



RESOLUTION

RELATING TO THE HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT.

WHEREAS, by enactment of Ordinance 07-01, the Council approved as the Locally Preferred Alternative ("LPA") for the Honolulu High-Capacity Transportation Corridor Project ("Project") a fixed guideway alternative connecting West Kapolei to the University of Hawaii at Manoa (the "Project"); and

WHEREAS, in Resolution 07-039, FD1(C), as amended by Resolution 08-261, the Council approved an initial Minimum Operable Segment ("MOS") for the Project between East Kapolei and Ala Moana Center, which the City Administration has reported can be constructed without the necessity of using City funds other than those derived through a surcharge on general excise and use taxes; and

WHEREAS, the City will require federal funds to complete the Project, and the mechanism by which the federal government commits funds for new fixed guideway transit projects is known as a Full Funding Grant Agreement ("FFGA") and

WHEREAS, such agreements provide the following benefits to the City:

1. They define the scope of the project;
2. They establish a firm date for project completion;
3. They provide a mechanism for designating federal funds for the project in future years;
4. They lead to the development of accurate cost estimates; and
5. They permit the use of local funding for project activities without jeopardizing the receipt of future federal funding for the project;

and

WHEREAS, with the approval of Resolution 09-252, CD1, by the voters at the 2010 general election, the City's functions relating to the construction and operation of the Project were transferred from the City's Department of Transportation Services ("DTS") to the Honolulu Authority for Rapid Transportation ("HART"); and



RESOLUTION

WHEREAS, on October 27, 2009, the Council adopted Resolution 09-306 authorizing the Director of Transportation Services to execute a "Programmatic Agreement" pursuant to Section 106 of the National Historic Preservation Act, prescribing the necessary steps for the City's preservation of historic properties and artifacts, including Native Hawaiian bones (ʻiwi kupuna), and on January 18, 2012, the Council adopted Resolution 11-7, issuing a Special Management Area Use Permit ("SMP") for those elements of the Project within the Special Management Area ("SMA"); and

WHEREAS, notwithstanding the lack of an FFGA, the FTA has issued two Letters of No Prejudice ("LONP") for the MOS, under which limited construction was authorized to commence without jeopardizing the City's eligibility for reimbursement for costs incurred or its eligibility for receipt of future federal grant funds for the MOS; and

WHEREAS, the first LONP, dated May 24, 2011, authorized utility relocation, archaeological surveys and other activities not included under federal pre-award authority provisions, and the second, dated February 6, 2012, authorized up to \$184.7 million for: (1) Segment 1 construction-West Oahu/Farrington Highway; (2) Segment 2 construction-Kamehameha Highway Guideway; (3) work on the Maintenance and Storage Facility at Leeward Community College ("LCC"); and (4) design and construction of the Farrington Highway Stations Group (LCC, West Loch and Waipahu stations); and

WHEREAS, in light of a finding by City consultants that no historic properties would be affected by construction activities within the Honouliʻuli District, the FTA, in a letter dated April 20, 2012, authorized HART to commence construction in that District; and

WHEREAS, in order to expedite the construction of the MOS, DTS and HART have awarded a number of consulting, planning, design and construction contracts, including various segment-specific contracts and some system-wide contracts, and some of these contracts have been subject to change orders that have increased the City's costs; and

WHEREAS, in Resolution 12-158, CD1, the Council: (1) requested HART to review its standard contract terms with an eye toward avoiding costly change orders, which could lead to Project cost overruns; (2) urged HART to provide to the Council and provide access to the public for relevant documents pertaining to procurements estimated to exceed \$1,000,000; and (3) urged HART to defer execution of additional construction contracts or the issuance of additional Notices to Proceed ("NTP") on such contracts until an FFGA has been executed; and



RESOLUTION

WHEREAS, according to Departmental Communication D-70 (2012), a letter dated February 7, 2012, from HART to the Council, AECOM Technical Services, Inc. ("AECOM"), has been awarded a \$38.8 million contract to design and prepare construction plans and specifications for the "Airport" segment of the MOS, between Aloha Stadium and the Middle Street Transit Center in Kalihi, and, in the HART staff's report to its Board dated July, 2012 (p. 23), it appears that two NTPs have been issued under the contract, but it is unknown to the Council whether additional NTPs have been issued for completion of AECOM's performance under the contract; and

WHEREAS, the Uniform Information Practices Act (Modified), Chapter 92F, Hawaii Revised Statutes ("UIPA"), as interpreted by the State Office of Information Practices in its Opinion Letters 92-17, 94-18, 98-2 and 03-16, requires government agencies to disclose the final terms of their contracts to the public, upon request, except those terms, the disclosure of which would unwarrantedly invade personal privacy or frustrate a legitimate governmental purpose, including terms that relate to the private contractors' sensitive financial information or trade secrets; and

WHEREAS, in Departmental Communication D-649 (2012), Daniel Grabauskas, the Executive Director and Chief Operating Officer of HART, agreed to provide the Council with copies of procurement documents for solicitations expected to exceed \$1,000,000, and informed the Council that information pertaining to all HART solicitations and related addenda are posted on the City's Division of Purchasing website; and

WHEREAS, although the City's Division of Purchasing website provides information relating to the procurement of City construction contracts, it does not include procurement documents pertaining to contracts for professional services, such as contracts for planning, engineering, consulting and project oversight; and

WHEREAS, it should not be necessary for members of the Council and the public to have to make formal requests under the UIPA in order to determine the terms of the City's contracts for professional services, particularly those directly relating to the largest single public works project the City has ever undertaken; and

WHEREAS, HART's provision of access to the terms of the City's professional service contracts to interested members of the Council and public provide an opportunity for the Council and the public to suggest refinements that may make the terms of future City professional services contracts more financially or otherwise advantageous to the City; and



RESOLUTION

WHEREAS, some members of the public have become frustrated with and lost confidence in the integrity of the Project due to a lack of transparency by the City administration regarding the Project; and

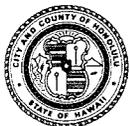
WHEREAS, on August 24, 2012, the Hawaii Supreme Court issued its opinion in Kaleikini v. Yoshioka, 2012 WL 3644820, in which it determined that an Archaeological Inventory Survey ("AIS") will be required to be completed for the entire MOS alignment prior to the issuance of a Special Management Area Use Permit ("SMP") and prior to commencement of further Project construction; and

WHEREAS, if the Hawaii Supreme Court does not reconsider and nullify its Kaleikini decision, the decision may significantly affect HART's timeline for completion of the MOS; and

WHEREAS, in order to protect the taxpayers of the City and County of Honolulu from paying for potentially unnecessary work, the Council wishes, if possible, to halt AECOM's further performance of design work on the MOS until the Archaeological Inventory Survey has been completed for the MOS, and, if necessary, a new SMP has been issued for the Project; now, therefore,

BE IT RESOLVED by the Council of the City and County of Honolulu that the Honolulu Authority for Rapid Transportation ("HART") is hereby requested to provide the Council with a copy of AECOM's contract with the City for planning and design of the MOS' Airport Segment and to work with the Department of Budget and Fiscal Services to ensure that, in addition to construction contracts, all HART professional services contracts currently in effect (whether executed prior to or after the adoption of this resolution), at least all of those in excess of \$1,000,000, are accessible to the public and the Council via posting on the Internet, subject to such redaction as may be required to avoid unwarranted invasions of personal privacy or the frustration of a legitimate governmental purpose under the State Uniform Information Practices Act (Modified), Chapter 92F, Hawaii Revised Statutes; and

BE IT FURTHER RESOLVED that HART and the Department of Planning and Permitting are requested to work with the Department of Corporation Counsel in order to determine whether it will be necessary for HART to reapply for an SMP for the MOS in light of the Kaleikini decision; and



RESOLUTION

BE IT FURTHER RESOLVED that HART is urged to defer issuance of any further NTPs under the AECOM contract for planning and design of the Airport segment of the MOS and to defer entering into any new contracts for planning and design of the Middle Street to Ala Moana Center Segment of the Project until: (1) the AIS for the entire MOS alignment has been completed; and (2) if it is determined that a new SMP is necessary, such SMP has been issued for the Project; and

BE IT FURTHER RESOLVED that HART is requested to provide the Council with a revised timeline for completion of the MOS in light of Kaleikini; and

BE IT FINALLY RESOLVED that copies of this Resolution be transmitted to the Chairperson of the Board of Directors and the Executive Director and Chief Operating Officer of the Honolulu Authority for Rapid Transportation; to the Director of Budget and Fiscal Services; and to the Director of Planning and Permitting.

INTRODUCED BY:

Romy M. Sabido

Mu Kobayashi

DATE OF INTRODUCTION:

SEP 12 2012

Honolulu, Hawaii

Councilmembers

HONOLULU AUTHORITY for RAPID TRANSPORTATION

Daniel A. Grabauskas
EXECUTIVE DIRECTOR AND CEO

BOARD OF DIRECTORS

Carrie K.S. Okinaga, Esq.
CHAIR

Ivan M. Lui-Kwan, Esq.
VICE CHAIR

Robert Bunda
William "Buzz" Hong

Donald G. Horner

Keslie W. K. Hui

Damien T. K. Kim

Glenn M. Okimoto, Ph.D.

David K. Tanoue

Wayne Y. Yoshioka

October 8, 2012

The Honorable Ernest Y. Martin, Chair
and Members
Honolulu City Council
530 South King Street, Room 202
Honolulu, Hawaii 96813

Dear Chair Martin and Councilmembers:

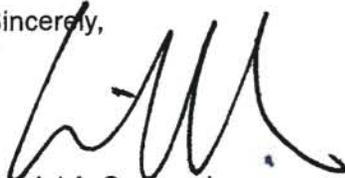
Subject: Resolution 12-261, Relating to the Honolulu High-Capacity Transit
Corridor Project

As requested, please find enclosed a copy of the contract with AECOM for architectural and engineering services necessary for the design and preparation of final construction plans, detailed specifications, and other contract documents for the Airport Segment Guideway and Utilities Contract. Included is a copy of the Agreement, Special Provisions (which includes the Scope of Work) and General Terms and Conditions for Contracts for Professional Services. Also included is a copy of Notices-to-Proceed 1a, 1b, and 2. Fourteen (14) additional copies of the contract are also enclosed on DVD for your convenience.

It should be noted that the "WHEREAS" clause on page 3, paragraph 4 of Resolution 12-261, regarding posting of procurement documents for construction contracts and for professional services contract is incorrect and the reverse is true. In other words, the procurement solicitation documents for construction contracts are automatically removed after the bid opening or proposal due date has elapsed and instead the Professional Service Notices that are posted on the City's Procurement Site stay posted indefinitely. The solicitation documents for the Airport Segment Guideway and Utilities Contract is Number 106 which was posted January 26, 2011.

Please do not hesitate to contact me should you have any further questions.

Sincerely,



Daniel A. Grabauskas
Executive Director and CEO

Enclosures

cc: HART Board of Directors
Mr. Douglas S. Chin, Managing Director

AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT FOR PROFESSIONAL SERVICES dated December 22, 2011 (this "Agreement"), is entered into by and between the HONOLULU AUTHORITY FOR RAPID TRANSPORTATION, a semi-autonomous agency of the City and County of Honolulu, whose principal place of business and mailing address is 1099 Alakea Street, Suite 1700, Honolulu, Hawai'i 96813, hereinafter referred to as "HART", and AECOM TECHNICAL SERVICES, INC., California Corporation, whose principal place of business and mailing address is 1001 Bishop Street, Suite 1600, Honolulu, Hawai'i 96813, hereinafter referred to as the "CONSULTANT". HART and the CONSULTANT collectively, are the "Parties", and individually a "Party", all as governed by the context in which such words are used.

WITNESSETH THAT:

WHEREAS, HART desires to engage the CONSULTANT for architectural and engineering services necessary for the design and preparation of final construction plans, detailed specifications and other contract documents for the Airport Segment Guideway and Utilities Contract for the Honolulu Rail Transit Project ("HRTTP"), hereinafter referred to as the "PROJECT";

WHEREAS, the services entered hereunder are technical and professional in nature and HART personnel are not able to provide these services;

WHEREAS, the CONSULTANT was selected pursuant to Section 103D-304 of the Hawai'i Revised Statutes, as amended, and related Hawai'i Administrative Rules ("HAR"), relating to the procurement of professional services; and

WHEREAS, the CONSULTANT is willing and able to provide the technical and professional services required if compensation is provided for;

NOW, THEREFORE, HART and the CONSULTANT, in consideration of the foregoing and of the mutual promises hereinafter set forth, the sufficiency and adequacy of which are hereby acknowledged, and intending to be legally bound, hereby mutually agree as follows:

1. The CONSULTANT shall perform and complete in a professional manner all of the services required for the PROJECT in accordance with and as set forth in the Contract Documents as hereinafter described, shall furnish all services, labor, goods, materials, supplies, equipment and other incidentals reasonably necessary for the successful completion of the PROJECT and work contemplated under the Contract Documents (the "Work"), and the CONSULTANT shall receive and accept as full compensation for all of the Work the price for the various items of the Work as hereinafter set forth.

2. The CONSULTANT shall complete and perform the Work in accordance with:

a. Part 1 - This Agreement;

- b. Part 2 - The Special Provisions and any exhibits and attachments thereto (“Special Provisions”);
- c. Part 3 - The General Terms and Conditions for Contracts for Professional Services for the City and County of Honolulu, dated 8/2000 (“General Terms and Conditions”); and
- d. Part 4 - The CONSULTANT’s Proposal (“Proposal”) dated, March 14, 2011;

all of which are collectively referred to as the “Contract Documents”, are attached hereto and incorporated herein, and are listed in order of controlling preference should there be any conflict in the terms of the Contract Documents, and any modifications, changes or amendments in connection therewith being specifically referred to and incorporated herein by reference and made a part hereof as though fully set forth herein. Provided, those portions of Part 4 that exceed the requirements of the other Contract Documents become the new minimum Contract requirements.

3. The CONSULTANT shall complete the Work required under the Contract Documents as provided for in the Special Provisions attached hereto.

There will be several separate and distinct written Notices to Proceed (“NTPs”) issued under the Agreement. Work shall not begin until HART has issued the respective NTP. Any Work undertaken by the CONSULTANT prior to issuance of a NTP will be the sole responsibility of and will be undertaken at the sole risk of the CONSULTANT without any obligation on the part of HART.

The first NTP will be NTP #1a. The CONSULTANT shall submit a draft Baseline Design Schedule and a Schedule of Milestones (“SM”) within twenty-two (22) working days after receipt of NTP #1a. The SM shall be completed as described in the Contract Documents. HART’s approved SM shall be added to the Agreement by contract amendment and become part of the Agreement by amending Exhibit 2B-1 to the Special Provisions.

NTP #1b will be limited to Work activities related to the revision of Preliminary Engineering (“PE”) drawings and preliminary design drawings, as defined by HART, to incorporate approved value engineering recommendations and other HART preferences, and to bring schematic designs in compliance with all applicable codes, regulations and design standards.

NTP #2 will be to commence interim design drawings, detailed working drawings and other PE phase activities, as defined by HART.

NTP #3 will be to commence final design and preparation of construction contract documents, cost estimating and other services in support of construction activities.

NTP #4 will be for design support during the Bidding Phase, as defined and directed by HART.

NTP #5 will be for design support during the Construction Phase, as defined and directed by HART.

4. This is a firm-fixed price contract and subject to the provisions of this paragraph and in accordance with Section VI, Compensation and Invoicing, of the Special Provisions and Section 8 of the General Terms and Conditions, as amended by the Special Provisions, HART agrees to pay the CONSULTANT, for the satisfactory performance and completion of the Work, the payments in accordance with the Approved Schedule of Milestones, Exhibit 2B-1, all as set forth in the Special Provisions. The aggregate amount of these lump sum payments shall not exceed THIRTY-SEVEN MILLION TWO HUNDRED FIFTY-TWO THOUSAND NINE HUNDRED FORTY-SIX AND 00/100 DOLLARS (\$37,252,946.00) (the "Total Contract Amount"). The lump sum payments for services and the Work performed under this Agreement are all inclusive of direct labor, overhead, general and administrative expenses, other direct costs, subcontractor costs, fixed fees, and all applicable taxes, including State general excise and use tax ("GET"), and county one-half percent (0.5%) GET Surcharge.

The allowance for extra work of ONE MILLION FIVE HUNDRED EIGHTY-EIGHT THOUSAND FOURTEEN AND 00/100 DOLLARS (\$1,588,014.00) is not to be exceeded without a contract amendment. Payment for extra work will be negotiated on a fixed-price basis and a contract amendment will be processed to reflect the change. Extra work requested by HART shall be authorized as set forth in Section 5 of the General Terms and Conditions, as amended by the Special Provisions. Any funds remaining at the end of the Agreement will revert back to HART.

In accordance with the paragraphs above, the total aggregate amount of THIRTY-EIGHT MILLION EIGHT HUNDRED FORTY THOUSAND NINE HUNDRED SIXTY AND 00/100 DOLLARS (\$38,840,960.00) (the "Total Aggregate Amount") is established as the maximum payable under this Agreement and is subject to the Special Provisions and the General Terms and Conditions, including the provisions thereof related to reducing or increasing the compensation of the CONSULTANT.

5. By signing below, the CONSULTANT hereby represents that, to the best of its knowledge and belief, cost or pricing data, as defined in HAR § 3-122-122 and submitted pursuant to HAR § 3-122-125, either actually or by specific identification in writing to the Officer-in-Charge in support of this Agreement, is accurate, complete, and current as of the date of this Agreement.

6. Unless otherwise agreed to in writing, when notice is to be given to HART, it shall be mailed or delivered to:

Kenneth T. Hamayasu
Interim Executive Director
Honolulu Authority for Rapid Transportation
1099 Alakea Street, Suite 1700
Honolulu, Hawai'i 96813

7. Unless otherwise agreed to in writing, when notice is to be given to the CONSULTANT, it shall be mailed or delivered to:

Rudolph Mina, PE
Pacific District Manager, West Region, North America
Airport Segment Guideway and Utilities Contract

HART-12 (11/11)

Certificate

The attached contract for architectural and engineering services necessary for the design and preparation of final construction plans, detailed specifications, and other contract documents for the Airport Segment Guideway and Utilities Contract

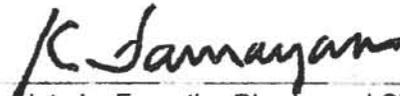
(\$38,840,960.00)

is hereby approved as to availability and designation of funds, and certification is hereby made that there is a valid appropriation from which expenditures to be made under said contract may be made and that sufficient unencumbered funds will be available in the Treasury of the City and County of Honolulu to the credit of such appropriation to pay the amounts of such expenditures when the same become due and payable.

CONTRACT NO.	<u>SC-HRT-1200038</u>
FUND	<u>Transit Fund (690 & 695)</u>
ACCOUNT NO.	<u>\$24,214,160 = 690/7790-12 (4064)</u>
	<u>\$14,626,800 = 695/7790-12 (4064)</u>
	<u>\$38,840,960 = TOTAL</u>

HONOLULU, HAWAII

Date:



Interim Executive Director and CEO
Honolulu Authority for Rapid Transportation

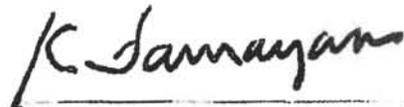
AECOM Technical Services, Inc.
1001 Bishop Street, Suite 1600
Honolulu, Hawai'i 96813

8. This Agreement, its integrated attachments, and the Contract Documents constitute the entire agreement of the Parties and such is intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Agreement specifically displays a mutual intent to amend a particular part of this Agreement, general conflicts in language between any such attachment and this Agreement shall be construed to be consistent with the terms of this Agreement. Unless otherwise expressly authorized by the terms of this Agreement or the Contract Documents, no modification or amendment to this Agreement or the Contract Documents shall be binding upon the Parties unless the same is in writing and signed by the respective Parties hereto.

IN WITNESS WHEREOF, HART and the CONSULTANT have executed this Agreement by their duly authorized officers or agents on the day and year first above written.

HONOLULU AUTHORITY FOR RAPID
TRANSPORTATION

AECOM TECHNICAL SERVICES, INC.


By: Kenneth T. Hamayasu
Interim Executive Director


By: Rudolph Mina
Its: District Manager

Address:
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPROVED AS TO FORM AND
LEGALITY

REID M. YAMASHIRO
Deputy Corporation Counsel

Attach Notary Page

SECRETARY'S CERTIFICATE

AECOM TECHNICAL SERVICES, INC.

I, Robyn L. Miller, **DO HEREBY CERTIFY** that I am the elected and acting Corporate Secretary of AECOM Technical Services, Inc., a corporation organized under the laws of the State of California.

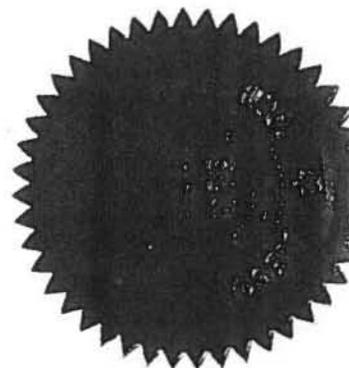
I FURTHER CERTIFY that Rudolph Mina has signatory authority for AECOM Technical Services, Inc. and is authorized to execute contracts and other documents including the Honolulu Authority for Rapid Transportation, a semi-autonomous agency of the City and County of Honolulu, for the Airport Segment Guideway and Utilities Contract for the Honolulu Rail Transit Project on behalf of the company.

IN WITNESS WHEREOF, I have subscribed my name this 13th day of December, 2011.



Name: Robyn L. Miller
Title: Corporate Secretary

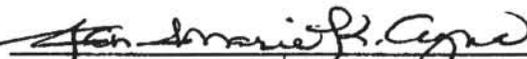
(Corporate Seal)



STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

On this 14th day of December, 2011, before me appeared, Rudolph Mina personally known to me, who, being by me duly sworn, did say that ~~he~~she is the District Manager of AECOM Technical Services, Inc., and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said Rudolph Mina acknowledged said instrument to be the free act and deed of said corporation.




Notary Public, First Judicial Circuit
State of Hawaii

My Commission Expires: May 13, 2012

NOTARY CERTIFICATE (Hawaii Administrative Rules §5-11-8)

Document Identification or Description: Agreement for
Professional Services – Airport Segment Guideway and Utilities
Contract for the Honolulu Rail Transit Project (“H RTP”)

Doc. Date: no date at time of notary No. of Pages: 262 Jurisdiction: First Circuit


Signature of Notary December 14, 2011
Date of Certificate

Jan-Marie K. Agua
Printed Name of Notary



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SPECIAL PROVISIONS

HONOLULU RAIL TRANSIT PROJECT

AIRPORT SEGMENT GUIDEWAY AND UTILITIES CONTRACT

SPECIAL PROVISIONS TABLE OF CONTENTS

- I. PROJECT
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- VIII. FEDERAL CLAUSES
- IX. ASSIGNMENT
- X. HEADINGS; GENDER; NUMBER
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- EXHIBIT 1 - SCOPE OF WORK
- EXHIBIT 2 -
 - A. CONTRACT COST ESTIMATE
 - B. COMPENSATION AND INVOICING
 - B-1 PROJECT PAYMENT SCHEDULE
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- EXHIBIT 4 - LETTER OF SUBCONTRACT INTENT
- EXHIBIT 5 - CERTIFICATE REGARDING INELIGIBLE CONTRACTORS
- EXHIBIT 6 - CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS
- EXHIBIT 7 - CERTIFICATION REGARDING LOBBYING
- EXHIBIT 8 - FEDERAL REQUIREMENTS
 - 1. ATTACHMENT 1.6a) - DBE Participation Report
 - 2. ATTACHMENT 1.6b) - Final Report of DBE Participation and Instructions for completion of the Final Report of DBE Participation

These Special Provisions to the Agreement for Professional Services ("Special Provisions"), shall be incorporated into and be a part of that certain Agreement for Professional Services, by and between the HONOLULU AUTHORITY FOR RAPID TRANSPORTATION ("HART ") and AECOM TECHNICAL SERVICES, INC. (the "CONSULTANT"), dated December 22, 2011 (the "Agreement"). HART and the CONSULTANT are hereinafter collectively referred to as the "Parties" and either may be referred to individually as a "Party", all as governed by the context in which such words are used. These Special Provisions and the General Terms and Conditions for Contracts for Professional Services for the City and County of Honolulu dated 8/2000 ("General Terms and Conditions") shall apply to, and are incorporated by reference into the Agreement, except as modified by reference herein. All defined terms in the Agreement shall have the same meaning as in these Special Provisions.

I. PROJECT

The Honolulu Rail Transit Project ("HRTP") is identified in the Final Environmental Impact Statement. It is described as a twenty (20) mile grade-separated fixed guideway transit system between East Kapolei and Ala Moana. The CONSULTANT will provide architectural and engineering services necessary for the design and preparation of final construction plans, detailed specifications and other contract documents for the Airport Segment Guideway and Utilities Contract for the HRTP, hereinafter referred to as the "PROJECT".

II. SERVICES

The services that the CONSULTANT shall provide under the Agreement are set forth in the Scope of Work attached hereto and incorporated herein as Exhibit 1.

III. TIME

Work under this Agreement shall be completed under multiple and overlapping Notices to Proceed ("NTPs"). Work authorized under NTP #1a, NTP #1b, NTP #2 and NTP #3 shall be completed within five hundred seven (507) calendar days from issuance of NTP #1a. The duration of performance for Work authorized under NTP #4 and NTP #5 shall be determined at the discretion of HART.

IV. LIQUIDATED DAMAGES

Liquidated damages are not applicable to this Agreement.

V. INSURANCE REQUIREMENTS

See Paragraph 4.3., Insurance, of the General Terms and Conditions as modified by Section VII (D) below.

VI. COMPENSATION AND INVOICING

A. Subject to the General Terms and Conditions, the compensation of the CONSULTANT shall be the amount stated in the Agreement and upon completion and

acceptance of each stage, payment shall be made in accordance with Exhibits 2B and 2B-1, attached hereto and incorporated herein, inclusive of all taxes.

B. Final acceptance of the Work contracted for herein and payment therefore shall not excuse the CONSULTANT from any liability for defects in performance of the Work which may subsequently appear.

VII. MODIFICATIONS TO THE GENERAL TERMS AND CONDITIONS FOR CONTRACTS FOR PROFESSIONAL SERVICES FOR THE CITY AND COUNTY OF HONOLULU (8/2000)

The General Terms and Conditions for Contracts for Professional Services for the City and County of Honolulu (8/2000) shall apply to, and are incorporated by reference into this Agreement, except as modified herein.

A. DEFINITIONS

The following definitions are added to the General Terms and Conditions:

“BASELINE DESIGN SCHEDULE” means the time-scaled and cost-loaded critical path network, updated monthly in accordance with the Agreement and depicting the Price Items and subordinate activities and their respective prices (distributed over time), durations, sequences, and interrelationships that represent the CONSULTANT’s Work plans, Work Breakdown Structure (“WBS”) for designing and completing the PROJECT and the cost of all Work to be performed under the Agreement, distributed over the duration of the Agreement.

“C.F.R.” means the Code of Federal Regulations.

“FEDERAL GOVERNMENT” means the United States of America and any executive department or agency thereof.

“FTA” means the Federal Transit Administration, United States Department of Transportation. The Federal Transit Administration is the current designation for the former Urban Mass Transportation Administration. Any reference in any law, map, regulation, document, paper, or other record of the United States to the Urban Mass Transportation Administration or its acronym UMTA is deemed a reference to the Federal Transit Administration.

“HART” means the Honolulu Authority for Rapid Transportation. The acronym “HART” shall be substituted for the “City and County of Honolulu”, “CITY”, “Rapid Transit Division”, and “RTD” wherever those terms appear in the General Terms and Conditions, unless the context clearly indicated otherwise.

“MILESTONE” means a defined step toward the completion of Work in the Schedule of Milestones. The Schedule of Milestones, once achieved, shall serve as the basis of payments.

“PMOC” means the FTA’s Project Management Oversight Contractor.

“PROJECT” means Work performed as set forth in the Agreement, including furnishing all services, labor, materials, supplies, equipment and other incidentals

reasonably necessary for the successful completion of the Work contemplated under the Agreement.

“PAY ITEM” means a component of the Schedule of Milestones for which the CONSULTANT provides a Pay Item Value for all Work included in a schedule milestone. A Pay Item may be activities, deliverables or a series of interrelated items as identified in the Schedule of Milestones and corresponding with activities from the CONSULTANT’s Baseline Design Schedule.

“PAY ITEM VALUE” means that value allocated by the CONSULTANT to a Pay Item that represents the dollar value to be achieved or achieved upon the completion of a schedule milestone as indicated in the Schedule of Milestones and the CONSULTANT’s Baseline Design Schedule.

“SCHEDULE OF MILESTONES” means a table of schedule milestones, organized by NTP, which specifies Pay Items, Pay Item descriptions, Pay Item Values, planned or actual achievement dates and serves as a basis for monthly payment.

“SCHEDULE OF MILESTONES PAY ITEM” means a series of activities contained in a Pay Item that depicts the associated Work leading to the payment milestone and shall contain unique coding to facilitate progress reporting of the Schedule of Milestones.

“STANDARD OR REQUIREMENT” means any provision of any Federal, State or local law, including City law, ordinance, code, rule, regulation, guideline, directive, order, circular, agreement, practice, policy, notice, plan, statement, or other standard or requirement, and any amendment or revision thereto made in the future, including any mandatory provision, term, condition, clause, representation, certification, assurance or other statement required thereunder.

“U.S.C.” means the United States Code.

“U.S. DOT” means the United States Department of Transportation, including its operating administrations.

“WORK” in addition to the definition described in the Agreement for Professional Services, paragraph 1, means all of the design, engineering, administration, testing, inspection and other duties and services that the CONSULTANT shall provide under the Agreement, which are set forth in the Scope of Work attached hereto and incorporated herein as Exhibit 1. In certain cases, the term is also used to mean the products of the Work.

“WORK BREAKDOWN STRUCTURE” (“WBS”) means a hierarchal breakdown of the scope of Work into components. HART shall provide the WBS that reflects its breakdown of the scope and associated code structure at NTP #1a.

The following definitions in the General Terms and Conditions are modified as follows:

“CONFORMANCE CHECKLIST” is the formal checklist used by the Project team to verify design criteria and construction specification conformance for each

certifiable element in accordance with the HHCTCP Safety and Security Management Plan dated, June 1, 2011.

“**CONTRACT**” shall be replaced with the term “Agreement”.

“**CONSULTANT**” OR “**CONTRACTOR**” means any corporation, partnership, individual, sole proprietorship, joint stock company, joint venture, or other private legal entity engaged by HART to perform the Work under this Agreement. For the purposes of this Agreement, “Contractor” shall mean “CONSULTANT”.

“**OFFICER-IN-CHARGE**” means the HART Executive Director or designee.

B. DESIGNATION OF PROJECT MANAGERS

The Officer-in-Charge shall designate, in writing, a key representative to coordinate the Work under this Agreement, to coordinate work under other HART contracts with the Work under this Agreement, and to act as the liaison between HART and the CONSULTANT in order to assist in expediting the resolution of questions or controversies, the making of HART decisions, and the review and approval by HART of documents, progress reports, requests, and other matters as required.

The CONSULTANT shall, subject to written approval from HART, designate a key representative, who shall maintain close and frequent communications with HART’s key representative and be authorized to act on behalf of the CONSULTANT. Any change in the CONSULTANT’s key representative will be made by request, in writing, to be approved by HART. The CONSULTANT’s key representative shall be experienced and qualified in the type of work involved and shall be directly responsible for the prosecution of the Work under this Agreement.

The Parties to this Agreement will make all reasonable efforts to retain the same key representative in order to maintain continuity of effort and control.

C. NO THIRD PARTY BENEFICIARY

The Parties are entering into this Agreement for the sole benefit of the Parties in exclusion of any third Party, and no third Party beneficiary is intended or created by execution of this Agreement.

D. INSURANCE

Section 4.3.2, paragraph 5 of the General Terms and Conditions is hereby deleted in its entirety and replaced with the following:

“5. Be provided by insurers authorized to provide insurance in the State of Hawaii, and with a current A.M. Best’s rating of not less than A-, or otherwise as approved by HART;”

E. CHANGE ORDERS

Section 5.1.1 (c) of the General Terms and Conditions is hereby deleted in its

entirety and replaced with the following:

“(c) *Within thirty (30) days* after receipt of a written change order, unless the period is extended by the Officer-in-Charge in writing, the CONSULTANT shall respond with a claim for an adjustment. The requirement for a timely written response cannot be waived and shall be a condition precedent to the assertion of a claim.”

F. DELAY

Section 6.2 of the General Terms and Conditions is hereby deleted in its entirety and replaced with the following:

“**6.2 DELAY.** If any excusable delay occurs, it shall be dealt with in accordance with subsection 9.2.3, Excuse for nonperformance or delayed performance. No extension of time however, shall be granted unless the written application therefore stating in detail the cause or causes of delay is filed by the CONSULTANT with the Officer-in-Charge *within thirty (30) days* after the commencement of the delay. No such extension shall be deemed a waiver of the right of the Officer-in-Charge to require the completion of services under the contract within the time required herein as so extended by the specific terms of such extension or extensions, nor a waiver of right to terminate the contract for any other or additional delay not covered by the specific terms of such extension or extensions. The number of days of each extension of time shall be determined by the Chief Procurement Officer upon the recommendation of the Officer-in-Charge.”

G. LIQUIDATED DAMAGES

Section 6.6 of the General Terms and Conditions, entitled "LIQUIDATED DAMAGES", is hereby deleted in its entirety.

H. SAFETY AND SECURITY CERTIFICATION

A new Section 6.8 of the General Terms and Conditions, entitled "SAFETY AND SECURITY CERTIFICATION ", is hereby inserted.

“**6.8 SAFETY AND SECURITY CERTIFICATION.**

- (a) The purpose of the safety and security certification is to ensure that:
 - 1. The design, construction, fabrication, installation, testing, and commissioning of all safety- and security-certifiable elements (civil, structural, and systems) have been evaluated for conformance with the safety and security design criteria and

specifications requirements and to verify their readiness for operational use; and

2. The rail system is operationally safe and secure for customers, employees, emergency responders, and the general public.
- (b) The objective is to achieve an acceptable level of risk through a systematic approach to safety hazard and security vulnerability management, design criteria adherence, specification and construction compliance, and testing and commissioning verification.
- (c) The CONSULTANT shall implement and successfully complete safety and security certification for all certifiable elements contained in the Agreement. Safety and security certification shall be conducted in accordance with the latest version of the Federal Transit Administration (FTA) Handbook for Transit Safety and Security Certification as tailored to the CONSULTANT's scope of work. HART has developed a Project Safety and Security Certification Plan (SSCP) based on FTA guidelines to describe how these activities will be implemented for the H RTP. The CONSULTANT's activities include, but are not limited to, the following:
1. Participate on safety and security committees and working groups established by HART to perform safety and security certification activities as requested.
 2. Demonstrate within its schedule the integration and completion of safety and security certification activities, including the development and completion of Conformance Checklists.
 3. Develop and support the development of safety and security analyses for safety and security certifiable elements as needed.
 4. Support the resolution of identified safety hazards and security vulnerabilities identified through safety and security analyses.
 5. Submit completed and signed Conformance Checklists to HART for review and acceptance.
 6. Submit supporting verification documentation to demonstrate that the design has incorporated and complies with safety and security design criteria

and requirements provided in the technical specifications and contract documents.

7. Submit required documents using HART's document management system for safety and security certification.
 8. Identify on its organization chart the representative assigned to manage and facilitate the CONSULTANT's implementation of the safety and security certification process.
- (d) The safety and security certification process for each certifiable element is not complete until Conformance Checklists completed, signed, and submitted by the CONSULTANT have been reviewed and accepted by HART. Additional requirements for safety and security certification are detailed in the Project SSCP. The CONSULTANT shall refer to Engineering Data for a copy of the Project SSCP."

I. PAYMENT

Section 8.2 of the General Terms and Conditions, entitled "PROGRESS PAYMENT", is hereby deleted in its entirety and replaced with the following:

"8.2 PAYMENT

- (a) Payments to the CONSULTANT for Work satisfactorily performed will be made monthly:
 1. **Scope of Payment.** The CONSULTANT shall receive and accept compensation provided for in the Agreement as full payment for performing all Work under the Agreement in a complete and acceptable manner and for all risk, loss, damage, or expense of whatever character arising out of the nature of the Work or the prosecution thereof.
 2. **Payment Concept.** Payment will be calculated using the Schedule of Milestones ("SM") Pay Item table.
 3. **Payment does not imply acceptance of the Work.** The granting of any payment by HART, or the receipt thereof by the CONSULTANT, shall in no way imply acceptance of the Work. Such Work, equipment, components or workmanship that do not conform to the requirements of this Agreement may be rejected by HART and in such case must be replaced by the CONSULTANT without delay.
- (b) Payment will be based on the SM.

Within ten (10) days upon receipt of NTP #1a, the CONSULTANT is required to breakdown the Work into milestones and submit the SM for approval and acceptance by HART. The SM is intended to provide linkage between the Baseline Design Schedule and the PROJECT Work Breakdown Structure ("WBS") provided by HART. The SM is to be organized by NTP and itemized by Pay Items. The CONSULTANT is to be paid upon satisfactory completion of SM Pay Item(s).

1. Pay Item measurement and payment shall be based on lump sum values assigned to all SM Pay Items. Completion of Milestones is the basis for payment.
 2. Request for Monthly Payment. The CONSULTANT shall submit monthly pay requests using Contract Management System procedures for HART to review. The request shall consist of the SM Pay Items for the current month and cumulative to date. An updated SM, Baseline Design Schedule, and a progress narrative addressing, at a minimum, areas of concern shall be included with each pay request.
- (c) HART's obligation to make timely payment and the statutory interest that accrues to any late unpaid balance shall be according to HRS § 103-10."

J. RETAINAGE

Section 8.5 of the General Terms and Conditions, entitled "RETAINAGE", is hereby deleted in its entirety.

K. PROMPT PAYMENT TO SUBCONTRACTORS

Section 8.6 of the General Terms and Conditions, entitled "PROMPT PAYMENT TO SUBCONTRACTORS," is hereby deleted in its entirety and replaced with the following:

"8.6 PROMPT PAYMENT TO SUBCONTRACTORS

- (a) Any money, other than retainage, paid to a contractor shall be dispersed to subcontractors within ten (10) days after receipt of the money in accordance with the terms of the subcontract; provided that the subcontractor has met all the terms and conditions of the subcontract and there are no bona fide disputes.
- (b) Upon final payment to the contractor, full payment to the subcontractor, including retainage, shall be made within ten (10) days after receipt of the money; provided that there are

no bona fide disputes over the subcontractor's performance under the subcontract. *See* HAR § 3-125-33.

- (c) A payment request made by a contractor to the Officer-in-Charge that includes a request for sums that were withheld or retained from a subcontractor and are due to the subcontractor may not be approved, unless the payment request includes:
1. Substantiation of the amounts requested; and
 2. Certification by the contractor, to the best of the contractor's knowledge and belief; that:
 - i) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the Agreement;
 - ii) The subcontractor has made payments due to its subcontractors and suppliers from previous payments received under the Agreement and will make timely payments from the proceeds of the payment covered by the certification, in accordance with their subcontract agreements and the requirements of this section; and
 - iii) The payment request does not include any amounts that the contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of their subcontract.
- (d) Prompt Payment of Retainage to Subcontractors upon Satisfactory Completion of Subcontractor Work. Upon satisfactory completion of accepted work by a subcontractor, the contractor shall request sums that were withheld or retained from a subcontractor and are due to the subcontractor pursuant to subsection (c). The contractor shall pay all retainage owed to the subcontractor within ten (10) days after payment to the contractor."

VIII. FEDERAL CLAUSES

FEDERAL FUNDING, INCORPORATION OF FTA TERMS, AND CHANGES TO FEDERAL REQUIREMENTS

This Agreement includes, in part, certain standard terms and conditions required by the FTA, whether or not expressly set forth in the Agreement provisions. All provisions required by the FTA, as set forth in FTA Circular 4220.1F, dated November 1, 2008 (including any changes), will be incorporated by reference. Anything to the contrary notwithstanding, all FTA mandated

terms and conditions will be deemed to control in the event of a conflict with other provisions contained in the Agreement. The CONSULTANT shall not perform any act, fail to perform any act, or refuse to comply with any HART requests which would cause HART to be in violation of FTA terms and conditions. This Agreement will be subject to any financial assistance agreement between HART and the FTA and all laws, regulations, guidelines, and provisions of the financial assistance agreement will apply to the Agreement and will be incorporated by reference as if fully set forth therein.

The CONSULTANT shall at all times comply with all applicable Federal Government laws and regulations, including without limitation FTA regulations, policies, procedures and directives, including those listed directly or by reference in Applicable Grant Agreements between HART and FTA, as they may be amended or promulgated from time to time during the term of the Agreement (collectively, "Federal Requirements"). These Federal Requirements may change and the changed Federal Requirements will apply to this Agreement as required unless the Federal Government determines otherwise. The CONSULTANT's failure to comply with the Federal Requirements shall constitute a material breach of the Agreement.

The Federal Requirements are contained in Exhibit 8, attached hereto and incorporated herein by reference.

IX. ASSIGNMENT

This Agreement is non-transferable and non-assignable in whole or in part, except by an instrument, in writing, signed by each of the Parties.

X. HEADINGS; GENDER; NUMBER

The titles of headings of Sections, Subsection and Paragraphs are intended for convenience of reference and shall not be considered as having any bearing on their interpretation.

All words used in the singular shall extend to and include the plural. All words used in the plural shall extend to and include the singular. All words used in any gender shall extend to and include all genders.

XI. REFERENCES TO THE CITY AND COUNTY OF HONOLULU

The acronym "HART" shall be substituted for "City and County of Honolulu", "CITY", "Rapid Transit Division", and "RTD" wherever those terms appear in the Request for Qualifications and Contract Documents inclusive of all Addendums, unless the context clearly indicates otherwise.

**SPECIAL PROVISIONS
EXHIBIT 1**

**HONOLULU RAIL TRANSIT PROJECT
AIRPORT SEGMENT GUIDEWAY AND UTILITIES CONTRACT**

SCOPE OF WORK

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Airport Segment Guideway and Utilities Contract

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This Exhibit 1 to the Special Provisions to the Agreement for Professional Services ("Exhibit 1") shall be incorporated into and be a part of that certain Agreement for Professional Services, by and between the HONOLULU AUTHORITY FOR RAPID TRANSPORTATION ("HART") and AECOM TECHNICAL SERVICES, INC., (the "CONSULTANT"), dated December 22, 2011 (the "Agreement"). All defined terms in the Agreement and the Special Provisions shall have the same meaning in this Exhibit 1.

Project Purpose and Description

The CONSULTANT will provide architectural and engineering services necessary for the design and preparation of final construction plans, detailed specifications and other contract documents for the Airport Segment Guideway and Utilities Contract (the "PROJECT") for the Honolulu Rail Transit Project ("H RTP").

A description of the Scope of Work (SOW) to be performed under this Agreement and deliverables is set forth in this Exhibit 1.

This SOW and accompanying budget/fee estimate assumes that the Design Schedule and durations of the Notice to Proceed ("NTP") phases will not require revision due to the schedules of interfacing contracts such as the West O'ahu Farrington Highway ("WOFH") Guideway Design-Build Contract, the Maintenance and Storage Facility Design-Build Contract, and the Core Systems Design-Build-Operate-Maintain ("DBOM") Contract. If changes to the durations or sequencing of the design work due to interfaces with other contracts are required, HART will consider adjustment to the NTP phases and durations stated herein.

The Airport Segment of the H RTP is a 5.2-mile, grade-separated fixed guideway transit system. The Airport Segment starts just past the Aloha Stadium Station along the south side of Kamehameha Highway, continues to Nimitz Highway and turns south along Aolele Street toward the Honolulu International Airport terminal. It then follows Aolele Street east to Ualena Street and Waiwai Loop east to reconnect to Nimitz Highway near Moanalua Stream and continues on to terminate past the Middle Street Transit Center Station.

Four (4) Stations are located along the route: Pearl Harbor Naval Base Station, Honolulu International Airport Station, Lagoon Drive Station, and the Middle Street Transit Center Station. The designs of these stations are part of the Airport Stations Group (ASG) and are not part of the SOW for this Contract.

The design of the Airport Segment will require the widening of portions of Kamehameha Highway and other streets to accommodate the guideway columns, provide bus stops, improve sidewalks and medians, relocate traffic signals, address environmental mitigation commitments, and other related improvements which are a part of this SOW. The SOW includes the installation of guideway lighting, a design that will accommodate miscellaneous electrical/mechanical wayside equipment, switch machines and the applicable sleeves and underground ductbanks/conduits to support the equipment. Design of barrier walls attached to the guideway, running rails and all related appurtenances are part of this SOW.

Numerous utilities along the proposed alignment require relocation to allow for the guideway construction. There are both public and private utilities including, but not limited to, power, sewer, water, and cable.

Phased Design and Duration of Contract

The work in this Contract will be phased to allow development of the design to occur in accordance with Federal Transit Administration (FTA) procedural requirements. The design phases will be initiated by a NTP issued by HART. A total of six (6) NTPs are anticipated:

NTP #1a – (Expected duration Forty-two (42) calendar days) Workshop, Design Schedule, and Schedule of Milestones (“SM”)

- Provide HART within twenty-two (22) calendar days of receipt of NTP #1a with a draft Baseline Design Schedule and a Schedule of Milestones (SM) that includes all work for which the CONSULTANT expects to be compensated. The SM is to be organized by NTP and will serve as the basis for payment. The CONSULTANT’s Baseline Design Schedule must be conformed to the SM. HART will review and provide comments to the CONSULTANT within ten (10) calendar days of receipt of the draft Baseline Design Schedule and SM. HART and the CONSULTANT shall reach agreement on the proposed SM within ten (10) calendar days from receipt of HART’s comments, at which time HART will approve the SM and issue NTP #1b. The SM format shall follow the sample SM provided to the CONSULTANT.
- A two (2)-day Design Workshop is to be included in this phase.
- The right of entry permitting request process for field investigations will also be initiated during this phase.

NTP #1b – (Expected duration one hundred Forty-five (145) calendar days) Revisions to Preliminary Engineering (“PE”)

- Commencing with NTP #1b, revise current PE design and drawings to incorporate the approved Station and Guideway Value Engineering (VE) recommendations, as applicable, and other HART preferences.
- Review site constraints and identify additional alignment changes/pier placement changes which improve the design consistent with the approved Environmental Documents; incorporate changes approved by HART.
- Update the Basis of Design to be consistent with current versions of relevant design codes/standards/regulations and verify compliance of PE design with this document.
- Develop column footprint to become the basis of design for Interim and Final Design Tasks.
- Duration for Airport Segment Guideway and Utilities design: one hundred fifteen (115) calendar days.
- HART Review: thirty (30) calendar days.

- Resolution of HART/Other Agency comments: Not to exceed thirty (30) calendar days, and may start concurrently with NTP #2. Agreed upon revisions will be addressed in NTP #2 deliverables.
- Conduct field investigations for ground surveys, utility potholing, and geotechnical.

NTP #2 – (Expected duration two hundred (200) calendar days) Interim Design (“ID”)

- Commence ID drawings and detailed working drawings and specifications and incorporate revisions resolved from NTP #1b HART/Agency review.
- Incorporate HRTTP standard details provided by HART and develop Airport Segment-specific details as required; provide consistent material selection that considers pedestrian safety, durability, maintenance, sustainability, and aesthetics relating to the transit environment.
- Duration for Airport Segment Guideway and Utilities design: one hundred seventy (170) calendar days.
- HART Review: thirty (30) calendar days.
- Resolution of HART/Other Agency comments: not to exceed thirty (30) calendar days, and may start concurrently with NTP #3. Agreed upon revisions will be addressed in NTP #3 deliverables.

NTP #3 – (Expected duration one hundred twenty (120) calendar days) Final Design (“FD”)

- Commence FD and preparation of construction contract documents, incorporating revisions resolved from NTP #2 HART/Agency review.
- Provide detailed construction contract documents to permit accurate cost estimating and expedite construction activities.
- The NTP #3 duration assumes the following:
 - Sixty (60) calendar days for Airport Segment Guideway and Utilities design from NTP #3 for submittal of camera-ready final documents to HART.
 - Thirty (30) calendar days for HART review; and thirty (30) calendar days for the CONSULTANT to incorporate review comments and prepare final advertisement-ready (“ad-ready”) construction documents.

NTP #4 – (Expected duration TBD) Design Support During Bidding

- As requested, assist HART in the construction solicitation process.
- As requested, assist HART during the solicitation of the construction contract including provision of technical design support for questions or RFIs posed by potential bidders.
- Duration is based on HART’s advertisement and bidding schedule.

NTP #5 – (Expected duration TBD) Design Support During Construction

- As requested, assist HART in responding to RFIs, reviewing shop drawings, resolving design issues during construction including site visits (as necessary), and incorporation of as-constructed changes into as-built drawings.
- Duration is based on HART's approved construction schedule.

Project Team

The CONSULTANT will be organized to provide a structure that will seamlessly integrate with HART. The Project Team is populated with personnel with direct relevant experience in transit system design, with a particular emphasis on the unique requirements of this PROJECT: segmental bridge design, local geotechnical and civil expertise, as well as community outreach and coordination and design system integration.

The CONSULTANT will establish a dedicated project office at its Honolulu Corporate office location at 1001 Bishop Street, in downtown Honolulu ("CONSULTANT project office"). This office is conveniently located across the street from the HART office and has the facilities to house all project coordination meetings with HART and other program staff. This CONSULTANT project office will be the work location for the following Key Personnel:

1. Project Director – Rudy Mina
2. Project Manager – Brian Dodson
3. Design Manager – Neil Harris
4. Civil Manager – Barry Muranaka
5. Design Interface Manager – James Statser
6. Structural Manager – John (Wally) Wallace Jordan

Also located at the CONSULTANT project office will be a majority of the project design staff. Other project design staff will be located at specific subconsultant offices located in Hawaii, while others will be located on the Mainland (estimated to be 30%). Work performed on the Mainland will be limited to specialty items, such as structural design, track design, constructability review and Intelligent Transportation Systems (ITS). As necessary, task designers will travel to or temporarily relocate to Hawaii to ensure coordination and communication.

All subconsultants' offices are located in Oahu, Hawaii, within close proximity of both the CONSULTANT project office, as well as HART's office.

The attached (Chart 1) is an updated organization chart identifying the location of all Project Team Leaders.

Brian Dodson, the Project Manager, will be the single point of contact for the CONSULTANT Project Team and will represent the CONSULTANT Project Team for all technical and contractual matters. Brian will be located full-time in Honolulu in the CONSULTANT project office.

Neil Harris, the Design Manger, will oversee the technical aspects of the project. Neil will be located in Honolulu in the CONSULTANT project office. However, his responsibilities will require extensive travel to coordinate with activities on the Island and on the Mainland.

Courtney Gonzalez, the Quality Assurance Manager, will be responsible for the development of the Quality Assurance Plan and conducting quality audits (the CONSULTANT and subconsultants). During the execution of the project, Courtney will be stationed out of the CONSULTANT's Oakland office, and will travel to Hawaii as necessary to ensure Quality Assurance. Supporting Courtney will be the CONSULTANT project office's QA Manager and Glenn Kunze (the CONSULTANT's Texas QA Manager), who will primarily be responsible for reviewing deliverables for QA compliance prior to submittal. Courtney will report directly to **Rudy Mina**, the Project Director.

Barry Muranaka, the Civil Task Manager, will oversee the various civil disciplines including track, utilities, MOT, roadway, drainage, survey, electrical, environmental, landscape and ITS. Barry is currently assigned to the CONSULTANT project office. The vast majority of this design effort will be performed out of the CONSULTANT project office, with support from Wilson Okamoto Corp.'s **Pete Pascua**, **Lance Oyama** and **Michael Fujita**. Their office is located within 3 miles of the CONSULTANT project office. Electrical design support will be performed by Ronald N.S. Ho & Associates, led by **Steven Sakai**. Their office is located within 3 miles of the CONSULTANT project office. Landscape design support will be performed by PBR Hawaii and led by **Stan Duncan**. Their office is located in the same building as the CONSULTANT project office. The ITS design function will be headed by **James Eden** from the CONSULTANT's Texas office.

