

File No. 151216

Committee Item No. 9

Board Item No. 18

COMMITTEE/BOARD OF SUPERVISORS

AGENDA PACKET CONTENTS LIST

Committee: Budget & Finance Committee

Date January 27, 2016

Board of Supervisors Meeting

Date February 2, 2016

Cmte Board

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Completed by: Linda Wong Date January 22, 2016
Completed by: Linda Wong Date January 28, 2016

1 [Agreement Amendment - Hellmuth, Obata & Kassabaum, Inc. - Traffic Company and
2 Forensic Services Division Facility - Earthquake Safety and Emergency Response Bond
3 Program - Not to Exceed \$11,862,305]

4 **Resolution authorizing the Director of Public Works to execute an amendment to the**
5 **Agreement between the City and County of San Francisco and Hellmuth, Obata &**
6 **Kassabaum, Inc., to furnish architectural and engineering design and related other**
7 **consulting services for the Traffic Company and Forensic Services Division Facility**
8 **under the Earthquake Safety and Emergency Response bond program, increasing the**
9 **not-to-exceed amount from \$993,952 to \$11,862,305.**

10
11 WHEREAS, San Francisco Charter, Section 9.118, requires that the Board of
12 Supervisors approve all contracts, other than construction contracts, with an anticipated
13 expenditure of more than ten million dollars (\$10,000,000); and

14 WHEREAS, The City and County of San Francisco intends to construct a new 110,000
15 square foot Traffic Company and Forensic Services Division (TCFSD) Facility at Evans
16 Avenue and Toland Street, funded by the Earthquake Safety and Emergency Response
17 (ESER) bond program, to house the Police Department's Traffic Company and Forensic
18 Services Division; and

19 WHEREAS, Through a competitive process, Public Works selected Hellmuth, Obata &
20 Kassabaum, Inc. (HOK) as a professional design firm possessing the special expertise,
21 qualifications, and experience to provide design professional services for the new TCFSD
22 Facility project; and

23 WHEREAS, On September 15, 2015, Public Works awarded an agreement to HOK in
24 the amount of \$993,952 to provide Program Validation and Conceptual Design; and

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WHEREAS, Public Works wishes HOK to proceed with professional services to complete design and construction administration services for the TCFSD Facility, including architectural and engineering design and related other consulting services for a total Agreement amount of \$10,783,914; and

WHEREAS, Public Works wishes to include a 10% contingency of \$1,078,391 for a combined not-to-exceed amount of \$11,862,305; and

WHEREAS, The Contract Monitoring Division established a Local Business Enterprise (LBE) subcontracting participation requirement of 20% for this agreement, and that requirement will remain unchanged; now, therefore, be it

RESOLVED, That the Board of Supervisors hereby approves the amendment to the Agreement between the City and County of San Francisco and Hellmuth, Obata & Kassabaum, Inc. to furnish architectural and engineering design and other services for the new Traffic Company and Forensic Services Division Facility project, increasing the not-to-exceed amount from \$993,952 to exceed \$11,862,305; and, be it

FURTHER RESOLVED, That within thirty (30) days of the amendment to the Agreement being fully executed by all parties, the Director of Public Works shall provide the amendment to the Clerk of the Board for inclusion into the official file.

Item 9 File 15-1216	Department: General Services Agency - Department of Public Works (DPW)
EXECUTIVE SUMMARY	
<p>Legislative Objectives</p> <ul style="list-style-type: none"> • The proposed resolution would approve an amendment to the existing agreement between Public Works and Hellmuth, Obata & Kassabaum, Inc. (HOK) for architectural and engineering design and other related consulting services for the San Francisco Police Department's (SFPD) new Traffic Company and Forensic Services Division Facility to be located at 1995 Evans Street. • The amendment increases the not-to-exceed agreement amount by \$10,868,353, from \$993,952 to a total not-to-exceed amount of \$11,862,305. <p>Key Points</p> <ul style="list-style-type: none"> • The City intends to construct a new 110,000-square-foot facility at 1995 Evans Street, which would relocate the (SFPD Traffic Company and Forensic Services Division from the Hall of Justice to 1995 Evans Street. • Based on the results of a competitive Request for Qualifications process, DPW selected HOK to provide design services for the proposed facility. • On September 15, 2015, Public Works awarded an agreement to HOK in the amount of \$993,952 to provide program validation and conceptual design phase services. • DPW is seeking authorization to amend the agreement with HOK to complete schematic design, design development, construction documents, bidding/negotiation, construction administration, and warranty phase services for the proposed facility. <p>Fiscal Impact</p> <ul style="list-style-type: none"> • The total project budget for the new SFPD Traffic Company and Forensic Services Division Facility is \$165,000,000. • The \$11,862,305 agreement between the City and HOK constitutes 7.2 percent of the total budget. • The project is funded by the \$400 million Earthquake Safety and Emergency Response Bonds approved by San Francisco voters in June 2014. <p>Recommendation</p> <ul style="list-style-type: none"> • Approve the proposed resolution. 	

MANDATE STATEMENT

City Charter Section 9.118(b) states that agreements entered into by a department, board, or commission having a term of (a) more than 10 years; (b) anticipated expenditures of \$10 million or more; or (c) modifications to these agreements of more than \$500,000, require Board of Supervisors approval.

BACKGROUND

The City intends to construct a new 110,000-square-foot facility at 1995 Evans Street, which would relocate the San Francisco Police Department's (SFPD) Traffic Company and Forensic Services Division from the Hall of Justice at 850 Bryant Street to 1995 Evans Street. The new Traffic Company and Forensic Services Division Facility will include forensic laboratories, laboratory support and office space, and storage and offices for the fleet of motorcycle police officers who provide traffic enforcement.

Construction of the new Traffic Company and Forensic Services Division Facility is part of Public Works' Justice Facilities Improvement Program to replace the Hall of Justice due to seismic deficiencies and obsolete building systems.

Public Works issued a competitive Request for Qualifications (RFQ) on August 8, 2014, for an architectural and engineering team to provide design and other related consulting services to the Traffic Company and Forensic Services Division Facility project. Based on the results of the RFQ process, DPW selected Hellmuth, Obata & Kassabaum, Inc. (HOK) to provide design services for the proposed facility.

On September 15, 2015, Public Works awarded an agreement to HOK in the amount of \$993,952 to provide program validation and conceptual design phase services.

Public Works is seeking authorization to amend the agreement with HOK to complete schematic design, design development, construction documents, bidding/negotiation, construction administration, and warranty phase services for the proposed facility.

DETAILS OF PROPOSED LEGISLATION

The proposed resolution would approve an amendment to the existing agreement between Public Works and HOK for architectural and engineering design and other related consulting services for the SFPD's new Traffic Company and Forensic Services Division Facility to be located at 1995 Evans Street. The amendment increases the not-to-exceed agreement amount by \$10,868,353, from \$993,952 to a total not-to-exceed amount of \$11,862,305, as shown in Table 1 below. The total not-to-exceed amount includes an 11 percent contingency amount of \$1,078,391.

FISCAL IMPACT

As shown in Table 1 below, the budget for HOK architectural and engineering design-related services totals \$11,862,305.

Table 1: Budget for HOK Design Services for the New SFPD Traffic Company and Forensic Services Division Facility

Services	Amount
Existing Agreement	
Program Verification	\$225,006
Conceptual Design	<u>768,946</u>
<i>Existing Agreement Subtotal</i>	<u>\$993,952</u>
Proposed Amendment	
Schematic Design	\$1,790,235
Design Development	2,434,466
Construction Documents	2,717,016
Bidding/Negotiation	131,450
Construction Administration	2,641,871
Warranty	<u>74,924</u>
<i>Additional Design Service Subtotal</i>	<u>\$9,789,962</u>
11 Percent Contingency	<u>1,078,391</u>
<i>Proposed Amendment Subtotal</i>	<u>\$10,868,353</u>
TOTAL	\$11,862,305

The SFPD Traffic Company and Forensic Services Division Facility total project budget is \$165,000,000. The \$11,862,305 agreement between the City and HOK constitutes 7.2 percent of the total budget, as shown in Table 2 below. According to Mr. Charles Higuera, Program Manager at Public Works, the 7.2 percent project budget allocated to architectural and engineering and other supporting design service is consistent with industry standards for this type of project.

The project is funded by the \$400 million Earthquake Safety and Emergency Response Bond approved by San Francisco voters in June 2014.

Table 2: Total Budget for Traffic Company and Forensic Services Division Facility

Services	Amount	Percent of Budget
Construction, Purchase, and Installation		
Principal Construction Contract	\$100,000,000	60.6%
General Contractor Contingency	1,193,440	0.7
Construction Change Order Contingency	6,903,487	4.2
Art Enrichment	1,972,425	1.2
Hazardous Materials Construction/Abatement	50,000	0.03
Temporary Utilities	450,000	0.3
<i>Construction Subtotal</i>	<i>\$110,569,352</i>	<i>67.0%</i>
Project Control		
Client Department Services	\$777,600	0.5%
DPW Project Management	4,410,939	2.7
City Administrative Services	385,000	0.2
Regulatory Agency Approvals	1,460,000	0.9
Architecture/Engineering Design	11,862,305	7.2
Conceptual Planning	844,992	0.5
Additional Architecture/Engineering Services	1,796,835	1.1
Construction Management Services	10,880,981	6.6
Geotechnical, Surveys, and Data Collection	1,541,178	0.9
Reserve	4,640,000	2.8
<i>Project Control Subtotal</i>	<i>\$38,599,830</i>	<i>23.4%</i>
Site Control	<i>\$15,830,818</i>	<i>9.6%</i>
TOTAL	\$165,000,000	100%

POLICY CONSIDERATION

As noted above, Public Works proposes to increase the agreement with HOK for the new SFPD Traffic Company and Forensic Services Division Facility by \$10,868,353, from \$993,952 to \$11,862,353. The scope of services specified in the RFQ included architecture and engineering design services for completion of the project. According to Mr. Higuera, the original agreement with HOK included a limited scope of services for only the initial program verification and conceptual design because it provides for a more certain understanding of the true scope of the project and corresponding construction cost. Public Works is now proposing to amend the agreement to include the full scope of architecture and engineering design services through the completion of the project because it provides for the necessary balance of design service aligned with the defined scope of the project.

RECOMMENDATION

Approve the proposed resolution.



November 19, 2015

RECEIVED
BOARD OF SUPERVISORS
SAN FRANCISCO
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AK

Angela Calvillo, Clerk of the Board
Board of Supervisors
1 Dr. Carlton B. Goodlett Place, Room 244
San Francisco, CA 94102-4689

Edwin M. Lee
Mayor

Mohammed Nuru
Director

Edgar Lopez
Deputy Director
and City Architect

Building Design & Construction
30 Van Ness Ave., 4th floor
San Francisco, CA 94102
tel 415-557-4700

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twitter.com/sfpublicworks

Dear Ms. Calvillo:

Attached please find an original and two copies of proposed resolution for Board of Supervisor approval, which authorizes the Director of Public Works to execute an amendment to an Agreement between the City and Hellmuth, Obata, & Kassabaum, Inc. (HOK) to furnish architectural and engineering design services for the Traffic Company and Forensic Services Division Facility Project, increasing the not-to-exceed amount from \$993,952 to \$11,862,305.

San Francisco Charter Section 9.118(b) requires that the Board of Supervisors approve all contracts, other than construction contracts, with an anticipated expenditure of more than ten million dollars.

Through a competitive process, San Francisco Public Works selected HOK as the Executive Architect for the TCFSD Facility project, and on September 15, 2015, awarded an Agreement to HOK in the amount of \$993,952 to provide Validation and Conceptual Design.

San Francisco Public Works wishes HOK to proceed with professional services to complete design and construction administration services for the TCFSD Facility project for a total Agreement amount of \$10,783,914, and adding a 10% contingency, for a total not-to-exceed amount of \$11,862,305.

Public Works project manager, Samuel Chui, may be contacted regarding this matter, at Samuel.Chui@sfdpw.org or (415)272-8293.

Best Regards,

Mohammed Nuru
Director of Public Works

CC: Greg Suhr, Chief of Police, San Francisco Police Department
Peter Walsh, Lieutenant, San Francisco Police Department
Julia Dawson, Deputy Director, San Francisco Public Works
Edgar Lopez, Deputy Director, San Francisco Public Works
Charles Higuera, Program Manager, San Francisco Public Works
Samuel Chui, Project Manager, San Francisco Public Works

MODIFICATION #1 to

AGREEMENT BETWEEN

CITY AND COUNTY OF SAN FRANCISCO

AND

HELLMUTH, OBATA & KASSABAUM, INC.

TO FURNISH

ARCHITECTURAL AND ENGINEERING

DESIGN SERVICES

FOR TRAFFIC COMPANY AND FORENSIC SERVICES DIVISION FACILITY

_____, 2015

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- Attachment 1 – Schedule of Services**
- Attachment 2 – Fee Schedule**
- Attachment 3 – HOK Exhibit A – Compensation, Services & Schedule**
- Attachment 4 – BIM Management Plan & Delivery Matrix**
- Attachment 5 – Quality Assurance/Quality Control Plan for the Traffic Company and Forensics Services Division Facility**
- Attachment 6 – Hourly Rate Schedule**
- Attachment 7 – Design Team and Key Employees**
- Attachment 8 – Percentage of Key Participants of each firm/employees**
- Attachment 9 – First Source Hiring**

**AGREEMENT BETWEEN
CITY AND COUNTY OF SAN FRANCISCO
AND
HELLMUTH, OBATA & KASSABAUM, INC.**

THIS AGREEMENT is made between the CITY and County of San Francisco, a public entity, acting by and through its San Francisco Public Works ("THE CITY") and Hellmuth, Obata & Kassabaum, Inc. (the "ARCHITECT").

WHEREAS, THE CITY desires the ARCHITECT to render professional services in connection with the design and construction of the new Traffic Company and Forensic Services Division ("TSFSD") Facility and issued an award of contract Order # 184,015 dated effective _____, 2015; and

WHEREAS, a Request for Qualifications ("RFQ") was issued on August 7, 2014, and CITY selected the ARCHITECT as the highest qualified applicant pursuant to the RFQ to provide the professional architectural and design services with respect to the design and construction of the new Traffic Company and Forensic Services Division ("TSFSD") Facility (the "PROJECT"); and

WHEREAS, the ARCHITECT represents that it possesses the requisite professional expertise, experience and resources to perform the services required by THE CITY as set forth under this Agreement; and,

WHEREAS, approval of this Agreement was obtained when the Civil Service Commission approved Contract Number 4126-12/13 on May 20, 2013;

WHEREAS, on _____ 2015, Ordinance No. _____ became effective, authorizing the Director of San Francisco Public Works to enter into this Agreement;

NOW, THEREFORE, THE CITY and the ARCHITECT agree as follows:

1 THE PROJECT

1.1 DESCRIPTION

1.1.1 THE CITY does hereby engage the ARCHITECT to perform, under the terms and conditions in this Agreement, professional services for the design of the PROJECT, to be located at 1995 Evans Street in the CITY and County of San Francisco.

The current assumption is that the Traffic Company and Forensics Services Division Facility Project will result in approximately 107,000 SF of new space. It is also assumed that utility relocation may be required, and that utilities are available in the surrounding streets.

1.1.2 The ARCHITECT, beginning with the Program Validation Phase, will assist THE CITY in providing overall design direction for the Project, and will be responsible in total for the complete design of the Traffic Company and Forensic Services Division Facility. In addition, the ARCHITECT will be completely responsible for all on-site and off-site improvements, and handle all other design elements as assigned by THE CITY for Basic and/or Additional Services. Further, the ARCHITECT will provide input when requested as to conceptual, design and constructability issues. The ARCHITECT will work with, advise, and make timely and researched recommendations to THE CITY's Program Director and CITY's Project Manager as to the best design options that satisfy the needs and concerns of THE CITY.

1.1.3 The ARCHITECT and THE CITY will work together, based on an understanding that the Bridging Documents completed in December 2012 will need to be verified for program adherence, and that THE CITY's approvals are required in order to have a schematic level design completeness and construction cost estimate prior to developing future phases of the Project.

1.1.4 The ARCHITECT will be required to develop the Project to the following milestones to allow the CM/GC and the CITY to issue all trade packages simultaneously as a fully coordinated and complete set of design document necessary to bid and build the Project.

- (a) Design Criteria (100% Schematic Design) for mechanical, electrical, low voltage electrical, and plumbing engineering, lighting, signage, fire protection, and exterior curtain wall design.
- (b) Site demolition & Site preparation documents,
- (c) 100% Construction Documents for all remaining scopes or disciplines

1.2 FIXED CONSTRUCTION BUDGET LIMIT

1.2.1 The fixed construction budget limit ("FCBL") for the Project is \$100,000,000. If there is any change in that amount, it will be inserted into this Agreement by a written amendment. For purposes of cost estimating, the target cost shall be five percent less than the FCBL.

1.2.2 The FCBL includes all of the costs of construction, except for: (a) CITY's construction contingencies, (b) the cost of furniture, equipment, telephones and business networks, (c) CM/GC Contingency, (d) CM/GC Pre-construction costs and (e) the cost of artwork that is to be incorporated in the Project as an integral building or site element. The ARCHITECT is responsible for designing a comprehensive and complete Project that can be built to 5% less than FCBL. The ARCHITECT will monitor the design and prepare updated construction estimates of the construction costs for the Project as the design is developed at issuance

report at completion of Conceptual Design, Schematic Design 50% and 100% Design Development, and 50%, 95% and Final Construction Documents. The ARCHITECT is expected to collaborate with cost estimators procured by CM/GC and THE CITY to reconcile cost estimates and to monitor construction costs as design is being developed.

The CM/GC, with the assistance of THE CITY, is responsible for preparing the trade packages and subcontracts for all bid and negotiated subcontracts. The ARCHITECT will cooperate with the CM/GC and THE CITY, and provide design assistance and coordination that is required to timely prepare the trade packages and subcontracts for bid and/or negotiation and award.

In the event that cost estimates at any point in the course of design and/or construction bidding of the Project indicate that the FCBL will likely be exceeded, the ARCHITECT shall, when requested to do so by THE CITY, revise or modify the design and the construction documents plans and specifications at no cost to THE CITY and assist the CM/GC and THE CITY with re-bidding the Project as a whole, re-bidding any phase of the Project, or re-bidding any trade package(s) also at no cost to THE CITY, until the cost to build the Project is within 5% of the FCBL.

- 1.2.3** The ARCHITECT shall, at no cost to THE CITY, design alternates with an estimated total value of not less than five percent (5%) and up to ten percent (10%) of the FCBL, and included as part of the FCBL. THE CITY will determine the percentage between 5% and 10%. The ARCHITECT, THE CITY, and the CM/GC will confer at all phases and decide on all alternates.
- 1.2.4** In the event that redesign services are necessary after THE CITY has received bids for construction of the Project and the alternates have not reduced the cost sufficiently to get within the percentage of the FCBL established in accordance with the provisions of sub-paragraph 1.2.3 above, THE CITY shall cooperate with the ARCHITECT in allowing design changes, including, if necessary, changes which reasonably affect the size and quality of the Project. The ARCHITECT must complete any redesign for permit submittal within time to be mutually agreed upon based on final Scope notification by THE CITY of its intent to redesign.
- 1.2.5** In the event that redesign services are performed after the ARCHITECT has received notification by THE CITY to redesign and/or modify the Construction Documents, preparation of modified Construction Documents and preparation of a Final Architect's Estimate of Construction Cost, and obtaining THE CITY approval of the final Construction Documents, shall be the limit of the ARCHITECT's responsibility arising out of the establishment of the FCBL, provided that the redesign and/or modification achieves the FCBL. This, however, shall in no way limit the ARCHITECT's responsibility or THE CITY's remedies in the event that the

reason that the FCBL was exceeded was the result of the ARCHITECT's negligent acts, errors or omissions.

1.2.6 Should THE CITY accept a subcontractor's competitive bid on any trade package, which price or bid is greater than the estimated cost for that trade package, there shall be no additional compensation (*i.e.*, no correlative proportional increase in fee) to the ARCHITECT, but the FCBL will be increased by the amount (on a dollar, not percentage, basis) that the accepted price or accepted bid exceeds 105% of the estimated cost for that trade package.

1.2.7 During the Construction Bid and Negotiation Phase, THE CITY intends to accept value engineering proposals submitted by trade subcontractors that will lower the cost of the Project. It is not intended for such cost savings to diminish the Project goal of achieving a LEED Gold certification by U.S. Green Building Council ("USGBC").

1.3 SCHEDULE OF SERVICES

1.3.1 Time is of the essence with respect to the performance of all provisions of this Agreement, and with respect to all Project schedules in which a definite time for performance by the ARCHITECT is specified, provided, however, that the foregoing shall not be construed to limit or deprive a party of the benefits of any grace period provided for in this Agreement. The ARCHITECT shall act diligently in anticipating and performing its required tasks in a manner so as to not unreasonably delay the prosecution of any services or work with respect to the Project. In the event that THE CITY directs a change to the plans and specifications, or any CITY agencies require additional time to complete their reviews or require additional review, and such change or delay is neither due to the fault nor in the control of the ARCHITECT, and which impacts the ARCHITECT's ability to meet the Design Services Schedule as set forth in Attachment 1 to this Agreement, THE CITY shall modify the Design Services Schedule by written modification to this Agreement. In such event, the ARCHITECT may request an equitable adjustment to its Basic Services Fee or may request an Additional Services Fee for the additional time and/or services required for the change, as appropriate to the nature of the changed design and/or changed Schedule. The ARCHITECT shall ensure that the completion of documents sufficient for bid shall be delivered in conformance with the dates indicated or as otherwise agreed to by THE CITY and in consultation with CM/GC. The ARCHITECT shall notify THE CITY at the earliest possible opportunity with a full explanation, should it expect to miss a particular date, sufficient to allow THE CITY to fairly assess the matter.

1.3.2 Attachment 1 to this Agreement (Schedule of Services) is a preliminary schedule of services that shows in summary fashion the sequence of tasks required to complete the Project and the schedule for completing all of the services required under this Agreement. No later than fifteen (15)

days after the date that THE CITY issues a Notice to Proceed (NTP) to the ARCHITECT, the ARCHITECT shall submit a progress schedule of services in the form of a Microsoft MP to THE CITY for its approval. At a minimum, the progress schedule must: (a) provide a schedule for completing each phase of the work required under this Agreement, (b) identify the tasks to be performed during each phase, and (c) identify the sequence in which key activities will be performed by THE CITY, including review and approval by THE CITY and any local, state or federal entities as may be required in order to complete the services required under this Agreement, but excluding detailed construction schedules. The ARCHITECT shall adopt the schedule as a baseline schedule once it is approved by THE CITY. Thereafter, the ARCHITECT shall submit a monthly progress schedule to THE CITY that shows the actual progress achieved that month as compared to the baseline schedule.

1.3.3 Should the ARCHITECT be required to perform Construction Administration Phase services for sixty days (60 days) beyond the scheduled completion date determined for Final Completion through agreement among THE CITY, the ARCHITECT and the CM/GC due to no fault of the ARCHITECT, the ARCHITECT is entitled to additional compensation and is obligated to provide complete and accurate documentation of all actual increased cost of performance of its services. In the event that the construction is delayed beyond the scheduled Final Completion date due to the negligent acts, errors, and omissions of the ARCHITECT, as determined by THE CITY in its sole discretion, then the ARCHITECT shall continue to provide Construction Administration services in accordance with this Agreement through the actual completion of construction at no additional charge to THE CITY. The ARCHITECT may submit any disputed amounts as a claim.

1.3.4 Each design phase (Program Validation, Conceptual Design, Schematic Design, Design Development, and Construction Documents, Construction Bid/Negotiation, Construction Administration, and Warranty) shall be subject to a separate written authorization to proceed to be issued by THE CITY. Work on a design phase shall not begin until THE CITY has issued the appropriate written authorization to proceed. Work on a design phase shall be based on documents, if any, from the prior design phase approved by THE CITY in writing (to the extent that such work is complete), any written directives by THE CITY with respect thereto, and any adjustments to the Project or the FCBL that have been authorized by THE CITY.

2 DEFINITIONS

For purposes of this Agreement, the following definitions will apply:

2.1 ADDITIONAL SERVICES means those services that THE CITY, in writing, authorizes the ARCHITECT to perform that are in addition to the Basic Services.

- 2.2 ADVISE** means "make recommendations to."
- 2.3 APPROPRIATE AUTHORITIES** refers to any local, state, regional or federal authority or entity having jurisdiction of any kind over the Project. Appropriate Authorities include those agencies and entities that may require information or the filing of plans, specifications and the like, whether on a voluntary or involuntary basis, in connection with the design and/or construction of the Project, including but not limited to, the San Francisco Art Commission and related committees (including the Civic Design Review Committee and the Visual Arts Committee), San Francisco Department of Building Inspection, San Francisco Fire Department, State Fire Marshal, the San Francisco Department of Public Works, the San Francisco Redevelopment Agency (currently known as Office Community Investment and Infrastructure (OCII), and other entities as THE CITY may designate.
- 2.4 ARCHITECT** means Hellmuth, Obata & Kassabaum, Inc. Prime consultant under this agreement with THE CITY, whether providing architectural, engineering or other professional design services.
- 2.5 AUTHORIZATION** means the direction of THE CITY properly executed by THE CITY's Program Director or Project Manager and, if involving the expenditure of funds, certified by THE CITY.
- 2.6 BASIC SERVICES** mean the services described in Articles 4, 5, and 6 below that the ARCHITECT is required to provide in return for the Compensation set forth in Article 8 below.
- 2.7 BIM** means a Building Information Model (BIM) that is a digital representation of physical and functional characteristics of a facility. As such it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life-cycle from inception onward.
- 2.7.1 Design BIM** means a Building Information Model developed and maintained by the ARCHITECT for the purpose of developing the design.
- 2.7.2 CM BIM** means a Building Information Model developed and maintained by the CM/GC as a tool to support collaboration and construction management.
- 2.7.3 As-Planned BIM** means a Building Information Model that is continuously updated to reflect changes in the design.
- 2.7.4 As-Built BIM** means a Building Information Model that reflects the Project as constructed.
- 2.8 CITY** means the CITY and County of San Francisco, a municipal corporation.
- 2.9 CONSTRUCTION DOCUMENTS** include plans and drawings, specifications, general conditions and special and/or supplementary general conditions, information for bidders, accepted bid proposals, accepted value engineering proposals, addenda, and any other documents developed to set forth in detail all aspects of the design, function and construction of the Project sufficient for a contractor to price and build the Project

- 2.10 CONSTRUCTION MANAGER/GENERAL CONTRACTOR (CM/GC)** refers to the CM/GC selected by THE CITY under separate contract with THE CITY to provide a complete and fully functional Project constructed in accordance with the Contract Documents and the Construction Documents. The CM/GC and its Subcontractors will, among other things, perform pre-construction and construction phase services including design assistance and review. THE CITY retains the CM/GC solely for THE CITY's benefit. The services rendered by the CM/GC will not operate to change or reduce the ARCHITECT's responsibilities under its Agreement with THE CITY. The ARCHITECT may communicate directly with the CM/GC, but the ARCHITECT shall promptly copy THE CITY on all written communications between the two and promptly confirm in writing to THE CITY the substance of all material, oral communications between the two. In no event shall the ARCHITECT issue any communication directing changes that impact time, cost or quality (including, but not limited to substitutions) for the Project without express written authorization from THE CITY. This mode of contracting is also described in §6.68 of the San Francisco Administrative Code.
- 2.11 CONTRACT DOCUMENTS** include the Agreement between THE CITY and the CM/GC and all items identified therein as construction documents, the Construction Documents, working drawings, specifications, addenda, change orders, notices to proceed, general conditions, and special and/or supplementary general conditions.
- 2.12 CONTROLLER** means THE CITY's Controller, as applicable.
- 2.13 DRAWING SET** means the design and/or construction documents that the ARCHITECT is required to submit to THE CITY. The following required documents shall be provided electronically as part of the Basic Services.
- 2.13.1** Program Validation Documents, Conceptual Design Documents, and Schematic Design Documents.
- 2.13.2** Design Development Phase: 50%, 100% (final submittals): Drawing set, BIM files, specifications with sufficient detail for cost estimating purposes, reports, schedules and other written documents.
- 2.13.3** Construction Documents Phase: 50%, 95% and final submittals: Drawing set, BIM files, specifications, reports, schedules and other written documents.
- 2.13.4** Construction Bid Phase: Drawing set, BIM files, specifications, reports, schedules, accepted Value Engineering proposal integrated into design documents and other written documents.
- 2.13.5** Construction Administration Phase: All documents including RFIs' substitution requests, submittals, shop drawings and other documents.
- 2.13.6** CAD drawings shall be provided in AutoCAD R2014 and Building Information Modeling on Autodesk Revit Building Suite 2015 or other software approved by THE CITY.

- 2.13.7 Written documents, spreadsheets and cost estimates on Microsoft Office Suite 2010 (Word and Excel).
- 2.13.8 Schedules in Microsoft Project 2013.
- 2.13.9 Audiovisual presentations in Microsoft PowerPoint 2013.
- 2.13.10 Image files in JPG, GIF, PICA, TIFF and BMP formats. These images shall be made available on any storage format selected by THE CITY.
- 2.13.11 Renderings in latest Adobe Suite and 3D Studio VIZ, or other software approved by THE CITY.
- 2.13.12 Presentation Boards: mounted on foam board, gator board, or eco-friendly rigid display board as requested by THE CITY.
- 2.13.13 Models: In Plexiglas, wood or other material requested by THE CITY, painted and mounted on wooden base with Plexiglas cover
- 2.14 FFE means Furniture, Fixtures, and Equipment that have no permanent connection and/or integration into the structure or building.
- 2.15 **PROGRAM DIRECTOR (PD) and PROJECT MANAGER (PM)** refers to the persons who THE CITY has designated, in writing, as the persons with authority to act on behalf of THE CITY with respect to this Agreement and the Project. The ARCHITECT shall communicate directly with the PD and PM on all matters concerning the Project and will accept directives only from the Program Director and/or Project Manager and not from any other employee of, or consultant to, THE CITY. The ARCHITECT may communicate directly with the GM/GC and other identified agents of THE CITY, but shall only take direction from the PD or PM, and shall not give direction to any agent of THE CITY except through the PD and PM.
- 2.16 **PROJECT ARCHITECT (PA)** refers to the person designated in writing by the ARCHITECT and accepted by THE CITY to make decisions on behalf of the ARCHITECT, to commit the resources of the ARCHITECT and all of its sub consultants, and to direct, coordinate and control the ARCHITECT and its entire team in providing all of the services required under this Agreement. So long as the PA performs in a manner acceptable to THE CITY and remains in the ARCHITECT's employ, the PA shall remain in charge of all design and other services required under this Agreement and shall attend all design-related meetings for the Project. The ARCHITECT may not replace the PA without THE CITY's written consent.
- 2.17 **PROPOSAL** means the ARCHITECT's response to THE CITY's Request for Qualifications for design professional services for the Project.
- 2.18 **QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)** means the Quality Assurance/Quality Control Plan to be used throughout the design process for the Project. The QA/QC Plan is developed to facilitate delivery of Project documents that are technically sound, complete, and coordinated to accurately communicate the design intent and scope of the Project.

2.19 REQUEST FOR QUALIFICATIONS means THE CITY's request for qualifications (RFQ) for professional design services for this Project and the ARCHITECT's proposal to provide such services. All requirements of the RFQ and the representations made in the ARCHITECT's Proposal that are not in conflict with provisions of this contract are hereby incorporated by reference and made an integral part of this Agreement as though fully set forth herein. With respect to any conflict or ambiguity between this Agreement and the RFQ or the proposal, this Agreement shall control except where the RFQ or the proposal refers to services not otherwise mentioned in this Agreement, in which case and to such extent the RFQ or proposal shall control.

3 STANDARD OF CARE (PERFORMANCE)

The ARCHITECT's obligation is to perform all of its services in accordance with generally accepted standards of professional practice in the design and construction administration of the Project and projects of similar size and complexity in the San Francisco Bay Area or other major metropolitan area in the United States. This standard shall apply to and define all professional obligations under this Agreement.

4 ARCHITECT'S BASIC SERVICES / GENERAL PROVISIONS

The ARCHITECT shall provide as its Basic Services all necessary architectural, engineering, cost estimating, and other consulting services during all Design Phases (Article 5) and during all Construction Phases (Article 6) of the Project as required by this Agreement to design a complete and comprehensive Project, except for services designated as Additional Services as described in Article 7. Basic Services are generally identified in and as subsequently modified by the agreement of the parties. All of the parties providing any of these necessary services shall be licensed by the State of California.

The ARCHITECT, its officers, agents, employees, subcontractors, consultants and any other persons or entities for whom the ARCHITECT is responsible, shall provide all of the services required under this Agreement in a manner consistent with the CM/GC Contracting method. Among other things, this will require the ARCHITECT, at no additional cost to THE CITY, to: (a) work closely with the CM/GC and its team during the pre-construction and construction phases of the Project and coordinate its work vis-a-vis the design with the services required of the CM/GC in its contract with THE CITY, and (b) prepare plans and specifications for discrete portions of the work as described in 1.1.4 or in the sequences that the ARCHITECT and the CM/GC reasonably agree are appropriate for the timely completion of the Project. The CM/GC will use the plans and specifications to prepare separate trade packages for all of the subcontractors who will construct the Project. Trade package may be awarded concurrently with other trade packages or individually, at different points in time, which may result in the ARCHITECT completing portions of the design after

commencement of construction of the Project and/or providing construction phase services before completion of all design phase services.

The ARCHITECT shall develop, manage, and maintain multi-dimensional design BIM's and reports, integrating information from engineering disciplines to collaborate and fully coordinate the design and construction features as described in the BIM Management Plan and Delivery Matrix. The ARCHITECT shall provide such models to the CM/GC for purposes of verifying constructability, compatibility, and compliance with design intent. The ARCHITECT shall consult with the CM/GC and provide the CM/GC an opportunity to review and comment upon all designs, drawings, models, and other materials developed by the ARCHITECT. The ARCHITECT shall incorporate into the Design BIM and Construction Documents constructability refinements resulting from the interactive collaboration with the CM/GC including accepted value engineering proposals. At the earliest moment the CITY, ARCHITECT, and CM/GC shall develop and execute BIM Management Plan and BIM Delivery Matrix (Attachment 4) based on the AIA E 202 *BIM Protocol Exhibit*, which will be used to specify the level of detail required in the Design, CM, and As-Built BIMs) and the system development level at agreed upon milestones. The ARCHITECT is not expected to prepare standalone Construction Documents and Specifications for each trade package. While the CM/GC is responsible for preparing the trade packages, the ARCHITECT will cooperate with the CM/GC and provide design assistance and coordination that is required to timely prepare the trade packages and subcontracts for bid and/or negotiation and award.

The CM/GC will develop, manage and maintain a multi-dimensional CM BIM or BIM's during construction to collaborate with the ARCHITECT. The CM/GC shall utilize the CM BIM(s) to verify constructability and to develop cost estimates, sequencing plans, and schedule. The CM/GC shall consult with the ARCHITECT to review and comment upon designs, drawings, models, and other materials developed by the ARCHITECT.

Nothing in the foregoing shall create any contractual relationship between THE CITY and any consultants employed by the ARCHITECT under the terms of this Agreement. The ARCHITECT is as responsible for the performance of its consultants as it would be if it had rendered these services itself. The ARCHITECT's services are intended for the sole benefit of THE CITY and are not intended to create any rights or benefits to third parties.

Basic Services shall include the following:

4.1 CONSULTING SERVICES

The ARCHITECT shall provide the following consulting services as part its Basic Services under this Agreement:

4.1.1 Consult with authorized employees, agents and/or representatives and consultants of THE CITY and as required or as requested by THE CITY,

to develop and complete the design phase, construction phase, and construction administration phase services of the Project.

- 4.1.2 Review and validate furniture, fixture, and equipment described in the Bridging document. Where required, verify the conditions and availabilities of equipment at the existing facility for incorporation at the TCFSD facility.
- 4.1.3 Review program requirements, site surveys, existing record documents, seismic data, mechanical, geotechnical, and other test reports, environmental documents, and any other documentation furnished by THE CITY. From an examination of the site and a review of available information and based on its experience and training, the ARCHITECT shall determine whether such data are sufficient for purposes of design or whether additional data are needed and, if so, recommend to the CITY in as timely a fashion as possible the manner in which it may be provided and needed services obtained to avoid any delay that could otherwise occur.
- 4.1.4 Contract for or employ, at the ARCHITECT's expense within the Basic Services fee, ARCHITECT's employees and ARCHITECT's subconsultants as may be necessary or required including, but not limited to, Mechanical, Civil, Electrical, Plumbing and/or Structural Engineers; Cost Estimator; Landscape ARCHITECT (Peer Review); LEED Coordinator; Energy Management & Building Automation Coordinator, and other specialty consultants and services for fire protection and life safety, acoustical, lighting, specifications, security, computer infrastructure, and disabled access, and others as may be necessary for complete design, or criteria design package as indicated by the CITY, of the Project; all parties shall be licensed by the State of California if so required. The ARCHITECT shall submit any proposed changes to the subconsultants listed in Attachment 7 to THE CITY for its approval.

4.2 DESIGNATION OF KEY EMPLOYEES AND CONSULTANTS

- 4.2.1 The key employees and consultants shall remain in charge of the professional services for the Project, so long as their respective performance continues to be acceptable to THE CITY. A list of the ARCHITECT's team members with their key employees are listed in Attachment 7. Attachment 8 sets forth some of the key employees of the entire Project team and their respective commitment to the Project.
- 4.2.2 The ARCHITECT commits to maintain the continuous involvement of the designated and approved key employees for the entire duration of the Project through the Construction Administration Phase. Absent the death, physical or mental incapacity or departure of the key employees from their respective firms, or the dissolution of their respective firms, or approval in writing by THE CITY to a different commitment, the key employees have committed to provide their percentages of involvement for each phase as described in Attachment 8. The ARCHITECT and THE CITY are both fully

aware that change in key personnel on a project can result in great detriment to the Project. Accordingly, any request by the ARCHITECT to change the amount of the key personnel's involvement shall be made with 60 days prior written notice and any approval or denial of such request shall be at the sole discretion of THE CITY and not subject to challenge by the ARCHITECT. THE CITY reserves the right to audit the key employees' time records if there are concerns about the time commitments of the employees identified in Attachment 8.

4.2.3 Because the evaluation of Contractors' Proposals were largely based on the qualifications of key personnel and because a change in key personnel on a project can result in great detriment to the project, the ARCHITECT agrees to maintain the continuous involvement of the designated and approved key employees for the entire duration of the Project through the Construction Administration Phase. ARCHITECT shall not substitute key personnel or change the amount of the key personnel's involvement as described in Attachment 7 without the prior written approval of the CITY. Requests for approval of substitutions shall be in writing and made at least 30 calendar days prior to the proposed substitution. Such notification shall include a detailed explanation of the circumstances necessitating the proposed substitution, a complete resume for the proposed substitute, and any other information requested or needed by the City to approve or disapprove the request. Proposed substitutes must have qualifications that are equal to or higher than the key personnel being replaced. The CITY shall evaluate such requests and promptly notify the ARCHITECT in writing whether the proposed substitution is acceptable. Approval or denial of such request is at the sole discretion of the CITY. The CITY reserves the right to audit the key employees' time records if there are concerns about the time commitments of the employees identified in Attachment 7. Failure to notify City prior to substitution of key personnel may result in City withholding payment(s) due.

4.2.4 The ARCHITECT will assign additional staff as needed to complete all of the services required by this Agreement at no cost to THE CITY.

4.3 COORDINATION OF DESIGN TEAM

Commensurate with the standard of care, the ARCHITECT shall coordinate its work with the work of all of its consultants to produce comprehensive, complete, coordinated and accurate drawings and specifications. The ARCHITECT shall use and manage BIM applications and methods for all portions of the Project.

4.4 COORDINATION WITH CM/GC AND ITS SUBCONTRACTORS

The ARCHITECT shall coordinate its work with the CM/GC and its subcontractors, and collaborate with each of them in a manner consistent with the Construction Manager/General Contractor Mode of Contracting as defined herein. The ARCHITECT shall use and manage BIM applications and methods as an integral part of this effort, as described in the BIM Management Plan and

Delivery Matrix. The ARCHITECT shall participate in meetings and workshops with the CM/GC and its team for purposes of design coordination and design review for accuracy, constructability, and value engineering.

4.5 QUALITY ASSURANCE/QUALITY CONTROL

Quality Assurance/Quality Control (QA/QC) are the responsibility of the ARCHITECT, and shall be rendered as defined in Attachment 5. The ARCHITECT shall provide THE CITY the QA/QC plan the ARCHITECT intends to utilize for the Project for approval by THE CITY. At the indicated percentage of completion shown as milestone dates of each phase, the ARCHITECT shall provide to THE CITY documentation that evidences the completeness of the QA/QC activity for that phase. The review and acceptance by THE CITY of this documentation is, in part, a necessary precondition for establishing the completion of the phase and the approval to continue on to the next phase.

4.6 COORDINATION WITH PUBLIC AGENCIES AND PUBLIC UTILITIES

Coordinate with THE CITY and the CITY's agencies, including the Fire Department, and all other state and federal public agencies and/or utility providers and TCFSD's Facility operations staff as necessary to identify design requirements that affect the Project, review designs and obtain agency and/or utility provider approvals. Where engineering designs would be prepared by such agencies and utility providers, coordinate their designs with the Project, and incorporate their designs into the Construction Documents and/or Contract Documents.

4.6.1 San Francisco Departments: Coordinate with and work with departments of the CITY and County of San Francisco as necessary to determine relevant CITY requirements, develop and review designs, and obtain required CITY approvals. Such departments include, but are not limited to, the Department of Public Works, Department of Environment, Department of Building Inspection, and Redevelopment Agency (currently known as Office Community Investment and Infrastructure (OCII)).

4.6.2 San Francisco Arts Commission: The ARCHITECT is required to coordinate the design and structure of the building and the Project site with any art work commissioned by THE CITY or CITY's Art Commission that is to be incorporated in the Project as an integral building or site element, including assisting with information necessary for the Art Commission to make the selection. These services are included as part of the ARCHITECT's Basic Services under this Agreement. As directed by THE CITY or CITY, ARCHITECT shall coordinate with and work with the Arts Commission, its committees, and any representatives from THE CITY or CITY that the Arts Commission may designate in the selection of artists for THE CITY Public Art Program. Once the art work is selected, the ARCHITECT shall coordinate with and work with the Arts Commission, and the chosen artists, and any representatives the Commission may designate and provide design and engineering services necessary to incorporate requirements for the chosen artwork into the design for the

facility. The ARCHITECT is not responsible for the design of the artwork or any stand-alone structure to accommodate the artwork. Substantial changes to design documents or other like work required of the ARCHITECT to incorporate requirements for the chosen artwork into the Project after the completion and acceptance by THE CITY of the Design documents shall be reviewed with and approved by THE CITY prior to incorporation into the Construction Documents. The ARCHITECT may be compensated for approved changes as Additional Services for work after the art work is selected, depending on the amount and complexity of the work.

4.7 COORDINATION WITH THE CITY

- 4.7.1** The ARCHITECT and key members of its design team shall meet regularly with the Program Director, Project Manager, THE CITY staff, consultants, and others as directed by the Program Director and Project Manager so as to keep the design and/or construction on budget and on schedule. Design Team includes the ARCHITECT's Key Employees and consultants assigned to work on this Project as described in Section 4.2 of this agreement.
- 4.7.2** Assist in establishing a means of electronic communication using the mutually agreed to software or equivalent software program employed by THE CITY, and fully participate in THE CITY's effort to develop electronic files for this Project.
- 4.7.3** Assist the Program Director and Project Manager in developing requests for proposals and/or requests for qualifications to acquire professional services from specialized consultants that THE CITY deems necessary for the successful completion of the Project.

4.8 THE CITY COST CHANGE CONTROL PROCEDURE

During all phases of the Project, the ARCHITECT shall cooperate with THE CITY and the CM/GC to control design and scope changes that could affect the cost of the Project. The ARCHITECT shall comply with a Cost Change Control Procedure to be established by the CITY for the Project. The Cost Change Control Procedure is intended to serve several purposes, including:

- (1) Assuring that the Project requirements are met,
- (2) Assuring timely and regular estimates of construction costs as the design is developed to ensure that these costs remain within the FCBL,
- (3) Assuring that all proposed changes to the design include an analysis of the cost impact of those changes,
- (4) Avoiding unnecessary re-design work by the ARCHITECT, and
- (5) Avoiding unnecessary additional costs to the CM/GC or THE CITY.

- 4.8.1** For purposes of implementing the Cost Change Control Procedure, the ARCHITECT will use the RFQ, the Statement of Cost (see section 1.1.3,

above), and the 100% Bridging Documents dated 12/2012 to validate cost of the Project. However, nothing in any of these reference documents is intended to change the FCBL.

- 4.8.2** The ARCHITECT shall promptly inform THE CITY of any proposed changes to the design or to the scope of the Project, that would, in the ARCHITECT's opinion, affect the estimated (whether increased or decreased) construction cost for the Project. The ARCHITECT shall review with THE CITY the benefits as well as costs of the proposed changes. For each significant proposed change, the ARCHITECT shall submit to THE CITY a completed Change Request Form, (provided by THE CITY), that describes the proposed change and analyzes the impact the change is likely to have on the cost to build the Project. Should the proposed change increase the estimated cost of the Project, the ARCHITECT shall cooperate with THE CITY to identify other changes to the Project that could reduce and/or offset the cost of the proposed change.

4.9 DESIGN CHANGES

- 4.9.1** No substantive change shall be incorporated into the design documents unless it has been approved by THE CITY in writing.
- 4.9.2** The ARCHITECT shall maintain a Change Log of all recommended, pending, approved and incorporated changes, and submit the Change Log to THE CITY monthly during the design phase.
- 4.9.3** THE CITY approval of any change shall not entitle the ARCHITECT to a change in ARCHITECT's compensation, unless approved in writing by THE CITY.

4.10 COST ESTIMATING

The ARCHITECT will review and validate the Probable Opinion of Construction Cost (cost estimate) prepared for the Bridging Documents' Estimate. The ARCHITECT will submit that Cost Evaluation Report to THE CITY for its approval as part of the package report at completion of Program Validation Phase cost verification.

- 4.10.1** During each subsequent design phase, (issuance of report at completion of Conceptual Design, Schematic Design, 50% and 100% Design Development, and 50% and 95% Construction Documents), the ARCHITECT shall update the cost estimate, both for the Project as a whole and for each trade package, changing the format to the MASTERFORMAT 2012 and according to the CSI 50 Division classifications.
- 4.10.2** With each cost estimate prepared by the ARCHITECT, all changes to estimated cost shall be considered a Cost Trend, shall be analyzed by the ARCHITECT to determine the cause of the cost change, and shall be presented to THE CITY for approval according to THE CITY Cost Change Control Procedure.

4.10.3 At all times during the design and construction bid phases, the ARCHITECT shall be responsible for monitoring and confirming that the total cost of all trade packages awarded to date, whether bid or negotiated, together with the estimated costs of trade packages that have not yet been bid or negotiated, are less than 5% of the FCBL.

4.11 CODE COMPLIANCE

The ARCHITECT shall comply with requirements of all applicable federal, state, and local codes, regulations, and current written interpretation thereof published and in effect at the time of submission of the building permit. In the event of changes in such codes, regulations or interpretations during the course of the Project that were not and should not have been reasonably anticipated by the ARCHITECT and which result in a substantive change to the construction documents, the ARCHITECT shall not be held responsible for the resulting additional costs, fees or time, and shall be entitled to reasonable additional compensation for the time and expense of responding to such changes. The ARCHITECT shall be responsible, however, to identify, analyze and report to THE CITY pending changes to codes and regulations that would reasonably be expected to affect the design of the Project, including pending changes to the California Building Codes and San Francisco Building Code.

4.12 MEETINGS WITH THE CITY AND OTHERS

The ARCHITECT shall attend meetings concerning the Project with the CITY, CM/GC and others as necessary, including the following, to the extent required:

4.12.1 CITY Departments and their Staff including the Department of Public Works, and Planning Department: The purpose of these meetings will be to assist the Program Director and Project Manager to present design concepts, solicit comments and answer questions, and report on the progress of the Project.

4.12.2 Art Commission and Others: Preparation of submissions to the Civic Design Committee or similar committee established by the CITY shall be made in keeping with the current requirements of the "San Francisco Art Commission Civic Design Review Committee Guidelines". Attend meetings with the Visual Arts Committee of the Art Commission and/or similar committee established by the CITY for the purposes of selecting artists to participate in the CITY Public Art Program, and for coordination with the artists.

4.12.3 SF Fire Department and Department of Building Inspection: Attend meetings to coordinate and obtain comments, permits and approvals, including support coordination and cooperation with Environmental Impact Review Study (EIR) process and consultants.

4.12.4 Community Groups, Strategic Advisory Group and Public Meetings: Attend up to six (6) meetings as requested by THE CITY to provide information regarding Project design issues and solicit community comments.

4.12.5 State Authorities: Attend meetings to review design issues, receive and respond to comments, and obtain approvals as required.

4.12.6 Compliance with Americans with Disabilities Act. ARCHITECT acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a contractor, must be accessible to the disabled public. ARCHITECT shall provide the services specified in this Agreement in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. ARCHITECT agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agrees that any violation of this prohibition on the part of ARCHITECT, its employees, agents or assigns will constitute a material breach of this Agreement.

The ARCHITECT shall meet with the Public Works- Disability Access Coordinator (DAC) for early planning and input in order to identify accessibility requirements that are critical to the budget and schedule of the PROJECT. The ARCHITECT shall expect to meet multiple times with the Public Works-DAC at each phase of the project, to review all aspects of accessibility compliance. The ARCHITECT shall expect to document all meetings and related communications to record the progress of review and/or agreements made with the Public Works-DCA on conformance to understood accessibility requirements.

5 ARCHITECT'S BASIC SERVICES / DESIGN PHASES

Upon execution of the Agreement THE CITY will issue a separate Notice-to-Proceed (NTP) authorizing the ARCHITECT to perform design services for each design phase of the Project as set forth below in Section 5, Attachment 3 and as applicable by Program increments. The parties understand and agree that those services delineated below and in Attachment 3 are to be performed only upon the written NTP by THE CITY. While THE CITY intends to authorize the ARCHITECT to provide the Design Services described below and in Attachment 3 THE CITY shall do so only when (a) sufficient funds for such services have been appropriated in accordance with the budget and fiscal provisions of THE CITY and, (b) THE CITY, in its sole discretion, without waiving any rights, has found that prior services of the ARCHITECT to date have been adequately performed and completed.

The ARCHITECT must obtain design review approval for each design phase. THE CITY is not obligated to pay ARCHITECT for services attributable to a design phase until the ARCHITECT has obtained design review approval for the preceding phase.

5.1 PROGRAM VALIDATION

The Program Validation is the first phase of the Project. Upon NTP for the Program Validation, the ARCHITECT shall:

- 5.1.1** Review thoroughly the Bridging Documents dated August 08, 2014, which includes the Conceptual Planning document prepared by Crime Lab Design and published in June 2013.
- 5.1.2** The ARCHITECT will advise THE CITY of the sufficiency and appropriateness of the design delineated thus far in the provided documents, and identify opportunities for functional enhancements and/or revisions of purpose and value for THE CITY to review.
- 5.1.3** The ARCHITECT to compile, prioritize, organize, and coordinate consultants' reviews.
- 5.1.4** The ARCHITECT to coordinate Program Validation meetings with the design team and THE CITY.
- 5.1.5** The ARCHITECT and its consultants will ensure that the functional enhancements and/or revisions accepted are within the project budget.
- 5.1.6** Refer to Attachment 3 for detailed description of additional Program Validation tasks and services.
- 5.1.7** The ARCHITECT to compile, proof read, format and submit final Program Validation Report for THE CITY's approval.

