surface and subsurface investigation. As initial surface and subsurface investigation is accomplished and data is reviewed, Consultant shall adjust boring depths, locations, and number of borings and CPTs/HSAs using prudent engineering judgment and considering subsurface conditions and project requirements, as approved by the Engineer. CPT/HSA data shall be obtained during borings. Sufficient borings and material samples shall be taken to determine the road structural section and slope stability.
5. Borings and CPTs/HSAs in uncontaminated areas shall be backfilled in accordance with latest County and State requirements. Borings and CPTs/HSAs in contaminated areas shall be backfilled with grout. Contaminated drilling spoils shall be left on-site in drums for disposal by others.

C. Laboratory Testing:

1. Perform laboratory testing to include, but not limited to, the following:
 - a. Index testing:
 - i. In-situ moisture content/dry density
 - ii. Maximum density and optimum moisture content
 - iii. Specific gravity
 - iv. Atterberg limits
 - v. Sand equivalent
 - vi. Sieve analysis
 - vii. Resistivity
 - viii. Grain size analysis
 - ix. Expansion index
 - b. Consolidation tests with time plot
 - c. Soil strength test:
 - i. Triaxial compression
 - ii. Direct shear
 - iii. Standard penetration test
 - d. R-value or CBR tests

- e. Hydrometer
 - f. Compaction tests.
 - g. Chemical analysis:
 - i. pH
 - ii. sulfates
 - iii. chlorides
 - h. Corrosivity
2. Investigation for Aerially Deposited Lead (ADL):
An ADL study, conducted in accordance with Caltrans minimum ADL investigation requirements, shall be conducted by others.

D. Prepare Soil Data Report:

- 1. Prepare narrative summary of the site soil conditions and soil parameters as developed from review of existing data, borings, and laboratory testing.
- 2. Prepare and draft boring logs using GINT program.
- 3. Prepare site soil plan, profile, and cross sections.
- 4. Prepare data report.

E. Geotechnical Analysis:

The geotechnical analysis shall be based on both the current available geotechnical site information and the results of the new field investigation. The following items shall be addressed by the geotechnical analysis:

- 1. Provide seismic design requirements and recommendations based on Los Angeles Building Code criteria, Caltrans criteria, and considering the significance of the Palos Verdes Fault.
- 2. Foundation analysis:
 - a. Develop recommendations for the foundations and/or bedding of structures, including standard and non-standard Caltrans retaining walls, vaults, storm drains and light poles considering local site conditions and recommended seismic requirements.
 - b. Prepare technical report.
- 3. Pavement design:
 - a. Develop pavement section for roadway improvements based on adjoining property usage.
 - b. Provide R-values and CBRs of sub-grade for pavement design.
 - c. Prepare technical report.
- 4. General grading:
 - a. Provide analyses and recommendations for the following:

- i. Trench excavation, backfill and shoring.
 - ii. Site grading, fill placement and compaction.
 - iii. Subgrade preparation for foundations and footings of structures.
 - iv. Bedding requirements for utilities and substructures.
 - v. Dewatering.
- 5. Corrosive potential
 - a. Determine soil corrosion potential and recommend protective measures for utilities and substructures.
- 6. Settlement Mitigation and Ground Improvements
 - a. Prepare and evaluate ground improvement alternatives for settlement mitigation for proposed embankment of on-off ramps; consider underlying utilities
 - b. Provide geotechnical analysis and geotechnical design based on surcharge placement, wick drains (PVDs) and/or ground improvement
 - c. Include proposed alternative and findings in Final Geotechnical Design Report

F. Draft and Final Reports:

The findings, conclusions and recommendations shall be discussed with the Harbor Department as they are developed. Upon completion of the work, Consultant shall submit copies of the draft report containing the findings, conclusions, and recommendations with the supporting field and laboratory data for review by the City and Caltrans. Consultant shall review and address the City's and Caltrans' comments, and submit copies of the final report validated by California State certified Geotechnical Engineer to the City and Caltrans.