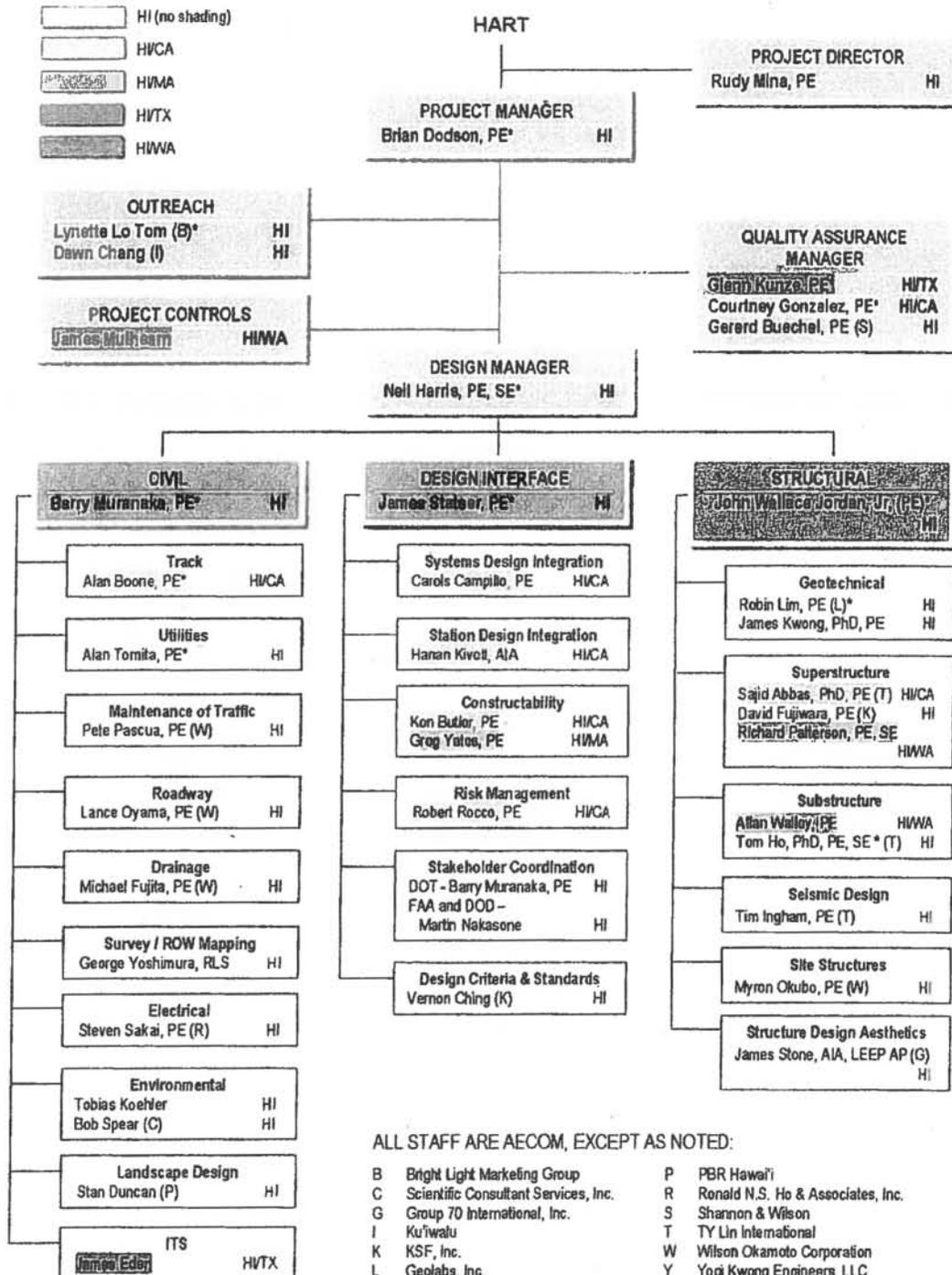
James Statser, the Design Interface Manager, will be responsible for the coordination of the various design teams and stakeholders. On-island presence is critical for this activity. James will be located full time in Honolulu in the CONSULTANT project office.

John (Wally) Jordan, the Structural Manager, will be responsible for the coordination of the structural design teams. Wally will be assigned to the CONSULTANT project office; however, as much of the structural design activity (about 60%) will be performed on the Mainland, it is anticipated that his time will be split between the Mainland and Hawaii. The structural production areas on the Mainland are located in California. The CONSULTANT project office will house a staff of structural engineers. These engineers will be assembled from the CONSULTANT and TY Lin International. This design team will be further supported by the on Island structural staff from KSF, Inc. led by **David Fujiwara**.

Outreach will be performed by Bright Light Marketing Group's **Lynette Lo Tom** and Ku'iwalu's **Dawn Chang**. Both of these firms are located in Honolulu across the street from the HART office and in the same building complex as the CONSULTANT project office. Both have a deep knowledge of local issues key to the success of the PROJECT.

In addition, the project controls staff and the CADD Manager will be located in the CONSULTANT project office.

Chart 1



Airport Segment Guideway and Utilities Contract

Scope of Work – Detailed Description by Task

The activity description sheets on the following pages describe the work to be performed by the CONSULTANT Project Team under the proposed design assignment.

The Airport Segment Guideway and Utilities SOW includes the design and preparation of final construction plans, detailed specifications and quantity take-offs for the Airport Segment as described. One set of bid documents will be prepared that address construction of the Airport Segment Guideway and the Airport Segment Utility Relocations. The design work will be based upon the existing PE Design documents and HART's Standard Documents. All plans will be prepared in accordance with the Plans Standards and CADD procedures. All work will be performed under the supervision of professional engineers licensed by the State of Hawai'i Department of Commerce and Consumer Affairs.

The following documents (provided by HART on DVD) will be utilized in preparation of the design:

- PE Drawings
 - Airport Segment
 - Pearl Harbor Naval Base Station
 - Honolulu International Airport Station
 - Lagoon Drive Station
 - Middle Street Transit Center Station
- Rapid Transit Division (RTD) Standard Documents
 - Standard and Directive Drawings
 - Compendium of Design Criteria
 - Plans Standards and Project CADD Procedures
 - Standard Specifications
- Systemwide Sustainability Report
- Airport Segment Drainage Report
- Geotechnical Data Report and associated technical memorandum
- RTD Interface Control Manual
- RTD Quality Management Plan
- Contract Management System (CMS) Requirements
- Final Environmental Impact Statement
- Record of Decision with the attached Section 106 of the National Historic Preservation Act (hereinafter, Section 106) Programmatic Agreement (PA)

Airport Segment Guideway and Utilities Contract

- FAA ROD
- Utilities Agreements (examples from other projects provided)
- VE Report (Stations)
- Draft VE Report (Guideway)
- Structures Workshop Summary Report (January 7-10, 2008)
- Soil Resistivity Report

Specific Tasks Performed by the CONSULTANT Include:

The tasks performed by the CONSULTANT have been broken down into nineteen (19) different activities. A listing of the nineteen (19) activities is found below. These activities have been broken down further into specific task items, Work Breakdown Structure (WBS). A listing of the task WBS items is found in Appendix A. For each task item, a task description has been developed and can be found in Appendix B.

Specific activities include:

- 0100 Project Management and Administration
- 0200 Design Workshop
- 0300 Interface and Coordination with Others
- 0400 Topographic Survey
- 0500 Civil Design
- 0600 Structural Design
- 0700 Geotechnical Exploration and Design
- 0800 Architectural Design
- 0900 Utility Design
- 1000 Traffic Signal Design
- 1100 Electrical Design
- 1200 Intelligent Transportation Systems (ITS) Design
- 1300 Environmental
- 1400 Maintenance of Traffic (MOT) Plans
- 1500 Public Involvement

- 1600 Quantity Take-Offs
- 1700 Specifications
- 1800 Design Support during Bidding (NTP #4)
- 1900 Design Support during Construction (NTP #5)

Key to the successful on-time competition of this PROJECT, the CONSULTANT recommends the following activities:

- During NTP #1b, the CONSULTANT will conduct a Contract Packaging Workshop with HART. The purpose of this workshop will be to determine the best method of packaging the design in order to optimize both the delivery schedule and project construction cost.
- The preliminary design update is a critical step in the design development and is the opportunity to resolve outstanding design issues with the community and project stakeholders:
 - The CONSULTANT will review the approved Station Value Engineering recommendations.
 - The CONSULTANT will review the approved Guideway Value Engineering recommendations, previously completed Structures Workshop information and the track layout for opportunities to optimize and refine the PE design. Specific emphasis will be placed on the western entrance into the airport, where the Guideway crosses over H1, and the Middle Street Transit Center Station. Refined optimization studies for span lengths, superstructure cross section dimensions and substructure dimensions will be conducted. The goal is to obtain clarification on optimum span length and pier placement as early as possible so that the geotechnical and utility investigation locations can be finalized.

Description of Design Submittals

PE Submittals

The PE Submittal consists of the updated PE Documents. These documents will be updated showing incorporation of HART-approved revisions from various Value Engineering reports, conclusions reached at the Design Workshop and results of optimization studies. Basis of Design reports will be updated to reflect decisions reached and any changes in codes/standards/regulations and/or direction from HART. The submittal will incorporate revised topographic background/utility information based on field surveys completed to date and include updated:

- Structural Drawings – Advanced to show final pier placement and configuration; typical sections; update of Structural Plans and Profiles; basic typical post-tensioning layout and construction sequence; pier configuration.
- Track Alignment Drawings – Updated based on studies conducted and verification that design meets the Basis of Design

- Drawings for all other disciplines included in the PE — Updated to be compatible with the changes to the structural and track alignment sheets and consistent with the updated Basis of Design. Accepted Value Engineering recommendations impacting the various disciplines will be incorporated as appropriate.
- Quantity Take-off – Updated to reflect the changes described above to the PE quantity take-off.
- Specification Index – Developed based on the anticipated Specification sections to be provided.

Interim Design Submittal

Drawings produced for the Interim Design Submittal will be approximately 90% complete and will incorporate revisions identified in the HART/outside agency review of the PE Update and all available design/details from the ASG and Core Systems Contract designers. New topographic survey and utility information will be incorporated. Calculation packages will be indexed and completed for all disciplines, except that the structures Independent Design Check will not be finalized until the Final Design NTP. Baseline specification sections will be edited to address the requirements of the design. Cost estimate quantity take-offs will be updated.

Draft Final Design Submittal

The Draft Final Design documents shall consist of complete design drawings, specifications and updated cost estimate quantity take-offs.

Drawings will be updated to resolve comments by HART and other outside agencies. Changes to the structure calculations/drawings resulting from the Independent Design Check will be implemented.

Final Design Submittal

The CONSULTANT will resolve and incorporate all HART comments and submit the Final Design documents. The Final Design documents are advertisement-ready ("ad-ready") construction documents. Submittal of the Final Design document represents conclusion of NTP #3.

Scope of Work (Assumptions and Exclusions)

In developing the WBS, detailed element SOW statements and cost proposal, the CONSULTANT has made the following assumptions:

- System element design will proceed such that information necessary for completion of the CONSULTANT's work will be available when needed.
- Station designs will proceed such that information necessary for completion of the CONSULTANT's work will be available as follows:
 - Loads to be carried by Guideway structural members will be provided by the start of NTP #2
 - Aesthetic features to be incorporated into the Guideway structural members in the vicinity of each Station will be provided by the start of NTP #3.

- Support requirements for Station structural elements (details of members to be supported) will be available at the start of NTP #3.
- HART has not approved Guideway VE recommendations at this point; the CONSULTANT assumes that basic alignment and structure type will be in accordance with the PE documents.
- The CONSULTANT's work is envisioned to be an evolution of this design, rather than development of a completely new design. While PE elements incorporated into the design and basis of design will be verified, the CONSULTANT assumes that all disciplines of PE work have been coordinated and that the design is in basic conformance with the approved Environmental Document.
- The CONSULTANT will incorporate revisions to address HART/Agency comments into the following milestone's deliverables rather than resubmit interim deliverables.
- The CONSULTANT will develop details compatible with the developed contact rail system and reference those plans within the deliverables. Note that the CONSULTANT does not run the load analysis to determine the contact rail and cable sizes/type; this will be performed by others. Design for the layout and support/mounting will be the CONSULTANT's responsibility. Connections from the cables to the contact rail will be done by the Core Systems Contractor in coordination with the CONSULTANT. Sleeves for connections of contact rails will be designed by the CONSULTANT.
- Drainage
 - The PE indicates that additional runoff quantities due to the PROJECT are minimal with respect to the overall drainage basin. The CONSULTANT assumes that design of drainage improvements will be limited to elements within or adjacent to the PROJECT area, and that downstream improvements to the overall drainage system will not be required.
 - HART will obtain the NPDES permit for runoff associated with construction activities. The CONSULTANT will provide engineering data required for the permit.

The following items are not included in the CONSULTANT's SOW and are specifically excluded:

- Station Design and Station Contract Documents except for structural design of pier caps supporting both Guideway and Station platforms.
- Traction Power Sub Stations (TPSS)/(GBS) electrical design except for coordinating power drops, and providing duct bank, vault or piles to support TPSS/GBS, manholes/handholes, Grounding Grid and stub ups for bonding to pre-fabricated structure grounding bus bar, and concrete/conduit duct bank between Guideway column and TPSS/GBS site.
- Traction power load analysis (train power demands) will be performed by the Core Systems Contractor.
- Core Systems design and contract documents for communications and control, traction electrification, train control and signaling, passenger vehicle and fare vending systems are by others except conduit duct banks for Communication, Fiber Optics, SCADA, Train Control from the Guideway to a manhole at passenger Station from both ends of the Station and then to TCCR room.

- Systemwide Wayfinding and Transit-related Signage design and contract documents, including specifications and quantities, will be prepared by others, but will be included in the Airport Segment Guideway and Utilities Contract.
- Only system Sites #19, 25, 27 and 28 are included in the Scope of Work. Foundations for site #19 and site #27 are excluded from this Contract.

Additional roadway Design Exceptions for roadway improvements requiring HDOT/FHWA approval are not required.

APPENDIX A
LISTING OF WBS NUMBERS

HHCTCP WBS NUMBERS									
Task No.	Sub Task No.	Description	NTP						
			#1a	#1b	#2	#3	#4	#5	
100	Project Management and Administration								
	0110	Project Management and Administration							
	.0010	General Management	X	X	X	X			
	.0020	Design Management	X	X	X	X			
	.0030	Constructability Reviews		X	X				
	.0040	Quality Assurance and Management	X	X	X	X			
	0120	Management Documents							
	.0010	Development of Design Schedule (Primavera P6)		X					
	.0020	Development of Schedule of Milestones (SM)	X						
	.0030	Development of Project Work Plan		X					
	.0040	Development of Management Plan		X					
	.0050	Development of Basis of Design Report (Initial Development)		X					
	.0060	Development of Quality Assurance Plan		X					
	.0070	Development of Interface Management Plan		X					
	.0080	Development of Safety and Security Manual		X					
200	Design Workshop								
	0200	Design Workshop							
	.0010	Conduct Two-Day Stakeholder Workshops	X						
	.0020	Conduct Contract Packaging Workshop		X					
300	Interface and Coordination with Others								
	0300	Interface and coordination with Others							
	.0010	Design Teams and Stakeholders	X	X	X	X			
	.0020	Section 106		X	X	X			
400	Survey								
	0400	Interface and coordination with Others							
	.0010	Develop Right of Entry Permits	X	X	X	X			
	.0020	Topographic Survey		X	X	X			
	.0030	ROW Mapping and Plans		X	X	X			
	.0040	Construction Easements		X	X	X			

Task No.	Sub Task No.	Description	NTP						
			#1a	#1b	#2	#3	#4	#5	
500	Civil Design								
	0510	Track Design							
	.0010	Track alignment design refinements (including revise-current PE to incorporate the Guideway VE)		X					
	.0020	Development of Guideway Track Design		X	X	X			
	0520	Roadway Design							
	.0010	Site and Roadway – Construction Plans and Details (Geometric)		X	X	X			
	.0020	Site and Roadway Pavement Markings and Roadway Signs		X	X	X			
	0530	Drainage Design							
	.0010	Drainage Report	X	X	X	X			
	.0020	Development of Guideway and Surface Drainage Design	X	X	X	X			
	.0030	Moanalua Stream "No Rise" Mitigative Measure - Design		X	X	X			
	.0040	Erosion Control Plans - Design		X	X	X			
	0540	Site Design							
	.0010	TPSS		X	X	X			
	0550	Landscape Design							
	.0010	Landscape		X	X	X			
	0560	Demolition Plans							
	.0010	Demolition Plans		X	X	X			
	0570	QC/QA							
	.0010	QC Review - Discipline and Inter-Discipline Review of Documents		X	X	X			

600	Structural Design								
	0610	Preliminary Studies							
	.0010	Evaluate/Implement Guideway VE Recommendations	X	X					
	.0020	Span Optimization Study	X	X					
	.0030	Substructure Cross-Section Optimization Study	X	X					
	.0040	Finalize Project Footprint		X					
	0620	Superstructure							
	.0010	Longitudinal Design/Details		X	X	X			
	.0020	Superstructure Transverse Design Details		X	X	X			
	.0030	Pedestrian Span Supports		X	X	X			
	0630	Substructure Design/Detailing							
	.0010	Typical Column Bent		X	X	X			
	.0020	Straddle Bent		X	X	X			
	.0030	Cantilever Pier		X	X	X			
	.0040	CIP Long Span Pier		X	X				

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	.0050	Station Pier	X	X	X		
	.0060	Analysis for Lateral and Gravity Loads	X	X			
0640		Structural Seismic Analysis					
	.0010	Structural Seismic Analysis	X	X			
0650		Site Structures					
	.0010	Site Structures	X	X	X		
0660		Structure Design Aesthetics					
	.0010	Structure Design Aesthetics	X	X	X		
0670		QA/QC					
	.0010	QC Review - Discipline and Inter-Discipline Review of Documents	X	X	X		
	.0020	Independent Design Check		X	X		

Task No.	Sub Task No.	Description	NTP					
			#1a	#1b	#2	#3	#4	#5
700		Geotechnical Exploration and Design						
	0710	Geotechnical Exploration and Design						
	.0010	Development of Boring Plan	X	X				
	.0020	Obtain Necessary Permits		X				
	.0030	Geotechnical Investigation and Soils Testing		X	X			
	.0040	Development of Reports and Design Technical Memoranda		X	X	X		
	.0050	Quality/Peer Review	X	X	X			
	0720	Load Test						
	.0010	Load Test			X			

800		Architectural Design						
	0810	Architectural Design						
	.0010	Station, Pier, TSSS, and Pedestrian Pathway Aesthetics		X	X	X		
	0820	Systemwide Sustainability Report						
	.0010	Sustainability Report Complication and Preparation of Report		X	X	X		
	0830	QA/QC						
	.0010	QC Review - Discipline and Inter-Discipline Review of Documents		X	X	X		

Task No.	Sub Task No.	Description	NTP				
			#1a	#1b	#2	#3	#4

Airport Segment Guideway and Utilities Contract

900	Utility Design						
	0910	As-Built Research & Sub-Surface Investigation					
		.0010	Development of Composite Utility Plans	X	X		
		.0020	Sub-surface investigation (GPR & Potholing)	X	X		
	0920	Design and Plan Development for Utilities					
		.0010	Design and Plan Development for Utilities (Non-electrical)	X	X	X	
		.0020	Design and Plan Development for Electrical and Communications Utilities	X	X	X	X
	0930	QA/QC					
		.0010	QC Review - Discipline and Inter-Discipline Review of Documents	X	X	X	

1000	Traffic Signal Design						
	1010	Traffic Signal System Design					
		.0010	Development of Interim Traffic Signal Plans	X	X	X	
		.0020	Development of Final Traffic Signal Plans	X	X	X	
	1020	QA/QC					
			QC Review - Discipline and Inter-Discipline Review of Documents	X	X	X	

1100	Electrical Design						
	1110	Guideway Alignment					
		.0010	Illumination and Traffic Signal Design	X	X	X	
		.0020	Pearl Harbor Naval Base Station Connections	X	X	X	
		.0030	Honolulu International Airport Station Connections	X	X	X	
		.0040	Lagoon Drive Station Connections	X	X	X	
		.0050	Middle Street Station Connections	X	X	X	
	1120	System Site					
		.0010	Site #25	X	X	X	
		.0020	Site #27	X	X	X	
		.0030	Site #28	X	X	X	
		.0040	Site #19	X	X	X	
	1130	QA/QC					
		.0010	QC Review - Discipline and Inter-Discipline Review of Documents	X	X	X	

Task No.	Sub Task No.	Description	NTP					
			#1a	#1b	#2	#3	#4	#5
1200	Intelligent Transportation Systems (ITS) Design							

Airport Segment Guideway and Utilities Contract

1210	Intelligent Transportation Systems (ITS) Design				
.0010	Development of Intelligent Transportation System Design	X	X	X	
1220	QA/QC				
.0010	QC Review - Discipline and Inter-Discipline Review of Documents -	X	X	X	

1300	Environmental				
1310	Hazardous Waste and Materials				
.0010	Investigate and Provide Remedial Design for Hazardous Waste and Materials	X	X	X	
.0020	Prepare and Update Environmental Compliance Plan (ECP)	X	X	X	X
.0030	Conduct Environmental Compliance Reviews During the Design Phase	X	X	X	X
.0040	Prepare environmental planning documents and permits		X	X	X
.0050	Prepare Other Permits and Clearances		X	X	X
1320	QA/QC				
.0010	QC Review - Discipline and Inter-Discipline Review of Documents	X	X	X	

1400	Maintenance of Traffic (MOT) Plans				
1410	Development of MOT Plans				
.0010	Station 988+60 to Station 1190+00	X	X	X	
.0020	Station 1190+00 to End Station (Phase 1)	X	X	X	
.0030	Station 1190+00 to End Station (Phase 2)	X	X	X	
1420	TMP / MOT Reports				
.0010	TMP Work Plan Schedule Coordination	X	X	X	
.0020	TMP Analysis and Coordination and Plan	X	X	X	
1430	QA/QC				
.0010	QC Review - Discipline and Inter-Discipline Review of Documents	X	X	X	

1500	Public Involvement						
1510	Public Involvement						
.0010	Meetings and Development of Material in Support of Meetings	X					
.0020	Coordinate/Provide Public Involvement Support to HART		X	X	X		

			NTP					
Task No.	Sub Task No.	Description	#1a	#1b	#2	#3	#4	#5
1600	Quantity Take-off							
	1610	Development of Quantities and Cost Estimate						

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	.0010	Review and Development	X	X	X
1620		QA/QC			
	.0010	QC Review - Discipline and Inter-Discipline Review of Documents	X	X	X

1700	Specifications				
	1710	Specifications - Review and Development			
	.0010	Review and Development	X	X	X
	1720	QA/QC			
	.0010	QC Review - Discipline and Inter-Discipline Review of Documents	X	X	X

1800	Design Support During Bidding (NTP #4)				
	1810	Design Support During Bidding			
	.0010	Guideway and Utility Package			X

1900	Design Support During Construction (NTP #5)				
	1910	Management			
	.0010	Management and Administration			X
	.0020	Shop Drawing Review			X
	.0030	As-Built Drawings			X
	.0040	Request For Information and Additional Support Activities			X

APPENDIX B

WBS LISTING AND TASK DESCRIPTION

TASK 0100 - Project Management and Administration

Provide management and administration resources to provide day-to-day oversight of the design of the Airport Segment Guideway and Utilities Contract including preparation of a Project Management Plan (PMP), hosting and recording coordination meetings, design cost monitoring and control, design schedule monitoring and control, subconsultant management and coordination, document control, monthly progress reporting and invoicing, and quality management and assurance. Regular interfacing and coordination with HART will be required.

The CONSULTANT's services will conform with the RTD Quality Management Plan (QMP) and the CONSULTANT shall prepare a specific Quality Assurance Plan (QAP) for the Airport Segment Guideway and Utilities Contract which meets the requirements of the FTA Quality Assurance/Quality Control (QA/QC) Guidelines. The QAP will be submitted to HART for acceptance prior to its use.

Prepare design schedule and provide updates to HART using Primavera P6. Non-CADD project correspondence and other documentation shall be controlled using the Primavera Contract Management System. HART's web-based file collaboration tool SharePoint shall be used for CADD drawings.

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Project Management And Administration 1:1 General Management	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0110.0010	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Project Management and Administration support during the design phase of the Project (NTP #1a, NTP #1b, NTP #2, and NTP #3). General Management for NTP #4 and NTP #5 are under a separate WBS number. 2) Attendance and participation as required in meetings with HART for design and management. 3) Management activities associated with coordination and communication with HART, including development of progress reports and invoices. 4) Design progress and cost monitoring. 5) CONSULTANT management activities, including internal design team coordination and management. 6) Interface with HART via Contract Management System (CMS). 7) Document Control. 8) Management of subconsultants . 9) Review and tracking of Design Schedule and Schedule of Milestones utilizing Primavera P6 Attendance and recording of various meetings with HART. 10) Preparation for, attendance and production of minutes at Technical Work Group Meetings with HART (NTP #1b, NTP #2, NTP #3). Meetings are assumed to occur at least biweekly as described in the assumptions below. The meetings will focus on technical issues including: <ol style="list-style-type: none"> a) Update HART regarding Design assumptions and approach. b) Seek HART's input regarding design issues. c) Identify technical issues which are on the critical path. 11) Preparation for, attendance and production of minutes for monthly Project Review Meetings with HART (NTP #1b, NTP #2, NTP #3). The meetings will focus on management issues, including: <ol style="list-style-type: none"> a) Provide updates regarding status of design and billing. b) Submittal of Status Set of Drawings. c) Identify quality issues. d) Identify items impacting the schedule. 12) Administration of the ProjectWise system for control of design documents and CADD files for the Airport Segment Guideway. Task includes: <ol style="list-style-type: none"> a) Establishment and maintenance of directories and access restrictions. b) Establishment and maintenance of ProjectWise users. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) Management and administration activities will vary based on NTP. Full management activities will not start until NTP #1b. 		

- 2) No deliverable or milestones are associated with General Management activities; rather the effort is distributed over a duration of time.
- 3) Design Team Review Meetings are anticipated to occur at least biweekly.
- 4) Meeting agendas and meeting minutes will be prepared by the CONSULTANT.
- 5) Agendas to be submitted two (2) days before meeting and minutes distributed through CMS two (2) days after the meeting.
- 6) NTP #1a – Schedule of Milestones – No HART Team Meetings.
- 7) NTP #1b – Preliminary Design:
 - a) Weekly design team review meetings.
 - b) Duration 115 days.
- 8) NTP #2 – Interim Design:
 - a) Biweekly design team review meetings.
 - b) Duration 170 days.
- 9) NTP #3 – Final Design:
 - a) Biweekly design team review meetings.
 - b) Duration 60 days.
- 10) For Project Controls:
 - a) The Design Schedule and Schedule of Milestones will be developed under a separate task item.
 - b) Tracking will be based on the Project Work Plan.
 - c) Monthly reports will be issued to HART.
 - d) Monthly Deliverable (Status Set of Drawings) will be utilized for tracking purposes.
 - e) Reports will be issued starting with NTP #1b.

C) Inputs:

- 1) Management activities are based off the Project Work Plan (Plan is developed under separate task item).
- 2) Project Controls activities are based off the Project Work Plan (Plan is developed under separate task item).

D) Deliverables:

- 1) Meeting Minutes / Management Reporting
- 2) Meeting Minutes / Management Reporting
- 3) Meeting Minutes / Management Reporting
- 4) Meeting Minutes / Management Reporting

NTP #

- 1a
- 1b
- 2
- 3

Activity:	Activity Responsibility:	Issue Date:
Project Management And Administration	AECOM	09/20/2011
- 1.2 Design Management	Task No. / Sub Task No.	Revision No:
	WBS – 0110.0020	Conformed

A) Activity Description:

This task is associated with Design Management, CADD Management and ProjectWise Administration during the design phase of the project (NTP #1a, NTP #1b, NTP #2, and NTP #3). Design Management for NTP #4 and NTP #5 are under a separate WBS number.

1) Design Manager:

- a) Design Manager will provide overall technical management of the Project.
- b) Design Manager will coordinate/communicate between design disciplines and monitor progress of the technical work.
- c) Design Manager will Interface with HART regarding technical issues.

2) Discipline Managers:

- a) Discipline Managers will manage specific discipline designs, including:
 - i). Civil Design Manager
 - ii). Design Interface Manager
 - iii). Structure Design Manager
 - iv). Other discipline leads (efforts are included within each task)
- b) Each discipline lead will be responsible to ensure their discipline submittals undergo the proper QA reviews.

3) CADD Management:

- a) CADD Management will provide overall management of CONSULTANT and subconsultant plans preparation and compliance with CADD Manual and standards.
- b) Interface with HART regarding CADD standards.

4) ProjectWise Administration:

- a) Administration of the ProjectWise system for control of design documents and CADD files for the Airport Segment Guideway.
- b) Establishment and maintenance of directories and access restrictions.
- c) Establishment and maintenance of ProjectWise users.

B) Assumptions:

- 1) No deliverable or milestones are associated with Design Management; rather the effort is distributed over a duration of time.

C) Inputs:

- 1) Basis of Design Report.
- 2) Preliminary Engineering Design.
- 3) Quality Assurance Plan.
- 4) Honolulu High-Capacity Transit Corridor Project – CADD Procedures dated October 16th, 2009 and future updates.
- 5) Honolulu High-Capacity Transit Corridor Project – Plans Standards; dated October 16th, 2009 and future updates.

D) Deliverables:

- 1) N/A

NTP #

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Project Management And Administration 1.3 Constructability Reviews	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS- 0110.0030	Revision No: Conformed
A) Activity Description: Activity includes the coordination of Constructability Review for submittals for major submittals. Review will focus on, but not limited to: <ol style="list-style-type: none"> 1) Structural constructability and staging review. 2) Civil, traffic, systems, geotechnical and other disciplines. 3) Constructability Reviews will be performed during the Preliminary Engineering and Interim Design phases and documented as part of the Quality Control Reviews. 		
B) Assumptions: <ol style="list-style-type: none"> 1) One constructability review will be performed during Preliminary Engineering; two reviews are anticipated during Interim Design, though additional partial reviews may be performed after substantial development of specific design concepts. These reviews will take place earlier than the submittal QC reviews to provide adequate time for implementation of design considerations. 		
C) Inputs: <ol style="list-style-type: none"> 1) Basis of Design Report. 2) Preliminary Engineering Drawings. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Constructability Review – Preliminary Engineering 2) Constructability Review – Interim Design 		NTP # 1b 2

ACTIVITY DESCRIPTION Form SOW 01

Activity: Project Management And Administration 1.4 Quality Assurance and Management	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0110.0040	Revision No: Conformed

A) Activity Description:

- 1) Quality Assurance and Management support during the design phase of the Project (NTP #1a, NTP #1b, NTP #2, and NTP #3). Quality Assurance and Management for NTP #4 and NTP #5 are under a separate WBS number.
- 2) This task item is associated with the enforcement of the Quality Assurance Plan.
- 3) All submittals must undergo a Quality Control procedure or review. This review will be documented as described in the Quality Assurance Plan. As part of the Plan, all submittals will be reviewed by Quality Assurance Personnel to ensure the proper Quality Control procedures have been followed.
- 4) Task includes Management (scheduling and assignment) of the Quality Control Personnel.

B) Assumptions:

- 1) All submittals will be reviewed by Quality Assurance Personnel.
- 2) Quality Assurance Personnel will be independent of the design process.
- 3) No deliverable or milestones are associated with Quality Assurance and Management; rather the effort is distributed over a duration of time.

C) Inputs:

- 1) Quality Assurance Plan

D) Deliverables:	NTP #
1) Quality Assurance – Schedule of Milestones	1a
2) Quality Assurance – Preliminary Engineering	1b
3) Quality Assurance – Interim Design	2
4) Quality Assurance – Final Design	3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Project Management And Administration Management Documents 1.5 Development of Design Schedule (Primavera P6)	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0120.0010	Revision No: Conformed
A) Activity Description: 1) Development of a Primavera P6 schedule for the design activities and interface of the Airport Segment Guideway.		
B) Assumptions: 1) The schedule will be broken down based on the Task activities developed in the Scope of Work. 2) Four basic Notices to Proceed will be issued by HART: a) NTP #1a – Schedule of Milestones (22 calendar days). b) NTP #1b – Preliminary Engineering (115 calendar days). c) NTP #2 – Interim Design (170 calendar days). d) NTP #3 – Final Design (60 calendar days). 3) The schedule will include NTP #4 (120 calendar days for each bid package). 4) The schedule will not include NTP #5. 5) The Draft Design Schedule will be issued with the start of NTP #1b.		
C) Inputs: 1) Schedule found in the Honolulu High-Capacity Transit Corridor Project Airport Segment Guideway and Utilities Professional Service Contract Request for Qualifications. 2) WBS Codes and activities found in the Scope of Work.		
D) Deliverables: 1) Draft Design Schedule 2) Final Design Schedule		NTP # 1b 1b

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Project Management And Administration Management Documents - 1.6 Development of Schedule of Milestones (SM)	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0120.0020	Revision No: Conformed
A) Activity Description: 1) Development of the Schedule of Milestones will be based off the design schedule.		
B) Assumptions: 1) The schedule will be broken down based on the Task activities developed in the Scope of Work. 2) Four basic Notices to Proceed will be issued by HART: a) NTP #1a – Schedule of Milestones (22 calendar days). b) NTP #1b – Preliminary Engineering (115 calendar days). c) NTP #2 – Interim Design (170 calendar days). d) NTP #3 – Final Design (60 calendar days). 3) The schedule will not include NTP #4 or NTP #5. 4) The Schedule will be issued during NTP #1a.		
C) Inputs: 1) Schedule found in the Honolulu High-Capacity Transit Corridor Project Airport Segment Guideway and Utilities Professional Service Contract Request for Qualifications.		
D) Deliverables: 1) Draft Design Schedule of Milestones 2) Final Design Schedule of Milestones		NTP # 1a 1a

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Project Management And Administration Management Documents 1.7 Development of Project Work Plan	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0120.0030	Revision No: Conformed
A) Activity Description: 1) Development of a Project Work Plan. 2) Plan will: <ul style="list-style-type: none"> a) Provide HART and project basic information. b) Define project organization and contact. c) Define communication and meeting. d) Overview of project goals. e) Define HART goals and objects. f) Outline scope of work. g) List project deliverables. h) List key milestones. i) Project Schedule (developed under separate task item). j) Define project budget and cost schedule. k) Define file index and filing procedures. l) Contain the Quality Assurance Plan (the QAP will be developed under a separate task item) . m) Contain the Project Basis of Design Report (developed under a separate task item). n) Project Safety and Health Plan (developed under a separate task item). 		
B) Assumptions: 1) Format will follow the CONSULTANT's typical Project Work Plan. 2) The Draft Project Work Plan will be issued with the start of NTP #1b.		
C) Inputs: 1) N/A		
D) Deliverables: 1) Draft Project Work Plan 2) Final Project Work Plan		NTP # 1b 1b

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Project Management And Administration Management Documents 1.8 Development of Management Plan	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS -- 0120.0040	Revision No: Conformed
A) Activity Description: 1) Development of a Management Plan. 2) Plan will include: <ul style="list-style-type: none"> a) Project Management Overview. b) Management organization, approach and responsibilities. c) Contracting approach. d) Basis of Design. e) Design Management. f) Financial Management. g) Cost and Schedule Control. h) Change Management. i) Document Management System. j) Management forms and procedures. k) Establishment of lines of communication. 		
B) Assumptions: 1) The Draft Management Plan will be issued with the start of NTP #1b.		
C) Inputs: 1) N/A		
D) Deliverables: 1) Draft Management Plan 2) Final Management Plan		NTP # 1b 1b

ACTIVITY DESCRIPTION		Form SOW/01
Activity: Project Management And Administration Management Document 1.9 Development of Basis of Design Report (Initial Development)	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0120.0050	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Development of Basis of Design Report. 2) The updated Basis of Design Report is the base document for which the Preliminary, Interim and Final design will be developed. 3) As the design is developed, it may be necessary to update the Basis of Design Report. If this is the case, this effort will be performed under a different task and will not be done without the consent of HART. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Development of Initial Basis of Design Report. This document will be based on the Honolulu High-Capacity Transit Corridor Project, Compendium of Design Criteria, dated February 22nd 2010, documents provided by HART and input received during the Design Workshop. 2) The Draft Basis of Design Report will be issued with the start of NTP #1b. 		
C) Inputs: <ol style="list-style-type: none"> 1) Based off the Honolulu High-Capacity Transit Corridor Project, Compendium of Design Criteria, dated February 22nd 2010. 2) Architectural Outline Specifications. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Draft Basis of Design Report 2) Final Basis of Design Report 		NTP # 1b 1b

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Project Management And Administration Management Document 1.10 Development of Quality Assurance Plan	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0120.0060	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Development of a project Quality Assurance Plan. 2) The Quality Assurance Plan will be utilized throughout all phases of the project. 3) The Quality Assurance Plan will outline the procedures for both QA and QC. 4) The Quality Assurance Plan establishes the applicable top-level quality control and quality assurance program requirements, identifies or references detailed implementing procedures, practices, and plans for the project activities to be performed by the CONSULTANT. 5) The quality system is based on the four fundamental principles adhered to by the Project: <ol style="list-style-type: none"> a) The achievement of quality is of the highest priority where each designer and supervisor is accountable for the quality of the work assigned to them. This applies to all persons performing work on this Project. b) The quality organization maintains a strong overview of the work in order to give additional assurance that specified requirements are met. This is done by performing reviews and approvals of documents; by conducting quality inspections, surveillances and audits. c) The degree of the application of the established quality criteria is dependent on the importance of the system or structure to the overall project, i.e., criticality, of the structure, system, or component to the safety and mission of the project. d) The review and approval of quality documents is at a management level commensurate with the importance of the item under consideration. 		
B) Assumptions: <ol style="list-style-type: none"> 1) A project specific Quality Assurance Plan will be developed. 2) All submittals will undergo the following reviews: <ol style="list-style-type: none"> a) Discipline review – Performed by a qualified engineer not associated with the development of the design. b) Inter-Discipline review – All submittals will be reviewed by each discipline to ensure inter-coordination of design. c) All Final Guideway structural submittals will have an independent design check. This check will be performed by qualified engineers not associated with the development of the specific design element. 3) The Quality Assurance Plan will outline specific form required for the review process. 4) The Quality Assurance Plan will outline the QA review procedure to ensure all submittals have been properly reviewed. The task of QA review will be performed under a separate task item. 5) The Quality Assurance Plan will be utilized by the CONSULTANT and all subconsultants. 		

6) The Draft Quality Assurance Plan will be issued with the start of NTP #1b.	
C) Inputs: 1) AECOM QA/QC Manual. 2) Based off the Honolulu High-Capacity Transit Corridor Project Quality Management Plan, dated January 11, 2011.	
D) Deliverables: 1) Draft Quality Assurance Plan 2) Final Quality Assurance Plan	NTP # 1b 1b

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Project Management And Administration Management Document 1.11 Development of Interface Management Plan	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0120.0070	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Development of an Interface Management Plan and Interface Control Manual. 2) The purpose of this document is to establish protocols for interface and design coordination with other Contracts or stakeholders. 3) The Interface Management Plan will: <ol style="list-style-type: none"> a) Define interface organization. b) Identify points of contact for key stakeholders, other contract teams, HART and CONSULTANT discipline leads. c) Define communication and meetings. d) Define matrix of stakeholder needs. e) Define procedures for oversight of environmental compliance. f) Establish tracking and verification of implementation of stakeholder needs in design activities. 		
B) Assumptions: <ol style="list-style-type: none"> 1) It is anticipated this will be a "living document" with frequent updates throughout the project. 2) Records of previous/on-going communications with stakeholders will be provided by HART. 3) The Draft Interface Management Plan will be issued with the start of NTP #1b. 		
C) Inputs: <ol style="list-style-type: none"> 1) Summary of prior stakeholder communications from HART. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Draft Interface Management Plan 2) Final Interface Management Plan 		NTP # 1b 1b

ACTIVITY DESCRIPTION		Form SOW.01
Activity: Project Management And Administration Management Documents 1.12 Development of Safety and Security Manual	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0120.0080	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Development of a project Safety and Security Manual in order to address safety at both the office and field. 2) The Safety and Security Manual will be developed such that it complies with HART safety and health programs and with applicable local, state and federal occupational safety and health regulations. 3) The Safety and Security Manual shall include, but not be limited to the following: <ol style="list-style-type: none"> a) Title, signature and phone number of the Safety and Security Manual Preparer, Company Officer and Safety and Security Representative. b) Background information: Designer name, contact name and number, description of work to be performed. c) Responsibilities and lines of authority. d) Safety policy statement. e) Training. f) Emergency Planning. g) First aid and CPR training. h) Personal Protective Equipment. i) Hazardous substance. j) Description of how traffic control will be accomplished. 		
B) Assumptions: <ol style="list-style-type: none"> 1) The Draft Safety and Security Manual will be issued with the start of NTP #1b. 2) The CONSULTANT is responsible for employee and subconsultant compliance with applicable regulations and Security Plan (SSSP). 		
C) Inputs: <ol style="list-style-type: none"> 1) AECOM Safety Manual. 2) Honolulu High-Capacity Transit Corridor Construction Safety and Security Plan (CSSP), dated 6/1/2011. 3) Various State and Federal occupational safety and health regulations. 4) Hawaii Administrative Rules, Title 12, Department of Labor and Industrial Relations Subtitle 8, Division of Occupational Safety and Health Part 3. 		
D) Deliverables:		NTP #

1) Draft Safety and Security Manual	1b
2) Final Safety and Security Manual	1b

TASK 0200 - Design Workshop

Commence design with one, two (2)-day workshop to review segment concepts previously completed and, if necessary, update PE Design based on HART input. Participants shall include the CONSULTANT's Project Manager, Design Manager, Structural Manager, Environmental Compliance Manager, HART Engineering Staff, United States Navy, State of Hawai'i Department of Transportation (HDOT) Highways and Airports Divisions, Hawaiian Electric Company (HECO) and other key utility owners, and the Federal Aviation Administration (FAA). Representatives of adjacent section designers will also be invited to participate.

Key Activities:

During NTP #1b, the CONSULTANT proposes to conduct a Contract Packaging Workshop with HART. The purpose of this workshop would be to determine the best method of packaging the design in order to optimize both the delivery schedule and project construction cost.

ACTIVITY DESCRIPTION

Form SOW 01

Activity:	Activity Responsibility:	Issue Date:
Design Workshops	AECOM	09/20/2011
2.1 Conduct Two-day Stakeholder Workshop	Task No. / Sub Task No.	Revision No:
	WBS – 0200.0010	Conformed

A) Activity Description:

- 1) The CONSULTANT will hold one two-day design workshop to review previously completed design concepts:
 - a) The first day will identify challenges and existing design solutions, and will solicit input from attendees for alternative solutions.
 - b) The second day will present an evaluation of alternatives by the design team with recommendations for the preferred solution.

- 2) Key stakeholders participating shall include:
 - a) The CONSULTANT's Project Manager, Design Manager, Structural Manager, and Environmental Compliance Manager.
 - b) HART staff.
 - c) United States Navy.
 - d) State of Hawai'i Department of Transportation Highways and Airports Divisions.
 - e) Hawaiian Electric Company.
 - f) Federal Aviation Administration.
 - g) Other key utility owners.
 - h) Other stakeholders identified by HART.

B) Assumptions:

- 1) Prior to workshops, HART staff will update the CONSULTANT regarding ongoing stakeholder discussions and outstanding issues.

C) Inputs:

- 1) Preliminary Engineering documents.
- 2) Preliminary Guideway Value Engineering Study Report prepared by Value Management Strategies, Inc., dated April 2011.
- 3) Basis of Preliminary Design Report, dated October 2010.

D) Deliverables:

- | | |
|--|--------------|
| | NTP # |
| 1) Design Workshop Review Meeting | 1a |
| 2) Conduct Two-Day Design Workshop with Stakeholders | 1a |

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Design Workshops	Activity Responsibility: AECOM	Issue Date: 09/20/2011
2.2 Conduct Contract Packaging Workshop	Task No. / Sub Task No. WBS – 0200.0020	Revision No: Conformed
<p>A) Activity Description:</p> <ol style="list-style-type: none"> 1) In association with preliminary structure optimization studies, the CONSULTANT will consider appropriate means in the plans and specifications to allow flexibility and increase opportunity for competitive construction bids. 2) After identifying options, the CONSULTANT will conduct a Contract Packaging Workshop with HART staff to explore opportunities to increase competitive construction bids. 		
<p>B) Assumptions:</p> <ol style="list-style-type: none"> 1) It is anticipated the Contract Packaging Workshop will take place after initial two-day stakeholder workshop and structure optimization studies in the early part of NTP #1b. 		
<p>C) Inputs:</p> <ol style="list-style-type: none"> 1) Structure optimization studies. 2) Evaluation of Contractor capabilities and capacities. 3) Preliminary design of Guideway sections. 		
<p>D) Deliverables:</p> <ol style="list-style-type: none"> 1) Conduct Contract Packaging Workshop 		<p>NTP # 1b</p>

TASK 0300 - Interface and Coordination with Others

Extensive and continual interface and design coordination with other Contracts or entities is essential for the Airport Segment Guideway and Utilities Contract. This interface includes, but is not limited to, the following:

- Interface and coordinate with HART on issues related to work performed by others, such as flood hazard analysis, coordinated communication with various stakeholders, and other systemwide issues.
- Core Systems Contract (CSC) - Interface with the CSC for the communications and control, traction electrification, train control and signaling, passenger vehicle and fare vending systems. Guideway design will include the embedded conduits and other embedded components, blockouts, structural supports and mountings, and other enclosures and finishes as needed.
- Airport Stations Group (ASG) Contract - Interface with the ASG Contract in the Station areas. The design of the Guideway superstructure, columns and foundations, Station platform support structures and concourse support structures within the limit of the Guideway structure is part of this scope of work. Also, any roadway, drainage and other features in the Station areas are part of the Airport Segment Guideway design Scope of Work.
- Systemwide Landscaping Design Contract - Interface with the Systemwide Landscaping Design Contract for proposed permanent irrigation and landscaping along the H RTP alignment in median areas occurring under and adjacent to the Guideway and other selected areas.
- Systemwide Signage Design - Interface with the Systemwide Signage Designer who will furnish construction drawings for H RTP signage, along the Guideway, on streets and intersections under or adjacent to the Guideway and signage for identification, directional or restrictive purposes at or approaching all Stations and facility sites, for inclusion in the Airport Segment Guideway and Utilities Contract.
- HDOT - Because of the Guideway alignment's location on or proximity to Kamehameha Highway, the H-1 freeway and the Honolulu International Airport, close coordination with HDOT Highways Division and HDOT Airports Division will be required.
- U.S. Departments of Navy and Air Force - The Guideway alignment encroaches onto property under the jurisdiction of the U.S. Navy between Valkenburgh and Elliott Streets. The Guideway also crosses over access ramps servicing Pearl Harbor Naval Base and Hickam Air Force Base. Coordination design and construction staging plan traffic impacts with the U.S. Navy and the U.S. Air Force.
- FAA - Because of the Guideway alignment, the Airport Station and Lagoon Drive Station's support structure's close proximity to the Honolulu International Airport and its surrounding infrastructure will require close coordination with FAA during design progression.
- Public and Private Utilities - Coordinate points of service, utility relocation, sizing and connection points, etc.
- Public and Private Property owners and businesses - Coordinate design and construction staging plan traffic impacts with adjacent or affected property owners and businesses.
- Consulting Parties to the Programmatic Agreement among the U.S. Department of Transportation Federal Transit Administration, the Hawai'i State Historic Preservation Officer, the United States Navy, and the Advisory Council on Historic Preservation regarding the Honolulu High-Capacity Transit Corridor Project in the City and County of Honolulu, Hawai'i (Section 106 Programmatic Agreement).

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Interface and coordination with Others 3.1 Design Teams and Stakeholders	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS- 0300.0010	Revision No: Conformed
<p>A) Activity Description:</p> <p>Interface and coordination within the design team and stakeholders, including:</p> <p>1) Interface with Outside Design Teams:</p> <ol style="list-style-type: none"> 1) Interface with HART regarding work by others, such as flood hazard analyses, communications with various stakeholders and other systemwide issues. 2) Interface with the CSC design team for the Communication and Control, Traction Electrification, Train Control and Signaling, Passenger Vehicle and Fare Vending systems. Communicate and coordinate Guideway design team's requirements for embedded conduits and other embedded components, blockouts, structural supports and mountings, and other enclosures and finishes as needed. 3) Interface with the ASG Contract design team in the four Station areas. Communicate and coordinate with the Guideway design team such that the Guideway superstructure, columns and foundations provide the necessary structural support for Station platforms and concourse structures as applicable. Communicate and coordinate roadway, drainage, utility conduits and other features in the Station areas as a part of this scope of work. 4) Systemwide Landscaping Design Contract - Communicate and coordinate with the Systemwide Landscaping Design Contract for proposed permanent irrigation and landscaping along the H RTP alignment in median areas occurring under and adjacent to the Guideway and other selected areas as shown in the PE plans. 5) Systemwide Signage Design - Communicate and coordination with the Systemwide Signage Designer who will furnish Station informational signage construction drawings for identification, directional or restrictive purposes at or approaching all Stations and facility sites, for inclusion in the Airport Segment Guideway and Utilities Contract . 6) Communicate and coordinate with Kamehameha Highway DB contract design team. 7) Communicate and coordinate with City Center DBB contract design team. <p>2) Interface with Government Agencies:</p> <ol style="list-style-type: none"> a) Coordination of Guideway, Station support structures, and utility design with: <ol style="list-style-type: none"> b) U.S. Navy. c) U.S. Air Force. d) U.S. Army. e) State of Hawaii, Department of Transportation, Highways Division. f) State of Hawaii, Department of Transportation, Airports Division. g) Federal Aviation Administration (FAA). h) U.S. Postal Service. i) State of Hawaii, Department of Accounting and General Services. j) City and County of Honolulu (Department of Planning & Permitting, Department of Design 		

Airport Segment Guideway and Utilities Contract

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Interface and coordination with Others 3.1 Design Teams and Stakeholders	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS- 0300.0010	Revision No: Conformed
<p>and Construction, Department of Transportation Services).</p> <p>k) Others as identified by HART.</p> <p>3) Interface with Public and Private Utilities:</p> <p>a) Oversight of the coordination with various utility owners, including (note that technical day-to-day coordination will be covered in task 0900):</p> <ul style="list-style-type: none"> i) Hawaiian Electric Company (HECO). ii) Board of Water Supply. iii) Sandwich Isles Communications. iv) Hawaiian Telecom. v) Oceanic Time Warner Cable. vi) AT&T. vii) Wavecom Solutions (aka Pacific Lightnet). viii) The Gas Company. ix) Chevron. x) Tesoro. xi) Network Enterprise Center. xii) U.S. Navy. xiii) TW Telecom. <p>4) Coordination with Public and Private Property Owners and Businesses:</p> <p>a). Coordinate design and construction staging plan traffic impacts with adjacent or affected property owners and businesses.</p> <p>b). Coordinate Guideway and utility design with other known projects along the segment, including:</p> <ul style="list-style-type: none"> i) Ford Island Master Plan ii) Honolulu International Airport Modernization Plan (including proposed Mauka Interisland Terminal Expansion and proposed Consolidated Rent-A-Car Facility) iii) Ke'ehi Community Resource Center iv) Redevelopment of Makalapa Navy Housing Area 		
<p>B) Assumptions:</p> <p>1) CSC design, ASG Contract design, and Systemwide Landscaping design is by others. All electrical conduits from Guideway to Stations and systems sites will be provided by Guideway designers, but wiring connections will be by others.</p> <p>2) Systemwide Signage Design is by others. In addition to providing contract drawings, other design teams will also provide specifications, and quantity estimates to the CONSULTANT.</p>		

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Interface and coordination with Others 3.1 Design Teams and Stakeholders	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS- 0300.0010	Revision No: Conformed
<p>Quality Control for these deliverables is responsibility of other design team. This is expected to only include signage by others in the areas of civil improvements at the Stations and systems sites and any attachment and conduit requirements (if any) on the Guideway or Station supports included in this contract. All other signage improvements/modifications relating to the construction items within this contract are included in this contract under other activities.</p> <p>3) Timely responses to requests for information /comments from respective owners. We are assuming a 30-day review period for all formal submittals.</p> <p>4) Coordination with utility owners will be performed in conjunction with Utility Design tasks.</p> <p>5) All property owner and business communications will be handled by HART.</p>		
<p>C) Inputs:</p> <ol style="list-style-type: none"> 1) Preliminary Engineering drawings. 2) Basis of Preliminary Design Report. 3) Interim and Final Core Systems designs/plans. 4) Interim and Final Station designs/plans. 5) Corridor Landscape Design criteria and concepts. 6) PS&E for Systemwide Signage provided by others for inclusion in CONSULTANT ID and FD submittals. 		
<p>D) Deliverables:</p> <ol style="list-style-type: none"> 1) Interface and Coordination – Workshop 2) Interface and Coordination – Preliminary Engineering 3) Interface and Coordination – Interim Design 4) Interface and Coordination – Final Design 		<p>NTP #</p> <p>1a</p> <p>1b</p> <p>2</p> <p>3</p>

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Interface and coordination with Others 3.2 Section 106	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0300.0020	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Interface with Environmental and Public Involvement tasks to coordinate project compliance with Section 106 of the National Historic Preservation Act. 2) Communicate and coordinate with Guideway and utility designers to incorporate environmental commitments and mitigation requirements into the Project plans, specifications and contract documents. 3) Communicate and coordinate between historical/archeological specialists and design team to assist with questions related to archaeological issues and Section 106. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Mitigation monitoring will be based in accordance with the ROD Mitigation Monitoring Plan (MMP). 2) All communication regarding Section 106 issues will be through HART. 		
C) Inputs: <ol style="list-style-type: none"> 1) Final Environmental Impact Statement (FEIS). 2) Environmental Record of Decision (ROD). 3) Section 106 Programmatic Agreement. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Interface and Coordination – Preliminary Engineering 2) Interface and Coordination – Interim Design 3) Interface and Coordination – Final Design 		NTP # 1b 2 3

TASK 0400 - Survey

Provide additional topographic survey as required to supplement the HART provided topographic survey and controls. Prepare site controls and property Right-of-Way (ROW) plans to identify right-of-way or easements required, as identified in the Preliminary Engineering drawings and any additional ROW or easements required.