5.2 CONCEPTUAL DESIGN

Upon approval by THE CITY of the Program Validation Phase and receipt of written NTP from THE CITY to proceed with the Conceptual Design Phase, the ARCHITECT shall:

- 5.2.1** The Conceptual Design documents shall include a Room by Room Review electronic database establishing and documenting all specific room utilization and operational needs including utilities, furnishings, equipment, and other specific room characteristics required for program THE CITY room usage and types. The Room by Room Review shall establish room typical drawings as required for clarity of requirements.
- 5.2.2** Prepare Conceptual Design drawings and other documents to conceptually illustrate and describe the preliminary design of the Project, establishing the scope, relationships, form, size and appearance of the Project by means of plans, sections and elevations, typical for this type of project and this type of project delivery.
- 5.2.3** Refer to Attachment 3 for additional Conceptual Design tasks and services to be performed during this phase.

- 5.2.4 Together with its subconsultants, make presentations to THE CITY and State agencies, stakeholders and community groups as directed by the Program Director or Project Manager.
- 5.2.5 Establish preliminary strategy and goals for achieving minimum of LEED Gold v.2009, and register the project with USGBC/ GBCI.
- 5.2.6 Prepare preliminary Opinion of Probable Construction Cost Estimate.

5.3 SCHEMATIC DESIGN PHASE

Upon approval by THE CITY of the Conceptual Design Phase and receipt of written NTP from THE CITY to proceed with the Schematic Design Phase, the ARCHITECT shall:

- 5.3.1 Prepare Schematic Design drawings and other documents to fully illustrate and describe the refinement to the design of the Project, establishing the scope, relationships, form, size and appearance of the Project by means of plans, sections and elevations, typical for this type of project and this type of project delivery, and preliminary equipment layouts for building and site structures.
- 5.3.2 Refer to Attachment 3 for additional tasks and services to be performed during the SD phase.
- 5.3.3 Create a systems checklist for selection and approval of systems to be included in the Project such as utilities, mechanical, electrical, communication, and security systems, and other relevant systems and equipment, including the coordination and management of required LEED certification documentation.
- 5.3.4 Update strategy and goals for achieving minimum of LEED Gold v.2009. Assist THE CITY with registering the Project with the U.S. Green Building Council (USGBC).
- 5.3.5 Prepare Construction Cost Estimate. Verify format with The CITY.
- 5.3.6 Prepare a report with narrative description of all components and facilities in the Project, code requirements, including the general types of construction by architectural and engineering disciplines, furnishings, equipment, outline specifications and preliminary seismic, Title 24 disability access, energy, mechanical and electrical load calculations and operating costs and THE CITY, state, and federal disabled access features. Include a list of recommended finish materials and colors.
- 5.3.7 Coordinate with THE CITY, Art Commission and the selected artists to incorporate requirements for the chosen artwork in pertinent documents of the Design Phase. The design of connection points and attachment of public art to the building shall be considered part of Basic Services.

- 5.3.8** Together with its consultants, make presentations to THE CITY and State agencies, community groups, and others as directed by the Project Manager or Program Director.

5.4 DESIGN DEVELOPMENT PHASE

Upon approval by THE CITY of the Schematic Design Phase and receipt of written NTP from THE CITY to proceed with the Design Development Phase, the ARCHITECT shall:

- 5.4.1** Prepare DD Phase design drawings and other documents to fully illustrate and describe the refinement to the design of the Project, establishing the scope, relationships, form, size and appearance of the Project by means of plans, sections and elevations, construction details typical for this type of project and this type of project delivery, and equipment layouts for all buildings and site structures. The Design documents shall include specifications following CSI MasterFormat 2012 standards that identify major materials and systems and establish in general their quality levels.
- 5.4.2** Manage, further develop and maintain multi-dimensional building information models and reports necessary to collaborate and coordinate design and construction features with CM/GC for purposes of verifying constructability and compatibility and cost. The ARCHITECT shall participate with THE CITY to establish an interactive and integrated design review and approval process with the CM/GC. The ARCHITECT shall consult with the CM/GC and provide the CM/GC an opportunity to review and comment upon all designs, drawings and materials developed by the ARCHITECT during the Design phase. Incorporate into the Design documents the design and constructability refinements resulting from the interactive collaboration with the CM/GC.
- 5.4.3** The ARCHITECT will be responsible for the preliminary layout, design, and detailing of all furnishing, fixture or equipment that is permanently attached to the Project building by means of adhesives, mechanical fasteners and/or any other device that secures a fixture to the building paid out of public funds. Inventory of existing equipment and furnishing will be performed by others. Furthermore, the ARCHITECT will be responsible for the design and specification of all other furnishings, fixtures and equipment, attached or unaffixed, required for the operations of the Traffic Company and Forensic Services Division Facility, the procurement and purchase of which shall be coordinated with the CITY Purchaser and funded apart from general obligation bond funds for this Project.
- 5.4.4** Further develop selection and approval of systems to be included in the Project such as utilities, mechanical, electrical, communication, and security systems, and other relevant systems and equipment, including the coordination and management of required LEED certification

documentation. Continue to monitor and evaluate LEED certification targets including tracking probable LEED point achievements through forecasted LEED Certification Scorecard format.

- 5.4.5** Update and modify the format of the Opinion of Probable Construction Cost Estimate submitted for DD phase of Design documents. Cooperate and coordinate with the Program Director, Project Manager and the CM/GC to reconcile any differences in cost estimates that THE CITY independent cost estimator and/or CM/GC may separately prepare based on similar level of design completion. Reconcile the estimates with one another and the FCBL.
- 5.4.6** Review all Design documents with THE CITY, CM/GC, and revise documents, estimates and schedules as necessary in order to incorporate all of the comments.
- 5.4.7** Actively participate in necessary design meetings and workshops with THE CITY's Program Director, CITY's Project Manager and CM/GC to secure all approvals from all appropriate stakeholders and authorities.
- 5.4.8** The ARCHITECT shall expressly identify and obtain approval from the CITY prior to including design-build elements in the design, except for those disciplines already indicated in this AGREEMENT as design-build scopes, including mechanical, electrical, low voltage electrical, and plumbing engineering, fire protection, and exterior curtain wall system.
- 5.4.9** Prepare materials to be used in the Project as reasonably necessary to perform Basic Services, to obtain required permits and approvals, and to make presentations to community groups and associations.
- 5.4.10** Prepare and maintain multi-dimensional (minimum of three dimensions) BIM models and reports necessary to collaborate and coordinate design and construction features with the CM/GC and its Subcontractors for purposes of verifying constructability and compatibility. The parties recognize that the BIM is an interactive tool to aid the ARCHITECT and the CM/GC in their efforts to better coordinate the design and construction of the Project. The ARCHITECT and its designated BIM Manager are responsible for managing the BIM until all necessary approvals have been achieved. The CM/GC and its designated BIM manager will assume principal responsibility for managing the BIM thereafter. In all cases, however, it remains the ARCHITECT's responsibility to prepare, (in whatever manner or form the ARCHITECT, in its professional judgment, deems appropriate), all of the documents that are necessary to secure permits from all agencies that have jurisdiction over the Project.
- 5.4.11** Update systems checklist for selection and approval of systems to be included in the Project such as utilities, mechanical, electrical, communication, and security systems, and other relevant systems and equipment, including the coordination and management of required LEED certification documentation.

- 5.4.12** Update strategy and goals for achieving minimum of LEED Gold v.2009. Assist THE CITY with registering the Project with the U.S. Green Building Council (USGBC).
- 5.4.13** Update narrative report with narrative description of all components and facilities in the Project, code requirements, including the general types of construction by architectural and engineering disciplines, furnishings, equipment, outline specifications and preliminary seismic, Title 24 disability access, energy, mechanical and electrical load calculations and operating costs and THE CITY, state, and federal disabled access features. Include a list of recommended finish materials and colors.
- 5.4.14** Prepare the Cost Estimate for the Project required in article 4.10 (Cost Estimating), above, and reconcile any differences with the FCBL and any estimates that THE CITY or its CM/GC might prepare. Update the baseline design schedule by tasks, personnel and milestones for the remainder of the design services.

5.5 CONSTRUCTION DOCUMENT PHASE

Upon approval of the Design Development Documents and receipt of written NTP from THE CITY to proceed with the Construction Document Phase, the ARCHITECT shall:

- 5.5.1** Prepare from approved Design Development Phase documents, Construction Documents setting forth in detail the requirements for construction of the Project. The Construction Documents shall include all site and building plans, sections, elevations, enlarged plans, and details necessary to construct the Project. Specifications shall include technical specifications conforming to CSI/MASTERFORMAT 2012 standards (50 Divisions), describing technical criteria, standards and requirements for elements of the Project. Drawings and Specifications shall establish in detail the quality levels of materials, systems and equipment required for the Project. Include in the Construction Documents work required for integration and installation of public art.
- 5.5.2** Manage, further develop and maintain multi-dimensional building information models and reports necessary to collaborate and coordinate design and construction features with CM/GC for purposes of verifying constructability, compatibility, and cost. The ARCHITECT shall consult with the CM/GC and provide the CM/GC an opportunity to review and comment upon all designs, drawings, and other materials developed by the ARCHITECT during the Construction Document phase. Incorporate into the Construction Documents the design and constructability refinements resulting from the interactive collaboration with the CM/GC including accepted value engineering proposals and value engineering proposals from trade contractors during bidding (see 6.2 Value Engineering Integration Phase). The ARCHITECT is not expected to

prepare stand-alone Construction Documents and Specifications for each trade package. While the CM/GC is responsible for preparing the trade packages, the ARCHITECT will cooperate with the CM/GC and provide all design assistance and coordination that is required to timely prepare the trade packages and subcontracts for bid and/or negotiation and award.

- 5.5.3** Participate and assist in Design Build Contractor's final selection and approval of systems to be included in the Project such as utilities, mechanical, electrical, communication, and security systems, and other relevant systems and equipment, including the coordination and management of required LEED certification documentation. Continue to monitor and evaluate LEED certification targets including tracking probable LEED point achievements through forecasted LEED Certification Scorecard format.
- 5.5.4** Prepare Construction Documents, including specifications, in full compliance with all applicable building codes, ordinances, other regulatory requirements, and, applicable THE CITY departments and utility providers. Assist THE CITY in submitting final construction documents to all agencies with jurisdiction. As necessary, review construction documents with agencies and revise and re-submit them as required to secure all necessary permits.
- 5.5.5** The ARCHITECT shall compile the Project Manual that includes THE CITY provided Conditions of the contract for construction and may include bidding requirements and bid forms. The ARCHITECT shall prepare the Technical Specification Section of the Project Manual. In addition the ARCHITECT shall assist THE CITY with modifications to THE CITY's standard conditions of the contract (General, Supplemental and Other Conditions) to adequately address the requirements of the Project; however, the ARCHITECT shall not incorporate any such changes into the Construction Documents without the written approval of THE CITY.
- 5.5.6** Prepare updates to the Cost Estimate at 50% and 95% level of completion. Cooperate and coordinate with the Program Director, Project Manager and the CM/GC to reconcile any differences with THE CITY's and/or the CM/GC's or its Subcontractors' estimates of construction costs and the FCBL.
- 5.5.7** Submit a new final ARCHITECT's Estimate of Construction Cost with the 95% Construction Documents. If the estimated construction cost at the Construction Documents Phase for any trade package exceeds the ARCHITECT's initial construction cost estimate (as required in section 4.8 of this Agreement) for that trade package, THE CITY may, at its discretion: (1) give written approval of an increase in the estimated cost for that trade package provided that the bid or negotiated price for that package is equal to or less than the estimated cost for that package, or (2) if the bid or negotiated price for that trade package exceeds the cost estimate, THE CITY may accept the higher price after reasonable opinion from the

ARCHITECT, and in consultation with the CM/GC and Construction Management consultant, that the cost of subsequent trade packages along with the cost of already bid and/or awarded trade packages will not exceed the FCBL, or (3) require the ARCHITECT at its own expense to revise the design for that trade package and/or other portions of the Project and revise the corresponding Construction Documents, so as to reduce the estimated Project construction cost for the entire Project to match the FCBL. This obligation to redesign is the limit of the ARCHITECT's liability for keeping the construction cost within the FCBL.

- 5.5.8** The ARCHITECT shall participate with THE CITY to establish an interactive and integrated design, review and approval process with the CM/GC. The ARCHITECT shall furnish a Drawing and Report Set of all documents to THE CITY for approval at 50% and 95% completion, and revise if required and directed by THE CITY.
- 5.5.9** Unless directed otherwise in writing by THE CITY, the Construction Document phase shall not be considered 100% complete until the ARCHITECT has received all required agency and THE CITY's approvals and/or permits.
- 5.5.10** The ARCHITECT and all subconsultants shall represent, in writing, that to the best of their knowledge, information and belief, the final Construction Documents, except for deferred submittals, are complete, fully coordinated and ready for bid, that they have reviewed the drawings in total and that their own work has been coordinated into the Construction Documents. At any time during the ARCHITECT's performance of design services, and upon completion of the final Construction Documents phase, THE CITY may retain architectural/engineering consultants to conduct a peer review of the Construction Documents for constructability and completeness. This peer review, if performed, shall be performed for the benefit of THE CITY and shall in no way decrease the obligation of the ARCHITECT to produce a comprehensive, complete and accurate set of construction documents including plans and specifications for the Project as required by this Agreement.
- 5.5.11** The ARCHITECT shall at 50% and 95% completion milestone conduct its QA/QC of the drawings and specification based on its QA/QC plan approved by THE CITY evidenced to show that QA/QC has been implemented.
- 5.5.12** Assist THE CITY and its CM/GC to coordinate with and secure all necessary approvals from all appropriate stakeholders and regulatory authorities including submitting Site Permit, Site Preparation, Foundation and, Excavation and Shoring, Electrical Switchgear relocation with DBI.
- 5.5.13** Upon written approval by THE CITY of the Drawing Set, provide THE CITY with a set of final Construction Documents ready for bidding. Said Construction Documents shall include any previously issued bid packages. Final Construction Drawings and the certification page of the

specifications submitted to THE CITY for bidding purposes shall be signed and stamped by the ARCHITECT or its consultants, as appropriate.

- 5.5.14 Together with its subconsultants, the ARCHITECT shall make presentations to THE CITY and State agencies, stakeholders and community groups as directed by the Program Director or Project Manager.
- 5.5.15 At 50% level of completion of the Construction Documents, provide a final color schedule along with samples of textures and finishes of all materials specified to be used in the Project, for the review and approval of THE CITY and the Art Commission.
- 5.5.16 Provide to the Program Director and Project Manager for his or her review and approval, electronic copies, including PDF files, CAD files, and BIM models, of all draft Drawing Sets as requested at approved drawing scale.
- 5.5.17 Coordinate with THE CITY and the CITY's Art Commission and selected artists and incorporate into the pertinent Construction Documents the requirements for the chosen artwork.
- 5.5.18 If requested by THE CITY, assist in the prequalification of sub-contractors to the CM/GC during bidding phase.

6 ARCHITECT'S BASIC SERVICES / CONSTRUCTION PHASES

The parties understand and agree that those services delineated below as Construction Phase Services are to be performed only upon the written direction of THE CITY. While THE CITY intends to authorize the ARCHITECT to provide the Construction Phase Services, THE CITY shall do so only when (a) sufficient funds for such services have been appropriated in accordance with the budget and fiscal provisions of THE CITY; and (b) THE CITY, in its sole discretion, without waiving any rights, has found that prior services of the ARCHITECT to date have been adequately performed and completed. Upon authorization by THE CITY, the Construction Phase Services become part of Basic Services.

There will be multiple trade packages for the Project, which consist of site preparation package and building package. The CM/GC is responsible for preparing all of the trade packages required to construct the Project. Trade packages will likely be awarded by both negotiation and competitive bid. Some or all of the trade packages may be assembled and negotiated or bid concurrently and/or negotiated or bid separately from other portions. During the preparation, negotiation, or bidding of each trade package, the ARCHITECT shall assist THE CITY and the CM/GC as necessary with clarifying the scope and intent of the trade packages and with the preparation of all necessary addenda.

Construction Services shall consist of the following phases of work.

6.1 CONSTRUCTION BID/NEGOTIATION PHASE

Upon commencement of the solicitation of bids/negotiations phase by THE CITY, the ARCHITECT shall:

- 6.1.1** Participate in and assist the CM/GC and THE CITY with pre-bid conferences, if any, for the construction trade packages.
- 6.1.2** Participate in and assist the CM/GC and THE CITY with negotiating subcontracts for the construction trade packages.
- 6.1.3** Prepare responses to bidders' questions, interpret Construction Documents, evaluate requests for substitutions and prepare addenda for clarifications, and assist the CM/GC and THE CITY as required in responding to bidders' questions.
- 6.1.4** Provide THE CITY with electronic originals of all addenda to be issued and provide copies to the CM/GC.
- 6.1.5** Assist the CM/GC and THE CITY with reviewing and evaluating all bids submitted, and make recommendations for awarding trade subcontracts.
- 6.1.6** Perform at no additional cost to THE CITY redesign services as may be required to remain within FCBL. Such redesign services may include, at no cost to THE CITY, incorporating value engineering proposals made by the CM/GC or any subcontractors and accepted by THE CITY if those are required to bring the Project within FCBL.
- 6.1.7** Upon award of the trade subcontracts, consolidate a set of Construction Documents with all addenda, permit plans, accepted bid alternates and construction bulletins incorporated into appropriate specification sections or drawing sheets. Provide the CM/GC and THE CITY with an electronic copy of conformance set "For Construction" Drawing Set and Project Manual including Specifications.
- 6.1.8** The ARCHITECT shall further develop, manage, and maintain the Design BIM(s) incorporating responses to RFI's, clarifications, ASI's, DDC's and ARCHITECT-issued documents arising from Change Orders to maintain a current As-Planned BIM. The CM/GC shall use the As-Planned BIM to keep current their own CM BIM(s) to verify constructability and costs, sequencing plans, and schedules. At the conclusion of construction, the CM/GC will prepare a BIM reflecting the "As-Built" conditions of the Project based on the ARCHITECT's As-Planned BIM. The AIA E 202 will be used to specify the level of detail required in the model(s).
- 6.1.9** THE CITY intends to accept value engineering proposals submitted by trade subcontractors that will lower the cost of the Project. Upon submittal of value engineering proposals during Construction Bid/Negotiations phase and before award of trade package contracts, the ARCHITECT shall:

- (1) Assist THE CITY and CM/GC with review and evaluation of the value engineering proposals submitted.

- (2) Interpret and assess the proposals and make appropriate recommendations, with supporting documentation and data, to THE CITY and CM/GC for consideration.
- (3) Incorporate selected value engineering proposals into the plans and specifications as part of its Basic Services.
- (4) Value engineering proposals submitted and accepted prior to award of trade packages shall be incorporated by the ARCHITECT and compensated out of the basic service fee if the estimated cost of that trade package exceeds the FCBL. Fees to incorporate Value Engineering changes to the design proposed by CM/GC or trade sub-contractors after award of trade packages shall be paid as additional services.
- (5) The amounts included for Value Engineering phase is a not-to-exceed allowance, not a lump sum quote. Any unused balance shall be deducted from the Contract Sum and revert to the CITY.

6.2 CONSTRUCTION ADMINISTRATION PHASE

Upon written notice from THE CITY to the ARCHITECT to proceed with Construction Administration Phase Services, the ARCHITECT shall provide services during the Construction Administration Phase as set forth below:

- 6.2.1** The ARCHITECT and its subconsultants shall fulfill all duties and requirements pertaining to ARCHITECT of Record and Engineer(s) of Record as required by code.
- 6.2.2** Upon having received all samples approved for use in the Project, provide an updated color schedule with samples of textures and finishes of all materials to be used in the Project for review and approval of THE CITY.
- 6.2.3** Update checklists of all special inspection and testing, equipment startups, submittals, warranties, guarantees, maintenance and operation manuals, extra stock and all other close-out documents that will be required of the CM/GC. Determine the acceptability of each item during the course of construction and provide a final status report of all items by the end of construction.
- 6.2.4** Prepare, submit, and administer final LEED certification documentation as required by the U.S. Green Building Council (USGBC).
- 6.2.5** Unless agreed by THE CITY otherwise, the ARCHITECT shall review, approve or otherwise act upon RFIs and mock-ups within an average of 7 working days and no more than 10 working days, and submittals, shop drawings and substitution requests within an average of 10 working days and no more than 15 working days. If the ARCHITECT expects that the review of any materials and/or communications will oblige longer than a 7 day consideration, the ARCHITECT shall notify THE CITY and CM/GC in

writing within 3 days of the receipt of the pertinent documents stating the reasons why a delay is expected, and what actions it intends to take to ensure the most timely response practicable. The construction specifications will be prepared to require the CM/GC to prepare all necessary design documentation to support its substitutions or value engineering proposals.

(a) If more than 5 RFIs are submitted per day (more than 25 RFIs per week), the Contractor shall prioritize RFIs responses needed based on most to least critical. Due dates based on 10 day duration will be adjusted accordingly.

- 6.2.6** As directed by THE CITY the ARCHITECT shall prepare and distribute electronically supplementary drawings and specifications in response to RFIs, or as otherwise required to clarify the design intent of the Construction Documents, or to document Change Orders and Construction Change Directives by THE CITY. The ARCHITECT shall respond to the CM/GC's requests for information; provided, however, that the ARCHITECT is not required to provide information that is already reasonably available to the CM/GC from a careful study of the Contract Documents, field conditions, or prior Project correspondence or documentation. THE CITY will prepare and effect any required contract modifications and change orders.
- 6.2.7** The CM/GC will categorize all Requests for Information (RFIs) and Change Orders (COs) by cause, and so advise the ARCHITECT. This will assist THE CITY in tracking the amount and percentage of additional costs incurred attributable to, for example, CITY requests, ARCHITECT errors, ARCHITECT omissions, hidden obstructions, unforeseen conditions, Contractor errors, other Contractor generated conditions, and new regulatory mandates. The ARCHITECT shall indicate in writing whether it concurs with or objects to how the CM/GC categorizes each RFI or CO, and shall recommend for THE CITY's consideration any change to the category assigned. No categorization by cause shall be deemed THE CITY's admission of legal responsibility or liability. For example, designating an RFI or CO as caused by "architect errors" or "architect omissions" is not an admission by the ARCHITECT that the error or omission was caused by the negligence of the ARCHITECT.
- 6.2.8** Preparing record drawings incorporating responses to RFI's and other clarifications.
- 6.2.9** At no cost to THE CITY, update the Construction documents, including BIM model, to reflect ARCHITECT's responses to RFIs and changes issued.
- 6.2.10** The ARCHITECT and its subconsultants shall make visits to the Project site as appropriate to the stage of construction or as otherwise directed by THE CITY to: (1) become generally familiar with and to keep THE CITY informed about the progress and quality of the portion of the Work

completed; (2) to endeavor to guard THE CITY against defects and deficiencies in the Work; and, (3) to determine in general if the Work is being performed in a manner indicating that the Work when fully completed, will be in accordance with the Construction Documents. These visits are not to be construed to require supervision or inspection, and the ARCHITECT shall not be required to make exhaustive or continuous on-site observations of the Work. The ARCHITECT shall prepare a written report of each and every site visit, and shall advise and report to THE CITY in writing of any deviations from the Construction Documents, non-conforming items or issues of concern observed during such visits.

- 6.2.11** The ARCHITECT shall attend construction and related other Project meetings throughout the construction phase as requested by THE CITY, the Program Director, Project Manager or the CM/GC. The ARCHITECT shall require that its subconsultants make such visits and attend Project meetings when appropriate to observe the progress of work designed or specified by them. It is understood that THE CITY will be responsible for providing day-to-day field inspection services and shall cooperate and coordinate with the ARCHITECT in matters pertaining to the ARCHITECT's work. The ARCHITECT and its subconsultants shall coordinate and cooperate with THE CITY to time its visits jointly to observe and discuss the CM/GC's field work and installation to reduce duplication of work by both the CM/GC and the ARCHITECT.
- 6.2.12** As part of its Basic Services, the ARCHITECT will assign at least one senior, responsible member of its design team acceptable to THE CITY to establish and maintain an on-site office for the duration of construction until substantial completion, unless otherwise authorized or directed by THE CITY. This staff member shall be authorized to represent and render decisions on behalf of the ARCHITECT in all design and construction coordination matters and shall be charged with representing the design team in responding to questions and clarifications needed on site to minimize disruption to construction. The ARCHITECT shall provide, as part of its BASIC SERVICES, support of the on-site office, including computer hardware, software, and IT support. Other subconsultants, as defined in Article 4.1.4, representing specialty services are required to perform similar on-site services for periods agreed to between the ARCHITECT and THE CITY, and it is the ARCHITECT's responsibility to coordinate the availability of other consultants and schedule such on-site services as necessary for the timely progress of the Work.
- 6.2.13** Interpret the Contract Documents and advise THE CITY of all decisions rendered. The ARCHITECT shall provide its interpretation electronically in written or graphic form. Interpretations by the ARCHITECT shall be consistent with the intent of and reasonably inferable from the Contract Documents.

- 6.2.14** The ARCHITECT acknowledges that THE CITY is using the Construction Manager/General Contractor mode of contracting to construct the Project. There is no certainty that the trade subcontractor(s) who is (are) awarded subcontracts will cooperate willingly with the contract documents. The ARCHITECT acknowledges that as a result, it may encounter varying amounts of administrative difficulties during the construction phase of the Project. The ARCHITECT agrees that it will not seek additional compensation for these administrative difficulties unless THE CITY in its sole discretion determines that the amount of time spent in responding is excessive given the complexity and scope of the Project.
- 6.2.15** Review and advise THE CITY when requested on claims, disputes and other matters in question between the CM/GC and THE CITY relating to the interpretation of the Contract Documents or proposed changes to them.
- 6.2.16** The Project delivery method that is incorporated into this Agreement and THE CITY's Agreement with the CM/GC, contemplates collaboration and open communication between the ARCHITECT and the CM/GC during all phases of the Project. The ARCHITECT will not, however, offer any directive or communication, nor make any agreement with the CM/GC that affects the design, construction or cost of the Project without first obtaining approval from THE CITY's Program Director and CITY's Project Manager. Communications by and with the ARCHITECT's consultants shall be through the ARCHITECT.
- 6.2.17** Assist THE CITY with evaluating progress payment requests from the CM/GC by reviewing the baseline Schedule of Values prepared by the CM/GC for sufficient detail, such as by specification section, floor and space segmentation.
- 6.2.18** The ARCHITECT shall review the CM/GC's payment applications and recommend to THE CITY whether it should certify as complete any of the work that is the subject of the application. The ARCHITECT's recommendation to pay any of the amounts requested shall constitute the ARCHITECT's representation that (a) it has observed and evaluated the work at the site as provided in Article 6.3.10 above, (2) it has reviewed the data in the CM/GC's application for payment, and (3) the work has progressed to the point indicated on the request for payment and that to the best of the ARCHITECT's knowledge, information and belief, the quality of the work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the work for conformance with the Construction Documents upon Substantial Completion, to results of subsequent test and inspections, to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the ARCHITECT. The ARCHITECT's recommendation to issue a certificate for payment shall constitute a further representation that the CM/GC is entitled to payment in the amount certified. However, the recommendation to issue a certificate

of payment is not a representation that the ARCHITECT has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the work; (2) reviewed construction means, methods, techniques, sequences or procedures; (3) reviewed copies of requisitions received from subcontractors and material suppliers and other data requested by THE CITY to substantiate the CM/GC's right to payment; or (4) ascertained how or for what purpose the CM/GC has used money previously paid.

- 6.2.19** The ARCHITECT shall advise THE CITY to reject work that the ARCHITECT believes in good faith does not conform to the Contract Documents. Whenever the ARCHITECT considers it necessary or advisable to implement the intent of the Contract Documents, the ARCHITECT will advise THE CITY to require additional inspection or testing of the work in accordance with the provisions of the Contract Documents, whether or not such work is fabricated, installed or completed. THE CITY shall make the final determination whether to reject work, require additional testing, or require other corrective actions by the CM/GC.
- 6.2.20** The ARCHITECT shall review proposed procedures and results of testing and special inspection procedures that are required by the construction Contract Documents, and report its comments to THE CITY. Review and advise THE CITY on special testing and/or inspection that may arise due to field conditions or as requested by appropriate authorities. It is understood that separate contracts for testing and special inspection consultants, laboratories or agencies will be arranged by THE CITY. Attend inspections with appropriate consultants when requested to do so by THE CITY.
- 6.2.21** Review and advise THE CITY as to the approval of substitutions proposed by the CM/GC, including advice as to whether accepting the proposed substitutions would expose THE CITY to added operations cost for the finished Project or require substantial revision to the Contract Documents. If in THE CITY's judgment, the ARCHITECT is required to substantially revise documents in order to accommodate substitutions or equals, THE CITY will compensate the ARCHITECT as Additional Services, provided that the need to revise the documents was not caused by the ARCHITECT'S errors or omissions.
- 6.2.22** Review shop drawings, laboratory reports, samples, wiring and control diagrams, schedules and lists of materials and equipment, and other descriptive data pertaining to specified materials, equipment and storage thereof that the CM/GC is required to submit for THE CITY'S approval, and recommend whether to approve. When possible documents shall be submitted electronically to the ARCHITECT.
- 6.2.23** Review documents and materials that the CM/GC is required to submit for conformance with the design intent of the Work and with the information

given in or inferable from the Contract Documents. Such review shall be made by the ARCHITECT upon receipt from the CM/GC of submittals that have been dated, signed and approved by the CM/GC, except where otherwise directed by THE CITY. The ARCHITECT may note the exceptions taken or not taken, the corrections necessary, and the re-submittals required, and will return the documents or materials with such notations to the CM/GC as directed by THE CITY. Review and action on an item that is a component of an assembly or system shall not necessarily apply to the entire assembly or system. In its agreement with the CM/GC, THE CITY will include a provision (such as clause 4.2.7 for AIA Document A201, 1987 edition) specifying that the ARCHITECT's review of the CM/GC's submittals does not alter the CM/GC's responsibility for errors and omissions in such submittals.

- 6.2.24** After compilation of the final punchlist by the CM/GC, the ARCHITECT, in conjunction with the CM/GC, will verify the final punchlist, recommend changes, participate in site visits to determine and track the status of the acceptability of all punchlist items, participate in the final review of the Project and advise THE CITY as to the approval of work performed by the CM/GC.
- 6.2.25** Assist the CM/GC and/or Commissioning Agent in arranging for building commissioning, start-up and testing, adjusting and balancing and the coordination of operational testing and proper functioning of all installed equipment, and any building commissioning that may be required related to applications by THE CITY for LEED certification.
- 6.2.26** Conduct observations and review completed work to determine the date or dates of substantial completion and the date of final completion and advise THE CITY in writing as to the same. The ARCHITECT shall advise THE CITY as to the appropriateness of the issuance of a final Certificate of Payment.
- 6.2.27** The ARCHITECT shall at all times have access to the work and the Project site.
- 6.2.28** The ARCHITECT shall have authority to make interpretations and decisions in matters relating to appearance and aesthetic or artistic effects where they do not conflict with any design element previously approved by THE CITY or Art Commission and where such decisions are consistent with the intent of the Construction Documents; provided THE CITY shall retain the authority to make the final interpretations and decisions. Whenever interpreting or making decisions concerning an integrated art work commissioned by THE CITY or Art Commission, the ARCHITECT must obtain THE CITY or Art Commission's approval prior to making any such interpretations or decisions. The ARCHITECT shall be responsible for any additional construction costs arising out of any aesthetic changes initiated by the ARCHITECT after the commencement of construction, unless payment to the Contractor for and notice to the ARCHITECT to

implement such changes have been specifically approved in writing by THE CITY in advance.

- 6.2.29** The ARCHITECT shall not have control or charge of and shall not be responsible for construction means, methods, techniques, scheduling, sequences or procedures, for safety precautions and programs in connection with construction of the Project, for the acts or omissions of the CM/GC, its subcontractors or any other persons performing any of the work on the Project (unless directly employed or retained by the ARCHITECT), or for the failure of any of them to carry out the work on the Project in accordance with the Construction Documents.
- 6.2.30** Coordinate with all artists in the installation of art work, either by the artists, contractors or separate installers that are to be incorporated in the Project as an integral building or site element.
- 6.2.31** The ARCHITECT shall not have the authority to stop the work unless specific authorization has been granted in writing by THE CITY.
- 6.2.32** All design-build systems, except for those indicated in this AGREEMENT as design-build disciplines, recommended by the ARCHITECT and submitted by the CM/GC shall be reviewed and stamped by the ARCHITECT in a timely manner for conformance with the intent of the design drawings and specifications. The CM/GC shall remain responsible for compliance with the design-build requirements and information and responses for agency approval.

6.3 WARRANTY PHASE

The ARCHITECT shall assist THE CITY and CITY's maintenance and operation personnel in conducting warranty inspections during the warranty period following Final Completion as set forth below:

- 6.3.1** The ARCHITECT shall observe and review the condition of completed work, and provide assistance to THE CITY to develop a list of corrective warranty work and a schedule for completion for systems, components, equipment, and finishes that have failed to meet the specified performance criteria or the terms of specific product warranties during the warranty period following Final Completion.
- 6.3.2** The final warranty inspection shall take place no earlier than the eleventh month following Final Completion and no later than the twelfth month following Final Completion.
- 6.3.3** In the event that systems, components, equipment, and finishes fail to meet the specified performance criteria or the terms of specific product warranties at any time prior to the final warranty inspection, the ARCHITECT shall observe and review the condition of completed work, and provide assistance to THE CITY to develop a list of corrective warranty work and a schedule for its completion.

7 ADDITIONAL SERVICES

As defined in paragraph 2.1 above, Additional Services are services in addition to the Basic Services of this Agreement. The ARCHITECT shall not proceed with any Additional Services without the prior written authorization of THE CITY. The written authorization to perform Additional Services must include a statement describing the services as Additional Services. In the event THE CITY believes certain services to be part of Basic Services which the ARCHITECT contends are Additional Services, the ARCHITECT shall not perform such services until (a) the ARCHITECT provides THE CITY with written notice of the contention with factual support, and (b) THE CITY then instructs the ARCHITECT in writing to proceed, in which case the ARCHITECT shall perform the services required and pursue any monies or other compensation which it believes it is owed, by filing a claim with THE CITY and/or pursuing any other available remedies.

Additional Services include the following

- 7.1** Financial feasibility studies.
- 7.2** Office systems furniture design, specifications, or procurement.
- 7.3** Services for future systems and equipment that are not intended to be constructed or provided for during the Construction Administration Phase. However, provisions for advances in computer technology (e.g., software upgrades) are to be made as part of Basic Services.
- 7.4** Detailed quantity surveys or inventories of material, equipment, furnishings and labor.
- 7.5** Services required in connection with construction performed by others that is not part of the Project work, except as indicated in the Agreement.
- 7.6** Providing consultation concerning replacement of any work damaged by fire or other cause during construction and furnishing services as may be required in connection with the replacement of such work.
- 7.7** Providing services made necessary by the default of the CM/GC, or by major defects or deficiencies in the work of the CM/GC, or otherwise caused by the CM/GC or others during construction, excluding the ARCHITECT's consultants or employees.
- 7.8** Preparing design and construction documents for procurement or manufacture or creation of art work that is to be incorporated in the Project as an integral building or site element, beyond those services necessary to coordinate the design and structure of the building or site to accommodate the installation of such art work.
- 7.9** Providing services after Warranty Phase completion, unless such services are required as a result of the ARCHITECT's negligent error or omissions.
- 7.10** Providing services, consultants, or scope of work not stipulated as included in this Agreement, and not customarily provided as part of the ARCHITECT's Basic Services, which includes but is not limited to:

- 7.10.1 Shadow study, wind studies, noise analysis, AB-32 carbon footprint analysis, traffic/parking and environmental or CEQA consultants;
- 7.10.2 Structural analysis beyond code requirements;
- 7.10.3 Archeological and Historic consultants;
- 7.10.4 Hazardous materials consultants; and,
- 7.10.5 Additional Services made necessary by reversals of authorizations, approvals or instructions previously given by THE CITY but only such services as are substantial and in excess of what would have been required if there had not been such reversals;
- 7.10.6 Additional Services to incorporate substantial structural changes to integrate the artwork administered by the Art Commission after the completion and acceptance of the Design Drawings.
- 7.10.7 Building Risk Assessment.
- 7.10.8 Traffic Analysis.
- 7.11 Services in connection with substantial changes in the scope or schedule of the Project directed by THE CITY, but not including changes proposed and recommended by the ARCHITECT, and not including changes or value engineering proposals by trade subcontractors during construction bidding/negotiations phase required to keep the Project within the FCBL.
- 7.12 Coordination of tenant moves and relocations and move management.
- 7.13 On-site representation beyond those services defined as Basic Services.

8 COMPENSATION

No charge shall be incurred under this Agreement nor shall any payments become due to the ARCHITECT until final reports, documents, or services as required under this Agreement have been completed and are received from the ARCHITECT and approved by THE CITY as being in accordance with this Agreement, or until THE CITY agrees that services covered under the payment request have been satisfactorily performed.

THE CITY shall compensate the ARCHITECT as follows:

8.1 BASIC SERVICES

The Contract Sum, which shall be a Lump Sum Fixed Fee, includes all subconsultant fees and normal costs to the Project including all phone calls, faxes, in-house and subconsultant coordination, presentations, printing, and reproductions as required by this Agreement and the like, and those specific costs defined in Article 8.4.5., excluding only those costs for Additional Services and amounts for Reimbursable Expenses. For all of the ARCHITECT's Basic Services, including all services performed under the Agreement, the ARCHITECT shall be paid a Contract Sum not to exceed \$10,783,914, inclusive

of the Contract Sum certified under the original Agreement, for the first two phases of design scope, and as is set forth in the Fee Schedule (Attachment 2).

The Certified Contract Sum is the amount of the Contract Sum certified by the Controller at any point in time. Certified Contract Sum shall not exceed \$10,783,914. THE CITY will adjust the value of the Certified Contract Sum during the course of the PROJECT. Upon certification of funds, the ARCHITECT will develop and monitor the Project according to the schedule. THE CITY, in its sole discretion, reserves the right to cancel any subsequent phase if it determines it is in THE CITY's best interest.

The Fee Schedule (Attachment 2) represents the ARCHITECT's estimate of the level of effort required of it over the life of this Agreement to earn the fees identified as "Architectural."

The CITY fully expects that the Lump Sum Fixed Fee for Basic Services, as represented by the ARCHITECT, adequately covers the cost to successfully complete the work across all phases according to the agreed upon schedule and with a professional level of quality. As such, only significant modification to the design directed by the CITY shall be considered an Additional Service. In the event that the building program or requirement reduces in complexity from that as represented in the RFQ document (e.g. a substantive reduction in area for the parking structure), the design fee shall be correspondingly reduced to reflect the adjusted level of effort.

8.2 ADDITIONAL SERVICES

As defined in Article 2.1 above, Additional Services are services not specified or required in the Agreement as Basic Services. THE CITY shall not compensate the ARCHITECT for Additional Services unless such services are authorized in writing prior to performance by the ARCHITECT. Payment for Additional Services shall be made in accordance with the Hourly Rate Schedule set forth in Attachment 6 which shall be adjusted annually consistent with the Consumer Price Index for the nine Bay Area counties as published on July 1 or the first date thereafter. ARCHITECT shall submit a letter requesting the rate change, which must be approved by THE CITY before revised rates may be invoiced.

8.3 FURNISHINGS, FIXTURES AND EQUIPMENT NOT AFFIXED

At the request of THE CITY, the ARCHITECT shall provide services to plan and prepare documents for procurement and installation of furnishings, laboratory furniture and equipment (FFE) not affixed to the building. The ARCHITECT shall provide these services as Basic Services. Inventory of laboratory equipment and non-laboratory equipment and furnishing shall be completed by others retained by THE CITY. The ARCHITECT will, however, coordinate such design, procurement or installation in the building as part of the ARCHITECT's Basic Services, as described in Article 9.7 below.

8.4 REIMBURSABLE EXPENSES

THE CITY has established an allowance of \$210,740 for Reimbursable Expenses, inclusive of Trip Allowance. Reimbursable Expenses shall be invoiced by the ARCHITECT's accounting categories and shall be subject to the audit provisions of this Agreement.

- 8.4.1 Only the actual costs incurred by the ARCHITECT shall be allowed and invoiced as Reimbursable Expenses. The ARCHITECT shall not exceed the Reimbursable Expense allowance set forth in Article 8.4 above without prior written authorization from THE CITY. There shall be no mark-ups of any kind allowed on Reimbursable Expenses.
- 8.4.2 If requested by THE CITY, the ARCHITECT will obtain and submit to THE CITY a quote from its insurance carrier for the cost of premiums for Project specific professional liability insurance. If approved by THE CITY, the actual cost for the insurance coverage will be included in this contract as a Reimbursable Expense. There will be no mark-ups allowed on these costs.
- 8.4.3 All documents shall be transmitted electronically to THE CITY.
- 8.4.4 All activities and work product resulting from implementation of BIM are considered Basic Services. Renderings, computer animated presentations and presentation models that are not otherwise part of the BIM work product, are considered reimbursable expenses when requested and approved by THE CITY in advance and in writing. Such documents prepared by the ARCHITECT without THE CITY's written advance approval shall be considered part of the ARCHITECT's Basic Services.
- 8.4.5 The following items are considered normal Project costs and a part of the Basic Services Fee, not Reimbursable Expenses: (a) phone calls, faxes, mail, express mail, courier delivery or overnight delivery service charges, or other communications charges between members of the ARCHITECT's team and/or the CM/GC and its team, regardless of location; (b) regional phone calls and faxes for all area codes having any geographical land area within 100 miles of San Francisco even though its outlying boundary exceeds the 100 mile limitation; (c) Internet gateways, FTP sites or data file transfer or research services; CITY(d) in-house coordination materials among the ARCHITECT and its team, including photocopy and drawing materials and messenger services; (e) all CAD and other computer-related time and expenses in support of those items specifically listed in articles 4, 5 and 6 of this Agreement; and (f) food and beverage charges of any kind unless approved in writing in advance by THE CITY.
- 8.4.6 Travel within 100 mile radius of San Francisco is considered a part of the Basic Services fee, not Reimbursable Expenses. If the needs of the project require the ARCHITECT or its subconsultants to travel outside 100 mile radius of San Francisco, THE CITY will reimburse the ARCHITECT for the actual travel expenses incurred.

8.4.6.1 Mileage shall be subject to the Internal Revenue Service (IRS) standard mileage rate for business use of an automobile, with no markup. This rate is subject to change, yearly.

8.4.6.2 For all travel within the continental United States, travel expenses will be reimbursed according to the federal maximum lodging by locality rates. Any exceptions to the Federal rates must be approved in advance by the Project Manager. Federal rates for lodging can be found at: <http://www.gsa.gov/> > Per Diem Rates.

8.4.6.3 Air travel expenses shall be based on lowest available Economy Class ticket prices. The ARCHITECT or its subconsultants shall reserve flight tickets as early as possible to ensure the most economical rate.

8.4.7 An allowance of trips by the Architect's consultant, RG Vanderweil & HOK Laboratory Planning staff located in their Washington DC office, has been incorporated into the Fee Schedule (Attachment 2). Each trip is subject to THE CITY's approval in writing two weeks in advance. Additional travel must be approved in advance by the Project Manager. All travel expenses are subject to final approval by the Project Manager at the time of invoice submittal.

Program Validation:	2 trips/2 Persons	Program Interviews Session 1 & 2
Concept Design:	2 trips/6 Persons	Design Meetings
	1 trip/6 Persons	Lab Planning Meetings
	1 trip/ 4 persons	Lab MEP Coordination Mtg WDC
SD	2 trips/6 Persons	Design meetings
	1 trips/2 Persons	Lab Planning Meetings
	1 trip/ 4 persons	Lab MEP Coordination Mtg WDC
DD	2 trip/2 Person	Design meetings
	1 trips/2 Persons	Lab Planning Meetings
CD	2 trips/2 Persons	Design Meeting
	1 trips/2 Persons	Lab Planning Meetings
Bidding	No Trips	
CA	1 trips/1 Person	Punch List
Warranty	No Trips	

8.5 PAYMENT SCHEDULE AND INVOICES

8.5.1 PAYMENT SCHEDULE AND INVOICES

The Fee Schedule:

The design services are divided into phases: Program Validation Phase (5.1) Conceptual Design Phase (5.2), Schematic Design Phase (5.3), Design Development Phase (5.4), and Construction Document Phase (5.5); and Construction Phases (Contract Bid/Negotiation Phase (6.1); Construction Administration Phase (6.2); and Warranty Phase (6.3). Each phase is assigned a value representing the total fee (ARCHITECT and subconsultants) for that phase. The total of all of the values assigned to each phase equals the total fee (ARCHITECT and subconsultants).

Each phase is considered complete when that phase has achieved the benchmark set forth in the following table or mutually agreed to benchmarks:

PHASE	COMPLETION BENCHMARK
Program Validation and review of Bridging Documents	Issue Program Validation Report
Conceptual Design	Incorporate data from Program Validation and develop and submit Conceptual Design documents.
Schematic Design	Incorporate conceptual design comments from THE CITY/CITY and/or CM/GC and submit Schematic Design Document. Civic Design Review – Phase 1
Design Development	Incorporate schematic design comments from THE CITY/CITY and/or CM/GC and submit 100% DD Set. Civic Design Review – Phase 2
Construction Documents	Incorporate design review comments from THE CITY/CITY and CM/GC and submit 100% Conformance Set for Construction. Civic Design Review – Phase 3
Construction Bid/Negotiation & Value Engineering	As described in Section 6, 6.1, 6.2
Construction Administration	Issuance of Certificate of Beneficial Occupancy by SF DBI and acceptance by THE CITY/CITY.
Warranty	As described in Section 6.4

8.5.2 The ARCHITECT will submit invoices for work in progress no more than once each month for Basic Services. All fees, including those of the ARCHITECT's subconsultants, are to be charged on a lump sum percent

complete basis within the course of each phase. Lump sum fees will be invoiced based on the ARCHITECT's calculation of the percentage of design services that have been satisfactorily completed and approved by THE CITY, relative to the percentage of the total lump sum fee approved for completion of the, all as set forth in the table below.

With respect to each completed phase, THE CITY will pay no more than the total amount budgeted for that phase. The ARCHITECT is responsible for any fees in excess of the amount budgeted for that phase.

All invoices that the ARCHITECT submits for payment for services performed under this Agreement must conform to THE CITY's Form of Invoice as it may be modified during the course of the Project. The invoices must identify each phase for which payment is being sought, the percentage of completion of each phase so identified, and the total amount being requested for each phase so identified.

PHASE	PERCENTAGE OF FEE (rounded to nearest whole number)
Program Validation Phase	2%
Conceptual Design Phase	7%
Schematic Design Phase	16%
Design Development Phase	23%
Construction Document Phase	25%
Construction Bid / Negotiations & Value Engineering	1%
Construction Administration Phase	25%
Warranty Phase (beginning at final completion)	1%
TOTAL:	100.00%

8.5.3 Payment to the ARCHITECT during the Construction Administration Phase will be made monthly in relation to the percentage of completion of the work by the CM/GC. Along with its invoice, the ARCHITECT shall furnish copies of invoices submitted by subconsultants to substantiate reimbursement. The ARCHITECT's invoices must identify the percentage and cost of the work completed by all subconsultants, on the Fee Schedule (Attachment 2).

THE CITY will retain 10% of the amount of each invoice submitted by the ARCHITECT for Basic Services, including costs of subconsultants, pending satisfactory completion by the ARCHITECT of all work in the

phase, and approval by THE CITY; Retention shall be released following the Owner's end of phase review and comment period and the Owner's acceptance of the work for that phase. There shall be no retention on Reimbursable Expenses or Additional Services.

- 8.5.4** The ARCHITECT shall receive compensation only for those Additional Services authorized in writing by THE CITY in advance of the ARCHITECT's performance of the work, and in accordance with the rate schedule found in the Hourly Rate Schedule, Attachment 6, which includes the subconsultants' fee schedules.
- 8.5.5** The hourly rates on Attachment 6 shall be the standard rates given to any client of the ARCHITECT under similar circumstances.
- 8.5.6** With respect to any hourly work (e.g., Additional Services), reimbursable fees paid will be based on the actual hours charged, subject to any specified maximums. For hourly work, the ARCHITECT shall submit copies of certified timesheet records for all persons performing the work, and shall indicate the number of hours worked by period, and the approved billing rate.
- 8.5.7** Alternatively, a lump sum or guaranteed maximum fee for Additional Services may be authorized by THE CITY prior to commencement of work on these services, in which case these services shall be invoiced according to the terms of Article 8.5.1 above.
- 8.5.8** There shall be no mark-ups by the ARCHITECT for the cost of professional consultants retained by the ARCHITECT in the performance of its Basic Services. Allowable mark-ups for professional consultants retained for approved Additional Services shall be 1.1 x the subconsultant's bill to the ARCHITECT. No markups of any kind shall be allowed for any reimbursable expenses, whether invoiced by or to the ARCHITECT.
- 8.5.9** If during the course of construction, THE CITY determines at its sole and reasonable discretion that modifications to Design Development Documents or Construction Documents are required due to errors or omissions on the part of the ARCHITECT or its subconsultants, the ARCHITECT shall not be compensated for the cost of developing, preparing or reproducing the necessary revised drawings and specifications to correct those errors or omissions nor shall the ARCHITECT be compensated in its fee for the cost of any related extra design work. The ARCHITECT's rights for such payment shall be reserved until Project completion.
- 8.5.10** No deductions shall be made from the ARCHITECT's compensation on account of penalty, liquidated damages or other sums withheld from payments to the CM/GC or on account of the cost of changes in the work other than those for which the ARCHITECT is responsible based on its negligent errors or omissions.

8.5.11 Payments of Reimbursable Expenses shall be made monthly upon presentation by the ARCHITECT of an itemized statement of actual expenses incurred with a detailed cost breakout and supporting invoices and copies of original receipts.

8.5.12 The Reimbursable Expense allowances set forth in Article 8.4 above provide only for costs which are defined as part of Basic or Additional Services Fees and are not subject to the LBE participation requirements of THE CITY.

8.5.13 No more than eighty percent (80%) of the Reimbursable Expense Allowance (see Article 8.4.) shall be allowed through completion of the Construction Documents Phase. The ARCHITECT shall not exceed this allowance or the total allowance without the prior written authorization of THE CITY.

8.5.14 Subject to the provisions of Article 11 below, if the Project is suspended for more than a total of ninety days (90) days or abandoned in whole or in part, except for time for the bond initiative, or the Project extends more than 30 days beyond the anticipated conclusion of the warranty phase, the ARCHITECT shall be compensated for services satisfactorily performed prior to receipt of written notice from THE CITY of such suspension or abandonment. If the Project is resumed after being suspended for more than 90 days, the ARCHITECT'S compensation for the remainder of the services to be provided for the Project shall be subject to renegotiation.

8.6 WITHHOLDING OF PAYMENT

THE CITY may withhold payment from the ARCHITECT for work not satisfactorily completed or delivered as required by this Agreement or for amounts incurred by THE CITY as a result of the ARCHITECT'S negligent errors or omissions. Payments for other amounts due on the same or other invoice shall not be unreasonably withheld or delayed. THE CITY shall endeavor to issue payments of undisputed amounts to the ARCHITECT within thirty (30) days following the receipt of complete and accurate invoices.

8.7 DISALLOWANCE

In the event the ARCHITECT claims or receives payment from THE CITY for a service, including progress payment, reimbursement for which is later disallowed by THE CITY, the ARCHITECT shall promptly refund the disallowed amount to THE CITY upon THE CITY'S request. At its option, THE CITY may offset the amount disallowed from any payment due or to become due to the ARCHITECT.

8.8 PAYMENT DOES NOT IMPLY ACCEPTANCE OF WORK

The issuance of any progress payment by THE CITY, or the receipt thereof by the ARCHITECT, shall in no way lessen the liability of the ARCHITECT to correct unsatisfactory work although the unsatisfactory nature of such work may or may not have been apparent or detected at the time such payment was made.

9 THE CITY'S RESPONSIBILITIES

THE CITY shall:

9.1 APPROVALS

Obtain approvals from Appropriate Authorities, as defined herein, with the assistance of the ARCHITECT and promptly render decisions when it is within THE CITY's power to do so.