G. Contract Documents Review:

Consult with designers during Preliminary and Final Designs as necessary to implement recommendations and review project drawings and specifications for conformance with geotechnical recommendations.

Deliverable(s): Boring & CPT Plan

Obtain Necessary Permits

Soil Data Reports

Draft and Final Geotechnical Reports

Materials Report

Type Selection Report

Preliminary Foundation Reports

Draft and Final Foundation Reports

Settlement Mitigation/Ground Improvement Alternatives & Geotechnical Design

2 hard-copies and 1 electronic file of each above deliverable

Task 2.2 Survey and Right-of-Way Research

Task 2.2.1 Topographic Survey

Consultant shall obtain aerial photography within project area and produce design level scale

(1"=50' with 1' contour interval) Digital Terrain Model (DTM). Consultant shall establish horizontal and vertical control information. Coordinate system shall be CCS83 Zone 5 epoch 2010.00 and elevations NAVD88, unless otherwise specified. Control from Caltrans, Harbor Department, and City of Los Angeles shall be located to show the differences between datums. Mapping shall be processed through Caltrans ABC process and approved survey control report shall be obtained.

Deliverable(s): Topographic Base Mapping
1 electronic file of each above deliverable

Task 2.2.2 Record Research and Monument Search

Consultant shall perform record research to locate recorded control maps, right-of-way maps, records of survey, corner records, and other maps of record to determine the right-of-way limits within the project area. A search shall be conducted to locate existing monuments within the project area. Found monuments shall be located using a Total Station or GPS and included in the base map. Monuments shall be tied out to Caltrans 3rd Order Standards and Observations. Data reduction and coordinates shall be submitted to Caltrans for review.

Task 2.2.3 Right-of-Way Retracement and Property Line Delineation

Consultant shall review and analyze the property and right-of-way ties obtained from record research. Consultant shall delineate existing right-of-way and parcel lines of impact parcels within project limits. Once boundaries are resolved, Consultant shall plot encumbrances affecting acquisition as shown in title reports.

Task 2.2.4 Appraisal Mapping and Relinquishment Map

Consultant shall prepare appraisal map to Caltrans standards using existing right-of-way data from retracement and new right-of-way requirements. Additionally, the Appraisal Map shall show screened topographic information and contain tabular data for parcel acquisitions, including Caltrans parcel numbers, owner name, areas of total ownership, acquisition remainder, and encumbrances. Following completion of boundary delineation and identifying relinquishments, Consultant shall prepare Relinquishment Map to be filed by Caltrans after review.

Deliverable(s): Right-of-Way Appraisal Mapping
2 hard-copies and 1 electronic file of each above deliverable

Task 2.2.5 Legal Descriptions and Plats, and Right-of-Way Record Mapping

Consultant shall prepare legal descriptions and plats for acquisition parcel(s) and Temporary Construction Easement (TCE) and will undergo one review by the City of Los Angeles and Caltrans for technical accuracy prior to signature. Consultant shall prepare right-of-way record map.

Deliverable(s): Legal and Plat Descriptions
Right-of-way Record Mapping
2 hard-copies and 1 electronic file of each above deliverable

Task 2.2.6 Pre-Construction Record of Survey

Consultant shall prepare Pre-Construction Record of Survey which complies with the Professional Land Surveyors Act. Reference points shall be set at various locations to perpetuate the location of monuments that may be disturbed or destroyed during construction activities. The Record

of Survey shall be reviewed by the City, Caltrans and Los Angeles County for approval prior to filing.

Deliverable(s): Pre-Construction Record of Survey
2 hard-copies and 1 electronic file of each above deliverable

Task 2.3 Utility Mapping and Coordination

Consultant shall prepare existing utility base mapping. The utility mapping developed shall be verified through topographic surveys and ground penetrating radar (GPR). Consultant shall perform up to seventy-five (75) potholes to located critical facilities. Consultant shall adhere to Caltrans' ABC process for producing utility letters. High and low risk facilities shall be identified through a Utility Conflict Matrix. Consultant shall provide coordination services for utility relocations including but not limited to: Los Angeles Department of Water and Power (LADWP) facilities, gas, oil, and water lines.