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Survey 4.1 Develop Right of Entry Permits	Activity Responsibility: AECOM Task No. / Sub Task No. WBS – 0400.0010	Issue Date: 09/20/2011 Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Provide HART Real Estate with sufficient detail of required work on each parcel to enable HART Real Estate to request access from property owners. The information should be bundled as not to disrupt or unduly burden the property owners with multiple requests of entry. 2) Provide schedule of proposed work. The requests for access should be made to allow sufficient time to acquire the consents. 3) For properties that are not identified in the FEIS as being impacted, the CONSULTANT will identify lot ownership and addresses for those affected parcels. 4) All permits (consents) for work within public right-of-way will be obtained by the CONSULTANT. 5) Distribute copies of letters to field survey crews conducting the topographic surveys. 		
B) Assumptions: <ol style="list-style-type: none"> 1) HART will work with the property owners to gain access to the property. 2) Right of Entry will be granted in approximately forty-five (45) days of submittal of the request to HART. 		
C) Inputs: <ol style="list-style-type: none"> 1) Preliminary Engineering Plans. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Right of Entry Request 2) Right of Entry Request 		NTP # 1a 1b

ACTIVITY DESCRIPTION		Form: SOW 01
Activity: Survey 4.2 Topographic Survey	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0400.0020	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Obtain primary survey control data from HART. 2) Research and obtain as-built utilities information from appropriate sources/agencies. 3) Obtain rights-of-way information from appropriate City/State agencies. 4) Determine Topographic Survey Limits based on design needs. 5) Transfer horizontal and vertical controls to the project route. These fixed horizontal control points and vertical benchmarks are then used as starting points for the topographic survey. 6) Supplement topographic survey of right-of-way to ten (10) feet outside the project limits. Locate all buildings, walls, fences, hedges, mail boxes, driveways, sidewalks, signs, street light poles, utilities, pavements, pavement markings, traffic signals, traffic signs, curbing, curb cuts, ADA ramps, ornamental trees, and other topographic details. Locate existing boundary pins, street survey monuments. 7) Verify utilities locations, sizes, inverts, and directions from field observations. Locate/verify underground utility lines as located/identified thru utility design as-built research and sub-surface investigation. 8) Prepare topographic map from field data in AutoCAD 2009 format at 1"=20' scale with 1-ft. contour intervals. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Assumed primary survey controls have been established along proposed transit corridor. These fixed horizontal control points and vertical benchmarks are to be used as starting points for the rights-of-way mapping and topographic surveys. 2) Assumed primary survey control is seamlessly tied in to adjoining H RTP sections. 		
C) Inputs: <ol style="list-style-type: none"> 1) Obtain primary survey control data sheets/recovery sheets. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Topographic Mapping File and DTM 		NTP # 1b

ACTIVITY DESCRIPTION Form SOW 01

Activity: <p style="text-align: center;">Survey</p> <p style="text-align: center;">4.3 ROW Mapping and Plans</p>	Activity Responsibility: <p style="text-align: center;">AECOM</p>	<p style="text-align: center;">09/20/2011</p>
	Task No. / Sub Task No. <p style="text-align: center;">WBS – 0400.0030</p>	Revision No: <p style="text-align: center;">Conformed</p>

A) Activity Description:

- 1) Research/acquisition of boundary information of properties in and adjacent to alignment area to update, review and augment boundary and survey performed earlier for HART.
 Research/acquisition of right-of-way information including, but not limited to centerline information and the extent/edge of right-of-way left/right of said centerline from both City & State agencies. Plot & match boundaries and right-of-way to assure a seamless connection of boundaries and baselines with adjoining sections. Coordinate with adjacent sections to match boundaries to continue the seamless boundary. Convert boundaries to NAD 83 from known "local" coordinate system if required. Conversion to NAD 83 to be done after culmination of any additional boundary work required.
- 2) Development of ROW Plans.
- 3) Provide delineation of right-of-way or easements required in addition to those shown in Preliminary Engineering drawings.

B) Assumptions:

- 1) Permanent right-of-way acquisition and subdivision to be performed by others.
- 2) Identification of construction easements or other temporary easements/rights-of-way are the responsibility of the CONSULTANT.
- 3) Title searches, Land Court documents and deeds to be provided by HART.
- 4) Boundaries, rights-of-way, baseline information of adjacent sections to be provided by HART.

C) Inputs:

- 1) Engineering Design Documents.

D) Deliverables:	NTP #
1) Preliminary Engineering Submittal	1b
2) Interim Design Submittal	2
3) Draft Final Design Submittal	3
4) Final Design Submittal	3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: <p style="text-align: center;">Survey 4.4 Construction Easements</p>	Activity Responsibility: <p style="text-align: center;">AECOM</p>	Issue Date: <p style="text-align: center;">09/20/2011</p>
	Task No. / Sub Task No. <p style="text-align: center;">Survey 0400.0040</p>	Revision No: <p style="text-align: center;">Conformed</p>
A) Activity Description: <p>1) Construction parcels/easements will be identified and prepared to provide contractors the incidental rights of ingress and egress and the right to use the designated land for construction purposes and/or staging. The duration of these construction easements will be for a definite period of time or term. Initially a plot location of the required construction parcel/easements from information provided by engineers based on their proposed engineering design. Perform calculations, locate and prepare precise and accurate metes and bounds descriptions to ensure construction parcels/easements can be located with certainty. Create ROW Maps for HDOT for those areas where construction parcels/easements are adjacent to HDOT jurisdiction rights-of-way. Prepare exhibits for all other areas not adjacent to HDOT right-of-way.</p>		
B) Assumptions: <p>1) Assume construction easements will be required where construction of improvements will be outside of designated H RTP right-of-way and/or affecting adjacent private properties.</p>		
C) Inputs: <p>1) Engineering design documents.</p>		
D) Deliverables: <p>1) Interim Construction Easement Maps 2) Final Construction Easement Maps</p>		Submittal NTP <p style="text-align: center;">2 3</p>

TASK 0500 - Civil Design

Design and develop civil plans showing alignment data, street or roadway restoration details, trackwork, grading, drainage and paving plans, and details for roadway and other facility sites, right-of-way plans, demolition plans (including tree removal), roadway and intersection signing and striping plans, and prepare hydrology and drainage reports as necessary.

Key Activities:

The Preliminary Design update is a critical step in the design development and is the opportunity to resolve any outstanding design issue with the community and project stakeholders; as well as to review and incorporate the Value Engineering recommendations.

ACTIVITY DESCRIPTION

Form SOW 01

Activity:	Activity Responsibility:	Issue Date:
Civil Design	AECOM	09/20/2011
Track Design	Task No. / Sub Task No.	Revision No:
5.1 Track Alignment Design Refinements (including revise current PE to incorporate the Guideway VE)	WBS - 0510.0010	Conformed

A) Activity Description:

- 1) Coordinate with other design disciplines to verify the adequacy of the previously developed alignment.

B) Assumptions:

- 1) Plinthless track shall be designed except at Stations, special trackwork (i.e. crossovers), and balanced cantilever segmental bridge areas.
- 2) EB track (and stationing) shall serve as the primary alignment for project reference and stationing.

C) Inputs:

- 1) Approval of previously developed alignment design by HART.
- 2) Identification of approved Guideway VE recommendations.
- 3) Input from other design disciplines (structures, communication, train control, traction power and distribution).
- 4) Input from HART operations & maintenance staff.
- 5) Input from previous design segments (Contractor, Designer, HART) to maintain consistency.
- 6) All plan sheets shall follow the HART Plan Standards.

D) Deliverables:

- | | |
|--|--------------|
| | NTP # |
| 1) Presentation at two-day workshop (Graphic display of recommended alignment changes) | 1a |
| 2) White paper report (summary of recommendations to be incorporated) | 1b |

ACTIVITY DESCRIPTION		Form SOW.01
Activity: Civil Design Track Design 5.2 Development of Guideway Track Design	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0510.0020	Revision No: Conformed
A) Activity Description:		
1) Alignment Design Prepare track alignment plan & profile drawings at a scale of 1"=40' Horizontal and 1"=10' Vertical on full size (22" by 34") sheets. Prepare tabulated alignment data sheets for each track.		
a) Track alignment plans will include alignment control points (TS, SC, CS, ST, PS, PITO) with applicable stationing, station equations, length of spiral, and all other relevant data needed to define the track alignment.		
b) Track profile sheets will include alignment control points (BVC, EVC and PIVC with corresponding station and elevation information), as well, as vertical curve lengths.		
c) Track plans will include locations of insulated rail joints and other facilities needed for train control and traction power including cross bonds, impedance bonds, and traction power negative return connections, guard rail locations, friction bumper locations.		
d) Prepare track superelevation diagrams.		
e) Prepare contact rail drawings showing bridgeable and non-bridgeable gaps as needed for safe rail operations.		
2) Wheel/Rail Study		
a) Review transit vehicle truck/wheel parameters including wheel base, wheel gauge, wheel profile, and propulsion characteristics.		
b) Review HART-furnished track design criteria & standards for standard and special trackwork. Identify key parameters including track gauge through curves, restraining rail requirements, and flange way widths through applicable special trackwork.		
c) Conduct wheel/rail interaction modeling studies for any curves with radius under 200 ft and double cross over with track centerline spacing less than 14 feet using HART-provided vehicle & trackwork parameters and NYTRAM performance plots.		
d) Prepare report documenting results of wheel/rail interaction study and provide recommendations for adjustments to HART-provided track & vehicle criteria.		
3) Typical Track Sections:		
a) Coordinate with Core Systems Contractor to verify the adequacy of the previously developed alignment including clearances to systems elements (third rail including support brackets) and structures.		
b) Prepare typical track sections for all conditions including tangent and curved (superelevated) double track, double track at Stations, and special trackwork.		
c) Typical sections will include track centerline spacing; distance to systems facilities including third rail and support brackets, distance to edge of structures including safety railings, sound barriers; and emergency walkway widths and offset from track centerlines.		
d) Typical sections will include track stationing limits for each section.		

- 4) Track Material Details (rail fasteners, special trackwork, bumping post):
 - a) Review procurement specifications and details for direct fixation rail fasteners and special trackwork (turnouts and diamond crossings).
 - b) Identify additional track components needed for the project including but not limited to bumping posts, insulated rail joints, switch stands and rail lubricators.
 - c) Prepare details of additional track components or provide catalog cuts of off-the-shelf components as appropriate.
- 5) Track Installation Details:
 - a) Review procurement specifications, plans and details of direct fixation rail fasteners and special trackwork (diamond crossings).
 - b) Prepare plans and details depicting installation of all track components including rail fasteners, rail, bumping posts, insulated rail joints, and rail lubricators.
- 6) Track /System Interface Details (impedance bonds, cross bonds, negative return connections):
 - a) Meet with Core Systems engineering staff to identify location of cross bonds, impedance bonds, traction power negative return connection points, and other systems interface locations.
 - b) Obtain details of systems elements that interface or will be connected to track components.
 - c) Include details of these components in the track installation plans that will be installed by the track installation contractor.
 - d) Platform Screen Gates to track ground conductor bonding.

B) Assumptions:

- 1) Transit vehicle selection specifications will be finalized prior to start of activity.
- 2) Revisions to the Track Alignment Design and or Project design criteria will be identified early in NTP #1b.
- 3) Procurement specifications and details for rail (115RE), direct fixation rail fasteners and special trackwork (turnouts and diamond crossings) will be available prior to start of activities.
- 4) Systems engineering design work will be provided for the items requiring integration in the track plans.
- 5) Shop drawings, plans and details of previously procured track material (rail, direct fixation rail fasteners and special trackwork) will be provided as they become available.
- 6) Core Systems Contractor or HART representation will be available to coordinate interface items.

C) Inputs:

- 1) Transit vehicle selection specifications.
- 2) Project design criteria and Technical Specifications.
- 3) Input from HART operations & maintenance staff if available.
- 4) Approval of previously developed alignment design by HART.

5) Identification of approved Guideway VE recommendations. 6) Input from Core Systems engineering design disciplines including train control, traction power and traction power distribution.	
D) Deliverables: 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal	NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Civil Design	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
5.3 Site and Roadway –Construction Plans and Details (Geometric)	Task No. / Sub Task No. WBS – 0520.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) NTP #1a: Review of design and possible impacts based on VE reports. 2) NTP #1b: Revise site and roadways design drawings to incorporate the approved Station and Guideway Value Engineering (VE) recommendations, as applicable and other HART preferences. Ensure compliance of all site and roadway design with the standards of the agency having jurisdiction. 3) NTP #2: Prepare plans for the construction, widening, resurfacing, and reconstruction of all site and roadways, medians, sidewalks, parking lots, etc., for the interim design. 4) NTP #3: Finalize the interim design and prepare the construction contract documents for all site and roadway improvements. 		
B) Assumptions: <ol style="list-style-type: none"> 1) While HART is the applying agency on the permit, the CONSULTANT shall prepare and provide input to the NPDES permit applications. 2) Prepare NPDES NOI includes site-specific BMP's, submit NPDES NOI, and complete NPDES NOI until NGPC is obtained. 		
C) Inputs: <ol style="list-style-type: none"> 1) Geotechnical Investigation Report with recommendations of pavement design. 2) PE drawings. 3) Draft VE Report. 4) HDOT Highway Division Design Standards. 5) City's Traffic Standards. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Civil Design	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
5.4 Site and Roadway Pavement Markings and Roadway Signs	Task No. / Sub Task No. WBS -- 0520.0020	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) NTP #1b: Revise signing and striping design drawings to incorporate the approved Station and Guideway Value Engineering (VE) recommendations, as applicable, and other HART preferences. Ensure compliance of all site and roadway design with the standards of the agency having jurisdiction. 2) NTP #2: Prepare detailed interim design plans of pavement markings and signage for all site and roadway improvements. 3) NTP #3: Finalize the interim design and prepare the construction contract documents for all site and roadway improvements. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) Number of traffic lanes within the roadways will match existing. 2) Number of traffic lanes approaching the intersections will match existing. 3) Design shall be verified against the FEIS. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) City's standards for pavement markings and traffic signage for work within City's Right-of-Way. 2) HDOT Highway Division Standards for pavement markings and traffic signage for work within State's Right-of-Way. 3) Draft VE Report. 4) PE Drawings. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2

3) Draft Final Design Submittal	3
4) Final Design Submittal	3

ACTIVITY DESCRIPTION		Form SOW-01
Activity: Civil Design	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
5.5 Drainage Report	Task No. / Sub Task No. WBS - 0530.0010	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) NTP #1a: Review existing drainage reports and VE reports in preparation for Design Workshop. 2) NTP #1b: Update drainage report to include the shift in alignment to Ualena Street and Waiwai Loop. Revise drainage report to incorporate the approved Station and Guideway Value Engineering (VE) recommendations, as applicable and other HART preferences. Ensure compliance with City and State drainage standards, as applicable. Include conceptual Guideway drainage details and conceptual permanent BMP reports. 3) NTP #2: Update drainage report as required. Update permanent BMP report as required. 4) NTP #3: Finalize the interim design and prepare the construction contract documents for the site and roadway drainage improvements. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) The Preliminary Engineering (PE) indicates that additional runoff quantities due to the project are minimal with respect to the overall drainage basin. The CONSULTANT assumes that design of drainage improvements will be limited to elements within or adjacent to the project area, and that downstream improvements to the overall drainage system will not be required. 2) HART will obtain the NPDES permit for runoff associated with construction activities. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Airport Guideway & Utilities Airport Stations - Preliminary Drainage Report. 2) PE drawings. 3) Draft VE Report. 4) HDOT Highway Division Design Standards. 5) City and State Drainage Standards. 6) Mitigation Monitoring Program. 7) City and State Storm Water Management Plans. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

ACTIVITY DESCRIPTION Form SOW/01

Activity: Civil Design	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
5.6 Development of Guideway and Surface Drainage Design	Task No. / Sub Task No. WBS - 0530.0020	Revision No: Conformed

- A) Activity Description:**
- 1) NTP #1a & NTP #1b: Assist in preparing design schedule and schedule milestone for the Drainage Plans. Revise drainage plan drawings to incorporate the approved Station and Guideway Value Engineering (VE) recommendations, as applicable and other HART preferences. Ensure compliance of storm water design with City, State, and FEIS storm water requirements.
 - 2) NTP #2: Prepare plans for site and roadway drainage improvements including plan and profile for the interim design. Prepare detailed working drawings and specifications for drainage system improvements including plan and details for the interim design. Coordinate Guideway drainage design with Guideway designers.
 - 3) NTP #3: Finalize the interim design and prepare the construction contract plans for the site and roadway drainage improvements. Finalize the interim design and prepare the construction contract documents for the drainage plans.
- B) Assumptions:**
- 1) HART will obtain the NPDES permit for runoff associated with construction activities.
- C) Inputs:**
- 1) Geotechnical Investigation Report with recommendations for trench backfill and restoration design.
 - 2) Airport Guideway & Utilities Airport Stations - Preliminary Drainage Report.
 - 3) PE drawings.
 - 4) Draft VE Report.
 - 5) HDOT Highway Division Design Standards.
 - 6) City and State Drainage Standards.
 - 7) City and State Storm Water Management Plans.
 - 8) Mitigation Monitoring Programs.

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| D) Deliverables: | NTP # |
| 1) Presentation at two-day workshop (Graphic display of drainage issues and recommendations) | 1a |
| 2) White paper report (summary of recommendations to be incorporated) | 1b |
| 3) Preliminary Engineering Submittal | 1b |
| 4) Interim Design Submittal | 2 |
| 5) Draft Final Design Submittal | 3 |
| 6) Final Design Submittal | 3 |

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Civil Design 5.7 Moanalua Stream "No Rise" Mitigative Measure – Design	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBDS - 0530.0030	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) NTP #1b: Revise Moanalua Stream "No Rise" Mitigative Measure design drawings to incorporate the approved Station and Guideway Value Engineering (VE) recommendations, as applicable and other HART preferences. Conduct existing condition hydraulic analysis incorporating new survey cross-sections. 2) NTP #2: Conduct hydraulic analysis incorporating proposed mitigation measures. Conduct scour analysis to provide input to foundation designer. Prepare detailed working drawings and specifications for Moanalua Stream "No Rise" Mitigative Measure improvements including plan and profile for the interim design. 3) NTP #3: Finalize the interim design and prepare the construction contract documents for the Moanalua Stream "No Rise" Mitigative Measure improvements. 		
B) Assumptions: <ol style="list-style-type: none"> 1) HART will provide the existing hydraulic analysis. 2) The CONSULTANT will obtain approval from FEMA and DPP for the hydraulic model used in the assessment and for the proposed mitigative measures. 3) HART will review the hydraulic analysis for no-rise, scour, and selection of the recommended mitigative measure for design. 4) The CONSULTANT will perform the final design of the selected mitigative measures. 		
C) Inputs: <ol style="list-style-type: none"> 1) Geotechnical Investigation Report with recommendations for design as required for the selected mitigative measure. 2) PE drawings. 3) Draft VE Report. 4) HDOT Highway Division Design Standards. 5) City and State Drainage Standards. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Civil Design	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
5.8 Erosion Control Plans – Design	Task No. / Sub Task No. WBS - 0530.0040	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) NTP #1b: Create base erosion control design drawings incorporating the approved Station and Guideway Value Engineering (VE) recommendations, as applicable, and other HART preferences. 2) NTP #2: Prepare detailed drawings and specifications for erosion control improvements including plans and details for the interim design. 3) NTP #3: Finalize the interim design and prepare the construction contract documents for the erosion control improvements. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) HART will obtain the NPDES permit for runoff associated with construction activities. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Geotechnical Investigation Report with recommendations. 2) PE drawings. 3) Draft VE Report. 4) HDOT Highway Division Design Standards. 5) City and State Erosion Control Standards. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Civil Design	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
5.9 Site Design – TPSS	Task No. / Sub Task No. WBS - 0540.0010	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) NTP #1b: Revise access road design drawings to incorporate the approved Station and Guideway Value Engineering (VE) recommendations, as applicable, and other HART preferences. 2) NTP #2: Prepare plans and profiles of access road, grading plan of for TPSS vault foundation pad, typical access road section, pavement details for the interim design. 3) NTP #3: Finalize the interim design and prepare the construction contract documents for the roadway improvements. 4) TPSS site civil work is limited to substation sites 25 and 28. This will include HECO switchgear pads (TPSS/GBS vault foundations) and the ductbanks and manholes for all sites noted leading up to switchgear in the pre-fab structure. The CONSULTANT is also responsible for the conduit duct banks and manholes/handholes located at the appropriate columns. Landscaping, grounding grid for TPSS and 10 - 15 feet of ground conductor stub up at two locations for connection to ground plate in TPSS/GBS and bonding for all fences is also part of the CONSULTANT's scope. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) HECO Utilities will terminate five (5) feet away from TPSS pad. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Geotechnical Investigation Report with recommendations of pavement design. 2) Drainage Report. 3) PE drawings. 4) Draft VE Report. 5) HDOT Highway Division Design Standards. 6) City's Traffic Standards. 7) Soil Resistivity Report. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Civil Design 5.10 Landscape	Activity Responsibility: PBR Hawaii & Associates, Inc.	Issue Date: 09/20/2011
	Task No. / Sub Task No. Civil - 0550.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Coordinate with HART Systemwide Landscape Designer. 2) Prepare preliminary design development level tree disposition, temporary erosion control planting and irrigation plans. 3) Prepare final tree disposition, temporary erosion control planting and irrigation plans. 		
B) Assumptions: <ol style="list-style-type: none"> 1) In conjunction with the Systemwide Landscape Architect, provide information to be used in developing sustainability opportunities. 2) No perspective renderings. 3) No separate community presentations. 		
C) Inputs: <ol style="list-style-type: none"> 1) Systemwide landscape design concepts. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 		NTP # 1b 2

3) Draft Final Design Submittal	3
4) Final Design Submittal	3

ACTIVITY DESCRIPTION		Form SOW 01	
Activity: Civil Design 5.11 Demolition Plans	Activity Responsibility: AECOM	Issue Date: 09/20/2011	
	Task No. / Sub Task No. Civil - 0560.0010	Revision No: Conformed	
A) Activity Description: <ol style="list-style-type: none"> 1) NTP #1b: Create base demolition design drawings from information on Preliminary Roadway Construction and System Site Plans. 2) NTP #2: Prepare detailed drawings and specifications for existing facility demolition including plans and details for the interim design. 3) NTP #3: Finalize the interim design and prepare the construction contract documents for existing facility demolition. 			
B) Assumptions: <ol style="list-style-type: none"> 1) Tree removal will be addressed in landscape plans. 2) Limits of work will be shown on the demolition plans, but most details of demolition (including handling of potentially hazardous materials) will be addressed by specification. 3) Roadway removal plans are not included in this task. 			
C) Inputs: <ol style="list-style-type: none"> 1) Preliminary Engineering Drawings. 			
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 			NTP # 1b 2

3) Draft Final Design Submittal	3
4) Final Design Submittal	3

ACTIVITY DESCRIPTION		Form SOW 01	
Activity: Civil Design	Activity Responsibility: AECOM	Issue Date: 09/20/2011	
5.12 QC Review - Discipline and Inter-Discipline Review of Documents	Task No. / Sub Task No. Civil - 0570.0010	Revision No: Conformed	
A) Activity Description:			
<ol style="list-style-type: none"> 1) Discipline quality control activities (checking of calculations, plans and specifications) will be initiated at the earliest possible opportunities as design tasks are completed. 2) Formal quality control reviews of drawing packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline Review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing the plans of other interfacing disciplines throughout each design phase. 5) Inter-Discipline Review is a review of the design drawing by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-Discipline Design Reviews will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed to verify that all QC activities have been completed. 7) QA/QC review will be performed prior to every formal submittal. 			

B) Assumptions:

- 1) N/A

C) Inputs:	
<ol style="list-style-type: none"> 1) Quality Assurance Plan. 	
D) Deliverables:	NTP #
1) Preliminary Engineering Submittal	1b
2) Interim Design Submittal	2
3) Draft Final Design Submittal	3
4) Final Design Submittal	3

TASK 0600 - Structural Design

Perform Load and Resistance Factor Design (LRFD) structural analysis and design and develop structural plans showing foundations, substructure, superstructure and structural details for the Guideway and all Station support structures. Scour/hydraulic analysis will also be required at the Guideway stream crossings. Coordinate with the ASG designers and evaluate requirements to protect adjacent buildings or existing structures that may be affected by the Guideway or Station support construction.

ACTIVITY DESCRIPTION Form SOW 01

Activity: Structures 6.1 Evaluate/Implement Guideway VE Recommendations	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0610.0010	Revision No: Conformed

A) Activity Description:

- 1) Evaluate and implement the viable alternatives outlined in the Guideway Preliminary Value Engineering (VE) Study Report prepared by Value Management Strategies, Inc., dated April 2011 and additional VE alternatives identified in an internal design team workshop to be conducted during NTP #1a. The VMS study, sponsored by DTS Rapid Transit Division, City and County of Honolulu, was conducted April 11-15, 2011.
- 2) Implement approved VE recommendations as identified in Stations Final Value Engineering Study Report dated September 2010 as they impact the Guideway design and the Structure Workshop Summary Report dated January 7, 2008. Approved VE recommendations will be determined in the two-day stakeholder workshop.

B) Assumptions:

- 1) Focus of the study will be opportunities to improve the constructability and reduce costs associated with the design-bid-build Guideway and utilities construction packages for the Airport Segment Guideway and Utilities Contract.

C) Inputs:

- 1) Preliminary Value Engineering Study Report Corridor – Guideway prepared by Value Management Strategies, Inc., dated April 2011.
- 2) Final Value Engineering Study Report Transit Corridor – Stations prepared by Value Management Strategies, Inc., dated September 2010.
- 3) Internal Value Engineering Workshop – members of H RTP Design Team
- 4) Preliminary Engineering Plans.
- 5) Structure Workshop Summary Report, dated January 7, 2008.

D) Deliverables	NTP #
1) Presentation at two-day workshop (Graphic display of recommended structural changes)	1a
2) White paper report (summary of recommendations to be incorporated)	1b

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Structures 6.2 Span Optimization Study	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0610.0020	Revision No: Conformed

A) Activity Description:

- 1) Span Optimization Study - Determine optimal span layout and optimum superstructure cross-section, for both the segmental and precast girder sections. The goals of the study are to:
 - a) Reduce number and types of special piers and straddle bents.
 - b) Ease transition to specialized units over Halawa Stream and Kalihi Stream.
 - c) Find opportunities to improve the constructability and reduce costs associated with the design-bid-build Guideway and utilities construction packages for the Airport Segment Guideway and Utilities Contract.
- 2) Superstructure Cross-Section Optimization Study – the CONSULTANT will perform an economic optimization study of superstructure cross-section with the goal of:
 - a) Maximizing structural efficiency while meeting functional requirements.
 - b) Maximizing the usage and efficiency of span by span precast segmental casting and erection procedures.
 - c) Simplifying casting and erection procedures.
- 3) Develop basic post-tensioning geometry workpoints:
 - a) Develop post-tensioning geometry workpoints based on optimal span study to ensure consistency between design teams.
 - b) Deviation block geometry will be developed.
 - c) Pier segment diaphragm geometry will be developed.
 - d) Expansion Joint diaphragm geometry will be developed.

B) Assumptions:

- 1) N/A

C) Inputs:

- 1) Preliminary Value Engineering Study Report prepared by Value Management Strategies, Inc., dated April 2011.
- 2) Representative historical project plans from the CONSULTANT's files.
- 3) H RTP Guideway Segments under construction using design/build procurement.
- 4) AIS Report.
- 5) Structure Workshop Summary Report, dated January 7, 2008.

D) Deliverables:

- | | |
|---|-------------|
| 1) Presentation at two-day workshop (Graphic display of recommended structural changes) | NTP #
1a |
| 2) White paper report (summary of recommendations to be incorporated) | 1b |

ACTIVITY DESCRIPTION		Form SOW 01
Activity:	Activity Responsibility:	Issue Date:
Structures	AECOM	09/20/2011
6.3 Substructure Cross-Section Optimization Study	Task No. / Sub Task No. WBS - 0610.0030	Revision No: Conformed

A) Activity Description:

- 1) The CONSULTANT will perform economic optimization study of substructure types and cross-sections (typical pier, cantilever pier and straddle bents) for design development.

B) Assumptions:

- 1) Optimal use of span-by-span precast segmental casting and erection procedures.
- 2) Reduce number and types of special piers and straddle bents.
- 3) Emphasize consistency of details between pier types and aesthetic harmony with Stations.

C) Inputs:

- 1) Optimized superstructure cross-section.
- 2) Optimized span layout Task.
- 3) Internal Value Engineering Workshop – members of H RTP Design Team.
- 4) H RTP Guideway Segments Plans previously under construction using design/build procurement.
- 5) Preliminary Engineering Plans.
- 6) Structure Workshop Summary Report, dated January 7, 2008.
- 7) Geotechnical data.

D) Deliverables:

- 1) Presentation at two-day workshop (Graphic display of recommended structural changes)
- 2) White paper report (summary of recommendations to be incorporated)

NTP #

1a

1b

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Structures 6.4 Finalize Project Footprint	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0610.0040	Revision No: Conformed

A) Activity Description:

- 1) Based on the results of the Value Engineering implementation and optimization studies, fix the pier and foundation locations throughout the alignment.
- 2) Validate with other disciplines that proposed pier/foundation locations are acceptable.
- 3) Perform site visits to confirm topographic information in Preliminary Plans matches current conditions at proposed pier/foundation locations.

B) Assumptions:

- 1) Minor variations in span layout/pier locations may occur as design develops, but footprint developed in this task is expected to form the basis of design for Interim and Final Design phases.

C) Inputs:

- 1) Interdisciplinary Workshop – members of H RTP Design Team – Utilities, Traffic Control, and Station Design, etc.
- 2) Preliminary Engineering Plans.
- 3) Additional topographic survey acquired.
- 4) Results and conclusions from the Span Optimization Study.
- 5) Results and conclusions from the Substructure cross-section optimization study.
- 6) Results from the AIS (Archaeological Inventory Survey Plan).
- 7) Geotechnical data.

D) Deliverables:

- 1) Preliminary Engineering Submittal

NTP #
1b

ACTIVITY DESCRIPTION		Form SOW 01
Activity:	Activity Responsibility:	Issue Date:
Structures	AECOM	09/20/2011
6.5 Superstructure Longitudinal Design / Details	Task No. / Sub Task No.	Revision No:
	WBS - 0620.0010	Conformed

A) Activity Description:

- 1) Perform superstructure longitudinal analysis to determine bending moments, torsion, and shear in superstructure box section under imposed loads.
- 2) Determine required longitudinal post-tensioning and web reinforcing requirements.
- 3) Determine post-tensioning pier reactions for substructure/foundation design.
- 4) Check potential conflicts between longitudinal tendon and transverse reinforcing and utilities.

B) Assumptions:

Design task includes the superstructure design of all structural elements including:

- 1) Typical spans – Segmental.
- 2) Station spans - Segmental.
- 3) Drop in spans.
- 4) Precast beam spans.
- 5) Halawa Stream Crossing.
- 6) Kalihi Stream Crossing.

C) Inputs:

- 1) Optimized superstructure cross-section.
- 2) Optimized substructure cross-section.
- 3) Final project footprint.
- 4) Post-Tensioning Geometry workpoints.

D) Deliverables:	NTP #
1) Preliminary Engineering Submittal	1b
2) Interim Design Submittal	2
3) Draft Final Design Submittal	3

4) Final Design Submittal	3
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ACTIVITY DESCRIPTION		Form SOW 01
Activity: <p style="text-align: center;">Structures</p> 6.6 Superstructure Transverse Design / Details	Activity Responsibility: <p style="text-align: center;">AECOM</p>	Issue Date: <p style="text-align: center;">09/20/2011</p>
	Task No. / Sub Task No. <p style="text-align: center;">WBS - 0620.0020</p>	Revision No.: <p style="text-align: center;">Conformed</p>
A) Activity Description <ol style="list-style-type: none"> 1) Perform superstructure transverse analysis to determine transverse bending moments in superstructure box section due to imposed loads. 2) Determine required transverse post-tensioning requirements in the top slab. 3) Determine required reinforcing requirements in the webs, top slab and bottom slab to resist transverse bending, torsion and vertical shear. 4) Develop segment reinforcing details and plans. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Separate design sub-tasks for each of the following sections: <ol style="list-style-type: none"> a) Typical Box Section. b) Tight Curvature Section near Airport Station. c) Deviator Segments (typically 2 per span). d) Pier Diaphragm (1 for each independent PT layout). e) Expansion Joint Pier Diaphragm (1 for each independent PT layout). f) Variable Depth CIP Long Span Typical, Deviators and Diaphragms (variable number based on final span configuration and post-tensioning layout). 		
C) Inputs: <ol style="list-style-type: none"> 1) Optimized superstructure cross-section. 2) Optimized substructure cross-section. 3) Final project footprint. 4) Post-Tensioning Geometry workpoints. 5) Dead Load and Live Load web shear. 6) Tensional Loads. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Structures 6.7 Pedestrian Span Supports	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0620.0030	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Design and detail intermediate span supports for Middle Street Transit Center Station platforms. 2) Design Pier supports for Middle Street Transit Center Station Platforms. 3) Design Pedestrian Bridge bent at Guideway station 1265+00 +/-. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Pedestrian bridge configuration as defined in Preliminary Plans. 2) Intermediate span and pier brackets are steel truss structures. 3) Station platforms and pedestrian bridge superstructure design are by others. Coordination is required with the Station designers. 		
C) Inputs: <ol style="list-style-type: none"> 1) Preliminary Engineering Plans. 2) Station Platform Layout and Support Loads. 3) Pedestrian Bridge Layout and Support Loads. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity:	Activity Responsibility:	Issue Date:
Structures	AECOM	09/20/2011
6.8 Substructure Design/Detailing	Task No. / Sub Task No.	Revision No:
Typical Column Bent	WBS - 0630.0010	Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Develop typical column design methodology to be used in the development of final substructure. 2) Categorize column shafts based on pier heights, geotechnical conditions, and loads. 3) Prepare standard column designs/details and tabulate. 4) Prepare standard cap designs/details and tabulate. 5) Prepare standard foundation designs/details and tabulate. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) The "typical" column bent is the single symmetrical bent utilized in the support of the majority of the structure. 2) Designs for foundations, columns and caps will be standardized as appropriate for maintaining economy of design and construction. To ensure consistency of detailing and design, columns will design and grouped together bases on the structural demand (i.e. 1.0% reinforcing, 1.2% reinforcing, etc.). 3) Includes footing, pier cap, and deep foundation analysis. 		

C) Inputs:

- 1) Optimized substructure cross-section.
- 2) Loads for superstructure longitudinal analysis.
- 3) Representative loads for superstructure transverse analysis.
- 4) Loads from substructure analysis.
- 5) Geotechnical data.

D) Deliverables:	NTP #
1) Preliminary Engineering Submittal	1b
2) Interim Design Submittal	2
3) Draft Final Design Submittal	3
4) Final Design Submittal	3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Structures 6.9 Substructure Design/Detailing Straddle Bent	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0630.0020	Revision No: Conformed
A) Activity Description: 1) Develop straddle column design methodology. 2) Develop design and details for straddle bents.		
B) Assumptions: 1) Evaluate straddle bents for varying column heights, span lengths, geotechnical conditions, and skew configurations focusing on reduction of number of differing conditions and standardization of design details. 2) Includes footing, pier cap, and deep foundation analysis.		
C) Inputs: 1) Optimized substructure cross-section. 2) Loads for superstructure longitudinal analysis. 3) Representative loads for superstructure transverse analysis. 4) Loads from substructure analysis. 5) Geotechnical data.		
D) Deliverables: 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity:	Activity Responsibility:	Issue Date:
Structures	AECOM	09/20/2011
6.10 Substructure Design/Detailing Cantilever Pier	Task No. / Sub Task No.	Revision No:
	WBS - 0630.0030	Conformed

A) Activity Description:

- 1) Develop typical cantilever pier design methodology to be used in the development of final substructure design.
- 2) Develop cantilever pier designs/details, including cap, column and foundation.

B) Assumptions:

- 1) Evaluate cantilever pier for varying column heights, span lengths, geotechnical conditions, and skew configurations focusing on reduction of number of differing conditions and standardization of design details.
- 2) Includes footing, pier cap, and deep foundation analysis.

C) Inputs:

- 1) Optimized substructure cross-section.
- 2) Loads for superstructure longitudinal analysis.
- 3) Representative loads for superstructure transverse analysis.
- 4) Loads from substructure analysis.
- 5) Geotechnical data.

D) Deliverables:

1) Preliminary Engineering Submittal	NTP #
2) Interim Design Submittal	1b
3) Draft Final Design Submittal	2
4) Final Design Submittal	3

ACTIVITY DESCRIPTION		Form SOW.01
Activity: Structures 6.11 Substructure Design/Detailing CIP Long Span Pier	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0630.0040	Revision No.: Conformed
A) Activity Description: 1) Develop column design methodology for Halawa and Kalihi Stream crossings to be used in the development of final substructure design. 2) Develop design and details for piers.		

B) Assumptions:

- 1) Includes footing, pier cap, and deep foundation analysis.

C) Inputs

- 1) Optimized substructure cross-section.
- 2) Loads for superstructure longitudinal analysis.
- 3) Representative loads for superstructure transverse analysis.
- 4) Loads from substructure analysis.
- 5) Geotechnical data.

D) Deliverables:	NTP #
1) Preliminary Engineering Submittal	1b
2) Interim Design Submittal	2
3) Draft Final Design Submittal	3
4) Final Design Submittal	3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Structures 6.12 Substructure Design/Detailing Station Pier	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0630.0050	Revision No: Conformed
A) Activity Description: 1) Develop Station column design methodology to be used in the development of final substructure design. 2) Develop design and details for Station piers.		
B) Assumptions: 1) Evaluate columns for varying height conditions, span lengths, geotechnical conditions, and Station loading demands emphasizing aesthetic harmony with Station design. 2) Includes footing, pier cap, and deep foundation analysis. 3) Coordination is required with the Station designers.		
C) Inputs: 1) Optimized substructure cross-section. 2) Loads from superstructure longitudinal analysis. 3) Representative loads for superstructure transverse analysis. 4) Loads from substructure analysis. 5) Typical column bent details. 6) Station architectural design details and loads. 7) Geotechnical data.		
D) Deliverables: 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity:	Activity Responsibility:	Issue Date:
Structures	AECOM	09/20/2011
6.13 Substructure Design/Detailing Analysis for Lateral and Gravity Loads	Task No. / Sub Task No. WBS - 0630.0060	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Produce structural analyses of various continuous span units on the project, for the development of vertical and lateral loadings acting on the substructure. Spreadsheets and/or hand calculations will be utilized to determine column loads for simple span units. These loads will be used to develop individual column loads. 2) Column loads will be provided to the engineers producing the individual bent designs. 3) Modify substructure gravity, longitudinal and lateral load models to address proper seismic boundary conditions and conduct global demand analysis. 4) Conduct push-over analyses to verify that column designs have the proper level of ductility. 5) Modifications will be made to column/foundation design as required by seismic analysis. 		

B) Assumptions:

- 1) Task includes the structural analysis of all Guideway spans.

C) Inputs: <ol style="list-style-type: none"> 1) Optimized superstructure cross-section. 2) Model geometry from superstructure longitudinal analysis. 3) Geotechnical data. 	
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 	NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Structures 6.14 Structural Seismic Analysis	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0640.0010	Revision No: Conformed
A) Activity Description: 1) Develop consistent approach to seismic modeling to ensure consistency of design for all individual units, including: <ol style="list-style-type: none"> a) Boundary Conditions. b) Model Types to be considered. c) Cracked section properties to utilize for columns. 		
B) Assumptions: 1) Design will be in accordance with the HART Design Criteria. 2) Seismic analysis will be produced after initial substructure analysis and interim column designs are complete. In most cases, these loads are not expected to govern the design. If it is determined that that seismic does control, the design will be adjusted accordingly and is considered part of this SOW. 3) Seismic analysis engineer will work with substructure design engineers to provide any modifications to gravity/lateral load design required to meet seismic requirements.		
C) Inputs: 1) HART Design Criteria. 2) Geotechnical data.		
D) Deliverables: 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Structures 6.15 Site Structures	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
	Task No. / Sub Task: WBS- 0650.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Coordinate with other disciplines for the design requirements of the site structures. Prepare structural drawings, cost estimates, and specifications for the following site structures: <ol style="list-style-type: none"> a) Retaining walls required for Roadway Construction. b) TPSS System Sites (excluding building). c) Wastewater Site Structure. d) Drainage Site Structures. e) Water Site Structures. f) Supports for Electrical and Communications. g) Traffic Signal Site Structures. h) Traffic Signage Site Structures. i) Street Lighting Structures. j) Site walls required for Landscaping. 2) Review CITY/Other Agency comments on the interim design and finalize the interim design. Prepare contract documents and construction cost estimates for bidding and construction. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Project elements that require structural supports and are attached to the Guideway will be considered part of the Guideway structural design. 2) Approximate locations of site structures are based on the Preliminary Engineering drawings and will be further developed through the design process. 		
C) Inputs: <ol style="list-style-type: none"> 1) Geotechnical engineer to provide soils related design and construction information required to design foundations, retaining walls, and other site structures. 2) Required design criteria, dimensions, configurations, and control elevations will be provided for structural design of non-standard manholes, catch basins, inlets, concrete pads, reaction bocks, and other site structures. 3) Requirements of private utility companies (HECO, Hawaiian Telcom, etc.). 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Structures 6.16 Structure Design Aesthetics	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task: WBS – 0660.0010	Revision No: Conformed
A) Activity Description: 1) Coordination with the architects to ensure project theme is correctly applied to the various structural elements, including (but not limited to): <ol style="list-style-type: none"> a) Typical piers. b) Cantilever piers. c) Station piers. d) Straddle bents. e) Precast girder pier between Stations 1196+00 and 1205+00 (approx). 		
B) Assumptions: 1) Concepts would be developed and approved 30 days prior to Interim Design Submittal (NTP #2).		
C) Inputs: 1) Input from architectural design.		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Structures	Activity Responsibility: AECOM	Issue Date: 09/20/2011
6.17 QC Review - Discipline and Inter-Discipline Review of Documents	Task No. / Sub Task No. WBS - 0670 .0010	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Discipline quality control activities (checking plans and specifications) will be initiated at the earliest possible opportunities as design tasks are completed. Independent Design Check (see 670.0020) will be utilized in lieu of direct line-by-line calculation checking for Guideway elements and non-gravity retaining structures. Other structural elements, such as TPSS foundations and traffic signal poles/foundations, will be checked by line-by-line calculation review under this task. 2) Formal quality control reviews of drawing packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal, and addressing all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing the plans of other interfacing disciplines throughout each design phase. 5) Inter-Discipline Review is a review of the design drawing by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-discipline Design Reviews will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed verify that all QC activities have been completed. 7) QA/QC review will be performed prior to every formal submittal. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) All Guideway structural elements undergo two reviews: <ol style="list-style-type: none"> a) A senior engineer review of the calculations developed for design, covered under this sub task number. Note that this is not a line-by-line check. b) An independent design check. The independent design check is performed by a qualified engineer who was not involved in the initial development of the design. This sub task is covered under a separate sub task number. This review occurs at or near the conclusion of the initial design (NTP #3). 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Quality Assurance Plan. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

ACTIVITY DESCRIPTION		Form SOW/01	
Activity: Structures 6.18 Independent Design Check	Activity Responsibility: AECOM	Issue Date: 09/20/2011	
	Task No. / Sub Task No. WBS - 0670.0020	Revision No: Conformed	

A) Activity Description:

- 1) Provide design plans to engineers not involved in the design. The independent engineer will review the drawings and develop independent analyses and calculations which document that the design meets the design criteria.
- 2) Any discrepancies between the designer and independent engineer will be resolved and the plans will be updated accordingly.

B) Assumptions:

- 1) All Guideway structural elements and non-gravity retaining structures will undergo an Independent Design Check.
- 2) Independent Design Check of various components may begin before design is entirely complete, to allow time for preparation of check analysis models.
- 3) All Guideway structural elements undergo two reviews:
 - a) A senior engineer check of the calculations developed for design. This is covered under a separate sub task number. Note that this is not a line-by-line check.
 - b) An independent design check. The independent design check is performed by a qualified engineer who was not involved in the initial development of the design. This sub task is covered under this sub task number. This review occurs at or near the conclusion of the initial design (NTP #3).
- 4) All Independent Design Checks will be conducted under the Responsible Charge of a Structural Engineer registered in the State of Hawaii.

C) Inputs:

- 1) Completed Interim Structural Design Drawings.
- 2) Approved Design Criteria.

D) Deliverables:

- 1) Final Design Submittal

NTP #

3

TASK 0700 - Geotechnical Exploration and Design

Geotechnical exploration will be conducted for all Guideway and site improvements within the Guideway right-of-way and for the Station support foundations. Coordination with the ASG designers for that information will be required to the extent practicable, Geotechnical data from previous investigations for the Guideway prepared by HART and from other readily available soils reports for other projects in the vicinity will be used to plan the exploration program. Geotechnical design will be based on LRFD design and based on the understanding that drilled shafts are per the FEIS and initial engineering studies preferred foundation type. Alternative foundations types will be considered as needed to meet project specific constraints and conditions.

ACTIVITY DESCRIPTION Form SOW 01

Activity: Geotechnical Exploration and Design 7.1 Development of Boring Plan	Activity Responsibility: Geolabs, Inc.	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0710.0010	Revision No: Conformed

A) Activity Description:

- 1) Review and synthesize available geotechnical data.
- 2) Review PE design substructure locations and compare existing data locations with CDC requirements for reuse/applicability.
- 3) Reconnaissance of the alignment to review bent locations and access considerations.
- 4) Develop geotechnical exploration plan [CDC Chapter 9; 02 32 00: §3.02 Work Plans].
 - a) Geotechnical Planning Report (GPR) [Article 3.02.A - GPR]
 - b) Geotechnical Investigations Work Plan (GIWP) [Article 3.02.B - GIWP]
 - c) Geotechnical Investigations Health and Safety Plan
 - d) Drilling Qualifications
 - e) Laboratory Qualifications
 - f) QA/QC Plan
- 5) Review existing utilities plan to check for obvious conflicts.
- 6) Identify locations where grading would be required for access for drilling and sampling.
- 7) Site and pavement borings.

B) Assumptions:

- 1) All record or as-built drawings of existing utilities and facilities to be provide by others.
- 2) Grading permits as required would be procured by the CONSULTANT.
- 3) All Rights-of-Entry to private properties will be provided by HART.
- 4) Approximately 240 (structural) foundation locations comprise the alignment (approximately 31,000 LF).
- 5) Approximately 40 site and pavement boring locations.
- 6) Negligible number of previously completed borings satisfy CDC requirement for re-use.
- 7) Drilling qualifications, laboratory qualifications, QA/QC Plan will be finalized prior to the actual start of field explorations.

C) Inputs:

- 1) PE Documents (substructure type and locations).
- 2) HART review comments to required work plans and submittals in accordance with project review schedules except as mutually agreed to the contrary for expedited reviews.

D) Deliverables:	NTP #
1) Develop Boring Plan	1b
2) Geotechnical QA/QC Plan	1b

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Geotechnical Exploration and Design 7.2 Obtain Necessary Permits	Activity Responsibility: Geolabs, Inc.	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0710.0020	Revision No: Conformed
A) Activity Description:		
1) NPDES Permits for Boring Activities (Ground Disturbance): <ol style="list-style-type: none"> a) HART will obtain the NPDES permit for geotechnical work, however the CONSULTANT will have to submit site-specific BMP's for various locations prior to geotechnical work. The CONSULTANT will provide the information required for HART to prepare the NPDES permit application. b) Evaluate site access clearance and the need for trail clearing or platform construction for access. c) Grading permits as required. d) Evaluate the need for in-water borings and access considerations. e) Develop traffic control plans for borings requiring lane closures. 		
2) Utility Clearance and Excavation Permits: <ol style="list-style-type: none"> a) Apply for all required excavation permits & street usage permits for drilling activities. b) Apply for One Call Center permit. c) Coordinate utility toning activities with various utility agencies and owners. d) Perform utility toning and verifications including geophysical survey and potholing, where necessary. 		
B) Assumptions:		
1) All record or as-built drawings of existing utilities and facilities to be provided by others.		
2) A Section 404 U.S. Army Corps of Engineers permit will not be required for in-water borings utilizing a platform or raft.		
3) Revisions necessitated by design substructure configuration changes will be addressed as they become available.		
4) All Rights-of-Entry to private properties will be provided by HART.		
5) Trail clearing associated with geotechnical investigation is typically exempt from a Grading Permit; however, given the large quantity of borings, it is recognized that some permits may be required.		
6) NPDES permit for geotechnical work will be obtained by HART.		
7) Nominal revised substructure locations that have been already drilled may need to be re-drilled. It is estimated that as many as 10% of the structural borings will have to be re-drilled.		
8) Right-of-entry will be granted within 45 days of submittal of the request to HART.		
9) The following permits may be needed, depending on the specific locations:		

PERMIT	AGENCY
A. Permit to Perform Work Upon State Highways	Hawaii DOT – Highways
B. Application & Permit for the Occupancy & Use of State Highway Right-of-Way	Hawaii DOT – Highways
C. Permit to Perform Work Upon Airport Roadways	Hawaii DOT – Airports
D. Site Development Division Master Application Form To obtain the "Permit to Excavate Public Right-of-Way"	CCHNL – Dept. Planning & Permitting
E. Application/Permit for Street Usage	CCHNL – Dept. of Transportation Services
F. Application for Right-of-Entry To Parks	CCHNL – Dept. of Parks & Recreation
G. Grading Permit, if extensive grading/earthwork required to provide boring access	CCHNL – Dept. of Planning & Permitting
H. Nationwide Permit Verification for In-Water Borings NOTE: This is not the Section 404 Corps of Engineers Permit	US Army Corps of Engineers – Honolulu District
I. Excavation Permit for Pearl Harbor NOTE: This is not an actual permit, but it is a series of protocols necessary for the utility clearance process within the Pearl Harbor Complex including personnel base access	US Dept. of the Navy
J. One-Call Center	Notification of agencies in accordance with Hawaii Revised Statutes § 269E

C) Inputs:

- 1) Up-to-date column/substructure locations.
- 2) Field revised geotechnical investigation locations.