9.2 BIDS

Advertise and receive bids for the construction of the Project when THE CITY funds are utilized. When public funds are used for trade package bidding, the CITY will bid the packages and will assign them to the CM/GC which would then become wholly part of the CM/GC's trade subcontractors.

9.3 BUILDING INSPECTORS

Provide Building Inspectors for the construction phase.

9.4 DEFICIENCIES

Promptly notify the ARCHITECT in writing of apparent deficiencies in materials or workmanship discovered within twelve (12) months from submission of the final punchlist.

9.5 FEES

Pay all fees required to secure building permits, utilities and LEED registration and certification.

9.6 HAZARDOUS SUBSTANCES

THE CITY acknowledges that the discovery, presence, handling or removal of asbestos, asbestos products, polychlorinated biphenyl (PCB) or other hazardous substances which may presently exist at the job site is outside of the ARCHITECT's expertise and is not included in the scope of work the ARCHITECT is to perform, nor included in the ARCHITECT's insurance. THE CITY therefore agrees to hire one or more expert consultants in this field to deal with these problems if the Project involves such materials. Even though the Construction Documents may incorporate the work of such other consultants, the ARCHITECT shall not be responsible for the discovery, presence, handling or removal of such materials.

9.7 NON-AFFIXED FURNITURE AND EQUIPMENT

THE CITY will be responsible for purchase and coordination with successful vendors for delivery, assembly, storage and placement of loose furniture, furnishings and equipment not included within the Construction Documents and Contract Documents prepared by the ARCHITECT.

9.8 PROJECT DATA

Furnish the following Project data to the ARCHITECT:

- (1) Civil Engineering Data: Furnish an Existing Site Utilities Plan including water, gas, drainage, sewer, power, telecommunications and site

drainage. Data shall be provided in hard copy and electronic (CADD) file formats.

- (2) **Mapping and Surveying Data:** Furnish reproducible drawings including a site plan of the Project site that are clear and legible, and accurate within accepted industry standards. Furnish relevant and necessary survey information, including the following: topographic map with utility locations (surface features), utility tunnel alignment locations (including height and width), building locations, and site boundaries to be shown based on available legal description. Data shall be provided in hard copy and electronic (CADD) file formats. Except that if the ARCHITECT discovers an error or discrepancy in the mapping and survey data provided by THE CITY, it is the ARCHITECT's responsibility to advise THE CITY in a timely manner of such error or discrepancy and to request THE CITY perform and provide additional field survey verification.
- (3) **Geotechnical Data:** Furnish soil and geological reports and data, including test logs; allowable soil bearing pressures under dead, live and short-term lateral loading; retaining wall design criteria; soil profile type; and near source factors per the applicable building codes; and other data reasonably necessary to define subsurface conditions. Furnish special testing and inspection services as required for the aforementioned items.
- (4) **Electrical Engineering Data:** Furnish data regarding capacity, location and routing of existing building systems: electrical power and distribution, fire / life safety, communications, and security.
- (5) **Mechanical Engineering Data:** Furnish data concerning water supply, drainage, sewage collection and disposal.
- (6) The services, information, surveys, and reports required by Section 9.8 shall be furnished at THE CITY's expense, and ARCHITECT shall be entitled to rely upon their accuracy and completeness, except that ARCHITECT may not rely upon and must question in writing to THE CITY any information that appears incorrect based upon the ARCHITECT's experience with or knowledge of the Project.

9.9 PROJECT MANAGER AND PROGRAM DIRECTOR

Designate a Program Director and a Project Manager who shall coordinate his/her duties with the ARCHITECT as provided herein.

9.10 RESPOND TO SUBMITTALS

During each phase identified below, review and respond, in writing, to all submittals within fifteen (15) working days from receipt of the complete submittal:

- (1) Program Validation
- (2) Conceptual Design Phase
- (3) Schematic Design Phase
- (4) Design Development Phase
- (5) Construction Document Phase

- (6) Construction Bid/Negotiations Phase
- (7) Construction Administration Phase
- (8) Warranty Phase

9.11 TESTS AND INSPECTIONS

Furnish tests and inspections as required during the construction phase. Furnish Commissioning or Enhanced Commissioning during construction.

10 DOCUMENTS AND CITY OWNERSHIP OF DOCUMENTS

10.1 CITY OWNERSHIP OF DOCUMENTS

- (a) All designs, drawing sets, specifications, documents, presentation models and drawings, electronic data and other work products created by the ARCHITECT and the subconsultants for this Project ("Instruments of Service"), and all copyrights in them shall become the property of THE CITY immediately upon creation of such Instruments of Services. As part of Basic Services, the ARCHITECT shall provide THE CITY with one licensed copy of software, paid for by THE CITY that will allow THE CITY to view the electronic BIM/Revit/CADD files prepared by the ARCHITECT or its subconsultants. Additionally, the ARCHITECT shall provide technical specifications for any computer hardware required to use the provided software and files.
- (b) All presentation drawings, models, films and videos, simulations or other presentation materials shall be and remain the property of THE CITY.
- (c) Should THE CITY or any other person, firm or legal entity under the authority and control of THE CITY, without the ARCHITECT's participation, use, reuse, or modify the ARCHITECT's drawings, specifications or other documents prepared under this Agreement, THE CITY agrees to notify the ARCHITECT of the intended use. The ARCHITECT shall not be responsible for any loss, costs or expenses incurred by any party arising out of such use, reuse or modification of the ARCHITECT's drawings, specifications, and other documents.
- (d) THE CITY acknowledges that in using magnetic data may be lost in translation from one format to another, or that electronic data may be altered, whether inadvertently or otherwise, and that there is a risk that errors or omissions may appear in any subsequent output as a result of software/hardware failure.

The ARCHITECT and the subconsultants shall defend (subject to THE CITY's right of consultation prior to selection of counsel), indemnify, and hold harmless THE CITY from any claim that the Instruments of Service infringe the copyright or similar rights of another. The ARCHITECT and the subconsultants shall retain ownership of their original sketches, study models and study materials made for their own purposes (i.e., creative development and internal discussion).

10.2 USE BY THE ARCHITECT OR THE ARCHITECT'S CONSULTANTS

The ARCHITECT and the subconsultants may retain copies of their Instruments of Service, such copies made at their expense. The ARCHITECT and the subconsultants may use the Instruments of Service for their own marketing purposes without the express written consent of THE CITY if the marketing materials have been previously approved by THE CITY and they have not been altered in any way since approval other than minor changes in format, organization or wording. Any other publication or use shall require the prior written approval of THE CITY. The ARCHITECT and the subconsultants may use architectural/engineering details contained in the Instruments of Service for other projects without the express written consent of THE CITY only to the extent such use would not infringe on THE CITY's copyright in the overall form of the Project as well as the arrangement and composition of spaces and elements in the design, as expressed in the Instruments of Service or any of them.

10.3 USE BY THE CITY

THE CITY may reproduce, distribute, and make any use of the Instruments of Service, whether or not the Project is executed, without further notice or compensation to the ARCHITECT or subconsultants, provided that such Instruments of Service shall not be used on other unrelated projects. If the ARCHITECT is not terminated for fault, the ARCHITECT and the subconsultants shall not be liable for any claim to the extent arising out of the use by or through THE CITY of the Instruments of Service, without the ARCHITECT's professional involvement.

10.4 COVENANT NOT TO SELL

THE CITY promises and agrees to refrain from selling, donating, or exchanging the Instruments of Service for use on any other project or building. However, THE CITY may sell, assign or otherwise appropriate any right, title or interest in the Instruments of Service for any purpose relative to the Traffic Company and Forensic Services Division Facility without notice to the ARCHITECT or the subconsultants. In such event, THE CITY shall make a good faith effort to include this covenant as a term of any such transaction.

11 TERMINATION OF AGREEMENT

11.1 BY EITHER PARTY FOR FAULT

Either party may terminate this Agreement, in whole or in part, in writing, if the other party substantially fails to fulfill its obligations under this Agreement through no fault of the terminating party. However, no such termination may be effected unless the other party is given (a) not fewer than ten (10) calendar days written notice (delivery by hand delivery or certified mail) of its intent to terminate; and (b) an opportunity for consultation and to rectify failures of obligations within thirty (30) days of consultation with the terminating party before termination becomes effective.

11.2 BY THE CITY FOR CONVENIENCE

THE CITY may, in its sole discretion, terminate this Agreement, in whole or in part, in writing, for its convenience (such as for legal or financial reasons, major changes in the work or program requirements) and without cause. In such event, THE CITY shall provide the ARCHITECT with (a) thirty (30) calendar days written notice (delivered by hand delivery or certified mail) of THE CITY's intent to terminate; and (b) an opportunity for consultation with THE CITY before termination becomes effective.

11.3 PROCEDURE UPON TERMINATION

11.3.1 If THE CITY terminates this Agreement for convenience, THE CITY shall acknowledge additional costs the ARCHITECT has incurred in the performance of the Agreement, the termination of which was due to no fault of the ARCHITECT, and shall authorize an equitable adjustment to the Agreement price as follows: The equitable adjustment in price shall include a reasonable profit for services or other work performed prior to the effective date of termination. The equitable adjustment shall provide for payment to the ARCHITECT for services rendered and expenses incurred before the termination in addition to termination settlement costs the ARCHITECT reasonably incurs relating to commitments which had become firm before the termination. ARCHITECT shall submit a final invoice for services actually performed and/or reimbursable expenses incurred, plus any markup as allowed under the Agreement; no amount shall be allowed for anticipated profit on unperformed or unauthorized services or charges.

11.3.2 In the event that THE CITY terminates the Agreement for fault, THE CITY may reduce any amount earned or otherwise due the ARCHITECT by the sum of any additional costs THE CITY has or will incur as a result of the Consultant's default.

11.3.3 Upon receipt of any notice for termination, the ARCHITECT shall (a) promptly discontinue all services affected (unless the notice directs otherwise); and (b) deliver or otherwise make available to THE CITY all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as the ARCHITECT and its consultants may have accumulated in performing this Agreement, whether completed or in progress.

11.3.4 Upon termination of this Agreement, THE CITY may take over the work and prosecute the same to completion by agreement with another party, with THE CITY resources, or otherwise. THE CITY may be free to engage another architect or to utilize such plans, drawings, specifications and other work prepared by the ARCHITECT for the Project. Such replacement architect shall expressly assume the responsibility of "ARCHITECT of Record," and shall be responsible for its own negligent errors and omissions on such plans, drawings, specifications and other work. If the termination is for fault, the ARCHITECT shall remain liable for

any damages or additional costs incurred by THE CITY as a result of completing or correcting the ARCHITECT's plans and/or specifications.

12 INSURANCE COVERAGES

12.1 Without in any way limiting Contractor's liability pursuant to the "Indemnification" section of this Agreement, ARCHITECT must maintain in force, during the full term of the Agreement, insurance in the following amounts and coverages:

- a. Workers' compensation, in statutory amounts, with employers' liability limits not less than \$1,000,000 each accident for bodily injury or disease; and,
- b. Commercial General Liability Insurance with limits not less than \$1,000,000 each occurrence / \$2,000,000 general aggregate combined single limit for Bodily Injury and Property Damage, including Contractual Liability, Personal Injury, Products and Completed Operations; and,
- c. Commercial Automobile Liability Insurance with limits not less than \$1,000,000 each occurrence Combined Single Limit for Bodily Injury and Property Damage, including Owned, Non-Owned and Hired auto coverage, as applicable; and,
- d. Professional Liability insurance with limits of \$10,000,000 each claim/aggregate with respect to negligent acts, errors or omission in connection with professional services to be provided under this Agreement.

12.2 Commercial General Liability (CGL) and Commercial Automobile Liability insurance policies must be endorsed to provide:

- a. Name as Additional Insured the CITY and County of San Francisco, its Officers, Agents, and Employees
- b. That such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that insurance applies separately to each insured against whom claim is made or suit is brought.

12.3 Regarding Workers' Compensation, ARCHITECT hereby agrees to waive subrogation which any insurer of ARCHITECT may acquire from ARCHITECT by virtue of the payment of any loss. ARCHITECT agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the CITY for all work performed by the ARCHITECT, its employees, agents and subconsultants.

12.4 All policies shall provide thirty (30) days' advance written notice to THE CITY of reduction or nonrenewal of coverages or cancellation of coverages for any reason. Notices shall be sent to THE CITY address in the "Notices" section (Article 23).

- 12.5 Should any of the required insurance be provided under a claims-made form, the ARCHITECT shall maintain such coverage continuously throughout the term of this Agreement and, without lapse, for a period of three years beyond the expiration of this Agreement, to the effect that, should occurrences during the contract term give rise to claims made after expiration of the Agreement, such claims shall be covered by such claims-made policies.
- 12.6 Should any of the required insurance (except for Professional Liability) be provided under a form of coverage that includes a general annual aggregate limit or provides that claims investigation or legal defense costs be included in such general annual aggregate limit, such general annual aggregate limit shall be double the occurrence of claims limits specified above.
- 12.7 Should any required insurance lapse during the term of this Agreement, requests for payments originating after such lapse shall not be processed until THE CITY receives satisfactory evidence of reinstated coverage as required by this Agreement, effective as of the lapse date. If insurance is not reinstated, THE CITY may, at its sole option, terminate this Agreement effective on the date of such lapse of insurance.
- 12.8 Before commencing any operations under this Agreement, the ARCHITECT shall furnish to THE CITY certificates of insurance and additional insured policy endorsements from insurers with ratings comparable to A-, VIII or higher that are authorized to do business in the State of California that are satisfactory to THE CITY in form evidencing all coverages set forth above and furnish complete endorsements with insurers with ratings comparable to A-, VIII or higher, that are authorized to do business in the State of California, and that are satisfactory to CITY, in form evidencing all coverages set forth above. Failure to maintain insurance shall constitute a material breach of this Agreement.
- 12.9 Approval of the insurance by THE CITY shall not relieve or decrease the liability of the ARCHITECT hereunder.
- 12.10 If a subcontractor or subconsultant will be used to complete any portion of this Agreement, the ARCHITECT will ensure that the subcontractor or subconsultant provides all necessary insurance and shall name the CITY and County of San Francisco, its officers, agents and employees and the ARCHITECT listed as additional insureds.

13 INDEMNIFICATION

13.1 GENERAL INDEMNITY

To the fullest extent permitted by law the ARCHITECT shall assume the defense of (with legal counsel subject to approval of THE CITY), indemnify, defend and save harmless THE CITY, and its boards, commissions, officers, and employees (collectively "Indemnitees"), from any and all claims, loss, cost, damage, injury (including, without limitation, injury to or death of an employee of the ARCHITECT or its subconsultants), expense and liability of every kind, nature, and description (including, without limitation, incidental and consequential

damages, court costs, reasonable attorney's fees and costs of investigation), that arise out of, pertain to, or relate to, directly or indirectly, in whole or in part, the negligence, recklessness, or willful misconduct of the ARCHITECT and/or subcontractors or subconsultants to the ARCHITECT, anyone directly or indirectly employed by them, or anyone that they control (collectively, "Liabilities"), subject to the provisions set forth herein.

13.2 LIMITATIONS

No insurance policy covering the ARCHITECT's performance under this Agreement shall operate to limit the ARCHITECT's Liabilities under this provision. Nor shall the amount of insurance coverage operate to limit the extent of such Liabilities. The ARCHITECT assumes no liability whatsoever for the sole negligence, active negligence, or willful misconduct of any Indemnitee or the contractors of any Indemnitee.

13.3 COPYRIGHT INFRINGEMENT

The ARCHITECT shall also indemnify, defend and hold harmless all Indemnitees from all suits or claims for infringement of the patent rights, copyright, trade secret, trade name, trademark, service mark, or any other proprietary right of any person or persons in consequence of the use by THE CITY and its respective past, present and future directors, boards, commissions, officers, employees or agents of articles or services to be supplied in the performance of the ARCHITECT's services under this Agreement. Infringement of patent rights, copyrights, or other proprietary rights in the performance of this Agreement, if not the basis for indemnification under the law, shall be considered a material breach of contract.

14 MODIFICATIONS

The Agreement may not be modified, nor may compliance with any of its terms be waived, except by written instrument executed and approved in the same manner as this Agreement. The ARCHITECT shall do no work in addition to or beyond the scope of the services set forth and contemplated by this Agreement unless and until it is authorized to do so by the issuance to it of a "Modification of Contract," duly executed and bearing THE CITY's certification that funds are available for additional work.

Contract Modifications (Mods) will be processed and approved electronically utilizing the Microsoft SharePoint© software. Participating ARCHITECTs and consultants agree to execute Mods electronically after, 1) executing a Confidentiality Agreement provided by the CITY on behalf of its company, 2) having all authorized company representatives that will execute Mods complete training on using this electronic approval system (training to be provided by the CITY at no expense to ARCHITECTs and consultants), and 3) submitting a completed executed User Access Setup form for each company representative using the electronic Modification approval system. ARCHITECT and consultants

shall also agree to immediately notify the CITY of any changes to authorized users of this Mod approval system.

15 INDEPENDENT CONTRACTOR

The ARCHITECT or any agent or employee of the ARCHITECT shall be deemed at all times to be an independent contractor and is wholly responsible for the manner in which it performs the services and work requested by THE CITY under this Agreement. The ARCHITECT or any agent or employee of ARCHITECT shall not have employee status with THE CITY, nor be entitled to participate in any plans, arrangements, or distributions by THE CITY pertaining to or in connection with any retirement, health or other benefits that THE CITY may offer its employees. The ARCHITECT or any agent or employee of the ARCHITECT is liable for the acts and omissions of itself, its employees and its agents. The ARCHITECT shall be responsible for all obligations and payments, whether imposed by federal, state or local law, including, but not limited to, FICA, income tax withholdings, unemployment compensation, insurance, and other similar responsibilities related to the ARCHITECT's performing services and work, or any agent or employee of the ARCHITECT providing same. Nothing in this Agreement shall be construed as creating an employment or agency relationship between THE CITY and the ARCHITECT or any agent or employee of the ARCHITECT.

Should THE CITY, in its discretion, or a relevant taxing authority such as the Internal Revenue Service or the State Employment Development Division, or both, determine that the ARCHITECT is an employee for purposes of collection of any employment taxes, the amounts payable under this Agreement shall be reduced by amounts equal to both the employee and employer portions of the tax due (and offsetting any credits for amounts already paid by the ARCHITECT which can be applied against this liability). THE CITY shall then forward those amounts to the relevant taxing authority.

Should a relevant taxing authority determine a liability for past services performed by the ARCHITECT for THE CITY, upon notification of such fact by THE CITY, the ARCHITECT shall promptly remit such amount due or arrange with THE CITY to have the amount due withheld from future payments to the ARCHITECT under this Agreement (again, offsetting any amounts already paid by the ARCHITECT which can be applied as a credit against such liability).

A determination of employment status pursuant to the preceding two paragraphs shall be solely for the purposes of the particular tax in question, and for all other purposes of this Agreement, the ARCHITECT shall not be considered an employee of THE CITY. Notwithstanding the foregoing, should any court, arbitrator, or administrative authority determine that the ARCHITECT is an employee for any other purpose, then the ARCHITECT agrees to a reduction in THE CITY's financial liability so that THE CITY's total expenses under this Agreement are not greater than they would have been had the court, arbitrator,

or administrative authority determined that the ARCHITECT was not an employee.

16 AUDIT AND INSPECTION OF RECORDS

The ARCHITECT agrees to maintain and make available to THE CITY accurate books and accounting records relative to all of its activities under this Agreement. The ARCHITECT will permit THE CITY to audit, examine and make excerpts and transcripts from such books and records and to make audits of all invoices, materials, payrolls, records or personnel and other data related to all of the services required under this Agreement, including basic services, reimbursable expenses, and additional services provided on an hourly basis, whether funded in whole or in part under this Agreement.

The ARCHITECT shall maintain such data and records in an accessible location and condition for a Period of not less than five (5) years after final payment under this Agreement or until after a final audit has been resolved, whichever is later.

A clause similar to this shall be included in all sub-agreements between the ARCHITECT and subconsultants giving THE CITY the same rights against the subconsultants. Canceled checks of payments to subconsultants must be maintained by the ARCHITECT and made available to THE CITY upon request.

THE CITY may initiate an audit under this Agreement by written notice, upon not fewer than seven (7) calendar days.

17 SUBCONSULTANTS

The ARCHITECT is permitted to subcontract portions of the services to be performed under this Agreement only after the prior written approval by THE CITY. The ARCHITECT shall be responsible for its subconsultants or subcontractors throughout the course of the work to be performed under this Agreement. Execution of this Agreement shall constitute approval of the firms and individuals listed on Attachment 7 as subconsultants and/or subcontractors on this Project.

Substitutions may be made for any consultants listed on Attachment 7 for: (1) failure to perform to a reasonable level of professional competence, (2) inability to provide sufficient staff to meet the Project requirements and schedules, or (3) unwillingness to negotiate reasonable contract terms or compensation.

THE CITY reserves the right to request specific consultants with specific expertise to be added to the team to provide Basic Services or Additional Services, if THE CITY determines that specific expertise is lacking in the Project team or if THE CITY believes it is in THE CITY's best interest to assign a particular subconsultant to the ARCHITECT.

Substitutions of LBE firms shall be made on equal basis upon written request and recommendation by the ARCHITECT and written approval by THE CITY. The

ARCHITECT shall hold harmless, indemnify and defend THE CITY from any claim that may arise out of any approval of substitutions.

18 TAXES

All taxes levied upon this Agreement, the transaction, or the services delivered pursuant hereto, shall be borne by the ARCHITECT. The ARCHITECT is to provide Business Tax Registration Certification in order to certify this contract.

19 PROPRIETARY INFORMATION OF THE CITY

The ARCHITECT understands and agrees that, in the performance of the work or services under this Agreement or in contemplation thereof, the ARCHITECT may have access to private or confidential information which may be owned or controlled by THE CITY and that such information may contain proprietary details, the disclosure of which to third parties would be damaging to THE CITY. The ARCHITECT agrees that all such information disclosed by THE CITY to the ARCHITECT shall be held in confidence and used only in the performance of the Agreement. The ARCHITECT shall exercise the same standard of care to protect such information as is used to protect its own proprietary data.

20 ADMINISTRATIVE REMEDY FOR AGREEMENT INTERPRETATION

The parties shall attempt in good faith to resolve by negotiation any disagreements between them concerning the interpretation of this Agreement. If a dispute persists, the ARCHITECT shall continue to perform services in accordance with THE CITY's interpretation of the Agreement, provided that if the dispute is resolved in the ARCHITECT's favor, the ARCHITECT shall be compensated for extra costs incurred in complying with THE CITY's interpretation but not legal fees and costs incurred in resolving the dispute.

Government Code Claims. No suit for money or damages may be brought against the CITY until a written claim therefor has been presented to and rejected by the CITY in conformity with the provisions of San Francisco Administrative Code Chapter 10 and California Government Code Section 900, et seq. Nothing set forth in this Agreement shall operate to toll, waive or excuse ARCHITECT's compliance with the Government Code Claim requirements set forth in Administrative Code Chapter 10 and Government Code Section 900, et seq.

20.1.1 Default; Remedies

- (a) Each of the following shall constitute an event of default ("Event of Default") under this Agreement:
 - (i) ARCHITECT fails or refuses to perform or observe any term, covenant or condition contained in any of the following Sections of this Agreement:

- | | |
|---|--|
| 35. Submitting False Claims | 48. Drug-free workplace policy |
| 18. Taxes | 32. Compliance with laws |
| 12. Insurance | 29. Assignment |
| 19. Proprietary information of the CITY | 50. Nondisclosure of private information |

(ii) ARCHITECT fails or refuses to perform or observe any other term, covenant or condition contained in this Agreement, and such default continues for a period of ten days after written notice thereof from CITY to ARCHITECT.

(iii) ARCHITECT (a) is generally not paying its debts as they become due, (b) files, or consents by answer or otherwise to the filing against of, a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction, (c) makes an assignment for the benefit of its creditors, (d) consents to the appointment of a custodian, receiver, trustee or other officer with similar powers of ARCHITECT or of any substantial part of ARCHITECT's property or (e) takes action for the purpose of any of the foregoing.

(iv) A court or government authority enters an order (a) appointing a custodian, receiver, trustee or other officer with similar powers with respect to ARCHITECT or with respect to any substantial part of ARCHITECT's property, (b) constituting an order for relief or approving a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction or (c) ordering the dissolution, winding-up or liquidation of ARCHITECT.

(b) On and after any Event of Default, CITY shall have the right to exercise its legal and equitable remedies, including, without limitation, the right to terminate this Agreement or to seek specific performance of all or any part of this Agreement. In addition, CITY shall have the right (but no obligation) to cure (or cause to be cured) on behalf of ARCHITECT any Event of Default; ARCHITECT shall pay to CITY on demand all costs and expenses incurred by CITY in effecting such cure, with interest thereon from the date of incurrence at the maximum rate then permitted by law. CITY shall have the right to offset from any amounts due to ARCHITECT under this Agreement or any other agreement between CITY and ARCHITECT all damages, losses, costs or expenses incurred by CITY as a result of such Event of Default and any liquidated damages due from ARCHITECT pursuant to the terms of this Agreement or any other agreement.

(c) All remedies provided for in this Agreement may be exercised individually or in combination with any other remedy available hereunder or under applicable laws, rules and regulations. The exercise of any remedy shall not preclude or in any way be deemed to waive any other remedy.

21 SEVERABILITY

Should the application of any provision of this Agreement to any particular facts or circumstances be found by a court of competent jurisdiction to be invalid or unenforceable, then (a) the validity of other provisions of this Agreement shall not be affected or impaired thereby, and (b) such provision shall be enforced to the maximum extent possible so as to effect the intent of the parties and shall be reformed by the CITY without further action by the parties to the extent necessary to make such provision valid and enforceable.

22 ENTIRE AGREEMENT

This Agreement sets forth the entire agreement between the parties, and supersedes all other oral or written provisions, including any prior Interim Agreement for professional services related to this Project. The terms of any prior Interim Agreement as well as any modifications to those terms are incorporated by reference into this Agreement to the extent they do not conflict with this Agreement. In the event of any conflict between the two, the terms of this Agreement shall prevail. This Agreement may not be modified, nor may compliance with any of its terms be waived, except by written instrument executed and approved in the same manner as this Agreement.

23 NOTICES

Unless otherwise indicated elsewhere in this Agreement, all written communications sent by the parties may be by U.S. mail, e-mail or by fax, and shall be addressed as follows:

To CITY: San Francisco Public Works
Division of Contract Administration
1155 Market Street, 4th Floor
San Francisco, CA 94103

To ARCHITECT: Hellmuth, Obata & Kassabaum, Inc.
One Bush Street, Suite 200
San Francisco, CA 94104

Any notice of default must be sent by registered mail.

From time to time, the parties may designate new address information by notice in writing, delivered to the other Party.

The delivery to the ARCHITECT at the legal address listed above, as it may be amended upon written notice, or the depositing in any post office or post office

box regularly maintained by the United States Postal Service in a postage paid wrapper directed to the ARCHITECT at such address, of any drawing, notice, letter or other communication shall be deemed legal and sufficient service thereof upon the ARCHITECT.

24 GUARANTEED MAXIMUM COSTS

THE CITY's obligation hereunder shall not at any time exceed the amount certified by the Controller for the purpose and period stated in such certification.

Except as may be provided by laws governing emergency procedures, officers and employees of THE CITY are not authorized to request, and THE CITY is not required to reimburse the ARCHITECT for, commodities or services beyond the agreed upon contract scope set forth in this Agreement unless the changed scope is authorized by amendment and approved as required by law.

Officers and employees of THE CITY are not authorized to offer or promise, nor is THE CITY required to honor, any offered or promised additional funding in excess of the maximum amount of funding for which the contract is certified without certification of the additional amount by the Controller.

The Controller is not authorized to make payments on any contract for which funds have not been certified as available in the budget or by supplemental appropriation.

25 LIABILITY OF THE CITY

THE CITY's payment obligations under this Agreement shall be limited to the payment of the compensation provided for in section 8 of this Agreement. Notwithstanding any other provision of this Agreement, in no event shall THE CITY be liable regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including but not limited to, lost profits, arising out of or in connection with this Agreement or the services performed in connection with this Agreement.

26 QUALIFIED PERSONNEL

Work under this Agreement shall be performed only by qualified and competent personnel under the supervision of and in the employment of the ARCHITECT or its subconsultants. The ARCHITECT's Key Personnel and subconsultants shall all be licensed by the State of California in their respective professional fields as Architects and Engineers. The ARCHITECT will comply with THE CITY's reasonable requests regarding assignment and/or removal of personnel, but all personnel including those assigned at THE CITY's request, shall be supervised by the ARCHITECT.

27 RESPONSIBILITY FOR EQUIPMENT

THE CITY shall not be responsible for any damage to persons or property as a result of the use, misuse or failure of any equipment used by the ARCHITECT, or by any of its employees, even though such equipment is furnished, rented or loaned to the ARCHITECT by THE CITY. The acceptance or use of such equipment by the ARCHITECT or any of its employees shall be construed to mean that the ARCHITECT accepts full responsibility for and agrees to exonerate, indemnify, defend and save harmless THE CITY, from and against any and all claims for any damage or injury of any type arising from the use, misuse or failure of such equipment, whether such damage be to the ARCHITECT, its employees, THE CITY employees or third parties, or to property belonging to any of the above.

28 CITY OWNERSHIP OF EQUIPMENT

Any equipment vehicles, computer programs (software licenses and the CITY media), and the like, purchased by the ARCHITECT or its subconsultants in connection with services to be performed under this Agreement and reimbursed by THE CITY, shall become property of and will be transmitted to THE CITY at the conclusion of the ARCHITECT's services under the Agreement.

29 ASSIGNMENT

The services to be performed by the ARCHITECT are personal in character and neither this Agreement nor any duties or obligations hereunder shall be assigned or delegated by the ARCHITECT unless approved by written instrument executed and approved in the same manner as this Agreement. The ARCHITECT, the partners of any Joint Venture or Association that the ARCHITECT may establish for the Project, or any of the ARCHITECT's subconsultants may incorporate or change their business names, provided, such incorporation or change does not decrease their obligations or liabilities under this Agreement.

30 SUCCESSORS AND ASSIGNS

This Agreement shall be binding upon THE CITY and the ARCHITECT and their respective successors and assigns. Neither the performance of this Agreement nor any part thereof, nor any funds due or to become due thereunder may be assigned by the ARCHITECT without the prior written consent and approval of THE CITY.

31 NON-WAIVER OF RIGHTS

The omission by either party at any time to enforce any default or right reserved to it, or to require performance of any of the terms, covenants, or provisions hereof by the other party at the time designated, shall not be a waiver of any such default or right to which the party is entitled, nor shall it in any way affect the right of the party to enforce such provisions thereafter.

32 COMPLIANCE WITH LAWS

The ARCHITECT shall keep itself fully informed of THE CITY's Charter, codes, ordinances, regulations, and policies, and of all state, and federal laws in any manner affecting the performance of this Agreement, and must at all times comply with such local codes, ordinances, regulations, policies and all applicable laws as they may be amended from time to time.

33 COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT

The ARCHITECT acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through an ARCHITECT, must be accessible to the disabled public. The ARCHITECT shall provide the services specified in this Agreement and shall prepare all designs for the Project in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. In addition, the ARCHITECT agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agree that any violation of this prohibition on the part of the ARCHITECT, its employees, agents or assigns will constitute a material breach of this Agreement.

34 AGREEMENT MADE IN CALIFORNIA; VENUE

The formation, interpretation and performance of this Agreement shall be governed by the laws of the State of California, without regard to its conflict of laws provisions. Venue for all litigation arising out of or related to this Agreement, whether relating to formation, interpretation, performance, or anything else, shall be in a court of competent jurisdiction in County of San Francisco, California, and the parties hereby agree to the exclusive jurisdiction of such court.

35 SUBMITTING FALSE CLAIMS

Pursuant to San Francisco Administrative Code Chapter 6, Article V, any contractor, subcontractor or consultant who submits a false claim shall be liable to THE CITY for statutory penalties as provided by law. A contractor, subcontractor or consultant will be deemed to have submitted a false claim to THE CITY if the contractor, subcontractor or consultant (a) knowingly presents or causes to be presented to an officer or employee of THE CITY a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by THE CITY; (c) conspires to defraud THE CITY by getting a false claim allowed or paid by THE CITY; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to pay or transmit money or property to THE CITY; (e) is a beneficiary of an inadvertent

submission of a false claim to THE CITY, subsequently discovers the falsity of the claim, and fails to disclose the false claim to THE CITY within a reasonable time after discovery of the false claim.

36 INCIDENTAL AND CONSEQUENTIAL DAMAGES

The ARCHITECT shall be responsible for incidental and consequential damages resulting from the ARCHITECT's negligent acts or omissions. Nothing in this Agreement shall constitute a waiver or limitation of any rights that THE CITY may have under applicable law.

37 OTHER AGREEMENTS BETWEEN THE CITY AND THE ARCHITECT

The ARCHITECT and its consultants shall provide a list of other Agreements with THE CITY that are in place at the time of execution of this Agreement.

38 WORKS FOR HIRE

If, in connection with services performed under this Agreement, the ARCHITECT or its subconsultants create artwork, copy, posters, billboards, photographs, videotapes, audio tapes, systems designs, software, reports, diagrams, surveys, source codes or any other original works of authorship, such works of authorship shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in such works are the property of THE CITY. If it is ever determined that any works created by the ARCHITECT or its subconsultants under this Agreement are not works for hire under U.S. law, the ARCHITECT hereby assigns all copyrights to such works to THE CITY, and agrees to provide any material and execute any documents necessary to effectuate such assignment. THE CITY hereby grants to the ARCHITECT a non-exclusive, non-transferable or assignable, royalty-free license to use such works solely for the purpose of marketing, i.e., to document the ARCHITECT's experience and capabilities, and to use or re-use details that are not unique to the design of the Project, which details would not otherwise be copyrightable under Title 17 of the United States Code. With respect to any other use or purpose, the ARCHITECT must obtain the prior express written permission of THE CITY. The requirements of this clause are only applicable in those situations where the requirements of section 10 do not apply.

39 CONSTRUCTION

All paragraph captions are for reference only and shall not be considered in construing this Agreement.

40 SOLE BENEFIT

This Agreement is intended for the sole benefit of THE CITY and the ARCHITECT, and is not intended to create any third-party rights or benefits; provided, however, that notwithstanding the above, THE CITY is an express third party beneficiary of this Agreement, is anticipated to become an assignee of this Agreement upon conclusion of the Project, and has certain rights under this Agreement as set forth more particularly herein.

41 NON-DISCRIMINATION IN THE CITY CONTRACTS AND BENEFITS ORDINANCE

41.1 ARCHITECT SHALL NOT DISCRIMINATE

In the performance of this Agreement, the ARCHITECT agrees not to discriminate against any employee, THE CITY and/or CITY's employee working with it or any of its subcontractors, applicant for employment with it or its subcontractors, or against any person seeking accommodations, advantages, facilities, privileges, services, or membership in all business, social, or other establishments or organizations, on the basis of the fact or perception of a person's race, color, creed, religion, national origin, ancestry, age, height, weight, sex, sexual orientation, gender identity, domestic partner status, marital status, disability or Acquired Immune Deficiency Syndrome or HIV status (AIDS/HIV status), or association with members of such protected classes, or in retaliation for opposition to discrimination against such classes.

41.2 SUBCONTRACTS

The ARCHITECT shall incorporate by reference in all subcontracts the provisions of Sections 12B.2(a), 12B.2(c)-(k), and 12C.3 of the San Francisco Administrative Code and shall require all subcontractors to comply with such provisions. The ARCHITECT's failure to comply with the obligations in this subsection shall constitute a material breach of this Agreement.

41.3 NON-DISCRIMINATION IN BENEFITS

The ARCHITECT will not as of the date of this Agreement and will not during the term of this Agreement in any of its operations in San Francisco or where the work is being performed for THE CITY, or elsewhere within the United States, discriminate in the provision of bereavement leave, family the MEDICAL leave, health benefits, membership or membership discounts, moving expenses, pension and retirement benefits or travel benefits, as well as any benefits other than the benefits specified above, between employees with domestic partners and employees with spouses, and/or between the domestic partners and spouses of such employees, where the domestic partnership has been registered with a governmental entity pursuant to state or local law authorizing such registration, subject to the conditions set forth in Section 12B.2(b) of the San Francisco Administrative Code.

41.4 CONDITION TO CONTRACT

As a condition to this Agreement, the ARCHITECT shall execute the "Chapter 12B Declaration: Nondiscrimination in Contracts and Benefits" form (Form CMD-12B-101) with supporting documentation and secure the approval of the form by the San Francisco Contract Monitoring Division.

41.5 INCORPORATION OF ADMINISTRATIVE CODE PROVISIONS BY REFERENCE

The provisions of Chapters 12B and 12C of the San Francisco Administrative Code are incorporated in this Section by reference and made a part of this Agreement as though fully set forth herein. The ARCHITECT shall comply fully with and be bound by all of the provisions that apply to this Agreement under such Chapters of the Administrative Code, including but not limited to the remedies in such Chapters. Without limiting the foregoing, the ARCHITECT understands that pursuant to Sections 12B.2(h) and 12C.3(g) of the San Francisco Administrative Code, a penalty of \$50 for each person for each calendar day during which such person was discriminated against in violation of the provisions of this Agreement may be assessed against the ARCHITECT and/or deducted from any payments due the ARCHITECT.

42 The LBE Ordinance

ARCHITECT, shall comply with all the requirements of the Local Business Enterprise and Non-Discrimination in Contracting Ordinance set forth in Chapter 14B of the San Francisco Administrative Code as it now exists or as it may be amended in the future (collectively the "LBE Ordinance"), provided such amendments do not materially increase ARCHITECT's obligations or liabilities, or materially diminish ARCHITECT's rights, under this Agreement. Such provisions of the LBE Ordinance are incorporated by reference and made a part of this Agreement as though fully set forth in this section. ARCHITECT's willful failure to comply with any applicable provisions of the LBE Ordinance is a material breach of ARCHITECT's obligations under this Agreement and shall entitle CITY, subject to any applicable notice and cure provisions set forth in this Agreement, to exercise any of the remedies provided for under this Agreement, under the LBE Ordinance or otherwise available at law or in equity, which remedies shall be cumulative unless this Agreement expressly provides that any remedy is exclusive. In addition, ARCHITECT shall comply fully with all other applicable local, state and federal laws prohibiting discrimination and requiring equal opportunity in contracting, including subcontracting.

42.1 Compliance and Enforcement. If ARCHITECT willfully fails to comply with any of the provisions of the LBE Ordinance, the rules and regulations implementing the LBE Ordinance, or the provisions of this Agreement pertaining to LBE participation, ARCHITECT shall be liable for liquidated damages in an amount equal to ARCHITECT's net profit on this Agreement, or 10% of the total amount of this Agreement, or \$1,000, whichever is greatest. The Director of the CITY's

Contract Monitoring Division or any other public official authorized to enforce the LBE Ordinance (separately and collectively, the "Director of CMD") may also impose other sanctions against ARCHITECT authorized in the LBE Ordinance, including declaring the ARCHITECT to be irresponsible and ineligible to contract with the CITY for a period of up to five years or revocation of the ARCHITECT's LBE certification. The Director of CMD will determine the sanctions to be imposed, including the amount of liquidated damages, after investigation pursuant to Administrative Code §14B.17. By entering into this Agreement, ARCHITECT acknowledges and agrees that any liquidated damages assessed by the Director of the CMD shall be payable to CITY upon demand. ARCHITECT further acknowledges and agrees that any liquidated damages assessed may be withheld from any monies due to ARCHITECT on any contract with CITY. ARCHITECT agrees to maintain records necessary for monitoring its compliance with the LBE Ordinance for a period of three years following termination or expiration of this Agreement, and shall make such records available for audit and inspection by the Director of CMD or the Controller upon request.

If the contract will involve the use of subcontracts, then include subparagraphs (2), (3) and (4). If the contract will not involve subcontracts, then omit (2), (3), and (4) and delete the subsection title above, "(1) Enforcement," but keep the text of the subparagraph.

42.2 Subcontracting Goals. The LBE subcontracting participation goal for this contract is 20%. ARCHITECT shall fulfill the subcontracting commitment made in its bid or proposal. Each invoice submitted to CITY for payment shall include the information required in the CMD Progress Payment Form and the CMD Payment Affidavit. Failure to provide the CMD Progress Payment Form and the CMD Payment Affidavit with each invoice submitted by ARCHITECT shall entitle CITY to withhold 20% of the amount of that invoice until the CMD Payment Form and the CMD Subcontractor Payment Affidavit are provided by ARCHITECT. ARCHITECT shall not participate in any back contracting to the ARCHITECT or lower-tier subcontractors, as defined in the LBE Ordinance, for any purpose inconsistent with the provisions of the LBE Ordinance, its implementing rules and regulations, or this Section.

42.3 Subcontract Language Requirements. ARCHITECT shall incorporate the LBE Ordinance into each subcontract made in the fulfillment of ARCHITECT's obligations under this Agreement and require each subcontractor to agree and comply with provisions of the ordinance applicable to subcontractors. ARCHITECT shall include in all subcontracts with LBEs made in fulfillment of ARCHITECT's obligations under this Agreement, a provision requiring ARCHITECT to compensate any LBE subcontractor for damages for breach of contract or liquidated damages equal to 5% of the subcontract amount, whichever is greater, if ARCHITECT does not fulfill its commitment to use the LBE subcontractor as specified in the bid or proposal, unless ARCHITECT received advance approval from the Director of CMD and contract awarding authority to substitute subcontractors or to otherwise modify the commitments in the bid or proposal. Such provisions shall also state that it is enforceable in a court of competent jurisdiction. Subcontracts shall require the subcontractor to maintain records necessary for monitoring its compliance with the LBE Ordinance for a period of three years following termination of this contract and to

make such records available for audit and inspection by the Director of CMD or the Controller upon request.

- 42.4 Payment of Subcontractors.** ARCHITECT shall pay its subcontractors within three working days after receiving payment from the CITY unless Contractor notifies the Director of CMD in writing within ten working days prior to receiving payment from the CITY that there is a bona fide dispute between Contractor and its subcontractor and the Director waives the three-day payment requirement, in which case Contractor may withhold the disputed amount but shall pay the undisputed amount. ARCHITECT further agrees, within ten working days following receipt of payment from the CITY, to file the CMD Payment Affidavit with the Controller, under penalty of perjury, that the ARCHITECT has paid all subcontractors. The affidavit shall provide the names and addresses of all subcontractors and the amount paid to each. Failure to provide such affidavit may subject ARCHITECT to enforcement procedure under Administrative Code §14B.17.

43 REQUIRING MINIMUM COMPENSATION FOR EMPLOYEES

The ARCHITECT agrees to comply fully with and be bound by all of the provisions of the Minimum Compensation Ordinance (MCO), as set forth in San Francisco Administrative Code Chapter 12P (Chapter 12P), including the remedies provided, and implementing guidelines and rules. The provisions of Chapter 12P are incorporated herein by reference and made a part of this Agreement as though fully set forth. The text of the MCO is available on the web at www.sfgov.org/olse. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12P. Consistent with the requirements of the MCO, ARCHITECT agrees to all of the following:

- a. For each hour worked by a Covered Employee during a Pay Period on work funded under the Agreement during the term of this Agreement, ARCHITECT shall provide to the Covered Employee no less than the Minimum Compensation, which includes a minimum hourly wage and compensated and uncompensated time off consistent with the requirements of the MCO. For the hourly gross compensation portion of the MCO, ARCHITECT shall pay a minimum of \$10.77 an hour for the term of this Agreement; provided, however, that Contractors that are Nonprofit Corporations or public entities shall pay a minimum of \$9 an hour for the term of this Agreement.
- b. If a Covered Employee of a Nonprofit Corporation works in San Francisco, then that employee is covered by San Francisco's Minimum Wage Ordinance, which is Chapter 12R of the Administrative Code. As of January 1, 2007, Chapter 12R's minimum wage is \$9.14 per hour.
- c. ARCHITECT shall not discharge, reduce in compensation, or otherwise discriminate against any employee for complaining to THE CITY and/or CITY with regard to ARCHITECT's compliance or anticipated compliance with the requirements of the MCO, for opposing any practice proscribed by

the MCO, for participating in proceedings related to the MCO, or for seeking to assert or enforce any rights under the MCO by any lawful means.

- d. The ARCHITECT understands and agrees that the failure to comply with the requirements of the MCO shall constitute a material breach by ARCHITECT of the terms of this Agreement. CITY, acting through the Contracting Department, shall determine whether such a breach has occurred.
- e. If, within 30 days after receiving written notice of a breach of this Agreement for violating the MCO, the ARCHITECT fails to cure such breach or, if such breach cannot reasonably be cured within such period of 30 days, the ARCHITECT fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, CITY, acting through the Contracting Department, shall have the right to pursue the following rights or remedies and any rights or remedies available under applicable law:
- (1) The right to charge the ARCHITECT an amount equal to the difference between the Minimum Compensation and any compensation actually provided to a Covered Employee, together with interest on such amount from the date payment was due at the maximum rate then permitted by law;
 - (2) The right to set off all or any portion of the amount described in Subsection (d)(1) of this Section against amounts due to the ARCHITECT under this Agreement;
 - (3) The right to terminate this Agreement in whole or in part;
 - (4) In the event of a breach by the ARCHITECT of the covenant referred to in Subsection (b) of this Section, the right to seek reinstatement of the employee or to obtain other appropriate equitable relief; and
 - (5) The right to bar the ARCHITECT from entering into future contracts with THE CITY and/or CITY for three years.

Each of the rights provided in this Subsection (e) shall be exercisable individually or in combination with any other rights or remedies available to THE CITY and/or CITY. Any amounts realized by CITY pursuant to this subsection shall be paid to the Covered Employee who failed to receive the required Minimum Compensation.

- f. The ARCHITECT represents and warrants that it is not an entity that was set up, or is being used, for the purpose of evading the intent of the MCO.
- g. The ARCHITECT shall keep itself informed of the current requirements of the MCO, including increases to the hourly gross compensation due Covered Employees under the MCO, and shall provide prompt written notice to all Covered Employees of any increases in compensation, as

well as any written communications received by the ARCHITECT from CITY, which communications are marked to indicate that they are to be distributed to Covered Employees.

- h. The ARCHITECT shall provide reports to CITY in accordance with any reporting standards promulgated by CITY under the MCO, including reports on subcontractors.
- i. The ARCHITECT shall provide THE CITY and/or CITY with access to pertinent records after receiving a written request from THE CITY and/or CITY to do so and being provided at least five (5) business days to respond.
- j. CITY may conduct random audits of the ARCHITECT. Random audits shall be (i) noticed in advance in writing; (ii) limited to ascertaining whether Covered Employees are paid at least the minimum compensation required by the MCO; (iii) accomplished through an examination of pertinent records at a mutually agreed upon time and location within ten days of the written notice; and (iv) limited to one audit of the ARCHITECT every two years for the duration of this Agreement. Nothing in this Agreement is intended to preclude CITY from investigating any report of an alleged violation of the MCO.
- k. Any subcontract entered into by the ARCHITECT shall require the subcontractor to comply with the requirements of the MCO and shall contain contractual obligations substantially the same as those set forth in this Section. A subcontract means an agreement between the ARCHITECT and a third party which requires the third party to perform all or a portion of the services covered by this Agreement. The ARCHITECT shall notify the Department of Administrative Services when it enters into such a subcontract and shall certify to the Department of Administrative Services that it has notified the subcontractor of the obligations under the MCO and has imposed the requirements of the MCO on the subcontractor through the provisions of the subcontract. It is the ARCHITECT's obligation to ensure that any subcontractors of any tier under this Agreement comply with the requirements of the MCO. If any subcontractor under this Agreement fails to comply, THE CITY and/or CITY may pursue any of the remedies set forth in this Section against the ARCHITECT.
- l. Each Covered Employee is a third-party beneficiary with respect to the requirements of subsections (a) and (b) of this Section, and may pursue the following remedies in the event of a breach by the ARCHITECT of subsections (a) and (b), but only after the Covered Employee has provided the notice, participated in the administrative review hearing, and waited the 21-day period required by the MCO. The ARCHITECT understands and agrees that if the Covered Employee prevails in such action, the Covered Employee may be awarded: (1) an amount equal to the difference between the Minimum Compensation and any

compensation actually provided to the Covered Employee, together with interest on such amount from the date payment was due at the maximum rate then permitted by law; (2) in the event of a breach by the ARCHITECT of subsections (a) or (b), the right to seek reinstatement or to obtain other appropriate equitable relief; and (3) in the event that the Covered Employee is the prevailing party in any legal action or proceeding against the ARCHITECT arising from this Agreement, the right to obtain all costs and expenses as provided by statute, incurred by the Covered Employee. The ARCHITECT also understands that the MCO provides that if the ARCHITECT prevails in any such action, the ARCHITECT may be awarded costs and expenses as provided by statute, from the Covered Employee if the court determines that the Covered Employee's action was frivolous, vexatious or otherwise an act of bad faith.

- m. If the ARCHITECT is exempt from the MCO when this Agreement is executed because the cumulative amount of agreements with this department for the fiscal year is less than \$25,000 (\$50,000 for nonprofits), but the ARCHITECT later enters into an agreement or agreements that cause contractor to exceed that amount in a fiscal year, the ARCHITECT shall thereafter be required to comply with the MCO under this Agreement. This obligation arises on the effective date of the agreement that causes the cumulative amount of agreements between the ARCHITECT and this department to exceed \$25,000 (\$50,000 for nonprofits) in the fiscal year.

44 REQUIRING HEALTH BENEFITS FOR COVERED EMPLOYEES

The ARCHITECT agrees to comply fully with and be bound by all of the provisions of the Health Care Accountability Ordinance (HCAO), as set forth in San Francisco Administrative Code Chapter 12Q, including the remedies provided, and implementing regulations, as the same may be amended from time to time. The provisions of Chapter 12Q are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the HCAO is available on the web at www.sfgov.org/olse. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12Q.

- a. For each Covered Employee, the ARCHITECT shall provide the appropriate health benefit set forth in Section 12Q.3 of the HCAO. If the ARCHITECT chooses to offer the health plan option, such health plan shall meet the minimum standards set forth by the San Francisco Health Commission.
- b. Notwithstanding the above, if the ARCHITECT is a small business as defined in Section 12Q.3(e) of the HCAO, it shall have no obligation to comply with part (a) above.

- c. The ARCHITECT's failure to comply with the HCAO shall constitute a material breach of this agreement. THE CITY and/or CITY shall notify the ARCHITECT if such a breach has occurred. If, within 30 days after receiving written notice of a breach of this Agreement for violating the HCAO, the ARCHITECT fails to cure such breach or, if such breach cannot reasonably be cured within such period of 30 days, the ARCHITECT fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, CITY shall have the right to pursue the remedies set forth in 12Q.5.1 and 12Q.5(f)(1-6). Each of these remedies shall be exercisable individually or in combination with any other rights or remedies available to THE CITY and/or CITY.
- d. Any Subcontract entered into by the ARCHITECT shall require the Subcontractor to comply with the requirements of the HCAO and shall contain contractual obligations substantially the same as those set forth in this Section. The ARCHITECT shall notify CITY's Office of Contract Administration when it enters into such a Subcontract and shall certify to the Office of Contract Administration that it has notified the Subcontractor of the obligations under the HCAO and has imposed the requirements of the HCAO on Subcontractor through the Subcontract. Each ARCHITECT shall be responsible for its Subcontractors' compliance with this Chapter. If a Subcontractor fails to comply, THE CITY and/or CITY may pursue the remedies set forth in this Section against the ARCHITECT based on the Subcontractor's failure to comply, provided that THE CITY and/or CITY has first provided the ARCHITECT with notice and an opportunity to obtain a cure of the violation.
- e. The ARCHITECT shall not discharge, reduce in compensation, or otherwise discriminate against any employee for notifying THE CITY and/or CITY with regard to the ARCHITECT's noncompliance or anticipated noncompliance with the requirements of the HCAO, for opposing any practice proscribed by the HCAO, for participating in proceedings related to the HCAO, or for seeking to assert or enforce any rights under the HCAO by any lawful means.
- f. The ARCHITECT represents and warrants that it is not an entity that was set up, or is being used, for the purpose of evading the intent of the HCAO.
- g. The ARCHITECT shall maintain employee and payroll records in compliance with the California Labor Code and Industrial Welfare Commission orders, including the number of hours each employee has worked on THE CITY Contract.
- h. The ARCHITECT shall keep itself informed of the current requirements of the HCAO.