Deliverable(s): Utility Mapping files
Certified List of Utilities per USA
Utility Conflict Mapping Procedure (ABC Letters)
LADWP – Power Pole Relocation Design
GPR Data
Potholing Results and Report
2 hard-copies and 1 electronic file of each above deliverable

Task 2.4 Hydraulic and Hydrology Report and Storm Water Data Report

Consultant shall prepare a Hydrology and Hydraulics Report and Storm Water Data Report. The reports shall include onsite hydrologic calculations to recommend drainage improvements as needed as a result of proposed roadway modifications and improvements. Calculations and recommendations shall conform to the latest Los Angeles County Hydrology Manual, Caltrans requirements, and City Standards. The onsite hydraulic computations shall be based on City of Los Angeles and Caltrans standards based on jurisdictional boundary.

Deliverable(s): Draft and Final Caltrans Hydrology and Hydraulic Report
Draft and Final City of Los Angeles Hydrology and Hydraulic Report
Draft and Final Storm Water Data Report
2 hard-copies and 1 electronic file of each above deliverable

Task 2.5 Life Cycle Cost Analysis (LCCA) Report

Consultant shall prepare Life Cycle Cost Analysis (LCCA) Report. The LCCA shall follow requirements per the Caltrans, Division of maintenance Life Cycle Cost Analysis and Procedures manual. A copy of the completed LCCA shall be submitted to Caltrans for review and approval.

Deliverable(s): Approved LCCA Report
2-hard copies and 1 electronic file of each above deliverable

Task 3. Preliminary Design Phase (35% Construction Plans)

Upon issuance of written Notice(s) to proceed from the Engineer, proceed with 35% design of project. Subsequent phases of design submittals assume that the project will proceed to construction under one construction contract and that multiple copies of one (1) set of construction documents will be required.

- A. Plans shall include typical sections and details and illustrate the architectural, civil, and electrical design aspects in sufficient detail to cover all matters, which will materially impact the essential features and cost of the project.
- B. Prepare and submit type selection documents according to current Caltrans requirements, as shown in Caltrans' OSFP Information and Procedures Guide, Section 4-2.
- C. Consultant shall provide technical training for the following: Caltrans Standard Retaining Wall Design, Caltrans and City of Los Angeles Drainage Design, and Caltrans Highway Design Manual.

Deliverable(s): Deliverables from this phase will provide a general overview of the entire proposed development not necessarily attempting to group the plans by anticipated construction contract sets. The deliverables will include the Response to Geometric Approval Drawings (GAD) submittal comments and GAD to the following (2 hard copies and 1 electronic file of each below deliverable):

- Caltrans Roadway 35% Plans Preparation (1"=50')
 - Title
 - Typical Sections
 - Key Map and Control
 - Project Control
 - Construction Details
 - Contour Grading
 - Utility Disposition
 - Signage and Striping
 - Layout Sheets
 - Phasing Plan
 - Plan/Profile and Superelevation Sheets
 - Lighting
 - Quantities
 - Roadway Cross Sections
- Harbor Department Conceptual Plans
- QC Review Comments for Harbor Department Staff 35% Plan Sheets

Task 4. Sixty-Five Percent Design Documents (65% Construction Plans)

- A. Upon issuance of written Notice(s) to Proceed from the Engineer, proceed with 65% design of Project. This procedure is the same for the Final design.
- B. Preparation of Contract Documents in sufficient detail to provide the information necessary for competitive construction contract bidding for Project.
- C. Permits and Approvals:
 - 1. Perform all appropriate code coordination and review with all applicable local, state, and federal agencies. Consultant shall complete applications, including necessary documentation, to obtain all permits and approvals for the project other than those that are required to be obtained by Contractor(s). These applications

shall be submitted to the Engineer for review and approval prior to filing with appropriate agencies.