D) Deliverables:

- 1) Obtain Permits

NTP #
1b

ACTIVITY DESCRIPTION		Form: SOW 01
Activity: Geotechnical Exploration and Design 7.3 Geotechnical Investigation and Soils Testing	Activity Responsibility: Geolabs, Inc.	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0710.0030	Revision No: Conformed
A) Activity Description:		
1) Boring: <ul style="list-style-type: none"> a) Mobilize drill rig(s), support truck(s), water truck(s), SCPT equipment, & personnel. b) Set-up for traffic control and conduct borings. c) Set-up for traffic control and conduct CPT. d) Set-up BMP's for drilling activities at each boring location, as required. e) Backfilling borings with bentonite and/or cement grout. f) Collect surface soil samples for lab CBR and Proctor compaction tests. g) Perform trail clearing to provide access to difficult access boring locations; coordinate tree removals with HART. h) Construct platforms and/or rafts for borings in water conditions. i) Install silt curtains and other BMPs for any water borings. j) Coordinate archeological oversight with designated HART representative. k) Install stand pipe/vibrating wire piezometers at selected locations. 		
2) Shear Wave Velocity Profile Testing: <ul style="list-style-type: none"> a) Mobilize drill rig with SCPT equipment & personnel. b) Set-up for traffic control and conduct SWV tests at selected locations. 		
3) Lab Testing: <ul style="list-style-type: none"> a) Review and select soil and rock samples for testing. b) Take photographs of core samples. c) Perform geotechnical laboratory tests. d) Test water samples for corrosivity, salinity, and disposal considerations. 		
B) Assumptions:		
1) Boring: <ul style="list-style-type: none"> a) Trail clearing associated with geotechnical investigation is exempt from a Grading Permit. b) A U.S. Army Corps of Engineers permit will not be required for in-water borings utilizing a platform or raft. c) All Rights-of-Entry to private properties will be provided by HART. d) HART to provide Archeological Monitors (AM); one week advance notice will be provided to the AM. e) It is anticipated that not all of the geotechnical investigations will be performed during the day. For borings that have to occur at night, the CONSULTANT will obtain the necessary 		

permits. f) CPT calibration will occur at each "site" where CPTs are used as basis for design. g) Substructure locations that are shifted after being drilled and sampled will be evaluated on case by case basis in consultation with HART to determine if the revised location will need to be drilled and sampled. h) Chemical tests for hazardous materials will not be required of geotechnical borings. i) Approximately 240 (structural) foundation locations comprise the alignment (approximately 31,000 LF). Up to 6 additional borings due to bent location refinements are assumed. j) Approximately 40 site and pavement boring locations. 2) Shear Wave Velocity Profile Testing: a) Approximately ten (10) SWVP test planned. b) Borings completed and backfilled with bentonite can remain open until SWVP testing can be completed. c) SWVP testing will not require any special BMPs such as are required for drilling and sampling activities. 3) Lab Testing: a) Chemical tests for hazardous materials will not be required of geotechnical borings. b) Lab testing can begin once the samples are procured.	
C) Inputs: 1) N/A	
D) Deliverables: 1) N/A	NTP #

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Geotechnical Exploration and Design 7.4 Development of Reports and Design Technical Memoranda	Activity Responsibility: Geolabs, Inc.	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0710.0040	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Site Specific Response Spectrum Analysis with Time History: <ol style="list-style-type: none"> a) Review subsurface information and evaluate dynamic soil properties. b) Review and evaluate available time histories. c) Plot and evaluate all time histories to be used for response spectrum analyses. d) Modify selected time histories for use in site-specific response spectrum analyses. e) Conduct site-specific seismic response spectrum analyses with developed time histories. f) Prepare technical memorandum with recommended seismic design parameters. 2) Development of Design Technical Memoranda: <ol style="list-style-type: none"> a) Perform preliminary geotechnical evaluation. b) Evaluate drilled shaft size and depth & lateral load analyses, etc. c) Develop and prepare interim geotechnical design technical memoranda. 3) Development of Reports (GDR and Geotechnical Final Design Report (GFDR)): <ol style="list-style-type: none"> a) Review field boring logs and soil samples and edit boring logs. b) Review laboratory test data and edit boring logs for conformance with test results. c) Review and evaluate soil properties at each bent location based on the borings. d) Perform additional drill shaft analyses for each bent location. e) Develop and prepare draft GDR. f) Review design drawings for compliance with the intent of geotechnical recommendations. 4) Pavement Justification Report. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Site Specific Response Spectrum Analysis with Time History: <ol style="list-style-type: none"> a) Some critical borings will have been completed to allow an estimate of soil properties and from these an empirically-based determination of seismic site class will be made. b) Site-specific response spectrum analyses most critical with design of foundations in Seismic Design Category (SDC) 3, e.g. seismic site class E and F. c) Site-specific response spectrum analyses not critical/required for design of foundations in Seismic Design Category (SDC) 1 and 2, e.g. seismic site classes B through D. 2) Development of Design Technical Memoranda: <ol style="list-style-type: none"> a) Existing generalized soil parameters provided in the reference Foundation TMs will require nominal validation and modification for these analyses. b) Findings of Interim Design Memo would be applied to planned geotechnical investigations 		

<p>within each work area.</p> <p>3) Development of Reports (GDR and Geotechnical Final Design Report (GFDR)):</p> <p>a) Substructure locations that have been revised subsequent to completion of drilling/investigation will be coordinated with HART and re-drilled as necessary.</p>	
<p>C) Inputs:</p> <p>1) Loading demands per LRFD for typical bent for foundation-specific analyses.</p> <p>2) Bent Locations will need to be finalized early on for geotechnical borings to proceed.</p>	
<p>D) Deliverables:</p> <p>1) Submittal of Draft Reports/Memos</p> <p>2) Submittal of Final Reports/Memos</p>	<p>NTP #</p> <p>1b</p> <p>2</p>

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Geotechnical 7.5 Quality/Peer Review	Activity Responsibility: SHANNON & WILSON	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0710.0050	Revision No: Conformed
A) Activity Description:		
<p>1) Shannon & Wilson will perform an independent Quality/Peer Review of the geotechnical program that will be accomplished for the project. This will include participation in monthly geotechnical progress meetings and reviewing the following documents that will be prepared by GeoLabs/YKE for completion of the work. The review would focus on the exploration program and engineering analyses so that a safe and cost effective final design is provided without increased risk.</p>		
<p>2) The following documents that will be prepared by GeoLabs/YKE, will be reviewed:</p>		
<p>a) Geotechnical Planning Report and Drilling and Sampling Plan. The Geotechnical Planning Report and Drilling and Sampling Plan will outline the Geotechnical Team’s approach to the geotechnical exploration program and engineering analyses. These documents will include the proposed exploration plan (including a description of all drilling and sampling methods), laboratory testing program, and any other field testing proposed for the project. They will also outline how the subsurface conditions (soil, rock, and groundwater) will be characterized; and based on this characterization, how foundation recommendations will be developed for the project. It is anticipated that the exploration work will be accomplished in two phases. The initial phase will include completing explorations where there are data gaps in the available subsurface information. This work will be accomplished as preliminary recommendations are developed for design of the foundations. These will also allow the structural design team to fix the location of the piers to avoid existing utilities and traffic considerations. Based on the “final” location of the pier foundations, a second phase of explorations will be accomplished at each of the pier locations where explorations do not exist to develop final design recommendations for each pier foundation. Shannon & Wilson will review both Draft and Final reports.</p>		
<p>b) Geotechnical Data Reports. Based on a two phase exploration program, there will be two Geotechnical Data Reports that would be prepared, one for each phase. These documents will include the results of all explorations, field testing, and laboratory testing. Shannon & Wilson would review both Draft and Final reports for each phase.</p>		
<p>c) Technical Memoranda. Based on the schedule, geotechnical design memoranda will be prepared prior to the Draft and Final Geotechnical Engineering reports. Shannon & Wilson will review these documents.</p>		
<p>d) Geotechnical Engineering Reports. The Geotechnical Engineering Report will summarize the geotechnical foundation design recommendations developed for the project. Shannon & Wilson will review these Draft and Final reports and supporting calculations.</p>		

B) Assumptions:	
<ol style="list-style-type: none"> 1) A Shannon & Wilson representative will participate in monthly geotechnical progress meetings. 2) Draft and Final Drilling and Sampling Plans will be reviewed. 3) Draft and Final Geotechnical Planning Reports will be reviewed. 4) Draft and Final Data Reports will be reviewed. 5) Draft and Final Engineering Reports will be reviewed. 6) Interim Technical Memoranda will be reviewed. 	
C) Inputs:	
<ol style="list-style-type: none"> 1) Pier locations developed by Structural Designer. 2) Preliminary and Final foundation demands developed by Structural Designer. 3) Lateral movement and allowable settlement criteria developed by Structural Designer. 	
D) Deliverables:	NTP #
1) Perform Review – Draft	1b
2) Perform Review – Final	2

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Geotechnical Exploration and Design 7.6 Load Test	Activity Responsibility: Geolabs, Inc.	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0720.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) A foundation load test(s) will be performed on the selected foundation type(s) for the project. The load tests will be used to confirm the final design, allow the use of a higher resistance factor, and therefore increase the cost effectiveness of the final design without increasing risk to the project. Tasks required to implement a foundation load test program into the project include the following: 2) Identification and Development of Load Test Specifications: <ol style="list-style-type: none"> a) Review the foundation design and the subsurface conditions to evaluate the most appropriate foundation load tests, which may include both axial and lateral load considerations. b) Once the nature of the test is developed, evaluate areas/locations where the tests can be performed. c) Develop planning documents for the test program, including permit considerations. 		
B) Assumptions: <ol style="list-style-type: none"> 1) The CONSULTANT will evaluate the permit requirements for performing the load test. 2) The CONSULTANT will determine available load test sites along the contract corridor. 3) The CONSULTANT will prepare and provide quantity take-offs for performance of the load tests. 4) The CONSULTANT will prepare the contract documents, including CADD drawings. 		
C) Inputs: <ol style="list-style-type: none"> 1) Final Design loads and controlling load cases will be provided by the structural designers. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Load Test Specifications 		NTP # 2

TASK 0800 - Architectural Design

Develop aesthetic treatment of selected Guideway columns in the vicinity of the Stations. An aesthetic design concept report shall be prepared to permit discussion of the ideas with HART prior to initiating and completing final design.

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Architectural Design 8.1 Station, Piers, TPSS and Pedestrian Pathway Aesthetics	Activity Responsibility: Group 70 International Inc.	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0810.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Review HART provided documents to be used in developing aesthetic design concepts for the Guideway. 2) Interface with HART Architectural staff, Station Design Consultant, Art-in-Transit Administrator, Structural engineer, Landscape Architect, civil engineer, Cultural Consultant and other disciplines as required. 3) Prepare studies, renderings and graphics to display the integration of aesthetic treatment into the engineered elements of the Guideway structure. 4) Research constructability and concrete form options, hardscapes options. 5) Prepare conference notes pertaining to scope for coordination and workshop meetings attended. 6) Based on comments from interim design submittal, prepare final design drawings. 7) Comprehensive review of PE design, H RTP design guidelines and preparation of design narrative. 8) Preparation of conceptual design studies of options and location plans. 9) Prepare at Interim design conceptual options for cost estimating and peer review. 10) Final design option detail design documents, plans, elevations sections and outline specification for any aesthetic elements, such as concrete form liners, concrete treatment/finishes and architectural hardscapes finishes. 		
B) Assumptions: <ol style="list-style-type: none"> 1) System Art Program, project cultural guidelines and principles developed in the PE and previous Guideway segments will guide the development of Guideway aesthetics. 2) Work will include Station areas and other areas identified in the aesthetic design study. 		
C) Inputs: <ol style="list-style-type: none"> 1) H RTP design guidelines and government provided documents. 2) Understanding of design elements used at other segment locations. 3) Design Language Pattern Book. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Design 2) Interim Design 3) Draft Final Design 4) Final Design 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Architectural Design 8.2 Sustainability Report Compilation and Preparation of Report	Activity Responsibility: Group 70 International Inc.	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0810.0020	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Preparation of draft/outline of potential sustainable opportunities for review and final determination of a list of opportunities to pursue. 2) Coordinate with Architectural, Landscape, Structural, Civil and Electrical and other disciplines for Contributing Sections. 3) Prepare draft report with summary, overview and draft definition of each sustainable strategy pursued, submit as part of interim design submittal. 4) Receive, comment on, and finalize systemwide report for final submittal. 		
B) Assumptions: <ol style="list-style-type: none"> 1) HART guidance on format or base document expectations. 2) Architectural, Landscape, Structural, Civil and Electrical, and other disciplines for Contributing Sections. 		
C) Inputs: <ol style="list-style-type: none"> 1) HHCTCP Systemwide Sustainability Report, dated May 22, 2009. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Submittal of Preliminary Engineering Design 2) Submittal of Interim Design 3) Submittal of Draft Final Design 4) Submittal of Final Design 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Architectural Design 8.3 Discipline and Inter-Discipline Review of Documents	Activity Responsibility: Group 70 International Inc.	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0820.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Discipline quality control activities (checking of calculations, plans and specifications) will be initiated at the earliest possible opportunities as design tasks are completed. 2) Formal quality control reviews of drawing packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline Review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing the plans of other interfacing disciplines throughout each design phase. 5) Inter-Disciplinary Review is a review of the design drawing by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-Discipline Design Reviews will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed to ensure adequacy of the QC review verify that all QC activities have been completed. 7) QA/QC review will be performed prior to every formal submittal. 		
B) Assumptions: <ol style="list-style-type: none"> 1) N/A 		
C) Inputs: <ol style="list-style-type: none"> 1) HHCTCP Quality Assurance Plan. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Design 2) Interim Design 3) Draft Final Design 4) Final Design 		NTP # 1b 2 3 3

TASK 0900 - Utility Design

Design and develop the composite existing utilities plans and the utility relocation and electrical service reconnection plans, profiles, and details within the Airport Segment Guideway and Utilities Contract. Perform sufficient additional pothole investigations to ensure no damage to the existing active utilities from the construction of drilled shafts and foundations and all other aspects of the work. Obtain HDOT waiver to retire abandoned underground utilities in place with the exception of fuel lines.

Note that traffic engineering design for the relocation of signals will be performed under task 1000, Traffic Signal Design. Electrical engineering associated with traffic signal design will be performed under task 1100, Electrical Design. Except at signalized intersections, relocation of existing traffic signal conduits impacted by construction activities will be accomplished under this task.

ACTIVITY DESCRIPTION		Form: SOW 01
Activity: As-Built Research & Sub-Surface Investigation 9.1 Development of Composite Utility Plans	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 0910.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Request as-built plan/mapping information from respective utility companies, HDOT, City, NAVFAC, NCTAMS and NEC. 2) Research available plans, including electronic files compiled for the preliminary engineering drawing set, to verify utility locations indicated on the Composite Plan – Existing Utilities. 3) Review Composite Plan – Existing Utilities and coordinate locations for sub-surface investigation to locate civil utility lines and electrical and communications ductlines. 4) Tabulate depth information gleaned from sub-surface investigation for use with civil utility and ductline profiles. 5) Conduct site visits along proposed track alignment and note any additional overhead or underground impacts. 6) The CONSULTANT will update the composite utility plans from the PE drawing set based on the information obtained through as-built research and sub-surface investigation. 		
B) Assumptions: <ol style="list-style-type: none"> 1) As-built utility, HDOT and City plans compiled during the Preliminary Engineering stage will be made available in electronic CADD format to the CONSULTANT. 2) Utility agencies will be allowed to discuss/assist the CONSULTANT with research (Utility agreements with HART in place). 		
C) Inputs: <ol style="list-style-type: none"> 1) Proposed adjustments to the track alignment or column support locations indicated in the Preliminary Engineering Plans. 2) Proposed adjustments to the transit Station site and/or system site footprints indicated in the Preliminary Engineering Plans. 3) Topographic survey. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: As-Built Research & Sub-Surface Investigation 9.2 Sub-Surface Investigation (GPR & Potholing)	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS- 0910.0020	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) The CONSULTANT will review existing utility layout and determine potential conflicts with pier locations and other improvements. 2) The CONSULTANT will determine which utilities need to be physically located. 3) The CONSULTANT will perform preliminary sub-surface investigation, possibly utilizing Ground Penetrating Radar (GPR) and other technology to determine where potholing should be performed. 4) The CONSULTANT will perform sub-surface investigation by potholing to locate existing utilities. 5) The CONSULTANT will survey the exposed utility for documentation. 6) Input utilities into the utility CADD files. 		
B) Assumptions: <ol style="list-style-type: none"> 1) The CONSULTANT will work with utility owners and HART to follow the guiding principle of minimizing relocations wherever possible. 		
C) Inputs: <ol style="list-style-type: none"> 1) Rights-of-entry will be granted in approximately forty-five (45) days of submittal of the request to HART. 		

D) Deliverables: <ol style="list-style-type: none"> 1) Right of Entry Requests and other Permit Applications required 	NTP # 1b
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ACTIVITY DESCRIPTION		Form SOW 01
Activity: Utility Design 9.3 Design and Plan Development for Utilities (Non-Electrical)	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 0920.0010	Revision No: Conformed
A) Activity Description: 1) Includes: a) Gas Line. b) Sewer Line. c) Irrigation Water Line. d) Storm Drain. e) Water Line. f) Fuel or Oil Line. g) Relocated utilities will be placed to avoid conflicts with proposed Guideway piers. h) Utilities will be relocated when they are within the clear zone (a 6-foot clearance to the face of the drilled shaft) of proposed Guideway piers. For water line 16" or greater, BWS requires a minimum 10-foot clearance to the face of drilled shaft. i) The CONSULTANT will propose utility relocation to avoid conflicts with other utilities.		
B) Assumptions: 1) HART will provide the CADD files for the Utility Relocation Plans from the PE drawings. 2) HART will provide any previous correspondence with HART, the City, or Navy regarding relocation design. 3) The CONSULTANT will work with the utility owners and HART to follow the guiding principle of minimizing utility relocations wherever possible.		
C) Inputs: 1) Revised Preliminary Engineering Plans.		
D) Deliverables: 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal		NTP # 1b 2 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Utility Design	Activity Responsibility: AECOM	Issue Date: 09/20/2011
9.4 Design and Plan Development for Electrical and Communication Utilities	Task No. / Sub Task No. WBS - 0920.0020	Revision No: Conformed

A) Activity Description:

- 1) Relocation Design and Plans.
 - a) Based on the updated Composite Existing Utility Plans, relocation design of the proposed electric and communications duct systems to replace existing utility facilities that are in conflict with the Guideway columns, proposed roadway improvements and relocated civil utilities.
 - b) Coordination of betterments proposed by the respective utility companies with the proposed relocation designs.
 - c) Based on the updated Composite Existing Utility Plans, relocation design of the proposed highway lights and street lights to replace existing State and City owned facilities that are in conflict with the Guideway columns, proposed roadway improvements and relocated civil utilities.
 - d) Coordinate with utility agencies to provide data for Utility Agreements to be developed by HART.
- 2) Demolition Plans (Depending on amount of information on Relocation Plans, this information may be incorporated into the Relocation Plans rather than a separate set).
 - a) For areas under HDOT jurisdiction in accordance with the policy indicated in HWY-O 2.11-0781, plans indicating the demolition/removal of underground utility, street light and traffic signal interconnect duct systems that are in conflict with the Guideway column locations, system sites and Station sites. Plans will also include demolition of highway light foundations in accordance with HDOT requirements.
 - b) For areas under City and County of Honolulu jurisdiction in accordance with City policy, plans indicating the demolition/removal of underground utility, street light and traffic signal interconnect duct systems that are to be relocated, in accordance with City policy. Plans will also include demolition of street light foundations.
 - c) Plans indicating removal of City-owned overhead lines that are in conflict with the track alignment.

B) Assumptions:

1) Relocation Design and Plans.

- a) The CONSULTANT will work with the utility owners and HART to follow the guiding principle of minimizing utility relocations wherever possible.
- b) Incorporation of any proposed utility betterments will be subject to the approval of HART. Any fees associated with the design of these betterments will be negotiated directly with the requesting utility company.
- c) Relocation designs will be based on approved adjustments to the track alignment, column locations, Station site footprint and system Station footprint.

2) Demolition Plans:

- a) Overhead utility lines requiring removal/relocation due to conflict with the track alignment will be removed by their respective owners.
- b) Traffic signal duct systems and traffic signal standard foundations at signalized intersections will be demolished/removed under the respective traffic signal plans for those intersections.
- c) It is understood that HART will be processing the Utility Construction Agreements for utilities and Use and Occupancy Agreements for State rights-of-way, but the CONSULTANT will provide data for input into each.

C) Inputs:

- 1) Revised Preliminary Engineering Plans.
- 2) Review of the proposed duct system alignment by Hawaiian Electric Co., Hawaiian Telcom, and Oceanic Time Warner Cable.
- 3) Where applicable, review of the proposed duct system alignment by: AT&T; Sandwich Isle Communications; Wavecom; TW Telcom; Pacific LightNet; Naval Computer and Telecommunications Master Station; and Network Enterprise Center.
- 4) Review by C & C Dept. of Planning and Permitting, C & C Dept. of Design and Construction and C & C Dept. of Transportation Services and State of Hawaii Department of Transportation for work within their respective jurisdictions.

D) Deliverables:

- 1) Preliminary Engineering Submittal
- 2) Interim Design Submittal
- 3) Draft Final Design Submittal
- 4) Final Design Submittal

NTP #

- 1b
- 2
- 3
- 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity:	Activity Responsibility:	Issue Date:
Utility Design	AECOM	09/20/2011
9.5 QC Review - Discipline and Inter-Discipline Review of Documents	Task No. / Sub Task No.	Revision No:
	WBS - 0930.0010	Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Discipline quality control activities (checking of calculations, plans and specifications) will be initiated at the earliest possible opportunities as design tasks are completed. 2) Formal quality control reviews of drawing packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline Review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing the plans of other interfacing disciplines throughout each design phase. 5) Inter-Discipline Review is a review of the design drawing by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-Discipline Design Reviews will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed to verify that all QC activities have been completed. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) N/A 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Quality Assurance Plan. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3

TASK 1000 - Traffic Signal Design

Design and develop traffic signal plans for one (1) new intersection and seven (7) existing intersections required by the Guideway construction. The new intersection is at Ualena Street/Lagoon Drive and the seven (7) existing intersections are along Kamehameha Highway at various locations, noted below:

- Kalaloa Street
- Arizona Street
- Radford Drive / Makalapa Road
- Center Drive
- Valkenburg Street
- Middle Street
- Gaspro Driveway

Traffic engineering design for the relocation of signals will be performed under task 1000, Traffic Signal Design, including wiring/conduit between the controllers and signals. Electrical engineering associated with tying the controllers into the City's traffic network will be performed under task 1100, Electrical Design.

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Traffic Signal Design	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
10.1 Development of Interim Traffic Signal Plans	Task No. / Sub Task No. WBS - 1010.0010	Revision No: Conformed
<p>A) Activity Description:</p> <ol style="list-style-type: none"> 1) Identify MOT Work Zones – coordinate with TMP and MOT reports. 2) Identify applicable geometrics and traffic movement restrictions associated with work activity time periods as applicable. 3) Review TMP and MOT Plans/Documents. 4) Confirm maintenance of traffic operations at intersections and other conflicting vehicular or multi-modal movements. 5) NTP #1b: Revise and develop interim traffic signal design drawings to incorporate the approved Station and Guideway Value Engineering (VE) recommendations, as applicable and other HART preferences. Ensure compliance of interim traffic signal system design with City’s roadway standards. 6) NTP #2: Prepare detailed working drawings and specifications of interim traffic signal design for the interim design phase. 7) NTP #3: Finalize the interim design and prepare the construction contract documents for the interim traffic signal design improvements. 		
<p>B) Assumptions:</p> <ol style="list-style-type: none"> 1) The City will provide signal timing plans associated with interim traffic signals during construction activities. 2) Number of traffic lanes within the roadways will match plans in MOT. 3) Number of traffic lanes approaching the intersections will match plans in MOT. 4) The available number of travel lanes will remain as existing during non-work periods. 5) Permitted traffic movements based on TMP and MOT. 6) Construction zone requirements as preliminary plans. 7) Excludes integration with offsite traffic control plans. 8) Signal phasing as identified in PE drawings and revised as required by MOT plans. 		
<p>C) Inputs:</p> <ol style="list-style-type: none"> 1) City’s standards for traffic signage and traffic signal appurtenances for work within City’s Right-of-Way. 2) HDOT Highway Division Standards for intersection and roadway work within State’s Right-of-Way. 3) Final Station and Guideway VE Reports. 4) PE Drawings and MOT plans. 5) Preliminary plans and specifications for maintenance of traffic plans. 		

6) Construction work activities, work flow, and schedule. 7) Level III TMP and MOT reports.	
D) Deliverables: 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal	NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Traffic Signal Design 10.2 Development of Final Traffic Signal Plans	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 1010.0020	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) NTP #1b: Revise and develop final traffic signal design drawings to incorporate the approved Station and Guideway Value Engineering (VE) recommendations, as applicable and other City preferences. Ensure compliance of final traffic signal system design with City's design standards. 2) NTP #2: Prepare detailed working drawings and specifications of the final traffic signal design for the interim design phase. 3) NTP #3: Finalize the interim design and prepare the construction contract documents for the final traffic signal design improvements. 		
B) Assumptions: <ol style="list-style-type: none"> 1) The City will provide signal timing plans associated with final traffic signals. 2) Number of traffic lanes within the roadways will match plans in MOT. 3) Number of traffic lanes approaching the intersections will match plans in MOT. 		
C) Inputs: <ol style="list-style-type: none"> 1) City's standards for traffic signage and traffic signal appurtenances for work within City's Right-of-Way. 2) HDOT Highway Division Standards for intersection and roadway work within State's Right-of-Way. 3) Final Station and Guideway VE Reports. 4) PE Drawings. 5) EIS Mitigation requirements. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 		NTP # 1b 2 3

4) Final Design Submittal	3
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ACTIVITY DESCRIPTION		Form: SOW 01
Activity: Traffic Signal Design	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
10.3 QC Review - Discipline and Inter-Discipline Review of Documents	Task No. / Sub Task No. WBS - 1020.0010	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Discipline quality control activities (checking of calculations, plans and specifications) will be initiated at the earliest possible opportunities as design tasks are completed. 2) Formal quality control reviews of drawing packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing the plans of other interfacing disciplines throughout each design phase. 5) Inter-Discipline Review is a review of the design drawing by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-Discipline Design Review will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed to verify that all QC activities have been completed. 7) QA/QC review will be performed prior to every formal submittal. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) N/A 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Quality Assurance Plan. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

TASK 1100 - Electrical Design

Design and develop electrical plans for street lighting, Guideway lighting, and traffic signals, and power distribution, and coordinate with the Airport Station Group (ASG) designers and the Core Systems Contract (CSC) designers for the design of electric service connections to four (4) Stations and the Traction Power Sub-Stations (TPSS) located at the four (4) Stations along the Airport Segment Guideway.

Traffic engineering design for the relocation of signals and new intersection signalization will be performed under task 1000, Traffic Signal Design. Task 1100 includes electrical and communication wiring/conduit interconnect design between intersection traffic signal controllers and tie-ins to the City's traffic signal and ITS network.

ACTIVITY DESCRIPTION Form SOW 01

Activity: Electrical Design	Activity Responsibility: Ronald Ho and Associates	Issue Date: 09/20/2011
11.1 Guideway Alignment Illumination and Traffic Signal Design	Task No. / Sub Task No. WBS - 1110.0010	Revision No: Conformed

A) Activity Description:

- 1) Illumination and Guideway Lighting:
 - a) The CONSULTANT will provide illumination calculations for the roadway segments where the street/highway lights are being relocated and/or replaced to avoid conflicts with the track alignment and columns and where the roadways are being widened or realigned to accommodate the track alignment.
 - b) Illumination will be designed for the parking lot at approximate Station 1217+00.
 - c) Guideway lighting as required.
- 2) Traffic Signals.
 - a) Based on the approved interim traffic signal plans, the CONSULTANT will submit the request for electric and telephone service at those intersections where the traffic signal controller is being relocated or replaced or for new traffic signal controller installations, and obtain the service agreements from the electric company and the service acknowledgment from the telephone company.
 - b) Based on the ITS System Design, the CONSULTANT will provide support structures and power connections for implementation of the temporary and permanent ITS equipment deployments.

B) Assumptions:

- 1) Illumination:
 - a) Illumination calculations will be based on AASHTO illumination criteria for roadways under State jurisdiction and on Department of Design and Construction criteria for roadways under City jurisdiction.
 - b) Standard mounting heights, pole heights, bracket/truss arm lengths and light sources will be utilized for the illumination calculations unless previously approved by the State or City, respectively.
 - c) For widened or realigned roadways, illumination calculations will be prepared based on the roadway geometry approved by the State or City, respectively.
 - d) If the CONSULTANT plans to replace any lights or poles with different make and model from City approved materials and if the existing make and model are out of production, the CONSULTANT shall obtain the approval of the City/ County before specification.
- 2) Traffic Signals:
 - a) For intersections under State jurisdiction, the electric and telephone service will be requested on behalf of Oahu District Office. For intersections under City jurisdiction, the electric and telephone service will be requested on behalf of the City Department of Transportation Services, Traffic Signals and Technology Division.

C) Inputs:	
1) Illumination:	
a) Review and approval by the State Department of Transportation for roadways under State jurisdiction and the City Department of Design and Construction, Mechanical/Electrical Division for roadways under City jurisdiction.	
2) Traffic Signals:	
a) Review by HDOT, City Department of Transportation Services, Hawaiian Electric Co. and Hawaiian Telcom.	
D) Deliverables:	NTP #
1) Preliminary Engineering Submittal	1b
2) Interim Design Submittal	2
3) Draft Final Design Submittal	3
4) Final Design Submittal	3

ACTIVITY DESCRIPTION		Form SOW: 01
Activity: Electrical Design 11.2 Guideway Alignment Pearl Harbor Naval Base Station Connections	Activity Responsibility: Ronald Ho and Associates	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS- 1110.0020	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Based on the updated Pearl Harbor Naval Base Station site plan, the CONSULTANT will coordinate the location of the electric transformer pad to a manhole/handhole, from the utility point of connection then to TCCR room in the transit Station. The CONSULTANT will coordinate with the Station Designer and prepare plans for the power utility duct system connections from the utility infrastructure to the Station site handhole/manhole and then to TCCR room in the Station. 2) All system concrete duct design, installation for Core Systems communication (i.e. non-utility), fiber optics, SCADA and train control, etc. from the Guideway columns (non-decorative columns) from both sides of the Station to the nearest manhole at the Station and from the manhole to TCCR room. 		
B) Assumptions: <ol style="list-style-type: none"> 1) The electrical and communications service request for the Pearl Harbor Naval Base Station will be made by the ASG Designer. 2) Extension of the electrical conductors from utility point of contact to the electrical transformer pad and then to the transit Station site electrical room/rooms will be provided under the ASG design. 3) Number of conduits, size and inner ducts in the system concrete duct bank for communication, train control, SCADA and fiber optics will be provided by the Core Systems designers to ASG Group. 		
C) Inputs: <ol style="list-style-type: none"> 1) Review and approval by Hawaiian Electric Co., Hawaiian Telcom and Oceanic Time Warner Cable, if required. 2) Pearl Harbor Naval Base Station site plan from the ASG Designer. 3) Number of conduits, sizes and inner ducts for communication, train control, SCADA and fiber optics will be provided by Core Systems Designer and design approval by HART. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Electrical Design 11.3 Guideway Alignment Honolulu International Airport Station Connections	Activity Responsibility: Ronald Ho and Associates	Issue Date: 09/20/2011
	Task No. / Sub Task No.: WBS- 1110.0030	Revision No.: Conformed
A) Activity Description: 1) Based on the updated Honolulu International Airport Station site plan, the CONSULTANT will coordinate the location of the electric transformer pad to a manhole/handhole, from the utility point of connection then to TCCR room in the transit Station. The CONSULTANT will coordinate with the Station Designer and prepare plans for the power utility duct system connections from the utility infrastructure to the Station site handhole/manhole and then to TCCR room in the Station. 2) All system concrete duct design, installation for Core Systems communication (i.e. non-utility), fiber optics, SCADA and train control, etc. from the Guideway columns (non-decorative columns) from both side of the Station to the nearest manhole at the Station and from the manhole to TCCR room.		
B) Assumptions: 1) The electrical and communications service request for the Honolulu International Airport Station will be made by the ASG Designer. 2) Extension of the electrical conductors from utility point of contact to the electrical transformer pad and then to the transit Station site electrical room/rooms will be provided under the ASG design. 3) Number of conduits, size and inner ducts in the system concrete duct bank for communication, train control, SCADA and fiber optics will be provided by the Core Systems Designer to ASG Group.		
C) Inputs: 1) Review and approval by Hawaiian Electric Co., Hawaiian Telcom and Oceanic Time Warner Cable, if required. 2) Honolulu International Airport Station site plan from the ASG Designer. 3) Number of conduits, sizes and inner ducts for communication, train control, SCADA and fiber optics will be provided by Core Systems Designer and design approval by HART.		
D) Deliverables: 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Electrical Design 11.4 Guideway Alignment Lagoon Drive Station Connections	Activity Responsibility: Ronald Ho and Associates	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 1110.0040	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Based on the updated Lagoon Drive Station site plan, the CONSULTANT will coordinate the location of the electric transformer pad to a manhole/handhole, from the utility point of connection then to TCCR room in the transit Station. The CONSULTANT will coordinate with the Station Designer and prepare plans for the power utility duct system connections from the utility infrastructure to the Station site handhole/manhole and then to TCCR room in the Station. 2) All system concrete duct design, installation for Core Systems communication (i.e. non-utility), fiber optics, SCADA and train control, etc. from the Guideway columns (non-decorative columns) from both side of the Station to the nearest manhole at the Station and from the manhole to TCCR room. 		
B) Assumptions: <ol style="list-style-type: none"> 1) The electrical and communications service request for the Lagoon Drive Station will be made by the ASG Designer. 2) Extension of the electrical conductors from utility point of contact to the electrical transformer pad and then to the transit Station site electrical room/rooms will be provided under the ASG design. 3) Number of conduits, size and inner ducts in the system concrete duct bank for communication, train control, SCADA and fiber optics will be provided by the Core Systems Designer to ASG Group. 		
C) Inputs: <ol style="list-style-type: none"> 1) Review and approval by Hawaiian Electric Co., Hawaiian Telcom and Oceanic Time Warner Cable, if required. 2) Lagoon Drive Station site plan from the ASG Designer. 3) Number of conduits, sizes and inner ducts for Communication, train control, SCADA and fiber optics will be provided by Core Systems Designer and design approval by HART. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Electrical Design	Activity Responsibility: Ronald Ho and Associates	Issue Date: 09/20/2011
11.5 Guideway Alignment Middle Street Transit Center Station Connections	Task No. / Sub Task No. WBS- 1110.0050	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Based on the updated Middle Street Transit Center Station site plan, the CONSULTANT will coordinate the location of the electric transformer pad to a manhole/handhole, from the utility point of connection then to TCCR room in the transit Station. The CONSULTANT will coordinate with the Station Designer and prepare plans for the power utility duct system connections from the utility infrastructure to the Station site handhole/manhole and then to TCCR room in the Station. 2) All system concrete duct design, installation for Core Systems communication (i.e. non-utility), fiber optics, SCADA and train control, etc. from the Guideway columns (non-decorative columns) from both side of the Station to the nearest manhole at the Station and from the manhole to TCCR room 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) The electrical and communications service request for the Middle Street Transit Center Station will be made by the ASG Designer. 2) Extension of the electrical conductors from utility point of contact to the electrical transformer pad and then to the transit Station site electrical room/rooms will be provided under the ASG design. 3) Number of conduits, size and inner ducts in the system concrete duct bank for communication, train control, SCADA and fiber optics will be provided by the Core Systems Designer to ASG Group. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Review and approval by Hawaiian Electric Co., Hawaiian Telcom and Oceanic Time Warner Cable, if required. 2) Middle Street Transit Center Station site plan from the ASG Designer. 3) Number of conduits, sizes and inner ducts for communication, train control, SCADA and fiber optics will be provided by Core Systems Designer and design approval by HART. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Electrical Design 11.6 System Site - Site #25	Activity Responsibility: Ronald Ho and Associates	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS- 1120.0010	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Based on the updated System Site #25 site plan, the CONSULTANT will coordinate the location of HECO Switchgear concrete pad for TPSS/GBS and the electric transformer pad with the Core Systems Designer and prepare plans for the utility duct system connections from the connection point of the existing HECO system to the proposed HECO switchgear for utility infrastructure to the system site. The CONSULTANT to coordinate and provide plans for concrete duct banks with spare conduits from HECO utility connection point to system site complete with manholes, handholes, transformer/switchgear pads and conduit stub ups. 2) Coordinate subsystem site foundation design, design of vault/piles required to set up pre-fabricated building of TPSS and GBS, grounding mat installation and test, soil resistivity test and all connecting conduits to system site, from the closest manhole to equipments inside the system site. 3) Design and install all duct banks for positive and negative communication from system site to Guideway piers avoiding aesthetic impacts to columns with necessary manholes, handholes, and conduit stubs. 4) Design and install duct bank and handholes/pull box within system site for negative drainage cables. 5) Number of conduits and sizes for all duct banks shall be coordinated with Core Systems Designer. 6) Design and install fence, fence grounding, gates, concrete pavement for maintenance vehicles and all necessary improvements for normal functioning of the TPSS/GBS within system site. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) Extension of the electrical conductors from HECO utility connection pole/manhole to the electrical transformer pad then to the system site equipment will be provided under the System Site Plans. 2) Conduits from the electric transformer pad will be stubbed to the border of the System Site. 3) Electric service request will be submitted with all necessary technical specifications and the CONSULTANT will coordinate the service connection and solicit the service proposal for System Site #25. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Review and input by Hawaiian Electric Co. 2) Review by Core Systems Designer for System Site #25 and design approval by HART. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

ACTIVITY DESCRIPTION		Form SOW:01
Activity: Electrical Design 11.7 System Sites - Site #27	Activity Responsibility: Ronald Ho and Associates	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS- 1120.0020	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Based on the updated System Site #27 site plan, the CONSULTANT will coordinate the location of HECO Switchgear concrete pad for TPSS/GBS and the electric transformer pad with the Core Systems Designer and prepare plans for the utility duct system connections from the connection point of the existing HECO system to the proposed HECO switchgear for utility infrastructure to the system site. The CONSULTANT to coordinate and provide plans for concrete duct banks with spare conduits from HECO utility connection point to system site complete with manholes, handholes, transformer/switchgear pads and conduit stub ups. 2) Coordinate subsystem site foundation design, design of vault/piles required to set up pre-fabricated building of TPSS and GBS, grounding mat installation and test, soil resistivity test and all connecting conduits to system site, from the closest manhole to equipments inside the system site. 3) Design and install all duct banks for positive and negative communication from system site to Guideway piers avoiding aesthetic impacts to columns with necessary manholes, handholes, and conduit stubs. 4) Design and install duct bank and handholes/pull box within system site for negative drainage cables. 5) Number of conduits and sizes for all duct banks shall be coordinated with Core Systems Designer. 6) Design and install fence, fence grounding, gates, concrete pavement for maintenance vehicles and all necessary improvements for normal functioning of the TPSS/GBS within system site. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Extension of the electrical conductors from HECO utility connection pole/manhole to the electrical transformer pad then to the system site equipment will be provided under the System Site Plans. 2) Conduits from the electric transformer pad will be stubbed to the border of the System Site. See Activity Description. 3) Submit the electric service request with all necessary technical specifications and coordinate the service connection and solicit the service proposal for System Site #27. 		
C) Inputs: <ol style="list-style-type: none"> 1) Review and coordination approval by Hawaiian Electric Co. 2) Review by Core Systems Designer for System Site #27 and design approval by HART. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Electrical Design 11.8 Systems Site - Site #28	Activity Responsibility: Ronald Ho and Associates	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 1120.0030	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Based on the updated System Site #28 site plan, the CONSULTANT will coordinate the location of HECO Switchgear concrete pad for TPSS/GBS and the electric transformer pad with the Core Systems Designer and prepare plans for the utility duct system connections from the connection point of the existing HECO system to the proposed HECO switchgear for utility infrastructure to the system site. The CONSULTANT to coordinate and provide plans for concrete duct banks with spare conduits from HECO utility connection point to system site complete with manholes, handholes, transformer/switchgear pads and conduit stub ups. 2) Coordinate subsystem site foundation design, design of vault/piles required to set up pre-fabricated building of TPSS and GBS, and all connecting conduits to system site, from the closest manhole to equipments inside the system site. 3) Design and install all duct banks for positive and negative communication from system site to Guideway piers avoiding aesthetic impacts to columns with necessary manholes, handholes, and conduit stubs. 4) Design and install duct bank and handholes/pull box within system site for negative drainage cables. 5) Number of conduits and sizes for all duct banks shall be coordinated with Core Systems Designer. 6) Design and install fence, fence grounding, gates, concrete pavement for maintenance vehicles and all necessary improvements for normal functioning of the TPSS/GBS within system site. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Extension of the electrical conductors from HECO utility connection pole/manhole to the electrical transformer pad then to the system site equipment will be provided under the System Site Plans. 2) Conduits from the electric transformer pad will be stubbed to the border of the System Site. 3) Submit the electric service request with all necessary technical specifications and coordinate the service connection and solicit the service proposal for System Site #28. 		
C) Inputs: <ol style="list-style-type: none"> 1) Review and input by Hawaiian Electric Co. 2) Review by Core Systems Designer for System Site #28 and design approval by HART. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Electrical Design 11.9 System Site - Site #19	Activity Responsibility: Ronald Ho and Associates	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS- 1120.0040	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Based on the updated System Site #19 site plan, the CONSULTANT will coordinate the location of HECO Switchgear concrete pad for TPSS/GBS and the electric transformer pad with the Core Systems Designer and prepare plans for the utility duct system connections from the connection point of the existing HECO system to the proposed HECO switchgear for utility infrastructure to the system site. The CONSULTANT to coordinate and provide plans for concrete duct banks with spare conduits from HECO utility connection point to system site complete with manholes, handholes, transformer/switchgear pads and conduit stub ups. 2) Coordinate subsystem site foundation design, design of vault/piles required to set up pre-fabricated building of TPSS and GBS, and all connecting conduits to system site, from the closest manhole to equipments inside the system site. 3) Design and install all duct banks for positive and negative communication from system site to Guideway piers avoiding aesthetic impacts to columns with necessary manholes, handholes, and conduit stubs. 4) Design and install duct bank and handholes/pull box within system site for negative drainage cables. 5) Number of conduits and sizes for all duct banks shall be coordinated with Core Systems Designer. 6) Design and install fence, fence grounding, gates, concrete pavement for maintenance vehicles and all necessary improvements for normal functioning of the TPSS/GBS within system site. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Extension of the electrical conductors from HECO utility connection pole/manhole to the electrical transformer pad then to the system site equipment will be provided under the System Site Plans. 2) Design of the improvements within the System Site will be by others. 3) Conduits from the electric transformer pad will be stubbed to the border of the System Site. See Activity Description. 4) Submit the electric service request with all necessary technical specifications and coordinate the service connection and solicit the service proposal for System Site #19. 		
C) Inputs: <ol style="list-style-type: none"> 1) Review and input and coordination approval by Hawaiian Electric Co. 2) Review by Core Systems Designer for System Site #19 and design approval by HART. 3) System Site #19 site plan from the Core Systems Designer. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Electrical Design	Activity Responsibility: AECOM	Issue Date: 09/20/2011
11.10 QC Review - Discipline and Inter-Discipline Review of Documents	Task No. / Sub Task No. WBS - 1130.0010	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Discipline quality control activities (checking of calculations, plans and specifications) will be initiated at the earliest possible opportunities as design tasks are completed. 2) Formal quality control reviews of drawing packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline Review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing the plans of other interfacing disciplines throughout each design phase. 5) Inter-Discipline Review is a review of the design drawing by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-Discipline Design Reviews will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed to verify that all QC activities have been completed. 7) QA/QC review will be performed prior to every formal submittal. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) N/A 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Quality Assurance Plan. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

TASK 1200 - Intelligent Transportation Systems (ITS) Design

Design and develop ITS plans for Closed Circuit Television (CCTV) cameras, Portable Dynamic Message Signs (PDMS), and License Plate Recognition (LPR) devices at selected intersections along the alignment. Interconnection with the City's CCTV camera system will be required. Also, travel time information gathered from LPR devices will be connected to HDOT's Traveler Information System.

ITS work defined under task 1200 addresses both the temporary and permanent ITS deployments. The temporary ITS project will include CCTV cameras and LPR devices to provide surveillance and travel time messaging on PDMS during construction while the permanent construction does not include new Dynamic Message Sign (DMS) installations.

ACTIVITY DESCRIPTION Form SOW 01

Activity: ITS 12.1 Development of Intelligent Transportation System Design	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No.: WBS - 1210.0010	Revision No: Conformed

A) Activity Description:

- 1) ITS Design Document:
 - a) Review existing preliminary engineering drawings and make appropriate adjustments to support the temporary and permanent ITS deployments.
 - b) Prepare ITS design documentation that defines the assumptions and design approach for the deployment of CCTV cameras, Portable Dynamic Message Signs and Travel Time Detection (e.g., LPR) devices and associated communication systems included in the temporary project (i.e., during construction) and only CCTV cameras and LPR devices after construction.
 - c) Conduct one work session with HART, City Department of Transportation Services (DTS), and HDOT to review ITS elements designed for previous H RTP corridors; design approach to be used for the Airport segment; as well as any relevant ongoing City and HDOT TS/communication/signal projects.
 - d) Develop preliminary engineering documentation detailing device type and locations for both temporary and permanent systems. CCTV camera systems and Travel Time Detection systems, including associated communication systems, will be included in subsequent stages of the ITS design. Portable DMS for the temporary deployment, if identified in preliminary engineering, will be coordinated with the Maintenance of Traffic plans.
- 2) CCTV Design:
 - a) Prepare plans, specifications, and estimates (PS&E) for the design of a CCTV system that would interconnect with the City's CCTV camera system and Traffic Management Center (TMC).
 - b) Conduct a design field review with HART, DTS, and HDOT to determine and agree upon CCTV locations.
 - c) Conduct bucket truck survey in the field to verify potential line-of-sight wireless communication options as well as to confirm that the height of each CCTV camera provides adequate viewing of areas to be covered (e.g., H-1 Freeway, arterials and intersections, activity centers involving high pedestrian activity, areas to be impacted by Guideway superstructure, columns and foundations, dynamic message signs, etc.).
 - d) Prepare specifications to comply with adopted standards and system architecture. These requirements may include the following components: camera mounts on signal poles or mast arms; separate camera poles; camera assembly, including vendor supplied cables; camera lowering system; video encoder; Ethernet switch; pole-mounted cabinet; electrical service; lightning protection; camera control software; software drivers for TMC software; etc.
 - e) Define power requirements and interface points with existing facilities.
 - f) Define communication requirements and interface points to transmit CCTV camera images to the TMC.

- g) Prepare PS&E packages for the design of temporary and permanent ITS deployments of CCTV camera at ID, Draft FD, and FD submittals.
- 3) License Plate Recognition (LPR) Design:
- a) Develop the design of a Travel Time detection system (i.e., LPR) that would interconnect with HDOT's Traveler Information System.
 - b) Conduct field survey to define LPR locations and potential PDMS locations.
 - c) Prepare specifications to comply with adopted standards and system architecture.
 - d) Define power requirements and interface points with existing facilities.
 - e) Define communication requirements and interface points to transmit LPR data to HDOT's Traveler Information System.
 - f) Prepare PS&E packages for the design of temporary and permanent ITS deployments of LPR's design at the ID, Draft FD, and FD submittals.
- 4) Communication Design:
- a) Develop the design of a communications system that would interconnect the CCTV cameras and Travel Time Detection system (i.e., LPRs) with the City's CCTV system and HDOT's Traveler Information System.
 - b) Review existing communications infrastructure to be used to integrate the proposed CCTV camera and Travel Time Detection systems as part of this project.
 - c) Conduct a gap analysis to determine additional communication links required to satisfy the project's requirements in accordance with the approved ITS Design Document.
 - d) Conduct a bandwidth analysis of the CCTV camera and Travel Time Detection systems to determine improvements required to upgrade the existing communications infrastructure.
 - e) Review committed improvements in the communications infrastructure that will be available in the timeframe needed for the temporary and permanent construction of the H RTP project.
 - f) Develop schematic layout of the communications infrastructure.
 - g) Define communication requirements and interface points to transmit LPR data to the HDOT Traveler Information System and CCTV camera images to the TMC located adjacent to the H-1 at 740 Kinalau Place.
 - h) Review how the communications lines cross utilities (e.g., water, gas, electric); determine the requirements for spacing of handholes to ensure accessibility during future maintenance; and review general cable routing (e.g., does it cross the mainline several times thereby resulting in maintenance of traffic problems during future maintenance).
 - i) Prepare PS&E packages for the communications design at the ID, Draft FD, and FD submittals to address the needs of the temporary and permanent ITS deployments.

B) Assumptions:

- 1) Neither a Concept of Operations or Systems Engineering Management Plan document is required as part of this scope.
- 2) HART will provide all relevant information associated with LPR systems developed for other segments of the rapid transit system.

<ul style="list-style-type: none"> 3) CCTV camera design will comply with HDOT and DTS standards. HART approvals will be directed at maintaining consistency with the ITS Document's findings. 4) HDOT's Traveler Information System already provides reliable information utilizing the PIPS' Technology (Federal Signal Corporation) LPR; the H RTP system will only plug into the existing system without significant software/hardware upgrades required. 5) All temporary deployment field devices will be solar powered with battery backup providing 72-hours of autonomous power. 6) Communication for the temporary deployment during construction will be wireless. 7) The LPR design will comply with existing HDOT and H RTP systems. 8) The communications design will comply with the ITS Design Document. HART approvals will be directed at maintaining consistency with the ITS Document's findings. 9) Information/access to existing points of service for power drops will be provided. 	
<p>C) Inputs:</p> <ul style="list-style-type: none"> 1) HART will provide any relevant documentation regarding the City's and HDOT's existing and proposed upgrades to their CCTV systems; Traveler Information System; communications infrastructure; dynamic message sign system; vehicle detection system; etc. 2) HART will provide interface requirements with adjacent sections of the H RTP, including LPR and CCTV camera systems. 3) Apply approved QC process for the review of the ITS Design Document as well as ITS plans, specifications and estimates. 	
<p>D) Deliverables:</p> <ul style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 	<p>NTP #</p> <p>1b</p> <p>2</p> <p>3</p> <p>3</p>

ACTIVITY DESCRIPTION		Form SOW/01
Activity:	ITS	Activity Responsibility: AECOM
12.2 QC Review - Discipline and Inter-Discipline Review of Documents		Issue Date: 09/20/2011
		Task No. / Sub Task No. WBS - 1220.0010
		Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Discipline quality control activities (checking of calculations, plans, and specifications) will be initiated at the earliest possible opportunities as design tasks are completed. 2) Formal quality control reviews of drawing packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline Review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing of the plans of other interfacing disciplines throughout each design phase. 5) Inter-Discipline Review is a review of the design drawings by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-Discipline Design Reviews will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed to verify that all QC activities have been completed. 7) QA/QC review will be performed prior to every formal submittal. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) Apply approved QC process for the review of the ITS Design Document as well as ITS plans, specifications and estimates. 2) Inter-disciplinary reviews will be conducted at the PE, ID and FD milestones. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Quality Assurance Plan. 2) HART will provide review comments in accordance with the approved project schedule. 3) Plans and specifications for other related disciplines will be available for review at the PE, ID and FD milestones. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

TASK 1300 - Environmental

Prepare an Environmental Compliance Plan (ECP) that addresses how compliance and documentation of compliance will be achieved in design and construction, including the design review process to address pertinent mitigation measures and permits specified in the H RTP's FEIS, the Record of Decision (ROD), the Federal Aviation Administration (FAA) ROD, and the Section 106 Programmatic Agreement (PA). The CONSULTANT will prepare environmental constraint maps as directed by HART as part of the ECP. These maps will be produced in GIS and/or CADD for use in Guideway design and field activities during construction. Prepare application(s) for pertinent environmental permits and related design plans that reflect achievement of environmental compliance. The CONSULTANT will update the ECP, as needed, when new or modified mitigation or environmental compliance conditions are developed during the term of the Contract. The CONSULTANT will be responsible for preparing the environmental documents as specified in the Scope of Work, and ensuring that they are in compliance with the FEIS, ROD, FAA ROD and Section 106 PA.

ACTIVITY DESCRIPTION		Form SOW.01
Activity: Environmental 13.1 Investigate and Provide Remedial Design for Hazardous Waste and Materials	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 1310.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Conduct eight Phase 1 Environmental Site Assessments (ESAs). 2) Conduct three Phase 2 Environmental Site Assessments. 3) Conduct Building Hazardous Materials Survey of up to twelve structures to be disturbed by the project. 4) Prepare Mitigation Design Documents. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Per the FEIS, 12 sites will require Phase 2 ESAs; however, the scope of the Phase 2 ESAs is not known. Additionally, pending the results of the Phase 1 ESAs, more or less than 12 sites may actually require Phase 2 ESAs. Therefore, the necessity, number, and scope of Phase 2 ESAs will be determined during the execution of the Phase 1 ESAs. Three Phase 2 ESAs are assumed for estimating purposes. 2) HART will secure Rights-of-Entry where applicable, and provide site owner/operator contact information. 3) The Hazardous Waste Abatement Plans and Specifications will incorporate mitigation provisions as detailed in the Mitigation Monitoring Plan dated January 2011 (MMP), FEIS, FAA ROD, ROD and their attachments. Any changes to these documents may require a modification to this scope of work. These mitigations will be included in the ECP prepared by the CONSULTANT. 		
C) Inputs: <ol style="list-style-type: none"> 1) FEIS. 2) ROD. 3) FAA ROD. 4) MMP. 5) Programmatic Agreement. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 5) Draft Building Hazardous Material Survey Report 6) Final Building Hazardous Material Survey Report 7) Draft Phase 1 Environmental Site Assessment Report 8) Final Phase 1 Environmental Site Assessment Report 9) Draft Phase 2 Environmental Site Assessment Report 10) Final Phase 2 Environmental Site Assessment Report 		NTP # 1b 2 3 3 3 3 3 3 3 3

ACTIVITY DESCRIPTION Form SOW 01

Activity: Environmental	Activity Responsibility: AECOM	Issue Date: 09/20/2011
13.2 Prepare and Update the Environmental Compliance Plan (ECP)	Task No. / Sub Task No. WBS - 1310.0020	Revision No: Conformed

- A) Activity Description:**
- 1) The CONSULTANT will include requirements for environmental compliance throughout the design development. The CONSULTANT team will complete the Environmental Compliance Plan (ECP) at the conclusion of NTP #1b for design as the first task of work prior to beginning design efforts. The ECP will detail the project’s environmental objectives and targets for design, with the goal of executing the work in an environmentally-sound manner in compliance with all federal, state, and local laws, regulations, permit conditions and commitments recorded in the FEIS, ROD, FAA ROD and PA for the project.
 - 2) The ECP will outline procedures and protocols for achieving environmental compliance, including environmental controls, training, monitoring, description of environmental team meetings, and documentation of compliance during the design and subsequent construction phases.
 - 3) The ECP will describe the roles and responsibilities and reporting relationships for both the CONSULTANT and HART environmental staff, including how coordination will occur.
 - 4) The ECP will detail protocols and reviews that occur during the design phase. Environmental compliance staff will collaborate with design teams to ensure that all environmental permit conditions and FEIS, ROD, FAA ROD, and mitigation provisions are adequately incorporated into the designs.
 - 5) The ECP will also establish a procedure to ensure that environmental compliance objectives and targets are carried forward through the bidding and construction phases, including, but not limited to, ensuring that all environmental compliance conditions are incorporated into the contract special provisions.
 - 6) The ECP will summarize and graphically depict environmental resources present at and near the Stations and Guideway segment and identify past impacts and uses at the site that may impact the site development during the project, including figures and data, as required.
 - 7) The ECP will include environmental constraint maps produced in GIS and/or CADD for use in design development, design reviews, and field activities during construction. The ECP will describe all actions and BMPs required for environmental compliance, and detail investigation and inspection requirements, including frequencies, while listing the corresponding documentation requirements. Procedural and documentation requirements of applicable permits, as well as, the FEIS, FAA ROD, and ROD commitments and mitigation measures and other project environmental constraints, will be incorporated into the ECP.
 - 8) The ECP will contain a list of potentially required environmental permits, waivers, and approvals.
 - 9) The ECP will also list regulatory agencies with an interest in the project, describe their reporting requirements, and provide points of contact.
 - 10) The ECP will establish and describe a record system for tracking all environmental commitments.
 - 11) The ECP will serve to update the implementation and reporting of the overall MMP (being overseen by HART).