- i. The ARCHITECT shall provide reports to CITY in accordance with any reporting standards promulgated by CITY under the HCAO, including reports on Subcontractors and Subtenants, as applicable.
- j. The ARCHITECT shall provide CITY with access to records pertaining to compliance with HCAO after receiving a written request from THE CITY to do so and being provided at least ten business days to respond.
- k. The ARCHITECT shall allow CITY to inspect the ARCHITECT's job sites and have access to the ARCHITECT's employees in order to monitor and determine compliance with HCAO.
- l. CITY may conduct random audits of the ARCHITECT to ascertain its compliance with HCAO. The ARCHITECT agrees to cooperate with THE CITY when it conducts such audits.
- m. If the ARCHITECT is exempt from the HCAO when this Agreement is executed because its amount is less than \$25,000 (\$50,000 for nonprofits), but the ARCHITECT later enters into an agreement or agreements that cause the ARCHITECT's aggregate amount of all agreements with THE CITY and/or CITY to reach \$75,000, all the agreements shall be thereafter subject to the HCAO. This obligation arises on the effective date of the agreement that causes the cumulative amount of agreements between the ARCHITECT and THE CITY and/or CITY to be equal to or greater than \$75,000 in the fiscal year.

45 FIRST SOURCE HIRING PROGRAM

a. Incorporation of Administrative Code Provisions by Reference

The provisions of Chapter 83 of the San Francisco Administrative Code are incorporated in this Section by reference and made a part of this Agreement as though fully set forth herein. The Architect shall comply fully with, and be bound by, all of the provisions that apply to this Agreement under such Chapter, including but not limited to the remedies provided therein.

b. First Source Hiring Agreement

The Architect shall enter into a First Source Hiring Agreement as set out in Attachment 9.

46 CONSIDERATION OF CRIMINAL HISTORY IN HIRING AND EMPLOYMENT DECISIONS.

a. Contractor agrees to comply fully with and be bound by all of the provisions of Chapter 12T "CITY Contractor/Subcontractor Consideration of Criminal History in Hiring and Employment Decisions," of the San Francisco Administrative Code (Chapter 12T), including the remedies provided, and implementing regulations, as may be amended from time to time. The provisions of Chapter 12T are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the Chapter 12T is available on the

web at www.sfgov.org/olse/fco. A partial listing of some of Contractor's obligations under Chapter 12T is set forth in this Section. Contractor is required to comply with all of the applicable provisions of 12T, irrespective of the listing of obligations in this Section. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12T.

b. The requirements of Chapter 12T shall only apply to a Contractor's or Subcontractor's operations to the extent those operations are in furtherance of the performance of this Agreement, shall apply only to applicants and employees who would be or are performing work in furtherance of this Agreement, shall apply only when the physical location of the employment or prospective employment of an individual is wholly or substantially within the CITY of San Francisco, and shall not apply when the application in a particular context would conflict with federal or state law or with a requirement of a government agency implementing federal or state law.

c. Contractor shall incorporate by reference in all subcontracts the provisions of Chapter 12T, and shall require all subcontractors to comply with such provisions. Contractor's failure to comply with the obligations in this subsection shall constitute a material breach of this Agreement.

d. Contractor or Subcontractor shall not inquire about, require disclosure of, or if such information is received base an Adverse Action on an applicant's or potential applicant for employment, or employee's: (1) Arrest not leading to a Conviction, unless the Arrest is undergoing an active pending criminal investigation or trial that has not yet been resolved; (2) participation in or completion of a diversion or a deferral of judgment program; (3) a Conviction that has been judicially dismissed, expunged, voided, invalidated, or otherwise rendered inoperative; (4) a Conviction or any other adjudication in the juvenile justice system; (5) a Conviction that is more than seven years old, from the date of sentencing; or (6) information pertaining to an offense other than a felony or misdemeanor, such as an infraction.

e. Contractor or Subcontractor shall not inquire about or require applicants, potential applicants for employment, or employees to disclose on any employment application the facts or details of any conviction history, unresolved arrest, or any matter identified in subsection 32(d), above. Contractor or Subcontractor shall not require such disclosure or make such inquiry until either after the first live interview with the person, or after a conditional offer of employment.

f. Contractor or Subcontractor shall state in all solicitations or advertisements for employees that are reasonably likely to reach persons who are reasonably likely to seek employment to be performed under this Agreement, that the Contractor or Subcontractor will consider for employment qualified applicants with criminal histories in a manner consistent with the requirements of Chapter 12T.

g. Contractor and Subcontractors shall post the notice prepared by the Office of Labor Standards Enforcement (OLSE), available on OLSE's website, in a conspicuous place at every workplace, job site, or other location under the Contractor or Subcontractor's control at which work is being done or will be done in furtherance of the performance of this Agreement. The notice shall be posted in English, Spanish, Chinese, and any language spoken by at least 5% of the employees at the workplace, job site, or other location at which it is posted.

h. Contractor understands and agrees that if it fails to comply with the requirements of Chapter 12T, the CITY shall have the right to pursue any rights or remedies available under Chapter 12T, including but not limited to, a penalty of \$50 for a second violation and \$100 for a subsequent violation for each employee, applicant or other person as to whom a violation occurred or continued, termination or suspension in whole or in part of this Agreement.

47 MACBRIDE PRINCIPLES-NORTHERN IRELAND

Pursuant to San Francisco Administrative Code §12F.5, CITY urges companies doing business in Northern Ireland to move towards resolving employment inequities, and encourages such companies to abide by the MacBride Principles. CITY urges San Francisco companies to do business with corporations that abide by the MacBride Principles. By signing below, the person executing this agreement on behalf of the ARCHITECT acknowledges and agrees that it has read and understood this section.

48 DRUG-FREE WORKPLACE POLICY

The ARCHITECT acknowledges that pursuant to the Federal Drug-Free Workplace Act of 1989, the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited on CITY premises. The ARCHITECT agrees that any violation of this prohibition by the contractor, its employees, agents or assigns shall be deemed a material breach of contract.

49 SUNSHINE ORDINANCE

In accordance with San Francisco Administrative Code §67.24(e), contracts, contractor's bids, responses to requests for proposals and all other records of communications between the department and persons or firms seeking contracts shall be open to inspection immediately after a contract has been awarded. Nothing in this provision requires the disclosure of a private person's or organization's net worth or other proprietary financial data submitted for qualification for a contract or other benefit until and unless that person or organization is awarded the contract or benefit. Information provided which is covered by this subdivision will be made available to the public upon request.

50 NONDISCLOSURE OF PRIVATE INFORMATION

The ARCHITECT has read and agrees to the terms set forth in San Francisco Administrative Code Sections 12M.2, "Nondisclosure of Private Information," and 12M.3, "Enforcement" of Administrative Code Chapter 12M, "Protection of Private Information," which are incorporated herein as if fully set forth. The ARCHITECT agrees that any failure of the ARCHITECT to comply with the requirements of Section 12M.2 of this Chapter shall be a material breach of the Contract. In such an event, in addition to any other remedies available to it under equity or law, THE CITY may terminate the Contract, bring a false claim action against the ARCHITECT pursuant to Chapter 6 or Chapter 21 of the Administrative Code, or debar the ARCHITECT.

51 LIMITATIONS ON CONTRIBUTIONS

Through execution of this Agreement, the ARCHITECT acknowledges that it is familiar with section 1.126 of CITY's Campaign and Governmental Conduct Code, which prohibits any person who contracts with CITY for the rendition of personal services, for the furnishing of any material, supplies or equipment, for the sale or lease of any land or building, or for a grant, loan or loan guarantee, from making any campaign contribution to (1) an individual holding a CITY elective office if the contract must be approved by the individual, a board on which that individual serves, or a board on which an appointee of that individual serves, (2) a candidate for the office held by such individual, or (3) a committee controlled by such individual, at any time from the commencement of negotiations for the contract until the later of either the termination of negotiations for such contract or six months after the date the contract is approved. The ARCHITECT acknowledges that the foregoing restriction applies only if the contract or a combination or series of contracts approved by the same individual or board in a fiscal year have a total anticipated or actual value of \$50,000 or more. The ARCHITECT further acknowledges that the prohibition on contributions applies to each prospective party to the contract; each member of the ARCHITECT's board of directors; the ARCHITECT's chairperson, chief executive officer, chief financial officer and chief operating officer; any person with an ownership interest of more than 20 percent in the ARCHITECT; any subcontractor listed in the bid or contract; and any committee that is sponsored or controlled by the ARCHITECT. Additionally, the ARCHITECT acknowledges that the ARCHITECT must inform each of the persons described in the preceding sentence of the prohibitions contained in Section 1.126.

52 PROHIBITING USE OF THE CITY OR CITY FUNDS FOR POLITICAL ACTIVITY

In accordance with San Francisco Administrative Code Chapter 12.G, the ARCHITECT may not participate in, support, or attempt to influence any political campaign for a candidate or for a ballot measure (collectively, "Political Activity") in the performance of the services provided under this Agreement. The ARCHITECT agrees to comply with San Francisco Administrative Code Chapter 12.G and any implementing rules and regulations promulgated by CITY's Controller. The terms and provisions of Chapter 12.G are incorporated herein by this reference. In the event the ARCHITECT violates the provisions of this section, THE CITY may, in addition to any other rights or remedies available hereunder, (i) terminate this Agreement, and (ii) prohibit the ARCHITECT from bidding on or receiving any new THE CITY contract for a period of two (2) years. The Controller will not consider the ARCHITECT's use of profit as a violation of this section.

53 LEED STATEMENT

The LEED Green Building Rating System or similar environmental guidelines ("LEED") utilizes certain design, construction and usage criteria in order to promote environmentally friendly building. In addressing LEED, the ARCHITECT shall perform its services in a manner consistent with that degree of skill and care ordinarily exercised by design professionals performing similar services in the same locality, and under the same or similar circumstances and conditions.

The ARCHITECT shall not be responsible for CM/GC's failure to adhere to the Contract Documents and any applicable laws, codes and regulations incorporated therein, nor for any changes to the design made by THE CITY without the direct participation and written approval of the ARCHITECT. Likewise, the ARCHITECT shall not be responsible for any environmental or energy issues arising out of the failure of THE CITY's use and operation of the completed Project as designed.

54 Rights and Duties upon Termination or Expiration

This Section and the following Sections of this Agreement shall survive termination or expiration of this Agreement:

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| 35. Submitting false claims | 19. Proprietary information of the CITY |
| 8.7. Disallowance | 10. Documents and CITY Ownership of Documents |
| 18. Taxes | 38. Works for Hire |
| 8.8. Payment does not imply acceptance of work | 16. Audit and Inspection of Records |
| 27. Responsibility for equipment | 14. Modifications |
| 15. Independent Contractor | 20. Administrative Remedy for Agreement Interpretation |
| 12. Insurance | 34. Agreement Made in California; Venue |
| 13. Indemnification | 39. Construction |
| 36. Incidental and Consequential Damages | 22. Entire Agreement |
| 25. Liability of the CITY | 21. Severability |
| | 50. Nondisclosure of private information |

Subject to the immediately preceding sentence, upon termination of this Agreement prior to expiration of the term specified in Section 2, this Agreement shall terminate and be of no further force or effect. The Architect shall transfer title to CITY, and deliver in the manner, at the times, and to the extent, if any, directed by CITY, any work in progress, completed work, supplies, equipment, and other materials produced as a part of, or acquired in connection with the performance of this Agreement, and any completed or partially completed work which, if this Agreement had been completed, would have been required to be furnished to CITY. This subsection shall survive termination of this Agreement.

55 Conflict of Interest

Through its execution of this Agreement, the Architect acknowledges that it is familiar with the provision of Section 15.103 of the CITY's Charter, Article III, Chapter 2 of CITY's Campaign and Governmental Conduct Code, and Section 87100 et seq. and Section 1090 et seq. of the Government Code of the State of California, and certifies that it does not know of any facts which constitutes a violation of said provisions and agrees that it will immediately notify the CITY if it becomes aware of any such fact during the term of this Agreement.

56 Tropical Hardwood and Virgin Redwood Ban

Pursuant to §804(b) of the San Francisco Environment Code, the CITY and County of San Francisco urges contractors not to import, purchase, obtain, or use for any purpose, any tropical hardwood, tropical hardwood wood product, virgin redwood or virgin redwood wood product.

57 Automated Clearing House (ACH) "electronic" payments

The CITY will issue payments to ARCHITECT through the CITY's electronic payment system called PayMode-X®. ARCHITECT acknowledges and agrees to receive payment electronically through this system. ARCHITECT shall not be entitled to any additional cost or charge under this Contract for using or failing to use the electronic payment system. Nor shall ARCHITECT be entitled to any additional cost or charge for delays or failures of the electronic payment system to complete a payment transaction.

58 Certification of Funds; Budget and Fiscal Provisions; Termination in Event of Non-Appropriation

This Agreement is subject to the budget and fiscal provisions of the CITY's Charter. Charges will accrue only after prior written authorization certified by the Controller, and the amount of CITY's obligation hereunder shall not at any time exceed the amount certified for the purpose and period stated in such advance authorization. This Agreement will terminate without penalty, liability or expense of any kind to CITY at the end of any fiscal year if funds are not appropriated for the next succeeding fiscal year. If funds are appropriated for a portion of the fiscal year, this Agreement will terminate, without penalty, liability or expense of any kind at the end of the term for which funds are appropriated. CITY has no obligation to make appropriations for this Agreement in lieu of appropriations for new or other agreements. CITY budget decisions are subject to the discretion of the Mayor and the Board of Supervisors. ARCHITECT's assumption of risk of possible non-appropriation is part of the consideration for this Agreement.

THIS SECTION CONTROLS AGAINST ANY AND ALL OTHER PROVISIONS OF THIS AGREEMENT.

59 Effective Date of Agreement

This Agreement shall become effective when the Controller has certified to the availability of funds and ARCHITECT has been notified in writing.

60 Resource Conservation.

Chapter 5 of the San Francisco Environment Code ("Resource Conservation") is incorporated herein by reference. Failure by ARCHITECT to comply with any of the applicable requirements of Chapter 5 will be deemed a material breach of contract.

61 Public Access to Meetings and Records

If the Contractor receives a cumulative total per year of at least \$250,000 in CITY funds or CITY-administered funds and is a non-profit organization as defined in Chapter 12L of the San Francisco Administrative Code, Contractor shall comply with and be bound by all the applicable provisions of that Chapter. By executing this Agreement, the Contractor agrees to open its meetings and records to the public in the manner set forth in §§12L.4 and 12L.5 of the Administrative Code. Contractor further agrees to make good faith efforts to promote community membership on its Board of Directors in the manner set forth in §12L.6 of the Administrative Code. The Contractor acknowledges that its material failure to comply with any of the provisions of this paragraph shall constitute a material breach of this Agreement. The Contractor further acknowledges that such material breach of the Agreement shall be grounds for the CITY to terminate and/or not renew the Agreement, partially or in its entirety.

62 Preservative-treated Wood Containing Arsenic

Contractor may not purchase preservative-treated wood products containing arsenic in the performance of this Agreement unless an exemption from the requirements of Chapter 13 of the San Francisco Environment Code is obtained from the Department of the Environment under Section 1304 of the Code. The term "preservative-treated wood containing arsenic" shall mean wood treated with a preservative that contains arsenic, elemental arsenic, or an arsenic copper combination, including, but not limited to, chromated copper arsenate preservative, ammoniacal copper zinc arsenate preservative, or ammoniacal copper arsenate preservative. Contractor may purchase preservative-treated wood products on the list of environmentally preferable alternatives prepared and adopted by the Department of the Environment. This provision does not preclude Contractor from purchasing preservative-treated wood containing arsenic for saltwater immersion. The term "saltwater immersion" shall mean a pressure-treated wood that is used for construction purposes or facilities that are partially or totally immersed in saltwater.

63 Services Provided by Attorneys

Any services to be provided by a law firm or attorney must be reviewed and approved in writing in advance by the CITY Attorney. No invoices for services provided by law firms or attorneys, including, without limitation, as subcontractors of Contractor, will be paid unless the provider received advance written approval from the CITY Attorney.

64. Food Service Waste Reduction Requirements

Contractor agrees to comply fully with and be bound by all of the provisions of the Food Service Waste Reduction Ordinance, as set forth in San Francisco Environment Code Chapter 16, including the remedies provided, and implementing guidelines and rules. The provisions of Chapter 16 are incorporated herein by reference and made a part of this Agreement as though fully set forth. This provision is a material term of this Agreement. By entering into this Agreement, Contractor agrees that if it breaches this provision, City will suffer actual damages that will be impractical or extremely difficult to determine; further, Contractor agrees that the sum of one hundred dollars (\$100) liquidated damages for the first breach, two hundred dollars (\$200) liquidated damages for the second breach in the same year, and five hundred dollars (\$500) liquidated damages for subsequent breaches in the same year is reasonable estimate of the damage that City will incur based on the violation, established in light of the circumstances existing at the time this Agreement was made. Such amount shall not be considered a penalty, but rather agreed monetary damages sustained by City because of Contractor's failure to comply with this provision.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day first mentioned above.

ARCHITECT

Recommended by:

Samuel Chui, Project Manager

Name

Address

Edgar Lopez, CITY Architect and Deputy Director

CITY State Zip

Approved as to Form:
Dennis J. Herrera
CITY Attorney

I have read and understood Sec. 31, the CITY's statement urging companies doing business in Northern Ireland to move towards resolving employment inequities, encouraging compliance with the MacBride Principles, and urging San Francisco companies to do business with corporations that abide by the MacBride Principles.

By
Deputy CITY Attorney

Approved:

Mohammed Nuru, Director of Public Works

By
Signature

Name Title

Area Code Phone Number

Federal Employer Number

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Attachment 1 – Schedule of Services

PHASE AND TASKS		DURATION	SCHEDULE
1.	Program Validation	7 weeks	October - December 2015
	Owner Review	3 weeks	
2.	Conceptual Design	12 weeks	November 2015 – February 2016
	Owner Review	3 weeks	
3.	Schematic Design	12 weeks	February – May 2016
	Owner Review	3 weeks	
4.	Design Development	16 weeks	May – September 2016
	50% DD Progress Set		
	Owner Review	3 weeks	
	100% DD Documents		
	Owner Review	3 weeks	
	CM/GC Bid – MEP & Curtain Wall	4 weeks	April - August 2016
5.	Construction Documents	36 weeks	October 2016 – June 2017
	50% CD Progress Set	14 weeks	October 2016 – February 2017
	Owner Review	3 weeks	
	95% CD Progress Set	15 weeks	February – May 2017
	Owner Review	3 weeks	
	Building Permit Process	35 weeks	December 2016 – July 2017
	Final Construction Documents	9 weeks	May - July 2017
6.	Construction Bid/Negotiation Phase		
	Site Preparation & Foundation	8 weeks	March – May 2017
	Building	8 weeks	July – September 2017
	Conformed Set	2 weeks	September 2017
7.	Construction Phase	118 weeks	October 2017 – December 2019
8.	Warranty Phase	52 weeks	January 2020 – December 2020

Attachment 2 -Fee Schedule

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Overall A-E Fee Per Phase

Discipline	Program Verification	Concept Design	Schematic Design	Design Development	Construction Documents	Bidding/Negotiation	Construction Admin.	Warranty Phase	Total A-E - 09/30/2015
Architecture/int./Equip/LA - HOK	55.29%	57.68%	28.91%	44.03%	47.47%	55.38%	34.24%	100.00%	4,408,011
Forensic Prog./Planning - HOK DG	32.11%	5.29%	5.26%	6.63%	4.71%	7.84%	3.50%	0.00%	585,970
Architecture - MEI - LBE	1.12%	6.33%	8.53%	11.19%	12.54%	3.53%	35.24%	0.00%	1,724,000
Structural - SOHA	0.00%	4.12%	8.32%	10.15%	12.65%	1.57%	9.61%	0.00%	1,010,000
MEP, FP & Energy Mdl - RGV	4.77%	16.34%	34.77%	8.60%	0.28%	0.00%	0.00%	0.00%	950,250
MEP & FP Peer Review - HOK	0.00%	1.15%	1.69%	1.13%	4.62%	6.28%	8.38%	0.00%	414,500
Civil/Telemon	0.00%	0.82%	1.84%	2.49%	3.56%	0.78%	1.42%	0.00%	231,000
Cost Estimating - Cumming	5.62%	3.94%	2.12%	3.75%	5.93%	4.39%	0.00%	0.00%	332,175
Acous/Low Voltage/IT/Sec - SFM	0.00%	0.00%	3.11%	2.04%	2.08%	6.12%	1.04%	0.00%	194,080
Vibration - CGA	0.00%	0.58%	0.67%	0.32%	0.22%	0.00%	0.23%	0.00%	35,350
Lighting Design - JS Nolan	0.00%	0.00%	0.39%	3.30%	0.74%	1.50%	1.22%	0.00%	139,688
Waterproofing: Skin & Roof - AB&B	0.00%	0.00%	0.63%	1.26%	0.84%	4.47%	1.68%	0.00%	113,250
Parking - Watry	0.00%	1.65%	0.86%	0.58%	0.58%	1.57%	0.06%	0.00%	60,000
Security Hardware - HOK	0.00%	0.00%	0.26%	0.20%	0.31%	0.00%	0.29%	0.00%	25,200
Code - Building	0.00%	0.00%	0.68%	0.37%	0.35%	2.82%	0.00%	0.00%	33,600
Code - ADA - ARC	0.00%	0.00%	0.53%	0.76%	0.00%	0.00%	0.00%	0.00%	48,405
Signage - K/Keating	0.00%	0.00%	0.08%	1.74%	0.82%	1.78%	1.06%	0.00%	95,150
LEED Documentation - HOK	0.00%	1.55%	0.65%	0.79%	0.87%	0.00%	1.81%	0.00%	112,020
Vertical Transportation - Syska	0.00%	0.00%	0.41%	0.49%	0.54%	1.96%	0.19%	0.00%	40,827
ASCLAD Advisor	1.09%	0.55%	0.29%	0.17%	0.12%	0.00%	0.04%	0.00%	19,698
TOTALS A-E Fees Per Phase	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	10,573,174
HOK Percentage/Fee	87.40%	65.67%	36.77%	52.79%	57.97%	69.50%	48.22%	100.00%	5,545,701
LBE Percentage/Fee	1.12%	7.15%	14.49%	21.52%	20.52%	13.72%	39.98%	0.00%	2,432,323
Other Percentage/Fee	11.48%	27.17%	48.74%	25.69%	21.51%	16.79%	11.80%	0.00%	2,595,150
TOTALS A-E Fees	2.03%	6.89%	16.48%	22.82%	25.27%	1.21%	24.61%	0.69%	10,573,174
HOK - Reimbursable Expenses	\$4,132	\$10,288	\$23,088	\$12,240	\$36,400	\$3,972	\$38,296	\$2,424	\$130,840
Travel Allowance	\$6,000	\$30,200	\$24,200	\$9,000	\$9,000	\$1,500	\$1,500	\$1,500	\$79,900
Total A-E Fees	22.64%	77.36%	18.29%	24.87%	27.75%	1.34%	26.99%	0.77%	10,783,914

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Attachment 3 – HOK Exhibit - A Compensation, Services & Schedule

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Exhibit – A

Compensation, Services & Schedule

Architecture

City of San Francisco Traffic Company and Forensic Services Division Facility

City of San Francisco Department of Public Works

Current version date: 2015-11-09

Revisions		
1	2015-05-29	Final Issued to DPW
2	2015-09-01	Phase 1 - Final
3	2015-11-09	Agreement Modification 1
4		
5		

EXHIBIT-A

COMPENSATION, SERVICES & SCHEDULE

Dated: November 9, 2015

A1.0 PROJECT INFORMATION

A1.1 An index of defined terms and expressions is stated in the Agreement.

A1.2 "**Project Information**" means the information stated in this Article and forms the basis of the Services, Compensation and Schedule stated in this Exhibit. If the Project Information is modified, the Services, Schedule and/or Compensation will be adjusted as necessary to accommodate the change.

A1.3 "**Client's Program**" means the Client's requirements for the Project as stated in the following document:

Title: Request For Qualifications Document for Traffic Company & Forensic Services Division Facility

Date: August 8, 2014

A1.4 "**Project**" is described as:

New 107,000 gross square foot four-story building to house City of San Francisco Police Department's Traffic Company Division & Forensic Services Division Facility.

A1.5 "**Project Site**" means the physical location of the Project as follows:

The new facility will be located at 1995 Evans Street on a site located at the southeast corner of Evans & Toland in San Francisco, California. The site is approximately 2.28 acres.

A1.6 "**Subconsultants**" are the following third-parties retained by HOK to perform a portion of the Basic Services under this Agreement:

<u>Discipline:</u>	<u>Subconsultant:</u>
Associate Architect	MEI Architects
Mechanical/Electrical/Plumbing	R.G. Vanderweil Engineers & HOK Engineering – San Francisco
Structural Engineer	SOHA Engineers
Civil Engineer	Telamon Engineering Consultants, Inc
Cost Estimating	Cumming Construction Management
A-V, Low Voltage, IT, Security Electronics, Acoustics & Noise Engineer	Smith, Fause & McDonald, Inc.
Vibration Engineering	Collin Gordon & Associates
Lighting Design	JS Nolan + Associates
Waterproofing, Roofing & Curtain Wall Peer Review	Allana Buick & Bers, Inc
Security Hardware	HOK - Architecture
Parking Design	Watry Design, Inc.
Building Code Consultant	The Fire Consultants
ADA Code Consultant	A.R. Sanchez-Corea & Associates, Inc.
Signage Consultant	Kate Keating Associates, Inc.
LEED Documentation	HOK – San Francisco
Fire Protection Engineer	R.G. Vanderweil Engineers & HOK Engineering – San Francisco
Energy Modeling	R.G. Vanderweil Engineers
Vertical Transportation	Syska Hennessy Group
ASCLAD/Lab Advisor	Bennie Del Re

A1.7 "**Sustainable Design Objective**" means the Client's objective for the Project to obtain certified rating of:

LEED - Gold

A1.8 "Sustainable Design Guidelines" mean the applicable criteria for achieving the Sustainable Design Objective as follows:

LEED Version 3]

A2.0 COMPENSATION

A2.1 "Basic Compensation" is the fee Client will pay HOK for performing Basic Services as follows (*select one*):

The stipulated sum of: Refer to Prime Agreement – Article 8 distributed on a monthly basis

A2.2 "Additional Compensation" is the additional fee Client will pay HOK for performing Additional Services described under Section A3.2. Additional Compensation will be mutually agreed to in writing by HOK and Client. In the absence of mutual agreement, Additional Compensation for HOK is determined by multiplying the number of hours required to perform Additional Services, multiplied by the applicable Hourly Billing Rates stated in Section A2.3. Additional Compensation for a Subconsultant is determined by multiplying the number of hours required to perform Additional Services, multiplied by the applicable hourly rate stated in the contract between HOK and the Subconsultant.

A2.3 "Hourly Billing Rates" are the billing rates for HOK personnel stated below and the billing rates specified in HOK's contracts with its Subconsultants.

Billable Employee: _____ Hourly Billing Rate: _____

REFER TO ATTACHMENT 6 OF THE PRIME A/E DESIGN SERVICES AGREEMENT

A2.4 "Reimbursable Expenses" are paid in addition to Compensation at the rate of one times the actual cost of Reimbursable Expenses. Reimbursable Expenses include any expense allowed per Article 8.4 of the Agreement, and incurred by HOK and/or its Subconsultants in performance of this Agreement. Reimbursable Expenses include, but are not limited to, the following:

.1 REFER TO ARTICLE 8.4 OF THE A/E DESIGN SERVICES AGREEMENT

.2

A3.0 SERVICES

A3.1 "Basic Services" consist of those described below and include Services of the Subconsultants identified in Section A1.6.

A3.1.1 Project Administration Services

- .1 Project administrative services shall be as described in the Prime A/E Design Services Agreement
- .2 HOK shall manage the Services performed by HOK and its Subconsultants. HOK will consult with the Client, research applicable design criteria, attend Project meetings, communicate with members of the Project team and report progress to the Client.
- .3 Consistent with the Standard of Care, HOK shall coordinate its Services with services performed by Client and Client's other consultants. HOK may rely on the accuracy and completeness of services and information furnished by Client and Client's other consultants. HOK shall provide notice to Client if it becomes aware of any error, omission or inconsistency in services performed by or through Client.
- .4 HOK shall offer for Client's consideration and approval environmentally responsible design alternatives, such as material choices and building orientation, together with other considerations based on Client's Program and aesthetics.
- .5 HOK shall consider the value of alternative materials, building systems and equipment, together with other considerations based on Client's Program and aesthetics in developing a design for the Project that is consistent with Client's Program, Schedule and Budget.
- .6 Meeting Minutes: HOK to document and distribute all project meeting minutes during design phase. HOK shall maintain a log of various project design action items. Items will be closed once resolutions is recorded.
- .7 HOK shall contact as necessary, the Governing Authorities required to approve the Contract Documents and the entities providing utility services to the Project. In designing the Project, HOK shall respond to applicable design requirements imposed by Governing Authorities and by such entities providing utility services. HOK shall assist Client in connection with Client's responsibility for filing documents required for the approval of Governing Authorities.

A3.1.2 Program Validation:

- .1 HOK shall review Client's RFP Bridging Documents and other Project Information, each in terms of the other, to ascertain the general requirements of the Project. HOK shall notify Client of: (1) any inconsistencies discovered in the Project Information; and (2) other information or consulting services that may be reasonably needed for the Project.
 - .1 Bridging Document cost estimate validation: HOK to review & validate cost estimate values included in Bridging Document.
- .2 Detailed Program Validation meetings with City Traffic Company & Forensic Services Division staff to expand on details of each space shown in the RFP Bridging Documents, dated June 2013. HOK shall seek additional information to validate spaces/rooms/function noted in Space Program. Each unit/department will be interviewed separately. Topics to be discussed include:
 - .1 Confirm functions/space/rooms.
 - .2 Confirm staffing numbers and positions.
 - .3 Identify tasks performed in each unit/space/room.
 - .4 Confirm space relationships to other room/lab functions.
 - .5 Identify equipment to be located in each unit. (new & existing).
 - .6 Discuss evidence flow and circulation patterns as noted in the RFP Bridging Document.
 - .7 Discuss internal security and safety requirements in regards to evidence handling as noted in the RFP Bridging Document.
 - .8 Discuss special storage requirements as noted in the RFP Bridging Document.
 - .9 Discuss building utilities required for each space.
 - .10 Discuss parking requirements as noted in the RFP Bridging Document.
- .3 Prepare meeting summaries. HOK to issue for owner confirmation of information gathered.
- .4 Project research: To support evaluation of area/space/room square footage projections HOK shall:
 - .1 Review Bridging Documents and previous studies (including pertinent strategic planning and long-range operational procedures.).
 - .2 Identify new technologies or advancements technologies, which may impact spaces/rooms/functions noted in the RFP Bridging Documents.
 - .3 Obtain and document applicable City space planning requirements for office and lab spaces, if any.
 - .4 Review applicable advancements in equipment technology and procedures.
 - .5 Research applicable demographics, crime trends, and caseload trending. City to provide historical data for caseload.
 - .6 Research applicable regulatory trends, which impact the programming and planning of each function.
 - .7 Verify ASCLD/Lab accreditation factors.
 - .8 Review inventory list of laboratory equipment & non-laboratory equipment/furnishing provided by the client and as noted in the RFP Bridging Documents.
- .5 Additional Program Validation interviews will be performed with:
 - .1 Department Directors to review proposed organizational structure, operational procedures, goals, evidence flow.
 - .2 Administration/support staff.
 - .3 Training facilities.
 - .4 Evidence unit interviews (evidence intake, evidence flow, and storage).
 - .5 Facility and site security and communication requirements interview.
 - .6 Interviews with Special City Focus Groups (e.g. safety, biohazards, chemical storage, ASCLD/Lab issues, etc.).
 - .7 City General Services and facilities management personnel.

- .8 Follow-up interviews with Traffic Company & Forensic Science Lab Representatives to review draft space/room spreadsheets and room criteria sheets.
- .6 Program Validation Task:
 - .1 Prepare final evaluation report regarding RFP Bridging Documents and information gather during interviews with building users.
 - .2 Define shared spaces and operational efficiencies.
 - .3 Upgrade space program and support documents based upon information gathered during program validation.
 - .4 Provide descriptions of departments and spaces.
 - .5 Evaluate general building and site security strategy as noted in the RFP Bridging Document.
 - .6 Evaluate evidence intake, storage & disposition needs as noted in the RFP Bridging Document.
 - .7 Evaluate safety & biohazard issues as noted in the RFP Bridging Document.
 - .8 Review site planning criteria as noted in the RFP Bridging Document.
 - .9 Submit preliminary project report for owner review.
- .7 Prepare Program Validation Report for City review to include:
 - .1 Preface and introduction.
 - .2 Executive summary.
 - .3 Narrative addressing program validation findings and research data collected during evaluation process.
 - .4 Update preliminary equipment data list/sheets. (Based upon equipment & furniture inventory documents prepared by others.)
 - .5 Narrative and/or diagram of ideal lab module.
 - .6 Adjacency diagrams.
 - .7 Flow diagrams for evidence.
 - .8 Narrative addressing RFP Bridging Document cost estimate.
- .8 Review Program Validation report with Owner & Key Stake Holders.
 - .1 Revise report per Owner review comments.
 - .2 Submit final document.
- .9 Deliverables: Program Validation Report. Report shall be in 8-1/2" x 11" format. One electronic PDF copy shall be submitted to the City of San Francisco.
- .10 HOK shall submit the Program Validation report for Client's review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen (15) days following receipt of the Program Validation report. HOK shall provide written respond to Client's written comments within ten (10) days following receipt.

A3.1.3 Conceptual Design:

- .1 Project Kick-off (Visioning & Goals) Session: Prior to start of Conceptual Design the design team shall lead a one-day Project kick-off / Visioning session with the Owner and key project stake holder. Intent of Kick-off Session is: introduction of all key personnel involved in this project, discuss role of key personnel, discuss project schedule, scope or work, owner goals and HOK project design approach. HOK shall review topics and issues to be discussed during the interview process. HOK shall conduct a "Forensic Science Laboratory Planning Seminar" to discuss what it takes to design a forensic science lab.
- .2 Tour of existing Forensic Science facilities within the State of California: At the beginning of the Conceptual Design phase the Owner, key project stake holders and HOK shall tour existing facilities within California for benchmarking comparison for the new Traffic Company & Forensic Services Division (TCFSD) Facility. Tour will consist of 2-3 day travel within California. HOK shall photo document and prepare report highlighting key features viewed during tours.

- .3 Design Charrette Meeting: The HOK design team and client shall attend and participate in a one day design charrette. Design team shall meet with City representatives prior to the Charrette to prepare, gather and document project design issues and possible design solutions. Design Charrette meeting shall involve design team presentation to client of design issues and discuss possible design solutions. Design team participants to include architectural, lab designer, structural, mechanical, electrical, plumbing, civil, landscape.
- .4 Architectural
 - .1 Based upon Program Validation finding HOK will present Client alternative approaches to design and construction of the Project, including the feasibility of incorporating environmentally responsible design approaches consistent with achievement of the Sustainable Design Objective. HOK shall reach an understanding with Client regarding sustainable strategies and requirements of the Project.
 - .2 Prepare conceptual site plan. Showing building block, parking garage, on-site parking, driveways, proposed site amenities and building support spaces. (No less than three concepts.).
 - .3 Prepare overall floor plans for each floor level. Showing office spaces/rooms, laboratory suites, circulation paths, corridors, vertical circulation (stairways and elevators.).
 - .4 Prepare conceptual forensic services lab floor plans for each laboratory department/unit. (up to three refined, fully-developed concepts).
 - .5 Develop conceptual lab module(s) and overall adjacency diagram(s).
 - .6 Prepare conceptual exterior elevations. (up to three concepts).
 - .7 Provide building/site sections.
 - .8 Prepare stacking diagrams.
 - .9 Prepare massing models for each concept.
 - .10 Prepare space/room data sheets based upon information gathered during interview sessions. Square footage numbers will be shown for move-in day, as well as future space projections. Future projection duration to be confirmed with the City. Room data sheets shall note building utilities, equipment, casework, furniture, room finishes, occupants, special issues impacting design, adjacencies, security requirements, etc.
 - .11 Compile design guidelines/room criteria sheets.
 - .12 Collect catalog cut-sheets of new owner-furnished equipment (laboratory and office equipment) and new equipment (Laboratory & Non-laboratory). (Inventory of existing equipment & furniture shall be prepared by others.).
 - .13 Prepare narrative for program descriptions, evidence flow report, safety/biohazards report, and site analysis report.
 - .14 Narrative covering demographics and trends summary.
 - .15 Narrative designer guidelines.
- .5 Structural
 - .1 Prepare report addressing Structural System options, foundation system options and seismic recommendations, including cost impacts.
 - .2 Coordinate structural system recommendation with Geotechnical Report.
- .6 Civil
 - .1 This work will include preparation of conceptual design level exhibits, programming level, for use in design team coordination. (Civil document will be prepared based upon site survey data provided by others.).
 - .2 Site Improvements (Coordinate with City Landscape Architects on landscape design.).
- .7 Prepare Basis of Design (BOD) Report: BOD to address the following:
 - .1 Mechanical/Electrical/Plumbing/Fire Protection:

- .1 Meet with City personnel to understand the operations, maintenance and fiscal requirements of City Building Systems. Discuss proposed systems for new TCFSD Facility.
 - .2 Meet with City's Commissioning Agent to review and discuss project requirements for commissioning, which will be performed by a 3rd party retained by the City.
 - .3 Identify potential Building Systems.
 - .4 List the most cost effective Building Systems for the new TCFSD Facility, including cost impacts.
 - .5 Building Management System options and selected system.
 - .6 Identify special systems (fire alarm, public address, audio/visual, parking control, etc.).
 - .7 Mechanical, Plumbing & Electrical Engineers to verify if existing off-site utilities can accommodate new TCFSD Facility needs. Coordinate point of connection with Civil Engineer.
 - .8 Lighting Design overall approach, design criteria, target illumination and luminance levels, preliminary power densities, color temperatures and switching and control design intent.
- .2 Life Cycle Cost Analysis and study of energy savings measures to assist in the system selection.
 - .3 Security (Electronic & Hardware):
 - .1 Meet with Forensic Science Lab Staff to discuss security issues related to building, evidence, and site.
 - .2 Meet with City General Services Staff to discuss and review City security requirements related to new TCFSD Facility.
 - .3 Coordinate with Lab Planning Consultant to review internal TCFSD Facility security issues and needs.
 - .4 Prepare report addressing Security System recommendations, including cost impacts.
 - .5 Verify ASCLD/LAB accreditation requirements.
 - .4 Acoustical & Vibration:
 - .1 Provide a report identifying vibration and acoustical requirements for each space, building and site.
 - .2 Provide comparison to previous studies related to current and future usages.
 - .3 Meet with City's TCFSD Facility staff to review and discuss acoustical and vibration issues.
 - .5 Telecommunication:
 - .1 Meet with TCFSD Facility Staff to discuss telecommunication issues.
 - .2 Meet with City General Services Staff to discuss and review City telecommunication requirements related to new TCFSD Facility.
 - .3 Prepare report addressing telecommunication system recommendations, including cost impacts.
 - .6 Audio Visual:
 - .1 Meet with client representatives review proposed facility and receive criteria for function of project audio-visual system(s).
 - .2 Identify image sizes appropriate to each room size, configuration and use based on the criteria outlined by the Client for the use of the system(s).
 - .3 Provide information to client on aspects of audio-visual systems impact on architectural design, including AV Systems equipment casework/credenza/room/control room requirements (size, location, adjacencies) screen location sizes and items in public view. Provide catalog cuts for review.

- .7 Public Address System:
 - .1 Meet with client representatives review proposed facility and receive criteria for function of public address system(s).
 - .2 Provide information to Client on aspects of public address systems impacting architectural design, including public address requirements (size, head end location, adjacencies) and items in public view.
 - .3 Provide catalog cuts for review.
- .8 Parking Planning:
 - .1 Review the project's parking program provided by the client, and the City's requirements for this project as they relate to parking.
 - .2 Assist in establish the parking design criteria agreed upon by the Client to be used by the team throughout the remaining phases of the project. This may include but is not limited to: Parking stall sizes, Parking Geometrics, Drive aisle widths, ADA Criteria, Other Special Criteria furnished by the Owner, Loading and site access requirements.
 - .3 Conduct Parking Demand Analysis.
- .8 LEED:
 - .1 Conduct Sustainable Charrette with owner and design team at start of programming phase.
 - .2 Prepare preliminary LEED credit checklist.
- .9 Probable Cost Estimate:
 - .1 Prepare preliminary probable project cost estimate based upon program report, conceptual design and BOD selected building systems.
 - .2 Cost estimate will be prepared for each design schemes.
- .10 Client Meetings: Bi-weekly (every two weeks) HOK meeting with City project manager and TCFSD Facility representative.
- .11 Design Team Meetings: Bi-weekly Design Team meeting at HOK San Francisco office.
- .12 HOK shall perform a quality control review of documents as outlined in Attachment 5 of the Agreement, prior to issuance to client.
- .13 Deliverables: Conceptual Design drawings, report, and probable cost estimate. Reports shall be in 8 1/2" x 11" report format and drawings in 30" x 42" format. One electronic PDF copy shall be submitted to the City of San Francisco.
- .14 HOK shall submit the Conceptual Design Documents for Client's review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen working (15) days following receipt of the Conceptual Design Documents. HOK shall provide written respond to Client's written comments within ten (10) working days following receipt.

A3.1.4 Schematic Design Phase Services

- .1 Based the approved conceptual design, HOK shall prepare Schematic Design Documents for Client's approval. The Schematic Design Documents will consist of drawings and other documents, including site plan, preliminary building plans, sections and elevations; and may include some combination of study models, perspective sketches, or digital modeling. Preliminary selections of major building systems and construction materials will be noted on the drawings or described in writing.
- .2 Pre-design meeting: The design team shall meet with the owner and TCFSD Facility representative to discuss various issues of the project prior to starting the schematic design phase. (Architectural, lab designer, structural, civil, landscape, cost estimator, sustainable LEED, acoustical, mechanical and electrical to attend).
- .3 Design-Build Systems: The building mechanical, electrical, lighting design, low voltage electronic (telecom/data, electronic security and AV), plumbing and fire protection systems, exterior curtain wall system and facility signage will be completed under a design-build CM/GC approach. During

the SD phase HOK's design team will develop design criteria for these systems so they can be bid at the completion of the SD phase.

- .1 HOK shall prepare the SD level criteria package for the early core-trades and design-build components, fully coordinated with all other aspects of design, and sufficient for the purpose of soliciting design-build core trade subcontractors.

.4 Architectural:

- .1 Develop and present Schematic Design level site plan layout and building floor plan. Plans to indicate potential expansion areas for future.
- .2 Develop and present Schematic Design level building exterior for the design of this project (with cost estimate of each.).
- .3 Prepare a report identifying possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, and structural systems.
- .4 Prepare Schematic Design Drawings. Package to include:
 - .1 Site plan-showing walks, parking, site flow and required off-site features.
 - .2 Prepare single line floor plans (Identifying the various major areas, elevator cores, mechanical shafts, laboratory space layout and their relationship).
 - .3 Building sections and wall sections to indicate design intent.
 - .4 Building elevations.
 - .5 Roof plans.
 - .6 Parking Garage layout.
- .5 Prepare a chart/report comparing changes in size of each space from the final program to the final Schematic design plan.
- .6 Update room data sheets. Itemize all requirements for each space. Show staff positions, furnishings, equipment, security requirements, electrical, telecom, phone and special needs.
- .7 Electronic rendering / perspective drawing, as determined by HOK, to convey design intent. Rendering / Perspective to be color computer generated, at 600 DPI.
- .8 Material list (outline specifications).
- .9 Furniture, Furnishings and related Equipment Services: HOK shall prepare preliminary report covering new and existing furniture, furnishings and related equipment – both Laboratory items and Non-Laboratory items. Existing equip & furnishing list will be based upon inventory list prepared and provided by client.
- .10 Perform code search for proposed design (Title 24, CBC, ADA). Code search to be included in Schematic Design Report.
- .11 Meet with City and City Building officials to review zoning and code issues.
- .12 Meet with Planning and Building Departments to review project.
- .13 Meet with San Francisco Fire Department to review project.

.5 Civil:

- .1 Prepare civil grading & drainage plan of proposed site. Coordinate with Architect and City Landscape Architect on site design.
- .2 Prepare preliminary horizontal layout locating building and site features. (Driveways and roads).
- .3 Prepare preliminary storm, sanitary & water plans.
- .4 Identify site location of all utilities (new & existing) to 5 feet outside building.
- .5 Indicate off-site requirements (new & existing) such as sidewalks, curbing, bus stops, and site lights. Coordinate with City & County utility agencies.

- .1 Develop off-site civil engineering plans for the surrounding streets fronting project. Include demolition, coordination with utility agencies, show off-site improvements, show grading and drainage design within public right of way.
- .6 Prepare preliminary fire protection site plan. Locate fire hydrants, FDC's & PIV's.
- .7 SFPUC Storm water Management Control – Pre-application Meeting.
 - .1 Coordinate with team members on a schematic level of Storm water Management Plan and set up the Pre-application.
 - .2 Meet with owner's representative, design team members and the SFPUC.
- .6 Landscape & Irrigation: City & County of San Francisco Landscape Architecture department will prepare SD documents for landscape and irrigation. HOK to provide peer review and design assist for landscape and irrigation design documents.
 - .1 Landscape drawings to include site features such as planters, bollards and concrete paving.
- .7 Structural:
 - .1 Show structural system selection on plans.
 - .2 Foundation.
 - .3 Bay size and story heights.
 - .4 Type of construction.
 - .5 Preliminary frame sizes and extent of lateral bracing.
 - .6 Seismic description.
 - .7 Coordination with Soils Engineer for report modifications.
 - .8 Assist in the preparation of a report identifying possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, structural systems and construction delivery methods.
- .8 Mechanical:
 - .1 Update HVAC System selection (including Building Management System).
 - .2 Assist in the preparation of a report identifying possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, structural systems and construction delivery methods.
 - .3 Provide preliminary building load calculation.
 - .4 Provide preliminary meter and sewer main locations.
 - .5 Preliminary HVAC equipment layout and single line duct layout.
 - .6 Catalog cut of new HVAC equipment.
 - .7 Prepare design criteria documents plan and specification. At the end of SD phase CITY will issue mechanical system documents for Design-Build Contractor pricing.
- .9 Plumbing:
 - .1 Update plumbing system selection in report.
 - .2 Assist in the preparation of a report identifying possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, structural systems and construction delivery methods.
 - .3 Identify special plumbing needs and areas on plumbing plan.
 - .4 Preliminary plumbing equipment layout on plumbing plan.
 - .5 Preliminary building loads and calculations for report.
 - .6 Show roof drain locations on plumbing plans. Coordinate with civil engineer.
 - .7 Coordination with utility companies of point for connection and available service capacity. Coordinate with civil engineer.

- .8 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue plumbing system documents for Design-Build Contractor pricing.
- .10 Electrical:
 - .1 Lighting fixtures at key room/spaces, located on single line electrical plan. Prepare conceptual lighting studies and analysis.
 - .2 Assist in the preparation of a report identifying possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, structural systems and construction delivery methods.
 - .3 Coordination with utility companies of point of connection and available service capacity.
 - .4 Finalize Electrical System selection shown on one line electrical distribution diagrams.
 - .5 Probable pre-ordered equipment identified.
 - .6 Wire management system: Power, voice, and data.
 - .7 Preliminary electrical equipment schedule indicating size and capacity.
 - .8 UPS design requirements (identify equipment on UPS power).
 - .9 Provide feasibility studies that shall analyze methods of reducing electrical energy usage and summer peak electrical demand.
 - .10 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue plumbing system documents for Design-Build Contractor pricing.
- .11 Electronic Security:
 - .1 Develop security diagram on single line floor plans.
 - .2 Identify security system selection in report.
 - .3 Meet with City Staff and TCFSD Facility Staff to update security issues.
 - .4 Prepare specifications. Coordinate with City standard specifications. Document where deviations are made to City standards.
 - .5 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue electronic security system documents for Design-Build Contractor pricing.
- .12 Telecommunications/data:
 - .1 Prepare single line floor plans locating telecommunication devices and special space.
 - .1 Indicate equipment space requirements including any antennas.
 - .2 Show routing/ access requirements at furniture locations.
 - .2 Finalize telecommunication system selection.
 - .3 Meet with City Staff and TCFSD Facility Staff to update telecommunication issues.
 - .4 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue telecommunication/data system documents for Design-Build Contractor pricing.
- .13 Fire Protection:
 - .1 Identify fire protection system(s).
 - .2 Identify special areas and fire protection system in report.
 - .3 Locate service connection point on site plans. Coordinate with civil engineer and City & County of San Francisco Fire Department.
 - .4 Identify riser location on floor plans.
 - .5 Attend meeting with City & County of San Francisco Fire Department.
 - .6 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue fire protection system documents for Design-Build Contractor pricing.
- .14 LEED:
 - .1 Analyze and coordinate schematic design documents for LEED compliance.

- .2 Produce a written report noting LEED issues pertaining to site and building systems such as mechanical, electrical, plumbing, structural, security systems, and finishes.
- .3 Conduct sustainable design progress meeting with design team and client.
- .4 Coordinate green issues in regards to project outline specifications. Coordinate with City standard specifications.
- .15 Acoustical and Vibration:
 - .1 Prepare report identifying acoustical and vibration issues based upon schematic design documents.
 - .2 Review equipment list (Laboratory and Building Systems) and provide recommendation for noise and vibration remediation.
 - .3 Provide noise design criteria for interior spaces. Identify critical requirements both within and between spaces and at building perimeter.
 - .4 Coordinate with structural engineer & mechanical engineer on vibration remediation issues. Prepare guidelines to address potential vibration issues.
 - .5 Conduct on-site vibration survey to determine existing ambient vibration levels.
- .16 Audio Visual:
 - .1 Coordinate with Client and other Design Team members as to requirements for audio-visual systems to be incorporated in documents by other disciplines, including at least:
 - .2 Architectural:
 - .1 Presentation Podium: Equipment enclosure, control and A/V input requirements.
 - .2 Projection screen integration with reflected ceiling and wall elevations.
 - .3 Structural: Hanging, support and restraint provisions.
 - .4 Electrical: AC main power, grounding, power conditioning.
 - .5 Lighting Design: Requirements for ambient/glare lighting control in vicinity of screens and in large public spaces.
 - .6 Provide criteria sketches for use by other disciplines of the Project Design Team.
 - .7 Prepare Design Criteria documents for Audio-visual/Video Projection system subcontract drawings in Project standard format including at least:
 - .1 Conduit, wiring and device floor plans, rcp's and elevations of major public spaces.
 - .2 System functional diagrams.
 - .3 Screen and projector section views.
 - .4 Equipment rack elevations.
 - .5 Wiring details.
 - .6 Receptacle panel details.
 - .8 Provide specification Section 27 41 16 - Integrated Audio-Video Systems and Equipment in project standard format.
 - .9 At end of SD phase issue Audio Visual documents for the solicitation of proposals from prospective Design-Build Contractor. .
 - .17 Public Address System:
 - .1 Coordinate with Client and other Design Team members as to requirements for public address systems to be incorporated in documents by other disciplines.
 - .2 Prepare design criteria documents including specifications for public address system drawing. At end of SD phase issue public address documents for the solicitation of proposals from Design-Build Contractor pricing.
 - .3 Provide specification section.
- .18 Signage Design: prepare design criteria for building identification signage and wayfinding signage. Develop options for exterior and interior signage components showing approximate size, shape

and typographics. Coordinate color and material scheme with architect and owner. Incorporate required code and ADA signage.