2. Permits/approvals for completion of this project include, but are not limited to, the following:
 - a. Caltrans Encroachment Permit (District 7 and Headquarters)
 - b. Los Angeles Department of Public Works (B-Permit)
 - c. Los Angeles Fire Department
 - d. Los Angeles Department of Transportation
 - e. Los Angeles Bureau of Street Lighting
 - f. Los Angeles Bureau of Sanitation
 - g. Los Angeles Bureau of Street Services
 3. Changes in the Contract Documents including any changes required by a change in rules, regulations, or laws required to obtain final approval from said agencies shall be made by Consultant.
 4. Consultant shall determine and apply for any other permits required by the local, state, and federal agencies for project.
- D. Sixty-Five Percent Submittal:
1. When contract documents are 65%, provide necessary number of copies and one reproducible set of the 65% drawings, specification, updated project cost estimate, and other documents to the City and Caltrans for review and comment.
 2. Consultant shall submit the 65% Contract Documents to the City and Caltrans for plan check approval, and shall make all plan check corrections necessary to obtain all required permits.
- E. Prepare specification in conformance with latest Caltrans specifications and special provisions. For items of work outside the state jurisdiction, the specifications will be developed in accordance with the "Green Book" standard specifications for public works construction, or as modified by the Harbor Department for their standard practice.
- Consultant shall use the most current Caltrans Standard Specifications for the project. The Special Provisions that pertain specifically to this project shall be developed in accordance with the Caltrans Plans, Specification, and Estimate Guide.
- F. Quantities for all contract items, including cost lump sum items, will be substantiated by calculations. Quantity calculations shall be neat and orderly, and they shall show all sketches, diagrams, and dimensions necessary to allow them to be independently used by the field engineers. All quantities shall be independently checked and substantiated with independent calculations.
- G. Consultant shall provide technical training for the following: Caltrans Standard Retaining Wall Design, Caltrans and City of Los Angeles Drainage Design, Caltrans Highway Design Manual.

Deliverable(s): A draft version of the following, grouped by contract set, shall be provided to the Harbor Department at the end of this design phase (2 hard copies and 1 electronic file of each below deliverable):

- Respond to 35% Submittal Comments
- Caltrans Roadway 65% Plans Preparation (1"=50')
 - Title
 - Typical Sections
 - Key Map and Control
 - Project Control
 - Construction Details
 - Contour Grading
 - Water Pollution Control
 - Utility Disposition
 - Stage Construction and Traffic Handling
 - Signage and Striping
 - Drainage Design, Details, and Quantities
 - Layout Sheets
 - Phasing Plan
 - Plan/Profile and Superelevation Sheets
 - Temporary Lighting
 - Lighting
 - Quantities
 - Roadway Cross Section
- City of Los Angeles (85% Plans)
 - Title Sheet
 - Typical Sections
 - Key Map and Control
 - Construction Details
 - Plan/Profile - Street Improvement Layout (1"=20')
 - Utility Disposition
 - Stage Construction and Traffic Handling
 - Signage and Striping
 - Street Lighting
 - Temporary Signal Plans
 - Roadway Cross Sections
- Specifications
 - Consultant shall use the most current Caltrans Standard Specifications for the project. The Special Provisions that pertain specifically to this project shall be developed in accordance with the Caltrans Plans, Specification, and Estimate Guide. Consultant shall also use the most current City of Los Angeles specifications for project plans corresponding to City of Los Angeles Departments.
- Quantities
 - Quantities for all contract items, including cost lump sum items, shall be substantiated by calculations. Quantity calculations shall be neat and orderly, and they shall show all sketches, diagrams, and dimensions necessary to allow independent use by the field engineers. All quantities shall be independently checked and substantiated with independent calculations.
- Roadway Preliminary Quantity and Cost Estimate
- Special Provisions and Technical Specification
- QC Review Comments for Harbor Department Staff 65% Plan Sheets

Task 5. Final Design Documents (95% Construction Plans)

- A. Upon issuance of written Notice(s) to Proceed from the Engineer, or written provisional

notice to proceed with individual elements, Consultant shall prepare the Final Design submittal and respond to and incorporate all comments received from the City and Caltrans.