B) Assumptions:	
<ul style="list-style-type: none"> 1) The ECP will not consider Health and Safety requirements of construction contractors. 2) The ECP will incorporate mitigation provisions as detailed in the MMP, FEIS, FAA ROD, ROD and their attachments. Any changes to these documents may require a modification to the ECP Scope-of-Work. 	
C) Inputs:	
<ul style="list-style-type: none"> 1) FEIS. 2) ROD. 3) MMP. 4) PA. 5) FAA ROD. 6) PE, ID and FD plan sets. 7) AISP Survey. 8) Phase 1 and Phase 2 ESAs. 9) Permits received by HART. 10) List of permits applied for by HART including status and permit conditions of each. 	
D) Deliverables:	NTP #
1) Preliminary Draft ECP Submittal	1b
2) Draft ECP Submittal	1b
3) Final ECP Submittal	3
4) ECP Update Submittals (2)	3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Environmental	Activity Responsibility: AECOM	Issue Date: 09/20/2011
13.3 Conduct Environmental Compliance Reviews During the Design Phase	Task No. / Sub Task No. WBS- 1310.0030	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) The CONSULTANT will conduct environmental compliance reviews per the Environmental Compliance Plan (ECP). 2) Implementation of the ECP will commence with a review of PE designs. This review will include identification/ reconfirmation of project impacts, critical design elements pertaining to environmental compliance, avoidance/ minimization/ mitigation options, and possible field reviews. Participants will include the project design and environmental compliance staff. 3) The CONSULTANT will track all environmental commitments in a record system designed to support HART's database of mitigation commitments detailed in the MMP. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) Station designs and contract documents, with the exception of Guideway superstructure, columns and foundations, Station platform support structures and concourse support structures within the limit of the Guideway, are by others. 2) Environmental compliance reviews of PE designs will occur prior to submittal of PE, ID and FD plan sets. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Meetings with designers. 2) Updated PE, ID, draft FD and final FD complete plan sets. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

ACTIVITY DESCRIPTION		Form SOW.01
Activity: Environmental	Activity Responsibility: AECOM	Issue Date: 09/20/2011
13.4 Prepare environmental planning documents and permits	Task No. / Sub Task No. WBS - 1310.0040	Revision No: Conformed
A) Activity Description: 1) The CONSULTANT to prepare applications for the following permits: a) NPDES NOI-C(NGPOC) from DOH CWB.		
B) Assumptions: 1) The CONSULTANT assumes that existing information and studies prepared for the FEIS, ROD, FAA ROD, MMP, PA and two (2) design documents prepared as part of this specific SOW will satisfy the permit application requirements. Additional studies (beyond those planned as part of this SOW) arising from permit application requirements may require contract modifications. 2) Section 401 Water Quality Certification (WQC) from the DOH CWB: The CONSULTANT assumes that HART is securing this permit. 3) Section 404 U.S. Army Corps of Engineers Permit: The CONSULTANT assumes that HART is securing this permit and conducting any associated consultations. 4) Section 402 NPDES NOI-F (Hydrotesting): Assume no discharge to drainage system or water body, therefore no permit is required. 5) Section 402 NPDES NOI-G (Construction Site Dewatering Effluent): Assume no discharge to drainage system or water body, therefore no permit is required. 6) Stream Channel Alteration Permit (SCAP) from DLNR CWRM: The CONSULTANT assumes that HART is securing or has secured this permit. 7) NPDES NOI-C (Construction Site Stormwater Management) for construction from DOH CWB. The CONSULTANT is responsible for preparing Site Specific BMP Plans. 8) Special Management Area (SMA) Permit will be in place along with any shoreline certification and/or shoreline setback variances prior to draft of ECP. 9) Section 9 of the River and Harbors Act: USCG has provided advanced approval dated December 23, 2008. The CONSULTANT will confirm that the advanced approval conditions are being met. 10) No underground injection is required as part of this Guideway segment. HART to secure Agreement from State DOT-Airports, State DOT-Highways, and U.S. Department of the Navy for storm drain connection to existing MS4s prior to construction.		
C) Inputs: 1) The CONSULTANT will furnish data, plans, engineering drawings and other project details for inclusion into permit applications. 2) For the NPDES NOI-C, the CONSULTANT will provide plans and estimated discharge volumes. 3) HART to provide copy of Section 9 of the River and Harbors Act approvals from USCG and dated December 23, 2008. 4) Archaeological Inventory Survey results.		
D) Deliverables: 1) Draft NPDES NOI-C Application 2) Final NPDES NOI-C Application		NTP # 3 3

ACTIVITY DESCRIPTION		Form SOW/01
Activity:	Activity Responsibility:	Issue Date:
Environmental	AECOM	09/20/2011
13.5 Prepare other permits and clearances	Task No. / Sub Task No.	Revision No:
	WBS - 1310.0050	Conformed
A) Activity Description:		
<p>1) The CONSULTANT to prepare applications for the following permits and clearances:</p> <ul style="list-style-type: none"> a) Storm drain connections (other than those associated with MS4 connection agreements with HDOT-Highways & HDOT-Airports and the U.S. Department of the Navy easement acquisition). b) Interstate airspace use approvals for H-1 Freeway Lanes Koko Head-bound near Honolulu Airport, H-1 Freeway Access ramps near Pearl Harbor Naval Base, and Freeway Access Ramps at Keehi Interchange (Design input only, HART to prepare application). c) Interstate access modification (Design input only, HART to prepare application). d) Form 7460.1 Notice of Proposed Construction or Alteration of Impacts to the Airport and FAA Facilities. e) Waiver to construction in runway protection zone. f) Flood Hazard District Compliance. g) Permit to perform work upon state highways from HDOT. h) Coordination for construction to cross or enter the State Energy Corridor. i) Grading, Grubbing, Stockpiling, Trenching from DPP. j) Landscaping Plans affecting HDOT roadways. k) Input for Utility Use & Occupancy Agreements as required. l) Noise Variance Permit. 		
B) Assumptions:		
<p>1) The CONSULTANT assumes that existing information and studies prepared for the FEIS, ROD, FAA ROD, MMP, PA and two (2) design documents prepared as part of this specific SOW will satisfy the permit application and clearance requirements.</p> <p>2) HART will establish any necessary utility engineering and/or construction agreements.</p> <p>3) Construction Contractor will be responsible for Street Usage Permit for City Streets and Use and Occupancy of State Highways.</p>		
C) Inputs:		
<p>1) The CONSULTANT will furnish data, plans, engineering drawings and other project details for inclusion into permit applications and/or clearances.</p>		
D) Deliverables:		NTP #
1) Draft Permit/Clearance Applications		2
2) Final Permit/Clearance Applications		3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Environmental 13.6 QC Review - Discipline and Inter-Discipline Review of Documents	Activity Responsibility: AECOM Task No. / Sub Task No. WBS- 1320.0010	Issue Date: 09/20/2011 Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Discipline quality control activities (checking of calculations, plans and specifications) will be initiated at the earliest possible opportunities as design tasks are completed. 2) Formal quality control reviews of drawing packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline Review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing the plans of other interfacing disciplines throughout each design phase. 5) Inter-Discipline Review is a review of the design drawing by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-Discipline Design Reviews will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed to verify that all QC activities have been completed. 7) QA/QC review will be performed prior to every formal submittal. 		
B) Assumptions: <ol style="list-style-type: none"> 1) N/A 		
C) Inputs: <ol style="list-style-type: none"> 1) Quality Assurance Plan. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

TASK 1400 - Maintenance of Traffic (MOT) Plans

Develop Maintenance of Traffic (MOT) plans to maximize the area available for all Guideway, Roadway-related and Utility relocation construction, minimize traffic disruption for both vehicular and pedestrian movement and maximize accessibility to adjacent properties and businesses. Prepare MOT plans for construction and identify where permits are required for access. MOT plans will be developed for both the utility and Guideway construction.

Note: Design of temporary ITS systems utilized in the maintenance of traffic is included in Task 1200, and not part of this task.

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Maintenance of Traffic	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
14.1 Development of MOT Plans Station 988+60 to Station 1190+00	Task-No. / Sub Task No. WBS – 1410.0010	Revision No: Conformed
Activity Description:		
<p>1) Work Zone Investigation/Coordination:</p> <ul style="list-style-type: none"> a) Identify/confirm work zone requirements. b) Identify work activity time periods as applicable. c) Identify anticipated work flow. d) Ensure MOT operations at intersections and other conflicting vehicular or multi-modal movements. <p>2) Development of MOT Plans:</p> <ul style="list-style-type: none"> a) NTP #1a - Prepare for and attend design workshop. b) NTP #1b - Assist in preliminary design schedule and schedule milestone for the MOT design for Station 988+60.43 to 1190+00. Revise MOT design drawings to incorporate the approved VE recommendations, as applicable, and other HART preferences. Ensure compliance of MOT design with applicable standards. c) NTP #2 - Prepare detailed working drawings and specifications for MOT-related components. Interface interim traffic signal design, roadway and signage improvements, and other work affecting traffic flow. Prepare MOT plans for the interim design phase. d) NTP #3 - Finalize interim design and prepare contract documents for MOT design. e) Site-specific TCPs for utility relocations, roadway improvements, traffic signal and intersection improvements, and other work outside of rail alignment. 		
Assumptions:		
<ul style="list-style-type: none"> 1) The available number of travel lanes will remain as existing during non-work periods. 2) Lane closures during off-peak periods only. 3) Maintain same number of travel lanes on roadway when all lanes are open during non-construction activity periods. 4) Excludes site-specific TCPs for utility relocations, roadway improvements, traffic signal and intersection improvements, and other work outside of rail alignment. 		

Inputs:

- 1) Preliminary plans and specifications for MOT plans.
- 2) Construction work activities, work flow, and schedule.
- 3) Construction activity staging.
- 4) HDOT Level III TMP standards.
- 5) Work zone coordination including phasing, schedule, and work flow.
- 6) Plans and specifications for MOT work.

Deliverables:

- | | NTP # |
|---|--------------|
| 1) Presented at two-day workshop (Graphic display of MOT recommendations) | 1a |
| 2) White paper report (summary of recommendations to be incorporated) | 1b |
| 3) Preliminary Engineering Submittal | 1b |
| 4) Interim Design Submittal | 2 |
| 5) Draft Final Design Submittal - Guideway | 3 |
| 6) Final Design Submittal - Guideway | 3 |

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Maintenance of Traffic	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
14.2 Development of MOT Plans Station 1190+00 to End (Phase 1)	Task No. / Sub Task No. WBS – 1410.0020	Revision No: Conformed
A) Activity Description:		
1) Work Zone Investigation/Coordination: <ol style="list-style-type: none"> a) Identify/confirm work zone requirements. b) Identify work activity time periods as applicable. c) Identify anticipated work flow. d) Ensure MOT operations at intersections and other conflicting vehicular or multi-modal movements. 		
2) Development of MOT Plans: <ol style="list-style-type: none"> a) NTP #1b - Assist in preliminary design schedule and schedule milestone for the MOT design for Station 988+60.43 to 1190+00. Revise MOT design drawings to incorporate the approved VE recommendations, as applicable and other HART preferences. Ensure compliance of MOT design with applicable standards. b) NTP #2 - Prepare detailed working drawings and specifications for MOT-related components. Interface interim traffic signal design, roadway and signage improvements, and other work affecting traffic flow. Prepare MOT plans for the interim design phase. c) NTP #3 - Finalize interim design and prepare contract documents for MOT design. 		
B) Assumptions:		
1) The available number of travel lanes will remain as existing during non-work periods. 2) Lane closures during off-peak periods only. 3) Maintain same number of travel lanes on roadway when all lanes are open during non-construction activity periods.		
C) Inputs:		
1) Preliminary plans and specifications for MOT plans. 2) Construction work activities, work flow, and schedule. 3) Construction activity staging. 4) HDOT Level III TMP standards. 5) Work zone coordination including phasing, schedule, and work flow. 6) Plans and specifications for MOT work.		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal - Guideway		3
4) Final Design Submittal - Guideway		3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Maintenance of Traffic	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: .09/20/2011
14.3 Development of MOT Plans Station 1190+00 to End (Phase 2)	Task No. / Sub Task No. WBS- 1410.0030	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Work Zone Investigation/Coordination: <ol style="list-style-type: none"> a) Identify/confirm work zone requirements. b) Identify work activity time periods as applicable. c) Identify anticipated work flow. d) Ensure MOT operations at intersections and other conflicting vehicular or multi-modal movements. 2) Development of MOT Plans: <ol style="list-style-type: none"> a) NTP #1b - Assist in preliminary design schedule and schedule milestone for the MOT design for Station 988+60.43 to 1190+00. Revise MOT design drawings to incorporate the approved VE recommendations, as applicable and other HART preferences. Ensure compliance of MOT design with applicable standards. b) NTP #2 - Prepare detailed working drawings and specifications for MOT-related components. Interface interim traffic signal design, roadway and signage improvements, and other work affecting traffic flow. Prepare MOT plans for the interim design phase. c) NTP #3 - Finalize interim design and prepare contract documents for MOT design. 		
B) Assumptions: <ol style="list-style-type: none"> 1) The available number of travel lanes will remain as existing during non-work periods. 2) Lane closures during off-peak periods only. 3) Maintain same number of travel lanes on roadway when all lanes are open during non-construction activity periods. 		
C) Inputs: <ol style="list-style-type: none"> 1) Preliminary plans and specifications for MOT plans. 2) Construction work activities, work flow, and schedule. 3) Construction activity staging. 4) HDOT Level III TMP standards. 5) Work zone coordination including phasing, schedule, and work flow. 6) Plans and specifications for MOT work. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal – Guideway 4) Final Design Submittal - Guideway 		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Maintenance of Traffic	Activity Responsibility: Wilson Okamoto Corporation	Issue Date: 09/20/2011
14.4 TMP / MOT Reports TMP Work Plan Schedule Coordination	Task No. / Sub Task No. WBS - 1420.0010	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Identify/confirm work zone requirements. 2) Identify work activity time periods as applicable. 3) Identify anticipated work flow and schedule. 4) Confirm MOT operations at intersections and other conflicting vehicular or multi-modal movements. 5) Obtain information from others including community concerns, stakeholder issues, and other public awareness information. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) The available number of travel lanes will remain as existing during non-work periods. 2) HART will identify off-site staging areas. 3) Construction zone requirements are as shown in the preliminary plans. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Preliminary plans and specifications for MOT plans. 2) Construction work activities, work flow, and schedule. 3) Construction activity staging. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal – Guideway		3
4) Final Design Submittal - Guideway		3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Maintenance of Traffic 14.5 TMP/MOT Reports TMP Analysis and Coordination and Plan	Activity Responsibility: Wilson Okamoto Corporation Task No. / Sub Task No. WBS - 1420.0020	Issue Date: 09/20/2011 Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Coordinate and obtain necessary information for Level III TMP. 2) Review any available MOT reports from Preliminary Engineering phase of project. 3) Collect traffic data. 4) Develop methodology to model existing and future traffic operational conditions. 5) Develop traffic projections based on historical trends and other relevant data sources as deemed appropriate by HART. 6) Identify and obtain approval for analysis methodology and tools used for analysis. 7) Establish traffic flow and delay standards for TMP. 8) Establish appropriate measures of effectiveness to assess compliance with standards. 9) Conduct queuing and volume analysis and using approved methodology for existing and projected conditions. 10) Conduct LOS analysis for existing and projected conditions. 11) Conduct analysis of traffic operations during construction. 12) Review incident and crash data and provide assessment on potential issues that need to be addressed in TMP. 13) Develop road network model for analysis using agreed upon methodology and tools. 14) Develop Traffic Management Plan Report. 15) Identify demand management strategies. 16) Conduct work zone impact analysis. 17) Prepare Traffic Management Plan Report including strategies, assessment of effectiveness, monitoring program, enforcement program, and contingency plan. 		
B) Assumptions: <ol style="list-style-type: none"> 1) Crash data will be provided by HDOT. 2) Synchro will be used as an analysis tool. 3) Other tools may be used in addition to or instead of Synchro based on agreed upon methodology. 4) The report will satisfy DOT Level III standards. 		

C) Inputs:	
<ol style="list-style-type: none"> 1) Preliminary plans and specifications for MOT plans. 2) Construction work activities, work flow, and schedule. 3) Construction activity staging and description of innovative construction strategies. 4) Acceptable Operational Levels of Service – to be jointly developed by HART and the CONSULTANT. 5) Community concerns and business impacts jointly developed by HART and the CONSULTANT. 6) Potential issues of seasonal impacts jointly identified by HART and the CONSULTANT. 7) Roadway classification, available existing traffic volumes, lane configuration and geometrics, actual roadway design designation, incident and crash data, signage and intersection controls, roadway capacity ratios, speed characteristics, and information on nearby projects. 8) TCPs. 9) Public awareness plan and strategies. 10) Non-project detours. 	
D) Deliverables:	NTP #
1) Preliminary Engineering Submittal	1b
2) Interim Design Submittal	2
3) Draft Final Design Submittal	3
4) Final Design Submittal	3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Maintenance of Traffic 14.6 QC Review - Discipline and Inter-Discipline Review of Documents	Activity Responsibility: AECOM Task No. / Sub Task No. WBS - 1430.0010	Issue Date: 09/20/2011 Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Discipline quality control activities (checking of calculations, plans and specifications) will be initiated at the earliest possible opportunities as design tasks are completed. 2) Formal quality control reviews of drawing packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline Review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing the plans of other interfacing disciplines throughout each design phase. 5) Inter-Discipline Review is a review of the design drawing by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-Discipline Design Reviews will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed to verify that all QC activities have been completed. 7) QA/QC review will be performed prior to every formal submittal. 		
B) Assumptions: <ol style="list-style-type: none"> 1) N/A 		
C) Inputs: <ol style="list-style-type: none"> 1) Quality Assurance Plan. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal – Guideway & Utility 4) Final Design Submittal – Guideway & Utility 		NTP # 1b 2 3 3

TASK 1500 - Public Involvement

The CONSULTANT will support HART's Public Involvement efforts. Anticipated roles include supporting and participating in community workshops or meetings hosted by HART to present Guideway final design and features to the community as needed. The CONSULTANT will provide illustrative materials, such as plans and other pertinent documents, as needed to help convey information to the public.

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Public Involvement	Activity Responsibility: Bright Light Marketing	Issue Date: 09/20/2011
15.1 Meetings and Development of Material in Support of Meetings	Task No. / Sub Task No. WBS - 1510.0010	Revision No: - Conformed
<p>A) Activity Description:</p> <p>1) The CONSULTANT will attend public involvement meetings and provide information and materials as requested by HART.</p> <p>a) The CONSULTANT will attend and meet with HART Public Involvement representatives to provide information and relevant updates as requested by HART.</p> <p>b) Prepare for HART meetings - The CONSULTANT will prepare agenda, minutes and debrief after HART meetings as directed. Follow up on requests, coordinate with team members (internal) and external partners.</p> <p>c) Meeting with Neighborhood Boards – The CONSULTANT will attend Neighborhood Board meetings. Present or speak at Neighborhood Board meetings when needed.</p> <p>d) Prep for Neighborhood Board meetings - The CONSULTANT will write minutes/debrief after the Neighborhood Board meetings as requested. Follow up on items related to the CONSULTANT’s work for Neighborhood Board meetings when applicable.</p> <p>e) Meeting with Public Organizations - The CONSULTANT will meet with public organizations, as directed by HART. The CONSULTANT will provide materials for these meetings as directed and support HART with logistics as needed. The CONSULTANT will also provide follow-up response or action when needed.</p> <p>f) The CONSULTANT will provide informational materials on the CONSULTANT’s Guideway final design and features, which are subject to HART’s approval.</p> <p>g) The CONSULTANT will provide support to HART as needed for up to three community meetings a year:</p> <p>i) Coordinate location – logistics.</p> <p>ii) Capture questions from audience. Follow up response.</p> <p>iii) Possible advertising for community meetings.</p> <p>h) Assist with general public involvement</p> <p>i) Participate in internal coordinating meetings with BLM and HART communication’s staff, when appropriate.</p> <p>ii) Assist where appropriate in the review and comment of news releases, fact sheets, and other communication materials.</p> <p>iii) Assist with support with public involvement, as needed.</p>		

<p>B) Assumptions:</p> <ol style="list-style-type: none"> 1) HART Meetings - Two-hour meetings once a month, up to a maximum of ten (10) for the design phase. Allow two hours to prepare for meeting. Allow two hours to write minutes/debrief after meeting. 2) Neighborhood board meetings. Allow three hours to attend each meeting. The CONSULTANT will attend meetings only as directed. Allow two hours to prepare and two hours to write minutes/debrief for each meeting. Assumes one meeting every three months. 3) Meeting with Public Organizations – Twenty (20) hours of meetings each month. The CONSULTANT will instigate meetings. The CONSULTANT will respond to requests for meetings. 4) News release - The CONSULTANT will prepare drafts for the HART to approve. Assume one every other month. 5) Informational materials – Five (5) hours a month. The CONSULTANT will prepare drafts for HART approval. 6) Review HART’s media distribution list, and make recommendations to additions to HART’s list. 	
<p>C) Inputs:</p> <ol style="list-style-type: none"> 1) Media and community relations materials. 	
<p>D) Deliverables:</p> <ol style="list-style-type: none"> 1) Public Involvement Support 2) Public Involvement Support 3) Public Involvement Support 4) Public Involvement Support 	<p>NTP #</p> <p>1a</p> <p>1b</p> <p>2</p> <p>3</p>

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Public Involvement 15.2 Coordinate/Provide Public Involvement to Support HART	Activity Responsibility: Kuiwalu	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 1510.0020	Revision No: Conformed
A) Activity Description: 1) The CONSULTANT will provide public involvement support for HART as requested. a) Respond to HART data calls, as requested. b) Assist HART as needed with the formulation of public relations messages as it pertains to the design of the Airport Segment. c) Prepare summary letter reports of project progress.		
B) Assumptions: 1) N/A		
C) Inputs: 1) FEIS, ROD, PA, MMP. 2) Project Design.		
D) Deliverables: 1) Summary letter reports 2) Summary letter reports 3) Summary letter reports		NTP # 1b 2 3

TASK 1600 - Quantity Take-offs

At each submittal, prepare material quantity take-offs to allow HART to perform a construction cost estimate. Format for the material quantity take-offs will be provided by HART.

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Quantity Take-Off 16.1 Review and Development	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 1610.0010	Revision No: Conformed
A) Activity Description: 1) For each submittal, the CONSULTANT will prepare material quantity take-offs to support HART in their development of a construction cost estimate. 2) Disciplines involved in the development of the Quantity take-off include: <ul style="list-style-type: none"> a) Track. b) Roadway. c) Drainage. d) Electrical. e) Structural. f) Utilities. g) ITS. h) Environmental. i) MOT. j) And others. 		
B) Assumptions: 1) Format for the Preliminary Engineering submittal material quantity takes-offs will be provided by HART.		
C) Inputs: 1) Project Work Plan. 2) Quality Assurance Plan.		
D) Deliverables: 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Quantity Take-Off 16.2 QC Review	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 1620.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Coordination of the Discipline Review of the Quantity Take-Off. 2) Formal quality control reviews of quantity take-off packages will be conducted prior to the submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) The Discipline Review is performed by staff not associated with the initial development of the Quantity Take-Off. 4) Once all the QC reviews are complete, a QA review is performed to verify that all QC activities have been completed. 5) QA/QC review will be performed prior to every formal submittal. 		
B) Assumptions: <ol style="list-style-type: none"> 1) N/A 		
C) Inputs: <ol style="list-style-type: none"> 1) Project Work Plan. 2) Quality Assurance Plan. 		
D) Deliverable: <ol style="list-style-type: none"> 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal 		NTP # 1b 2 3 3

TASK 1700 - Specifications

At each submittal, prepare outline and/or detailed specifications, depending on the design completeness for the submittal.

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Specifications 17.1 Review and Development	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS - 1710.0010	Revision No: Conformed
A) Activity Description: 1) For the specifications, at each submittal, the CONSULTANT will prepare an outline and/or detailed specifications, depending on the design completeness for the submittal. 2) Disciplines involved in the development of the specifications are: a) Track. b) Roadway. c) Drainage. d) Electrical. e) Structural. f) Utilities. g) ITS. h) Environmental. i) MOT. j) Geotechnical. k) And others.		
B) Assumptions: 1) Outlines will be developed for the Preliminary submittal. 2) Detailed specifications will be developed for the Final submittal.		
C) Inputs: 1) Project Work Plan. 2) Quality Assurance Plan. 3) H RTP Standard Specifications.		
D) Deliverables: 1) Preliminary Engineering Submittal 2) Interim Design Submittal 3) Draft Final Design Submittal 4) Final Design Submittal		NTP # 1b 2 3 3

ACTIVITY DESCRIPTION		Form SOW 01
Activity:	Activity Responsibility:	Issue Date:
Specifications	AECOM	09/20/2011
17.2 QC Review - Discipline and Inter-Discipline Review of Documents	Task No. / Sub Task No. WBS – 1720.0010	Revision No: Conformed
A) Activity Description:		
<ol style="list-style-type: none"> 1) Discipline quality control activities will be initiated at the earliest possible opportunities as design tasks are completed. 2) Formal quality control reviews of specification packages will be conducted prior to submittal of each deliverable. The review includes verifying the submittal addresses of all previous internal and external comments in accordance with the comment resolution matrices. 3) Discipline review is performed by staff not associated with the development of the original design. 4) Task discipline leads will be responsible for periodically reviewing the plans of other interfacing disciplines throughout each design phase. 5) Inter-Discipline Review is a review of the design drawing by all the other disciplines. This review is performed to ensure and verify interface of design. Formal Inter-discipline Design Reviews will be conducted prior to each submittal. 6) Once all the QC reviews are complete, a QA review is performed to verify that all QC activities have been completed. 7) QA/QC review will be performed prior to every formal submittal. 		
B) Assumptions:		
<ol style="list-style-type: none"> 1) Final Specifications in their entirety will be reviewed by each of the major disciplines. 2) Review is to verify coordination of design between disciplines in order to avoid, overlaps and possible errors. 		
C) Inputs:		
<ol style="list-style-type: none"> 1) Quality Assurance Plan. 		
D) Deliverables:		NTP #
1) Preliminary Engineering Submittal		1b
2) Interim Design Submittal		2
3) Draft Final Design Submittal		3
4) Final Design Submittal		3

TASK 1800 - Design Support during Bidding (NTP #4)

For the Airport Segment Guideway and Utilities Contract bidding period, provide support for the bidding process, prepare addenda if necessary, and assist HART in evaluating bids received.

ACTIVITY DESCRIPTION		Form SOW 01
Activity: Design Support During Bidding 18.1 Guideway and Utility Package	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 1810.0010	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Management, administration, and design support during Design Support During Bidding (NTP #4). 2) Attendance at Pre-Bid Conference. 3) As requested, assist HART in the construction solicitation process. 4) As requested, assist HART during the solicitation of the construction contract including provision of technical design support for questions or RFI's posed by potential bidders. 		
B) Assumptions: <ol style="list-style-type: none"> 1) An amount will be provided with justification and an amendment will be issued for NTP #4. 		
C) Inputs: <ol style="list-style-type: none"> 1) Final Design Bid Packages. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Response to RFI's 2) Preparation of Addendum 		NTP # 4 4

TASK 1900 - Design Support during Construction (NTP #5)

One construction contract for the Guideway and utility relocations will be advertised for all of the work designed under this Scope of Work. The construction period is to be determined. Upon issuance of NTP #5, the CONSULTANT will provide design support during the construction phase including, but not limited to, shop drawing review and approval, material samples review and approval, responding to contractor Requests for Information, periodic inspections, development of punchlists, and preparation of as-built drawings based on mark-ups from the contractor(s). Construction Management is not included in this Scope of Work.

ACTIVITY DESCRIPTION Form SOW 01

Activity: Design Support During Construction 19.1 Management and Administration	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 1910.0010	Revision No: - Conformed

A) Activity Description:

- 1) Management and Administration support during Design Support During Construction (DSDC).
- 2) Attendance and participation as required in meetings with HART and or the Contractor for design support and management.
- 3) Management activities associated with coordination and communication with HART, including development of progress reports and invoices.
- 4) Design progress and cost monitoring.
- 5) CONSULTANT management activities, including internal design team coordination and management.
- 6) Interface with HART via Contract Management System (CMS).
- 7) Document Control.
- 8) Management of subconsultants.
- 9) Administration of the ProjectWise system for control of design documents and CADD files.
- 10) Quality Assurance Management.

B) Assumptions:

- 1) No deliverable or milestones are associated with Design Support During Construction: Management and Administration; rather the effort is distributed over the duration of time associated with NTP #5.
- 2) An amount will be provided with justification and an amendment will be issued for NTP #5.

C) Inputs:

- 1) Project Work Plan.
- 2) Quality Assurance Plan.
- 3) Project Schedule.

D) Deliverables: 1) Meeting Minutes/Management Reporting	NTP # 5
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ACTIVITY DESCRIPTION		Form SOW 01
Activity: Design Support During Construction 19.2 Shop Drawing Review	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 1910.0020	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Structural: Review of Structural (bridge) shop drawings to ensure conformance to the design documents. 2) Drainage: Review of Drainage shop drawings to ensure conformance to the design documents. 3) Traffic: Review of Traffic shop drawings to ensure conformance to the design documents. 4) Rail: Review of Rail shop drawings to ensure conformance to the design documents. 5) Others: Review of shop drawings and other submittals as required to ensure conformance to the design documents for ITS, Environmental, Roadway and Utilities (or those not associated with Structural, Drainage, Traffic and Rail). 6) Grounding of rebars for corrosion protection. 7) Stray current test facilities. 8) Concrete mixture for stray current leakage protection. 		

B) Assumptions:

- 1) With regard to task tracking and budgeting, no deliverable or milestones are associated with Design Support During Construction: Shop Drawing Review; rather the effort is distributed over the duration of time associated with NTP #5.
- 2) An amount will be provided with justification and an amendment will be issued for NTP #5.
- 3) Structural - Review includes, but is not limited to:
 - a) Segment shop drawing.
 - b) Post-tensioning layout shop drawings.
 - c) Pre-tensioning detail shop drawings.
 - d) Bearing shop drawing.
 - e) Expansion joint shop drawings.
 - f) Precast beam shop drawings.
 - g) Post-tensioning substructure element bent shop drawing.
 - h) Reinforcement shop drawings.
- 4) Drainage - Review includes, but not limited to:
 - a) Culvert drawings.
 - b) Bridge deck inlets shop drawings.
 - c) Pipe runs shop drawings.
- 5) Traffic - Review includes, but not limited to:
 - a) Large signs shop drawings.
 - b) Small signs shop drawings.
 - c) Sign support structures shop drawing.

- 6) Rail - Review includes, all shop drawing associated with the rail.
- 7) Others - Review includes, all shop drawing associated with ITS, Environmental, Roadway, and Utilities (or those not associated with Structural, Drainage, Traffic and Rail).
- 8) Duration is based on the HART approved construction schedule.

C) Inputs:

- 1) Project Work Plan.
- 2) Quality Assurance Plan.
- 3) Schedule.

D) Deliverables: 1) Reviewed Shop Drawings	NTP # 5
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ACTIVITY DESCRIPTION		Form SOW 01
Activity: Design Support During Construction 19.3 As-Built Drawings	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 1910.0030	Revision No: Conformed

A) Activity Description:

- 1) Structural : Development of as-built structural (bridge) drawings.
- 2) Drainage: Development of as-built drainage drawings.
- 3) Traffic: Development of as-built traffic drawings.
- 4) Rail: Development of as-built rail drawings.
- 5) Others: Development of as-built drawing associated with ITS, environmental, roadway, and utilities (or those not associated with structural, drainage, traffic and rail).

B) Assumptions:

- 1) With regard to task tracking and budgeting, no deliverable or milestones are associated with Design Support During Construction: As-Built Drawings; rather the effort is distributed over the duration of time associated with NTP #5.
- 2) A nominal amount will be provided and an amendment will be issued for NTP #5.
- 3) Structural - Development of as-built structural drawings based on information received from the Contractor. The CONSULTANT is not responsible for the development of as-built data; rather the CONSULTANT is responsible only for the transcribing of Contractor-provided as-built data onto the drawings.
- 4) Drainage - Development of as-built drainage drawings based on information received from the Contractor. The CONSULTANT is not responsible for the development of as-built data; rather the CONSULTANT is responsible only for the transcribing of Contractor-provided as-built data onto the drawings.
- 5) Traffic - Development of as-built traffic drawings based on information received from the Contractor. The CONSULTANT is not responsible for the development of as-built data; rather the CONSULTANT is responsible only for the transcribing of Contractor-provided as-built data onto the drawings.
- 6) Rail - Development of as-built rail drawings based on information received from the Contractor. The CONSULTANT is not responsible for the development of as-built data; rather the CONSULTANT is responsible only for the transcribing of Contractor-provided as-built data onto the drawings.
- 7) Others - Development of as-built drawings based on information received from the Contractor. The CONSULTANT is not responsible for the development of as-built data; rather the CONSULTANT is responsible only for the transcribing of Contractor-provided as-built data onto the drawings.
- 8) Duration is based on the HART approved construction schedule.

C) Inputs:

- 1) Project Work Plan.
- 2) Quality Assurance Plan.

D) Deliverables: 1) As-Built Drawings	NTP # 5
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ACTIVITY DESCRIPTION		Form SOW 01
Activity: Design Support During Construction 19.4 Request For Information and Additional Support Activities	Activity Responsibility: AECOM	Issue Date: 09/20/2011
	Task No. / Sub Task No. WBS – 1910.0040	Revision No: Conformed
A) Activity Description: <ol style="list-style-type: none"> 1) Request for Information through HART: <ol style="list-style-type: none"> a) Structural: Respond to queries from the Contractor associated with the Structural design. b) Drainage: Respond to queries from the Contractor associated with the Drainage design. c) Traffic: Respond to queries from the Contractor associated with the Traffic design. d) Rail: Respond to queries from the Contractor associated with the Rail design. e) Others: Respond to queries from the Contractor associated with ITS, Environmental, Roadway and Utilities (or those not associated with Structural, Drainage, Traffic and Rail). 2) Other Support Activities: <ol style="list-style-type: none"> a) Review of Contractor initiated Change Orders, including: <ol style="list-style-type: none"> i) Technical review and analysis. ii) Quantity review. iii) Cost review. b) Respond to Contractor Non-Conformance Reports, including: <ol style="list-style-type: none"> i) Technical review and analysis of as-built condition. ii) Possible redesign to accommodate as-built conditions. iii) Development of replacement design. 		
B) Assumptions: <ol style="list-style-type: none"> 1) With regard to task tracking and budgeting, no deliverable or milestones are associated with Design Support During Construction: Request for Information and Additional Support Activities; rather the effort is distributed over the duration of time associated with NTP #5. 2) An amount will be provided and an amendment will be issued for NTP #5. 3) Duration is based on the HART approved construction schedule. 		
C) Inputs: <ol style="list-style-type: none"> 1) Project Work Plan. 2) Quality Assurance Plan. 		
D) Deliverables: <ol style="list-style-type: none"> 1) Respond to Requests for Information 2) Provide Change Order Evaluation 3) Respond to Contractor Non-Conformance Reports 		NTP # 5 5 5

**SPECIAL PROVISIONS
EXHIBIT 2A**

**HONOLULU RAIL TRANSIT PROJECT
AIRPORT SEGMENT GUIDEWAY AND UTILITIES CONTRACT**

CONTRACT COST ESTIMATE

**EXHIBIT 2A
CONTRACT COST ESTIMATE**

<u>Notice to Proceed</u>	<u>Cost</u>
1a: PREPARE SCHEDULE OF MILESTONES	\$784,136
1b: REVISION TO PRELIMINARY ENGINEERING (PE)	\$13,233,957
2: INTERIM DESIGN (ID)	\$17,048,698
3: FINAL DESIGN (FD)	\$6,186,155
4: DESIGN SUPPORT DURING BIDDING	TBD
5: DESIGN SUPPORT DURING CONSTRUCTION	<u>TBD</u>
Total Contract Amount	\$37,252,946
Allowance for Extra Work	<u>\$1,588,014</u>
Total Aggregate Amount	\$38,840,960

**SPECIAL PROVISIONS
EXHIBIT 2B**

**HONOLULU RAIL TRANSIT PROJECT
AIRPORT SEGMENT GUIDEWAY AND UTILITIES CONTRACT**

COMPENSATION AND INVOICING

EXHIBIT 2B
COMPENSATION AND INVOICING

1. Subject to the provisions set forth in this Agreement, the CONSULTANT will be paid periodically by HART for authorized and satisfactorily completed Work under this Agreement based on an approved Schedule of Milestones. Such payment shall be full compensation for Work performed, for all supervision, labor, supplies, materials, equipment or use thereof, taxes, and for all other necessary incidentals. The amount to be paid to the CONSULTANT shall be computed as hereinafter set forth; provided that such payment shall not exceed the amount of THIRTY-SEVEN MILLION TWO HUNDRED FIFTY-TWO THOUSAND NINE HUNDRED FORTY-SIX AND 00/100 DOLLARS (\$37,252,946.00), which includes all costs and fees associated with this Agreement, subject only to authorized adjustments as specifically provided for in this Agreement. In the event the CONSULTANT incurs costs or fees in excess of the Total Contract Amount, adjusted as provided herein, the CONSULTANT shall pay such excess from its own funds and shall have no claim against HART for payment of such excess.

2. The CONSULTANT shall submit a proposed Schedule of Milestones within twenty-two (22) working days after receipt of NTP #1a. The Schedule of Milestones is to be organized by NTP and will identify the Scope of Work ("SOW") activity code, describe the activity, specify the associated fixed-price amount and specify the estimated completion date. The CONSULTANT's Baseline Design Schedule must be conformed to the Schedule of Milestones. HART and the CONSULTANT shall reach agreement on the proposed Schedule of Milestones at which time HART will approve the Schedule of Milestones. HART's approved Schedule of Milestones shall be added to the Agreement by contract amendment and become part of the Agreement by amending Exhibit 2B-1 to these Special Provisions. In no event shall compensation exceed the amounts listed in the Schedule of Milestones or the Total Contract Amount.

3. **Payment Schedule.** Upon completion of Milestones for which NTP has been issued, the CONSULTANT shall submit to HART invoices for payment for Project Work completed on a schedule to be determined by HART and CONSULTANT in a form and in reasonable detail as determined by HART. Within thirty (30) days of receipt of invoice, and upon approval of the work satisfactorily completed and amount billed, HART will pay the invoice as approved. At no time shall the total cumulative amount paid for the Project Work exceed the Total Contract Amount. **The CONSULTANT shall notify HART in writing no later than ten (10) days after expending seventy five percent (75%) of the Total Contract Amount or whenever the CONSULTANT believes the Project Work cannot be completed for the Total Contract Amount.**

**EXHIBIT 2B-1
PROJECT PAYMENT SCHEDULE**

APPROVED SCHEDULE OF MILESTONES*

<u>Milestone</u>	<u>Amount</u>
NTP #1a Schedule of Milestones	\$784,136
NTP #1b: Revision to Preliminary Engineering	\$13,233,957
NTP #2 Interim Design (ID)	\$17,048,698
NTP #3 Final Design (FD)	<u>\$6,186,155</u>
Total Contract Amount	\$37,252,946
Allowance for Extra Work	<u>\$1,588,014</u>
Total Aggregate Amount	\$38,840,960

*Upon issuance of NTP #1a, the CONSULTANT is to provide a Schedule of Milestones to HART within twenty-two (22) working days. HART's approved Schedule of Milestones shall be added to the Agreement by contract amendment and become part of the Agreement by amending this Exhibit 2B-1.

EXHIBIT 3
CERTIFICATION REGARDING CONFLICT OF INTEREST

“Organizational conflict of interest” means that, because of other activities or relationships with other persons or firms, a Consultant (including its principal participants, directors, proposed consultants or subcontractors) would be unable or potentially unable to render impartial, technically sound assistance or advice to the Honolulu Authority for Rapid Transportation (HART); or the Consultant’s objectivity in performing the Work would or might be otherwise impaired.

On behalf of AECOM Technical Services, Inc., I certify that:
(Named Consultant)

(Check one)

The Consultant does not have any relationships with any firms or individuals that are or appear to be an organizational conflict of interest.

The Consultant has had the following relationships with the specific firm(s)/individual(s), identified on the attached sheet, which may be determined to be an organizational conflict of interest. I understand that based on the information I have provided, HART may exclude the Offeror from further consideration and may withdraw its selection if the real or apparent organizational conflict of interest cannot be avoided or mitigated. I further certify that the degree and extent of the relationship of the Consultant with these named firm(s)/individual(s) have been fully disclosed on the attached sheet.



(Signature of Authorized Official)

Rudolph Mina

(Print Name)

December 13, 2011

(Date)

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to
Yogi Kwong Engineers, LLC

(Name of Subcontractor/Consultant)

to perform the following type of work:

Yogi Kwong is one of two firms responsible for the geotechnical exploration in support of aerial guideway foundation
design. In addition, Yogi Kwong will be responsible for the development of geotechnical recommendations for
pavement reconstruction and civil retaining structures.

The minimum value of the Subcontract is \$2,250,000.00.

The Subcontractor/Consultant _____ is is not a certified DBE firm.

If certified, indicate certifying entity: _____. Include a name and telephone
number for certifying entity _____.

For the Consultant:


(Signature)

Rudolph Mina
(Printed Name)

District Manager
(Title)

December 13, 2011
(Date)

For the Subcontractor/Subconsultant:


Confirmed by: (Signature)

David R. Yogi, Jr.
(Printed Name)

Manager
(Title)

Nov. 21, 2011
(Date)

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to
Group 70 International, Inc.
(Name of Subcontractor/Consultant)

to perform the following type of work:

Group 70 will develop the plan set, quantities and specification for the project architectural design.

The minimum value of the Subcontract is \$100,000.00.

The Subcontractor/Consultant Group 70 is is not a certified DBE firm.

If certified, indicate certifying entity: _____ Include a name and telephone
number for certifying entity _____.

For the Consultant:

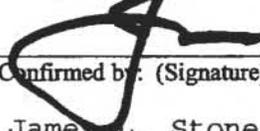

(Signature)

Rudolph Mina
(Printed Name)

District Manager
(Title)

December 13, 2011
(Date)

For the Subcontractor/Subconsultant:


Confirmed by: (Signature)

James L. Stone
(Printed Name)

Principal
(Title)

12-2-2011
(Date)

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. _____ intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to
Wilson Okamoto Corporation

(Name of Subcontractor/Consultant)

to perform the following type of work:

Design will include the project's roadway design, drainage design, traffic signal design, maintenance of traffic (MOT) plans, and structural design of the site structures. In addition to development of the plan set for the disciplines listed, Wilson Okamoto will be responsible for the development of quantities and the specification for these disciplines.

The minimum value of the Subcontract is \$4,500,000.00.

The Subcontractor/Consultant _____ is is not a certified DBE firm.

If certified, indicate certifying entity: _____ . Include a name and telephone number for certifying entity _____.

For the Consultant:

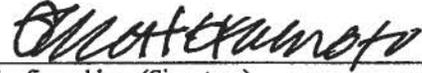

(Signature)

Rudolph Mina
(Printed Name)

District Manager
(Title)

December 13, 2011
(Date)

For the Subcontractor/Subconsultant:


Confirmed by: (Signature)

Gary T. Okamoto
(Printed Name)

President
(Title)

11/17/11
(Date)

Exhibit 4 – Letter of Subcontract Intent

SPECIAL PROVISIONS
Airport Segment Guideway
and Utilities Contract

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to

Ronald N. S. Ho & Associates, Inc.

(Name of Subcontractor/Consultant)

to perform the following type of work:

Design will include the project's electrical design and design of electrical utility relocations. In addition to the development of the plan set for the disciplines listed, Ronald N. S. Ho will be responsible for the development of quantities and specification for these disciplines.

The minimum value of the Subcontract is \$1,000,000.00.

The Subcontractor/Consultant _____ is X is not a certified DBE firm.

If certified, indicate certifying entity: _____. Include a name and telephone number for certifying entity _____.

For the Consultant:



(Signature)

Rudolph Mina

(Printed Name)

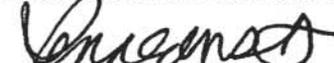
District Manager

(Title)

December 13, 2011

(Date)

For the Subcontractor/Subconsultant:



Confirmed by: (Signature)

Ronald N.S. Ho

(Printed Name)

President

(Title)

11/17/11

(Date)

Exhibit 4 – Letter of Subcontract Intent

SPECIAL PROVISIONS
Airport Segment Guideway
and Utilities Contract

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to
KSF, Inc.

(Name of Subcontractor/Consultant)

to perform the following type of work:

Three firms will participate in the viaduct structural design. KSF will assist in the design. In addition, KSF will be
responsible for the development of quantities and specification or their design elements.

The minimum value of the Subcontract is \$500,000.00.

The Subcontractor/Consultant _____ is is not a certified DBE firm.

If certified, indicate certifying entity: _____. Include a name and telephone
number for certifying entity _____.

For the Consultant:


(Signature)

Rudolph Mina
(Printed Name)

District Manager
(Title)

December 13, 2011
(Date)

For the Subcontractor/Subconsultant:


Confirmed by: (Signature)

David K. Fujiwara
(Printed Name)

President
(Title)

11/17/2011
(Date)

Exhibit 4 – Letter of Subcontract Intent

SPECIAL PROVISIONS
Airport Segment Guideway
and Utilities Contract

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to
TY Lin International
(Name of Subcontractor/Consultant)

to perform the following type of work:

The firms will participate in the viaduct structural design. T.Y. Lin International will assist in the design. In addition,
T.Y. Lin International will be responsible for the development of quantities and specification for their design elements.

The minimum value of the Subcontract is \$3,000,000.00.

The Subcontractor/Consultant _____ is is not a certified DBE firm.

If certified, indicate certifying entity: _____. Include a name and telephone
number for certifying entity _____.

For the Consultant:

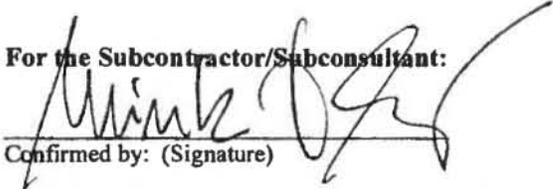
h —
(Signature)

Rudolph Mina
(Printed Name)

District Manager
(Title)

December 13, 2011
(Date)

For the Subcontractor/Subconsultant:


Confirmed by: (Signature)

Mirek Olmer
(Printed Name)

Vice President, Project Director
(Title)

11/21/2011
(Date)

Exhibit 4 – Letter of Subcontract Intent

SPECIAL PROVISIONS
Airport Segment Guideway
and Utilities Contract

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to

PBR Hawaii & Associates, Inc.
(Name of Subcontractor/Consultant)

to perform the following type of work:

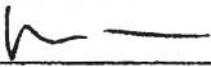
PBR Hawaii & Associates, Inc. will develop the plan set, quantities and specification for the project landscape design.

The minimum value of the Subcontract is \$250,000.00.

The Subcontractor/Consultant _____ is is not a certified DBE firm.

If certified, indicate certifying entity: _____. Include a name and telephone number for certifying entity _____.

For the Consultant:

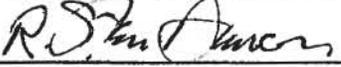

(Signature)

Rudolph Mina
(Printed Name)

District Manager
(Title)

December 13, 2011
(Date)

For the Subcontractor/Subconsultant:


Confirmed by: (Signature)

R. Stan Duncan
(Printed Name)

Executive Vice President
(Title)

November 11, 2011
(Date)

Exhibit 4 – Letter of Subcontract Intent

SPECIAL PROVISIONS
Airport Segment Guideway
and Utilities Contract

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to
Geolabs, Inc.

(Name of Subcontractor/Consultant)

to perform the following type of work:

Geolabs is one of two firms responsible for the geotechnical exploration and design. In addition, Geolabs will be
responsible for the development of geotechnical related specifications.

The minimum value of the Subcontract is \$4,750,000.00.

The Subcontractor/Consultant _____ is X is not a certified DBE firm.

If certified, indicate certifying entity: Not Applicable. Include a name and telephone
number for certifying entity Not Applicable.

For the Consultant:



(Signature)

Rudolph Mina

(Printed Name)

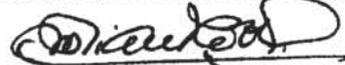
District Manager

(Title)

December 13, 2011

(Date)

For the Subcontractor/Subconsultant:



Confirmed by: (Signature)

Robin M. Lim

(Printed Name)

Vice President

(Title)

11/11/11

(Date)

Exhibit 4 – Letter of Subcontract Intent

SPECIAL PROVISIONS
Airport Segment Guideway
and Utilities Contract

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to
Shannon & Wilson

(Name of Subcontractor/Consultant)

to perform the following type of work:

Shannon & Wilson is responsible for the quality oversight of the two geotechnical exploration and design firms.

The minimum value of the Subcontract is \$150,000.00.

The Subcontractor/Consultant, Shannon & Wilson, Inc., is not a certified DBE firm.

If certified, indicate certifying entity: _____ . Include a name and telephone
number for certifying entity _____.

For the Consultant:

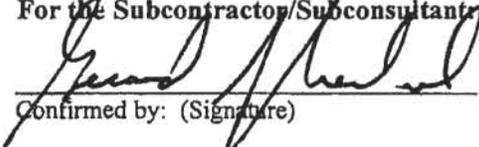

(Signature)

Rudolph Mina
(Printed Name)

District Manager
(Title)

December 13, 2011
(Date)

For the Subcontractor/Subconsultant:


Confirmed by: (Signature)

Gerard J. Buechel
(Printed Name)

President
(Title)

November 10, 2011
(Date)

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to
Bright Light Marketing Group, Inc.

(Name of Subcontractor/Consultant)

to perform the following type of work:

Bright Light Marketing Group, Inc. will assist HART with regards to public involvement for the project.

The minimum value of the Subcontract is \$150,000.00.

The Subcontractor/Consultant is is not a certified DBE firm.

*Bright Light Marketing Group, Inc. has submitted the forms for DBE certification, but has not yet received it.

If certified, indicate certifying entity: _____ Include a name and telephone
number for certifying entity _____.

For the Consultant:



(Signature)

Rudolph Mina

(Printed Name)

District Manager

(Title)

December 13, 2011

(Date)

For the Subcontractor/Subconsultant:



Confirmed by: (Signature)

Lynette Lo Kanda, aka Lynette Lo Tom

(Printed Name)

President & CEO

(Title)

November 15, 2011

(Date)

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 4
LETTER OF SUBCONTRACT INTENT

AECOM Technical Services, Inc. intends to subcontract Work for the
Airport Segment Guideway and Utilities Contract to
Ku'iwalu

(Name of Subcontractor/Consultant)
to perform the following type of work:

Ku'iwalu will assist HART with regards to public involvement for the project, focusing on the Hawai'ian
communities.

The minimum value of the Subcontract is \$30,000.00.

The Subcontractor/Consultant is is not a certified DBE firm.

If certified, indicate certifying entity: _____ Include a name and telephone
number for certifying entity _____.

For the Consultant:



(Signature)

Rudolph Mina

(Printed Name)

District Manager

(Title)

December 13, 2011

(Date)

For the Subcontractor/Subconsultant:



Confirmed by: (Signature)

DAWN N.S. CHANG

(Printed Name)

MANAGER

(Title)

11/10/11

(Date)

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 5
CERTIFICATE REGARDING INELIGIBLE CONTRACTORS

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER
INELIGIBILITY AND VOLUNTARY EXCLUSION FROM TRANSACTIONS
FINANCED IN PART BY THE U.S. GOVERNMENT**

I, Rudolph Mina, District Manager, hereby
(Name of Certifying Officer) (Title of Certifying Officer)

certify that AECOM Technical Services, Inc.
(Name of Contractor/Consultant)

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation by any Federal department or agency or from participation in Project No. _____;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in Paragraph 2 of this certification; and
4. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

If any Principal Participant is unable to certify to any of the statements in this certification, such prospective Principal Participant shall attach an explanation to this certification.

I hereby certify and affirm the truthfulness and accuracy of the above statement, and I understand that the provisions of 31 United States Code (U.S.C.) §3801 et seq., (Administrative Remedies for False Claims and Statements) are applicable hereto.