- .1 At end of SD phase, prepare and issue Signage Design Criteria documents for Design-Build trade contractor procurement.
- .19 Client Meetings: Bi-weekly HOK meeting with City project manager and TCFSD Facility representative.
- .20 Design Team Meetings: Bi-weekly Design Team meeting at HOK San Francisco office.
- .21 Prepare probable construction cost estimate based on selected building systems. Cost Estimate to be based on square footage cost. Cost estimate to include a preliminary statement of probable construction cost. Cost Estimate is to include a chart comparing the change in cost elements from final Program phase cost estimate to final Schematic Design phase cost estimate.
- .22 Project specifications covering material, system, and equipment. Coordinate with City requirements. HOK to document where deviations are made to City requirements.
- .23 Update BOD report narratives report by each discipline. Describing proposed design philosophy with a description of, and rationale for the following: proposed lab design & layout, proposed structural systems, types of MEP & FP equipment, electronic security systems, architectural materials and finishes, audio visual systems, public address systems, site development and landscaping. The rationale shall include initial cost, life cycle cost and life expectancy considerations.
- .24 Exterior Envelope Peer Review Report: Prepare report addressing design guidelines for slab-on-grade vapor barriers, exterior curtain wall systems, exterior walls, exterior glazing system and building roofing system.
- .25 Elevator traffic analysis: Perform elevator traffic analysis to review proposed elevator schemes and verify the selected design is appropriate. Review Elevator core and layout with architect and owner.
- .26 Update Project Schedule with critical dates identified. Project Schedule to show progress and submittal dates for documents.
- .27 HOK shall perform a quality control review of documents prior to issuance to client.
- .28 Deliverables: Schematic Design report, rendering / perspective drawing (30" x 40"), specifications, probable cost estimate in 8 1/2" x 11" format and 30" x 42" drawings. One electronic PDF copy shall be submitted to the City.
- .29 HOK shall submit the Schematic Design Documents for Client's review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen (15) days following receipt of the Schematic Design Documents. HOK shall provide written respond to Client's written comments within ten (10) days following receipt.

A3.1.5 Design Development Phase Services

- .1 Based the approved Schematic Design Documents, HOK shall prepare Design Development Documents for Client's approval. The Design Development Documents will illustrate and describe the development of the approved Schematic Design Documents and will consist of drawings and other documents including plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, and such other elements as may be appropriate.
- .2 Design-Build Systems: City & County of San Francisco have determined the building mechanical, electrical, lighting design, low voltage electronics (telecommunication/data, electronic security & AV), signage, plumbing and fire protection systems will be completed under a design-build approach. During the DD phase HOK's design team will provide peer review services.
- .3 Design-Build Exterior Curtain Wall System: City & County of San Francisco have determined Exterior Curtain Wall will be completed under a design-build CM/GC approach. During the DD phase Exterior Curtain Wall sub-contractor shall develop DD level documents for the exterior curtain wall system with design-assistance from HOK.
- .4 Architectural:
 - .1 Site plan – showing property lines, setbacks, and easements, paved areas, landscape areas, site furniture and features, fences, gates, signage, vehicle parking areas and building outline. Note off-site features effecting project design.

- .2 Building floor plans– identify rooms, wall types, firewalls, openings and primary building dimensions.
 - .3 Building Roof plan- showing roof slopes, roof top equipment, rooftop accessories and roof drainage.
 - .4 Building sections and typical wall sections.
 - .5 Reflected Ceiling Plans show various ceiling types and heights with lights, diffusers, etc. (coordinate with mechanical and electrical).
 - .6 Large scale plans – Restrooms, laboratory spaces/suites, stairs and elevator cores.
 - .7 Interior elevations of restrooms, non-laboratory spaces and casework.
 - .8 Building exterior elevations – Indicating materials, vertical dimensions and gridlines.
 - .9 Special interior and exterior details.
 - .10 Outline color schedule and material boards.
 - .11 Interior space planning for laboratory spaces.
 - .12 Casework/Finish and Equipment Schedules.
 - .13 Preliminary Finish Schedule.
 - .14 Preliminary Door and Hardware Schedule.
 - .15 Project equipment (laboratory & office equipment) Contractor Furnished and Owner Furnished.
 - .16 Update room data sheets. Itemize all requirements for each space. Show staff positions, furnishings, equipment, security requirements, electrical, telecom, phone and special needs.
 - .17 Parking garage – continue refinement of parking garage design including access/ egress, control systems and signage.
- 5 Civil:
- .1 Develop site grading plan. Show preliminary site contours, improvements on-site and typical off-site frontage improvements. Indicate all benchmarks. Location of major elements relative to benchmarks, corners etc.
 - .2 Prepare storm, drainage and water plans.
 - .3 Continue to develop drainage plan (coordinated with plumbing).
 - .4 Prepare preliminary site details (driveway sections, etc.) and civil project notes.
 - .5 Off-site utility coordination, show location of all point-of-connections, including invert elevations. Coordinate with City for required off-site utility improvements necessary for the project.
 - .6 Preliminary on-site Utility layout plans.
 - .7 Preliminary fire protection site plan.
 - .8 Develop Storm Water Management Plan (SCP)
 - .1 Provide preliminary calculation for the sizes of various Low Impact Development (LIDs) concepts to the team members. Provide typical LID elements sections and details.
 - .2 Gather information provided by other team members, including Architect, Plumbing Engineer and Landscape Architect on LID elements, watershed and piping system. Prepare Preliminary SCP application package and submittal to SFPUC.
- 6 Landscape & Irrigation: City & County of San Francisco Landscape Architecture department will prepare DD documents for landscape and irrigation. HOK to provide peer review and design assist for landscape and irrigation design documents and to coordinate the work of the landscape architect with those of other architectural and engineering disciplines.
- .1 Landscape drawings to include site features such as planters, bollards and concrete paving.

- .7 Structural:
 - .1 Structural floor plans showing all column, shears walls, shaft openings and stairs, etc.
 - .2 Structural roof framing plans showing primary dimensions, all framing members.
 - .3 Foundation and framing grids.
 - .4 Typical framing section and details.
 - .5 All loads defined, lateral defined and major elements located.
 - .6 Preliminary footing, beam, column, and connection schedules.
 - .7 Preliminary structural member sizes, based on all typical vertical loads.
- .8 Mechanical / Electrical / Plumbing / Fire Protection:
 - .1 Provide peer review for mechanical, electrical, plumbing, and fire protection drawings and specifications prepared by design-build MEP & FP engineers.
- .9 Telecommunication/data:
 - .1 Provide peer review for telecommunication/data drawings and specifications prepared by design-build telecom/data engineers.
- .10 Electronic Security System:
 - .1 Provide peer review for electronic security drawings and specifications prepared by design-build electronic security engineers.
- .11 Audio Visual:
 - .1 Provide peer review for audio/visual drawings and specifications prepared by design-build AV engineers.
- .12 LEED:
 - .1 Coordinate environmental sustainability strategies and issues with project specifications.
 - .2 Review and coordinate documents for LEED certification requirements.
 - .3 Prepare a life cycle cost-benefit analysis to evaluate solar, renewable & other alternate energy sources.
 - .4 Participate in, and provide peer review on, energy modeling study.
 - .5 Prepare daylight modeling study.
 - .6 Produce a written report covering all sustainability issues addressed by the project and identifying LEED points and associated strategies agreed to by the team, and noting LEED issues pertaining to building systems such as mechanical, electrical, structural, security systems.
- .13 Acoustical and Vibration:
 - .1 Prepare report identifying acoustical and vibration issues based upon Design Development documents.
 - .2 Review equipment list (Laboratory and Building Systems) and provide recommendation for noise and vibration remediation.
 - .3 Review documents for noise design criteria for interior spaces.
 - .4 Review documents for vibration issues.
- .14 Public Address System:
 - .1 Provide peer review for public address drawings and specifications prepared by design-build low voltage electronic engineers.
- .15 Elevator Design:
 - .1 Provide detailed design arrangement for all selected vertical transportation equipment including the number, size, speed, and arrangement of the vertical transportation equipment.
 - .2 Provide design information for interface with other engineering disciplines including:
 - .1 Equipment loads.
 - .2 Electrical power requirements.

- .3 Heat emissions.
 - .4 Ventilation requirements.
 - .5 Space requirements, including clearances, pit depths, and overrun heights.
 - .6 Equipment outlines.
 - .7 Security interface.
 - .8 Life Safety and Fire Protection.
- .3 Provide design information for interface with related work to be accomplished by other disciplines.
 - .4 Review architectural drawings as they relate to vertical transportation equipment. Provide written comments along with advice, assistance or information on any items related to the drawings, as required by the Architect.
 - .5 Prepare a draft specification using the standard C.S.I. format. The specification will include performance criteria and establish the quality of equipment required in sufficient detail to obtain preliminary budget pricing. Performance specifications shall include reference to applicable codes and standards.
- .16 Signage Design:
 - .1 Provide peer review for interior and exterior signage drawings and specifications prepared by design-build signage vendor.
 - .17 Preliminary probable construction cost estimate – quantity take-off based upon a building component format. Cost estimates to be prepared at 50% & Final DD. Cost Estimate is to include a chart comparing the change in cost elements from approved cost estimates.
 - .18 Client Meetings: Bi-weekly HOK meeting with County’s project manager.
 - .19 Design Team Meetings: Bi-weekly Design Team meeting at HOK San Francisco office.
 - .20 HOK to meet with planning/building officials to review project design goals & code issues. HOK to document meeting minutes.
 - .21 At completion of Design Development, the design team shall attend and participate in a two-day workshop or two one-day workshops to review the project design and specifications to identify value engineering opportunities.
 - .22 The Design Development Documents will include project specifications that identify major materials and systems and establish in general their quality levels. Project specifications to include product catalog cut-sheets and samples. Design-Build contractors/engineers to provide specifications and cut-sheets for their area of responsibility.
 - .23 Update BOD report noting probable construction cost, code analysis, ADA review. Design-Build contractors/engineers to address building system such as mechanical, electrical, structural, security systems and communication network. Include in Design Development phase report.
 - .24 Exterior Envelope Peer Review Report: Update report addressing assessment of current building design for slab-on-grade vapor barriers, exterior curtain wall systems, exterior walls, exterior glazing system and building roofing system.
 - .1 Incorporate recommendations for exterior curtain wall number and type of mock-ups and testing requirements.
 - .25 Project schedule – update. Prepare and update Project Schedule with critical dates identified. Project Schedule to show progress and submittal dates for design documents.
 - .26 HOK shall perform quality assurance/ quality control review of documents per Attachment 5 prior to issuance to client.
 - .27 Deliverables: Design Development phase report, specifications, probable cost estimate in 8 ½” x 11” format and 30” x 42” drawings. One electronic PDF copy shall be submitted to the City of San Francisco at 50% and 100% final DD review.
 - .28 HOK shall submit the Design Development Documents for Client’s review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen (15) working days following receipt of the Design Development Documents. HOK shall provide written respond to Client’s written comments within ten (10) working days following receipt.

A3.1.6 Contract Documents Phase Services

- .1 HOK shall incorporate into the Contract Documents the design requirements of Governmental Authorities.
- .2 Design-Build Systems: City & County of San Francisco have determined the building mechanical, electrical, lighting design, low voltage electronics (telecommunication/data, electronic security & A/V), signage, plumbing and fire protection systems will be completed under a design-build CM/GC approach. During the CD phase HOK's design team will provide peer review services for these disciplines.
- .3 Design-Build Exterior Curtain Wall System: City & County of San Francisco have determined Exterior Curtain Wall will be completed under a design-build CM/GC approach. During the CD phase Exterior Curtain Wall sub-contractor shall develop contract documents for the exterior curtain wall system with design-assistance from HOK.
- .4 During the development of the Contract Documents, HOK shall assist Client in the development and preparation of bidding and procurement information that describes the time, place and conditions of bidding, including bidding or proposal forms. Client shall provide HOK with a copy of the Conditions of the Contract for Construction (General, Supplementary and other Conditions) for review and written acceptance of any responsibilities assigned to HOK therein. HOK shall also compile a project manual that includes the Conditions of the Contract for Construction, specifications, and bidding requirements and bid forms.
- .5 Based on the approved Design Development Documents, HOK shall prepare Contract Documents for Client's approval. The Contract Documents will illustrate and describe the development of the approved Design Development Documents. Contract Documents will consist of Drawings and Specifications setting forth in detail the quality levels of materials and systems and other requirements for permitting and construction of the Work. Contract documents shall at minimum include the following documents:
 - .6 Architectural:
 - .1 Cover Sheet.
 - .2 General information including project location, abbreviations and symbols
 - .3 Site Plan.
 - .4 Code Analysis & ADA analysis drawings.
 - .5 Floor Plans – showing the type and location of interior partitions, doors, openings, plumbing fixtures, and standard building items.
 - .1 All doors, windows, and special doors with identifying numbers.
 - .2 Dimensions.
 - .3 Building Sections, Wall Sections, Enlarged Plans, Details, and Elevation references.
 - .4 All built-in items.
 - .6 Roof Plans
 - .1 Roof drains & overflow drains.
 - .2 All penetrations.
 - .3 Screens or railings.
 - .4 Gutters and downspouts.
 - .5 Roof and steel slopes.
 - .6 Rooftop equipment.
 - .7 Door Schedule:
 - .1 Door and hardware specifications and schedules showing the type, size, material, rating, locations, and manufacturer of doors, hardware, and keying based on Owner's instruction.
 - .8 Room Finish Schedule and Color Schedule: Show all room finishes, paint and material colors, and ceiling heights.
 - .9 Building Sections: Indicating major dimensions and wall section references.

- .10 Major Wall Sections: Indicating all heights. Indicating all finishes, materials, dimensions, detail references.
- .11 Building Elevations
 - .1 Show all glazing types.
 - .2 Indicate all materials.
 - .3 Indicate all finishes, colors, and textures.
 - .4 Show wall sections and detail references.
 - .5 If required for clarity show exterior door and exterior window reference numbers.
 - .6 Show outline of below-grade foundations and other structures.
- .12 Exterior Curtain Wall Details – HOK shall provide peer review & design assistance on exterior curtain wall drawings prepared by Design-build Exterior Curtain wall subcontractor.
- .13 Exterior Details: exterior roof details, exterior details (not included in the exterior curtain wall system) and other miscellaneous details to clarify the building design.
- .14 Interior Details. HOK to prepare details for such items as major interior wall types, interior windows and doors, interior wall details and other miscellaneous details.
- .15 Interior Elevations at key rooms (Restrooms, lobby and casework).
- .16 Large Scale Plans – restrooms, laboratory spaces, stairs and elevator cores.
- .17 Reflected Ceiling Plans – showing the pattern, alignment and type of ceiling, ceiling heights, soffit breaks, and window shading pockets, dimension, and location of lighting fixtures, HVAC diffusers and grilles, cameras, alarms, access panels, and any special features, such as skylights, AV equipment, or laboratory fixtures suspended from the ceiling.
 - .1 Lighting.
 - .2 Exit signs and speakers.
 - .3 Diffusers.
 - .4 Tile types.
 - .5 All walls penetrating the ceiling.
 - .6 Fire sprinkler heads at key locations (Lobby).
- .18 Interior color boards. Show textures, paint and material colors.
- .19 Laboratory schedules for casework, sink, countertops, laboratory equipment and fume hoods.
- .20 Parking Garage – include plans, building sections, elevations, stair and elevator sections, parking garage details and signage.
- .7 Civil:
 - .1 Civil drawings indicating horizontal construction and improvements, driveway, pavement sections and on-site concrete walkways & patios (indicate finish and texture).
 - .2 Grading Plans.
 - .3 Drainage plans.
 - .4 Site utilities; indicate invert elevations at all point-of-connections.
 - .5 On-site storm, sanitary and water plans.
 - .6 Prepare site fire design plan with pipe sizing, flow analysis, fire system layout, including fire hydrants, FDC's & PIV's.
 - .7 Final Off-site plans for frontage improvements. Coordinate with local building officials.
 - .8 Civil details & construction notes.
 - .9 Provide storm drainage calculation for site.
 - .10 Final Storm water Management Plan (SCP).

- .1 Set up and attend follow up meeting with owner's representative, design team members and SFPUC.
- .2 Coordinate with design team members to finalize SCP design and prepare Final SCP application package and submittal, including obtaining other design consultants documentations and final SCP calculation.
- .8 Landscape & Irrigation: City & County of San Francisco Landscape Architecture department will prepare CD documents for landscape and irrigation. HOK to provide peer review and design assist for landscape and irrigation design documents.
 - .1 Landscape drawings to include site features such as planters, bollards and concrete paving.
- .9 Structural:
 - .1 Detail structural drawings showing structural systems, foundations, and calculations.
 - .2 Foundation plans.
 - .3 All footing sizes and depths (input needed for elevators, sumps, depressions, etc.).
 - .4 All major penetrations.
 - .5 Framing plans.
 - .6 All major members sized (input needed for elevators, stairs, ducts, etc.).
 - .7 All major openings shown.
 - .8 Building sections.
 - .9 Wall sections.
 - .10 All schedules: foundation, beam, columns, waffle slab, etc., with sizes shown.
 - .11 Typical and special structural details.
- .10 Mechanical / Electrical / Plumbing / Fire Protection:
 - .1 Provide peer review for mechanical, electrical, plumbing, and fire protection drawings and specifications prepared by design-build MEP & FP engineers.
- .11 Telecommunication/data:
 - .1 Provide peer review for telecommunication/data drawings and specifications prepared by design-build telecommunication contractor.
- .12 Electronic Security:
 - .1 HOK to provide peer review electronic security drawings and specifications prepared by design-build electronic security sub-contractor.
 - .2 Design-build electronic security sub-contractor to coordinate security requirements with door hardware provided in division 8.
- .13 Audio Visual
 - .1 HOK to provide peer review for audio visual drawings and specifications prepared by design-build low voltage electronics sub-contractor.
- .14 Public Address System
 - .1 HOK to provide peer review for public address system drawings and specifications prepared by design-build low voltage electronics sub-contractor.
- .15 LEED
 - .1 Coordinate environmental sustainability issues with project specifications.
 - .2 Review documents for LEED certification requirements.
 - .3 Prepare a life cycle cost-benefit analysis to evaluate solar, renewable & other alternate energy sources.
 - .4 Participate in, and provide peer review on, energy modeling study.
 - .5 Prepare daylight modeling study.

- .6 Produce a written report noting LEED issues pertaining to building systems such as structural and security systems. Include written report prepared by Design-Build subcontractor for mechanical, electrical and plumbing systems.
- .16 Acoustical and Vibration
 - .1 Prepare report identifying acoustical and vibration issues based upon Contract Documents. Includes review of Design Build documents for building MEP systems.
 - .2 Review equipment list (Laboratory and Building Systems) and provide updated recommendation for noise and vibration remediation.
 - .3 Review documents for noise design criteria for interior spaces.
 - .4 Review documents for vibration issues.
- .17 Elevator Design
 - .1 Coordinate architectural, structural, mechanical, electrical design and construction documents related to vertical transportation equipment. Provide written comments, diagrams and other information required to insure coordination of systems with vertical transportation equipment. Effort will be ongoing during the construction document phase.
 - .2 Prepare detailed and complete vertical transportation specifications appropriate for competitive bidding. The specification will address applicable codes, appropriate materials, representative product/model examples, minimum qualifications of bidders, system performance criteria and establish the quality of the equipment required.
- .18 Design-Build Signage: HOK's design team shall provide peer review of the signage package.
- .19 Exterior Envelope Peer Review Report: Update report addressing assessment of current building design for slab-on-grade vapor barriers, exterior curtain wall systems, exterior walls, exterior glazing system and building roofing system. Finalize specifications for exterior curtain wall number and type of mock-ups and testing requirements.
- .20 Client Meetings: Bi-weekly HOK meetings with City's project manager and TCFSD Facility representatives.
- .21 Design Team Meetings: Bi-weekly Design Team meeting at HOK San Francisco office.
- .22 Prepare probable budget – construction cost estimate for the City review and approval. Cost estimates to be prepared at 50% & 95% CD. Cost Estimate is to include a chart comparing the change in cost elements from previous cost estimate.
- .23 Specifications and finish schedules to set standards for the project to be used by the CM/GC, installers, fabricators, and suppliers. Specifications using the Construction Specification Institute's current format listing products equivalent in quality from no fewer than three manufacturers. The City shall provide General and Supplementary Conditions of the contract and Division One of the Specifications indicating General Requirements. HOK shall prepare and furnish Division One of the specifications pertaining to LEED requirements. HOK shall provide catalog cut-sheets of all specified items. Provide list of all required contractor submittals. Provide list of all required testing & inspection. Design-Build contractors/engineers to provide specification for their area of responsibility.
- .24 Update BOD report noting probable construction cost, code analysis, ADA review, Peer Review comments regarding design build building system such as mechanical, electrical, structural, security systems and communication network. Include in Contract Document Phase report.
- .25 Furniture, Furnishings and related Equipment Report: HOK shall prepare final report covering new and existing furniture, furnishings and related equipment – both Laboratory items and Non-Laboratory items. Schedule of Equipment & Furnishing will be based upon inventory list provided by client.
- .26 Project Rendering: Building rendering will be provided at the start of Contract Document phase. Rendering shall be based on the approve Design Development. Rendering shall be in electronic format, at no less than 600 DPI.
- .27 HOK shall perform a quality control review of documents prior to issuance to client.
- .28 Submission of documents to Planning and Building Departments, and Fire Marshal/City Plan Check review. HOK to meet with Building Officials prior to document plan check submission and during permit review to ensure the successful issuance of the required permit document. HOK to document meeting minutes. As agreed to by the City, and noted in the prime agreement, to be in

the best interest of the Project, there may be multiple or phased submission, or permit addenda, to the Building Department.

- .29 Deliverables: Contract Document phase specifications, probable cost estimate in 8 1/2" x 11" format and 30" x 42" drawings. One electronic PDF copy shall be submitted to the City of San Francisco at 50%, 95% and 100% CD final reviews.
- .30 HOK shall submit the Contract Documents for Client's review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen (15) working days following receipt of the Contract Documents. HOK shall provide written respond to Client's written comments within seven (7) working days following receipt.

A3.1.7 Bidding or Negotiation Phase Services

- .1 HOK shall assist Client and CM/GC in establishing a list of prospective trade subcontractors. Following Client's approval of the Contract Documents, HOK shall assist Client in (1) obtaining either competitive bids or negotiated proposals; (2) confirming responsiveness of bids or proposals; (3) determining the successful bid or proposal, if any; and (4) awarding contracts for construction.
- .2 Assist the City preparing in modifications, clarifications or additions to Owner's Standard Invitation to Bid, Information of Bidders, and Proposal Form, based upon City provided data.
- .3 Draft RFI responses and prepare addenda and clarification documents, interpret drawings and specifications where required to clarify the intent of the construction documents during the bidding phase.
- .4 Review responses to Request for Qualification for all trade packages.
- .5 Participate at Value Engineering sessions to evaluate VE proposals from trade subcontractor bidders.
- .6 Participate in pre-bid conferences and attend bid openings.
- .7 Prior to start of construction and upon issuance of the final permit addendum, HOK shall prepare "Conformed Set" of documents, including documents of design-build disciplines, and as described in A/E Design Services agreement.

A3.1.8 Construction Administration Phase Services

- .1 General. HOK shall provide administration of the Contract between Client and the CM/GC as stated in prime agreement and supplemented in this Article. HOK's responsibility to provide Construction Phase Services commences with the award of the Contract for Construction and terminates on the date HOK issues the final Certificate for Payment.
- .2 *Authority.* HOK shall advise and consult with Client during the Construction Phase Services. HOK shall have authority to act on behalf of Client only to the extent provided in this Agreement. HOK shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, nor will HOK be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. HOK shall be responsible for HOK's negligent acts or omissions, but will not have control over or charge of, and will not be responsible for, acts or omissions of the CM/GC or of any other persons or entities performing portions of the Work.
- .3 Project Site Visits. HOK shall visit the Project Site to become generally familiar with the progress and quality of the portion of the Work completed, and to determine, in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. On the basis of the site visits HOK shall keep Client reasonably informed about the progress and quality of the portion of the Work completed, and report to Client known: (1) deviations from the Contract Documents; (2) deviations from the most recent construction schedule submitted by the CM/GC; and (3) defects and deficiencies observed in the Work.
- .4 Non-conforming Work. HOK shall advise the Client when it is necessary to reject Work that does not conform to the Contract Documents. Whenever HOK considers it necessary or advisable, HOK shall have the authority to require inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed or completed. Neither this authority of HOK nor a decision made in good faith either to exercise or not to exercise such authority will give rise to a duty or responsibility of HOK to the CM/GC,

Subcontractors, material and equipment suppliers, their agents or employees or other persons or entities performing portions of the Work.

- .5 Interpret Contract Documents. HOK shall interpret and decide matters concerning the requirements of, the Contract Documents on written request of either Client or CM/GC. HOK's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of HOK shall be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, HOK shall endeavor to secure faithful performance by both Client and CM/GC, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.
- .6 Submittals. All submittals shall be transmitted electronically to HOK. In accordance with Prime Agreement and City-approved submittal schedule, HOK shall review and approve or take other appropriate action upon the CM/GC's submittals such as Shop Drawings, Product Data and Samples (collectively "Submittals") as follows:
 - .1 Submittals shall be reviewed and returned to the CM/GC within 21 calendar days. HOK's action in reviewing submittals will be taken in accordance with the approved submittal schedule or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in HOK's professional judgment to permit adequate review. HOK's will review each Submittal after the CM/GC provides written confirmation that it conforms to: (1) the requirements of the Contract Documents (or reflects approved deviations therefrom); (2) existing field conditions; and (3) other conditions that affect incorporation of the Submittal into the Work.
 - .2 HOK shall review each Submittal according to the Architect's Standard of Care, only for the design intent. HOK shall review each Submittal only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. HOK's review will not constitute approval of safety precautions or, unless otherwise specifically stated by HOK, of any construction means, methods, techniques, sequences or procedures. HOK's approval of a specific item will not indicate approval of an assembly of which the item is a component.
 - .3 If the Contract Documents specifically require the CM/GC to provide professional design services or certifications by a design professional related to systems, materials or equipment, HOK shall specify the appropriate performance and design criteria that such services must satisfy. HOK shall review shop Drawings and other submittals related to the Work designed or certified by the design professional retained by the CM/GC that bear such professional's seal and signature when submitted to HOK. HOK shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals.
 - .4 HOK shall maintain a record of submittals and copies of submittals supplied by the CM/GC in accordance with the requirements of the Contract Documents.
- .7 Requests for Information. HOK shall review properly prepared, timely requests by the CM/GC for additional information about the Contract Documents ("RFI"). A properly prepared RFI about the Contract Documents will be in a form prepared or approved by the City and HOK and will include a detailed written statement that indicates the specific Drawings or Specifications in need of clarification and the nature of the clarification requested. HOK may provide additional requirements for RFIs in the Contract Documents and may return without response any request that does not reasonably comply with the requirements stated in this Agreement and the Contract Documents. HOK's response to RFIs will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, HOK shall prepare and issue supplemental Drawings and Specifications in response to RFIs.
- .8 Changes in the Work shall be addressed as noted in the Prime Agreement.
- .9 Change Order Review: assist the City with the review of proposed change orders submitted by the CM/GC, by carefully reviewing the justification for merit of the change, the quantity of work, and reasonableness of the proposed materials, equipment, and labor costs.
- .10 Project Completion. HOK shall: (1) conduct on-site observation trips to determine the date or dates of Substantial Completion and the date of final completion; (2) issue Certificates of Substantial Completion; (3) receive from the CM/GC and forward to Client, for Client's review and records, written warranties and related documents required by the Contract Documents and assembled by the CM/GC; and (4) issue a final Certificate for Payment based upon a final inspection indicating the Work complies with the requirements of the Contract Documents. HOK's inspections will be conducted with Client to check conformance of the Work with the requirements of the Contract

Documents and to verify the accuracy and completeness of the list submitted by the CM/GC of Work to be completed or corrected. When the Work is found to be substantially complete, HOK shall inform Client about the balance of the Cost of the Work remaining to be paid the CM/GC, including the amount to be retained from the Cost of the Work, if any, for final completion or correction of the Work. HOK shall forward to Client the following information received from the CM/GC: (a) consent of surety or sureties, if any, to reduction in or partial release of retainage or the making of final payment; (b) affidavits, receipts, releases and waivers of liens or bonds indemnifying Client against liens; and (c) any other documentation required of the CM/GC under the Contract Documents.

- .11 Record Drawings: Prepare a set of reproducible record drawings showing significant changes in the Work made during construction based on marked-up prints, drawings and other data furnished by the CM/GC to HOK. (Refer to Article 6.2.8 of the A/E Design Services Agreement).
- .12 Deliverables: Updated Exterior and interior paint color sample schedule.
- .13 Warranty Phase: Refer to Article 6.3 of the A/E Design Services agreement.

A3.2 **"Additional Services"** are services HOK and/or its Subconsultants are qualified to perform, but are not specifically identified as Basic Services or Excluded Services in this Exhibit. HOK shall perform Additional Services if requested by the Client or if otherwise required for the Project and approved by the City. Upon recognizing the need to perform the following Additional Services, HOK shall notify Client with reasonable promptness and explain the facts and circumstances giving rise to the need. Additional Services include, but are not limited to, the following:

- .1 Refer to Article 7 "ADDITIONAL SERVICES" in A/E Design Services Agreement.
- .2 Final presentation models.
- .3 Services required to revise Drawings, Specifications or other documents necessitated by:
 - .1 A change in the Project Information, previous instructions of the Client or approvals given by the Client.
 - .2 Revisions of Contract Documents due to the enactment or revision of codes, laws or regulations after completion of the Design Development documents.
 - .3 Client's failure to provide timely decisions, approvals or information.
 - .4 A substantive scope of work change in the Project after completion of schematic design phase.
- .4 Services of design consultants other than the Basic Services performed by the Sub consultants identified in the Project Information.
- .5 Modification to contract documents due to inaccurate information (drawings or other documents) provided by the client.
- .6 Services related to assistance in the utilization of equipment or systems such as testing, adjusting and balancing, initial start-up, preparation of operation maintenance manuals, training personnel for operation and maintenance, and consultation during operation.
- .7 Providing services designated in other parts of the Prime Agreement as Additional Services.

A3.3 **"Excluded Services"** are not required of HOK or its Subconsultants, unless otherwise agreed to in writing by HOK and Client. Excluded Services consist of any service outside of HOK's expertise and/or not ordinarily furnished in accordance with generally accepted practices of other design professionals performing services similar to those under this Agreement. Examples of Excluded Services include the following:

- .1 Services related to the detection, removal, disposal or otherwise rendering harmless Hazardous Materials.
- .2 Services related to geotechnical engineering or soil analysis.
- .3 Permitting Fees.
- .4 Detailed inventory of existing laboratory equipment, per agreement with city services to be performed by others.
- .5 Detailed inventory of existing Furniture, Fixtures & Equipment, per agreement with city services to be performed by others.
- .6 Engineering of off-site utilities.

- .7 Chemical inventory and analysis.
- .8 Alternate site studies.
- .9 Detailed inventory of existing evidence.

A4.0 SCHEDULE

"Schedule" is the time period(s) for performing the Basic Services as follows:

Refer to Attachment 1 - Schedule of Services.

[END OF EXHIBIT-A]

Attachment 4 – BIM Management Plan & Delivery Matrix

DRAFT



Design Team Project Execution Plan

*City/County of San Francisco Traffic Company
Division & Forensic Science Division Laboratory*

Current version date: 11-02-2015

Revisions		
1	2015-01-27	Draft for internal HOK review.
2	2015-02-20	Draft for Project Team Review.
3	2015-03-25	Issued as exhibit to contract.
4	2015-04-20	Issued revised exhibit for contract inclusion
5	2015-05-29	Issued Final to County
6	2015-09-01	Issued Final to City – Phase 1 Contract
7	2015-11-02	Contract Modification No. 1

NOTE: During the life of the Project, changes to the software versions listed within this document must be coordinated with and agreed to by all BIM Managers/Coordinators involved in the Project.

Template: BTM01-PxP Template version: 3.0

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Project Execution Plan Overview

This Project Execution Plan (“PxP”) describes the design team process for the project and includes key information regarding the project goals, schedule, deliverables, building information model (“BIM”) platform, supporting tools, and responsibilities of team members to execute the work. The PxP is an organizational tool for Project planning to be used by the “Project Leaders” who include: HOK and Subconsultant Project Managers, HOK and Subconsultant Project Designers, HOK Project Architects, HOK and/or Subconsultant Project Engineers HOK and Subconsultant BIM Coordinators and the BIM Manager.

Except to the extent otherwise provided in the HOK/Client Agreement (“Prime Agreement”), BIM data is not a contract deliverable. The terms used in this PxP have the same meaning as those assigned in the Prime Agreement governing the Project.

NOTE: During the life of the Project, changes to the software versions listed within this document must be coordinated with and agreed to by all BIM Managers/Coordinators involved in the Project.

PxP Development/Presentation Schedule

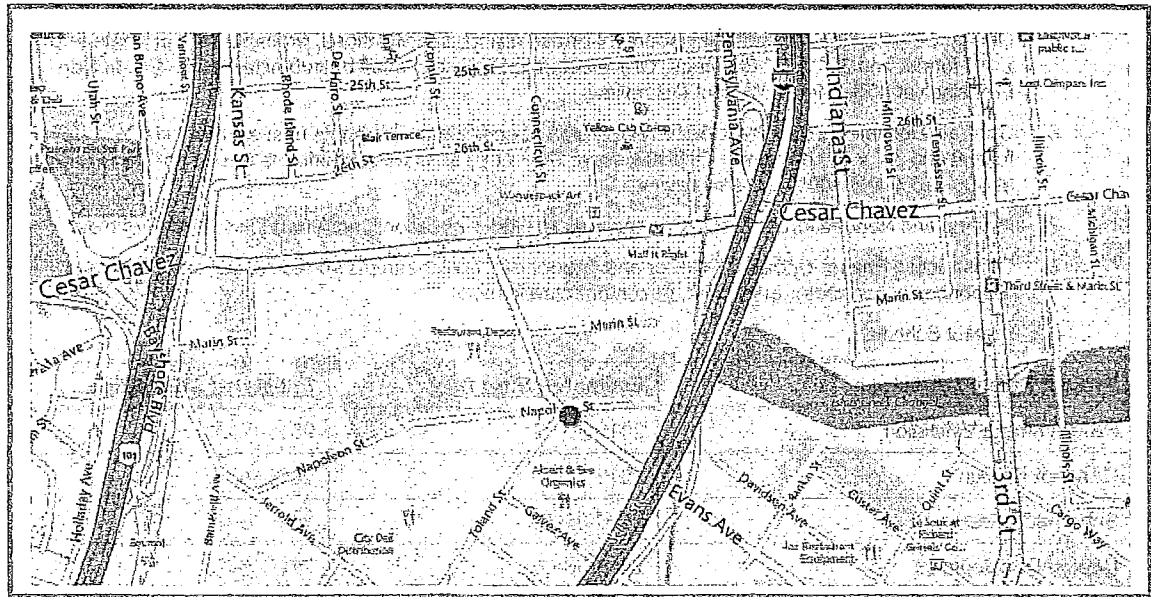
<u>Meeting Type</u>	<u>Project Stage</u>	<u>Date</u>	<u>Participants</u>	<u>Location</u>
BIM Requirements Kick-Off	Pre-Design	12/2/2015	All project stakeholders	HOK San Francisco
Project Execution Plan Demonstration (beginning of phase)	Schematic Design	3/1/2016	All project stakeholders	HOK San Francisco/WebEx
	Design Development	6/7/2016	All project stakeholders	HOK San Francisco/WebEx
	Construction Documents	10/11/2016	All project stakeholders	HOK San Francisco/WebEx
Project Execution Plan Lessons Learned (end of phase)	Schematic Design	5/17/2016	PIC, PM, PD, PA, BIM Coordinator, BIM Manager	HOK San Francisco
	Design Development	9/20/2016	PIC, PM, PD, PA, BIM Coordinator, BIM Manager	HOK San Francisco

Project Summary & Goals

PROJECT LOCATION AND ADDRESS

Project Address 1994 Evans Avenue, San Francisco, California.

(<http://www.bing.com/maps/default.aspx?q=1994+Evans+Ave%2c+San+Francisco%2c+California%2c+United+State&mkt=en&FORM=HDRSC4#Y3A9MzcuNzQ3MTY5fi0xMjluMzk1NzQ0JmX2bD0xNiZzdHk9ciZ0bT0iN0iIMiJXZWxib21iUGFuZWxUYXNrJT10JTI0MSUyMIUzQW51bGwlnOQ=>)



PROJECT NUMBERS

Description	Number
Client Contract Number	TBD
Client Task Order	TBD
Project Number (HOK)	14.04024.00

PROJECT DESCRIPTION

New 107,000 gross square foot four-story building to house City/County of San Francisco Police Department's Traffic Company Division & Forensic Services Division Laboratory.

The new facility will be located at 1994 Evans Avenue on a site located at the southeast corner of Evans Avenue & Toland Street in San Francisco, California. The site is approximately 2.28 acres.

CONTRACT TYPE / DELIVERY METHOD

The project is Construction Manager/General Contractor method of delivery, with Design/Build delivery of mechanical, electrical, plumbing and building envelope core trades.

PROJECT DELIVERABLES PLAN

1. Program Validation

BTM01-PXP (PROJECT EXECUTION PLAN) CITY/COUNTY OF SAN FRANCISCO TRAFFIC
COMPANY DIVISION & FORENSIC SCIENCE DIVISION LABORATORY

2. Program Validation Report (in 8-1/2" x 11" report format.) One electronic PDF copy shall be submitted to the City/County of San Francisco. HOK to provide written response to Owner review comments.
3. Conceptual Design: Conceptual Design drawings, Basis of Design report and probable construction cost estimate. (in 8 1/2" x 11" report format and 30" x 42" drawings.) One electronic PDF copy shall be submitted to the City/County of San Francisco. HOK to provide written response to Owner review comments.
4. Schematic Design: Schematic Design report, rendering / perspective drawing (30" x 40"), specifications, probable cost estimate in 8 1/2" x 11" format and 30" x 42" drawings. One electronic PDF copy shall be submitted to the City.
5. Design Development: Design Development phase report, specifications, probable cost estimate in 8 1/2" x 11" format and 30" x 42" drawings. One electronic PDF copy shall be submitted to the City of San Francisco at 50% and 100% final DD review.
6. Contract Documents: Contract Document phase specifications, probable cost estimate in 8 1/2" x 11" format and 30" x 42" drawings. One electronic PDF copy shall be submitted to the City of San Francisco at 50%, 95% and 100% CD final reviews.
7. Bidding and Negotiation: If required responses to bidder questions, addendum and review of bids.
8. Construction Phase: Updated Exterior and interior paint color sample schedule. Review submittals, responses to contractor questions, document clarifications.
9. Project Schedule

<u>Project Phase / Milestone</u>	<u>Estimated Start Date</u>	<u>Estimated Completion</u>
Programming Validation	2015-10-13	2015-10-23
Concept Design	2015-11-23	2016-02-12
Schematic Design	2016-02-29	2016-05-20
Design Development	2016-06-06	2016-09-23
Construction Documents	2016-10-10	2017-06-20
Bidding	2016-12-19	2017-07-28
Construction	2017-10-09	2019-12-06
Warranty Period	2019-12-09	2020-12-09

CONSULTANTS

<u>Company</u>	<u>Location</u>	<u>Discipline or Service</u>
A.R. Sanchez-Corea & Associates Inc.	301 Junipero Serra Blvd., Suite 270 San Francisco, CA 94127	ADA Code Consultant
Allana Buick & Bers, Inc.	990 Commercial St. Palo Alto, CA 94303	Waterproofing, Roofing & Curtain Wall Peer Review
Bennie Del Re	Modesto, CA.	ASCLAD Advisor
Collin Gordon & Associates	150 N. Hill Drive, Suite 15 Brisbane, CA 94005	Vibration Engineering
Cumming Construction Management	475 Sansome Street, Suite 520 San Francisco, CA 94111	Cost Estimating
HOK	One Bush Street, Suite 200 San Francisco, CA 94104	Security Hardware

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<u>Company</u>	<u>Location</u>	<u>Discipline or Service</u>
HOK	One Bush Street, Suite 200 San Francisco, CA 94104	LEED Documentation
HOK Engineering	One Bush Street, Suite 200 San Francisco, CA 94104	Peer Review – Mechanical, Plumbing, Electrical and Fire Protection
HOK	Canal House, 3223 Grace Street, N.W. Washington, DC 20007	Laboratory Planning
JS Nolan + Associates	601 4th Street, Suite 115 San Francisco, CA 94107	Lighting Design
Kate Keating Associates, Inc.	1045 Sansome Street, Ste. 202 San Francisco, CA 94111	Signage Consultant
MEI Architects	239 9th Street San Francisco, CA 94103	Associate Architect
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Mechanical Engineers
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Electrical Engineers
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Plumbing Engineers
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Fire Protection Engineer
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Energy Modeling
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	Audio Visual
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	IT
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	Security Electronics
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	Acoustics & Noise Engineer
SOHA Engineers	48 Colin P. Kelly Jr. Street San Francisco, CA 94107	Structural Engineer
Syska Hennessy Group	425 California Street, Suite 700 San Francisco, CA 94104	Vertical Transportation
Telamon Engineering Consultants Inc.	855 Folsom Street, Unit 142 San Francisco, CA 94107	Civil Engineer
The Fire Consultants	1981 North Broadway, Suite 400 Walnut Creek, CA. 94596	Building Code Consultant
Watry Design Inc.	100 Century Center Court, Suite 600 San Jose, CA 95112	Parking Design

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BIM MANAGERS / COORDINATORS

<u>Organization</u>	<u>Name</u>	<u>Location</u>	<u>Email</u>	<u>Phone</u>
Cumming Construction Management	Nick Mata	475 Sansome Street, Suite 520 San Francisco, CA 94111	nmata@ccorpusa.com	415-748-3093
HOK	Cesar Escalante	1 Bush Street Suite: 200 San Francisco, CA 94104	cesar.escalante@hok.com	415-356-8627
JS Nolan + Associates	Janet Nolan	601 4th Street, Suite 115 San Francisco, CA 94107	jnolan@jsnald.com	415-618-0101
Kate Keating Associates, Inc.	Julia Vogel	1045 Sansome Street, Ste. 202 San Francisco, CA 94111	julie@kkainc.com	415-773-1000
MEI Architects	Steven J. Juergens	239 9th Street San Francisco, CA 94103	SJuergens@meiarchitects.com	415-703-0328
R.G. Vanderweil Engineers	Gavin Barbosa	274 Summer Street Boston, MA 02210	gbarbosa@vanderweil.com	617-556-9387
Smith, Fause & McDonald Inc.	Alfred Calado	351 8th Street San Francisco, CA 94103	alfred@sfmi.com	415-255-9140
SOHA Engineers	Frank M Espino	48 Colin P. Kelly Jr. Street San Francisco, CA 94107	fespino@soha.com	415-989-9900
Syska Hennessy Group	John Moran	425 California Street, Suite 700 San Francisco, CA 94104	Jmoran@syska.com	415-288-9060
Telamon Engineering Consultants Inc.	Doug Zuuring	855 Folsom Street, Unit 142 San Francisco, CA 94107	doug.z@telamoninc.com	415-837-1336
Watry Design Inc.	Taylor Kim	100 Century Center Court, Suite 600 San Jose, CA 95112	tkim@watrydesign.com	408-392-7900

SPECIAL PROJECT GOALS

Special Project goals of the Client that may not be included as part of Basic Services are:

<u>Priority</u>	<u>Goal Description</u>	<u>Proposed BIM Uses</u>
	Utilize BIM as a tool for project coordination and the reduction of change orders. (Paraphrased from the RFQ)	

CLIENT BIM REQUIREMENTS

1.1 DEFINITIONS

- 1.1.1** BIM means a Building Information Model (BIM) that is a digital representation of physical and functional characteristics of a facility. As such it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life-cycle from inception onward.
- 1.1.2** Design BIM means a Building Information Model developed and maintained by the ARCHITECT for the purpose of developing the design.
- 1.1.3** CM BIM means a Building Information Model developed and maintained by the CM/GC as a tool to support collaboration and construction management.
- 1.1.4** As-Planned BIM means a Building Information Model that is updated through-out the project

- design phases to reflect changes in the design.
- 1.1.5 As-Built BIM means a Building Information Model that reflects the Project as constructed.
- 1.2 ARCHITECT'S BASIC SERVICES / GENERAL PROVISIONS
- 1.2.1 The ARCHITECT shall develop, manage, and maintain multi-dimensional design BIM's and reports, integrating information from engineering disciplines to collaborate and fully coordinate the design and construction features. The ARCHITECT shall provide such models to the CM/GC for purposes of verifying constructability, compatibility, and compliance with design intent. The ARCHITECT shall consult with the CM/GC and provide the CM/GC an opportunity to review and comment upon all designs, drawings, models, and other materials developed by the ARCHITECT. The ARCHITECT shall incorporate into the Design BIM and Construction Documents constructability refinements resulting from the interactive collaboration with the CM/GC including accepted value engineering proposals. At the earliest moment the CITY, ARCHITECT, and CM/GC shall develop and execute BIM Management Plan and BIM Delivery Matrix (Attachment 4) based on the AIA E 202 BIM Protocol Exhibit and Model Element Table include in Appendix D, which will be used to specify the level of detail required in the Design, CM, and As-Built BIMs) and the system development level at agreed upon milestones. Level of Development for Design BIM shall in no case exceed LOD 300. The ARCHITECT is NOT expected to prepare stand alone Construction Documents and Specifications for each trade package. While the CM/GC is responsible for preparing the trade packages, the ARCHITECT will cooperate with the CM/GC and provide design assistance and coordination that is required to timely prepare the trade packages and subcontracts for bid and/or negotiation and award.
 - 1.2.2 The CM/GC will develop, manage and maintain a multi-dimensional CM BIM or BIM's during construction to collaborate with the ARCHITECT. The CM/GC shall utilize the CM BIM(s) to verify constructability and to develop cost estimates, sequencing plans, and schedule. The CM/GC shall consult with the ARCHITECT to review and comment upon designs, drawings, models, and other materials developed by the ARCHITECT.
- 1.3 DESIGNATION OF KEY EMPLOYEES AND CONSULTANTS
- 1.3.1 COORDINATION OF DESIGN TEAM
Commensurate with the standard of care, the ARCHITECT shall coordinate its work with the work of all of its consultants to produce comprehensive, complete, coordinated and accurate drawings and specifications. The ARCHITECT shall use and manage BIM applications and methods for all portions of the Project.
 - 1.3.2 COORDINATION WITH CM/GC AND ITS SUBCONTRACTORS
The ARCHITECT shall coordinate its work with the CM/GC and its subcontractors, and collaborate with each of them in a manner consistent with the Construction Manager/General Contractor Mode of contracting as defined herein. The ARCHITECT shall use and manage BIM applications and methods as an integral part of this effort. The ARCHITECT shall participate in meetings and workshops with the CM/GC and its team for purposes of design coordination and design review for accuracy, constructability, and value engineering.
 - 1.3.3 The following checklist will be used to track BIM use through-out the project.

<u>BIM Use</u>	<u>Responsible Party</u>	<u>Resources</u>	<u>Experience</u>	<u>Notes</u>	<u>Proceed</u>
Program Validation	Architect				
Design Authoring (Design BIM)	Architect and Sub-Consultants				
3D Coordination prior to permitting approval.	Architect and Sub-Consultants				
3D Coordination-post permitting approval.	CM/GC				
Record Modeling (As-Built BIM)	CM/GC				
CM BIM	CM/GC				

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BIM USE	As-Planned BIM	Architect and Sub-Consultants				
	Sustainable Integration	Architect				
	Sustainability Evaluation	Architect and Sub-consultants				
	Structural Analysis	Structural Engineer				
	Existing Conditions Modeling- prior to permitting approval.	Architect and Sub-consultants				
	Existing Conditions Modeling- post permitting.	CM/GC				
	Cost Estimation- prior to permitting approval.	Cost Estimating				
	Cost Estimation- prior to permitting approval.	CM/GC				

ANALYSIS

Select sections of this document to be included:

<input checked="" type="checkbox"/> Program Validation	<input checked="" type="checkbox"/> Design Authoring	<input checked="" type="checkbox"/> 3D Coordination
<input checked="" type="checkbox"/> Sustainability	<input checked="" type="checkbox"/> Energy	<input checked="" type="checkbox"/> Sustainability Evaluation (LEED)
<input checked="" type="checkbox"/> Structural Analysis	<input checked="" type="checkbox"/> Existing Conditions Modeling	<input checked="" type="checkbox"/> Cost Estimation
<input checked="" type="checkbox"/> Phase Planning (4D)	<input checked="" type="checkbox"/> Record Modeling	<input checked="" type="checkbox"/> Remote Applications

[End of Section]

Project Process Overview

This section will provide an overview of the BIM uses selected for implementation on the Project.

IMPLEMENTED BIM USES

In the following table, indicate the BIM uses selected for implementation *after a BIM Use Analysis has been completed*.

<u>Phase</u>	<u>BIM Use</u>	<u>Responsible Parties</u>
Concept Design	Program Validation	Architect, Laboratory Planning
	Design Authoring (Design BIM)*	Architect, Laboratory Planning, Civil Engineer, Transportation Engineer, Parking Design
Schematic Design	Program Validation	Architect, Laboratory Planning
	Design Authoring (Design BIM)*	Architect, Structural Engineer, Mechanical Engineer, Electrical Engineer, Plumbing Engineer, Fire Protection Engineer, Civil Engineer, , AV, IT, Security Electronics, Vertical Transportation, Parking Design
	Energy Analysis	Architect, Mechanical Engineer, Sustainability leaders
	3D Coordination*	Architect, Laboratory Planning, Structural Engineer, Mechanical Engineer, Electrical Engineer, Plumbing Engineer, Fire Protection Engineer, Civil Engineer,, AV, IT, Security Electronics, Vertical Transportation, Parking Design
	Structural Analysis	Structural Engineer
Design Development	Program Validation	Architect, Laboratory Planning
	Design Authoring (Design BIM)*	Architect, Laboratory Planning, Structural Engineer, Mechanical Engineer, Electrical Engineer, Plumbing Engineer, Fire Protection Engineer, Civil Engineer,, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
	Energy Analysis	Architect, Mechanical Engineer, Sustainability leaders
	3D Coordination	Architect, Laboratory Planning, Structural Engineer, Mechanical Engineer, Electrical Engineer, Plumbing Engineer, Fire Protection Engineer, Civil Engineer, , AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage

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<u>Phase</u>	<u>BIM Use</u>	<u>Responsible Parties</u>
Construction Documents	Design Authoring (Design BIM)*	Architect, Laboratory Planning, Structural Engineer, Design-build Mechanical Engineer, Design-build Electrical Engineer, Design-build Plumbing Engineer, Design-build Fire Protection Engineer, Civil Engineer, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
	Energy Analysis	Architect, Mechanical Engineer, Sustainability leaders
	3D Coordination	Architect, Laboratory Planning, Structural Engineer, Design-build Mechanical Engineer, Design-build Electrical Engineer, Design-build Plumbing Engineer, Design-build Fire Protection Engineer, Civil Engineer, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
Conformed Set	Design Authoring (Design BIM)*	Architect, Laboratory Planning, Structural Engineer, Design-build Mechanical Engineer, Design-build Electrical Engineer, Design-build Plumbing Engineer, Design-build Fire Protection Engineer, Civil Engineer, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
Construction Administration**	Record Modeling (As-Built BIM)	CM/GC
	As-Planned BIM	Architect, Laboratory Planning, Structural Engineer, Design-build Mechanical Engineer, Design-build Electrical Engineer, Design-build Plumbing Engineer, Design-build Fire Protection Engineer, Civil Engineer, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
	CM BIM	CM/GC

* - These BIM uses are part of HOK's Basic Services unless otherwise noted. Design-Build engineers at CD phase and later phases are contracted to CM/GC.