- B. When Contract Documents are 95% complete, Consultant shall submit necessary prints and one reproducible set of design drawings, specifications, estimates, calculations, or other documents to the City and Caltrans for review and comments.
- C. Contract Documents shall be stamped and signed by an engineer and/or architect appropriately licensed to practice in the State of California.
- D. Consultant shall submit all construction quantities as well as civil, electrical, mechanical, and any other calculations used in the design of the project.
- E. Consultant shall submit a detailed estimate of the cost based on the bid items and provide a Class "A" estimate.
- F. Consultant shall submit a proposed construction schedule in sufficient detail for use by the Engineer in evaluating the adequacy of the Contractor's scheduling submittal.

Deliverable(s): Final versions of the following contract sets consisting of plans, specifications, and estimates are anticipated:

- Respond to 65% Caltrans and 85% City of LA Submittal Comments
- Caltrans Roadway 95% Plans Preparation (1"=50')
 - Title
 - Typical Sections
 - Key Map and Control
 - Project Control
 - Construction Details
 - Contour Grading
 - Water Pollution Control
 - Temporary Water Pollution Control
 - Settlement Mitigation Design, Details, and Quantities
 - Utility Disposition
 - Stage Construction and Traffic Handling
 - Signage and Striping
 - Drainage Design, Details, and Quantities
 - Temporary Drainage Design, Details, and Quantities
 - Landscape and Irrigation
 - Layout Sheets
 - Phasing Plan
 - Plan/Profile and Superelevation Sheets
 - Select Standard Plans
 - Temporary Lighting
 - Lighting
 - Temporary ITS Design
 - ITS Design
 - Quantities
 - Roadway Cross Section
 - Architectural Treatment
- City of Los Angeles (100% Plans)
 - Title Sheet

- Typical Sections
- Key Map and Control
- Construction Details
- Plan/Profile - Street Improvements (1"=20')
- Temporary Water Pollution Control
- Utility Disposition
- Stage Construction and Traffic Handling
- Signage and Striping
- Temporary Street Lighting
- Street Lighting
- Temporary Signal Plans
- Drainage Design and Details
- Roadway Cross Sections
- Harbor Department Staging Index Plans
- Provide Structural Standard and Non-Standard Retaining Wall Design Support
- All other Task 4 Deliverables to 95% design

Task 6. Signature Submittal

- A. Following review and incorporation of final design comments of the Engineer, original Contract Documents, stamped and signed by an engineer or architect appropriately licensed to practice in the State of California, shall be submitted for signature by the Engineer.
- B. The original drawings and two full-size prints, drawing electronic CAD files, unbound original specification, and two copies of final cost estimate and schedule shall be submitted.
- C. Submit to the Engineer all final construction quantities as well as architectural, civil, electrical, mechanical, and any other calculations used in the design of the project.

Deliverable(s): Signature Drawings – Caltrans and City of Los Angeles
 Unbound Original Specifications
 Final Cost Estimate
 Final Schedule
 Final Quantities and Calculations
 Approved Supplemental Fact Sheets
 2 hard-copies and 1 electronic file of each above deliverable

Task 7. Bidding Phase

Consultant shall provide assistance to the City during the contract(s) advertising and award process to include the following:

- Assistance with future potential bidders
- Attendance at pre-bid meetings
- Reviewing and providing responses to bidder inquiries
- Preparing and issuing addendums as needed
- Assistance in reviewing bids

Task 8. Design Services During Construction

Consultant shall provide the following services in support of the City on-site construction management efforts:

A. Office Engineering

1. Check detailed construction drawings, submittals, shop and erection drawings, and substitutions submitted by the project contractor for compliance with permits and contract documents.
2. Review specific non-routing laboratory, shop, and mill test reports of materials and equipment as directed by the City.
3. Address requests for information ("RFI's") from the project contractor and project inspectors.
4. Prepare record (as-built) drawings on original contract documents as per the data supplied by the project contractor via the City's construction manager.