AECOM Technical Services, Inc.
Name of Consultant

1001 Bishop Street, Suite 1600
Street Address

Honolulu, HI 96813

City, State, Zip
808.521.3051

Telephone Number


Signature of Certifying Officer

(Note: The above certification merely certifies that the Consultant and its subcontractors are not declared by the Federal Government or have not voluntarily declared themselves debarred, suspended, or declared ineligible from doing transactions with the Federal Government or any of its agencies.)

Exhibit 5 - Certificate Regarding Ineligible Contractors

SPECIAL PROVISIONS
Airport Segment Guideway
and Utilities Contract

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SC-HET-1200008 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)

David R. Yogi, Jr.
Signed

David R Yogi, Jr
Typed or Printed Name

Yogi Kwong Engineers, LLC
Company Name

11/18/2011
Date

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SC-421-120038 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)

Signed



James L. Stone

Typed or Printed Name

Group 70 International inc.

Company Name

12-2-2011

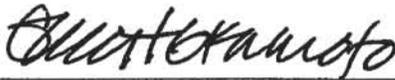
Date

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SC-1121-120028 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)



Signed _____

Gary T. Okamoto

Typed or Printed Name _____

Wilson Okamoto Corporation

Company Name _____

November 17, 2011

Date _____

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SCUBT-200038 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)



Signed

Ronald N.S. Ho

Typed or Printed Name

Ronald N.S. Ho & Associates, Inc.

Company Name

11/17/11

Date

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SL-HRT-120038 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)


Signed

David K. Fujiwara
Typed or Printed Name

KSF, Inc.
Company Name

November 14, 2011
Date

Honolulu High-Capacity Transit Corridor Project

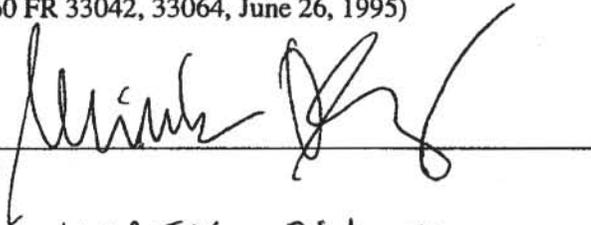
EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion,
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. HNL RT 3rd SEB, by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)

Signed



MIREK OMER

Typed or Printed Name

T.-Y. LIN INTERNATIONAL

Company Name

11/11/2011

Date

Exhibit 6 – Certificate Regarding Ineligible Subcontractors

SPECIAL PROVISIONS
Airport Segment Guideway
and Utilities Contract

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SEA-12-00030 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)



Signed

R. Stan Duncan
Typed or Printed Name

PBR Hawaii & Associates, Inc.
Company Name

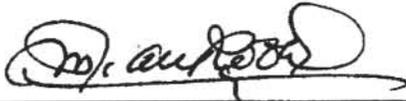
November 11, 2011
Date

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SC-421-120038 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)



Signed

Robin M. Lim

Typed or Printed Name

Geolabs, Inc.

Company Name

November 11, 2011

Date

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SC-421-200038 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)

Signed



Gerard J. Buechel

Typed or Printed Name

Shannon & Wilson, Inc.

Company Name

November 10, 2011

Date

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SL H&T-1200028 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)



Signed

Lynette Lo Kanda, aka Lynette Lo Tom, President & CEO

Typed or Printed Name

Bright Light Marketing Group, Inc.

Company Name

November 15, 2011

Date

EXHIBIT 6
CERTIFICATE REGARDING INELIGIBLE SUBCONTRACTORS

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

- 1) The prospective lower tier participant (Subcontractor/Subconsultant) certifies, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in Contract No. SC-HBT-1200030 by any federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation.

(60 FR 33042, 33064, June 26, 1995)



Signed

DAWN N.S. CHANG

Typed or Printed Name

HO'ĀKEA LLC DBA KU'IWALU

Company Name

11/10/11

Date

Honolulu High-Capacity Transit Corridor Project

EXHIBIT 7

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) **No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned,** to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.
- (2) **If any funds other than Federal appropriated funds have been paid or will be paid** to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions [as amended by "Government-wide Guidance for New Restrictions on Lobbying," 61 Federal Regulations 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, et seq.)].
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. §1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each expenditure or failure.]
AECOM Technical

The CONSULTANT, Services, Inc., certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the CONSULTANT understands and agrees that the provisions of 31 U.S.C. §3801, et seq., apply to this certification and disclosure, if any.

Company Name: AECOM Technical Services, Inc.
Signature: 
Print Name: Rudolph Mina
Title: District Manager
Date: December 13, 2011

NOTE: THE CONSULTANT IS REQUIRED PURSUANT TO FEDERAL LAW, TO INCLUDE THE ABOVE LANGUAGE IN SUBCONTRACTS OVER \$100,000 AND TO OBTAIN THIS LOBBYING CERTIFICATE FROM EACH SUBCONTRACTOR BEING PAID \$100,000 OR MORE UNDER THIS CONTRACT.

**SPECIAL PROVISIONS
EXHIBIT 8**

**HONOLULU RAIL TRANSIT PROJECT
AIRPORT SEGMENT GUIDEWAY AND UTILITIES CONTRACT**

FEDERAL REQUIREMENTS

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FEDERAL REQUIREMENTS

1.0 GENERAL

The CONSULTANT understands that Federal laws, regulations, policies, and related administrative practices applicable to this Agreement on the date signed may be modified from time to time. The CONSULTANT agrees that the most recent of such Federal requirements will govern the administration of the Agreement at any particular point in time, except if HART issues a written determination otherwise. To achieve compliance with changing Federal requirements, the CONSULTANT agrees to include notice in each subcontract that Federal requirements may change and that the changed requirements will apply to the subcontract as required.

1.1 No Government Obligation to Third Parties

(a) HART and the CONSULTANT acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying Agreement, absent the express written consent by the Federal Government, the Federal Government is not a party to this Agreement and shall not be subject to any obligations or liabilities to HART, the CONSULTANT, or any other party (whether or not a party to that Agreement) pertaining to any matter resulting from the underlying Agreement.

(b) The CONSULTANT agrees to include the above clause in each subcontract. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

1.2 Program Fraud and False or Fraudulent Statements and Related Acts

(a) The CONSULTANT acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. §§ 3801 *et seq.* and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying Agreement, the CONSULTANT certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying Agreement or the Federal Transit Administration (FTA) assisted project for which this Agreement work is being performed. In addition to other penalties that may be applicable, the CONSULTANT further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the CONSULTANT to the extent the Federal Government deems appropriate.

(b) The CONSULTANT also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under an Agreement connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. Chapter 53, the Federal Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5323(l) on the CONSULTANT, to the extent the Federal Government deems appropriate.

(c) The CONSULTANT shall include the above two clauses in each subcontract. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

1.3 Access to Records and Reports

(a) The CONSULTANT shall provide HART, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the CONSULTANT which are directly pertinent to this Agreement for the purposes of making

audits, examinations, excerpts and transcriptions. The CONSULTANT shall, pursuant to 49 C.F.R. § 633.17, provide the FTA Administrator or his authorized representatives, including any Project Management Oversight Contractor, access to the CONSULTANT's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. § 5302(a)(1), which is receiving federal financial assistance through the programs described at 49 U.S.C. §§ 5307, 5309 or 5311.

(b) The CONSULTANT shall permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

(c) The CONSULTANT shall maintain all books, records, accounts and reports required under this Agreement for a period of not less than three years after the date of termination or expiration of this Agreement, except in the event of litigation or settlement of claims arising from the performance of this Agreement, in which case the CONSULTANT shall maintain the same until HART, the FTA Administrator, the Comptroller General of the United States, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto.

1.4 Federal Changes

The CONSULTANT shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between the City and the FTA, as they may be amended or promulgated from time to time during the term of this Agreement. The CONSULTANT's failure to so comply shall constitute a material breach of this Agreement.

1.5 Civil Rights Requirements

The CONSULTANT shall comply with the following requirements and include the following requirements in each subcontract, modified only if necessary to identify the affected parties:

(a) Nondiscrimination. In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the CONSULTANT shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the CONSULTANT shall comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

(b) Equal Employment Opportunity. The following equal employment opportunity requirements apply to the underlying Agreement:

(1) Race, Color, Creed, National Origin, Sex. In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the CONSULTANT shall comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Agreement Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 *et seq.*, (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The CONSULTANT shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other

forms of compensation; and selection for training, including apprenticeship. In addition, the CONSULTANT shall comply with any implementing requirements FTA may issue.

(2) Age. In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § 623 and Federal transit law at 49 U.S.C. § 5332, the CONSULTANT shall refrain from discrimination against present and prospective employees for reason of age. In addition, the CONSULTANT shall comply with any implementing requirements FTA may issue.

(3) Disabilities. In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the CONSULTANT shall comply with the requirements of the U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the CONSULTANT shall comply with any implementing requirements FTA may issue.

(4) Access for Individuals with Disabilities. The CONSULTANT shall comply with 49 U.S.C. § 5301(d), which states the Federal policy that elderly individuals and individuals with disabilities have the same right as other individuals to use public transportation services and facilities, and that special efforts shall be made in planning and designing those services and facilities to implement transportation accessibility rights for elderly individuals and individuals with disabilities.

1.6 Disadvantaged Business Enterprises (DBE)

(a) DBE Assurances. The CONSULTANT and its subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The CONSULTANT shall carry out applicable requirements of 49 C.F.R. Part 26 in the award and administration of U.S. DOT-assisted Agreements. Failure by the CONSULTANT to carry out these requirements is a material breach of this Agreement, which may result in termination of this Agreement or such other remedy, as HART deems appropriate.

The above paragraph shall be included in each subcontract the CONSULTANT signs with a subcontractor.

(b) Prompt Payment. The CONSULTANT shall pay all subcontractors (DBEs and non-DBEs) for satisfactory performance of their subcontracts no later than ten (10) days from receipt of payment by HART. Full and prompt payment by the CONSULTANT to all subcontractors shall include retainage, if applicable.

(c) DBE Goal. The City has established a race neutral overall DBE goal of 3.83% for fiscal year 2011-2013. Although HART has not established a DBE Agreement goal for this Project, DBE firms and small businesses shall have an equal opportunity to participate in the Agreement. The CONSULTANT shall adhere to the following requirements:

(1) Take affirmative steps to use as many of the race-neutral means of achieving DBE participation identified at 49 C.F.R. § 26.51(b) as practicable to afford opportunities to DBEs to participate in the Agreement. A race-neutral measure is one that is, or can be, used to assist all small businesses.

(2) A DBE firm must perform a commercially useful function, i.e., must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing and supervising the work; and

(3) A DBE firm must be certified by the Hawai'i State Department of Transportation before its participation is reportable under paragraph (d) below;

(d) Reports to HART. The CONSULTANT shall report its DBE participation obtained through race-neutral means throughout the period of performance. The CONSULTANT shall submit the "DBE PARTICIPATION REPORT" reflecting payments made by the CONSULTANT to DBE subcontractors. Payments to the CONSULTANT will not be processed if the DBE PARTICIPATION REPORT is not properly completed and attached. The DBE PARTICIPATION REPORT shall be prepared in the format set forth in ATTACHMENT 1.6 a) to this Exhibit.

(e) Records. On request, the CONSULTANT shall make available for inspection, and assure that its subcontractors make available for inspection:

- (1) Records of prompt payments made in accordance with Section 1.6(b), above;
- (2) The names and addresses of DBE subcontractors, vendors, and suppliers under this Agreement;
- (3) The dollar amount and nature of work of each DBE subcontractor;
- (4) The social/economic disadvantaged category of the DBE firms, i.e. Black American, Hispanic American, Native American, Subcontinent Asian American, Asian Pacific American, Non-Minority Women, or Other; and
- (5) Other related materials and information.

(f) The CONSULTANT shall promptly notify HART, whenever a DBE subcontractor performing work related to this Agreement is terminated or fails to complete its work. The CONSULTANT shall also promptly notify HART of a DBE subcontractor's inability or unwillingness to perform and provide reasonable documentation.

1.7 Government-Wide Debarment and Suspension (Non-procurement)

(a) This Agreement is a covered transaction for purposes of 2 C.F.R. § 180.220(b) and 2 C.F.R. § 1200.220. As such, the CONSULTANT is required to verify that none of the CONSULTANT, its principals, as defined at 2 C.F.R. § 180.995, or affiliates, as defined at 2 C.F.R. § 180.905, are excluded or disqualified as defined at 2 C.F.R. § 180.940 and 2 C.F.R. § 180.935.

(b) The CONSULTANT is required to comply with 2 C.F.R. § 180, Subpart C, as supplemented by 2 C.F.R. § 1200, Subpart C, and must include the requirement to comply with 2 C.F.R. § 180, Subpart C, as supplemented by 2 C.F.R. § 1200, Subpart C, in any lower tier covered transaction equal to or exceeding \$25,000 it enters into. By signing the Agreement, the CONSULTANT certifies as follows:

The certification in this clause is a material representation of fact relied upon by HART. If it is later determined that the CONSULTANT knowingly rendered an erroneous certification, in addition to remedies available to HART, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The CONSULTANT agrees to comply with the requirements of 2 C.F.R. § 180, Subpart C, as supplemented by 2 C.F.R. § 1200, Subpart C, throughout the Agreement period. The CONSULTANT further agrees to include a provision requiring such compliance in its lower tier covered transactions equal to or exceeding \$25,000.

1.8 Lobbying

The "CERTIFICATION REGARDING LOBBYING," as executed by the CONSULTANT in Exhibit 7 of the Special Provisions is incorporated herein by reference. The CONSULTANT and its subcontractors at every tier shall comply with U.S. DOT regulations, "New Restrictions on Lobbying," 49 C.F.R. Part 20, modified as necessary by 31 U.S.C. § 1352, which requires that no Federal appropriated funds shall be used to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal Agreement, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal Agreement, grant, or award covered by 31 U.S.C. § 1352. Such disclosures are forwarded from tier to tier up to HART.

1.9 Clean Air Requirements

(a) The CONSULTANT shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 *et seq.* The CONSULTANT shall report each violation to HART and understands and agrees that HART will, in turn, report each violation as required to FTA and the appropriate EPA Regional Office.

(b) The CONSULTANT shall include the above clause in each subcontract exceeding \$100,000.

1.10 Clean Water Requirements

(a) The CONSULTANT shall comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 *et seq.* The CONSULTANT shall report each violation to HART and understands and agrees that HART will, in turn, report each violation as required to FTA and the appropriate EPA Regional Office.

(b) The CONSULTANT shall include the above clause in each subcontract exceeding \$100,000.

1.11 Fly America Requirements

(a) The CONSULTANT shall comply with 49 U.S.C. § 40118 (the "Fly America Act") in accordance with the General Services Administration's regulations at 41 C.F.R. Parts 301-10, which provide that HART and sub-recipients of Federal funds and their consultants are required to use U.S. Flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The CONSULTANT shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. Flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements.

(b) The CONSULTANT shall include the requirements of this section in all subcontracts that may involve international air transportation.

1.12 Energy Conservation Requirements

(a) The CONSULTANT shall comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

(b) The CONSULTANT shall include the above clause in each subcontract at every tier. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to the provisions.

1.13 Recycled Products

The CONSULTANT agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act as amended (42 U.S.C. § 6962), including but not limited to the regulatory provisions of 40 C.F.R. Part 247, and Executive Order No. 12873, as they apply to the procurement of the items designated in Subpart B of 40 C.F.R. Part 247.

1.14 ADA Access

The CONSULTANT shall comply with the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 et seq., which requires that accessible facilities and services be made available to individuals with disabilities; and with the Architectural Barriers Act of 1968, as amended, 42 U.S.C. §§ 4151 et seq., which requires that buildings and public accommodations be accessible to individuals with disabilities, and any subsequent amendments to these laws. In addition, the CONSULTANT agrees to comply with all applicable implementing Federal regulations and directives and any subsequent amendments thereto.

1.15 Seismic Safety

The CONSULTANT shall ensure that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in the U.S. Department of Transportation's Seismic Safety Regulations (49 C.F.R. Part 41) and shall certify to compliance to the extent required by the regulation. The CONSULTANT also agrees to ensure that all work performed under this Agreement including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the Project.

1.16 Text Messaging While Driving

In accordance with Executive Order No. 13513, Federal Leadership on Reducing Text Messaging While Driving, October 1, 2009, 23 U.S.C.A. § 402 note, and U.S. DOT Order 3902.10, Text Messaging While Driving December 30, 2009, the CONSULTANT is encouraged to comply with the terms of the following:

(a) Definitions.

(1) "Driving" means operating a motor vehicle on a roadway, including while temporarily stationary because of traffic, a traffic light, stop sign, or otherwise. "Driving" does not include being in your vehicle (with or without the motor running) in a location off the roadway where it is safe and legal to remain stationary.

(2) "Text Messaging" means reading from or entering data into any handheld or other electronic device, including for the purpose of short message service texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication. The term does not include the use of a cell phone or other electronic device for the limited purpose of entering a telephone number to make an outgoing call or answer an incoming call, unless the practice is prohibited by State or local law.

(b) Safety. The CONSULTANT is encouraged to:

(1) Adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers including policies to ban text messaging while driving:

(i) CONSULTANT -owned or CONSULTANT -rented vehicles or Government-owned, leased or rented vehicles;

(ii) Privately-owned vehicles when on official Project related business or when performing any work for or on behalf of the Project; or

(iii) Any vehicle, on or off duty, and using an employer supplied electronic device.

(2) Conduct workplace safety initiatives in a manner commensurate with the CONSULTANT's size, such as:

(i) Establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving; and

(ii) Education, awareness, and other outreach to employees about the safety risks associated with text messaging while driving.

(3) Include this Special Provision in its subagreements with its subrecipients and third party contracts and also encourage its subrecipients, lessees, and third party contractors to comply with the terms of this Special Provision and include this clause in each subagreement, lease, and subcontract at each tier financed with Federal assistance provided by the Federal Government.

1.17 Sensitive Security Information

The CONSULTANT, as a third party contractor must protect, and take measures to ensure that its subcontractors at each tier protect, "sensitive security information" made available during the administration of a third party contract or subcontract to ensure compliance with 49 U.S.C. § 40119(b) and implementing U.S. DOT regulations, "Protection of Sensitive Security Information," 49 C.F.R. Part 15, and with 49 U.S.C. § 114(r) and implementing Department of Homeland Security regulations, "Protection of Sensitive Security Information", 49 C.F.R. Part 1520.

1.18 Incorporation of FTA Terms

(a) The Special Provisions to the Agreement are to include, in part, certain Standard Terms and Conditions required by the U.S. DOT, whether or not expressly set forth in the preceding provisions. All contractual provisions required by the U.S. DOT, as set forth in FTA Circular 4220.1F are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The CONSULTANT shall not perform any act, fail to perform any act, or refuse to comply with any HART requests which would cause HART to be in violation of the FTA terms and conditions.

(b) The CONSULTANT shall include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

ATTACHMENT 1.6 a) – DBE PARTICIPATION REPORT

DBE PARTICIPATION REPORT				
This report shall be submitted with each invoice as a condition of payment under this Contract.				
Project Name:				
Contract No:		Consultant Name:		
Federal ID No.: (OWP WE #, FTA Grant #, FHWA Project #)		Contract Amount (including amendments):		\$
Period Covered By This Report:	Current (Invoice # _____)		Total to Date	
Total Invoice Amount	(A) \$		(B) \$	
Payment Requested:	DBE? (Yes/No) DBE Code (if "Yes")	Prior Amount*	Current Amount*	Total Amount to Date*
Prime Consultant		\$	\$	\$
Subcontractors (attach additional sheets as needed):				
Name: Type of Work:		\$	\$	\$
Name: Type of Work:		\$	\$	\$
Name: Type of Work:		\$	\$	\$
Name: Type of Work:		\$	\$	\$
TOTALS		\$	\$	(C) \$
DBE Participation to Date (C/B)		%		

****Insert dollar amounts for DBEs only***

ATTACHMENT 1.6 b) - FINAL REPORT OF DBE PARTICIPATION

This report must be submitted by the Consultant with the final invoice or request for payment under this contract.

Project Title: _____

Contractor Name: _____

Project No.: _____ Contract No.: _____

Period Covered by this Report: _____

Contract Amount (including amendments): \$ _____

Final Payment Amount: \$ _____ Invoice No.: _____

Total Payment to DBE: \$ _____

All Subcontractors (DBE and non-DBE) & DBE Suppliers or Manufacturers	Type of Service or Materials Provided	Subcontract Amount
Name Address Telephone No.		

Add additional sheets as necessary.

Signature

Print Name & Title

**ATTACHMENT 1.6 b) - INSTRUCTIONS FOR COMPLETING THE
FINAL REPORT OF DBE PARTICIPATION**

All subcontractors, suppliers and manufacturers should be listed on the FINAL REPORT OF DBE PARTICIPATION in the same order as listed in the proposal.

Project Title:	Self Explanatory
Project No.:	Self Explanatory
Period Covered by this Report:	Same period as invoice period
Consultant Name:	Self-Explanatory
Contractor No:	Self-Explanatory
Contract Amount (including amendments):	Less Mobilization, Force Account Items and Allowance Items Amendments should be listed separately with an explanation of how it was allocated to DBEs and non-DBEs
Invoice No.:	Self-Explanatory
Final Payment Amount:	Self-Explanatory
Total Payment to DBE	Total \$ amount paid to DBE

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**GENERAL TERMS AND CONDITIONS FOR CONTRACTS
FOR PROFESSIONAL SERVICES FOR THE CITY AND
COUNTY OF HONOLULU (8/2000)**

HONOLULU RAIL TRANSIT PROJECT

AIRPORT SEGMENT GUIDEWAY AND UTILITIES CONTRACT

(8/00)

**GENERAL TERMS AND CONDITIONS
FOR CONTRACTS FOR PROFESSIONAL SERVICES
FOR THE
CITY AND COUNTY OF HONOLULU**

SECTION 1 - DEFINITIONS; GENERAL PROVISIONS

1.1 DEFINITIONS. Terms as used in these General Terms and Conditions and the contract, unless the context requires otherwise, shall have the following meaning:

"Amendment" means modification.

"Change order" means a written order signed by the officer-in-charge and approved by the Director of Budget and Fiscal Services, directing the contractor to make changes which the changes clause of the contract authorizes the officer-in-charge to order without the consent of the contractor.

"City" means the City and County of Honolulu, State of Hawaii.

"Contract" means the written agreement between the City and the successful contractor.

"Contractor" or "consultant" means the person having a contract with the City.

"Day" means calendar day unless otherwise specified.

"Design and plans" means any and all designs, plans, construction drawings, specifications, cost estimates, work schedules, proposals, studies, reports and other items.

"Designee" means a person appointed by the Director of Budget and Fiscal Services or the officer-in-charge to act on his/her behalf with delegated authority.

"Director of Budget and Fiscal Services" means the chief procurement officer of the executive branch of the City and County of Honolulu, or the director's designee.

"General terms and conditions" means these General Terms and Conditions for Contracts for Professional Services for the City and County of Honolulu.

"HRS" means the Hawaii Revised Statutes of the State of Hawaii.

"Modification" means any written alteration in specifications, delivery point, rate of delivery, period of performance, price, quantity, or other provisions of the contract accomplished by mutual action of the parties to the contract.

"Notice to proceed" means the written document indicating the official commencement date of services.

"Officer-in-charge" means the head of the department or a designee of the officer-in-charge for which services are being rendered.

"Professional services" means those services within the scope of the practice of architecture, landscape architecture, professional engineering, land surveying, real property appraisal, law, medicine, accounting, dentistry, or any other practice defined as professional pursuant to section 415A-2, HRS, or the professional and scientific occupation series contained in the United States Office of Personnel Management's Qualifications Standards Handbook.

"Qualified list method" means the method of source selection for professional services under HRS 103D-304.

1.2 GENERAL PROVISIONS

1.2.1 Nondisclosure of designated trade secrets or proprietary information. A person shall request in writing nondisclosure of designated trade secrets or other proprietary data to be confidential. *Such data shall accompany the proposal, be clearly labeled as confidential, and shall be readily separable from other data in order to facilitate eventual public inspection of the nonconfidential portion of the data.* [3-122-46, HAR]

1.2.2 Independent price determination. By submitting an offer or price, the person certifies that the price submitted for the contract was independently arrived at without collusion. [3-122-192, HAR]

1.2.3 No reimbursement. The City shall not provide any reimbursement for the cost of developing or presenting proposals in response to the request for proposal. Failure to include the requested information may have a negative impact on the evaluation of the offeror's proposal.

1.2.4 Cancellation of solicitation. Solicitations may be canceled in whole or in part when in the best interest of the agency. [3-122-95, HAR]

1.2.5 Determination of contractual terms and conditions. The Director of Budget and Fiscal Services is authorized to determine the contractual provisions, terms, and conditions of solicitations and contracts, provided such provisions, terms, and conditions are not contrary to statutory or Chapter 91, HRS, administrative rule requirements governing the procurement. [3-122-7, HAR]

1.2.6 Any notice required or permitted by the provisions hereunder or under the contract to be given by a party to any other party, shall be written and either shall be delivered personally or mailed postage prepaid by certified mail, return receipt requested, to each other party at the address and to the person designated by each party in the contract. No other method of notice shall be effective. If notice is given by mail, it shall be effective one business day following the date it is mailed. If notice is hand delivered, it shall be effective upon receipt. Any change of address of either of the parties shall be effective upon receipt of written notice of such change by the other party.

1.2.7 If any term, condition, provision, covenant or agreement of the terms hereunder or under the contract or the application thereof to any person or circumstance is rendered or held invalid, illegal or unenforceable under the laws of the State of Hawaii or the United States of America, such part of the terms hereunder or under the contract as shall have been rendered or held to be invalid, illegal or unenforceable shall not affect the validity of the terms hereunder or under the contract as a whole or the remainder of the terms hereunder or under the contract and the application of such part to other persons and circumstances, but shall be given effect and enforced without such part to the greatest extent permitted by applicable law.

1.2.8 The provisions of this document and the contract shall be interpreted in accordance with the laws of the State of Hawaii as those laws are construed and amended from time to time.

1.2.9 The titles of headings of sections, subsections and paragraphs are intended for convenience of reference and shall not be considered as having any bearing on their interpretation.

1.2.10 All words used in the singular shall extend to and include the plural. All words used in the plural shall extend to and include the singular. All words used in any gender shall extend to and include all genders.

1.2.11 Managed Competition Review. All contracts executed on or after July 20, 1998 which will extend beyond June 30, 2001 (including contracts which have initial terms ending before June 30, 2001, with options to extend beyond June 30, 2001) will be subject to the Managed Competition Review, as defined below.

During its term, the contract shall be subject to a single review by the City pursuant to the managed process for public-private competition to be developed under Part III, Section 6 of Act 230, Session Laws of Hawaii 1998. It is the understanding of the parties that, as a result of the managed process review, the Agreement may be terminated by the City, renegotiated by mutual agreement of the parties, or continued in its current form. Any termination pursuant to this Section shall be deemed a termination for convenience.

1.2.12 Cooperation. The contractor shall cooperate and coordinate with other contractors who may be employed by the City on the same or related projects of the City, and to the extent possible, shall avoid interference therewith, and shall cooperate with the other contractors so as to avoid unnecessary delay or hindrance in the performance of their respective contracts. Any difference or conflict which may arise between the contractor and the other contractors of the City shall be resolved by the officer-in-charge, whose decision shall be final and binding.

1.2.13 Confidentiality. When dealing with the news media, the contractor is expected to be circumspect and to treat all matters falling within the scope of the contract with the utmost confidentiality. The contractor shall consult with and/or obtain the consent of the officer-in-charge prior to having conversations with or giving public interviews to the news media or any other members of the public.

SECTION 2 - HAWAII ADMINISTRATIVE RULES (HAR)

The Public Procurement Code (HRS Chapter 103D) and the Hawaii Administrative Rules, Title 3, Department of Accounting and General Services, State of Hawaii (HAR), govern the procurement of goods and services and are by reference incorporated herein and made a part of the request for proposals and contract documents.

Wherever "chief procurement officer" appears in the HAR, for the Board of Water Supply (BWS), it shall mean the Manager and Chief Engineer of the BWS, for all others it shall mean the Director of Budget and Fiscal Services.

Wherever "head of the purchasing agency" and "procurement officer" appear in the HAR, both shall mean the officer-in-charge, or their authorized designees. For all agencies except the Board of Water Supply, the officer-in-charge shall have authority to act as specified herein.

Sections of the HAR are provided in whole or in part in these general terms and conditions for convenience only and the applicable section numbers are indicated in brackets. These provisions are not intended to relieve the contractor from the responsibility of familiarizing themselves with the HAR relating to this contract. Should any provision of these general terms and conditions be found to be inconsistent with the HAR, the provision in the HAR shall take precedent.

SECTION 3 - AWARD AND EXECUTION OF CONTRACT

3.1 AWARD OF CONTRACT. The contractor, upon being selected to render the services for the project, will be notified of its commission by the officer-in-charge. Said notice shall not be construed to be authorization to proceed with the performance of services under the contract.

3.2 EXECUTION OF CONTRACT

3.2.1 If the contractor is an individual, or partnership, the contractor shall cause the contract to be signed before a notary public duly acknowledged. If the contractor is a corporation, or if the joint venture is made up of two or more corporations, the contractor shall cause the contract to be signed and sealed before a notary public who shall acknowledge the person(s) signing, their titles, and shall affix thereto their corporate resolution, or other instrument vesting such officer with authority to sign the contract on their behalf.

3.2.2 If performance and payment bonds are required in the solicitation or contract, such documents shall be executed in the same manner above.

3.2.3 The signed contract, bonds, if any bonds are required, shall be returned together with evidence of insurance coverages as may be required, to the officer-in-charge for further processing, within ten days after notification of award.

3.3 CONTRACT NOT BINDING UNLESS PROPERLY EXECUTED AND APPROPRIATION AVAILABLE. The contract shall not be binding or of any force and effect without an endorsement by the Director of Budget and Fiscal Services that there is an appropriation or balance of an appropriation over and above all outstanding contracts sufficient to cover the amount required by the contract.

3.3.1 Exceptions to the certification of funds required above are:

- (1) If a contract is a multi-term contract pursuant to section 3-122-149, HAR, the Director of Budget and Fiscal Services shall only be required to certify that there is an appropriation or balance of an appropriation over and above all outstanding contracts that is sufficient to cover the amount required to be paid under the contract during the current fiscal year or remaining portion of the current fiscal year of the first term of the multi-term contract. Payment and performance obligations for succeeding fiscal periods shall be subject to the availability and appropriation of funds therefore from sources which are identified in writing;
- (2) If the contract is one under which the total amount to be paid to the contractor cannot be accurately estimated at the time the contract is to be awarded; and

- (3) If there is no direct expenditure of public funds from the City to the contractor.
- (4) Certification of a portion of the total funds required for a contract may be permitted when an immediate solicitation will result in significantly more favorable contract terms and conditions to the City than a solicitation made at a later date; provided that certification for partial funding shall be permitted only if the Director of Budget and Fiscal Services states in the certificate that the availability of funds in excess of the amount certified as available shall be contingent upon future appropriations or special fund revenues. All contracts partially funded shall be enforceable only to the extent to which funds have been certified as available.

3.3.2 Contracts involving federal funds. Unless otherwise specified in the solicitation, for any contract supplemented by federal funds or receiving one hundred per cent federal funds, payment shall be made upon receipt of federal funds. The obligation of the City shall extend only to that portion of funds certified to and payable out of City funds. [3-122-102; 3-122-103, HAR]

3.4 COMMENCEMENT OF WORK. Work shall not commence until a contract has been executed and availability of funds certified by the Director of Budget and Fiscal Services, and the officer-in-charge has issued a written notice to proceed or the executed contract specifies the official commencement for services to begin.

SECTION 4 - LEGAL RELATIONS AND RESPONSIBILITY

4.1 INDEPENDENT CONTRACTOR

4.1.1 The contractor shall perform the work as an independent contractor and shall indemnify and hold harmless the City, its departments, and all of their officers, employees or agents, from any and all deaths, injuries, losses and damages to persons or property, and any and all claims, demands, suits, action and liability therefor including reasonable attorney fees and cost of defense, caused by error, omissions or negligence in the performance of the contract by the contractor or the contractor's subcontractors, agents and employees and this requirement shall survive the termination of contract..

The contractor is an independent contractor and shall not be deemed to be an agent, servant, representative or employee of the City. The contract shall not be construed to create a partnership or joint venture between the City and the contractor.

4.1.2 Laws, regulations. The contractor shall keep itself fully informed of all laws, ordinances, codes, rules and regulations, governmental general and development plans, setback limitations, rights-of-way, and all changes thereto, which in any manner affect the contract and the performance thereof. The contractor shall comply with all such laws, ordinances, codes, rules and regulations, governmental general and development plans, setback limitations, rights-of-way, including the giving of all notices necessary and incident to the proper and lawful prosecution of the work, and all changes thereto. If any discrepancy or inconsistency is discovered between the contract and any such law, ordinance, code, rule, regulation, design standard, design criterion, governmental general and development plans, setback limitation, rights-of-way, the contractor shall forthwith report the same in writing to the officer-in-charge.

4.2 COPYRIGHT OR PATENT

4.2.1 If the contractor is required or desires to use any design, device, material or process covered by letters of patent or copyright, the right for such use shall be procured by the contractor from the patentee or owner. The contractor shall indemnify and hold harmless the City and its departments, from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright in connection with the work to be performed under the contract, and shall indemnify the City and its departments, and all of their officers, employees or agents, for any costs, expenses and damages which it may be obliged to pay by reason of any such infringement at any time during the prosecution or after the completion of the work.

4.2.2 The City shall have an unrestricted, royalty-free, nonexclusive and irrevocable license to reproduce, publish, translate or otherwise use and to authorize others to publish and use all materials obtained or produced in connection with the work hereunder which may be copyrighted by the contractor prior to the completion of the contract.

4.3 INSURANCE

4.3.1 Unless otherwise specified in contract documents, the contractor shall procure or cause to be procured and maintain (as provided herein), at no cost to the City, during the life of this contract and any extensions thereof, all insurance to cover the operations under this contract, that may be required under the laws, ordinances or regulations of any governmental authority, including but not limited to the coverages below. The contractor shall either include all tiers of subcontractors, if any, under the policies required under paragraphs 2 through 4, to the extent permitted by law, or shall require all subcontractors to maintain coverages described in paragraphs 1 through 4.

1. Workers Compensation and Employers Liability Insurance. Contractor shall maintain workers compensation and employers liability insurance. Workers compensation coverage shall be in accordance with State statutes. Employers liability coverage shall provide limits of not less than \$100,000 each accident for bodily injury by accident or \$100,000 each employee, \$100,000 aggregate, for bodily injury by disease.
2. Commercial General and Umbrella Liability Insurance . Contractor shall maintain commercial general liability (CGL) and if necessary commercial umbrella insurance with a limit of not less than \$1,000,000 each occurrence, and general aggregate. CGL insurance shall be written on ISO occurrence form, CG 00 01 (or a substitute form providing equivalent coverage), and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract). The City shall be included as an additional insured under the CGL, using ISO additional insured endorsement CG 20 10 (or equivalent), and under the commercial umbrella, if any. The policy(ies) shall contain a waiver of subrogation in favor of the City.
3. Business Automobile and Umbrella Liability Insurance . Contractor shall maintain business auto liability (including no-fault coverage) and if necessary, commercial umbrella liability insurance with a limit of not less than \$1,000,000 each accident. Such insurance shall cover liability arising out of any auto (including owned, hired, and non-owned autos) used by contractor in the performance of this contract. Business auto coverage shall be written on ISO form CA 00 01, CA 00 05, CA 00 12, CA 00 20, or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage.

4. Professional Liability Insurance . The contractor shall maintain professional liability insurance with limits of not less than \$1,000,000 per claim/annual aggregate, covering the contractor, the contractor's employees or agents for liability arising out of errors, omissions, or negligence in the performance of professional services under the contract. Such insurance shall remain in full force and effect continuously for the period of design and construction of the work, and for a period of 1 year following substantial completion of construction, provided that such coverage is reasonably available at commercially affordable premiums, as mutually determined and agreed.

4.3.2 The insurance specified above shall:

1. Provide that such insurance is primary coverage with respect to all insureds for claims arising from contractor's negligent acts and/or omissions or misconduct; and that any insurance (or self-insurance) carried by the City shall be excess and non-contributing;
2. Contain a standard Cross Liability endorsement providing that the insurance applies separately to each insured, applicable to policies specified in 4.3.1.2 and 4.3.1.3 above;
3. Not be terminated, canceled, not renewed or substantially changed without THIRTY (30) DAYS prior written notice to the City, except for non-payment of premium;
4. Except for Professional Liability insurance required in 4.3.1.4 above, be written on an "Occurrence" form of policy, unless otherwise specifically approved by the City.
5. Be provided by insurers authorized to do business in the State of Hawaii, and with a current Best's rating of not less than A-, or otherwise as approved by the City;

4.3.3 Certificate of insurance:

1. The contractor will provide and thereafter maintain current and renewal certificates of insurance, prepared by a duly authorized agent, or if requested, copies of the policies, evidencing the insurance in effect at all times during the term of this contract as required herein to the City.
2. Certificates shall clearly identify the project by name and/or contract number.
3. Certificates shall show the Certificate Holder as the City and County of Honolulu, and be delivered to the Director of Budget and Fiscal Services, 530 South King Street, Honolulu, Hawaii 96813.

SECTION 5 - MODIFICATIONS

5.1 MODIFICATIONS OF CONTRACTS. The City may at any time make such modifications in the contract, and the services, designs and plans, or studies prepared by the contractor as the officer-in-charge deems necessary and advisable. Such modifications shall be made by a supplemental agreement in writing or by a written order of the Director of Budget and Fiscal Services; provided that modifications by such a written order shall be limited to modifications in the scope of

services and in the designs, plans and studies; and provided further that modifications involving no reduction or increase in compensation of the contractor may be made by written order of the officer-in-charge.

5.1.1 Change order. (a) The officer-in-charge, with the approval of the Director of Budget and Fiscal Services, may at any time, and without notice to any surety, unilaterally, order of the contractor:

- (1) Changes in the work within the scope of the contract; and
- (2) Changes in the time of performance of the contract that do not alter the scope of the contract work.

(b) If any change order increases or decreases the contractor's cost of, or the time required for, performance of any part of the work under the contract, an adjustment shall be made and the contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined, where applicable, in accordance with subsection 5.2, Price adjustment, or as negotiated. Failure of the parties to agree to an adjustment shall not excuse the contractor from proceeding with the contract as changed, provided that the officer-in-charge promptly and duly makes the provisional adjustments in payment or time for the direct costs of the work as the City deems reasonable. The right of the contractor to dispute the contract price or time or both shall not be waived by its performing the work, provided however, that it follows the written notice requirements for disputes and claims established by the contract or these provisions.

(c) *Within ten days* after receipt of a written change order, unless the period is extended by the officer-in-charge in writing, the contractor shall respond with a claim for an adjustment. The requirement for a timely written response cannot be waived and shall be a condition precedent to the assertion of a claim.

(d) Claim barred after final payment. No claim by the contractor for an adjustment hereunder shall be allowed if written response is not given prior to final payment under the contract.

(e) Claims not barred. In the absence of a change order, nothing in this subsection shall be deemed to restrict the contractor's right to pursue a claim under the contract or for breach of contract. [3-125-2, HAR]

5.1.2 Modifications. (a) By written order, the officer-in-charge, with the approval of the Director of Budget and Fiscal Services, may at any time, and without notice to any surety, subject to mutual agreement of the parties to the contract and all appropriate adjustments, make modifications within the general scope of the contract to include any one or more of the following:

- (1) Drawings, designs, or specifications, for the goods to be furnished;
- (2) Method of shipment or packing;
- (3) Place of delivery;
- (4) Description of services to be performed;
- (5) Time of performance (i.e., hours of the day, days of the week, etc.);

- (6) Place of performance of the services; or
- (7) Other provisions of the contract accomplished by mutual action of the parties to the contract.

(b) If any modification increases or decreases the contractor's cost of, or the time required for, performance of any part of the work under the contract, an adjustment shall be made and the contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined, where applicable, in accordance with subsection 5.2, Price adjustment or as negotiated.

(c) Claim barred after final payment. No claim by the contractor for an adjustment hereunder shall be allowed if written agreement of modification is not made prior to final payment under the contract.

(d) Claims not barred. In the absence of a contract modification, nothing in this subsection shall restrict the contractor's right to pursue a claim arising under the contract or for breach of contract. [3-125-3, HAR]

5.1.3 Variations in definite quantities. Upon the agreement of the parties, the quantity of goods or services or both specified in the contract may be increased by a maximum of ten percent provided the unit prices will remain the same except for any price adjustments otherwise applicable and the officer-in-charge makes a written determination that such an increase will either be more economical than awarding another contract or that it would not be practical to award another contract. [3-125-8, HAR]

5.1.4 Order to stop work. (a) The officer-in-charge may, with the approval of the Director of Budget and Fiscal Services, by written order to the contractor, at any time, and without notice to any surety, require the contractor to stop all or any part of the work called for by the contract. *This order shall be for a specified period not exceeding sixty days* after the order is delivered to the contractor, unless the parties agree to any further period. Any order shall be identified specifically as a stop work order issued pursuant to this subsection. Upon receipt of an order, the contractor shall forthwith comply with its terms and take all reasonable steps to minimize the occurrence of costs allocable to the work covered by the order during the period of work stoppage. Before the stop work order expires, or within any further period to which the parties shall have agreed, the officer-in-charge, with the approval of the Director of Budget and Fiscal Services, shall either:

- (1) Cancel the stop work order, or
- (2) Terminate the work covered by the order as provided in subsection 9.2, Termination for default, or subsection 9.3, Termination for convenience.

(b) Cancellation or expiration of the order. If a stop work order issued under this subsection is canceled at any time during the period specified in the order, or if the period of the order or any extension thereof expires, the contractor shall have the right to resume work. An appropriate adjustment shall be made in the delivery schedule or contract price, or both, and the contract shall be modified in writing accordingly, if:

- (1) The stop work order results in an increase in the time required for, or in the contractor's cost properly allocable to, the performance of any part of the contract; and

- (2) The contractor asserts a claim for such an adjustment *within thirty days* after the end of the period of work stoppage; provided that, if the officer-in-charge decides that the facts justify such action, any claim asserted may be received and acted upon at any time prior to final payment under the contract.

(c) Termination of stopped work. If a stop work order is not canceled and the work covered by the order is terminated for default or convenience, the reasonable costs resulting from the stop work order shall be allowable by adjustment or otherwise.

(d) Adjustment of price. Any adjustment in contract price made pursuant to this clause shall be determined in accordance with subsection 5.2, Price adjustment. [3-125-6, HAR]

5.2 PRICE ADJUSTMENT. Any adjustment in contract price pursuant to a clause in the contract shall be made in one or more of the following ways:

- (1) By agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;
- (2) By unit prices specified in the contract or subsequently agreed upon;
- (3) By the costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as specified in the contract or subsequently agreed upon;
- (4) In such other manner as the parties may mutually agree; or
- (5) In the absence of agreement between the parties, by a unilateral determination by the Director of Budget and Fiscal Services upon the recommendation of the officer-in-charge of the costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as computed by the officer-in-charge in accordance with generally accepted accounting principles and applicable sections of chapters 3-123 and 3-126, HAR.
- (6) The contractor shall provide cost or pricing data for any price adjustments subject to the provisions of chapter 3-122, subchapter 15, HAR. [3-125-12, HAR]

5.3 NOVATION OR CHANGE OF NAME

5.3.1 No assignment. No contract is transferable, or otherwise assignable, without the written consent of the Director of Budget and Fiscal Services.

5.3.2 Recognition of a successor in interest; assignment. When in the best interest of the City, a successor in interest may be recognized in an assignment agreement in which the transferor, the transferee and the City shall agree that:

- (1) The transferee assumes all of the transferor's obligations;
- (2) The transferor remains liable for all obligations under the contract but waives all rights under the contract as against the City; and

- (3) The transferor shall continue to furnish, and the transferee shall also furnish, all required bonds.

5.3.3 Change of name. When a contractor requests to change the name in which it holds a contract with the City, the Director of Budget and Fiscal Services shall, upon receipt of a document indicating such change of name (for example an amendment to the articles of incorporation of the corporation), enter into an agreement with the requesting contractor to effect such a change of name. The agreement changing the name shall specifically indicate that no other terms and conditions of the contract are thereby changed. [3-125-14, HAR]

5.4 CLAIMS BASED ON THE OFFICER-IN-CHARGE'S ACTIONS OR OMISSIONS.

(a) If any action or omission on the part of an officer-in-charge or designee of such officer, requiring performance changes within the scope of the contract constitutes the basis for a claim by the contractor for additional compensation, damages, or an extension of time for completion, the contractor shall continue with performance of the contract in compliance with the directions or orders of such officials, but by so doing, the contractor shall not be deemed to have prejudiced any claim for additional compensation, damages, or an extension of time for completion; provided:

- (1) The contractor shall have given written notice to the officer-in-charge;
 - (A) *Prior to the commencement* of the work involved, if at that time the contractor knows of the occurrence of the action or omission;
 - (B) *Within thirty days after* the contractor knows of the occurrence of the action or omission, if the contractor did not have knowledge prior to the commencement of the work; or
 - (C) Within further time as may be allowed by the officer-in-charge in writing.
- (2) This notice shall state that the contractor regards the act or omission as a reason which may entitle the contractor to additional compensation, damages, or an extension of time. The officer-in-charge or designee of such officer, upon receipt of the notice may rescind the action, remedy the omission, or take other steps as may be deemed advisable in the discretion of the officer-in-charge or designee of such officer;
- (3) The notice required by paragraph (1) describes as clearly as practicable, at the time, the reasons why the contractor believes that additional compensation, damages, or an extension of time may be remedies to which the contractor is entitled; and
- (4) The contractor maintains and, upon request, makes available to the officer-in-charge within a reasonable time, detailed records to the extent practicable, of the claimed additional costs or basis for an extension of time in connection with the changes.

(b) Nothing herein contained, however, shall excuse the contractor from compliance with any rules of law precluding any City officers and any contractors from acting in collusion or bad faith in issuing or performing change orders which are clearly not within the scope of the contract.

(c) Any adjustment in the contract price made pursuant to this clause shall be determined in accordance with subsection 5.2, Price adjustment. [3-125-15, HAR]

SECTION 6 - PERFORMANCE OF CONTRACT

6.1 TIME. Time is of the essence of the contract. Performance of the services under the contract shall be commenced on the date designated in the notice to proceed or in the contract and the services as required in the contract shall be completed within the number of days or on the date specified.

6.2 DELAY. If any excusable delay occurs, it shall be dealt with in accordance with subsection 9.2.3, Excuse for nonperformance or delayed performance. No extension of time however, shall be granted unless the written application therefor stating in detail the cause or causes of delay is filed by the contractor with the officer-in-charge *within fifteen days* after the commencement of the delay. No such extension shall be deemed a waiver of the right of the officer-in-charge to require the completion of services under the contract within the time required herein as so extended by the specific terms of such extension or extensions, nor a waiver of right to terminate the contract for any other or additional delay not covered by the specific terms of such extension or extensions. The number of days of each extension of time shall be determined by the Director of Budget and Fiscal Services upon the recommendation of the officer-in-charge.

6.3 EXTENSION OF TIME ON CONTRACTS. If a contract has exhausted its provision for extension(s) of time of performance, or if the contract does not include a provision for extension(s) of time of performance, the contract may be extended upon approval of the Director of Budget and Fiscal Services, provided:

- (1) The period of each extension is for one hundred eighty calendar days or less;
- (2) The officer-in-charge makes a written determination that it is not practical to award another contract at the time of the expiration of the contract for reasons to include but be limited to the following:
 - (A) A new contract cannot be executed by the time the contract expires; or
 - (B) The need for the good or service is short term;
- (3) All parties agree to the extension of time of performance; and
- (4) The price or conditions of the contract remain the same as the original contract, or as amended per the contract; or if not the same or as amended, they are fair and reasonable.
[3-122-3, HAR]

6.4 PROSECUTION OF THE WORK. The contractor shall be available upon reasonable demand to discuss the progress of the services being performed under the contract. The contractor shall also remain available through any applicable alternative means of contact, such as pager or cellular phone, in the event of an emergency or other event that necessitates immediate communication with the contractor. All questions arising during the performance of the contract which must be resolved by the officer-in-charge shall be brought to the officer-in-charge's immediate attention.

The contractor shall direct its work to relate appropriately to, and in accordance with, established principles, practices and standards for such work. The contractor shall direct its work to relate appropriately to, and in accordance with, established engineering, planning and/or architectural design principles and practices for good exterior appearance, and the natural and man-made environment.

The contractor shall furnish sufficient technical supervision and administrative personnel to insure the proper performance of the services under the contract.

The contractor shall be responsible for the accuracy of all computations and completeness of all studies, designs and plans.

All notes, deliverables, plans, specifications, calculations, field notes, and other data produced in the performance of the contract shall be the property of the City.

The officer-in-charge shall have access, at all reasonable times, to all notes, designs, drawings, tracings or other technical data pertaining to the services being performed under the contract for the purpose of inspection and making copies of them. Upon completion of the services under the contract, any or all of such notes, studies, designs, drawings, tracings or other technical data shall be delivered and surrendered to the officer-in-charge on demand, provided that copies of notes, studies and other technical data may be delivered and surrendered instead of the originals.

6.5 AUTHORITY OF THE OFFICER-IN-CHARGE AND DIRECTOR OF BUDGET AND FISCAL SERVICES. The decisions of the officer-in-charge shall be final and binding upon parties unless the same is fraudulent or capricious or arbitrary or so grossly erroneous as necessarily to imply bad faith or is not supported by substantial evidence, provided that decisions on questions or disputes relating to the acceptance of the services performed under the contract, suspension or termination of the contract, extension of time, reduction or increase in the compensation of the contractor and payment shall become final and binding upon all parties only upon approval of the Director of Budget and Fiscal Services, and provided further that nothing herein shall be construed as making final and binding any decision of the officer-in-charge and/or Director of Budget and Fiscal Services on a question of law. Pending final decision of any dispute or question, the contractor shall proceed diligently with the performance of services under the contract in accordance with the decision of the officer-in-charge and/or Director of Budget and Fiscal Services.

6.6 LIQUIDATED DAMAGES. The amount of damage to the City as a result of failure to complete performance of specified services under the contract within the time fixed or any extension thereof, exclusive of overhead expenses, being certain but difficult, if not impossible to ascertain, the contractor agrees to pay the sum stated in the contract as liquidated damages, and not by way of penalty, for every calendar day of delay until the services are completed and accepted, or a reasonable time has expired for completion and acceptance of the services remaining to be performed.

When the contractor is given notice of delay or nonperformance as specified in subsection 9.2, Termination for default, and fails to cure in the time it is agreed specified, the contractor shall pay to the City the amount specified in the contract per calendar day from the date set for cure until either the officer-in-charge reasonably obtains similar goods or services if the contractor is terminated for default, or until the contractor provides the goods or services if the contractor is not terminated for default. To the extent that the contractor's delay or nonperformance is excused under 9.2.3, Excuse for nonperformance or delayed performance of the termination for default clause, liquidated damages shall not be due the City. The contractor remains liable for damages caused other than by delay. [3-125-19, HAR]

6.7 SUBCONTRACTING. The contractor shall not subcontract all or any part of the services under the contract without the prior written consent of the officer-in-charge. Any consent by the officer-in-charge to subcontract or otherwise dispose of any portion of the contract shall not be construed to relieve the contractor of any responsibility for the performance of the contract.

SECTION 7 - SERVICES TO BE PERFORMED BY THE CITY

7.1 COOPERATION BY THE CITY. The City shall, without cost to the contractor, through the officer-in-charge, cooperate fully with the contractor and will promptly place at the disposal of the contractor all available pertinent information which the City may have in its possession. The officer-in-charge will certify to the accuracy of certain information in writing whenever it is possible to do so. The officer-in-charge does not represent that other information not certified as accurate is so and takes no responsibility therefor, and the contractor shall rely on such information at the contractor's own risk.

7.2 REVIEW BY THE OFFICER-IN-CHARGE. The officer-in-charge shall review all submittals and other work and data required to be made by the contractor and reject or approve such submittals in their entirety or approve the same subject to such deletions, additions and revisions as the officer-in-charge may deem necessary and proper. In submittals specified in the special provisions, all items not required by the contractor to be deleted, added, or revised after review by the contractor and not defective by reason or error, omissions or negligence on the part of the contractor, his subcontractor, agents or employees shall be deemed to have been approved.

SECTION 8 - COMPENSATION

8.1 COMPENSATION. The contractor shall be paid the amount stated in the contract or the amount determined in accordance with the special provisions, whichever is lower, as full compensation for the performance of the services under the contract.

8.2 PROGRESS PAYMENT. The contractor's compensation shall be paid as set forth in the contract.

8.3 ACCEPTANCE AND FINAL PAYMENT. The officer-in-charge shall approve and accept completion of the contract upon the satisfactory fulfillment of the terms of the contract and receipt of a certificate from the State Director of Taxation and the Internal Revenue Service, as provided in section 103-53, HRS, relating to prerequisite for final settlement of contracts, provided that final payment will be made upon approval of the Director of Budget and Fiscal Services. The tax clearances required at final settlement of a contract shall be on an original certificate or certified copy and valid for a period of 6 months from the later date stamped on the form, provided that the contractor does not delay in obtaining clearance from both agencies.