** - BIM uses in construction and operation of the Project are only listed here if they are dependent on BIM uses implemented by the Design Team.

BIM USE WORKFLOWS

Process maps provide a valuable overview of the timing and specific work flows of each BIM use. The Level 1 process map is intended to be an executive summary of the entire project timeline and will indicate when the selected BIM strategies are to be implemented. The Level 2 process maps (one map for each BIM strategy) provide a detailed overview of the input, work flow, and intended results of the respective BIM strategy.

The Project Leaders will review and edit the template process maps and include image exports of each map in the following document appendices:

- Appendix B: Level 1 Process Map (overview of all BIM uses for Project)
- Appendix C: Level 2 Process Maps (detailed processes for each BIM use)

PROJECT DELIVERABLES PROCESS

BIM files shall be submitted as outlines in the Prime Agreement. HOK will be the lead organizer for document-based Project Deliverables. All document deliverables shall be transmitted to HOK in the format(s) listed below:

Format of Document Deliverables

Drawings/Sheets: Provide individual-PDF files for each sheet. The files should be named by the sheet number and sheet name, for example "A201A-FLOOR PLAN LEVEL 1 PART A", "E301-LIGHTING PLAN LEVEL 1", "S705-STEEL DETAILS" etc. The PDF files should be full size (30" x 42") and should include electronic stamps and signatures in the title block. Files should be vector based, flattened and have optical character recognition. Raster based files are not acceptable. From the point of initial submittal for AHJ approval and/or bidding and negotiation all changes to the drawings should be indicated with clouds and deltas. The Architect will combine all of the individual files for each discipline and collate the drawing sets.

Specifications: Provide individual PDF (.pdf) files and word (.doc) files for each section. The files should be named by the section number and section name, for example "07 21 00 – Thermal Insulation", "08 80 00 - Glazing", "09 51 13 – Acoustical Panel Ceilings" etc. Sections are to include all cut-sheets, schedules attachments, etc; these are not to be provided separately. Add a blank page to each section with an odd number of pages so that each section has an even number of pages. Sections with an even number of pages allow for the sections to be printed double sided. From the point of initial submittal for AHJ approval and/or bidding and negotiation all changes to the specifications should be clearly indicated with additions underlined and deletions with a ~~strikethrough~~. The Architect will combine all of the individual files for each discipline and collate the specifications. .

Reports: Provide individual PDF (.pdf) files and word (.doc) files for each report or section. Report format shall be based upon 8 ½" x 11" paper size. Drawings included in reports shall be 11" x 17" format.

CAD Backgrounds: DWG (AutoCAD R2012). The files should be named by the sheet number, for example "A201A", "E301", "S705" etc.

Bulletin or Addenda: Provide Please provide a written narrative of all of the changes to the drawings and specifications using the word file (.doc) template document. The narrative for drawings changes are required to identify the drawing sheet number, name and written description of the changes for drawings that are added, deleted and/ or modified. Complete sentences written in the past tense is to be used for the descriptions. The narrative for specification changes are to identify the section name and number that are added, deleted and/ or modified. The Architect will combine all of the individual narratives into a complete narrative.

The aforementioned Deliverables shall be transmitted to Architect no later than five (5) days prior to any Project milestone deadline.

Requirements for CAD Data Deliverables

CAD Deliverables will be exported from BIM data and will adhere to *US National CAD Standards, Version 4*.

Floor plan backgrounds will be exported from specifically designated plan views (not sheet views) using the *Shared* coordinate system basis.

Naming convention for floor plan backgrounds:

FLOOR PLAN – LEVEL 1

View settings for floor plan backgrounds:

TBD

Format of BIM Data Deliverables

Provide Revit 2015 models, or current version utilized by the City and the Architect, to the project team on a weekly basis and at every milestone deliverable.

QUALITY CONTROL OVERVIEW

Refer to Attachment 5 of the Prime Agreement.

QUALITY CONTROL SCHEDULE

Refer to Attachment 5 of the Prime Agreement.

COMMUNICATION AND DATA PROCEDURES

HOK's Info Exchange site will be the main medium through which all project design files will be transmitted. All external team members will receive a user account for Info Exchange access. Design files are NOT to be transmitted as email attachments.

HOK Info Exchange login site: <https://infoexchange.hok.com>

Newforma training resources: http://www.newforma.com/News---Resources/How-To_Resources.aspx

[End of Section]

Program Validation

For more information: <http://bim.psu.edu/Uses/Programming.aspx>

ORGANIZATIONAL ROLES / STAFFING FOR PROGRAMMING (VALIDATION)

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>
HOK (Lead)	One Bush Street, Suite 200 San Francisco, CA 94104	James Aguilar
HOK	Canal House, 3223 Grace Street N.W. Washington, DC 20007	Tim O'Connell

(Full contact information can be found in [BIM Managers/Coordinators list](#))

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
ALL	dRofus (view User Guide) (Download client application)	1.3.9

Programming Database/Server Information

Server: drofus.hok.com Database: << enter database name here >>

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Excel to dRofus	XLS/XLSX	Information to be organized into unique rows to allow for automated dRofus import. See HOK BIM Support site for additional instructions.

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

PROGRAMMING SCHEDULE

<u>Action</u>	<u>Frequency or Date</u>	<u>Participants</u>	<u>Location</u>
Visioning Session	Refer to Attachment 1	Stakeholders & Design Team	HOK- San Francisco
Programming Workshops	Refer to Attachment 1	Stakeholder Groups & Design Team	City Department Offices
Program validation	(see QC schedule – Attachment 5)	HOK	HOK

QUALITY CONTROL

Spatial Validation

The net area of designed spaces shall be within +/- 5% of the required area

Furniture & Equipment Validation

SCOPE OF WORK SHALL BE AS DEFINED IN PRIME AGREEMENT ARTICLE 5 AND ATTACHMENT 3.PROGRAM PARAMETERS

The following parameters shall be coordinated between the Programming database and the Design Authoring models:

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<u>Parameter Name</u>	<u>dRofus Attribute</u>	<u>Model Category(ies)</u>	<u>Format</u>	<u>Source</u>
RoomID	Room ID	Rooms	Integer	Revit == dRofus
Area	Designed Area	Rooms	Area (square feet)	Revit → dRofus
Program Area	Program Area	Rooms	Area (square feet)	Revit ← dRofus
Name	Room Name	Rooms	Text	Revit ← dRofus
Number	User room no.	Rooms	Text	Revit → dRofus
Comments	Note	Rooms	Text	Revit ← dRofus
FF&E parameters				
Article ID	article_id	Furniture, Equipment, Specialty Equipment	Integer	Revit == dRofus
Family Name + Type	BIM ID		Text	Revit → dRofus
Family Name	Name		Text	Revit → dRofus

[End of Section]

Design Authoring

Definition: A process in which 3D software is used to develop a Building Information Model based on criteria that are important to the translation of the building's design. Authoring tools create models while audit and analysis tools study or add to the richness of information in a model. Design authoring tools are a first step towards BIM and the key is connecting the 3D model with various data from other sources.

All design team organizations listed below are responsible for providing accurately modeled elements representing the respective scope of work according to the Project's Model Element Table (Appendix D). **Any 2D drawings, details, schedules, or CAD backgrounds are to be extracted from the BIM platform – not drafted in CAD software.**

Each design team member is to model all of the components of their work (see Model Element Table) to scale, at elevation, and free from interference with the structure, their own components, and other MEP trades' work.

It is understood that elements of smaller detail may not be modeled; however, such details must correspond to the appropriate condition in the 3D model. Design team members are encouraged to use the actual model as an underlay to smaller scale details.

ORGANIZATIONAL ROLES / STAFFING FOR DESIGN AUTHORING

<u>Organization</u>	<u>Location</u>	<u>Contact</u>
HOK (Lead)	1 Bush Street Suite: 200 San Francisco, CA 94104	Kyle Prenzlów
HOK – WDC (Lab)	Canal House, 3223 Grace Street N.W. Washington, DC 20007	Tim O'Connell
JS Nolan + Associates	601 4th Street, Suite 115 San Francisco, CA 94107	Janet Nolan
Kate Keating Associates, Inc.	1045 Sansome Street, Ste. 202 San Francisco, CA 94111	Julia Dobroff
MEI Architects	239 9th Street San Francisco, CA 94103	Ruairi O'Connell
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Gavin Barbosa
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	Dennis Mill
SOHA Engineers	48 Colin P. Kelly Jr. Street San Francisco, CA 94107	Frank Espino
Syska Hennessy Group	425 California Street, Suite 700 San Francisco, CA 94104	John Moran
Telamon Engineering Consultants Inc.	855 Folsom Street, Unit 142 San Francisco, CA 94107	Mennor Chan
Watry Design Inc.	100 Century Center Court, Suite 600 San Jose, CA 95112	Taylor Kim

(Full contact information can be found in BIM Managers/Coordinators list)

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
Architecture	Revit (Architecture)	2015

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<u>Discipline</u>	<u>Software</u>	<u>Version</u>
Structure	Revit (Structure)	2015
Mechanical (HVAC)	Revit (MEP)	2015
Electrical	Revit (MEP)	2015
Plumbing	Revit (MEP)	2015
Civil	AutoCad Civil 3D	2015
Laboratory Planning	Revit (Architecture)	2015
Lighting Design	Revit (Architecture)	2015
Signage Consultant	Revit (Architecture)	2015
Fire Protection	Revit (MEP)	2015
Fire Alarm	Revit (MEP)	2015
Audiovisual	Revit (MEP)	2015
IT	Revit (MEP)	2015
Security Electronics	Revit (MEP)	2015
Vertical Transportation	Revit (Architecture)	2015
Parking Design	Revit (Architecture)	2015

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to AutoCAD	DWG (2010)	Layer export template to comply with client CAD standards. If none, AIA layering standards will be used.

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

DESIGN AUTHORIZING SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Design team meeting	Bi-weekly	All disciplines	HOK office
Upload model files	Weekly (Fri)	All disciplines	InfoExchange or Citrix
Model Audit (QC)	Ends of phases	All disciplines	n/a

MODEL ORGANIZATION

As most projects utilizing BIM do not store all data in a single file, this section will describe the method by which the project work will be divided and then recombined for referencing purposes.

MODEL OWNERSHIP OVERVIEW

<u>Model</u>	<u>Model Author</u>	<u>Contents/Notes</u>
SFTCFH-HOK-AR-central.rvt	HOK/MEI	Architecture

<u>Model</u>	<u>Model Author</u>	<u>Contents/Notes</u>
SFTCFL-HOK-ID-central.rvt	HOK/MEI	Interiors
SFTCFL-HOK-AS-central.rvt	HOK/MEI	Site
SFTCFL-SOHA-ST-central.rvt	SOHA	Structure
SFTCFL-HOK-QL-central.rvt	HOK	Laboratory
SFTCFL-RGV-ME-central.rvt	R.G. Vanderweil Engineers	Mechanical
SFTCFL-RGV-EL-central.rvt	R.G. Vanderweil Engineers	Electrical
SFTCFL-RGV-PL-central.rvt	R.G. Vanderweil Engineers	Plumbing
SFTCFL-RGV-FP-central.rvt	R.G. Vanderweil Engineers	Fire Protection
SFTCFL-DPW-LD-central.rvt	San Francisco Department of Public Works	Landscape
SFTCFL-TEC-CI-central.rvt	Telamon Engineering Consultants Inc.	Civil
SFTCFL-JSN-LT-central.rvt	JS Nolan + Associates	Lighting
SFTCFL-KKA-AG-central.rvt	Kate Keating Associates Inc.	Signage
SFTCFL-SFM-AV-central.rvt	Smith, Fause & McDonald Inc.	Audio Visual
SFTCFL-SFM-TC-central.rvt	Smith, Fause & McDonald Inc.	IT
SFTCFL-SFM-SC-central.rvt	Smith, Fause & McDonald Inc.	Security Electronics
SFTCFL-SHG-VT-central.rvt	Syska Hennessy Group	Vertical Transportation
SFTCFL-WDI-PK-central.rvt	Watry Design Inc.	Parking

For more detailed model element authorship, refer to the **Model Element Table** in Appendix D.

MODEL ELEMENT AUTHORSHIP AND LEVELS OF DEVELOPMENT

The Design Team will agree to develop model elements within respective project models according to the accepted industry practice known as levels of development (LOD). Refer to the Model Element Table in Appendix D. The LOD definitions are based on those set forth by the American Institute of Architects (AIA) in document E202 (BIM Protocol Exhibit). These are explained as follows:

LOD 100 – Project description/narrative accompanied by overall program area.

LOD 200 – Model elements are created as generalized systems or assemblies with approximate quantities, size, shape, location, and orientation. Non-geometric information may also be attached to model elements.

LOD 300 – Model elements are created as manufacturer-specific assemblies that are accurate in terms of quantity, size, shape, location, and orientation. Non-geometric information may also be attached to model elements.

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LOD 400 – Model elements are created as specific assemblies that are accurate in terms of size, shape, location, quantity, and orientation with complete fabrication, assembly, and detailing information.

LOD 500 – Model elements are created as constructed assemblies that are actual and accurate in terms of size, shape, location, quantity, and orientation. Non-geometric information may also be attached to modeled elements.

MODELING CONTENT AND REFERENCE INFORMATION

Identify items such as families, templates, and databases.

<u>Discipline (if applicable)</u>	<u>Model Content / Reference Information</u>	<u>Version</u>	<u>Instructions / Comments</u>
ALL	Shared parameters		HOK shall provide a shared parameters text file for all design team members.

MODEL STANDARDS

File Naming Convention

File names for Revit models shall be formatted as:

< Project Name> - < Model Owner > - < Discipline > - <Model Type> - <Identifier> -central

Ex: SFTCFLL-HOK-AR-SH-central.rvt (SF Traffic and Forensics Lab, HOK, Architectural Shell model)

A table of models used on this project will be completed at the start of the Conceptual Design phase.

Measurement System

The measurement system utilized on this project shall be *Imperial* and the base unit of measurement shall be <feet – inches – mm – cm – m>.

Coordinates/Survey Description

Survey provided by: San Francisco Department of Public Works

Name of Shared Coordinate System: SFTCFLL-Shared Coordinates

Model designated as source of Shared Coordinates: SFTCFLL-HOK-AS-central.rvt

Location of Project Origin: TBD

Location of Shared Origin: TBD

Location of origin marker: TBD

Model Accuracy and Tolerances

Models should include all appropriate dimensioning as needed for design intent, analysis, and construction. Level of detail and included model elements are provided in the Model Element Table found in Appendix D.

<u>Phase</u>	<u>Discipline</u>	<u>Tolerance</u>
Design Documents (sheets)	All	Dimension rounding to +/- 1/4"
Design Models	All	Accuracy of modeled elements and placement to +/- 1/4" of actual size and location
Record Documents (sheets)	All	Dimension rounding to +/- 1/8"
Record Models	All	Accuracy of modeled elements and placement to +/- 1/8" of actual size and location

MODEL DEPENDENCIES

When design team stakeholders utilize the Coordination features, the following elements will be managed:

<u>Element</u>	<u>Owner</u>	<u>Usage by others</u>
Grids	Architect	Copy + monitor
Levels	Architect	Copy + monitor

QUALITY CONTROL

File naming check; dimension rounding; verify project information is correct in all models

Coordination: Proper copy/monitoring as per plan; linked models utilizing shared coordinates

Periodic Review: Review warnings, eliminate extraneous modeling (outside scope of actual project boundaries), compliance with Model Element Table (multi-category assembly code report)

Model Deficiency Check (in Solibri; if BIM is deliverable outside design team)

[End of Section]

3D Coordination

Definition: A process in which Clash Detection software is used during the coordination process to determine field conflicts by comparing 3D models of building systems. The goal of clash detection is to reduce or eliminate the major system conflicts prior to installation.

ORGANIZATIONAL ROLES / STAFFING FOR 3D COORDINATION

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>
Architecture - HOK (Lead)	San Francisco, CA	Kyle Prenzlów
Laboratory Planning - HOK-WDC (Lab)	Washington, DC	Tim O'Connell
Structural Engineer – SOHA Engineers	San Francisco, CA	Frank Espino
Mechanical Engineer – R.G. Vanderweil Engineers	Boston, MA	Gavin Barbosa
Plumbing Engineer – R.G. Vanderweil Engineers	Boston, MA	Gavin Barbosa
Electrical Engineer – R.G. Vanderweil Engineers	Boston, MA	Gavin Barbosa
Fire Protection Engineer – R.G. Vanderweil Engineers	Boston, MA	Gavin Barbosa
Civil Engineer – Telamon Engineering Consultants Inc.	San Francisco, CA	Mennor Chan
Lighting Designer – JS Nolan + Associates	San Francisco, CA	Janet Nolan
Signage Consultant – Kate Keating Associates Inc.	San Francisco, CA	Julia Dobroff
Audio Visual – Smith, Fause & McDonald Inc.	San Francisco, CA	Dennis Mill
IT – Smith, Fause & McDonald Inc.	San Francisco, CA	Dennis Mill
Security Electronics - HOK	San Francisco, CA	Kyle Prenzlów
Vertical Transportation – Syska Hennessy Group	San Francisco, CA	Dewin Essary
Parking Design – Watry Design Inc.	San Jose	Taylor Kim

(Full contact information can be found in BIM Managers/Coordinators list)

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
All	Navisworks Manage	2013

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to Navisworks	NWC	Use Navisworks Exporter add-in for Revit; set location to Shared Coordinates.

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

Project Leaders will:

- Provide accurate and complete model content representative of their discipline requirements according to the Model Element Table in Appendix D.
- Take the appropriate action to resolve identified clashes within the time frame specified.

3D COORDINATION SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Upload model files	Weekly (Wed)	Structure, MEP	InfoExchange
Run clash tests	Weekly (Thu)	Architecture	n/a
Coordination meeting	Bi-weekly (Thu)	Architecture, Structure, MEP	HOK San Francisco office

CLASH TESTS

From the list below, select the clash tests most appropriate for use on this project and indicate the agreed tolerance to which the final results will be measured.

NOTE: Multiple disciplines being modeled from a single organization are to be coordinated BEFORE delivering models to HOK for overall coordination. See below for indication of DISCIPLINE-SPECIFIC tests.

NOTE: Clearance zones (maintenance/service/installation) are NOT included unless otherwise specified.

STATUS: Y=Yes; N=No; R=Required; D=Discipline-specific (must be run by authoring discipline before transferring models to 3D Coordination leader)

TOLERANCE: Negative distances represent allowable overlap (for example, if tolerance is -2" then objects must overlap more than 2" to indicate a clash); positive distances represent clearance clashes (for example, if tolerance is +2" then objects any closer than 2" will generate a clash).

<u>Status</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>
Structural Coordination			
R	1.1 Structural Framing – Arch. Ceiling	Structure, Arch.	0 in.
MEP Coordination			
	2.1 Equipment	<i>(roll-up test)</i>	
R	2.1.1 Equipment – Structural Framing	M/E/P, S	

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<u>Status</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>
R	2.1.2 Equipment – Architecture	M/E/P, A	
	2.2 Mechanical Ventilation	<i>(roll-up test)</i>	
R,D	2.2.1 Mech. Ventilation – Equipment	M	
R	2.2.2 Mech. Ventilation – Struct. Framing	M, S	
R	2.2.3 Mech. Ventilation – Arch. Ceiling	M, A	
R,D	2.2.4 Mech. Ventilation – Mech. Ventilation	M (self check)	
	2.3 Mechanical Piping	<i>(roll-up test)</i>	
R,D	2.3.1 Mech. Piping – Equipment	M	
	2.3.2 Mech. Piping – Struct. Framing	M, S	
	2.3.3 Mech. Piping – Arch. Ceiling	M, A	
R,D	2.3.4 Mech. Piping – Mech. Ventilation	M	
R,D	2.3.5 Mech. Piping – Mech. Piping	M (self check)	
	2.4 Plumbing	<i>(roll-up test)</i>	
R	2.4.1 Plumbing – Equipment	P, M	
R	2.4.2 Plumbing – Structural	P, S	
R	2.4.3 Plumbing – Arch. Ceiling	P, A	
R,D	2.4.4 Plumbing – Mech. Ventilation	P, M	
R,D	2.4.5 Plumbing – Mech. Piping	P, M	
R,D	2.4.6 Plumbing – Plumbing	P (self check)	
	2.5 Electrical	<i>(roll-up test)</i>	
R,D	2.5.1 Electrical – Equipment	E, M	
	2.5.2 Electrical – Struct. Framing	E, S	
R	2.5.3 Electrical – Arch. Ceiling	E, A	
R,D	2.5.4 Electrical – Mech. Ventilation	E, M	
R,D	2.5.5 Electrical – Mech. Piping	E, M	
R,D	2.5.6 Electrical – Plumbing	E, P	
R,D	2.5.7 Electrical – Electrical	E (self check)	
	2.6 Fire Protection	<i>(roll-up test)</i>	
R,D	2.6.1 Fire Protection – Equipment	F, M	
R	2.6.2 Fire Protection – Struct. Framing	F, S	
R	2.6.3 Fire Protection – Arch. Ceiling	F, A	
R,D	2.6.4 Fire Protection – Mech. Ventilation	F, M	
R,D	2.6.5 Fire Protection – Mech. Piping	F, M	
R,D	2.6.6 Fire Protection – Plumbing	F, P	

BTM01-PXP (PROJECT EXECUTION PLAN) CITY/COUNTY OF SAN FRANCISCO TRAFFIC
COMPANY DIVISION & FORENSIC SCIENCE DIVISION LABORATORY

<u>Status</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>
R,D	2.6.7 Fire Protection – Electrical	F, E	
R,D	2.6.8 Fire Protection - Fire Protection	F (self check)	
Interior Construction Coordination			
	3.1 Casework – Walls, Elec. Fixtures/Devices	A, E	
	3.2 Furnishings – Walls, Elec. Fixtures/Devices	A, E	
AV, TC, SC Coordination			
	4.1 Equipment	<i>(roll-up test)</i>	
R	4.1.1 Equipment – Structural Framing	AV, TC, SC, S	
R	4.1.2 Equipment – Architecture	AV, TC, SC, A	
	4.2 Audio Visual Equipment	<i>(roll-up test)</i>	
R,D	4.2.1 Audio Visual Equipment – Equipment	AV	
R	4.2.2 Audio Visual Equipment – Struct. Framing	AV, S	
R	4.2.3 AV Equipment – Arch. Ceiling	AV, A	
R	4.2.4 AV Equipment – Mechanical	AV, M	
R	4.2.5 AV Equipment – Electrical	AV, E	
R	4.2.6 AV Equipment – Plumbing	AV, P	
R	4.2.7 AV Equipment – Fire Protection	AV, F	
R,D	4.2.8 AV Equipment – AV Equipment	AV (self check)	
	4.3 AV Pathways	<i>(roll-up test)</i>	
R,D	4.3.1 AV Pathway – Equipment	AV	
	4.3.2 AV Pathway – Struct. Framing	AV, S	
	4.3.3 AV Pathway – Arch. Ceiling	AV, A	
	4.3.4 AV Pathway – Mechanical	AV, M	
	4.3.5 AV Pathway – Electrical	AV, E	
	4.3.6 AV Pathway – Plumbing	AV, P	
	4.3.7 AV Pathway – Fire Protection	AV, F	
R,D	4.3.8 AV Pathway – AV Equipment	AV	
R,D	4.3.9 AV Pathway – AV Pathway	AV (self check)	
	4.4 IT Equipment	<i>(roll-up test)</i>	
R	4.4.1 IT – Equipment	IT	
R	4.4.2 IT – Structural	IT, S	
R	4.4.3 IT – Arch. Ceiling	IT, A	

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<u>Status</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>
R,D	4.4.4 IT – Mechanical	IT, M	
R,D	4.4.5 IT – Electrical	IT, E	
R,D	4.4.6 IT – Plumbing	IT, P	
R,D	4.4.7 IT – Fire Protection	IT, F	
R,D	4.4.8 IT – IT	IT (self check)	
	4.5 IT Pathways	<i>(roll-up test)</i>	
R,D	4.5.1 IT Pathways – Equipment	IT, M	
R	4.5.2 IT Pathways – Struct. Framing	IT, S	
R	4.5.3 IT Pathways – Arch. Ceiling	IT, A	
R,D	4.5.4 IT Pathways – Mechanical	IT, M	
R,D	4.5.5 IT Pathways – Electrical	IT, E	
R,D	4.5.6 IT Pathways – Plumbing	IT, P	
R,D	4.5.7 IT Pathways – Fire Protection	IT, F	
R,D	4.5.8 IT Pathways – Electrical	IT (self check)	
	4.6 Security Electronics Equipment	<i>(roll-up test)</i>	
R,D	4.6.1 Security Electronics Equipment	SC	
R	4.6.2 Security Electronics Equipment – Struct. Framing	SC, S	
R	4.6.3 Security Electronics Equipment – Arch. Ceiling	SC, A	
R,D	4.6.4 Security Electronics Equipment – Mechanical	SC, M	
R,D	4.6.5 Security Electronics Equipment – Electrical	SC, E	
R,D	4.6.6 Security Electronics Equipment – Plumbing	SC, P	
R,D	4.6.7 Security Electronics Equipment – Fire Protection	SC, F	
R,D	4.6.8 Security Electronics Equipment - Security Electronics Equipment	SC (self check)	
	4.6 Security Electronics Pathways	<i>(roll-up test)</i>	
R,D	4.7.1 Security Electronics Pathways	SC	
R	4.7.2 Security Electronics Pathways – Struct. Framing	SC, S	
R	4.7.3 Security Electronics Pathways – Arch. Ceiling	SC, A	
R,D	4.7.4 Security Electronics Pathways – Mechanical	SC, M	
R,D	4.7.5 Security Electronics Pathways – Electrical	SC, E	
R,D	4.7.6 Security Electronics Pathways – Plumbing	SC, P	
R,D	4.7.7 Security Electronics Pathways – Fire Protection	SC, F	
R,D	4.7.8 Security Electronics Pathways - Security Electronics Pathways	SC (self check)	

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COMPANY DIVISION & FORENSIC SCIENCE DIVISION LABORATORY

Additional clash sub-tests to be performed on this project:

<u>Y/N</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>

[End of Section]

Sustainability Plan

The Project Leaders have shared responsibility for the successful integration of sustainable performance into the project. Based on project scope and approach, the project manager should assign a team member to serve as the Project Sustainable Coordinator. The Project Sustainable Coordinator is the day to day sustainable advocate for the project, acts as a resource on the Project team, tracks sustainable performance against project goals throughout the design, and coordinates the sustainable strategy implementation. The Office Sustainable Leader acts as a resource and in a review capacity for the Sustainable Project Coordinator.

For each designated Sustainable task below, identify the team member(s) within the respective organization(s) who will coordinate and perform that function

ORGANIZATIONAL ROLES / STAFFING FOR SUSTAINABLE INTEGRATION

<u>Role</u>	<u>Firm/Location</u>	<u>Contact</u>	<u>Phone</u>
Project Sustainable Coordinator	HOK / San Francisco, CA	Breffni O'Rourke	(415) 356-8604
Office Sustainable Design Leader	HOK / San Francisco, CA	Zorana Bosnic	415) 356-8771
Energy Modeler	R.G. Vanderweil / Boston, MA	Suzanne Robinson	(617) 423-7423
Design Analyst	R.G. Vanderweil / Boston, MA	John Saad	(617) 423-7423
Commissioning Agent	TBD	TBD	TBD

SOFTWARE

<u>Discipline</u>	<u>Analysis</u>	<u>Software</u>	<u>Version</u>
Architecture	Climate Study	HOK Climate Tool Climate Consultant	1.0
Architecture	Benchmarking	HOK Benchmarking Tool Energy Star Target Finder	
Architecture	Climate Study	Climate Consultant	
Architecture	Climate Study, Massing/Orientation Study, Daylighting Study, Façade Study	Ecotect Analysis	2012

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Weather file data to MS Excel	.epw file	See HOK Climate Tool
Ecotect to MS Excel	.wea file	See HOK Climate Tool
Others...		

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Confirm Project Sustainable Scope	At project scoping	PM, Sustainable Design Leader	HOK SF
Visioning/Goal and Performance Setting Session.	Concept Design	PM, Project Designer, Sustainable Design Leader, Design Analyst, all project stakeholders including client	HOK SF
Climate Study	Concept Design	Design Analyst	HOK SF
Benchmarking study	Concept Design	Design Analyst	HOK SF
Sustainable Charrette *Include in section 8 for LEED	Concept Design or Schematic Design (NIC)	PM, Project Designer, Sustainable Design Leader, Design Analyst, all project stakeholders	HOK SF
Sustainable Status Project Review	Monthly	PM, Project Designer, Sustainable Design Leader, Design Analyst, all project stakeholders	HOK SF
Sustainable Performance Tracking and compliance	Bi-weekly; or as needed at phase end (SD/DD/CD – (NIC))	PM, Project Architect, Sustainable Design Leader, Design Analyst, w/ related project team members	HOK SF
Sustainable Construction Coordination	Kick-off and periodic during Construction Phase (NIC)	GC, Subs, HOK CA, Sustainable Design Leader	Project Job Site Office
Post Occupancy and Performance Evaluation	12 months after occupancy (NIC)	Commissioning Agent, Owner, Design-Build MEP Engineer, HOK-MEP	Project Location

MODEL STANDARDS

Site Data Description

Survey provided by: San Francisco Department of Public Works

Weather file source:

Other:

IDENTIFY PERFORMANCE TARGETS

<u>Type of Goal</u>	<u>Value Target #, Comparative</u>	<u>Governing Authority</u>	<u>Client Requirement</u>
Energy	TBD		Yes/No
Water	TBD		Yes/No
Materials	TBD		Yes/No
Indoor Environmental Quality	TBD		Yes/No
Certification	Level TBD	LEED USGBC	Yes/No
OTHER (based on project)	TBD		Yes/No

MEASUREMENT & VERIFICATION

TBD

[End of Section]

Energy Analysis

Definition: A process in the facility design phase which one or more building energy simulation programs use a properly adjusted Building Information Model to conduct energy assessments for the current building design. The core goal of this BIM use is to inspect building energy standard compatibility and seek opportunities to optimize proposed design to reduce structure's life-cycle costs and harmful environmental impacts.

ORGANIZATIONAL ROLES / STAFFING FOR ENERGY ANALYSIS

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
HOK – Energy Modeling	Boston, MA	Suzanne Robinson	(617) 423-7423
MEP Engineer - Design Criteria - R.G. Vanderweil (Up to DD Phase)	Boston, MA	John Saad	(617) 423-7423
HOK – Sustainability	San Francisco, CA	Zorana Bosnic	(415) 356-8771
Design – Build Mechanical Engineer (CD Phase)	TBD	TBD	TBD

SOFTWARE

<u>Discipline</u>	<u>Analysis</u>	<u>Software</u>	<u>Version</u>
Energy Model & Architecture	Massing/Orientation Study	Ecotect, Radiance, IESVE	2.1
Energy Model & Architecture	Facade Study	Ecotect, IESVE	4.0
Architecture	Daylighting Study	Ecotect, Radiance	
MEP Engineer	Energy Model	IESVA	

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to Ecotect	dwg.dxf	See HOK Guidelines
Revit to Radiance	dwg.dxf	See HOK Guidelines
Revit to IESVE	dwg.dxf	See HOK Guidelines
Others...		

PROCESS OVERVIEW

ENERGY ANALYSIS SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>
Massing & Orientation	Concept Design, Schematic Design (NIC)	Design Analyst/ Design Team
Facade Optimization	Concept Design, Schematic Design (NIC), Design Development (NIC)	Design Analyst/ Design Team

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>
Daylight Study	Concept Design, Schematic Design (NIC), Design Development (NIC)	Design Analyst/ Design Team
Energy Model	Per Energy Modelling Agreement	MEP Engineer/ consultant

MODEL STANDARDS

File Naming Convention

File names for analysis models shall be formatted as:

YYYY-MM-DD Phase-Option-Description

Ex: 2012-01-02 Concept-Option2-DaylightStudy

Refer to HOK BIM Standards for more information.

Measurement System

The measurement system utilized on this project shall be *<Imperial or Metric>* and the base unit of measurement shall be *<feet – inches or mm – cm – m>*.

MEASUREMENT & VERIFICATION

TBD

[End of Section]

Sustainability Evaluation – LEED (Basic)

This section covers the basic HOK activities and responsibilities on projects pursuing LEED certification, but where HOK is not acting as the projects overall LEED Facilitator/Manager. Additional responsibilities when HOK acts as the overall LEED Facilitator/Manager for the entire project team is covered in the LEED – Management section (TBD).

For each designated Sustainable task below, identify the team member(s) within the respective organization(s) who will coordinate and perform that function.

<u>Role</u>	<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>
Sustainable Coordinator/ LEED Prime Certification Manager	HOK	San Francisco, CA	Zorana Bostic Breffni O'Rourke
Energy Modeling	RGV - MEP Engineer	Boston, MA	Suzanne Robinson
Mechanical Engineer – Design Criteria	RGV - MEP Engineer	Boston, MA	Harris Zeidman

SOFTWARE

NOTE: During the life of the Project, changes to the software versions listed below must be coordinated with and agreed to by all parties to this document.

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
Energy Modeling & Architecture	Revit	2015

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to MS Excel		See HOK Revit LEED Guidelines

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Feasibility assessment	Once	LEED Prime, PM, Project Designer, Mechanical Engineer, w/ related project team members	HOK - SF
Project Registration and LEED® Online team management	Once	LEED Prime, PM, client	HOK - SF
Sustainable Design Objective Confirmation	Bi-weekly; or as needed at phase end (SD/DD/CD – (NIC))	Architecture, Structure, HVAC, Electrical, Plumbing, w/ related project team members	HOK - SF

BTM01-PXP (PROJECT EXECUTION PLAN) CITY/COUNTY OF SAN FRANCISCO TRAFFIC
 COMPANY DIVISION & FORENSIC SCIENCE DIVISION LABORATORY

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Specification development and plan review	Schematic Design (NIC), Design Development (NIC), Construction Documentation (NIC)	PM, Project Architect, LEED Prime, Project Designer, Specification writer, w/ related project team members	HOK - SF

QUALITY CONTROL

Refer to Attachment 5 in Prime Agreement.

[End of Section]

Structural Analysis

Definition: A process in which analytical software utilizes the BIM Design Authoring model to determine the behavior of a given structural system. With the modeling minimum required standards for structural design and analysis are used for optimization. Based on this analysis, further development and refinement of the structural design takes place to create effective, efficient, and constructible structural systems.

ORGANIZATIONAL ROLES / STAFFING FOR 3D COORDINATION

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
SOHA Engineers	San Francisco, CA	Frank Espino	(415) 989-9900

SOFTWARE

NOTE: During the life of the Project, changes to the software versions listed below must be coordinated with and agreed to by all parties to this document.

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
Structure	ETAB Version 13.1.4 SAP 2000 Version 16 SAFE Version 12.3.2	

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>

PROCESS OVERVIEW

SCHEDULE

QUALITY CONTROL

[End of Section]

Existing Conditions Modeling

Definition: A process in which a project team develops a 3D model of the existing conditions for a site, facilities on a site, or a specific area within a facility. This model can be developed in multiple ways: including laser scanning and conventional surveying techniques, depending on what is desired and what is most efficient. Once the model is constructed, it can be queried for information, whether it is for new construction or a modernization project

ORGANIZATIONAL ROLES / STAFFING

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
City / County of San Francisco	San Francisco, CA	Marilyn Lopes	(415) 554-5901

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
ALL	AutoCAD 2012 Civil 3D	2012

Existing conditions shall be modeled in accordance with the standards and requirements specified in Design Authoring. All elements shall be modeled on the *Existing* phase.

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Point Cloud to Revit	PTX or PTC	City / County of San Francisco DPW to confirm.

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

EXISTING CONDITIONS MODELING SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Complete ECM service request form (HOK)	Once	City / County of San Francisco DPW, HOK, Telamon.	DPW
ECM service kick-off	Once	ECM provider, applicable engineers, City / County of San Francisco DPW, HOK, Telamon.	DPW
ECM milestone review	At milestones	ECM provider, applicable engineers, City / County of San Francisco DPW, HOK, Telamon.	DPW

QUALITY CONTROL

Revit model of existing conditions shall be compared to original point cloud in Navisworks Manage.

IMPLEMENTATION NOTES

[End of Section]

Cost Estimation (Quantity Take-Off)

Definition: Commonly referred to as '5D,' a process in which BIM is used to assist in the generation of accurate quantity take-offs and cost estimates throughout the lifecycle of a project. This process allows the project team to see the cost effects of their changes, during all phases of the project.

ORGANIZATIONAL ROLES / STAFFING

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
HOK	San Francisco, CA	James Aguilar	(415) 356-8724
Cost Consultant – Cumming Corp.	San Francisco, CA	Nick Mata	(415) 748-3094

SOFTWARE

NOTE: During the life of the Project, changes to the software versions listed below must be coordinated with and agreed to by all parties to this document.

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
All Design Disciplines	(see Design Authoring)	
Estimator		

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to QTO	DWfx	

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

COST ESTIMATING SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Design team meeting - Coordination	Bi-weekly	All disciplines	HOK office
Upload model files	Weekly (Fri)	All disciplines	InfoExchange
Model Audit (QC)	Ends of phases	All disciplines	n/a
Conceptual Design	End of phase	Cost Consultant	n/a
Schematic Design (NIC)	End of phase	Cost Consultant	n/a
Design Development (NIC)	50% & 100%	Cost Consultant	n/a
Contract Documents (NIC)	50% & 95%	Cost Consultant	n/a

QUALITY CONTROL

IMPLEMENTATION NOTES

[End of Section]

Record Modeling

Definition: The process used to depict an accurate representation of the physical conditions, environment, and assets of a facility. At a minimum, the record model should contain information relating to the main architectural, structural, and MEP elements. It is the culmination of all the Design Authoring throughout the project, including linking Operation, Maintenance, and Asset data to the As-Built model (created from the Design, Construction, 4D Coordination Models, and Subcontractor Fabrication Models) to deliver a record model to the owner or facility manager. Additional information including equipment and space planning systems may be necessary if the owner intends to utilize the information in the future. As noted in the Prime Agreement HOK shall provide a. As-Planned BIM file to the CM/GC at the start of the Construction phases. CM/GC shall a BIM reflecting "As-Built" conditions throughout the construction phase and submit to the owner at completion of the project construction.

ORGANIZATIONAL ROLES / STAFFING

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
CM/GC	TBD	TBD	TBD
HOK (Prime)	San Francisco, CA	James Aguilar	(415) 356-8724
HOK (Lab)	Washington, DC	Tim O'Connell	(202) 944-1456
MEI Architects	San Francisco, CA	Steven Juergens	(415) 703-0328
SOHA Engineers	San Francisco, CA	Steve Lau	(415) 989-9900
Telamon Engineering Consultants Inc.	San Francisco, CA	Mennor Chan	(415) 837-1336
Kate Keating & Associates	San Francisco, CA	Julie Vogel	(415) 773-1000
Syska Hennessy Group	San Francisco, CA	John Moran	(415) 288-9060
Design-Build Mechanical Engineer	TBD	TBD	TBD
Design-Build Electrical Engineer	TBD	TBD	TBD
Design-Build Plumbing Engineer	TBD	TBD	TBD
Design-Build Fire Protection Engineer	TBD	TBD	TBD
Design-Build Low Voltage Engineer	TBD	TBD	TBD

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
All	Revit	2015

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to COBie	XLS	

PROCESS OVERVIEW

See Appendix C for Level 2 process diagrams

RECORD MODELING SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
As-Planned BIM kick-off	Once	Architect, engineers, contractor, owner	TBD
Record Modeling deliverable review	Once (end of construction)	Architect, engineers, CM/GC, owner	TBD

QUALITY CONTROL

IMPLEMENTATION NOTES

Remote Application Collaboration

HOK uses Citrix XenApp (www.citrix.com/xenapp) for enhanced remote application sharing. Direct access to

HOK Citrix XenApp host office(s): << >>

Applications authorized for Project: << >>

Procedures for HOK employees: Send an email to *_HOK Citrix Support Request* to be added to the Project.

Procedures for non-HOK team members: Contact the HOK Project Manager or BIM Coordinator who will submit a request to *_HOK Citrix Support Request*. A form will be transmitted to the requesting party(ies) for completion.

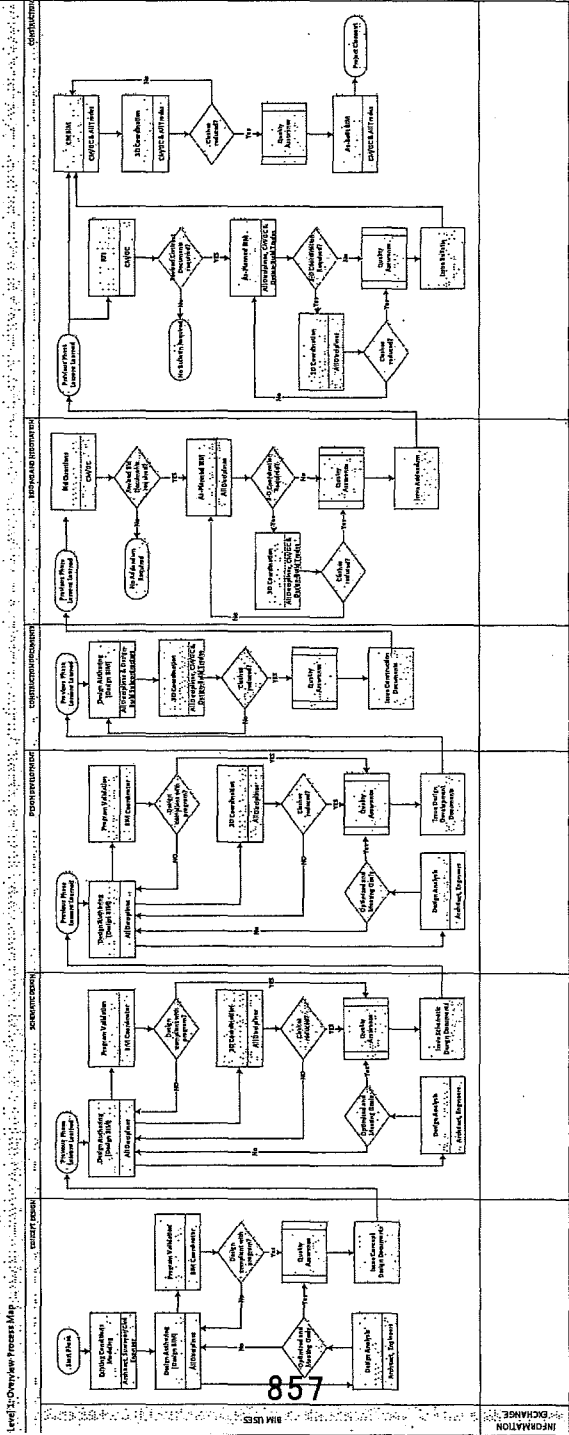
HOK XenApp address: <https://remote.hok.com>

Server address for project files: << to be determined >>

Appendix B: Level 1 Process Map

856

City/County of San Francisco Traffic Company Division & Forensic Science Division Laboratory

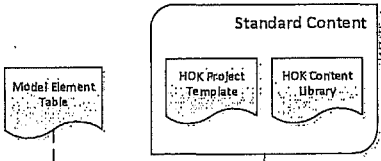


857

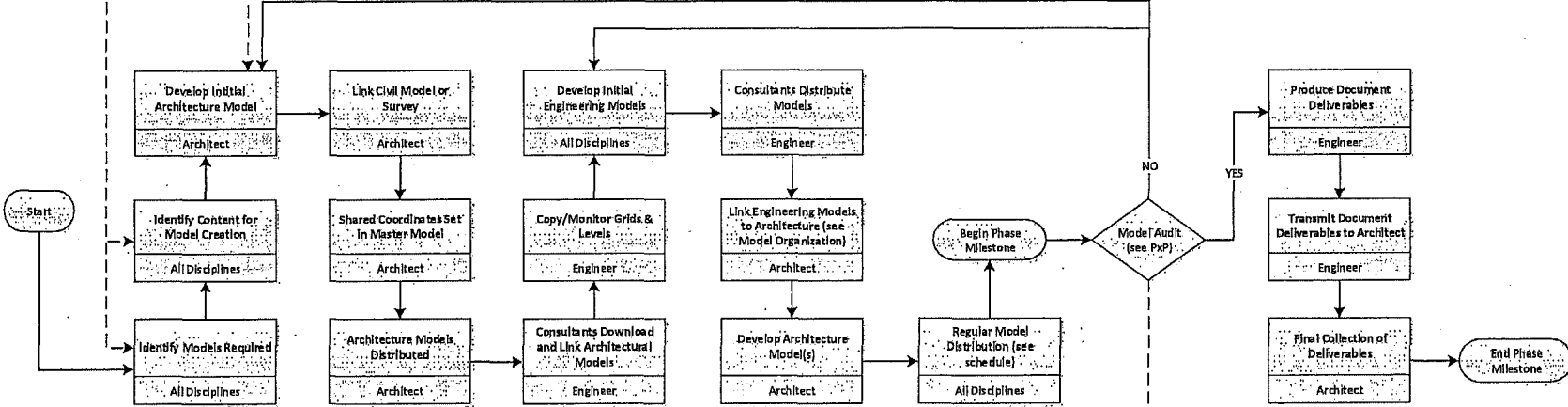
Appendix C: Level 2 Process Maps

858

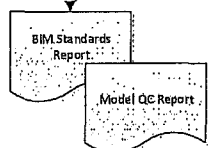
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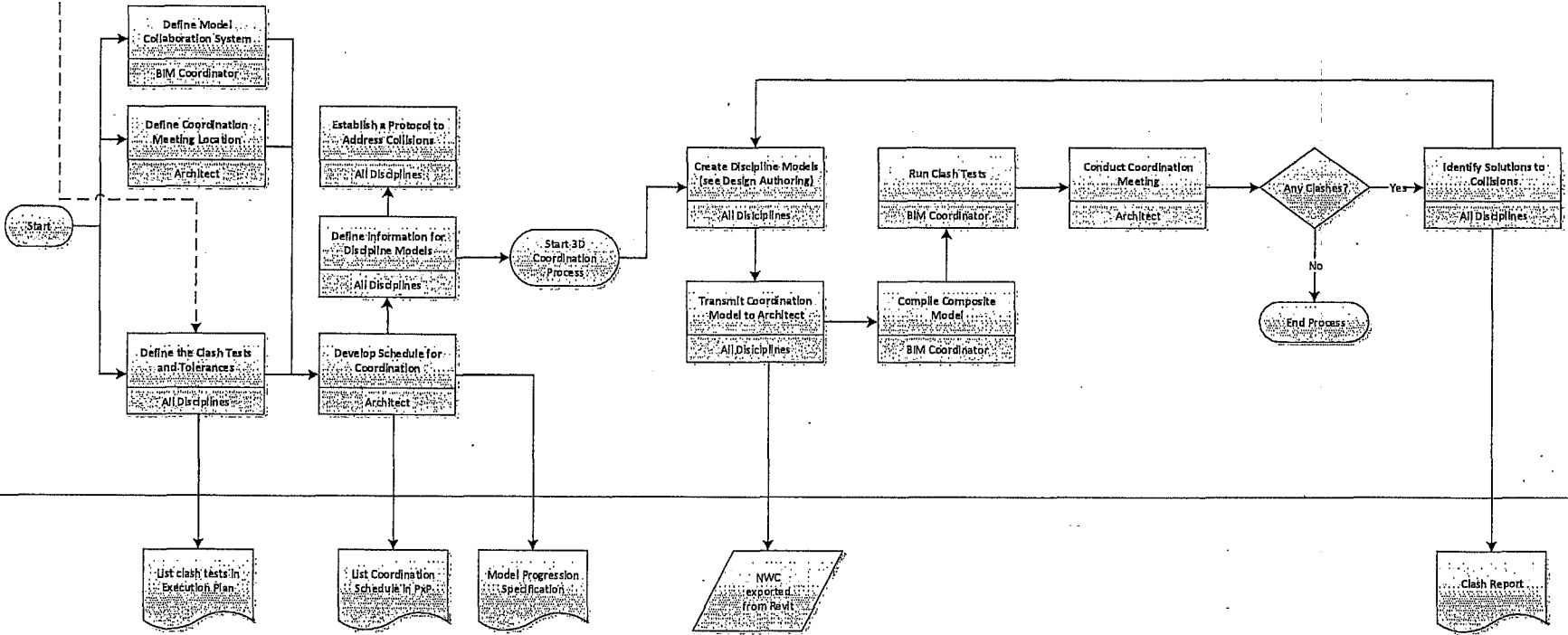
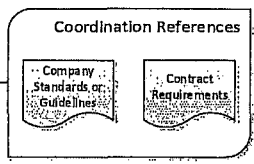
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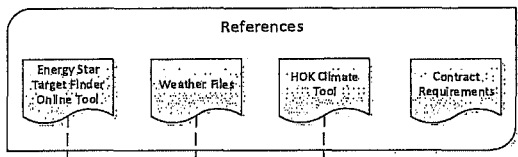
Info. Exchange



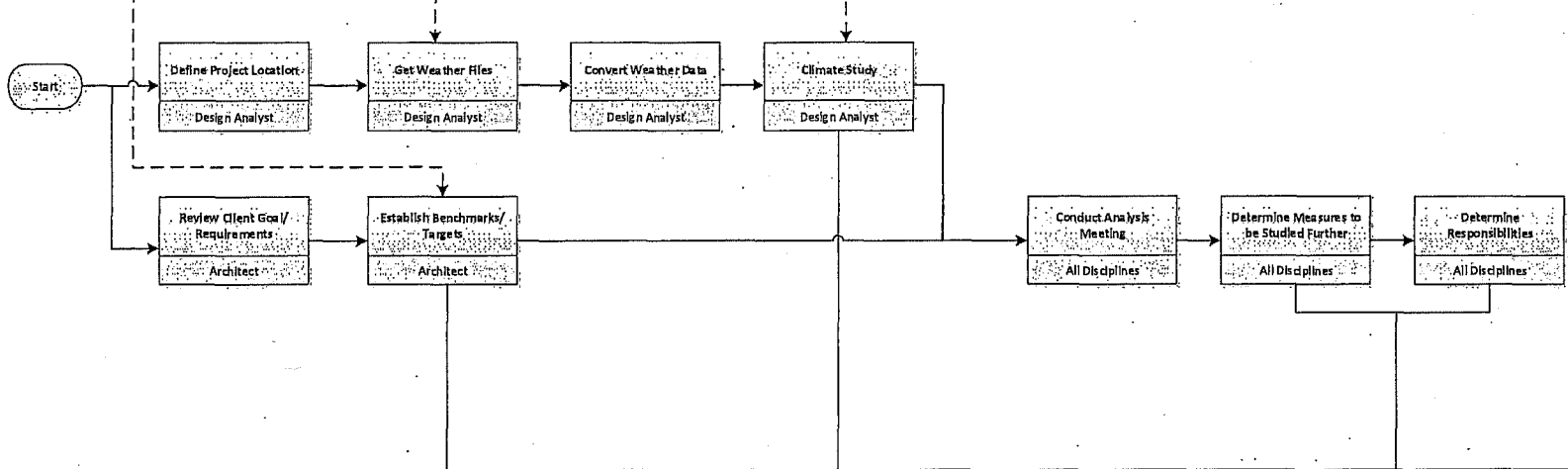
Reference Info
Process 098
Info Exchange



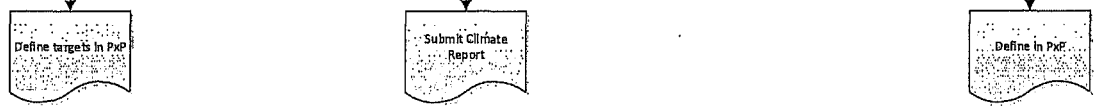
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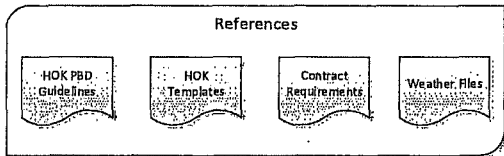
Process 98