B. Field Engineering

1. Make periodic visits to the site to observe the work in progress and provide appropriate reports including attendance at selected weekly progress meetings.
2. Observe and report to the City on any performance test required by the contract documents.
3. Attend final inspections of project's completed construction contracts.

C. Structural Observation

Consultant shall provide qualified personnel for observation of structural systems, for general conformance to the approved plans and specifications in conformance with all applicable codes.

This task includes a limited number of field trips at significant construction stages and at completion of the structural system. The structural systems include the lateral and/or gravity of load paths.

Deliverable(s): Responses to Request for Information (RFI)
 Field Reports and "Punch Lists"
 Reviewed Shop Drawings and Submittals
 As-Built Drawings
 2 hard-copies and 1 electronic file of each above deliverable

Task 9. As Needed Engineering Services

Provide as-needed engineering services including, but not limited to, technical studies, analysis, conceptual-final designs, professional training, and other engineering services as directed by the Chief Harbor Engineer.

EXHIBIT F-1

**EXHIBIT F-1
METHOD OF COMPENSATION
(Revised January 5, 2021)**

Port of Los Angeles

#	TASK	COST
1.0	Project Management and Coordination (Lump Sum)	\$ 0
2.0	Collect Existing Data and Field Investigations (Lump Sum)	\$ 962,295
3.0	Preliminary Design (35% Construction Plans) (Lump Sum)	\$ 456,296
4.0	Sixty-Five Percent Design Documents (65% Construction Plans) (Lump Sum)	\$ 682,564
5.0	Final Design Documents (95% Construction Plans) (Lump Sum)	\$ 1,429,207
6.0	Signature Submittal (Lump Sum)	\$ 486,234
7.0	Bidding Phase (Time and Materials)	\$ 60,556
8.0	Design Services During Construction (Time and Materials)	\$ 254,333
9.0	As Needed Engineering Services (Time and Materials)	\$ 200,000.40
9.1	Cloud Platform & File Management Services (Time and Materials)	\$ 43,363
9.2	Additional Geotechnical Services (Time and Materials)	\$ 181,533.60
9.3	Settlement Evaluation & Mitigation Alternatives (Time and Materials)	\$ 104,871
10	Non-Standard Retaining Wall Support (Lump Sum)	\$ 136,620
	TOTAL	\$ 4,997,873

For those items of the Scope of Work for which compensation is payable in fixed fee amounts, payment to the Consultant shall be made in accordance with the compensation schedule as set forth in the Directive, and the percentage of completion of each phase of the Scope of Work, as determined and approved by the Engineer and based upon monthly progress reports submitted by the Consultant. Monthly progress payments shall be equal to the percentage of completion of each phase multiplied by the fixed fee payable for completion of each phase, less amounts previously billed.

For those items of the Scope of Work for which compensation is payable in not-to-exceed amounts, the Consultant shall be paid an hourly fee as defined in Section 5.2 of this Agreement, at the rates set forth in Exhibit "G-1" and in accordance with the compensation schedule as set forth in the Directive. The Consultant's monthly invoice shall itemize all hours actually worked in performing such services, identifying the personnel and sub-consultant classifications of individuals performing the Directive, and the applicable hourly rates, according to "Exhibit G-1". Compensable amounts set forth on (i) an hourly basis, or (ii) on the basis of an estimated Fixed Fee subject to a not-to-exceed maximum, are estimated only. In the event that all necessary services required in any category described above are, in the judgment of the Engineer, fully performed by Consultant at a cost to City which is less than the amounts estimated and authorized hereunder, Engineer may apply the unexpended balance to compensate Consultant for services in any other category for which compensation was underestimated on either of these base.

A 5% (five percent) mark-up payable to the prime Consultant shall be allowed for all work performed by listed Subconsultants.