8.3.1 In the event equipment is provided under the contract, which received prior approval from the Director of Budget and Fiscal Services, the contractor shall also provide a written list of equipment installed or provided, listing the description, make, model, serial number, cost, and location of the equipment or room number in which the equipment is located.

For purposes of this subsection, "equipment" means any item such as a water heater that can be removed with a hand tool, or like an air conditioner, is capable of being moved or transferred to another location and is accessible to tagging with an identification number.

8.3.2 Acceptance by the contractor of the final payment shall constitute payment in full for all services performed under the contract.

8.4 **AUTHORITY TO WITHHOLD MONEY DUE OR PAYABLE.** The officer-in-charge may withhold such amounts from the money due or to become payable under the contract to the contractor, or any assignee under subsection 5.3, Novation or change of name, as may be necessary to protect the City against liability or to satisfy the obligations of the contractor to the City, State Department of Taxation, Internal Revenue Service, and to employees, subcontractors and material suppliers who have performed labor or furnished material and equipment under the contract and may make such payments from such amounts as may be necessary to discharge such obligations and protect the City.

8.5 **RETAINAGE.** In accordance with HRS 103-32.1, the officer-in-charge may determine the need for retainage of a portion of the monthly payments to the contractor or payments made upon completion of phases of the contract to insure the proper performance of the contract; provided that the sum withheld shall not exceed five per cent of the amount due the contractor and that after fifty per cent of the contract is completed and progress is satisfactory, no additional sum shall be withheld; provided further that if progress is not satisfactory, the officer-in-charge may continue to withhold as retainage, sums not exceeding five per cent of the amount due the contractor.

For federally funded contracts, the amount of retainage shall be the amount allowed by federal regulations.

8.6 **PROMPT PAYMENT TO SUBCONTRACTORS.**

- (1) Any money, other than retainage, paid to a contractor shall be dispersed to subcontractors within ten days after receipt of the money in accordance with the terms of the subcontract; provided that the subcontractor has met all the terms and conditions of the subcontract and there are no bona fide disputes; and
- (2) Upon final payment to the contractor, full payment to the subcontractor, including retainage, shall be made within ten days after receipt of the money; provided that there are no bona fide disputes over the subcontractor's performance under the subcontract. [3-125-23, HAR]

8.7 **PAYMENT FOR REIMBURSABLE EXPENSES.**

Payment requests for all reimbursable expenses shall be accompanied and supported by receipted invoices for all charges. The City must approve of all reimbursable expenses in writing. Payment for reimbursable items shall be made for allowable costs in accordance with the Hawaii Administrative Rules, Title 3, Department of Accounting and General Services, Chapter 3-122, Subchapter 15, cost or pricing data, and Chapter 3-123, cost principles.

Reimbursable amounts stated in the contract shall not be exceeded without a contract amendment. Any balance remaining from the reimbursable expense funds at the completion of the Agreement shall revert to the City.

SECTION 9 - TERMINATION OF CONTRACTS

9.1 RIGHT OF THE CITY TO TERMINATE. The City shall have the right to suspend performance of the services under the contract or terminate the contract in whole or in part at any time by written notice to the contractor. If the termination is for reasons other than default of the contractor as provided in subsection 9.2, the contractor shall be compensated in accordance with subsection 9.3, Termination for convenience.

9.2 TERMINATION FOR DEFAULT. If the contractor refuses or fails to perform any of the provisions of the contract with such diligence as will ensure its completion within the time specified in the contract, or any extension thereof, otherwise fails to timely satisfy the contract provisions, or commits any other substantial breach of the contract, the officer-in-charge may notify the contractor in writing of the delay or nonperformance, and *if not cured in ten days* or any longer time specified in writing by the officer-in-charge, the officer-in-charge may, with the approval of the Director of Budget and Fiscal Services, terminate the contractor's right to proceed with the contract or a part of the contract as to which there has been delay or other breach of contract. In the event of termination in whole or in part, the Director of Budget and Fiscal Services may procure similar goods or services in a manner and upon terms deemed appropriate by the Director of Budget and Fiscal Services. The contractor shall continue performance of the contract to the extent it is not terminated and shall be liable for excess costs incurred in procuring similar goods or services.

Notwithstanding the above, in the event the contract is terminated, in whole or in part, by the City as the result of a default by the contractor, the City may secure, on any terms and in any manner that the City deems appropriate, supplies, materials, equipment and/or services similar to those required under the work terminated. The contractor shall be liable to the City for any excess costs for such similar supplies, materials, equipment and/or services, and the City may withhold and apply any monies due or to become due to the contractor under the contract for the completion of the work and/or for the payment of an additional contractor or contractors. This provision shall survive the termination of the contract. In case an additional contract or contracts let after such termination for default are let in an amount or amounts in excess of the amount remaining available for the contract in the hands of the City, free from all claims by laborers or material providers for work performed or materials furnished for the contract prior to the termination for default or any deductions authorized by the terms hereunder or the contract in favor of the City, then the contractor shall deposit, within ten (10) days from the receipt of each notice of any such reletting, to the credit of the City, solely for the prosecution and completion of the work, a sum of money equal to such excess; and in case the City desires to complete the work in any other manner than by contract, then the contractor shall deposit within ten (10) days from the receipt of each notice of the final completion of the work, to the credit of the City, the amount of any excess cost occasioned by such completion over the amount available under the contract in the hands of the City, free from all claims or deductions as aforesaid, all without prejudice to any other or additional rights or remedies the City may have against the contractor under the terms hereunder or the contract or under any applicable law, statute, ordinance, rule, regulation or other standard or requirement.

9.2.1 Contractor's duties. Notwithstanding termination of the contract and subject to any directions from the Director of Budget and Fiscal Services or the officer-in-charge, the contractor shall take timely and necessary action to protect and preserve property in the possession of the contractor in which the City has an interest.

9.2.2 Compensation. Payment for completed goods delivered and accepted by the City shall be at the contract price. Payment for the protection and preservation of property shall be in an amount agreed upon by the contractor and the officer-in-charge; if the parties fail to agree, the Director of Budget and Fiscal Services, upon recommendation of the officer-in-charge, shall set an amount subject

to the contractor's rights under chapter 3-126, HAR. The City may withhold from amounts due the contractor as the Director of Budget and Fiscal Services deems to be necessary to protect the City against loss because of outstanding liens or claims of former lien holders and to reimburse the City for the excess costs incurred in procuring similar goods and services.

9.2.3 Excuse for nonperformance or delayed performance. Except with respect to defaults of subcontractors, the contractor shall not be in default by reason of any failure in performance of the contract in accordance with its terms, if the contractor has notified the officer-in-charge *within fifteen days* after the cause of the delay and the failure arises out of causes including but not limited to: acts of God; acts of the public enemy; acts of the City and any other governmental body in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather. If the failure to perform is caused by the failure of a subcontractor to perform or to make progress, and if the failure arises out of causes similar to those set forth above, the contractor shall not be deemed to be in default, unless the goods or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the contractor to meet the contract requirements.

Upon request of the contractor, the officer-in-charge shall ascertain the facts and extent of the failure, and, if the officer-in-charge determines that any failure to perform was occasioned by any one or more of the excusable causes, and that, but for the excusable cause, the contractor's progress and performance would have met the terms of the contract, the completion date or delivery schedule shall be revised accordingly, subject to the rights of the City under subsection 9.3, Termination for convenience. As used in this paragraph, the term "subcontractor" means subcontractor or subconsultant at any tier.

9.2.4 Additional rights and remedies. The rights and remedies provided in this clause are in addition to any other rights and remedies provided by law. [3-125-17, HAR]

9.3 TERMINATION FOR CONVENIENCE. The Director of Budget and Fiscal Services may, upon recommendation of the officer-in-charge, when the interests of the City so require, terminate the contract in whole or in part, for the convenience of the City. The Director of Budget and Fiscal Services shall give written notice of the termination to the contractor specifying the part of the contract terminated and when termination becomes effective.

9.3.1 Contractor's obligations. The contractor shall incur no further obligations in connection with the terminated work and on the dates set in the notice of termination the contractor will stop work to the extent specified. The contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work subject to the City's approval. The contractor may be directed to assign the contractor's right, title, and interest under terminated orders or subcontracts to the City. The contractor must still complete the work not terminated by the notice of termination and may incur obligations as are necessary to do so.

9.3.2 Right to goods.

- (1) The contractor may be required to transfer title and deliver to the City in the manner and to the extent directed by the officer-in-charge or the Director of Budget and Fiscal Services: any completed goods; and the partially completed goods and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights, hereinafter

called "manufacturing material," as the contractor has specifically produced or specially acquired for the performance of the terminated part of the contract.

- (2) The contractor shall, upon direction of the officer-in-charge, protect and preserve property in the possession of the contractor in which the City has an interest. If the officer-in-charge does not exercise this right, the contractor shall use the contractor's best efforts to sell such goods and manufacturing materials. Use of this section in no way implies that the City has breached the contract by exercise of the termination for convenience clause.

9.3.3 Compensation

- (1) The contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data to the extent required by subchapter 15, chapter 3-122, HAR, bearing on such claim. If the contractor fails to file a termination claim *within one year* from the effective date of termination, payment may be made to the contractor, if at all, in accordance with paragraph (3) below.
- (2) A settlement may be agreed to by both parties provided the contractor has filed a termination claim supported by cost or pricing data to the extent required by subchapter 15, chapter 3-122, HAR, and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the City, the proceeds of any sales of goods and manufacturing materials under paragraph 9.3.2, Right to goods, and the contract price of the work not terminated.
- (3) Absent complete agreement under paragraph (2), the contractor shall be paid the following amounts, provided payments agreed to under paragraph (2) shall not duplicate payments under this paragraph for the following:
 - (A) Contract prices for goods or services accepted under the contract;
 - (B) Costs incurred in preparing to perform and performing the terminated portion of the work plus a five percent markup on actual direct costs on such portion of the work, the markup shall not include anticipatory profit or consequential damages, less amounts paid or to be paid for accepted goods or services; provided that if it appears that the contractor would have sustained a loss if the entire contract would have been completed, no markup shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss;
 - (C) Subject to the prior approval of the Director of Budget and Fiscal Services the costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to paragraph 9.3.1, contractor's obligations. Subcontractors shall be entitled to a markup of no more than ten percent on direct costs incurred to the date of termination. These costs must not include costs paid in accordance with subparagraph (3)(B).
 - (D) The total sum to be paid the contractor under this paragraph shall not exceed the total contract price reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under subsection 9.3.2, Right to goods, and the contract price of work not terminated.

- (4) Cost claimed, agreed to, or established under paragraphs (2) and (3) shall be in accordance with Chapter 3-123, HAR. [3-125-21, HAR]

**SECTION 10 - DISPUTES ON CONTRACT
AND BREACH OF CONTRACT CONTROVERSIES.**

10.1 FINAL DECISION. (a) When a controversy cannot be resolved by mutual agreement between the officer-in-charge and the contractor, the Director of Budget and Fiscal Services shall, upon recommendation by the officer-in-charge, after written request by the contractor for a final decision, promptly issue a written decision.

(b) Any such decision shall be final and conclusive, unless fraudulent, or unless the contractor brings an action seeking judicial review of the decision in a circuit court of this State *within the six months* from the date of receipt of the decision.

10.1.1 The Director of Budget and Fiscal Services shall issue a written decision within the following time limitations:

- (1) For claims not exceeding fifty thousand dollars: *ninety calendar days* after receipt of the claim.
- (2) For claims exceeding fifty thousand dollars: *ninety calendar days* after receipt of the claim; provided that if a decision is not issued within ninety calendar days, the Director of Budget and Fiscal Services shall notify the contractor of the time within which a decision will be made.

If the Director of Budget and Fiscal Services fails to issue a decision on a claim not exceeding fifty thousand dollars within ninety calendar days after receipt, or does not issue a decision within the time promised for a claim in excess of fifty thousand dollars, the contractor may proceed as if an adverse decision had been received.

10.2 PAYMENT. The amount determined payable pursuant to the decision, less any portion already paid, normally should be paid without awaiting contractor action concerning appeal. Such payments shall be without prejudice to the rights of either party and where such payments are required to be returned by a subsequent decision, interest on such payments shall be paid at the statutory rate from the date of payment.

10.3 CLAIMS AGAINST THE CONTRACTOR. All controversies involving claims asserted by the City against a contractor which cannot be resolved by mutual agreement shall be the subject of a decision by the Director of Budget and Fiscal Services, upon recommendation by the officer-in-charge. [3-126-29, HAR]

10.4 CONTINUED PERFORMANCE OF THE CONTRACT. The contractor shall comply with any decision of the Director of Budget and Fiscal Services and proceed diligently with performance of the contract pending final resolution by a circuit court of this State of any controversy arising under, or by virtue of, the contract, except where there has been a material breach of contract by the City; provided that in any event the contractor shall proceed diligently with the performance of the contract where the Director of Budget and Fiscal Services has made a written determination that

continuation of work under the contract is essential to the public health and safety. [3-126-28, 3-126-29, 3-126-31, HAR]

10.5 REMEDIES. Any dispute arising under or out of the contract is subject to chapter 3-126, HAR. The procedures and remedies provided for shall be the exclusive means available for persons aggrieved in connection with the solicitation or award of a contract, a suspension or debarment proceeding, or in connection with a contract controversy, to resolve their claims or differences. The contested case proceedings set out in chapter 91, HRS, shall not apply to protested solicitations and awards, debarments or suspensions, or the resolution of contract controversies. [HRS 103D-704]

SECTION 11 - COST OR PRICING DATA

11.1 COST OR PRICING DATA. Pursuant to chapter 3-122, subchapter 15, HAR, cost or pricing data may be required as determined by the officer-in-charge or by chapter 3-122, subchapter 15, HAR, along with the certification of current cost or pricing data, substantially in the form attached hereto as Exhibit "A".

11.1.1 Cost and pricing data means all facts as of the date of price agreement that prudent buyers and sellers would reasonably expect to affect price negotiations significantly. Cost or pricing data are factual, not judgmental, and are therefore verifiable. While they do not indicate the accuracy of a prospective contractor's judgment about future costs or projections, they do include the data forming the basis for that judgment. Cost or pricing data are more than historical accounting data; they are all facts that can reasonably be expected to contribute to the soundness of estimates of future costs and to the validity of determinations of costs already incurred. They also include such factors as:

- (1) Vendor quotations;
- (2) Nonrecurring costs;
- (3) Information on changes in production methods and in production or purchasing volume;
- (4) Data supporting projections of business prospects and objectives and related operations costs;
- (5) Unit cost trends such as those associated with labor efficiency;
- (6) Make or buy decisions;
- (7) Labor union contract negotiations; and
- (8) Information on management decisions that could have a significant bearing on costs.

11.1.2 When cost or pricing data are required, they shall be submitted to the officer-in-charge prior to beginning price negotiations at any reasonable time and in any reasonable manner prescribed by the officer-in-charge. Such data shall either be actually submitted or specifically identified in writing. The contractor is required to keep such submission current until the negotiations are concluded.

The contractor shall provide written certification as soon as practicable after agreement is reached on price that the cost or pricing data submitted are accurate, complete, and current as of the date of reaching agreement on price.

11.1.3 If a prospective contractor refuses to supply the required data, the Director of Budget and Fiscal Services, upon recommendation of the officer-in-charge, shall determine in writing whether to disqualify the noncomplying contractor, to defer award pending further investigation, or to enter into the contract. If, after award, a contractor refuses to supply the required data, the officer-in-charge shall determine in writing whether to further investigate the price adjustment, not to allow any price adjustment, or to set the amount of the price adjustment, subject to the contractor's rights under chapter 3-126, HAR.

The certificate of cost or pricing data is not to be construed as a representation as to the accuracy of the contractor's judgment on the estimated portion of future costs or projections. It does, however, constitute a representation as to the accuracy of the data upon which the contractor's judgment is based.

The exercise of an option at the price established in the initial negotiation in which certified cost or pricing data were used does not require recertification or further submission of data.

11.1.4 If certified cost or pricing data are subsequently found to have been inaccurate, incomplete, or not current as of the date stated in the certificate, the City is entitled to an adjustment of the contract price, including profit or fee, to exclude any significant sum by which the price, including profit or fee, was increased because of the defective data. It is presumed that overstated cost or pricing data increased the contract price in the amount of the defect plus related overhead and profit or fee. Therefore, unless there is a clear indication that the defective data were not used or relied upon, the price should be reduced in such amount.

In determining the amount of a downward adjustment, the contractor shall be entitled to an offsetting adjustment of any understated cost or pricing data submitted in support of price negotiations for the same pricing action up to the amount of the City's claims for overstated cost or pricing data arising out of the same pricing action.

11.1.5 If the contractor and the officer-in-charge cannot agree as to the existence of defective cost or pricing data or amount of adjustment due to defective cost or pricing data, the officer-in-charge shall set an amount in accordance with provisions of this section and the contractor may appeal this decision as a contract controversy under chapter 3-126, HAR.

SECTION 12 - SEXUAL HARASSMENT POLICY

12.1 GENERAL. The contractor must comply with Revised Ordinances of Honolulu (ROH) section 1-18, on sexual harassment. The contractor shall have and enforce a policy prohibiting sexual harassment. The contractor's sexual harassment policy must set forth the same or greater protection than those contained or required by the ordinance. Section 1-18, ROH is on file and available for viewing in the Purchasing Division. Contractors needing a copy must pick up the copy from the Office of the City Clerk, Room 203, City Hall, 530 South King Street, Honolulu, Hawaii.

12.1.1 The ordinance is applicable to the employer's business and includes:

- (1) Prohibitions against an officer's or employee's sexual harassment of the following:
 - (a) Another officer or employee of the employer;
 - (b) An individual under consideration for employment with the employer; or
 - (c) An individual doing business with the employer;
- (2) A provision prohibiting a management or supervisory officer or employee from knowingly permitting a subordinate officer or employee to engage in the sexual harassment prohibited under paragraph (1) above;
- (3) A prohibition against retaliation towards an officer, employee, or individual who has complained of sexual harassment, conducted an investigation of a complaint, or acted as a witness during an investigation of a complaint;
- (4) A prohibition against a malicious false complaint of sexual harassment by an officer, employee, or individual;
- (5) Provisions allowing an officer, employee, or individual to make a sexual harassment complaint to an appropriate management, supervisory, or personnel officer or employee;
- (6) Procedures for investigating a sexual harassment complaint in an unbiased, fair, and discreet manner with appropriate safeguards to maintain confidentiality and protection from embarrassment;
- (7) A provision requiring the use of the "reasonable person of the same gender standard," to determine if sexual harassment has occurred. Under the standard, sexual harassment shall be deemed to have occurred if the alleged offender's conduct would be considered sexual harassment from the perspective of a reasonable person of the same gender as the alleged victim. If the alleged victim is a woman, the "reasonable person of the same gender standard" shall be equivalent to and may be called the "reasonable woman standard;"
- (8) Disciplinary actions which may be imposed on an officer or employee who committed a prohibited act; and
- (9) For an employer with at least five employees, a provision requiring the annual viewing of a video on the sexual harassment policy by each management or supervisory officer or employee.

12.2 POLICY TERM. The policy required under this section shall be in effect for at least the duration of the contractor's contract with the City.

12.3 PLEDGE AND ACCEPTANCE. The action of the contractor signing the contract shall constitute the contractor's pledge and acceptance of the provisions for the sexual harassment policy as required by section 1-18, HRS.

CERTIFICATE OF CURRENT COST OR PRICING DATA

This is to certify that, to the best of my knowledge and belief, cost or pricing data as defined in section 3-122-122, HAR, and submitted pursuant to section 3-122-125, HAR; either actually or by specific identification in writing to the officer-in-charge in support of * Airport Segment Guideway and Utilities Contract for the Honolulu Rail Transit Project ("H RTP") are accurate, complete, and current as of ** December 14, 2011.
(Month, day, year)

This certification includes the cost or pricing data supporting any advance agreement(s) between the offeror and the City which are part of the proposal.

Firm: AECOM Technical Services, Inc.

Signature: 

Rudolph Mina, District Manager
(Print name & title of person signing)

Date of execution***: December 14, 2011

- * Describe the project and reference (i.e. project name, +PCD No., field change, change order number, etc.).
- ** The date should be a mutually determined date prior to but as close to the date when price negotiations were concluded and the price was agreed to as possible.
- *** Date of execution should be as soon after the date when price negotiations were concluded and the contract price was agreed to as practical.

(This document shall be signed, sealed, and notarized.)

Notary on separate sheet

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

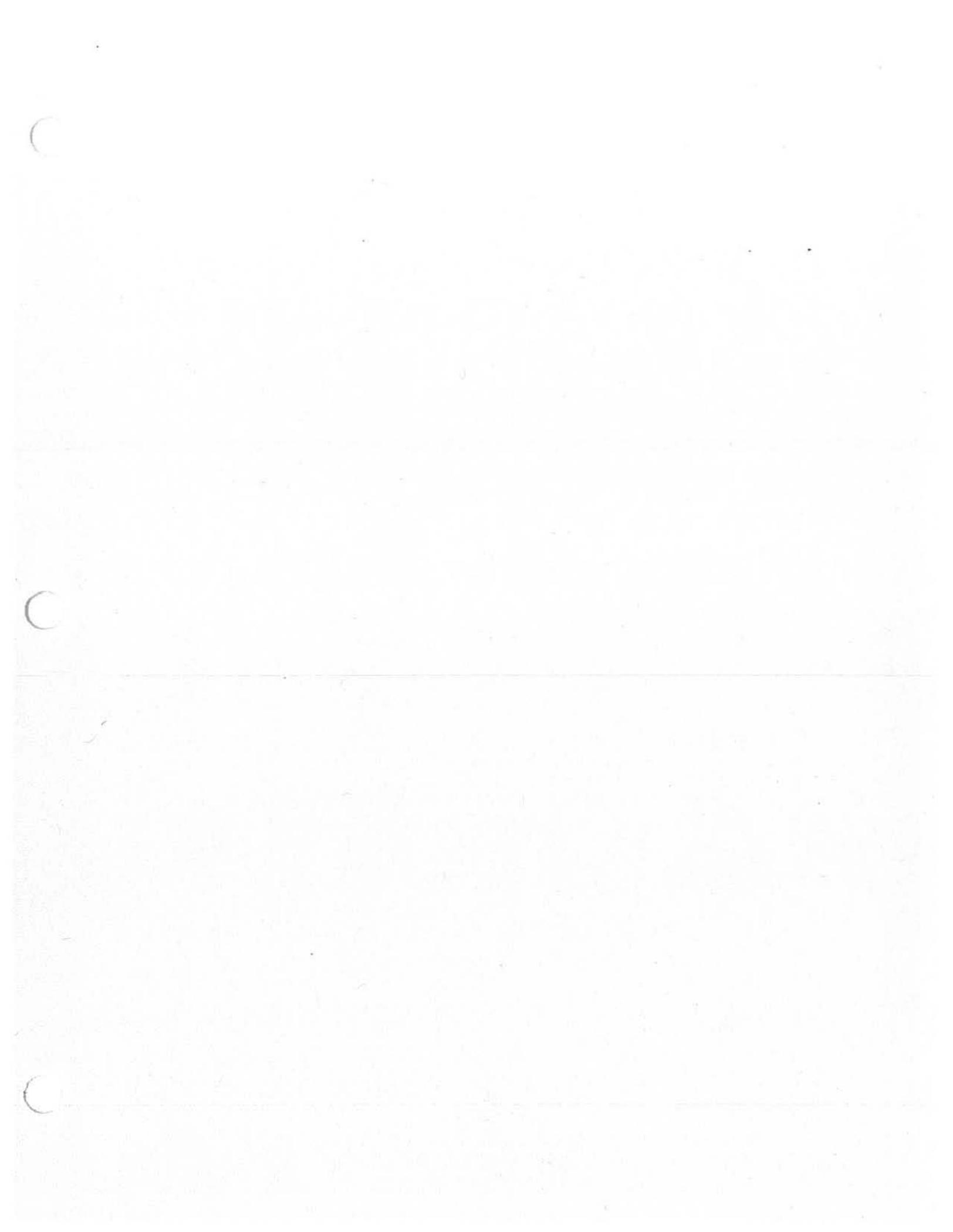
On this 14th day of December, 2011, before me appeared, Rudolph Mina personally known to me, who, being by me duly sworn, did say that he/she is the District Manager of AECOM Technical Services, Inc., and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said Rudolph Mina acknowledged said instrument to be the free act and deed of said corporation.



Jan-Marie K. Agua
Notary Public, First Judicial Circuit
State of Hawaii
My Commission Expires: May 13, 2012

<u>NOTARY CERTIFICATE</u> (Hawaii Administrative Rules §5-11-8)		
Document Identification or Description: <u>Certificate of Current</u>		
Cost or Pricing Data		
Doc. Date: <u>no date at time of notary</u> No. of Pages: <u>1</u> Jurisdiction: <u>First Circuit</u>		
<u>Jan-Marie K. Agua</u> Signature of Notary	<u>December 14, 2011</u> Date of Certificate	
<u>Jan-Marie K. Agua</u> Printed Name of Notary		(Official Stamp of Seal)







IN REPLY REFER TO:
CMS-AP00-00091

HONOLULU AUTHORITY for RAPID TRANSPORTATION

Kenneth Toru Hamayasu, P.E.
INTERIM EXECUTIVE DIRECTOR AND CEO

January 5, 2012

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Mr. Rudy Mina
Pacific District Manager
West Region, North America
AECOM Technical Services, Inc.
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Dear Mr. Mina:

Subject: Honolulu Rail Transit Project
Contract No. SC-HRT-1200038
Airport Segment Guideway and Utilities Contract
Notice to Proceed (NTP) #1a

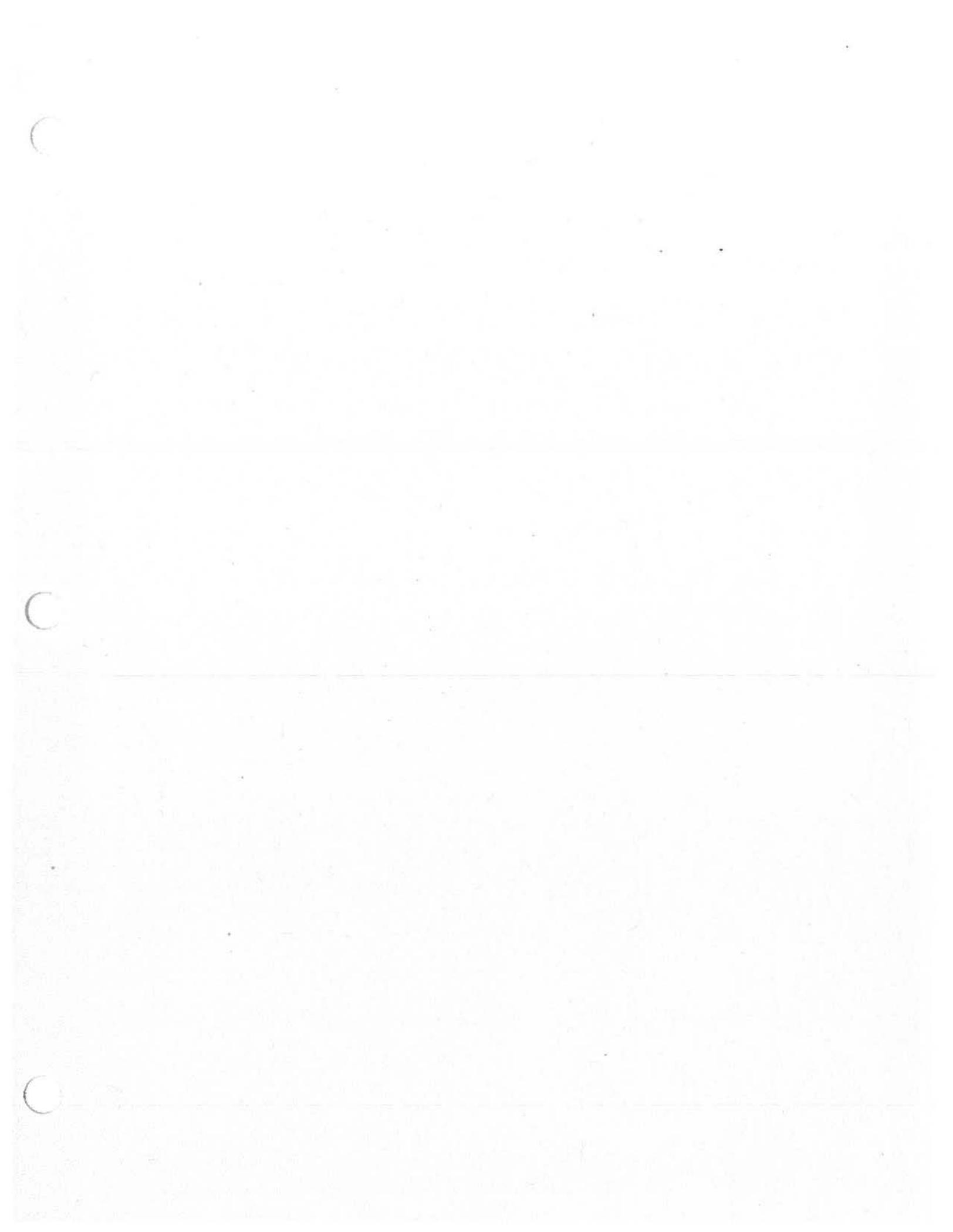
This letter serves as your Notice to Proceed for NTP #1a, pursuant to Paragraph 3 of the Agreement. As Officer-in-Charge, I have designated Mr. Gregory Rapp as HART Guideway Contract Manager in accordance with Section VII.B of the Special Provisions.

We look forward to working with you on this project. If you have any questions, please contact Mr. Gregory Rapp at (808) 768-6243.

Sincerely,


Kenneth Toru Hamayasu
Interim Executive Director and CEO

cc: Mr. Wes Kira, BFS-C&M Fiscal





IN REPLY REFER TO:
CMS-FGFD430-0003

HONOLULU AUTHORITY for RAPID TRANSPORTATION

Kenneth Toru Hamayasu, P.E.
INTERIM EXECUTIVE DIRECTOR AND CEO

February 22, 2012 .

Mr. Rudy Mina
Pacific District Manager
West Region, North America
AECOM Technical Services, Inc.
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

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Wayne Y. Yoshioka

Dear Mr. Mina:

Subject: Honolulu Rail Transit Project
Contract No. SC-HRT-1200038
Airport Segment Guideway and Utilities Design Contract
Notice to Proceed (NTP) #1b

This letter serves as your Notice to Proceed #1b ("NTP #1b") pursuant to Paragraph number 3 of the above-referenced Agreement for Work activities related to the revision of Preliminary Engineering ("PE") drawings and preliminary design drawings, as defined by HART, to incorporate approved value engineering recommendations and other HART preferences, and to bring schematic designs in compliance with all applicable codes, regulations, and design standards. These activities include, but are not limited to, work as referenced in the Special Provisions, Exhibit 1-Scope of Work, Exhibit 2A-Contract Cost Estimate, Exhibit 2B-Compensation and Invoicing, and Exhibit 2B-1-Project Payment Schedule. Costs associated with NTP #1b shall not exceed the limits set forth in Exhibits 2A, and 2B-1.

The aggregate amount for this NTP #1b shall not exceed \$13,233,957.00.

Should you have any questions, please contact Mr. Gregory Rapp at (808) 768-6243.

Sincerely,

Kenneth Toru Hamayasu
Interim Executive Director and CEO

Attachments

cc: BFS Fiscal

FINAL SCHEDULE OF MILESTONES
 REVISION 0

LINE #	NTP #	PRICE ITEM CODE	BASELINE SCHEDULE ACTIVITY ID	MILESTONE CODE (WBS)	MILESTONE TITLE	SM VALUE (\$)	PLANNED ACHIEVEMENT (DATE)	QUANTITY	UNIT	UNIT VALUE (\$/UNIT)
SCHEDULE OF MILESTONES										
1	NTP 1a	1a	A1000	F.G.00.01.00.00.80.03	Management / Design Management / Quality Assurance Management	\$ 213,919	16-Feb-12	1	MO	\$ 213,919.00
2	NTP 1a	1a	A1320	F.G.00.01.19.00.80.03	Interface and Coordination with Others - Design Team and Stakeholders / Section 106	\$ 4,952	16-Feb-12	1	MO	\$ 4,952.00
3	NTP 1a	1a	M0003R	F.G.00.01.22.00.80.02	Attendance at Two-Day Stakeholder Workshop	\$ 214,683	16-Feb-12		LS	
4	NTP 1a	1a	A1080	F.G.00.01.12.00.80.03	Draft Baseline Design Schedule	\$ 34,019	26-Jan-12		LS	
5	NTP 1a	1a	A1100	F.G.00.01.12.00.80.03	Draft Schedule of Milestones (SOM)	\$ 36,588	26-Jan-12		LS	
6	NTP 1a	1a	A1260	F.G.00.01.22.00.80.02	Design Workshop Report	\$ 18,270	16-Feb-12		LS	
7	NTP 1a	1a	A1110	F.G.00.01.12.00.80.03	Final Schedule of Milestones	\$ 9,147	16-Feb-12		LS	
8	NTP 1a	1a	M0008R	F.G.00.01.22.00.80.02	Over the Shoulder Submittal 00 - NTP #1a	\$ 252,958	16-Feb-12		LS	
						\$ 784,136				
PRELIMINARY ENGINEERING										
9	NTP 1b	1b	A1010	F.G.00.01.00.00.80.03	Management / Design Management / Quality Assurance Management	\$ 1,033,335	10-Jul-12	5	MO	\$ 206,667.00
10	NTP 1b	1b	A1330	F.G.00.01.19.00.80.03	Interface and Coordination with Others - Design Team and Stakeholders / Section 106	\$ 249,635	10-Jul-12	5	MO	\$ 49,927.00
11	NTP 1b	1b	A13416	F.G.00.01.15.00.80.03	Coordinate / Provide Public Involvement to Support HART	\$ 63,415	10-Jul-12	5	MO	\$ 12,683.00
12	NTP 1b	1b	A1560	F.G.00.02.21.00.80.07	Region 1 - Complete Field Survey at Available Locations	\$ 17,276	17-Feb-12		LS	
13	NTP 1b	1b	A10956	F.G.00.02.32.00.80.07	Draft Geotechnical QA/QC Plan	\$ 32,000	20-Feb-12		LS	
14	NTP 1b	1b	A1580	F.G.00.02.21.00.80.07	Region 1 - Update Topo File	\$ 8,500	21-Feb-12		LS	
15	NTP 1b	1b	A1280	F.G.00.01.00.00.80.03	Contract Packaging Workshop	\$ 13,630	23-Feb-12		LS	
16	NTP 1b	1b	A10876	F.G.00.02.32.00.80.07	Draft Geotechnical Health & Safety Plan	\$ 16,000	23-Feb-12		LS	
17	NTP 1b	1b	A1400	F.G.00.01.41.00.80.06	Right of Entry Authorization (Group B - HDOT)	\$ 2,473	23-Feb-12		LS	
18	NTP 1b	1b	A1120	F.G.00.01.00.00.80.03	Draft Project Work Plan	\$ 7,608	24-Feb-12		LS	
19	NTP 1b	1b	A1180	F.G.00.01.43.00.80.03	Draft Quality Assurance Plan	\$ 23,074	24-Feb-12		LS	
20	NTP 1b	1b	A10796	F.G.00.02.32.00.80.07	Draft Geotechnical Planning Report	\$ 30,000	24-Feb-12		LS	
21	NTP 1b	1b	A10836	F.G.00.02.32.00.80.07	Draft Geotechnical Investigation Work Plan	\$ 30,000	24-Feb-12		LS	
22	NTP 1b	1b	A1600	F.G.00.02.21.00.80.07	Region 1 - Field Review Topo File	\$ 8,500	24-Feb-12		LS	
23	NTP 1b	1b	A1440	F.G.00.01.41.00.80.06	Right of Entry Authorization (Group D - Misc Properties)	\$ 2,473	27-Feb-12		LS	
24	NTP 1b	1b	A1520	F.G.00.02.21.00.80.07	Identify Furnished Control Points	\$ 16,000	28-Feb-12		LS	
25	NTP 1b	1b	A10896	F.G.00.02.32.00.80.07	Final Geotechnical Health & Safety Plan	\$ 4,000	28-Feb-12		LS	
26	NTP 1b	1b	A10976	F.G.00.02.32.00.80.07	Final Geotechnical QA/QC Plan	\$ 8,000	28-Feb-12		LS	
27	NTP 1b	1b	A1540	F.G.00.02.21.00.80.07	Region 1 - Established Survey at Available Locations Control	\$ 4,500	28-Feb-12		LS	
28	NTP 1b	1b	A1640	F.G.00.02.21.00.80.07	Region 2 - Establish Survey Control at Available Locations	\$ 4,500	28-Feb-12		LS	
29	NTP 1b	1b	A1910	F.G.00.02.21.00.80.07	Region 4 - Establish Survey Control at Available Locations	\$ 4,500	28-Feb-12		LS	
30	NTP 1b	1b	M0030R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 02 - NTP #1b	\$ 171,573	29-Feb-12		LS	
31	NTP 1b	1b	A1090	F.G.00.01.12.00.80.03	Final Design Schedule	\$ 16,862	29-Feb-12		LS	
32	NTP 1b	1b	A1380	F.G.00.01.41.00.80.06	Right of Entry Authorization (Group A - DOO)	\$ 3,010	1-Mar-12		LS	
33	NTP 1b	1b	A1300	F.G.00.01.00.00.80.02	Contract Packaging Workshop Report	\$ 3,407	2-Mar-12		LS	
34	NTP 1b	1b	A3090	F.G.00.01.22.00.80.02	Draft Track Alignment White Paper Report	\$ 40,057	2-Mar-12		LS	
35	NTP 1b	1b	A7830	F.G.00.01.22.00.80.02	Draft concept shapes for piers, stations, etc.	\$ 13,036	2-Mar-12		LS	
36	NTP 1b	1b	A1680	F.G.00.02.21.00.80.07	Region 2 - Completed Field Survey at Available Locations	\$ 15,000	7-Mar-12		LS	
37	NTP 1b	1b	A1950	F.G.00.02.21.00.80.07	Region 4 - Complete Field Survey at Available Locations	\$ 14,000	7-Mar-12		LS	
38	NTP 1b	1b	A4700	F.G.00.02.32.00.80.07	Draft GP&E Sheets (Group A - 50 Spans)	\$ 30,839	8-Mar-12		LS	
39	NTP 1b	1b	A11036	F.G.00.02.32.00.80.07	Authorization for Access for Boring (Group A and B - 40 Borings)	\$ 45,934	9-Mar-12		LS	
40	NTP 1b	1b	A11316	F.G.00.02.32.00.80.07	Boring Logs (Group A - 20 Borings)	\$ 308,416	9-Mar-12		LS	
41	NTP 1b	1b	A4520	F.G.00.01.22.00.80.02	Draft Structural VE Recommendation White Paper Report	\$ 9,243	9-Mar-12		LS	
42	NTP 1b	1b	A4570	F.G.00.01.22.00.80.02	Span Optimization White Paper Report	\$ 29,648	9-Mar-12		LS	
43	NTP 1b	1b	A4650	F.G.00.01.22.00.80.02	Cross-Section White Paper Report	\$ 10,265	9-Mar-12		LS	
44	NTP 1b	1b	A1420	F.G.00.01.41.00.80.06	Right of Entry Authorization (Group C - Honolulu International Airport)	\$ 2,473	9-Mar-12		LS	
45	NTP 1b	1b	A1970	F.G.00.02.21.00.80.07	Region 4 - Update Topo File	\$ 8,500	9-Mar-12		LS	
46	NTP 1b	1b	A1730	F.G.00.02.21.00.80.07	Region 2 - Update Topo File	\$ 8,500	12-Mar-12		LS	
47	NTP 1b	1b	A1140	F.G.00.01.10.00.80.03	Draft Management Plan	\$ 12,940	13-Mar-12		LS	

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48	NTP 1b	1b	A1160	F.G.00.01.22.00.80.02	Draft Basis of Design Report	\$	25,374	13-Mar-12	LS
49	NTP 1b	1b	A1300	F.G.00.01.19.00.80.03	Draft Interface Management Plan	\$	10,664	13-Mar-12	LS
50	NTP 1b	1b	A1220	F.G.00.01.18.00.80.03	Draft Safety Manual	\$	6,499	13-Mar-12	LS
51	NTP 1b	1b	A1990	F.G.00.02.21.00.80.07	Region 4 - Field Review Topo File	\$	8,500	15-Mar-12	LS
52	NTP 1b	1b	A11076	F.G.00.02.32.00.80.07	Authorization for Access for Boring (Group C & D - 40 Borings)	\$	45,934	16-Mar-12	LS
53	NTP 1b	1b	A7910	F.G.00.01.02.00.80.02	Draft Sustainability Report	\$	11,494	16-Mar-12	LS
54	NTP 1b	1b	A1750	F.G.00.02.21.00.80.07	Region 2 - Field Review Topo File	\$	4,500	16-Mar-12	LS
55	NTP 1b	1b	A11596	F.G.00.02.32.00.80.07	Lab Test Results on Borings (Group A - 20 Borings)	\$	39,000	20-Mar-12	LS
56	NTP 1b	1b	A11336	F.G.00.02.32.00.80.07	Boring Logs (Group B - 20 Borings)	\$	308,416	26-Mar-12	LS
57	NTP 1b	1b	A4720	F.G.00.02.32.00.80.07	Draft GP&E Sheets (Group B - 50 Spans)	\$	30,839	28-Mar-12	LS
58	NTP 1b	1b	A12556	F.G.00.01.25.00.80.07	Phase I ESA (Group 1) - Final Report	\$	85,000	29-Mar-12	LS
59	NTP 1b	1b	A1620	F.G.00.02.21.00.80.07	Region 1 - Supplemented Field Survey (at all remaining locations), update and Finalize Topo	\$	16,800	29-Mar-12	LS
60	NTP 1b	1b	A1790	F.G.00.02.21.00.80.07	Region 3 - Establish Survey Control at Available Locations	\$	4,500	30-Mar-12	LS
61	NTP 1b	1b	A1460	F.G.00.01.41.00.80.06	Right of Entry Authorization (Group E - Remaining Properties)	\$	2,473	30-Mar-12	LS
62	NTP 1b	1b	A12876	F.G.00.01.25.00.80.03	Environmental Compliance Workshop	\$	85,000	30-Mar-12	LS
63	NTP 1b	1b	A2110	F.G.00.02.21.00.80.07	LIDAR Base Mapping	\$	120,000	30-Mar-12	LS
64	NTP 1b	1b	M0064R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 02 - NTP #1b	\$	1,096,964	30-Mar-12	LS
65	NTP 1b	1b	A4590	F.G.00.01.22.00.80.02	Final Span Optimization White Paper Report	\$	28,661	2-Apr-12	LS
66	NTP 1b	1b	A4670	F.G.00.01.22.00.80.02	Final Cross-Section White Paper Report	\$	10,244	2-Apr-12	LS
67	NTP 1b	1b	A2150	F.G.00.01.22.00.80.02	Region 1 & 2 - Research existing property ownership	\$	8,556	5-Apr-12	LS
68	NTP 1b	1b	A11616	F.G.00.02.32.00.80.07	Lab Test Results on Boring (Group B - 20 Borings)	\$	39,000	5-Apr-12	LS
69	NTP 1b	1b	A7850	F.G.00.01.22.00.80.02	Final concept shapes for piers, stations, etc	\$	7,500	6-Apr-12	LS
70	NTP 1b	1b	A1130	F.G.00.01.00.00.80.03	Final Project Work Plan	\$	1,902	9-Apr-12	LS
71	NTP 1b	1b	A1190	F.G.00.01.43.00.80.03	Final Quality Assurance Plan	\$	5,769	9-Apr-12	LS
72	NTP 1b	1b	A1830	F.G.00.02.21.00.80.07	Region 3 - Complete Field Survey at Available Locations	\$	14,000	9-Apr-12	LS
73	NTP 1b	1b	A11356	F.G.00.02.32.00.80.07	Boring Logs (Group C - 20 Borings)	\$	308,416	11-Apr-12	LS
74	NTP 1b	1b	A3110	F.G.00.01.07.00.80.02	Final Track Alignment White Paper Report	\$	4,582	12-Apr-12	LS
75	NTP 1b	1b	A1850	F.G.00.02.21.00.80.07	Region 3 - Update Topo File	\$	8,500	13-Apr-12	LS
76	NTP 1b	1b	A11116	F.G.00.02.32.00.80.07	Authorization for Access for Boring (Group E & F - 40 Borings)	\$	45,934	16-Apr-12	LS
77	NTP 1b	1b	A11156	F.G.00.02.32.00.80.07	Authorization for Access for Boring (Group G & H - 40 Borings)	\$	45,934	16-Apr-12	LS
78	NTP 1b	1b	A11196	F.G.00.02.32.00.80.07	Authorization for Access for Boring (Group I & J 40 Borings)	\$	50,830	16-Apr-12	LS
79	NTP 1b	1b	A11931	F.G.00.02.32.00.80.07	Interim Geotechnical Memorandum & Pier Review	\$	90,000	16-Apr-12	LS
80	NTP 1b	1b	A4740	F.G.00.02.32.00.80.07	Draft GP&E Sheets (Group C 50 Spans)	\$	30,839	17-Apr-12	LS
81	NTP 1b	1b	A1870	F.G.00.02.21.00.80.07	Region 3 - Field Review Topo File	\$	8,500	17-Apr-12	LS
82	NTP 1b	1b	A2010	F.G.00.02.21.00.80.07	Region 4 - Supplemented Field Survey (at all remaining locations), update and Finalize Topo	\$	14,000	19-Apr-12	LS
83	NTP 1b	1b	A11636	F.G.00.02.32.00.80.07	Lab Test Results on Boring (Group C - 20 Borings)	\$	39,000	20-Apr-12	LS
84	NTP 1b	1b	A1770	F.G.00.02.21.00.80.07	Region 2 - Supplemented Field Survey (at all remaining locations), update and Finalize Topo	\$	16,800	20-Apr-12	LS
85	NTP 1b	1b	A10816	F.G.00.02.32.00.80.07	Final Geotechnical Planning Report	\$	6,000	25-Apr-12	LS
86	NTP 1b	1b	A11951	F.G.00.01.22.00.80.02	Draft Seismic Design Memorandum & Peer Review	\$	90,000	25-Apr-12	LS
87	NTP 1b	1b	A1150	F.G.00.01.10.00.80.03	Final Management Plan	\$	3,235	26-Apr-12	LS
88	NTP 1b	1b	A1170	F.G.00.01.22.00.80.02	Final Basis of Design Report	\$	6,344	26-Apr-12	LS
89	NTP 1b	1b	A1210	F.G.00.01.19.00.80.03	Final Interface Management Plan	\$	2,666	26-Apr-12	LS
90	NTP 1b	1b	A1230	F.G.00.01.18.00.80.03	Final Safety Manual	\$	1,625	26-Apr-12	LS
91	NTP 1b	1b	A11376	F.G.00.02.32.00.80.07	Boring Logs (Group D - 20 Borings)	\$	308,416	27-Apr-12	LS
92	NTP 1b	1b	A10856	F.G.00.02.32.00.80.07	Final Geotechnical Investigation Work Plan	\$	5,976	30-Apr-12	LS
93	NTP 1b	1b	M0093R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 03 - NTP #1b	\$	1,412,275	30-Apr-12	LS
94	NTP 1b	1b	A3770	F.G.00.01.22.00.80.02	Draft Preliminary Drainage Report	\$	66,534	30-Apr-12	LS
95	NTP 1b	1b	A11876	F.G.00.02.32.00.80.07	Shear Wave Velocity Profile Testing Results (Group A - 2 Test)	\$	193,688	30-Apr-12	LS
96	NTP 1b	1b	A12836	F.G.00.01.25.00.80.02	Draft ECP	\$	85,000	30-Apr-12	LS
97	NTP 1b	1b	A2170	F.G.00.01.22.00.80.02	Region 3 & 4 - Research existing property ownership	\$	8,350	4-May-12	LS
98	NTP 1b	1b	A2420	F.G.00.02.32.00.80.07	Documentation of 1st 50 boring locations	\$	5,000	4-May-12	LS
99	NTP 1b	1b	A4760	F.G.00.07.32.00.80.07	Draft G P & E Sheets (Group D - 50 Spans/ remaining Spans)	\$	30,839	7-May-12	LS
100	NTP 1b	1b	A11656	F.G.00.02.32.00.80.07	Lab Test Results on Borings (Group D - 20 Borings)	\$	39,000	7-May-12	LS
101	NTP 1b	1b	A2330	F.G.00.02.21.00.80.07	Region 1 - Identification of locations in need for field monumentation of boundaries/ties	\$	5,677	11-May-12	LS