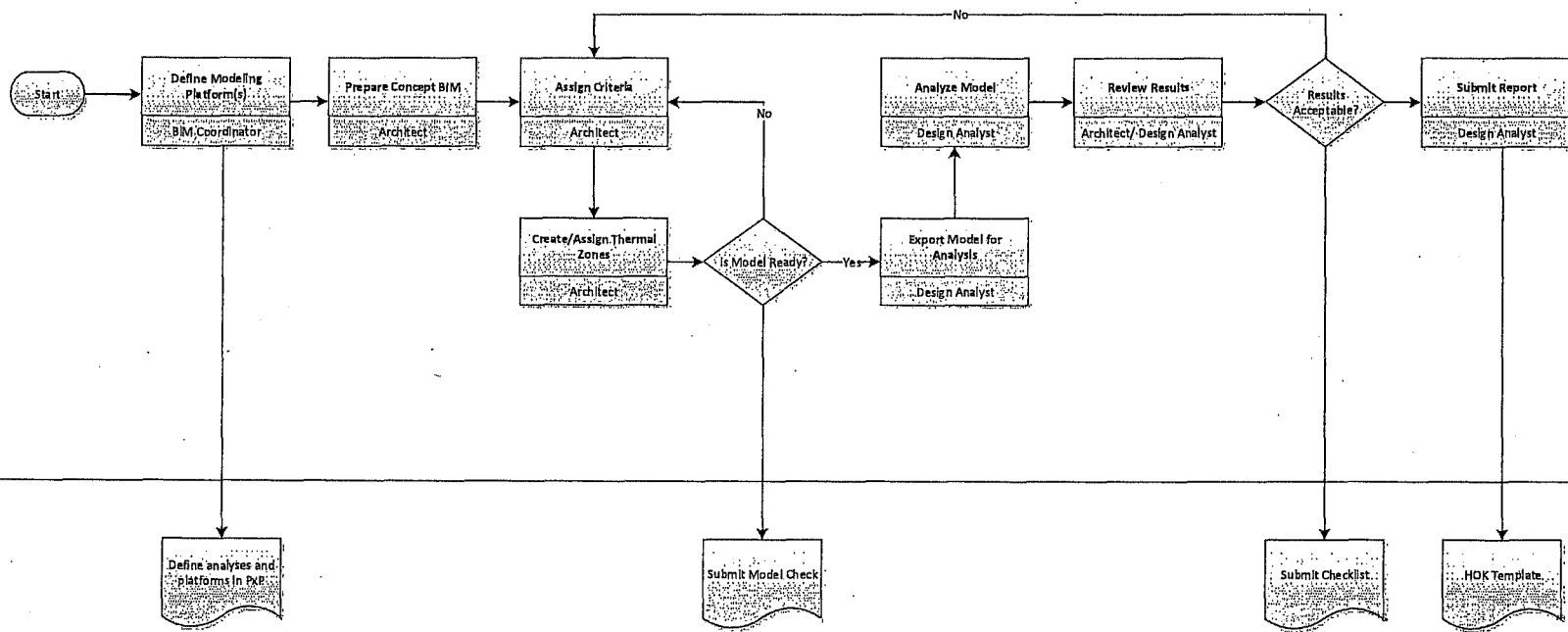
Info. Exchange



Reference Info

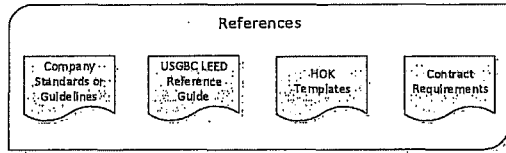


Process 862

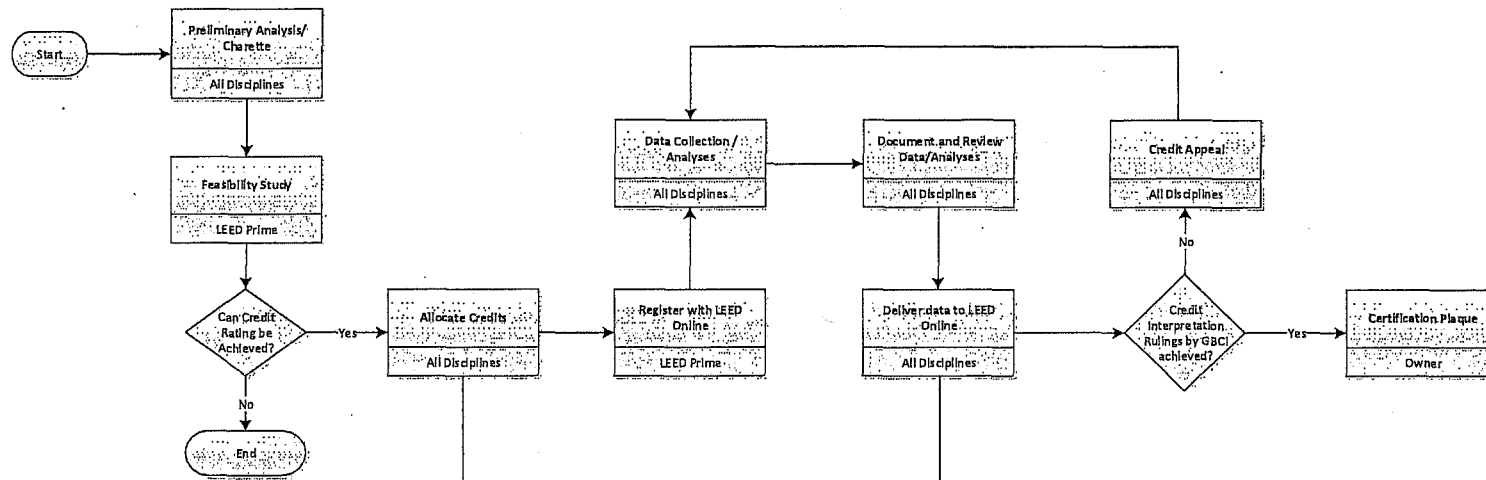


Info Exchanges

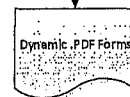
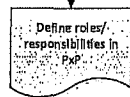
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Process



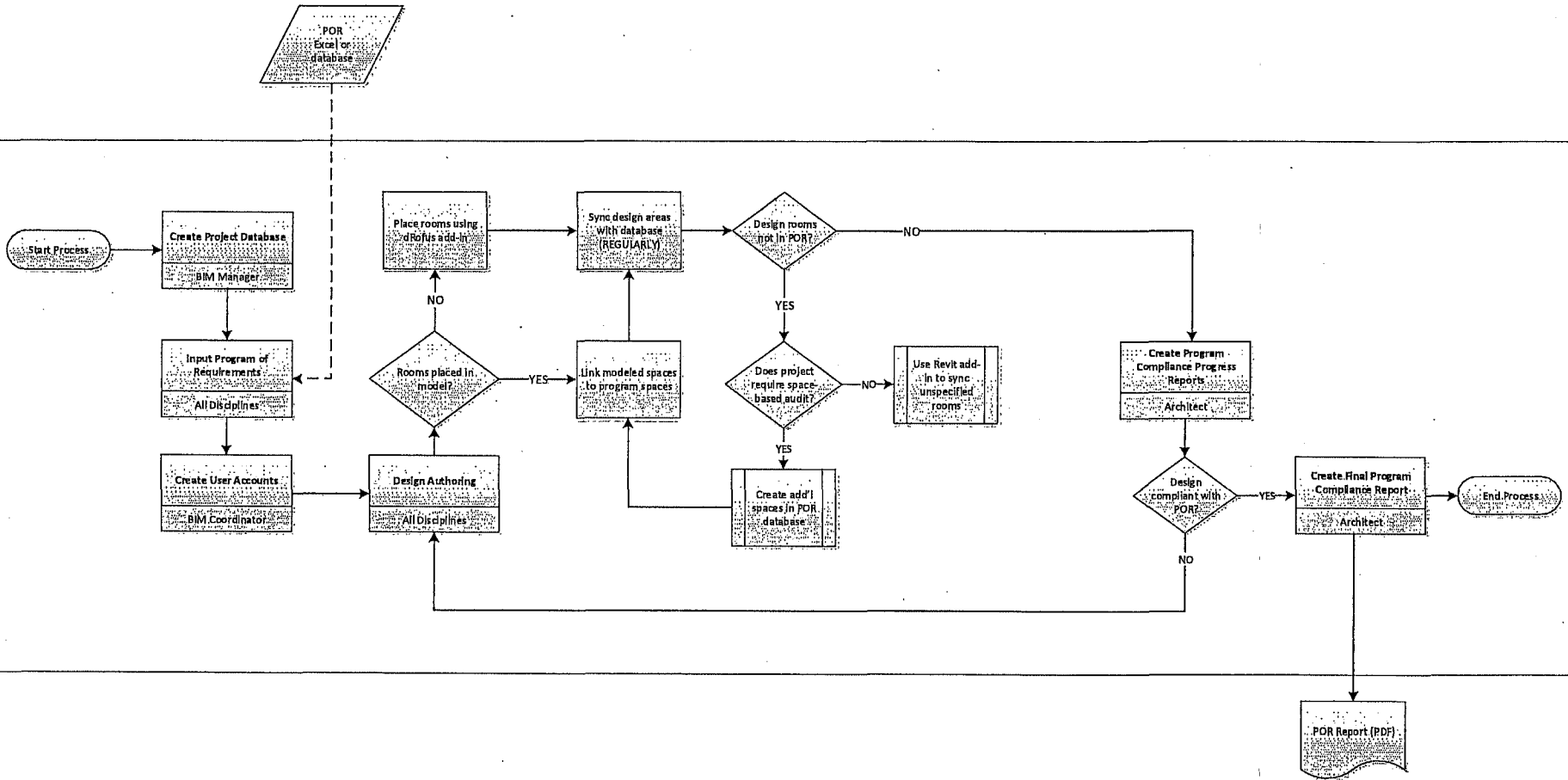
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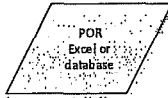
Reference Info

Process 798

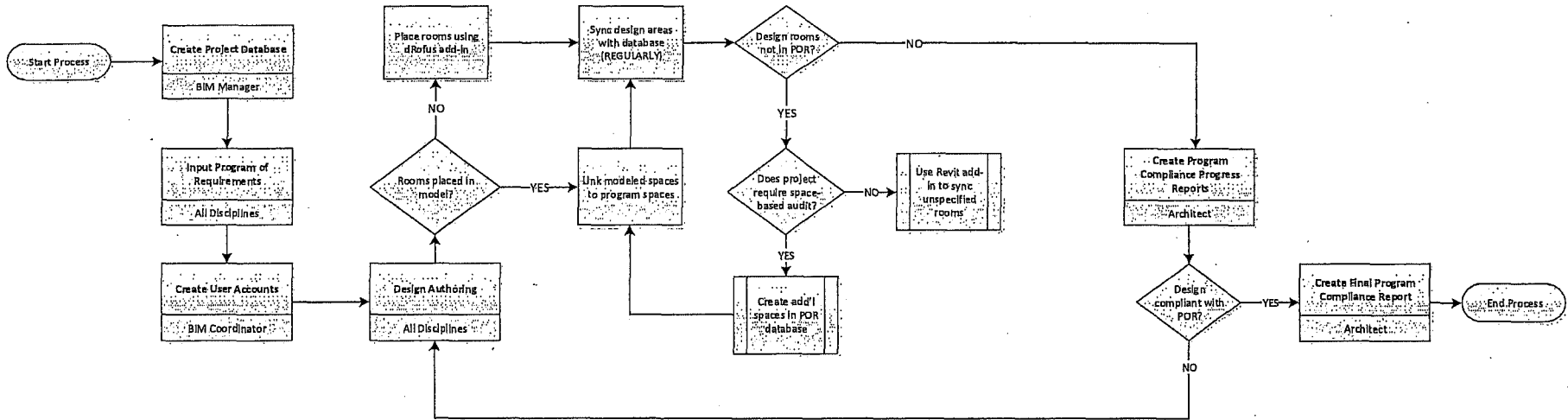
Info Exchange



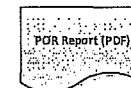
Reference Info



Process



Info Exchange



Appendix D: Model Element Table

Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction		
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	
GENERAL MODEL INFORMATION													
Datum													
	Levels	300	AR	300	AR	300	AR	300	AR	300	PC	300	PC
	Grids	200	AR	300	SE	300	SE	300	SE	300	TC	300	TC
3040.35	Coordinate System (Survey Info)	300	AR	300	AR	300	AR	300	AR	300	PC	300	PC
Rooms													
	Room Names	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC
	Room Numbers	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC
	Room Finishes	100	AR	200	AR	300	AR	300	AR	300	PC	300	PC
	Room Areas (POR)	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC
Areas													
	Area Boundaries	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC
	Area Names	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC
	Area Types	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC
A SUBSTRUCTURE													
A10 FOUNDATIONS													
A1010 Standard Foundations													
A1010.10	Wall Foundations	200	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1010.30	Column Foundations	200	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1010.90	Standard Foundation Supplementary Component	200	SE	200	SE	250	SE	250	SE	250	PC	250	PC
A1020 Special Foundations													
A1020.10	Driven Piles	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1020.15	Bored Piles	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1020.20	Caissons	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1020.30	Special Foundation Walls	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1020.40	Foundation Anchors	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1020.50	Underpinning	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1020.60	Raft Foundations	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1020.70	Pile Caps	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A1020.80	Grade Beams	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC
A20 SUBGRADE ENCLOSURES													
A2010 Walls on Subgrade Enclosures													
A2010.10	Subgrade Enclosure Wall Construction	100	AR	200	CE	300	CE	300	CE	400	TC	400	TC
A2010.20	Subgrade Enclosure Wall Interior Skin	100	AR	200	CE	300	CE	300	CE	400	TC	400	TC
A2010.90	Subgrade Enclosure Wall Supplementary Component	100	AR	200	CE	300	CE	300	CE	400	TC	400	TC
A40 SLABS ON-GRADE													
A4010	Standard Slabs-on-Grade	100	AR	200	AR	300	AR	300	AR	400	PC	400	PC
A4020	Structural Slabs-on-Grade	100	AR	200	SE	300	SE	300	SE	400	TC	400	TC
A4030	Slab Trenches	100	AR	200	SE	300	SE	300	SE	400	TC	400	TC
A4040	Pits & Bases	100	AR	200	SE	300	SE	300	SE	400	TC	400	TC
A4090	Slab-On-Grade Supplementary Components	100	AR	200	AR	300	AR	300	AR	400	PC	400	PC
A60 WATER AND GAS MITIGATION													
A6010	Building Subdrainage												
A6020	Off-Gassing Mitigation												
B SHELL													
B10 SUPERSTRUCTURE													
B1010 Floor Construction													
B1010.10	Floor Structural Frame	200	SE										
B1010.20	Floor Decks, Slabs, and Toppings	100	SE										
B1010.30	Balcony Floor Construction	100	AR	200	SE								
B1010.40	Mezzanine Floor Construction	200	SE										
B1010.50	Ramps	100	AR	200	AR	200	AR/SE	200	AR	200	PC	200	PC
B1010.90	Floor Construction Supplementary Components	-	-										
B1020 Roof Construction													
B1020.10	Roof Structural Frame	200	SE	200	SE	300	SE	300	SE	400	TC	200	TC

AR Architect
SE Structural Engineer
ME Mechanical Engineer
EE Electrical Engineer
PE Plumbing Engineer

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer		
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction					
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA				
B1020.20	Roof Decks, Slabs, and Sheathing		100	SE	200	SE	300	SE	300	SE	400	TC	200	TC	Insulation, fireproofing, firestopping, etc.	
B1020.30	Canopy Construction		100	SE	200	SE	300	SE	300	SE	400	TC	200	TC		
B1020.90	Roof Construction Supplementary Components		-	-	-	-	300	SE	300	SE	400	TC	-	-		
B1080.00	Stairs		200	AR	200	AR	300	AR	300	AR	400	PC	400	PC		
B1080.10	Stair Construction		-	-	200	AR	300	AR	300	AR	400	PC	400	PC		
B1080.30	Stair Soffits		-	-	200	AR	300	AR	300	AR	400	PC	400	PC		
B1080.50	Stair Railings		-	-	200	AR	300	AR	300	AR	400	PC	400	PC		
B1080.60	Fire Escapes		-	-	200	AR	300	AR	300	AR	400	PC	400	PC		
B1080.70	Metal Walkways		-	-	200	AR	300	AR	300	AR	400	PC	400	PC		
B1080.80	Ladders		-	-	200	AR	300	AR	300	AR	400	PC	400	PC		
B2000.00 EXTERIOR VERTICAL ENCLOSURES																
B2010.00	Exterior Walls		100	AR	200	AR	300	AR	300	AR	300	PC	300	PC	See also: C2010 Wall Finishes See also: B2020.30 Window Wall	
B2010.10	Exterior Wall Veneer		-	-	200	AR	300	AR	300	AR	300	PC	300	PC		
B2010.20	Exterior Wall Construction		100	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2010.30	Exterior Wall Interior Skin		100	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2010.40	Fabricated Exterior Wall Assemblies		100	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2010.50	Parapets		100	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2010.60	Equipment Screens		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2010.80	Exterior Wall Supplementary Components		-	-	-	-	-	-	-	-	-	-	-	-		
B2010.90	Exterior Wall Opening Supplementary Components		-	-	-	-	-	-	-	-	-	-	-	-		
B2020.00	Exterior Windows		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	Glazed facades may be represented as a generic wall with model pattern in SD	
B2020.10	Exterior Operating Windows		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2020.20	Exterior Fixed Windows		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2020.30	Exterior Window Wall		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2020.50	Exterior Special Function Windows		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2050.00	Exterior Doors and Grilles		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	Frames, hardware, glazing, louvers	
B2050.10	Exterior Entrance Doors		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2050.20	Exterior Utility Doors		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2050.30	Exterior Oversize Doors		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2050.40	Exterior Special Function Doors		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2050.60	Exterior Grilles		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2050.70	Exterior Gates		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2050.90	Exterior Door Supplementary Components		-	-	-	-	-	-	-	-	-	-	-	-		
B2070.00	Exterior Louvers and Vents		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2070.10	Exterior Louvers		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2070.20	Exterior Vents		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2080.00	Exterior Opening Protection Devices		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	Column covers, decorative metal, composites...	
B2080.10	Exterior Fixed Grilles and Screens		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2080.30	Exterior Opening Protection Devices		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2080.50	Exterior Balcony Walls and Railings		200	AR	200	AR	300	AR	300	AR	300	PC	300	PC		
B2080.70	Exterior Fabrications		200	AR	200	AR	300	AR	200	AR	200	PC	200	PC		
B2080.80	Blrd Control Devices		200	AR	200	AR	300	AR	200	AR	200	PC	200	PC		
B2080.90	Exterior Wall Specialties		200	AR	200	AR	300	AR	200	AR	200	PC	200	PC		
B3000.00 EXTERIOR HORIZONTAL ENCLOSURES																
B3010.00	Roofing		100	AR	200	AR	200	AR	200	AR	200	PC	200	PC	Lapped shingles, shakes, roofing tiles, etc. Membrane roofing	
B3010.10	Steep Slope Roofing		100	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3010.50	Low Slope Roofing		100	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3010.70	Canopy Roofing		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3010.90	Roofing Supplementary Components		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3020.00	Roof Appendages		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC	Ladders, curbs, vents, walkways, etc. Cupolas, spires, steeples, weathervanes, etc. Gutters, downspouts, scuppers, etc.	
B3020.10	Roof Accessories		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3020.30	Roof Specialties		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3020.70	Rainwater Management		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3040.00	Traffic Bearing Horizontal Enclosures		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC	Substrate board, insulation, flashing, copings, etc.	
B3040.10	Traffic Bearing Coatings		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3040.30	Horizontal Waterproofing Membrane		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3040.50	Wear Surfaces		200	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
B3040.90	Horizontal Enclosure Supplementary Components		-	-	-	-	-	-	-	-	-	-	-	-		

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction		
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	
B3060 Horizontal Openings													
B3060.10 Roof Windows and Skylights													
B3060.50 Vents and Hatches													
B3060.90 Horizontal Opening Supplementary Components													Frames, hardware, glazing, flashing, etc.
B3080 Overhead Exterior Enclosures													
B3080.10 Exterior Ceilings													
B3080.20 Exterior Soffits													
B3080.30 Exterior Bulkheads													Frames, hardware, glazing, flashing, etc.
C	INTERIORS												
C1010 INTERIOR PARTITIONS													
C1010.00 Interior Fixed Partitions	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
C1010.20 Interior Glazed Partitions	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
C1010.40 Interior Demountable Partitions													Partitions which can be demounted and relocated with minimum labor.
C1010.50 Interior Operable Partitions													Track-supported, operable panels and partitions, top hung and floor supported, manual or power operated. Includes auditorium partitions/dividers. Includes overhead supports.
C1010.70 Interior Screens													Portable and open dividers.
C1010.90 Interior Partition Supplementary Components													Sound isolation, acoustic insulation, firestopping, expansion control.
C1020 INTERIOR WINDOWS													
C1020.10 Interior Operating Windows	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC	
C1020.20 Interior Fixed Windows	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC	
C1020.50 Interior Special Function Windows	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC	
C1020.90 Interior Window Supplementary Components													Frames, sills, operating hardware, etc.
C1030 INTERIOR DOORS													
C1030.10 Interior Swinging Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
C1030.20 Interior Entrance Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
C1030.25 Interior Sliding Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
C1030.30 Interior Folding Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
C1030.40 Interior Colling Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
C1030.60 Interior Panel Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
C1030.70 Interior Special Function Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
C1030.80 Interior Access Doors and Panels			200	AR	200	AR	200	AR	200	PC	200	PC	
C1030.90 Interior Door Supplementary Components													Frames, hardware, glazing and louvers.
C1040 INTERIOR GRILLES AND GATES													
C1040.10 Interior Grilles													
C1040.50 Interior Gates													
C1060 RAISED FLOOR CONSTRUCTION													
C1060.10 Access Flooring			200	AR	200	AR	200	AR	200	PC	200	PC	
C1060.30 Platform/Stage Floors													
C1070 SUSPENDED CEILING CONSTRUCTION													
C1070.10 Acoustical Suspended Ceilings			200	AR	300	AR	300	AR	300	PC	300	PC	
C1070.20 Suspended Plaster and Gypsum Board Ceilings			200	AR	300	AR	300	AR	300	PC	300	PC	
C1070.50 Specialty Suspended Ceilings			200	AR	300	AR	300	AR	300	PC	300	PC	
C1070.70 Special Function Suspended Ceilings													
C1070.90 Ceiling Suspension Components													Hangers and framing to suspend ceiling and sound isolation components to be included with suspended ceiling construction elements above as appropriate.
C1090 INTERIOR SPECIALTIES													
C1090.10 Interior Railings and Handrails			200	AR	200	AR	200	AR	200	PC	200	PC	
C1090.15 Interior Louvers			200	AR	200	AR	200	AR	200	PC	200	PC	Louvers and other items for ventilation that are not an integral part of the mechanical system.
C1090.20 Information Specialties													Display units, chalkboards, markerboards, panels, etc.
C1090.25 Compartments & Cubicles													
C1090.30 Service Walls													Patient bed service walls
C1090.35 Wall and Door Protection													

AR Architect
SE Structural Engineer
ME Mechanical Engineer
EE Electrical Engineer
PE Plumbing Engineer

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)	LOD for (CM-BIM)	LOD for (As-Built BIM)	Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer				
	Schematic Design		Design Development		Construction Documents							Construction		Construction	
	LOD	MEA	LOD	MEA	LOD	MEA						LOD	MEA	LOD	MEA
C1090.40 Toilet, Bath, and Laundry Accessories															
C1090.50 Fireplaces and Stoves															
C1090.60 Safety Specialties															
C1090.70 Storage Specialties															
C1090.90 Other Interior Specialties											Pest control, flags, banners, mirrors, etc.				
C2000 INTERIOR FINISHES															
C2010.00 Wall Finishes															
C2010.10 Tile Wall Finish											Determine limitations of material takeoffs				
C2010.20 Wall Paneling											Determine limitations of material takeoffs				
C2010.30 Wall Coverings															
C2010.50 Stone Facing															
C2010.60 Special Wall Surfacing															
C2010.70 Wall Painting and Coating															
C2010.80 Acoustical Wall Treatment															
C2010.90 Wall Finish Supplementary Components											Wood/metal furring.				
C2020.00 Interior Fabrications	200	AR	200	AR	200	AR	200	AR	200	PC	Various materials formed to a variety of profiles for purposes such as column covers				
C2030.00 Flooring															
C2030.10 Flooring Treatment															
C2030.20 Tile Flooring															
C2030.30 Specialty Flooring															
C2030.40 Masonry Flooring			200	AR	200	AR	200	AR	200	PC	200	PC	Thick flooring materials such as stone should be modeled as separate floors		
C2030.45 Wood Flooring															
C2030.60 Resilient Flooring															
C2030.60 Terrazzo Flooring			200	AR	200	AR	200	AR	200	PC	200	PC			
C2030.70 Fluid-Applied Flooring															
C2030.75 Carpeting															
C2030.80 Athletic Flooring															
C2030.85 Entrance Flooring			200	AR	200	AR	200	AR	200	PC	200	PC	Entrance mats and frames		
C2030.90 Flooring Supplementary Components											Furring, underlayment, sound and vibration control.				
C2040.00 Stair Finishes															
C2040.20 Tile Stair Finish															
C2040.40 Masonry Stair Finish															
C2040.45 Wood Stair Finish															
C2040.50 Resilient Stair Finish															
C2040.60 Terrazzo Stair Finish															
C2040.75 Carpeted Stair Finish															
C2050.00 Ceiling Finishes															
C2050.10 Plaster and Gypsum Board Finish															
C2050.20 Ceiling Paneling															
C2050.70 Ceiling Painting and Coating															
C2050.80 Acoustical Ceiling Treatment															
D SERVICES															
D1000 CONVEYING															
D1010.00 Vertical Conveying Systems															
D1010.10 Elevators	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC			
D1010.20 Lifts			200	AR	200	AR	200	AR	200	PC	200	PC	Wheelchair, platform, stage, vehicle lifts.		
D1010.30 Escalators	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC			
D1010.50 Dumbwaiters															
D1010.60 Moving Ramps															
D1030.00 Horizontal Conveying															
D1030.10 Moving Walks	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC			
D1030.30 Turntables															
D1030.50 Passenger Loading Bridges	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC			
D1030.70 People Movers															
D1050.00 Material Handling															
D1050.10 Cranes															

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
D1050.20 Holsts														
D1050.30 Derricks														
D1050.40 Conveyors														
D1050.50 Baggage Handling Equipment														
D1050.50 Chutes														
D1050.70 Pneumatic Tube Systems														
D1080.10 Operable Access Systems														
D1080.10 Suspended Scaffolding														
D1080.20 Rope Climbers														
D1080.30 Elevating Platforms														
D1080.40 Powered Scaffolding														
D1080.50 Building Envelope Access														Window washing scaffolding Façade access equipment
D2000 PLUMBING														
D2010 Domestic Water Distribution														
D2010.10 Facility Potable-Water Storage Tanks														
D2010.20 Domestic Water Equipment			200	ME	300	TC	300	TC	300	TC	300	TC		
D2010.40 Domestic Water Piping			200	ME	300	TC	300	TC	300	TC	300	TC		
D2010.60 Plumbing Fixtures			200	AR/ME	300	AR/TC	300	AR/TC	300	PC/TC	300	PC/TC		** Architect or Engineer placement?
D2010.90 Domestic Water Distribution Supplementary Components														Meters, gages, hangers/supports, insulation, etc.
D2020 Sanitary Drainage														
D2020.10 Sanitary Sewerage Equipment														
D2020.30 Sanitary Sewerage Piping														Waste and vent piping, drains, manholes, etc.
D2020.90 Sanitary Drainage Supplementary Components														Supports, meters, gages, valves, insulation, etc.
D2030 Building Support Plumbing Systems														
D2030.10 Stormwater Drainage Equipment														
D2030.20 Stormwater Drainage Piping			200	PE	300	TC	300	TC	300	TC	300	TC		
D2030.30 Facility Stormwater Drains			200	AR/PE	300	AR/TC	300	AR/TC	300	PC/TC	300	PC/TC		** Architect or Engineer placement?
D2030.60 Grey Water Systems														
D2030.90 Building Support Plumbing System Supplementary Components														
D2060 General Service Compressed Air														
D2060 Process Support Plumbing Systems														
D2060.10 Compressed-Air Systems														
D2060.20 Vacuum Systems														
D2060.30 Gas Systems														
D2060.40 Chemical Waste Systems														
D2060.50 Processed Water Systems														
D2060.90 Process Support Plumbing System Supplementary Components														
D3000 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)														
D3010 Facility Fuel Systems														
D3010.10 Fuel Piping														
D3010.20 Fuel Pumps														
D3010.50 Fuel Storage Tanks														
D3020 Heating Systems														
D3020.10 Heat Generation														Boilers, furnaces, etc.
D3020.30 Thermal Heat Storage														
D3020.70 Decentralized Heating Equipment														Convection units, chilled beams, air coils, etc.
D3020.90 Heating System Supplementary Components														Supports, meters, gages, valves, insulation, etc.
D3030 Cooling Systems														
D3030.10 Central Cooling														Compressors, condensers, chillers, cooling towers.
D3030.30 Evaporative Air-Cooling														Equipment used to reject heat from the refrigeration process by evaporation.
D3030.50 Thermal Cooling Storage														
D3030.70 Decentralized Cooling														
D3030.90 Cooling System Supplementary Components														Air conditioners, heat pumps, air coils, etc.
D3050 Facility HVAC Distribution Systems														Supports, meters, gages, insulation, etc.
D3050.10 Facility Hydronic Distribution														
D3050.30 Facility Steam Distribution														
D3050.50 HVAC Air Distribution														
D3050.90 Facility Distribution System Supplementary Components														

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)	LOD for (CM BIM)	LOD for (As-Built BIM)	Comments				
	Schematic Design		Design Development		Construction Documents						Construction		Construction	
	LOD	MEA	LOD	MEA	LOD	MEA					LOD	MEA	LOD	MEA
D3060 Ventilation														
D3060.10 Supply Air														
D3060.20 Return Air														
D3060.30 Exhaust Air														
D3060.40 Outside Air														
D3060.60 Air-to-Air Energy Recovery														
D3060.70 HVAC Air Cleaning														
D3060.90 Ventilation Supplementary Components														
D3070 Special Purpose HVAC Systems														
D3070.10 Snow Melting										Electric cables and hydronic piping used for snow and ice control.				
D4000 FIRE PROTECTION														
D4010 Fire Suppression														
D4010.10 Water-Based Fire Suppression										Piping, standpipes, pumps, sprinkler systems.				
D4010.50 Fire-Extinguishing										CO2, clean-agent, wet/dry chemical extinguishing systems.				
D4010.90 Fire Suppression Supplementary Components										Supports, meters, gauges, valves, insulation, etc.				
D4030 Fire Protection Specialties														
D4030.10 Fire Extinguisher Cabinets			200	AR	300	AR	300	AR	300	PC				
D4030.30 Fire Extinguishers			200	AR	300	AR	300	AR	300	PC				
D4030.50 Breathing Air Replenishment Systems														
D4030.70 Fire Extinguisher Accessories														
D5000 ELECTRICAL														
D5010 Facility Power Generation														
D5010.10 Packaged Generator Assemblies														
D5010.20 Battery Equipment														
D5010.30 Photovoltaic Collectors														
D5010.40 Fuel Cells														
D5010.60 Power Filtering and Conditioning														
D5010.70 Transfer Switches														
D5010.90 Facility Power Generation Supplementary Components														
D5020 Electrical Service & Distribution														
D5020.10 Electrical Service														
D5020.30 Power Distribution														
D5020.70 Facility Grounding														
D5020.90 Electrical Service and Distribution Supplementary Components														
D5030 General Purpose Electrical Power														
D5030.10 Branch Wiring System										Includes raceways, ducts, cable trays and wiring.				
D5030.50 Wiring Devices			200	AR/EE	300	AR/TC	300	AR/TC	300	PC/TC	** Architect to determine device location?			
D5030.90 General Purpose Electrical Power Supplementary Components										Hangers, supports, etc.				
D5040 Lighting														
D5040.10 Lighting Control			200	AR/EE	300	AR/TC	300	TC	300	PC/TC	Lighting equipment may be modeled by both the AR and EE			
D5040.20 Branch Wiring for Lighting														
D5040.50 Lighting Fixtures			200	AR/EE	300	AR/TC	300	AR/TC	300	PC/TC	Lighting equipment may be modeled by both the AR and EE			
D5040.90 Lighting Supplementary Components										Hangers, supports, etc.				
D5080 Miscellaneous Electrical Systems														
D5080.10 Lightning Protection														
D5080.40 Cathodic Protection														
D5080.70 Transient Voltage Suppression														
D5080.90 Misc. Electrical Systems Supplementary Components														
D6000 COMMUNICATIONS														
D6010 Data Communications														
D6010.10 Data Communications Network Equipment										Firewalls, routers, switches, hubs, WAPs				
D6010.20 Data Communications Hardware										Servers, desktops, laptops, etc.				
D6010.30 Data Communications Peripheral Equipment										Printers, scanners, VR equipment, etc.				
D6010.50 Data Communications Software														
D6010.60 Data Communication Program and Integration Services														

AR Architect
SE Structural Engineer
ME Mechanical Engineer
EE Electrical Engineer
PE Plumbing Engineer

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
D6020.00 Voice Communications														
D6020.10 Voice Communications Switching and Routing Equipment														
D6020.20 Voice Communications Terminal Equipment			200	AR/EE	300	AR/EE	300	AR/EE	300	PC/TC	300	PC/TC	Telephones, transceivers, modems, TTY, radio	
D6020.30 Voice Communications Messaging	n/a		n/a		n/a		n/a		n/a		n/a			
D6020.40 Call Accounting	n/a		n/a		n/a		n/a		n/a		n/a			
D6020.50 Call Management	n/a		n/a		n/a		n/a		n/a		n/a			
D6030.00 Audio-Video Communication														
D6030.10 Audio-Video Systems														
D6030.50 Electronic Digital Systems														
D6060.00 Distributed Communications and Monitoring														
D6060.10 Distributed Audio-Video Communications Systems													Paging, PA, sound masking systems	
D6060.30 Healthcare Communications and Monitoring													Patient monitoring, telemetry, telemedicine systems, etc.	
D6060.50 Distributed Systems													Clocks, interior antenna systems, tracking systems, etc.	
D6090.00 Communications Supplementary Components														
D6090.10 Supplementary Components													Hangers, supports, conduits, back boxes, cable trays, etc.	
D7000.00 ELECTRONIC SAFETY AND SECURITY														
D7010.00 Access Control and Intrusion Detection														
D7010.10 Access Control														
D7010.50 Intrusion Detection														
D7030.00 Electronic Surveillance														
D7030.10 Video Surveillance														
D7030.50 Electronic Personal Protection														
D7050.00 Detection and Alarm														
D7050.10 Fire Detection and Alarm														
D7050.20 Radiation Detection and Alarm														
D7050.30 Fuel-Gas Detection and Alarm														
D7050.40 Fuel-Oil Detection and Alarm														
D7050.50 Refrigeration Detection and Alarm														
D7050.60 Water Intrusion Detection and Alarm														
D7070.00 Electronic Monitoring and Control														
D7070.10 Electronic Detention Monitoring and Control													Equipment and systems for detention applications.	
D7090.00 Electronic Safety and Security Supplementary Components														
D7090.10 Supplementary Components														
D8000.00 INTEGRATED AUTOMATION														
D8010.00 Integrated Automation Facility Controls														
D8010.10 IA Control of Equipment														
D8010.20 IA Control of Conveying														
D8010.30 IA Control of Fire-Suppression														
D8010.40 IA Control of Plumbing Systems														
D8010.50 IA Control of HVAC Systems														
D8010.60 IA Control of Electrical Systems														
D8010.70 IA Control of Communication Systems														
D8010.80 IA Control of Electronic Safety and Security Systems														
D8010.90 IA Supplementary Components														
E EQUIPMENT AND FURNISHINGS														
E1010.00 Vehicle and Pedestrian Equipment														
E1010.10 Vehicle Servicing Equipment														
E1010.30 Interior Parking Control Equipment														
E1010.50 Loading Dock Equipment			200	AR	300	AR	300	AR	300	PC	300	PC	Gates, fare collection, security, etc.	
E1010.70 Interior Pedestrian Control Equipment														
E1030.00 Commercial Equipment														
E1030.10 Mercantile and Service Equipment														
E1030.20 Vault Equipment														
E1030.25 Teller & Service Equipment														
E1030.30 Refrigerated Display Equipment														
E1030.35 Laundry & Dry Cleaning Equipment														

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Element Classification		Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
		Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
		LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
E1030.40	Maintenance Equipment														
E1030.50	Hospitality Equipment														
E1030.55	Unit Kitchens														
E1030.60	Photographic Processing Equipment														
E1030.70	Postal, Packaging, and Shipping Equipment														
E1030.75	Office Equipment														
E1030.80	Foodservice Equipment														
E1040.10	Educational and Scientific Equipment														
E1040.20	Healthcare Equipment			200	AR	300	AR	300	AR	300	PC	300	PC		
E1040.40	Religious Equipment														
E1040.60	Security Equipment														
E1040.70	Detention Equipment														
E1060.10	Residential Appliances														
E1060.50	Retractable Stairs														
E1060.70	Residential Ceiling Fans														
E1070.10	Theater and Stage Equipment														
E1070.20	Musical Equipment														Bells, carillons, organs
E1070.50	Athletic Equipment														Gym equipment, scoreboards, exercise, etc.
E1070.60	Recreational Equipment														Bowling alley, shooting range, climbing walls, etc.
E1090.10	Other Equipment														
E1090.10	Solid Waste Handling Equipment														
E1090.30	Agricultural Equipment														
E1090.40	Horticultural Equipment														
E1090.60	Decontamination Equipment														
E2000 FURNISHINGS															
E2010.10	Fixed Artwork														
E2010.20	Window Treatments														
E2010.30	Casework			200	AR	300	AR	300	AR	300	PC	300	PC		
E2010.70	Fixed Multiple Seating			200	AR	300	AR	300	AR	300	PC	300	PC		
E2010.90	Other Fixed Furnishings														Artificial plants, interior landscaping accessories.
E2050.10	Movable Artwork														
E2050.30	Furniture			200	AR	300	AR	300	AR	300	PC	300	PC		
E2050.40	Accessories			200	AR	300	AR	300	AR	300	PC	300	PC		
E2050.60	Movable Multiple Seating														
E2050.90	Other Movable Furnishings														Artificial plants, landscaping accessories.
F SPECIAL CONSTRUCTION AND DEMOLITION															
F1000 SPECIAL CONSTRUCTION															
F1010.10	Building Modules														Fabricated and pre-engineered modules for on-site assembly.
F1010.50	Manufactured/Fabricated Rooms														
F1010.70	Modular Mezzanines														
F1020 Special Structures															
F1020.10	Fabric Structures														
F1020.20	Space Frames														
F1020.30	Geodesic Structures														
F1020.40	Manufacturer-Engineered Structures														
F1020.80	Manufactured Canopies														
F1020.85	Rammed Earth Construction														
F1020.70	Towers														Fabricated and pre-engineered structures of a vertical nature for a variety of purposes (utility, communications, etc.)
F1030 Special Function Construction															

Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
F1030.10 Sound and Vibration Control														
F1030.30 Seismic Control														
F1030.50 Radiation Protection														
F1050.00 Special Facility Components														
F1050.10 Pools														
F1050.20 Interior Fountains														
F1050.30 Interior Water Features														
F1050.40 Aquariums														
F1050.50 Amusement Park Structures and Equipment														
F1050.60 Ice Rinks														
F1050.70 Animal Containment														
F1060.00 Athletic and Recreational Special Construction														
F1060.10 Indoor Soccer Boards														
F1060.20 Safety Netting														
F1060.30 Arena Football Boards														
F1060.40 Floor Sockets														
F1060.50 Athletic and Recreational Court Walls														
F1060.60 Demountable Athletic Surfaces														
F1080.00 Special Instrumentation														
F1080.10 Stress Instrumentation														
F1080.20 Seismic Instrumentation														
F1080.40 Meteorological Instrumentation														
F1080.60 Earth Movement Monitoring														
F2000.00 FACILITY REMEDIATION														
F2010.00 Hazardous Materials Remediation														
F2010.10 Transportation and Disposal of Hazardous Materials														
F2010.20 Asbestos Remediation														
F2010.30 Lead Remediation														
F2010.40 Polychlorinate Biphenyl Remediation														
F2010.50 Mold Remediation														
F3000.00 DEMOLITION														
F3010.00 Structure Demolition														
F3010.10 Building Demolition														
F3010.30 Tower Demolition														
F3010.50 Bridge Demolition														
F3010.70 Dam Demolition														
F3030.00 Selective Demolition														
F3030.10 Selective Building Demolition														
F3030.30 Selective Tower Demolition														
F3030.50 Selective Bridge Demolition														
F3030.70 Selective Dam Demolition														
F3050.00 Structural Moving														
F3050.10 Structure Relocation														
F3050.30 Structure Raising														
G SITEWORK														
G1000.00 SITE PREPARATION														
G1010.00 Site Clearing														
G1010.10 Clearing & Grubbing														
G1010.30 Tree and Shrub Removal & Trimming														
G1010.50 Earth Stripping and Stockpiling														
G1020.00 Site Elements Demolition														
G1020.10 Utility Demolition														
G1020.30 Infrastructure Demolition														
G1020.50 Selective Site Demolition														
G1030.00 Site Element Relocations														
G1030.10 Utilities Relocation														
G1050.00 Site Remediation														
G1050.10 Physical Decontamination														

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)	LOD for (CM BIM)	LOD for (As-Built BIM)	Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer				
	Schematic Design		Design Development		Construction Documents							Construction		Construction	
	LOD	MEA	LOD	MEA	LOD	MEA						LOD	MEA	LOD	MEA
G1050.16 G1050.20 G1050.25 G1050.30 G1050.40 G1050.45 G1050.50 G1050.60 G1050.80	Chemical Decontamination Thermal Decontamination Biological Decontamination Remediation Soil Stabilization Site Containment Sinkhole Remediation Hazardous Waste Drum Handling Contaminated Site Material Removal Water Remediation														
G1070.10 G1070.20 G1070.30 G1070.35 G1070.40 G1070.45 G1070.50 G1070.55 G1070.60 G1070.65 G1070.70 G1070.80 G1070.90	Site Earthwork Grading Excavation and Fill Embankments Erosion and Sedimentation Controls Soil Stabilization Rock Stabilization Soil Reinforcement Slope Protection Gablons Riprap Wetlands Earth Dams Site Soil Treatment														
G2000 SITE IMPROVEMENTS															
G2010.10 G2010.20 G2010.40 G2010.70 G2010.80	Roadway Pavement Roadway Curbs and Gutters Roadway Appurtenances Roadway Lighting Vehicle Fare Collection														
G2020.10 G2020.20 G2020.40 G2020.70 G2020.80	Parking Lot Pavement Parking Lot Curbs and Gutters Parking Lot Appurtenances Parking Lot Lighting Exterior Parking Control Equipment														
G2030.10 G2030.20 G2030.30 G2030.40 G2030.70 G2030.80	Pedestrian Pavement Pedestrian Pavement Curbs and Gutters Exterior Steps & Ramps Pedestrian Pavement Appurtenances Plaza and Walkway Lighting Exterior Pedestrian Control Equipment										Gates, fare collection, security equipment				
G2040.10 G2040.20 G2040.40 G2040.70 G2040.80	Aviation Pavement Aviation Pavement Curbs and Gutters Aviation Pavement Appurtenances Aviation Lighting Airfield Signaling and Control Equipment														
G2050.10 G2050.30 G2050.50	Athletic, Recreational, and Playfield Areas Athletic Areas Recreational Areas Playfield Areas														
G2060.10 G2060.20 G2060.25 G2060.30 G2060.35	Site Development Exterior Fountains Fences & Gates Site Furnishings Exterior Signage Flagpoles														

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
G2060.40 Covers and Shelters														
G2060.45 Exterior Gas Lighting														
G2060.50 Site Equipment														
G2060.60 Retaining Walls														
G2060.70 Site Bridges														
G2060.80 Site Screening Devices														
G2060.85 Site Specialties														Bollards
G2080.00 Landscaping														
G2080.10 Planting Irrigation														
G2080.20 Turf and Grasses														
G2080.30 Plants														
G2080.50 Planting Accessories														
G2080.70 Landscape Lighting														
G30 LIQUID AND GAS SITE UTILITIES														
G3010.00 Water Utilities														
G3010.10 Site Domestic Water Distribution														
G3010.30 Site Fire Protection Water Distribution														
G3010.50 Site Irrigation Water Distribution														
G3020.00 Sanitary Sewerage Utilities														
G3020.10 Sanitary Sewerage Utility Connection														
G3020.20 Sanitary Sewerage Piping														
G3020.40 Utility Septic Tanks														
G3020.50 Sanitary Sewerage Structures														
G3020.60 Sanitary Sewerage Lagoons														
G3030.00 Storm Drainage Utilities														
G3030.10 Storm Drainage Utility Connection														
G3030.20 Storm Drainage Piping														
G3030.30 Culverts														
G3030.40 Site Storm Water Drains														
G3030.50 Storm Drainage Pumps														
G3030.60 Site Subdrainage														
G3030.70 Storm Drainage Ponds and Reservoirs														
G3050.00 Site Energy Distribution														
G3050.10 Site Hydronic Heating Distribution														
G3050.20 Site Steam Energy Distribution														
G3050.40 Site Hydronic Cooling Distribution														
G3040400 Pumping Stations														
G3060.00 Fuel Distribution														
G3060.10 Site Gas Distribution														
G3060.20 Site Fuel-Oil Distribution														
G3060.30 Site Gasoline Distribution														
G3060.40 Site Diesel Fuel Distribution														
G3060.50 Site Aviation Fuel Distribution														
G3090.00 Liquid and Gas Site Utilities Supplementary Components														Manholes and structures, utility structures, trenchless utility installations, etc.
G3090.10 Supplementary Components														
G40 ELECTRICAL SITE IMPROVEMENTS														
G4010.00 Site Electrical Distribution Systems														
G4010.10 Electrical Utility Services														
G4010.20 Electric Transmission and Distribution														
G4010.30 Electrical Substations														
G4010.40 Electrical Transformers														
G4010.50 Electrical Switchgear and Protection Devices														
G4010.70 Site Grounding														
G4010.90 Electrical Distribution System Instrumentation														
G4050.00 Site Lighting														
G4050.10 Area Lighting			200	AR/EE	200	AR/TC	200	AR/TC	200	PC/TC	200	PC/TC		
G4050.20 Flood Lighting			200	AR/EE	200	AR/TC	200	AR/TC	200	PC/TC	200	PC/TC		
G4050.50 Building Illumination			200	AR/EE	200	AR/TC	200	AR/TC	200	PC/TC	200	PC/TC		

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)	LOD for (CM BIM)	LOD for (As-Built BIM)	Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer			
	Schematic Design		Design Development		Construction Documents		Construction		Construction					
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD			MEA		
G4050.90 Exterior Lighting Supplementary Components			200	AR/EE	200	AR/TC	200	AR/TC	200	PC/TC	200	PC/TC	Lighting poles and standards, instrumentation and controls.	
G6010.00 SITE COMMUNICATIONS														
G6010.10 Site Communications Structures													Transmission towers, utility poles, vaults, etc.	
G6010.30 Site Communications Distribution														
G6010.50 Wireless Communications Distribution														
G9010.00 MISCELLANEOUS SITE CONSTRUCTION														
G9010.10 Vehicular Tunnels														
G9010.20 Pedestrian Tunnels														
G9010.40 Service Tunnels														
G9010.80 Tunnel Construction Related Activities														

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**Attachment 5 – Quality Assurance/Quality Control Plan for the Traffic Company
and Forensic Services Division Facility**

DRAFT



Design Team Quality Assurance and Quality Control Plan

*City/County of San Francisco Traffic Company
Division & Forensic Science Division Laboratory*

Current version date: 2015-11-03

Revisions		
1	2015-04-28	Draft Issued to DPW
2	2015-05-29	Final Issued to DPW
3	2015-09-01	Phase 1 – Final
4	2015-11-03	Contract Modification No. 1
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Attachment 5

Quality Assurance and Quality Control Plan for the Traffic Company and Forensic Services Division Facility

The team will implement a Quality Assurance/Quality Control (QA/QC) Plan to be used throughout the design process for the San Francisco Traffic Company and Forensic Lab Building. This QA/QC plan is tailored to the specifics of the project using principles of HOK's firm-wide Quality Management Program. The plan is developed to facilitate delivery of project documents that are technically sound, complete, and coordinated to accurately communicate the design intent and scope of the project, as well as in conformance with the program and project scope requirements.

The QA/QC Plan is based on the following principles of quality management:

- Quality management begins at the outset of the project and is continuous during the entire course of the work.
- All project team members are responsible to contribute to the quality management process.
- The ability to affect change and take corrective action diminishes during the course of the project.

Project Manager James Aguilar (PM) and Project Architect Kyle Prenzlou (PA) will lead Quality Assurance and Quality Control respectively for the TC&FSD Facility. They are supported by Mike Retford, Principal-in-Charge for HOK's San Francisco office and liaison to HOK's firm-wide project delivery board, which administers HOK's quality management program.

Quality Assurance

Quality Assurance begins with the development and documentation of QA/QC procedures and guidelines in a Quality Assurance Manual. These procedures and guidelines will establish protocols for daily work on the project as well as outline standards for Milestone Document Reviews. The preparation of the Quality Manual will commence as soon as the team has received the Notice to Proceed for the Project.

The PM and PA will conduct a QA/QC kick-off meeting with the Consultant team prior to commencing Concept Design. During the meeting the Quality Assurance Manual will be distributed to each team member and each aspect of the QA/QC process will be reviewed.

QA/QC Procedures and Guidelines

The Quality Assurance Manual will address the following standards and procedures:

1. QA/QC objectives and scope:
 - a. QA/QC program summary
 - b. QA/QC team responsibilities
 - c. QA/QC schedule and milestones
2. Team Communications:
 - a. Team Organization
 - b. Filing and Data Management standards
 - c. Communication protocol

3. Project Scope and Deliverables:
 - a. Project Scope of work/contract
 - b. Project goals and objectives
 - c. Project schedule
4. Project Execution Plan (PxP) Implementation
5. Document standards:
 - a. Construction document standards
 - b. CAD/BIM standards
6. Coordination
7. Document Review
 - a. Milestone Quality Review
 - b. Peer Review
 - c. Integrated Project Review
8. Project QA/QC Measurement and Reporting

Quality Control

While quality assurance measures are employed throughout the design process, formal milestone reviews focus on quality control. These reviews are performed for verification of quality, coordination, and completeness of the work prior to the milestone deliverables in every phase of every project. All disciplines will be reviewed for coordination and conformance with the contract and program requirements. Critical systems including mechanical, laboratory design, fire/life safety, and exterior envelope will undergo a peer review at certain milestones. Comments will be generated, addressed, and tracked for the project record through the use of Bluebeam Studio, a cloud based collaboration tool. All team members have access to the same review documents and can see the comments made by others, so that no compilation is required, and duplicative and contradictory comments are eliminated. Reports will be generated to capture comments from the quality review and then shared and archived along with the annotated documents in PDF or printed format.

Milestone Quality Reviews will occur at each phase of the project tailored to the relevant information for that phase. Quality reviews are coordinated to include participation of the Project Team, Peer Review, and the independent Quality Reviewers. Comments from the milestone QC review will be addressed as required with prior to the commencement of the quality review by the client and the CM/GC. At the completion of the review process, comments and feedback from all participants are synthesized with responses documented. Information will be reviewed into the milestone workshops and relevant revisions will be incorporated into the project documents.

A senior project architect (Quality Reviewer), not assigned to the project, will lead the Quality Review. Comments that carry over to a subsequent phase can be added to the project issues log for tracking. This information can be accessed by multiple team members from any location.