EXHIBIT G-1

EXHIBIT G-1
RATES
(revised January 13, 2021)

Mark Thomas Applied Hourly Rates		
Labor Classification	Abbrev	Rate
Sr. Project Manager	SPM	\$275/hr
Sr. Landscape Division Manager	SLDM	\$265/hr
Practice Area Lead	PAL	\$260/hr
Survey Division Manager	SDM	\$255/hr
Project Manager/ QAQC Manager	PM/QAQCM	\$250/hr
Engineering Manager	EM	\$240/hr
Senior Structures	SS	\$240/hr
Sr. Landscape Project Manager	SLPM	\$225/hr
Sr. Survey Manager	SSM	\$220/hr
Senior Technical Lead	STL	\$220/hr
Technical Lead	TL	\$205/hr
LAUD Division Manager	LAUD DM	\$192/hr
Survey Manager	SM	\$190/hr
Senior Technical Engineer	STE	\$185/hr
Deputy Project Manager	DPM	\$177/hr
Senior Project Surveyor	SPS	\$175/hr
Project Surveyor	PS	\$165/hr
Senior Project Engineer	SPE	\$164/hr
Senior Project Engineer (Structures)	SPES	\$160/hr
LAUD Project Manager	LAUD PM	\$155/hr
Surveyor	S	\$145/hr
Sr. Graphic Designer	SGD	\$145/hr
Sr. Project Accountant	SPA	\$135/hr
Project Engineer	PE	\$133/hr
Sr. Survey Technican	SST	\$125/hr
Project Accountant	PA	\$121/hr
Design Engineer II	DE II	\$116/hr
Sr. Project Coordinator	SPC	\$116/hr
Senior Technician	ST	\$112/hr
Design Engineer I (Structures)	DES II	\$105/hr
Technician	T	\$105/hr
Survey Technician	ST	\$100/hr
Project Landscape Architect	PLA	\$99/hr
2 Person Field Crew	TFC	\$320/hr
1 Person Field Crew	OFC	\$200/hr
Drone Pilot	DP	\$210/hr
Design Engineer I	DE I	\$93/hr
Project Coordinator	PC	\$89/hr
Landscape Designer	LD	\$79/hr
Landscape Intern	LI	\$65/hr
Survey Intern	SI	\$65/hr
Intern	I	\$54/hr

User License (per month, per license)	UL	\$25/mo
FPL Applied Rates		
Labor Classification	Abbrev	Rate
Project Manager	PM	\$234/hr
Project Engineer	PE	\$204/hr
Associate Engineer	AE	\$146/hr
Engineer	E	\$111/hr
Assistant Engineer	AE	\$95/hr
JFA Applied Rates		
Labor Classification	Abbrev	Rate
3 Person Field Crew	3FC	\$365/hr
2 Person Field Crew	2FC	\$275/hr
Licensed Surveyor	LS	\$185/hr
Senior Technician	ST	\$137/hr
Technical/CAD Operator	T/CO	\$125/hr
AirX Applied Rates		
Labor Classification	Abbrev	Rate
Potholing Crew (2)	PC	\$290/hr
Utility Locator Crew (2)	ULC	\$210/hr
Traffic Control Plan Specialist	TCPS	\$134/hr
Project Manager	PM	\$100/hr
USA Mark-Out (Locator)	USAL	\$95/hr
Report Drafter/Admin/Permit Processor	RD/A/PP	\$80/hr

NMG Geotechnical Applied Rates		
Labor Classification	Abbrev	Rate
Principal Engineer	PE	\$170/hr
Project Manager	PM	\$140/hr
Senior Staff	SS	\$110/hr
CAD Drafter	CD	\$92/hr
Word Processor	WP	\$74/hr
Cone Penetration Test Boring	CPT	\$2,780/ea
Hollow Stem Auger Boring	HSA	\$2,780/ea
Large Bucket Auger Boring	LBA	\$10,130/ea
Atterberg Limits	AL	\$155/ea
Consolidation Per Time Rate Increment	CPTRI	\$38/ea
Consolidation (Typical/Water)	C (T/W)	\$200/ea
Hydrometer	H	\$120/ea
Passing No. 200 Sieve	PS - 200	\$70/ea