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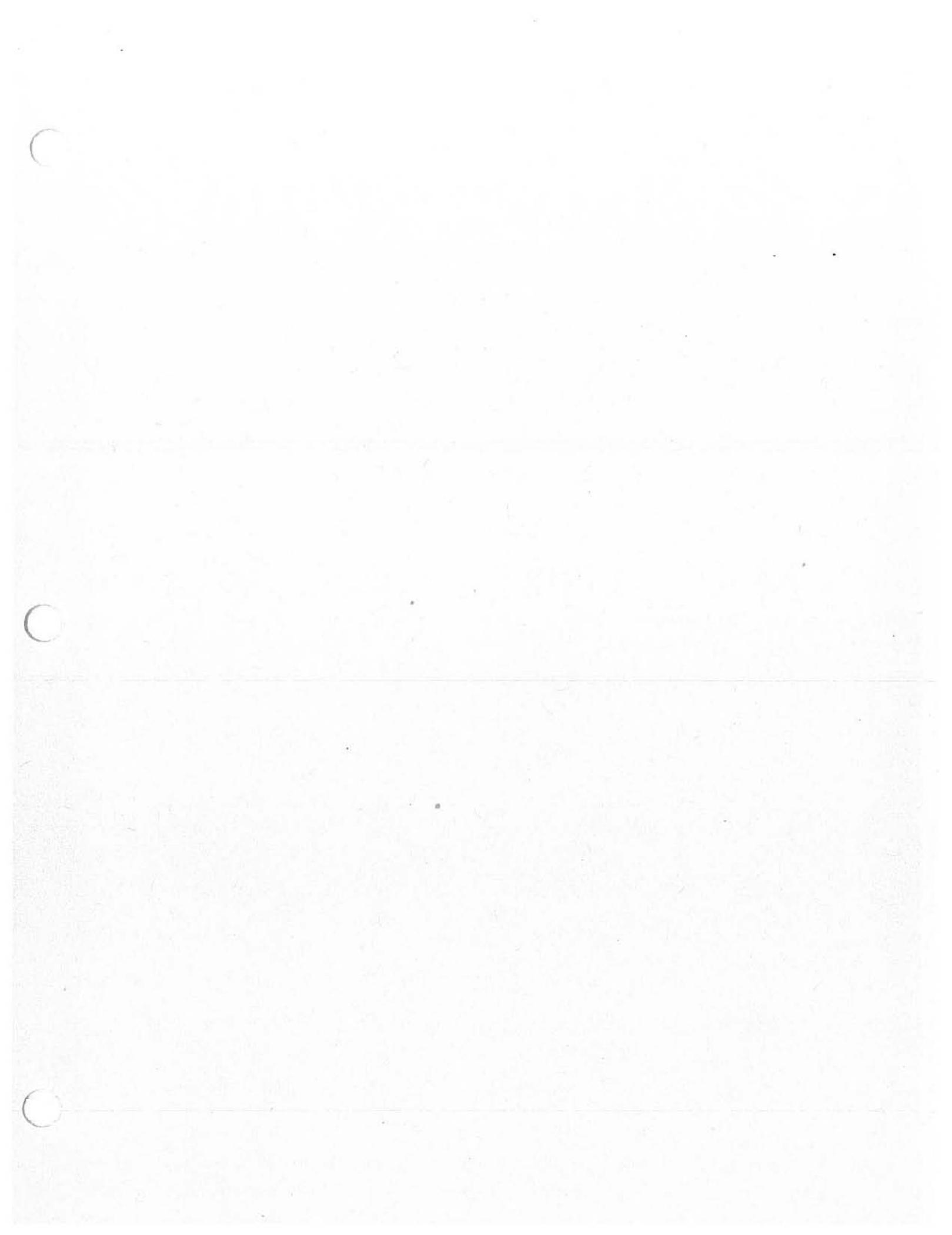
102	NTP 1b	1b	A11396	F.G.00.02.32.00.80.07	Boring Logs (Group E - 20 Borings)	\$	308,416	11-May-12	LS		
103	NTP 1b	1b	A11236	F.G.00.02.32.00.80.07	Authorization for Access for Boring (Group K & L 40 Borings)	\$	50,830	15-May-12	LS		
104	NTP 1b	1b	A11276	F.G.00.02.32.00.80.07	Authorization for Access for Boring (Group M & N 40 Borings/or remainder)	\$	50,830	15-May-12	LS		
105	NTP 1b	1b	A12576	F.G.00.01.25.00.80.07	Phase I ESA (Group 2) - Final Report	\$	85,000	16-May-12	LS		
106	NTP 1b	1b	A11971	F.G.00.02.32.00.80.07	Initial Draft Geotechnical Data Report Volume 1 & Piar Rerew	\$	130,000	17-May-12	LS		
107	NTP 1b	1b	A2350	F.G.00.02.21.00.80.07	Region 2 - Identification of locations in need for field monumentation of boundaries/ties	\$	5,677	18-May-12	LS		
108	NTP 1b	1b	A1890	F.G.00.02.21.00.80.07	Region 3 - Supplemented Field Survey (at all remaining locations), update and Finalize Topo	\$	14,000	22-May-12	LS		
109	NTP 1b	1b	A12596	F.G.00.01.25.00.80.07	Phase II ESA - Site 1 - Draft Report	\$	85,000	25-May-12	LS		
110	NTP 1b	1b	A12001	F.G.00.02.32.00.80.07	Initial Draft Geotechnical Data Report Volume 2 & Peer Review	\$	120,000	28-May-12	LS		
111	NTP 1b	1b	A13776	F.G.00.01.22.00.80.02	Preliminary Civil Specifications	\$	21,038	28-May-12	LS		
112	NTP 1b	1b	A13756	F.G.00.01.22.00.80.02	Preliminary Structural Specifications	\$	14,912	28-May-12	LS		
113	NTP 1b	1b	A13816	F.G.00.01.22.00.80.02	Preliminary Other Specifications	\$	36,155	28-May-12	LS		
114	NTP 1b	1b	A11416	F.G.00.02.32.00.80.07	Boring Logs (Group F - 20 Borings)	\$	308,416	29-May-12	LS		
115	NTP 1b	1b	M0115R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 04 - NTP #1b	\$	2,225,347	31-May-12	LS		
116	NTP 1b	1b	A11961	F.G.00.01.22.00.80.02	Final Seismic Design Memorandum	\$	15,000	4-Jun-12	LS		
117	NTP 1b	1b	A2430	F.G.00.02.32.00.80.07	Documentation of 2nd 50 boring locations	\$	5,000	5-Jun-12	LS		
118	NTP 1b	1b	A2450	F.G.00.02.32.00.80.07	Documentation of 3rd 50 boring locations	\$	5,000	5-Jun-12	LS		
119	NTP 1b	1b	A1040	F.G.00.01.22.00.80.02	Constructability Review of NTP 1b	\$	43,749	5-Jun-12	LS		
120	NTP 1b	1b	A11696	F.G.00.02.32.00.80.07	Lab Test Results on Boring (Group F - 20 Borings)	\$	39,000	8-Jun-12	LS		
121	NTP 1b	1b	A1050	F.G.00.01.22.00.80.02	Constructability Review Report - Report NTP 1b	\$	8,458	11-Jun-12	LS		
122	NTP 1b	1b	A11436	F.G.00.02.32.00.80.07	Boring Logs (Group G - 20 Borings)	\$	308,416	14-Jun-12	LS		
123	NTP 1b	1b	A2390	F.G.00.02.21.00.80.07	Region 4 - Identification of need of field monumentation of boundaries/ties	\$	5,677	20-Jun-12	LS		
124	NTP 1b	1b	A11676	F.G.00.02.32.00.80.07	Lab Test Results on Boring (Group E - 20 Borings)	\$	39,000	22-Jun-12	LS		
125	NTP 1b	1b	A11981	F.G.00.02.32.00.80.07	Draft Geotechnical Data Report Volume 1 & Peer Review	\$	62,553	25-Jun-12	LS		
126	NTP 1b	1b	A12856	F.G.00.01.25.00.80.07	Final ECP (After Final Design)	\$	62,917	29-Jun-12	LS		
127	NTP 1b	1b	M0127R	F.G.00.01.22.00.80.02	Preliminary Engineering Submittal	\$	1,174,678	29-Jun-12	LS		
128	NTP 1b	1b	A11456	F.G.00.02.32.00.80.07	Boring Logs (Group H - 20 Borings)	\$	308,416	29-Jun-12	LS		
129	NTP 1b	1b	A11941	F.G.00.02.32.00.80.07	Updated Geotechnical Memorandum & Peer Review	\$	20,000	2-Jul-12	LS		
130	NTP 1b	1b	A12716	F.G.00.01.25.00.80.07	Building Hazardous Material Surveys - Draft Report	\$	57,083	2-Jul-12	LS		
131	NTP 1b	1b	A12616	F.G.00.01.25.00.80.07	Phase II ESA - Site 1 - Final Report	\$	85,000	5-Jul-12	LS		
132	NTP 1b	1b	A12896	F.G.00.01.22.00.80.02	ECP Update after Preliminary Design	\$	75,000	5-Jul-12	LS		
133	NTP 1b	1b	A12636	F.G.00.01.25.00.80.07	Phase II ESA - Site 2 - Draft Report	\$	50,000	9-Jul-12	LS		
134	NTP 1b	1b	M0134R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 05 - NTP #1b	\$	133,040	10-Jul-12	LS		
135	NTP 1b	1b	A2370	F.G.00.02.21.00.80.07	Region 3 - Identification of need of field monumentation of boundaries/ties	\$	5,677	11-Jul-12	LS		
						\$	13,233,957				
INTERIM DESIGN											
136	NTP 2	2	A1020	F.G.00.01.00.00.80.03	Management / Design Management / Quality Assurance Management	\$	1,518,146	25-Jan-13	7	MO	\$ 216,878.00
137	NTP 2	2	A1340	F.G.00.01.19.00.80.03	Interface and Coordination with Others - Design Team and Stakeholders / Section 106 - NTP 2	\$	364,735	25-Jan-13	7	MO	\$ 52,105.00
138	NTP 2	2	A13436	F.G.00.01.15.00.80.03	Coordinate / Provide Public Involvement to Support HART	\$	90,594	25-Jan-13	7	MO	\$ 12,942.00
139	NTP 2	2	A11716	F.G.00.02.32.00.80.07	Lab Test Results on Boring (Group G - 20 Borings)	\$	39,004	12-Jul-12		LS	
140	NTP 2	2	A11736	F.G.00.02.32.00.80.07	Lab Test Results on Boring (Group H - 20 Borings)	\$	39,000	12-Jul-12		LS	
141	NTP 2	2	A11476	F.G.00.02.32.00.80.07	Boring Logs (Group I - 20 Borings)	\$	397,325	16-Jul-12		LS	
142	NTP 2	2	A2490	F.G.00.01.22.00.80.02	Region 1 & 2 - Draft set of easement plans	\$	16,000	23-Jul-12		LS	
143	NTP 2	2	A12676	F.G.00.01.25.00.80.07	Phase II ESA - Site 3 - Draft Report	\$	50,000	25-Jul-12		LS	
144	NTP 2	2	A11756	F.G.00.02.32.00.80.07	Lab Test Results on Boring (Group I - 20 Borings)	\$	39,000	26-Jul-12		LS	
145	NTP 2	2	M0145R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 06 - NTP #2	\$	705,552	31-Jul-12		LS	
146	NTP 2	2	A11896	F.G.00.02.32.00.80.07	Shear Wave Velocity Profile Testing Results (Group B - 2 Test)	\$	160,107	31-Jul-12		LS	
147	NTP 2	2	A11916	F.G.00.02.32.00.80.07	Shear Wave Velocity Profile Testing Results (Group C - 2 Test)	\$	160,107	31-Jul-12		LS	
148	NTP 2	2	A2510	F.G.00.01.22.00.80.02	Region 3 & 4 - Draft set of easement plans	\$	16,000	1-Aug-12		LS	
149	NTP 2	2	A11496	F.G.00.02.32.00.80.07	Boring Logs (Group J - 20 Borings)	\$	397,325	1-Aug-12		LS	
150	NTP 2	2	A2190	F.G.00.02.21.00.80.07	Region 1 & 2 - Field Monumentation of Boundaries/Ties	\$	14,500	3-Aug-12		LS	
151	NTP 2	2	A12016	F.G.00.02.32.00.80.07	Draft Geotechnical Data Report Volume 2 & Peer Review	\$	120,000	3-Aug-12		LS	
152	NTP 2	2	A2210	F.G.00.02.21.00.80.07	Region 3 & 4 - Field monumentation of boundaries/ties	\$	14,500	10-Aug-12		LS	

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153	NTP 2	2	A2570	F.G.00.02.32.00.80.07	Documentation of 4th 50 boring locations	\$	5,000	10-Aug-12		LS		
154	NTP 2	2	A11776	F.G.00.02.32.00.80.07	Lab Test Results on Borings (Group J - 20 Borings)	\$	39,000	10-Aug-12		LS		
155	NTP 2	2	A4130	F.G.00.01.22.00.80.02	Draft Scour Summary Report	\$	19,715	14-Aug-12		LS		
156	NTP 2	2	A11516	F.G.00.02.32.00.80.07	Boring Log (Group K - 20 Borings)	\$	397,325	17-Aug-12		LS		
157	NTP 2	2	A12656	F.G.00.01.25.00.80.07	Phase II ESA - Site 2 - Final Report	\$	55,000	17-Aug-12		LS		
158	NTP 2	2	A12736	F.G.00.01.25.00.80.07	Building Hazardous Material Surveys (12 Buildings) - Final Report	\$	50,000	21-Aug-12		LS		
159	NTP 2	2	A2230	F.G.00.01.02.00.80.02	Region 1 & 2 - Draft set of ROW maps and plans	\$	12,000	24-Aug-12		LS		
160	NTP 2	2	A2250	F.G.00.01.02.00.80.02	Region 3 & 4 - Draft set of ROW maps and plans	\$	12,000	30-Aug-12		LS		
161	NTP 2	2	M0161R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 07 - NTP #2	\$	1,421,419	30-Aug-12		LS		
162	NTP 2	2	A11536	F.G.00.02.32.00.80.07	Boring Log (Group L - 20 Borings)	\$	397,325	3-Sep-12		LS		
163	NTP 2	2	A12696	F.G.00.01.25.00.80.07	Phase II ESA - Site 3 - Final Report	\$	55,000	4-Sep-12		LS		
164	NTP 2	2	A2030	F.G.00.02.21.00.80.07	Update Topo File as Necessary for NTP 2	\$	90,000	10-Sep-12		LS		
165	NTP 2	2	A13096	F.G.00.01.41.00.80.06	Storm Drain connection Permitt Application	\$	10,000	10-Sep-12		LS		
166	NTP 2	2	A11816	F.G.00.02.32.00.80.07	Lab Test Results on Borings (Group L - 20 Borings)	\$	39,000	12-Sep-12		LS		
167	NTP 2	2	A12066	F.G.00.02.32.00.80.07	Draft Geotechnical Design Report (Guideway Structure)	\$	94,369	17-Sep-12		LS		
168	NTP 2	2	A12086	F.G.00.02.32.00.80.07	Draft Geotechnical Design Report (On-Grade Structures)	\$	79,635	17-Sep-12		LS		
169	NTP 2	2	A11556	F.G.00.02.32.00.80.07	Boring Logs (Group M - 20 Borings)	\$	397,325	18-Sep-12		LS		
170	NTP 2	2	A11796	F.G.00.02.32.00.80.07	Lab Test Results on Boring (Group K - 20 Borings)	\$	39,000	27-Sep-12		LS		
171	NTP 2	2	A11896	F.G.00.02.32.00.80.07	Lab Test Results on Boring (Group M - 20 Borings)	\$	39,000	28-Sep-12		LS		
172	NTP 2	2	M0172R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 08 - NTP #2	\$	1,851,552	28-Sep-12		LS		
173	NTP 2	2	A11576	F.G.00.02.32.00.80.07	Borings (Group N or remaining Borings)	\$	397,327	4-Oct-12		LS		
174	NTP 2	2	A2590	F.G.00.02.32.00.80.07	Document of Remaining boring Locations	\$	5,000	10-Oct-12		LS		
175	NTP 2	2	A13196	F.G.00.01.41.00.80.06	Flood Hazard District Compliance	\$	10,000	14-Oct-12		LS		
176	NTP 2	2	A13216	F.G.00.01.41.00.80.06	Development of Construction Plan to Cross State Emergency Corridor	\$	10,000	15-Oct-12		LS		
177	NTP 2	2	A11856	F.G.00.02.32.00.80.07	Lab Test Results on Boring Logs (Group N - 20 Borings/or remainder)	\$	39,000	15-Oct-12		LS		
178	NTP 2	2	A13136	F.G.00.01.41.00.80.06	Interstate Access Modification	\$	10,000	15-Oct-12		LS		
179	NTP 2	2	A13156	F.G.00.01.41.00.80.06	Form 7460.1	\$	10,000	15-Oct-12		LS		
180	NTP 2	2	A13176	F.G.00.01.41.00.80.06	Waiver for Construction in a Runway Protection Zone	\$	10,000	15-Oct-12		LS		
181	NTP 2	2	A13236	F.G.00.01.41.00.80.06	Grading, Grubbing, Stockpiling and Trench From DPP	\$	9,167	15-Oct-12		LS		
182	NTP 2	2	A3820	F.G.00.01.22.00.80.02	Draft Interim Erosion Control Report	\$	44,784	17-Oct-12		LS		
183	NTP 2	2	M0183R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 09 - NTP #2	\$	1,680,079	31-Oct-12		LS		
184	NTP 2	2	A3800	F.G.00.01.22.00.80.02	Draft Interim Drainage Report	\$	16,000	2-Nov-12		LS		
185	NTP 2	2	A12076	F.G.00.02.32.00.80.07	Final Geotechnical Design Report (Guideway Structure)	\$	42,061	23-Nov-12		LS		
186	NTP 2	2	A12096	F.G.00.02.32.00.80.07	Final Geotechnical Design Report (On-Grade Structures)	\$	44,272	23-Nov-12		LS		
187	NTP 2	2	A13856	F.G.00.01.22.00.80.02	Interim Structural Specifications	\$	35,236	30-Nov-12		LS		
188	NTP 2	2	M0188R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 10 - NTP #2	\$	1,758,158	30-Nov-12		LS		
189	NTP 2	2	A13876	F.G.00.01.22.00.80.02	Interim Civil Specifications	\$	13,745	30-Nov-12		LS		
190	NTP 2	2	A13916	F.G.00.01.22.00.80.02	Interim Other Specifications	\$	51,200	30-Nov-12		LS		
191	NTP 2	2	A1060	F.G.00.01.22.00.80.02	Notes from NTP 2 Constructability Review	\$	43,749	21-Dec-12		LS		
192	NTP 2	2	A1070	F.G.00.01.22.00.80.02	Constructability Report for NTP 2	\$	8,458	28-Dec-12		LS		
193	NTP 2	2	M0193R	F.G.00.01.22.00.80.02	Interim Design Submittal	\$	3,321,417	31-Dec-12		LS		
194	NTP 2	2	A13116	F.G.00.01.41.00.80.06	Interstate Airspace Use Approvals	\$	10,000	31-Dec-12		LS		
195	NTP 2	2	A12036	F.G.00.02.32.00.80.07	Initial Draft Geotechnical Data Report Volume 3 & Peer Review	\$	123,869	3-Jan-13		LS		
196	NTP 2	2	A7940	F.G.00.01.02.00.80.02	Final Sustainability Report	\$	8,122	24-Jan-13		LS		
197	NTP 2	2	M0197R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 11 - NTP #2	\$	101,500	25-Jan-13		LS		
							\$	17,048,698				
FINAL DESIGN												
198	NTP 3	3	A1030	F.G.00.01.00.00.80.03	Management / Design Management / Quality Assurance Management	\$	827,992	27-May-13	4	MO	\$ 206,998.00	
199	NTP 3	3	A1350	F.G.00.01.19.00.80.03	Interface and Coordination with Others - Design Team and Stakeholders / Section 106 - NTP 3	\$	113,208	27-May-13	4	MO	\$ 28,302.00	
200	NTP 3	3	A13456	F.G.00.01.15.00.80.03	Coordinate / Provide Public Involvement to Support HART	\$	27,972	27-May-13	4	MO	\$ 6,993.00	
201	NTP 3	3	A12916	F.G.00.01.22.00.80.02	ECP Update after Interim Design	\$	24,998	28-Jan-13		LS		
202	NTP 3	3	M0202R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 12 - NTP #3	\$	868,304	31-Jan-13		LS		
203	NTP 3	3	A12046	F.G.00.02.32.00.80.07	Draft Geotechnical Data Report Volume 3 & Peer Review	\$	74,750	8-Feb-13		LS		

FINAL SCHEDULE OF MILESTONES
 REVISION 0

204	NTP 3	3	A3870	F.G.00.01.22.00.80.02	Draft Final Erosion Control Report	\$	16,807	8-Feb-13	LS
205	NTP 3	3	A2530	F.G.00.01.22.00.80.02	Region 1 & 2 - Final set of easement plans	\$	9,500	11-Feb-13	LS
206	NTP 3	3	A3850	F.G.00.01.22.00.80.02	Draft Final Drainage Report	\$	6,000	11-Feb-13	LS
207	NTP 3	3	A2550	F.G.00.01.22.00.80.02	Region 3 & 4 - Draft set of easement plans	\$	3,500	21-Feb-13	LS
208	NTP 3	3	A12476	F.G.00.01.22.00.80.02	Draft Load Test Procedures	\$	21,062	26-Feb-13	LS
209	NTP 3	3	M0209R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 13 - NTP #3	\$	732,127	28-Feb-13	LS
210	NTP 3	3	A13956	F.G.00.01.22.00.80.02	Draft Final Structural Specifications	\$	14,220	28-Feb-13	LS
211	NTP 3	3	A13976	F.G.00.01.22.00.80.02	Draft Final Civil Specifications	\$	8,483	28-Feb-13	LS
212	NTP 3	3	A14016	F.G.00.01.22.00.80.02	Draft Final Other Specifications	\$	24,418	28-Feb-13	LS
213	NTP 3	3	A12026	F.G.00.02.32.00.80.07	Final Geotechnical Data Report Volume 2 & Peer Review	\$	25,000	5-Mar-13	LS
214	NTP 3	3	A13056	F.G.00.01.41.00.80.06	Draft NPDES NOI-C Application	\$	25,000	6-Mar-13	LS
215	NTP 3	3	A4180	F.G.00.01.22.00.80.02	Prepare Final Scour Summary Report and Countermeasures	\$	31,203	12-Mar-13	LS
216	NTP 3	3	A11991	F.G.00.02.32.00.80.07	Final Geotechnical Data Report Volume 1 & Peer Review	\$	25,000	15-Mar-13	LS
217	NTP 3	3	A12056	F.G.00.02.32.00.80.07	Final Geotechnical Data Report Volume 3 & Peer Review	\$	25,000	25-Mar-13	LS
218	NTP 3	3	M0218R	F.G.00.01.22.00.80.02	Draft Final Design Submittal	\$	1,910,843	29-Mar-13	LS
219	NTP 3	3	A12496	F.G.00.01.22.00.80.07	Draft Load Test Procedures	\$	10,521	24-Apr-13	LS
220	NTP 3	3	A13076	F.G.00.01.41.00.80.06	Final NPDES NOI-C Application	\$	7,950	25-Apr-13	LS
221	NTP 3	3	M0221R	F.G.00.01.22.00.80.02	Over The Shoulder Submittal 14 - NTP #3	\$	362,481	30-Apr-13	LS
222	NTP 3	3	A13276	F.G.00.01.41.00.80.06	Utility Use and Occupancy Agreements	\$	10,000	27-May-13	LS
223	NTP 3	3	A13296	F.G.00.01.41.00.80.06	Noise Variance Permit	\$	10,000	27-May-13	LS
224	NTP 3	3	M0224R	F.G.00.01.22.00.80.02	Final Design Submittal	\$	975,816	27-May-13	LS
						\$	6,186,155		
Total - NTP 1a						\$	784,136		
Total - NTP 1b						\$	13,233,957		
Total - NTP 2						\$	17,048,688		
Total - NTP 3						\$	6,186,155		
Total - NTP 4						\$	433,681		
Total - NTP 5						\$	1,154,333		
GRAND TOTAL						\$	38,840,960		





IN REPLY REFER TO:
CMS FGFD430-00006

HONOLULU AUTHORITY for RAPID TRANSPORTATION

Daniel A. Grabauskas
EXECUTIVE DIRECTOR AND CEO

July 23, 2012

BOARD OF DIRECTORS
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Mr. Rudy Mina
Pacific District Manager
West Region, North America
AECOM Technical Services, Inc.
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Dear Mr. Mina:

Subject: Honolulu Rail Transit Project
Contract No. SC-HRT-1200038
Airport Section Guideway and Utilities Design Contract
Notice to Proceed (NTP) 2 - Interim Design (ID)

This letter serves as your Notice to Proceed #2 ("NTP #2") pursuant to Paragraph 3 of the above-referenced Agreement for Work activities related to interim design drawings, detailed working drawings, and other PE phase activities, as defined by HART, and to bring designs in compliance with all applicable codes, regulations, and design standards. These activities include, but are not limited to, work as referenced in the Special Provisions, Exhibit 1 Scope of Work, Exhibit 2A Contract Cost Estimate, Exhibit 2B Compensation and Invoicing, and Exhibit 2B-1 Project Payment Schedule. Costs associated with NTP #2 shall not exceed the limits set forth in Exhibits 2A and 2B-1.

The aggregate amount for this NTP #2 shall not exceed \$17,048,698.00.

Should you have any questions regarding this matter, please contact Mr. Gregory Rapp at (818) 768-6243.

Sincerely,

Daniel A. Grabauskas
Executive Director and CEO

Attachments

cc: Construction and Maintenance Fiscal

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
 PERIOD TO: June 29, 2012
 CONTRACT NO.: SC-HRT - 1200038
 INFO/ADVANTAGE (C2HERP's CONTRACT NO.SC-HRT-12H0038
 CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00001	NTP1A		1000.0		Mngmnt/Design Mngmnt/Quality Assurance Mngmnt	\$213,919.00		LUMP SUM		\$213,919.00	\$0.00	\$213,919.00
							1	PER MO	13,919.00			
00002	NTP1A		1320.0		Interface and Coord. w/others-Design Team and STKHILDRS/Seet.	\$4,952.00		LUMP SUM		\$4,952.00	\$0.00	\$4,952.00
							1	PER MO	4,952.00			
00003	NTP1A		M0003R		Attendance at Two-Day Stakeholder Workshop	\$214,683.00		LUMP SUM		\$214,683.00	\$0.00	\$214,683.00
00004	NTP1A		1080.0		Draft Baseline Design Schedule	\$34,019.00		LUMP SUM		\$34,019.00	\$0.00	\$34,019.00
00005	NTP1A		1100.0		Draft Schedule of Milestones SOM	\$36,588.00		LUMP SUM		\$36,588.00	\$0.00	\$36,588.00
00006	NTP1A		1260.0		Design Workshop Report	\$18,270.00		LUMP SUM		\$18,270.00	\$0.00	\$18,270.00
00007	NTP1A		1110.0		Final Schedule of Milestones	\$9,147.00		LUMP SUM		\$9,147.00	\$0.00	\$9,147.00
00008	NTP1A		M0008R		Over the Shoulder Submittal 00-NTP 1a	\$252,558.00		LUMP SUM		\$252,558.00	\$0.00	\$252,558.00
00009	NTP1B		1010.0	NOT COSTED	Mngmnt/Design Mngmnt/Quality Assurance Mngmnt	\$1,033,335.00		LUMP SUM		\$620,001.00	\$206,687.00	\$826,668.00
							5	PER MO	6,667.00			
00010	NTP1B		1330.0	NOT COSTED	Interface and Coord. w/others-Design Team and STKHILDRS/Seet.	\$249,635.00		LUMP SUM		\$149,781.00	\$49,927.00	\$199,708.00
							5	PER MO	19,927.00			
00011	NTP1B		13416.0	NOT COSTED	Coordinate/Provide Public Involvement to Support IIART	\$63,415.00		LUMP SUM		\$38,049.00	\$12,683.00	\$50,732.00
							5	PER MO	12,683.00			
00012	NTP1B		1580.0		Region 1-Complete Field Survey at Available Locations	\$17,276.00		LUMP SUM		\$17,276.00	\$0.00	\$17,276.00
00013	NTP1B		10856.0		Draft Geotech QA/QC Plan	\$32,000.00		LUMP SUM		\$32,000.00	\$0.00	\$32,000.00
00014	NTP1B		1580.0		Region 1-Update Topo File	\$8,500.00		LUMP SUM		\$8,500.00	\$0.00	\$8,500.00
00015	NTP1B		1260.0		Contract Packaging Workshop	\$13,630.00		LUMP SUM		\$13,630.00	\$0.00	\$13,630.00
00016	NTP1B		10876.0		Draft Geotech Health and Safety Plan	\$16,000.00		LUMP SUM		\$16,000.00	\$0.00	\$16,000.00
00017	NTP1B		1400.0		Right of Entry Authorization Group B-11DOT	\$2,473.00		LUMP SUM		\$2,473.00	\$0.00	\$2,473.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
PERIOD TO: June 29, 2012
CONTRACT NO.: SC-HRT - 1200038
INFO/ADVANTAGE (C2HERPs CONTRACT NO.): SC-HRT-12H0038
CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00018	NTP1B		1120.0		Draft Project Work Plan	\$7,608.00		LUMP SUM		\$7,608.00	\$0.00	\$7,608.00
00019	NTP1B		1180.0		Draft Quality Assurance Plan	\$23,074.00		LUMP SUM		\$23,074.00	\$0.00	\$23,074.00
00020	NTP1B		10796.0		Draft Geotech Planning Report	\$30,000.00		LUMP SUM		\$30,000.00	\$0.00	\$30,000.00
00021	NTP1B		10836.0		Draft Geotech Investigation Work Plan	\$30,000.00		LUMP SUM		\$30,000.00	\$0.00	\$30,000.00
00022	NTP1B		1600.0		Region 1-Field Review Topo File	\$8,500.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00023	NTP1B		1440.0		Right of Entry Authorization Group D-Misc Properties	\$2,473.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00024	NTP1B		1520.0		Identify Furnished Control Points	\$16,000.00		LUMP SUM		\$16,000.00	\$0.00	\$16,000.00
00025	NTP1B		10896.0		Final Geotech Health and Safety Plan	\$4,000.00		LUMP SUM		\$4,000.00	\$0.00	\$4,000.00
00026	NTP1B		10976.0	NOT COSTED	Final Geotech QA/QC Plan	\$8,000.00		LUMP SUM		\$0.00	\$8,000.00	\$8,000.00
00027	NTP1B		1540.0		Region 1-Established Survey at Available Locations Control	\$4,500.00		LUMP SUM		\$4,500.00	\$0.00	\$4,500.00
00028	NTP1B		1640.0		Region 2-Establish Survey Control at Available Locations	\$4,500.00		LUMP SUM		\$4,500.00	\$0.00	\$4,500.00
00029	NTP1B		1910.0		Region 4-Establish Survey Control at Available Locations	\$4,500.00		LUMP SUM		\$4,500.00	\$0.00	\$4,500.00
00030	NTP1B		M0030R		Over The Shoulder Submittal 01- NTP 1b	\$171,573.00		LUMP SUM		\$171,573.00	\$0.00	\$171,573.00
00031	NTP1B		1090.0		Final Design Schedule	\$16,862.00		LUMP SUM		\$16,862.00	\$0.00	\$16,862.00
00032	NTP1B		1380.0		Right of Entry Authorization Group A-DOD	\$3,010.00		LUMP SUM		\$3,010.00	\$0.00	\$3,010.00
00033	NTP1B		1300.0		Contract Packaging Workshop Report	\$3,407.00		LUMP SUM		\$3,407.00	\$0.00	\$3,407.00
00034	NTP1B		3090.0		Draft Track Alignment White Paper Report	\$40,057.00		LUMP SUM		\$40,057.00	\$0.00	\$40,057.00
00035	NTP1B		7830.0		Draft concept shapes for piers, stations, etc.	\$13,036.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00036	NTP1B		1680.0		Region 2-Completed Field Survey at Available Locations	\$15,000.00		LUMP SUM		\$15,000.00	\$0.00	\$15,000.00
00037	NTP1B		1650.0		Region 4-Complete Field Survey at Available Locations	\$14,000.00		LUMP SUM		\$14,000.00	\$0.00	\$14,000.00
00038	NTP1B		4700.0		Draft GPandE Sheets Group A-50 Spans	\$30,839.00		LUMP SUM		\$30,839.00	\$0.00	\$30,839.00
00039	NTP1B		11036.0		Authorization for Access for Boring Group A and B-40 Borings	\$45,934.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00040	NTP1B		11316.0		Boring Logs Group A-20 Borings	\$308,416.00		LUMP SUM		\$0.00	\$0.00	\$0.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
 PERIOD TO: June 29, 2012
 CONTRACT NO.: SC-HRT - 1200038
 INFO/ADVANTAGE (C2HERP) CONTRACT NO. SC-HRT-12H0038
 CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00041	NTP1B		4520.0		Draft Structural VE Recommendation White Paper Report	\$9,243.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00042	NTP1B		4570.0		Span Optimization White Paper Report	\$29,648.00		LUMP SUM		\$29,648.00	\$0.00	\$29,648.00
00043	NTP1B		4650.0		Cross-Sept. White Paper Report	\$10,265.00		LUMP SUM		\$10,265.00	\$0.00	\$10,265.00
00044	NTP1B		1420.0		Right of Entry Authorization Group C-FNL Intl Airport	\$2,473.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00045	NTP1B		1970.0		Region 4-Update Topo File	\$8,500.00		LUMP SUM		\$8,500.00	\$0.00	\$8,500.00
00046	NTP1B		1730.0		Region 2-Update Topo File	\$8,500.00		LUMP SUM		\$8,500.00	\$0.00	\$8,500.00
00047	NTP1B		1140.0		Draft Mngmnt Plan	\$12,940.00		LUMP SUM		\$12,940.00	\$0.00	\$12,940.00
00048	NTP1B		1160.0	NOT COSTED	Draft Basis of Design Report	\$25,374.00		LUMP SUM		\$0.00	\$25,374.00	\$25,374.00
00049	NTP1B		1200.0		Draft Interface Mngmnt Plan	\$10,664.00		LUMP SUM		\$10,664.00	\$0.00	\$10,664.00
00050	NTP1B		1220.0		Draft Safety Manual	\$6,499.00		LUMP SUM		\$6,499.00	\$0.00	\$6,499.00
00051	NTP1B		1990.0		Region 4-Field Review Topo File	\$8,500.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00052	NTP1B		11076.0		Authorization for Access for Boring Group C and D-40 Borings	\$45,934.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00053	NTP1B		7910.0		Draft Sustainability Report	\$11,494.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00054	NTP1B		1750.0		Region 2-Field Review Topo File	\$4,500.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00055	NTP1B		11596.0		Lab Test Results on Borings Group A-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00056	NTP1B		11336.0		Boring Logs Group B-20 Borings	\$308,416.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00057	NTP1B		4720.0		Draft GP and E Sheets Group B-50 Spans	\$30,839.00		LUMP SUM		\$30,839.00	\$0.00	\$30,839.00
00058	NTP1B		12556.0		Phase I ESA Group I-Final Report	\$85,000.00		LUMP SUM		\$85,000.00	\$0.00	\$85,000.00
00059	NTP1B		1620.0		Region 1-Supp. Field Survey at all remaining locations, upda	\$16,800.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00060	NTP1B		1790.0		Region 3-Establish Survey Control at Available Locations	\$4,500.00		LUMP SUM		\$4,500.00	\$0.00	\$4,500.00
00061	NTP1B		1460.0		Right of Entry Authorization Group E-Remaining Properties	\$2,473.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00062	NTP1B		12876.0		Environmental Compliance Workshop	\$85,000.00		LUMP SUM		\$85,000.00	\$0.00	\$85,000.00
00063	NTP1B		A2110		LIDAR Base Mapping	\$120,000.00		LUMP SUM		\$120,000.00	\$0.00	\$120,000.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
PERIOD TO: June 29, 2012
CONTRACT NO.: SC-HRT - 1200038
INFO/ADVANTAGE (C2HERP): CONTRACT NO. SC-HRT-12H0038
CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00064	NTP1B		M0064R		Over The Shoulder Submittal 02-NTP 1b	\$1,096,964.00			LUMP SUM	\$1,096,964.00	\$0.00	\$1,096,964.00
00065	NTP1B		4590.0	NOT COSTED	Final Span Optimization White Paper Report	\$28,661.00			LUMP SUM	\$0.00	\$28,661.00	\$28,661.00
00066	NTP1B		4670.0	NOT COSTED	Final Cross-Section White Paper Report	\$10,244.00			LUMP SUM	\$0.00	\$10,244.00	\$10,244.00
00067	NTP1B		2150.0		Region 1 and 2-Research existing property ownership	\$8,556.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00068	NTP1B		11618.0		Lab Test Results on Boring Group B-20 Borings	\$39,000.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00069	NTP1B		7850.0		Final concept shapes for piers, stations, etc	\$7,500.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00070	NTP1B		1130.0		Final Project Work Plan	\$1,902.00			LUMP SUM	\$1,902.00	\$0.00	\$1,902.00
00071	NTP1B		1190.0		Final Quality Assurance Plan	\$5,769.00			LUMP SUM	\$5,769.00	\$0.00	\$5,769.00
00072	NTP1B		1830.0		Region 3-Complete Field Survey at Available Locations	\$14,000.00			LUMP SUM	\$14,000.00	\$0.00	\$14,000.00
00073	NTP1B		11356.0		Boring Logs Group C-20 Borings	\$308,416.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00074	NTP1B		3110.0		Final Track Alignment White Paper Report	\$4,582.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00075	NTP1B		1850.0		Region 3-Update Topo File	\$8,500.00			LUMP SUM	\$8,500.00	\$0.00	\$8,500.00
00076	NTP1B		11116.0		Authorization for Access for Boring Group E and F-40 Borings	\$45,934.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00077	NTP1B		11156.0		Authorization for Access for Boring Group G and H-40 Borings	\$45,934.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00078	NTP1B		11196.0		Authorization for Access for Boring Group I and J 40 Borings	\$50,830.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00079	NTP1B		11931.0		Interim Geotech Memorandum and Pier Review	\$90,000.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00080	NTP1B		4740.0		Draft GPandE Sheets Group C 50 Spans	\$30,839.00			LUMP SUM	\$30,839.00	\$0.00	\$30,839.00
00081	NTP1B		1870.0		Region 3-Field Review Topo File	\$8,500.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00082	NTP1B		2010.0		Region 4- Supp. Field Survey at all remaining locations, upd	\$14,000.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00083	NTP1B		11638.0		Lab Test Results on Boring Group C-20 Borings	\$39,000.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00084	NTP1B		1770.0		Region 2-Supp. Field Survey at all remaining locations, upds	\$16,800.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00085	NTP1B		10816.0		Final Geotech Planning Report	\$6,000.00			LUMP SUM	\$0.00	\$0.00	\$0.00
00086	NTP1B		11951.0	NOT COSTED	Draft Seismic Design Memorandum and Peer Review	\$90,000.00			LUMP SUM	\$0.00	\$90,000.00	\$90,000.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
 PERIOD TO: June 29, 2012
 CONTRACT NO.: SC-HRT - 1200038
 INFO/ADVANTAGE (C2HERP's CONTRACT NO.SC-HRT-12H0038
 CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00087	NTP1B		1150.0		Final Mngmnt Plan	\$3,235.00		LUMP SUM		\$3,235.00	\$0.00	\$3,235.00
00088	NTP1B		1170.0		Final Basis of Design Report	\$6,344.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00089	NTP1B		1210.0		Final Interface Mngmnt Plan	\$2,666.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00090	NTP1B		1230.0		Final Safety Manual	\$1,625.00		LUMP SUM		\$1,625.00	\$0.00	\$1,625.00
00091	NTP1B		11376.0		Boring Logs Group D-20 Borings	\$308,416.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00092	NTP1B		10856.0		Final Geotech Investigation Work Plan	\$5,976.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00093	NTP1B		M0093R		Over The Shoulder Submittal 03-NTP 1b	\$1,412,275.00		LUMP SUM		\$1,412,275.00	\$0.00	\$1,412,275.00
00094	NTP1B		3770.0	NOT COSTED	Draft Preliminary Drainage Report	\$66,534.00		LUMP SUM		\$0.00	\$66,534.00	\$66,534.00
00095	NTP1B		11876.0		Shear Wave Velocity Profile Testing Results Group A-2 Test	\$193,688.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00096	NTP1B		12836.0		Draft ECP	\$85,000.00		LUMP SUM		\$85,000.00	\$0.00	\$85,000.00
00097	NTP1B		2170.0		Region 3 and 4-Research existing property ownership	\$8,350.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00098	NTP1B		2420.0		Doc of 1st 50 boring locations	\$5,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00099	NTP1B		4760.0		Draft G P and E Sheets Group D-50 Spans/remaining Spans	\$30,839.00		LUMP SUM		\$30,839.00	\$0.00	\$30,839.00
00100	NTP1B		11656.0		Lab Test Results on Borings Group D-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00101	NTP1B		2330.0		Region 1-Iden. of locations need field monumentation of bou	\$5,677.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00102	NTP1B		11396.0		Boring Logs Group E-20 Borings	\$308,416.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00103	NTP1B		11236.0		Authorization for Access for Boring Group K and L 40 Borings	\$50,830.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00104	NTP1B		11276.0		Authorization for Access for Boring Group M and N 40 Borings	\$50,830.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00105	NTP1B		12576.0		Phase I ESA Group 2-Final Report	\$85,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00106	NTP1B		11971.0		Initial Draft Geotech Data Report Vol 1 and Pier Retiew	\$130,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00107	NTP1B		2350.0		Region 2-Iden. locations need for field monumentation of bou	\$5,677.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00108	NTP1B		1890.0		Region 3-Supp. Field Survey all remaining locations, update,	\$14,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00109	NTP1B		12586.0		Phase 2 ESA-Site 1-Draft Report	\$85,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
PERIOD TO: June 29, 2012
CONTRACT NO.: SC-HRT - 1200038
INFO/ADVANTAGE (C2HERPs CONTRACT NO.): SC-HRT-12H0038
CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00110	NTP1B		12001.0		Initial Draft Geotech Data Report Vol 2 and Peer Review	\$120,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00111	NTP1B		13776.0	NOT COSTED	Preliminary Civil Specs	\$21,038.00		LUMP SUM		\$0.00	\$21,038.00	\$21,038.00
00112	NTP1B		13756.0	NOT COSTED	Preliminary Structural Specs	\$14,912.00		LUMP SUM		\$0.00	\$14,912.00	\$14,912.00
00113	NTP1B		13816.0	NOT COSTED	Preliminary Other Specs	\$36,155.00		LUMP SUM		\$0.00	\$36,155.00	\$36,155.00
00114	NTP1B		11416.0		Boring Logs Group F-20 Borings	\$308,416.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00115	NTP1B		M0115R		Over The Shoulder Submittal 04-NTP 1b	\$2,225,347.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00116	NTP1B		11961.0		Final Seismic Design Memorandum	\$15,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00117	NTP1B		2430.0		Doc of 2nd 50 boring locations	\$5,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00118	NTP1B		2450.0		Doc of 3rd 50 boring locations	\$5,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00119	NTP1B		1040.0	NOT COSTED	Constructability Review of NTP 1b	\$43,749.00		LUMP SUM		\$0.00	\$43,749.00	\$43,749.00
00120	NTP1B		11696.0		Lab Test Results on Boring Group F-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00121	NTP1B		1050.0		Constructability Review Report-Report NTP 1b	\$8,458.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00122	NTP1B		11436.0		Boring Logs Group G-20 Borings	\$308,416.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00123	NTP1B		2390.0		Region 4-Iden. of need of field monumentation of boundaries/	\$5,677.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00124	NTP1B		11676.0		Lab Test Results on Boring Group E-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00125	NTP1B		11981.0		Draft Geotech Data Report Vol 1 and Peer Review	\$62,553.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00126	NTP1B		12856.0		Final ECP After Final Design	\$62,917.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00127	NTP1B		M0127R	NOT COSTED	Preliminary Engineering Submittal	\$1,174,679.00		LUMP SUM		\$0.00	\$1,174,679.00	\$1,174,679.00
00128	NTP1B		11456.0		Boring Logs Group H-20 Borings	\$308,416.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00129	NTP1B		11941.0		Updated Geotech Memorandum and Peer Review	\$20,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00130	NTP1B		12716.0		Building Hazardous Material Surveys-Draft Report	\$57,083.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00131	NTP1B		12616.0		Phase II ESA-Site I-Final Report	\$85,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00132	NTP1B		12896.0		ECP Update after Preliminary Design	\$75,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
 PERIOD TO: June 29, 2012
 CONTRACT NO.: SC-HRT - 1200038
 INFO/ADVANTAGE (C2HERPs CONTRACT NO.SC-HRT-12H0038
 CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00133	NTP1B		12836.0		Phase II ESA-Site 2-Draft Report	\$50,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00134	NTP1B		M0134R		Over The Shoulder Submittal 05-NTP 1b	\$133,040.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00135	NTP1B		2370.0		Region 3-Iden. need of field monumentation of boundaries/tie	\$5,677.00		LUMP SUM		\$0.00	\$0.00	\$0.00
										\$4,182,343.00	\$2,748,590.00	\$6,701,516.00
00136	NTP 2		1020.0		Mgmt/Design Mgmt/Quality Assurance Mgmt	\$1,518,146.00		LUMP SUM		\$0.00	\$0.00	\$0.00
							7	PER MO	16,878.00			
00137	NTP 2		1340.0		Interface and Coord w/Design Team and STKHLDRS/Sect. 106-NT	\$364,735.00		LUMP SUM		\$0.00	\$0.00	\$0.00
							7	PER MO	12,105.00			
00138	NTP 2		13436.0		Coordinate/Provide Public Involvement to Support IIART	\$90,594.00		LUMP SUM		\$0.00	\$0.00	\$0.00
							7	PER MO	12,942.00			
00139	NTP 2		11716.0		Lab Test Results on Boring Group G-20 Borings	\$39,004.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00140	NTP 2		11736.0		Lab Test Results on Boring Group H-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00141	NTP 2		11476.0		Boring Logs Group I-20 Borings	\$397,325.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00142	NTP 2		2490.0		Region 1 and 2-Draft set of easement plans	\$16,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00143	NTP 2		12676.0		Phase II ESA-Site 3-Draft Report	\$50,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00144	NTP 2		11756.0		Lab Test Results on Boring Group J-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00145	NTP 2		M0145R		Over The Shoulder Submittal 06-NTP 2	\$705,552.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00146	NTP 2		11896.0		Shear Wave Velocity Profile Testing Results Group B-2 Test	\$160,107.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00147	NTP 2		11916.0		Shear Wave Velocity Profile Testing Results Group C-2 Test	\$160,107.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00148	NTP 2		2510.0		Region 3 and 4-Draft set of easement plans	\$16,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00149	NTP 2		11496.0		Boring Logs Group J-20 Borings	\$397,325.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00150	NTP 2		2190.0		Region 1 and 2-Field Monumentation of Boundaries/Ties	\$14,500.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00151	NTP 2		12016.0		Draft Geotech Data Report Vol 2 and Peer Review	\$120,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
 PERIOD TO: June 29, 2012
 CONTRACT NO.: SC-HRT - 1200038
 INFO/ADVANTAGE (C2HERP) CONTRACT NO. SC-HRT-12H0038
 CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00152	NTP 2		2210.0		Region 3 and 4-Field monumentation of boundaries/ies	\$14,500.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00153	NTP 2		2570.0		Doc of 4th 50 boring locations	\$5,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00154	NTP 2		11776.0		Lab Test Results on Borings Group J-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00155	NTP 2		4130.0		Draft Scour Summary Report	\$19,715.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00156	NTP 2		11516.0		Boring Log Group K-20 Borings	\$397,325.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00157	NTP 2		12856.0		Phase II ESA-Site 2-Final Report	\$55,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00158	NTP 2		12736.0		Building Hazardous Material Surveys 12 BLDGS-Final Report	\$50,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00159	NTP 2		2230.0		Region 1 and 2-Draft set of ROW maps and plans	\$12,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00160	NTP 2		2250.0		Region 3 and 4-Draft set of ROW maps and plans	\$12,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00161	NTP 2		M0161R		Over The Shoulder Submittal 07-NTP 2	\$1,421,419.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00162	NTP 2		11536.0		Boring Log Group L-20 Borings	\$397,325.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00163	NTP 2		12696.0		Phase 2 ESA-Site 3-Final Report	\$55,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00164	NTP 2		2030.0		Update Topo File as Necessary for NTP 2	\$90,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00165	NTP 2		13096.0		Storm Drain connection Permit Application	\$10,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00166	NTP 2		11816.0		Lab Test Results on Borings Group L-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00167	NTP 2		12066.0		Draft Geotech Design Report Guideway Structure	\$94,369.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00168	NTP 2		12086.0		Draft Geotech Design Report On-Grade Structures	\$79,635.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00169	NTP 2		11556.0		Boring Log Group M-20 Borings	\$397,325.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00170	NTP 2		11796.0		Lab Test Results on Boring Group K-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00171	NTP 2		11836.0		Lab Test Results on Boring Group M-20 Borings	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00172	NTP 2		M0172R		Over The Shoulder Submittal 08-NTP 2	\$1,851,552.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00173	NTP 2		11576.0		Borings Group N or remaining Borings	\$397,327.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00174	NTP 2		2590.0		Document of Remaining boring Locations	\$5,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
 PERIOD TO: June 29, 2012
 CONTRACT NO.: SC-HRT - 1200038
 INFO/ADVANTAGE (C2HERPs CONTRACT NO.SC-HRT-12H0038
 CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MPLESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00175	NTP 2		13196.0		Flood Hazard District Compliance	\$10,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00176	NTP 2		13216.0		Development of Const. Plan to Cross State Emergency Corridor	\$10,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00177	NTP 2		11856.0		Lab Test Results on Boring Logs Group N-20 Borings/or remain	\$39,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00178	NTP 2		13136.0		Interstate Access Modification	\$10,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00179	NTP 2		13156.0		Form 7460.1	\$10,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00180	NTP 2		13176.0		Waiver for Const. in a Runway Protection Zone	\$10,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00181	NTP 2		13236.0		Grading, Grubbing, Stockpiling and Trench From DPP	\$9,167.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00182	NTP 2		3820.0		Draft Interim Erosion Control Report	\$44,784.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00183	NTP 2		M0183R		Over The Shoulder Submittal 09-NTP 2	\$1,680,073.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00184	NTP 2		3800.0		Draft Interim Drainage Report	\$16,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00185	NTP 2		12076.0		Final Geotech Design Report Guideway Structure	\$42,061.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00186	NTP 2		12096.0		Final Geotech Design Report On-Grade Structures	\$44,272.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00187	NTP 2		13856.0		Interim Structural Specs	\$35,236.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00188	NTP 2		M0188R		Over The Shoulder Submittal 10-NTP 2	\$1,758,158.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00189	NTP 2		13876.0		Interim Civil Specs	\$13,745.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00190	NTP 2		13916.0		Interim Other Specs	\$51,200.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00191	NTP 2		1060.0		Notes from NTP 2 Constructability Review	\$43,749.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00192	NTP 2		1070.0		Constructability Report for NTP 2	\$8,458.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00193	NTP 2		M0193R		Interim Design Submittal	\$3,321,417.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00194	NTP 2		13116.0		Interstate Airspace Use Approvals	\$10,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00195	NTP 2		12036.0		Initial Draft Geotech Data Report Vol 3 and Peer Review	\$123,869.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00196	NTP 2		7940.0		Final Sustainability Report	\$8,122.00		LUMP SUM		\$0.00	\$0.00	\$0.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
 PERIOD TO: June 29, 2012
 CONTRACT NO.: SC-HRT - 1200038
 INFO/ADVANTAGE (C2HERP) CONTRACT NO. SC-HRT-12H0038
 CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00197	NTP 2		M0197R		Over The Shoulder Submittal 11-NTP 2	\$101,500.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00198	NTP 3		1030.0		Mngmnt/Design Mngmnt/Quality Assurance Mngmnt	\$827,992.00		LUMP SUM		\$0.00	\$0.00	\$0.00
							4	PER MO	6,998.00			
00199	NTP 3		1350.0		Interface and Coord. w/Design Team and STK/HLDRS/Sect. 106-NT	\$113,208.00		LUMP SUM		\$0.00	\$0.00	\$0.00
							4	PER MO	18,302.00			
00200	NTP 3		13456.0		Coordinate/Provide Public Involvement to Support HART	\$27,972.00		LUMP SUM		\$0.00	\$0.00	\$0.00
							4	PER MO	6,993.00			
00201	NTP 3		12916.0		ECP Update after Interim Design	\$24,998.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00202	NTP 3		M0202R		Over The Shoulder Submittal 12-NTP 3	\$868,304.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00203	NTP 3		12046.0		Draft Geotech Data Report Vol 3 and Peer Review	\$74,750.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00204	NTP 3		3870.0		Draft Final Erosion Control Report	\$16,807.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00205	NTP 3		2530.0		Region 1 and 2-Final set of easement plans	\$3,500.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00206	NTP 3		3850.0		Draft Final Drainage Report	\$6,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00207	NTP 3		2550.0		Region 3 and 4-Draft set of easement plans	\$3,500.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00208	NTP 3		12476.0		Draft Load Test Procedures	\$21,062.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00209	NTP 3		M0209R		Over The Shoulder Submittal 13-NTP 3	\$732,127.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00210	NTP 3		13956.0		Draft Final Structural Specs	\$14,220.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00211	NTP 3		13976.0		Draft Final Civil Specs	\$8,483.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00212	NTP 3		14016.0		Draft Final Other Specs	\$24,418.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00213	NTP 3		12026.0		Final Geotech Data Report Vol 2 and Peer Review	\$25,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00214	NTP 3		13066.0		Draft NPDES NOI-C Application	\$25,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00215	NTP 3		4180.0		Prepare Final Scour Summary Report and Countermeasures	\$31,203.00		LUMP SUM		\$0.00	\$0.00	\$0.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
 PERIOD TO: June 29, 2012
 CONTRACT NO.: SC-HRT - 1200038
 INFO/ADVANTAGE (C2HERPs CONTRACT NO.SC-HRT-12H0038
 CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00216	NTP 3		11991.0		Final Geotech Data Report Vol 1 and Peer Review	\$25,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00217	NTP 3		12056.0		Final Geotech Data Report Vol 3 and Peer Review	\$25,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00218	NTP 3		M0218R		Draft Final Design Submittal	\$1,910,843.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00219	NTP 3		12496.0		Draft Load Test Procedures	\$10,521.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00220	NTP 3		13076.0		Final NPDES NoI-C Application	\$7,950.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00221	NTP 3		M0221R		Over The Shoulder Submittal 14-NTP 3	\$362,481.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00222	NTP 3		13276.0		Utility Use and Occupancy Agreements	\$10,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00223	NTP 3		13296.0		Noise Variance Permit	\$10,000.00		LUMP SUM		\$0.00	\$0.00	\$0.00
00224	NTP 3		M0224R		Final Design Submittal	\$975,816.00		LUMP SUM		\$0.00	\$0.00	\$0.00
										\$0.00	\$0.00	\$0.00
00225	NTP 4				NTP 4 - TBD	\$433,681.00		LUMP SUM		\$0.00	\$0.00	\$0.00
										\$0.00	\$0.00	\$0.00

SCHEDULE OF MILESTONES PROGRESS

INVOICE NO.: 00005
PERIOD TO: June 29, 2012
CONTRACT NO.: SC-HRT - 1200038
INFO/ADVANTAGE (C2HERPs CONTRACT NO.: SC-HRT-12H0038
CONTRACTOR: AECOM Technical Services, Inc.

LINE ITEM	NTP	PRICE ITEM CODE	ACT ID	WBS	DESCRIPTION	MILESTONE VALUE	UNIT	QTY	UNIT VALUE	ACHIEVED PREVIOUSLY \$	ACHIEVED CURRENT \$	ACHIEVED TO DATE \$
00226	NTP 5				NTP 5- TBD	\$1,154,333.00		LUMP SUM		\$0.00	\$0.00	\$0.00
CONTRACT Subtotal						\$38,840,960.00				\$5,204,079.00	\$1,788,623.00	\$6,992,702.00
Contract Aggregate Total						\$38,840,960.00				\$5,204,079.00	\$1,788,623.00	\$6,992,702.00

SUMMARY OF COSTS

DESCRIPTION	MILESTONE VALUE	FROM PREVIOUS APPLICATION	WORK COMPLETED THIS PERIOD	COMPLETED TO DATE	% COMPLETE	BALANCE TO FINISH
NTP1A Subtotal	\$784,136.00	\$784,136.00	\$0.00	\$784,136.00	100.00%	\$0.00
NTP1B Subtotal	\$13,233,957.00	\$4,419,943.00	\$1,788,623.00	\$6,208,566.00	46.91%	\$7,025,391.00
NTP 2 Subtotal	\$17,048,698.00	\$0.00	\$0.00	\$0.00	0.00%	\$17,048,698.00
NTP 3 Subtotal	\$6,186,155.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,186,155.00
NTP 4 Subtotal	\$433,681.00	\$0.00	\$0.00	\$0.00	0.00%	\$433,681.00
NTP 5 Subtotal	\$1,154,333.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,154,333.00
Totals	\$38,840,960.00	\$5,204,079.00	\$1,788,623.00	\$6,992,702.00	18.00%	\$31,848,258.00