1. Quality review:
 - a. The Quality Review will be done sufficiently in advance of the milestone deadline to be able to check and incorporate required changes into the work. The Quality Review will focus on the following key issues:
 - Codes and Life Safety
 - Accessibility

- Interdisciplinary Coordination
 - Sub-Consultants Quality Assurance
 - Building Performance
- b. Constructability: The Quality Review will be performed using Bluebeam Studio. Comments are color coded by author. The Quality Reviewer will check the deliverables for the phase, including drawings, specifications, and reports against the key issues, marking directly on the documents. Upon the completion of the review, the Project Architect will review all of the comments, and assign the responsibility for each actionable comment to a team member within the file. The team member will either respond to clarify or make the correction and change the comment status to CLOSED. Comments that require review and discussion with the owner will be coded and extracted to an issues log for follow up. A PDF of the Quality Review documents will be provided to the owner at the end of the phase to ensure the transparency and efficacy of the process.

2. Peer Reviews:

- a. Concurrent with the Milestone quality review, independent Peer Reviews will be performed by one or more senior staff from each primary discipline; Architecture, Structure, Mechanical, Electrical, Plumbing, and Tel/Data. The review will be by staff or consultants outside of the immediate project team to provide a fresh look at the work. The focus of the review will be to evaluate the progress of the work against the milestone deliverable, provide feedback on design considerations, evaluate technical approach and quality, and check for interdisciplinary coordination. Comments will be in a consistent format with the Quality Review, sharing the same Bluebeam session for coordination with other reviewers.

	Schematic Design	50% Design Development	Design Development	50% Construction Documents	95% Construction Documents	Construction Documents
Peer Review	MEP/FP Lab planning	MEP/FP Enclosure Lab planning	MEP/FP Enclosure Lab planning	Enclosure Lab planning	Enclosure Lab planning	Enclosure Lab planning
Design-Build Peer Review				MEP/FP	MEP/FP	MEP/FP

3. Integrated Project Review:

4. The Integrated Project Review is a full day interactive session held at the outset of the Owner's Quality review period. Project stakeholders (project management, users, facilities and operations, authorities having jurisdiction) gather for the day in a group workshop with the design and construction team, participating in multiple concurrent discipline and systems based project reviews. The intent is to orient the greater project team to the design, focus the discussion on the relevant issues in that phase, and daylight overarching concerns in a big room format prior to the client review period. At the end of the day, each focus group will present critical findings for discussion. Client Review:

- a. Documents will be issued electronically to the City for their review and approval. The City will review documents for program compliance, durability, ease of operations and accommodation of City standards, capturing their comments electronically. Client review comments will be issued to the Project Team using the same formats as the CM/GC reviews.

5. CM/GC Review:

- a. Concurrent with the client review, documents will be issued electronically to the CM/GC for cost and constructability review. The CM/GC reviews will commence at 50% DD. CM/GC review comments will be captured and documented in a common format with the Client Review.

6. Reconciliation:

- a. After completion of the CM/GC and City Reviews, all review comments will be distributed to the design team for review and evaluation. Project team leaders will synthesize information and respond to each of the items identified. Items requiring clarification will be incorporated into the milestone workshops. Review comments with cost implications will be flagged and tracked in the Cost Estimate. At the completion of this process, items will be flagged for integration into the project or synthesized information will be red-marked by the Project Architect and Discipline leaders into the project Team Check Set. The Team Check Set will be distributed and a 'yellowed-out' set produced for verification to the client that the comments relative to that phase have been incorporated into the documents.

7. Milestone Workshops

- a. Milestone workshops are attended by the project stakeholders and the Project Team immediately following the reconciliation exercise. The intent is to focus on three things – resolution of outstanding questions from the milestone review, reconciliation of cost, and an evaluation of the team's progress.
 - i. In order to resolve outstanding comments, the workshop will focus on comments where there is conflicting direction, a deviation from the program or previous design direction, or where there are cost implications. Items that cannot be closed in the workshop will be identified for a research subgroup in the subsequent phase.
 - ii. The cost portion of the workshop will be planned and led collaboratively by both the CM/GC and the design team. The focus will be on Value Analysis instead of Value engineering.
 - 1. Re-confirm priorities for program and goals
 - 2. Analyze contributing design features
 - 3. Seek improvements - Eliminate or reduce the cost of components that add little value. Enhance the value added by components that contribute significantly.
 - iii. As a team, review the results of the previous phase and assess the progress against the project goals. The team will use a plus/delta format to capture feedback from the team, and ideas for improvement going forward.

Schedule and Content of QA/QC milestone and Reviews

- 1. Program Verification
 - a. Quality review:
 - i. Program Compliance
 - ii. Cost
 - b. Client Review
- 2. Concept Phase - 90%:
 - a. Quality review
 - i. Key Issues
 - b. Integrated Project Review
 - c. Client Review
- 3. Schematic Design - 90%:
 - a. Quality review
 - i. Key Issues
 - ii. Peer Review

- b. Integrated Project Review
 - c. Client Review
 - d. Milestone Workshop
4. Design Development Phase – 50%
- a. Quality review
 - i. Key Issues
 - ii. Peer Review
 - b. Integrated Project Review
 - c. CM/GC Review
 - d. Client Review
 - e. Milestone Workshop
5. Design Development Phase – 90%
- a. Quality review
 - i. Key Issues
 - ii. Peer Review
 - b. Integrated Project Review
 - c. Client Review
 - d. CM/GC Review
 - e. Milestone Workshop
6. Construction Document Phase – 50%
- a. Quality review
 - i. Key Issues
 - ii. Peer Review
 - b. Integrated Project Review
 - c. CM/GC Review
 - d. Client Review
 - e. Milestone Workshop
7. Construction Document Phase – 95%
- a. Quality review
 - i. Key Issues
 - ii. Peer Review
 - b. CM/GC Review
 - c. Client Review
 - d. Milestone Workshop
8. Bid Documents
- a. Quality review
 - i. Key issues
 - b. CM/GC Review

Attachment 6- Hourly Rate Schedule

Include all Prime and Sub-consultant 2014 Billing Rates

HOK

Principal in Charge	\$361.84
Project Manager	\$223.57
Project Designer	\$291.12
Project Architect	\$199.62
Lab Planner / Programmer	\$200.75
Lab Equipment Planner	\$209.98
Urban Planning / Landscape	\$255.49
Sustainable Design / LEED	\$207.59
Senior Architect	\$215.89
Architect	\$152.79
Specifications	\$225.86
BIM Manager	\$172.72
Jr. Designer	\$89.68
Senior Interior Designer	\$166.07
Interior Designer	\$119.57
Senior Design Professional (Revit)	\$116.25
Design Professional (Revit)	\$89.68
Administration Support	\$83.04
Landscape Design Director	\$255.75
Landscape Architect	\$149.47

MEI Architects

Technical Principal	\$220.80
CA Manager	\$232.00
Design Director	\$195.00
Project Designer	\$136.73
Project Architect	\$195.36
Job Captain	\$156.29
Graphic Production	\$123.73
Administration Support	\$97.68
Construction Administrator	\$63.48

RG Vanderweil

Project Manager	\$199.64
Lead HVAC Engineer	\$174.86
Lead Electrical Engineer	\$163.41
Lead Plumbing Engineer	\$145.61
Lead Fire Protection Engineer	\$178.03

SOHA

Principal	\$221.33
Sr. Project Manager	\$157.11
Sr. Project Engineer	\$116.14
CAD Drafter	\$106.56

Telamon Engineering Consultants, Inc.

Principal/Project Manager	\$192.65
Sr. Project Engineer	\$174.41
Civil Engineer III	\$148.16
Engineer II	\$126.85
Civil Engineer IA	\$99.10
Civil Engineer IB	\$95.14
CAD Drafter III	\$110.99
CAD Drafter II	\$95.14
CAD Drafter I	\$88.79
Survey Manager	\$190.27
Office Surveyor	\$119.14
Survey Party Chief	\$128.97
Survey Field Crew	\$110.04

Cumming

Sr. Cost Manager	\$175.01
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Smith, Fause & McDonald, Inc.

Principal	\$190.58
Senior Engineer	\$145.20

Project Engineer	\$117.98
Revit	\$105.88
CAD	\$78.65

Allana Buick Bers AE

Principal IV	\$350.00
Principal III	\$300.00
Principal II	\$275.00
Principal I	\$250.00
Associate IV	\$235.00
Associate III	\$225.00
Associate II	\$210.00
Associate I	\$195.00
Consultant IV	\$200.00
Consultant III	\$185.00
Consultant II	\$165.00
Consultant I	\$145.00
Executive Project Manager	\$200.00
Project Manager III	\$185.00
Project Manager II	\$165.00
Project Manager I	\$145.00
Building Technologist III	\$140.00
Building Technologist II	\$125.00
Building Technologist I	\$110.00
Field Monitor (Part Time)	\$145.00
Field Monitor III	\$140.00
Field Monitor II	\$130.00
Field Monitor I	\$110.00
CAD Specialist III	\$145.00
CAD Specialist II	\$130.00
CAD Specialist I	\$115.00
Forensic Documentation Specialist	\$140.00
IT Consultant	\$135.00
Administrative	\$85.00

Watry Design, Inc.

Principal	\$308.35
Project Manager	\$176.93
Senior Designer	\$110.40

JS Nolan + Associates Lighting Design, LLC

Principal	\$219.04
Designer 1	\$95.83
Designer 2	\$84.88
Designer 3	\$69.82
Admin	\$67.08

Kate Keating & Associates

Principal-in-Charger	\$314.57
Principal	\$207.82
Project Manager	\$180.71
Designer	\$158.96
Junior Designer	\$133.86
Design Assistant	\$108.76
Administration	\$76.13

The Fire Consultants

Principal	\$181.13
Fire Protection Engineer	\$181.13
Technical	\$96.60

A.R. Sanchez

Principal	\$295.00
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Syska Hennessy Group

Principal	\$267.16
Project Manager	\$189.34
Project Engineer	\$136.43

Collin Gordon Associates

Principal Consultant	\$300.00
Senior Consultant	\$250.00
Consultant I	\$175.00
Consultant II	\$150.00
Technical Assistant I	\$125.00
Technical Assistant II	\$100.00
Staff Assistant	\$100.00

Benny Del Re

Forensic Science Advisor	\$125.00
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Attachment 7 – Design Team and Key Employees

<u>DISCIPLINE:</u>	<u>FIRM:</u>	<u>KEY EMPLOYEE:</u>
Prime Architect, Interiors Forensic Lab Program/Planning Interior Design/Planning Lab Equipment Planning Specifications Landscape Arch. (Peer Review) Security Hardware Construction Support	HOK	Mike Retford – Principal In Charge James Aguilar – Project Manager Kyle Prenzlow - Project Architect Alan Bright – Senior Project Designer Tim O'Connell - Senior Lab Planner Jack Baker, Lab Planner Emily Fowlkes - Lab Equipment Planner Anne Whitacre – Specifications Joe Winters - Lab Specs
Associate Architect Interiors Construction Admin Support	MEI Architects	Mei Mei Chan - Technical Principal Steven Juegens - Architect Ruairi O'Connell - Project Designer David Wilson, AIA - CA support
Mechanical Engineering Electrical Engineering Plumbing Engineering Fire Protection Engineering Energy Modeling	R.G. Vanderweil Engineers	John Saad – MEP Principal Michael Walsh - MEP PM Harris Zeidman – HVAC Engineer Robert Chaves – Electrical Engineer Seth Johnson – Plumbing Engineer Demetri Tsatsarones – Fire Protection
Design Peer Review for Mechanical / Electrical / Plumbing	HOK – Engineering	Dave Troup – MEP Art Morrissey – Plumbing John Santos – Mechanical Daniel Huang - Electrical
Structural Engineer	SOHA Engineers	Steve Lau – Structural Engineer Farshad Khodayari – Structural Engineer
Civil Engineer	Telamon Engineering Consultants, Inc	Mennor Chan – Principal Civil Engineer
Cost Estimating	Cumming Construction Management	Nick Mata – Senior Cost Estimator
A-V, Low Voltage, IT, Security Electronics, Acoustics & Noise Engineer	Smith, Fause & McDonald, Inc.	Peter McDonald
Vibration Engineering	Collin Gordon & Associates	Stephen Jaeger – Senior Consultant Hal Amick – Vibration Engineer
Lighting Design	JS Nolan + Associates	Janet Nolan – Lighting Designer

Waterproofing, Roofing & Curtain Wall Peer Review	Allana Buick & Bers, Inc	Gerson Bers Jerome Jeffers
Parking Design	Watry Design, Inc.	Michelle Wendler – Parking Planner Taylor Kim – Parking Planner
Building Code Consultant	The Fire Consultants	Jeff Maddox – Building Code Consultant John Stauder – Building Code Consultant
ADA Code Consultant	A.R. Sanchez-Corea & Associates, Inc.	Tony Sanchez-Corea – ADA Code Consultant
Signage Consultant	Kate Keating Associates, Inc.	Julie Vogel
LEED Documentation	HOK – San Francisco	Zorana Bosnic - Sustainable Design Leader Breffni O'Rourke - Sustainable Design Specialist
Vertical Transportation	Syska Hennessy Group	John Moran – Elevator Engineer
ASCLAD Advisor	Bennie Del-Re	Bennie Del Re – Forensic Science Consultant

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Attachment 8 – Percentage of Key Participants of Each Firm/Employees

Name	Role	Firm	Prog. Phase	Con. Desg.	SD Phase (NIC)	DD Phase (NIC)	CD Phase (NIC)	CA Phase (NIC)	Warr. Phase (NIC)
			2%	7%	16%	23%	26%	25%	1%
Mike Retford	PIC	HOK	20	20	40	25	25	20	5
James Aguilar	Project Manager	HOK	80	80	90	90	90	40	5
Kyle Prenzlow	Project Architect	HOK	2	75	90	90	90	40	40
Alan Bright	Sr. Project Designer	HOK	2	70	90	30	10	5	5
Tim O'Connell	Lab Planner & Program	HOK	80	60	70	40	20	5	0
Emily Fowlkes	Lab Equipment Planner	HOK	5	40	40	40	20	5	0
Mei Mei Chan	Technical Principal	MEI	5	80	60	60	70	40	0
Ruairi O'Connell	Project Designer	MEI	0	50	80	30	30	5	0
David Wilson	Construc. Admin.	MEI	0	10	10	15	35	90	0
Farshad Khodayari	Structural Engineer	SOHA	0	30	60	60	60	30	0
Mennor Chan	Civil Engineer	Telamon	0	35	50	60	60	15	0
Michael Walsh	Mechanical Engineer	RGV	10	30	75	5	0	0	0
Harris Zeidman	HVAC Engineer	RGV	5	60	70	5	0	0	0
John Santos	HVAC Engineer	HOK-Eng	0	3	5	10	15	15	0
Robert Chaves	Electrical Engineer	RGV	5	60	75	5	0	0	0
Daniel Hueng	Electrical Engineer	HOK-Eng	0	3	5	10	15	15	0
Seth Johnson	Plumbing Engineer	RGV	5	60	75	5	0	0	0
Art Morrissey	Plumbing & FP Engineer	HOK-Eng	0	3	5	10	15	15	0
Demetri Tsatsarones	Fire Protection Engineer	RGV	3	40	70	5	0	0	0
Nick Mata	Senior Cost Manager	Cumming	40	40	60	50	10	0	0

Attachment 9 – First Source Hiring

PROFESSIONAL SERVICES

SPECIFICATIONS SECTION FOR CITYBUILD REQUIREMENTS

1.1 SUMMARY

- A. This Document incorporates the requirements of the First Source Hiring Program pursuant to San Francisco Administrative Code Chapter 83. The CityBuild Program managed by the Office of Economic and Workforce Development (OEWD) is the sole administrator of the First Source Hiring Program. CityBuild partners with various educational programs dedicated to the training and job placement of Trainees who are Economically Disadvantaged Workers of all ethnic backgrounds and genders. The goal of the First Source Hiring Program is to fill every available Entry Level Position with a qualified and job ready CityBuild Trainee.
- B. Consultant agrees to participate in the CityBuild Program managed by the Office of Economic and Workforce Development (OEWD) and comply with the provisions of SF Administrative Code Chapter 83.
- C. The CityBuild requirements are set forth below. As part of its participation, the Consultant shall incorporate the provisions of this Document into any Joint Venture Partnership and subconsultant on this Contract regardless of tier and shall require it subconsultants to do the same.

1.2 DEFINITIONS

For the purposes of this Document only, the following definitions shall apply:

- A. Economically Disadvantaged Worker: An individual who is either (a) eligible for services under the Workforce Investment Act of 1998 (29 U.S.C.A. 2801, *et seq.*), as may be amended from time to time, or (b) designated as by the CityBuild Program as an individual at risk of relying upon or returning to public assistance.
- B. Entry Level Position: Any non-managerial position that requires no education above a high school diploma or certified equivalency, and less than two (2) years training or specific preparation, and shall include temporary, permanent and intern positions. Trainees are considered Entry Level Positions.
- C. CityBuild Program: The First Source Hiring Administrator established by the CITY and County of San Francisco and managed by the Office of Economic and Workforce Development (OEWD).
- D. Trainee: Economically Disadvantaged Worker who is a member of the CityBuild Program and has been identified by CityBuild staff as having the appropriate training, employment background and skill sets for a Consultant specified Entry Level Position. Trainees do not require a college degree.

- E. Consultant: Prime Consultant, Joint Venture Partner and any other subconsultant of all tiers for the purpose of performing work under this Professional Service Contract.

1.3 CITYBUILD REQUIREMENTS

- A. Consultants are required to notify CityBuild staff of all available Entry Level Positions. In addition, the CITY requires the Consultant to hire a minimum number of Trainees in the area of the Consultant's expertise. Trainees hired by the Consultant count toward the First Source Hiring requirements
- B. The intent of hiring Trainees is to provide Economically Disadvantaged Workers technical training and job opportunities in a professional environment. The Trainee must be hired in a discipline related to technical services or meaningful support for the Consultant.
- C. Trainees must be obtained through the CityBuild Program and the Consultants must consider all Trainees fairly, equally and comply with the non-discrimination provisions pursuant to local, state and federal laws. The final decision to hire a Trainee shall be made by the Consultant.
- D. Consultant shall make good faith efforts to hire Trainees referred by the CityBuild Program. Consultant may decline to hire a Trainee if the Consultant considers the Trainee in good faith but deems the Trainee is not qualified. The final decision to hire a Trainee shall be made by the Consultant. The number of Trainees to be hired is based on the Consultant Fee Schedule below:

Consultant Fee Schedule	Number of Trainees to be Hired
\$0 – \$499,999	0
\$500,000 – \$899,999	1
\$900,000 – \$1,999,999	2
\$2,000,000 – \$4,999,999	3
\$5,000,000 – \$7,999,999	4
\$8,000,000 – \$10,999,999	5
\$11,000,000 – \$13,999,999	6
(> = \$14M, for each additional \$3 million in consultant fees, add one additional Trainee)	

- E. The Consultant shall hire the Trainee on a full-time basis for at least 12 months or on part-time basis for 24 months, offering him/her On The Job Training (OJT) Training, which allows the Trainee to progress on a career path. The hiring of Trainees can be phased over a period of time.
- F. The Trainees will be hired as regular employees of the firm and shall receive any benefits that they may be entitled to under State labor laws. No existing employee may be counted towards meeting the Trainee goal.
- G. The Consultant shall design a training program specifically for the Trainee. The program shall include, but not limited to company's personnel policy and

procedures manual, benefit package and OJT duties and responsibilities. The Trainees are not permitted to perform work in construction trade positions. These opportunities will be executed throughout the duration of this contract.

- H. The Consultant may hire the Trainee(s) for the duration of the project and may utilize Trainees on other contracts it has within the San Francisco Bay Area
- I. The Consultant can replace a Trainee if there is documentation demonstrating the Trainee did not perform the job requirements at a satisfactory level.
- J. The Consultant shall provide the necessary tools and office equipment (i.e., computers, desks and chairs) for Trainees to perform the assigned duties. The Consultant shall provide travel costs if the Trainee has to travel 50 miles or more from his/her assigned work site for the purposes of the scope of work under this contract.
- K. Designate a Consultant representative to monitor all employment-related activity and be the main contact for CityBuild staff.
- L. Consultant shall permit CityBuild staff to interview regular employees and Trainees during working hours of this contract.

1.4 DOCUMENT REQUIREMENTS

- A. Bid Document Requirements: Consultant shall complete, sign and submit *CityBuild Trainee Form* with Consultant's bid proposal. Failure to submit a completed and signed *CityBuild Trainee Form* with the Consultant's proposal will result in a rejected bid.
- B. Awarded Consultant Document Requirements: Within 30 days of award of contract, the Consultant shall provide the CityBuild program the following information:
 - 1. Indicate number of Trainees to be hired, Trainee's start date, and Trainees rate of pay.
 - 2. Provide the name, telephone number and email of the Consultant representative with hiring authority.
 - 3. Provide a job description for all Trainee positions. Indicate the specific skill sets and disciplines for the position. A College degree is not a requirement for a Trainee position.
- B. The Consultant shall submit to the CityBuild Program a monthly report on the status of hired Trainees.
- C. Upon request by CityBuild staff, the Consultant shall maintain a CityBuild compliance binder which shall include copies of all documentation and records supporting good faith efforts toward the requirements set forth under this Document.

1.5 KICKOFF MEETING

- A. Prior to commencement of work, Consultant shall attend a kickoff meeting convened by CityBuild staff. A Consultant representative present at the kickoff

meeting must have hiring authority. Any kickoff or pre-mobilization meeting convened by the awarding CITY department and attended by CityBuild staff and a Consultant representative with hiring authority will satisfy this provision.

- B. Failure to comply with this kickoff meeting provision may result in the CITY ordering a suspension of work by the Consultant until the breach has been cured; any delay resulting from such suspension shall be considered the fault of the Consultant and an avoidable delay.

1.6 PROGRESS PAYMENTS

Failure to demonstrate good faith efforts in conformance with the provisions of this Document may result in the withholding of progress payments under this Contract. The Consultant agrees that the CITY may withhold pending and future progress payments should the Consultant not demonstrate good faith efforts toward satisfying the required number of Trainees hired.

1.7 LIQUIDATED DAMAGES

- A. The Consultant acknowledge and agree that their commitment to comply with the CityBuild requirements set forth in this Document is a material element of the CITY's consideration for this Contract; that the failure of the Consultant to comply with the terms and conditions of this Specification Section will cause harm to the CITY and the public which is significant and substantial but extremely difficult to quantify; that the harm to the CITY includes not only the financial cost of funding public assistance programs but also the insidious but impossible-to-quantify harm that this community and its families suffer as a result of unemployment; and that the assessment of liquidated damages of up to \$5,000 for every notice of a new hire for an Trainee and an Entry Level Position improperly withheld by the Consultant from the CityBuild Program, as determined by the CityBuild Director during his/her first investigation of the Contract, does not exceed a fair estimate of the financial and other damages that the CITY suffers as a result of the failure by the Consultant to this Specification to comply with its CityBuild Program contractual obligations.
- B. The Consultant further acknowledge and agree that the continued failure to comply with its CityBuild Program obligations will cause further significant and substantial harm to the CITY and the public, and that a second assessment of liquidated damages of up to \$10,000.00 for each Trainee and Entry Level Position improperly withheld from the CityBuild Program from the time of the conclusion of the first investigation forward, does not exceed the financial and other damages that the CITY suffers as a result of the Consultant's continued failure to comply with the CityBuild Program.

1.7 TERM

The obligations of the Consultant, as set forth in this Document, shall remain in effect until Substantial Completion of all work to be performed by the Consultant under the terms and conditions of this Contract.

END OF SECTION



NOTICE TO PROCEED

Edwin M. Lee
Mayor

Mohammed Nuru
Director

Stacey Camillo
Division Manager

Office of the Deputy Director
for Financial Management
and Administration

Contract Administration
1155 Market Street, 4th floor
San Francisco, CA 94103
tel 415-554-4886

sfpublicworks.org
facebook.com/sfpublicworks
twitter.com/sfpublicworks

Contractor: Hellmuth, Obata & Kassabaum (HOK)
One Bush Street, Suite 200
San Francisco, CA 94104

Project: Architectural and Engineering Team Led by an Executive Architect
for Traffic Company and Forensic Services Division Facility

Term: 10/13/2015 – 6/11/2016

Job No.: 9100A

DPW ID #: FPA15019

DPW Order No.: 184,015

Contract Sum: \$993,952.00

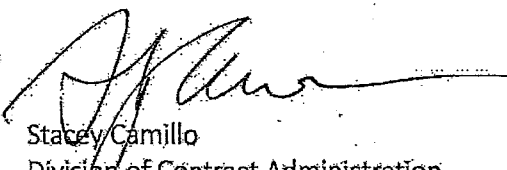
Certified
Contract Sum: \$993,952.00

Controller's Posting Number:

Reference this # on
your invoices: ENAT16000017-01

Date Posted: 10/13/2015

Mohammed Nuru
Director of Public Works

by 
Stacey Camillo
Division of Contract Administration
October 13, 2015

cc: Samuel Chui, Project Management
Accounting

attachments: Contract Purchase Order # ENAT16000017-01
Appointment
Agreement

SC:ml

FAML6300 V5.1
LINK

CITY AND COUNTY OF SAN FRANCISCO--NFAMIS
TRANSACTION DETAIL INQUIRY

10/13/2015
12:58 PM



DOC# ENAT16000017 -- POST PERIOD -- POST DATE ----- POSTED BY ----- UNIT
04 2016 OCT 2015 10/13/2015 CAMILLO, STACEY

TRANS NO : 140 ESTABLISH A NON-ADPICS ENCUMBRANCE
DOCUMENT REF : NOTEPAD : Y
TRANS DESC. : 9100A TCFSD A/E SERVICES DPW#184015
AMOUNT : 993,952.00 DUE DATE : SINGLE CHECK :
VENDOR NUMBER : 84054 01 HELLMUTH OBATA + KASSABAUM INC
INDEX CODE : PWA333CCF14A BOA/BAW/13/PP/CITY FAC IMPVT PROJ-ESER2
SUB-OBJECT : 02701 ARCHITECTURAL SERVICES
USER CD :
GRANT / GR DTL :
PROJ / PJDTL : CESER2 TC0054 9100A A/E RFQ HOK
START DATE : END DATE :
G/L / SUBSID :
BANK NO/ SUBSID :
TREAS NUM :
CURRENCY CODE : CONV DATE : FRGN CURR AMT:

FAML1010 V5.1

CITY AND COUNTY OF SAN FRANCISCO--NFAMIS
NOTEPAD

10/13/2015
1:30 PM

ATTACHED TO : DOCUMENT NUMBER : ENAT16000017 01
PAGE : 01 OF 01

ID# FPA15019 AWARD ORDER # 194,015 JO# 9100A
TITLE: ARCHITECTURAL AND ENGINEERING TEAM LED BY AN EXECUTIVE ARCHITECT FOR
TRAFFIC COMPANY AND FORENSIC SERVICES DIVISION FACILITY
TOTAL CONTRACT SUM SHALL NOT EXCEED \$993,952.00 FOR THE PROGRAM VALIDATION
AND CONCEPTUAL DESIGN PHASES (PHASE 1 AND 2). SUBSEQUENT DESIGN AND
CONSTRUCTION SUPPORT PHASES SHALL BE INCORPORATED VIA CONTRACT MODIFICATION
PENDING APPROVAL OF BOARD OF SUPERVISORS. ESTIMATED COMPLETION DATE IS 243
DAYS FROM THE DATE OF CERTIFICATION BY THE CONTROLLER.

PSC# 4126-12/13 APPROVED ON MAY 20, 2013
INSURANCE REQUIRED: G/L: \$1M, A/L: \$1M, W/C: \$1M, P/L: \$10M

FAML6051 V5.1
LINK TO:

CITY AND COUNTY OF SAN FRANCISCO--NFAMIS
DOCUMENT INQUIRY

10/13/2015
1:30 PM

FISCAL MO/YEAR : 04 2016 CREATE/UPDTE DT: 10/13/2015 10/13/2015
DOCUMENT : ENAT16000017 01 DUE DATE :
INDX PWA333CCF14A BOA/BAW/13/PP/CITY FAC SINGLE CHK IND : NOTEPAD IND: Y
VEND 84054 01 HELLMUTH OBATA + KASS TREAS NO :
G/L 470 ENCUMBRANCES UC
SOBJ 02701 ARCHITECTURAL SERVICE SER2
PROJ CESER2 EARTHQUAKE SAFETY & E GRNT
PRDT TC0054 9100A A/E RFQ HOK GRDT

S	OCT 2015	NOV 2015	PRIOR YEAR
ORIGINAL AMOUNT	993,952.00	993,952.00	.00
ADJUSTMENTS	.00	.00	.00
LIQUIDATIONS	.00	.00	.00
REMAINING BALAN	993,952.00	993,952.00	.00
PAYMENT/RECEIPT	.00	.00	.00
RETAINAGE/LIENS	.00	.00	.00
DELINQUENCY CHA	.00	.00	.00



GENERAL - DIRECTOR'S OFFICE
City Hall, Room 348
1 Dr. Carlton B. Goodlett Place, S.F., CA 94102
(415) 554-6920 www.sfdpw.org



Edwin M. Lee, Mayor
Mohammed Nuru, Director

DPW Order No: 184015

**CITY AND COUNTY OF SAN FRANCISCO
SAN FRANCISCO PUBLIC WORKS
APPOINTMENT**

ID# FPA15019

Contractor: Hellmuth, Obata & Kassabaum (HOK)
One Bush Street, Suite 200
San Francisco, CA 94104

is appointed to provide Architectural and Engineering Team Led by an Executive Architect for Traffic Company and Forensic Services Division Facility.

Payment will be made upon submission of approved invoices based upon work performed satisfactorily. Total Contract Sum shall not to exceed \$993,952.00 for the program validation and conceptual design phases. Subsequent design and construction support phases shall be incorporated via contract modification pending approval of Board of Supervisors. Estimated completion date is 243 days from the date of Certification by the Controller.

Contractor shall indemnify and hold harmless the City & County of San Francisco, its officers and employees and furnish certificates of insurance directly protecting himself, any subcontractors and the City & County of San Francisco. The City & County of San Francisco, its officers, agents and employees shall be named as additional insureds and insurance shall be for:

Commercial General Liability 1,000,000 Single Limit
(bodily injury and property damage)
Business Automobile Liability \$1,000,000 Single Limit
(bodily injury and property damage)
Workers' Compensation; Employers' Liability \$1,000,000 Per Claim
Professional Liability \$10,000,000 per Claim

A Notice To Proceed and a \$993,952.00 Contract Purchase Order will be issued to the Contractor.

Funds are available:

Job Order 9100A, Index Code PWA333CCF14A, Project/Project Detail CESER2/ TC0054, SUBOBJ 02701
\$993,952.00

DISTRIBUTION:

Hellmuth, Obata & Kassabaum (HOK)
Samuel Chui, Project Manager (Samuel.Chui@sfdpw.org)
Romulus Asenloo, Contract Monitoring Division (Romulus.Asenloo@sfgov.org)



San Francisco Public Works
Making San Francisco a beautiful, livable, vibrant, and sustainable city.

Selormey Dzikunu, Contract Monitoring Division (Selormey.Dzikunu@sfdpw.org)
Emily Chea, Office of Economic and Workforce Development (Emily.Chea@sfgov.org)
San Francisco Public Library (sfdocs@sfppl.org)
Jan-Kevin Lacsina, Public Works (Jan-Kevin.Lacsina@sfdpw.org)

SC:ml

9/9/2015

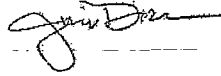
9/14/2015

X Edgar Lopez

Lopez, Edgar
Deputy Director and City Architect
Signed by: Lopez, Edgar

9/15/2015

X



Dawson, Julia
Deputy Director, Financial Management & A...
Signed by: Dawson, Julia

X Mohammed Nuru

Nuru, Mohammed
Director of Public Works
Signed by: Nuru, Mohammed



San Francisco Public Works
Making San Francisco a beautiful, livable, vibrant, and sustainable city.

AGREEMENT BETWEEN
CITY AND COUNTY OF SAN FRANCISCO
AND
HELLMUTH, OBATA & KASSABAUM, INC.
TO FURNISH
ARCHITECTURAL AND ENGINEERING
DESIGN SERVICES
FOR TRAFFIC COMPANY AND FORENSIC SERVICES DIVISION FACILITY

September 01, 2015

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**AGREEMENT BETWEEN
CITY AND COUNTY OF SAN FRANCISCO
AND
HELLMUTH, OBATA & KASSABAUM, INC.**

THIS AGREEMENT is made between the CITY and County of San Francisco, a public entity, acting by and through its San Francisco Public Works ("THE CITY") and Hellmuth, Obata & Kassabaum, Inc. (the "ARCHITECT").

WHEREAS, THE CITY desires the ARCHITECT to render professional services in connection with the design and construction of the new Traffic Company and Forensic Services Division ("TSFSD") Facility and issued an award of contract Order # 184,015 dated effective September 15, 2015; and

WHEREAS, a Request for Qualifications ("RFQ") was issued on August 7, 2014, and CITY selected the ARCHITECT as the highest qualified applicant pursuant to the RFQ to provide the professional architectural and design services with respect to the design and construction of the new Traffic Company and Forensic Services Division ("TSFSD") Facility (the "PROJECT"); and

WHEREAS, the ARCHITECT represents that it possesses the requisite professional expertise, experience and resources to perform the services required by THE CITY as set forth under this Agreement; and,

WHEREAS, approval of this Agreement was obtained when the Civil Service Commission approved Contract Number 4126-12/13 on May 20, 2013;

NOW, THEREFORE, THE CITY and the ARCHITECT agree as follows:

1 THE PROJECT

1.1 DESCRIPTION

1.1.1 THE CITY does hereby engage the ARCHITECT to perform, under the terms and conditions in this Agreement, professional services for the design of the PROJECT, to be located at 1995 Evans Street in the CITY and County of San Francisco.

The current assumption is that the Traffic Company and Forensics Services Division Facility Project will result in approximately 107,000 SF of new space. It is also assumed that utility relocation may be required, and that utilities are available in the surrounding streets.

1.1.2 The ARCHITECT, beginning with the Program Validation Phase, will assist THE CITY in providing overall design direction for the Project, and will be responsible in total for the complete design of the Traffic Company and Forensic Services Division Facility. In addition, the ARCHITECT will

be completely responsible for all on-site and off-site improvements, and handle all other design elements as assigned by THE CITY for Basic and/or Additional Services. Further, the ARCHITECT will provide input when requested as to conceptual, design and constructability issues. The ARCHITECT will work with, advise, and make timely and researched recommendations to THE CITY's Program Director and CITY's Project Manager as to the best design options that satisfy the needs and concerns of THE CITY.

- 1.1.3** The ARCHITECT and THE CITY will work together, based on an understanding that the Bridging Documents completed in December 2012 will need to be verified for program adherence, and that THE CITY's approvals are required in order to have a schematic level design completeness and construction cost estimate prior to developing future phases of the Project.
- 1.1.4** The ARCHITECT will be required to develop the Project to the following milestones to allow the CM/GC and the CITY to issue all trade packages simultaneously as a fully coordinated and complete set of design document necessary to bid and build the Project.
- (a) Design Criteria (100% Schematic Design) for mechanical, electrical, low voltage-electrical, and plumbing engineering, lighting, signage, fire protection, and exterior curtain wall design.
 - (b) Site demolition & Site preparation documents,
 - (c) 100% Construction Documents for all remaining scopes or disciplines.

1.2 FIXED CONSTRUCTION BUDGET LIMIT

- 1.2.1** The fixed construction budget limit ("*FCBL*") for the Project is \$100,000,000. If there is any change in that amount, it will be inserted into this Agreement by a written amendment. For purposes of cost estimating, the target cost shall be five percent less than the FCBL.
- 1.2.2** The FCBL includes all of the costs of construction, except for: (a) CITY's construction contingencies, (b) the cost of furniture, equipment, telephones and business networks, (c) CM/GC Contingency, (d) CM/GC Pre-construction costs and (e) the cost of artwork that is to be incorporated in the Project as an integral building or site element. The ARCHITECT is responsible for designing a comprehensive and complete Project that can be built to 5% less than FCBL. The ARCHITECT will monitor the design and prepare updated construction estimates of the construction costs for the Project as the design is developed at issuance report at completion of Conceptual Design, Schematic Design 50% and 100% Design Development, and 50%, 95% and Final Construction Documents. The ARCHITECT is expected to collaborate with cost

estimators procured by CM/GC and THE CITY to reconcile cost estimates and to monitor construction costs as design is being developed.

The CM/GC, with the assistance of THE CITY, is responsible for preparing the trade packages and subcontracts for all bid and negotiated subcontracts. The ARCHITECT will cooperate with the CM/GC and THE CITY, and provide design assistance and coordination that is required to timely prepare the trade packages and subcontracts for bid and/or negotiation and award.

In the event that cost estimates at any point in the course of design and/or construction bidding of the Project indicate that the FCBL will likely be exceeded, the ARCHITECT shall, when requested to do so by THE CITY, revise or modify the design and the construction documents plans and specifications at no cost to THE CITY and assist the CM/GC and THE CITY with re-bidding the Project as a whole, re-bidding any phase of the Project, or re-bidding any trade package(s), also at no cost to THE CITY, until the cost to build the Project is within 5% of the FCBL.

- 1.2.3** The ARCHITECT shall, at no cost to THE CITY, design alternates with an estimated total value of not less than five percent (5%) and up to ten percent (10%) of the FCBL, and included as part of the FCBL. THE CITY will determine the percentage between 5% and 10%. The ARCHITECT, THE CITY, and the CM/GC will confer at all phases and decide on all alternates.
- 1.2.4** In the event that redesign services are necessary after THE CITY has received bids for construction of the Project and the alternates have not reduced the cost sufficiently to get within the percentage of the FCBL established in accordance with the provisions of sub-paragraph 1.2.3 above, THE CITY shall cooperate with the ARCHITECT in allowing design changes, including, if necessary, changes which reasonably affect the size and quality of the Project. The ARCHITECT must complete any redesign for permit submittal within time to be mutually agreed upon based on final Scope notification by THE CITY of its intent to redesign.
- 1.2.5** In the event that redesign services are performed after the ARCHITECT has received notification by THE CITY to redesign and/or modify the Construction Documents, preparation of modified Construction Documents and preparation of a Final Architect's Estimate of Construction Cost, and obtaining THE CITY approval of the final Construction Documents, shall be the limit of the ARCHITECT's responsibility arising out of the establishment of the FCBL, provided that the redesign and/or modification achieves the FCBL. This, however, shall in no way limit the ARCHITECT's responsibility or THE CITY's remedies in the event that the reason that the FCBL was exceeded was the result of the ARCHITECT's negligent acts, errors or omissions.
- 1.2.6** Should THE CITY accept a subcontractor's competitive bid on any trade package, which price or bid is greater than the estimated cost for that

trade package, there shall be no additional compensation (*i.e.*, no correlative proportional increase in fee) to the ARCHITECT, but the FCBL will be increased by the amount (on a dollar, not percentage, basis) that the accepted price or accepted bid exceeds 105% of the estimated cost for that trade package.

- 1.2.7** During the Construction Bid and Negotiation Phase, THE CITY intends to accept value engineering proposals submitted by trade subcontractors that will lower the cost of the Project. It is not intended for such cost savings to diminish the Project goal of achieving a LEED Gold certification by U.S. Green Building Council ("USGBC").

1.3 SCHEDULE OF SERVICES

- 1.3.1** Time is of the essence with respect to the performance of all provisions of this Agreement, and with respect to all Project schedules in which a definite time for performance by the ARCHITECT is specified; provided, however, that the foregoing shall not be construed to limit or deprive a party of the benefits of any grace period provided for in this Agreement. The ARCHITECT shall act diligently in anticipating and performing its required tasks in a manner so as to not unreasonably delay the prosecution of any services or work with respect to the Project. In the event that THE CITY directs a change to the plans and specifications, or any CITY agencies require additional time to complete their reviews or require additional review, and such change or delay is neither due to the fault nor in the control of the ARCHITECT, and which impacts the ARCHITECT's ability to meet the Design Services Schedule as set forth in Attachment 1 to this Agreement, THE CITY shall modify the Design Services Schedule by written modification to this Agreement. In such event, the ARCHITECT may request an equitable adjustment to its Basic Services Fee or may request an Additional Services Fee for the additional time and/or services required for the change, as appropriate to the nature of the changed design and/or changed Schedule. The ARCHITECT shall ensure that the completion of documents sufficient for bid shall be delivered in conformance with the dates indicated or as otherwise agreed to by THE CITY and in consultation with CM/GC. The ARCHITECT shall notify THE CITY at the earliest possible opportunity with a full explanation, should it expect to miss a particular date, sufficient to allow THE CITY to fairly assess the matter.

- 1.3.2** Attachment 1 to this Agreement (Schedule of Services) is a preliminary schedule of services that shows in summary fashion the sequence of tasks required to complete the Project and the schedule for completing all of the services required under this Agreement. No later than fifteen (15) days after the date that THE CITY issues a Notice to Proceed (NTP) to the ARCHITECT, the ARCHITECT shall submit a progress schedule of services in the form of a Microsoft MP to THE CITY for its approval. At a minimum, the progress schedule must: (a) provide a schedule for completing each phase of the work required under this Agreement, (b)

identify the tasks to be performed during each phase, and (c) identify the sequence in which key activities will be performed by THE CITY, including review and approval by THE CITY and any local, state or federal entities as may be required in order to complete the services required under this Agreement, but excluding detailed construction schedules. The ARCHITECT shall adopt the schedule as a baseline schedule once it is approved by THE CITY. Thereafter, the ARCHITECT shall submit a monthly progress schedule to THE CITY that shows the actual progress achieved that month as compared to the baseline schedule.

- 1.3.3** Should the ARCHITECT be required to perform Construction Administration Phase services for sixty days (60 days) beyond the scheduled completion date determined for Final Completion through agreement among THE CITY, the ARCHITECT and the CM/GC due to no fault of the ARCHITECT, the ARCHITECT is entitled to additional compensation and is obligated to provide complete and accurate documentation of all actual increased cost of performance of its services. In the event that the construction is delayed beyond the scheduled Final Completion date due to the negligent acts, errors, and omissions of the ARCHITECT, as determined by THE CITY in its sole discretion, then the ARCHITECT shall continue to provide Construction Administration services in accordance with this Agreement through the actual completion of construction at no additional charge to THE CITY. The ARCHITECT may submit any disputed amounts as a claim.
- 1.3.4** Each design phase (Program Validation, Conceptual Design, Schematic Design, Design Development, and Construction Documents, Construction Bid/Negotiation, Construction Administration, and Warranty) shall be subject to a separate written authorization to proceed to be issued by THE CITY. Work on a design phase shall not begin until THE CITY has issued the appropriate written authorization to proceed. Work on a design phase shall be based on documents, if any, from the prior design phase approved by THE CITY in writing (to the extent that such work is complete), any written directives by THE CITY with respect thereto, and any adjustments to the Project or the FCBL that have been authorized by THE CITY.

2 DEFINITIONS

For purposes of this Agreement, the following definitions will apply:

- 2.1 ADDITIONAL SERVICES** means those services that THE CITY, in writing, authorizes the ARCHITECT to perform that are in addition to the Basic Services.
- 2.2 ADVISE** means "make recommendations to."
- 2.3 APPROPRIATE AUTHORITIES** refers to any local, state, regional or federal authority or entity having jurisdiction of any kind over the Project. Appropriate Authorities include those agencies and entities that may require information or

the filing of plans, specifications and the like, whether on a voluntary or involuntary basis, in connection with the design and/or construction of the Project, including but not limited to, the San Francisco Art Commission and related committees (including the Civic Design Review Committee and the Visual Arts Committee), San Francisco Department of Building Inspection, San Francisco Fire Department, State Fire Marshal, the San Francisco Department of Public Works, the San Francisco Redevelopment Agency (currently known as Office Community Investment and Infrastructure (OCII), and other entities as THE CITY may designate.

- 2.4 ARCHITECT** means Hellmuth, Obata & Kassabaum, Inc. Prime consultant under this agreement with THE CITY, whether providing architectural, engineering or other professional design services.
- 2.5 AUTHORIZATION** means the direction of THE CITY properly executed by THE CITY's Program Director or Project Manager and, if involving the expenditure of funds, certified by THE CITY.
- 2.6 BASIC SERVICES** mean the services described in Articles 4, 5, and 6 below that the ARCHITECT is required to provide in return for the Compensation set forth in Article 8 below.
- 2.7 BIM** means a Building Information Model (BIM) that is a digital representation of physical and functional characteristics of a facility. As such it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life-cycle from inception onward.
- 2.7.1 Design BIM** means a Building Information Model developed and maintained by the ARCHITECT for the purpose of developing the design.
- 2.7.2 CM BIM** means a Building Information Model developed and maintained by the CM/GC as a tool to support collaboration and construction management.
- 2.7.3 As-Planned BIM** means a Building Information Model that is continuously updated to reflect changes in the design.
- 2.7.4 As-Built BIM** means a Building Information Model that reflects the Project as constructed.
- 2.8 CITY** means the CITY and County of San Francisco, a municipal corporation.
- 2.9 CONSTRUCTION DOCUMENTS** include plans and drawings, specifications, general conditions and special and/or supplementary general conditions, information for bidders, accepted bid proposals, accepted value engineering proposals, addenda, and any other documents developed to set forth in detail all aspects of the design, function and construction of the Project sufficient for a contractor to price and build the Project
- 2.10 CONSTRUCTION MANAGER/GENERAL CONTRACTOR (CM/GC)** refers to the CM/GC selected by THE CITY under separate contract with THE CITY to provide a complete and fully functional Project constructed in accordance with the Contract Documents and the Construction Documents. The CM/GC and its

Subcontractors will, among other things, perform pre-construction and construction phase services including design assistance and review. THE CITY retains the CM/GC solely for THE CITY's benefit. The services rendered by the CM/GC will not operate to change or reduce the ARCHITECT's responsibilities under its Agreement with THE CITY. The ARCHITECT may communicate directly with the CM/GC, but the ARCHITECT shall promptly copy THE CITY on all written communications between the two and promptly confirm in writing to THE CITY the substance of all material, oral communications between the two. In no event shall the ARCHITECT issue any communication directing changes that impact time, cost or quality (including, but not limited to substitutions) for the Project without express written authorization from THE CITY. This mode of contracting is also described in §6.68 of the San Francisco Administrative Code.

- 2.11 CONTRACT DOCUMENTS** include the Agreement between THE CITY and the CM/GC and all items identified therein as construction documents, the Construction Documents, working drawings, specifications, addenda, change orders, notices to proceed, general conditions, and special and/or supplementary general conditions.
- 2.12 CONTROLLER** means THE CITY's Controller, as applicable.
- 2.13 DRAWING SET** means the design and/or construction documents that the ARCHITECT is required to submit to THE CITY. The following required documents shall be provided electronically as part of the Basic Services.
- 2.13.1** Program Validation Documents, Conceptual Design Documents, and Schematic Design Documents.
 - 2.13.2** Design Development Phase: 50%, 100% (final submittals): Drawing set, BIM files, specifications with sufficient detail for cost estimating purposes, reports, schedules and other written documents.
 - 2.13.3** Construction Documents Phase: 50%, 95% and final submittals: Drawing set, BIM files, specifications, reports, schedules and other written documents.
 - 2.13.4** Construction Bid Phase: Drawing set, BIM files, specifications, reports, schedules, accepted Value Engineering proposal integrated into design documents and other written documents.
 - 2.13.5** Construction Administration Phase: All documents including RFIs' substitution requests, submittals, shop drawings and other documents.
 - 2.13.6** CAD drawings shall be provided in AutoCAD R2014 and Building Information Modeling on Autodesk Revit Building Suite 2015 or other software approved by THE CITY.
 - 2.13.7** Written documents, spreadsheets and cost estimates on Microsoft Office Suite 2010 (Word and Excel).
 - 2.13.8** Schedules in Microsoft Project 2013.
 - 2.13.9** Audiovisual presentations in Microsoft PowerPoint 2013.

- 2.13.10 Image files in JPG, GIF, PICA, TIFF and BMP formats. These images shall be made available on any storage format selected by THE CITY.
- 2.13.11 Renderings in latest Adobe Suite and 3D Studio VIZ, or other software approved by THE CITY.
- 2.13.12 Presentation Boards: mounted on foam board, gator board, or eco-friendly rigid display board as requested by THE CITY.
- 2.13.13 Models: In Plexiglas, wood or other material requested by THE CITY, painted and mounted on wooden base with Plexiglas cover
- 2.14 FFE means Furniture, Fixtures, and Equipment that have no permanent connection and/or integration into the structure or building.
- 2.15 **PROGRAM DIRECTOR (PD) and PROJECT MANAGER (PM)** refers to the persons who THE CITY has designated, in writing, as the persons with authority to act on behalf of THE CITY with respect to this Agreement and the Project. The ARCHITECT shall communicate directly with the PD and PM on all matters concerning the Project and will accept directives only from the Program Director and/or Project Manager and not from any other employee of, or consultant to, THE CITY. The ARCHITECT may communicate directly with the GM/GC and other identified agents of THE CITY, but shall only take direction from the PD or PM, and shall not give direction to any agent of THE CITY except through the PD and PM.
- 2.16 **PROJECT ARCHITECT (PA)** refers to the person designated in writing by the ARCHITECT and accepted by THE CITY to make decisions on behalf of the ARCHITECT, to commit the resources of the ARCHITECT and all of its sub consultants, and to direct, coordinate and control the ARCHITECT and its entire team in providing all of the services required under this Agreement. So long as the PA performs in a manner acceptable to THE CITY and remains in the ARCHITECT's employ, the PA shall remain in charge of all design and other services required under this Agreement and shall attend all design-related meetings for the Project. The ARCHITECT may not replace the PA without THE CITY's written consent.
- 2.17 **PROPOSAL** means the ARCHITECT's response to THE CITY's Request for Qualifications for design professional services for the Project.
- 2.18 **QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)** means the Quality Assurance/Quality Control Plan to be used throughout the design process for the Project. The QA/QC Plan is developed to facilitate delivery of Project documents that are technically sound, complete, and coordinated to accurately communicate the design intent and scope of the Project.
- 2.19 **REQUEST FOR QUALIFICATIONS** means THE CITY's request for qualifications (RFQ) for professional design services for this Project and the ARCHITECT's proposal to provide such services. All requirements of the RFQ and the representations made in the ARCHITECT's Proposal that are not in conflict with provisions of this contract are hereby incorporated by reference and made an integral part of this Agreement as though fully set forth herein. With respect to

any conflict or ambiguity between this Agreement and the RFQ or the proposal, this Agreement shall control except where the RFQ or the proposal refers to services not otherwise mentioned in this Agreement, in which case and to such extent the RFQ or proposal shall control.

3 STANDARD OF CARE (PERFORMANCE)

The ARCHITECT's obligation is to perform all of its services in accordance with generally accepted standards of professional practice in the design and construction administration of the Project and projects of similar size and complexity in the San Francisco Bay Area or other major metropolitan area in the United States. This standard shall apply to and define all professional obligations under this Agreement.

4 ARCHITECT'S BASIC SERVICES / GENERAL PROVISIONS

The ARCHITECT shall provide as its Basic Services all necessary architectural, engineering, cost estimating, and other consulting services during all Design Phases (Article 5) and during all Construction Phases (Article 6) of the Project as required by this Agreement to design a complete and comprehensive Project, except for services designated as Additional Services as described in Article 7. Basic Services are generally identified in and as subsequently modified by the agreement of the parties. All of the parties providing any of these necessary services shall be licensed by the State of California.

The ARCHITECT, its officers, agents, employees, subcontractors, consultants and any other persons or entities for whom the ARCHITECT is responsible, shall provide all of the services required under this Agreement in a manner consistent with the CM/GC Contracting method. Among other things, this will require the ARCHITECT, at no additional cost to THE CITY, to: (a) work closely with the CM/GC and its team during the pre-construction and construction phases of the Project and coordinate its work vis-a-vis the design with the services required of the CM/GC in its contract with THE CITY, and (b) prepare plans and specifications for discrete portions of the work as described in 1.1.4 or in the sequences that the ARCHITECT and the CM/GC reasonably agree are appropriate for the timely completion of the Project. The CM/GC will use the plans and specifications to prepare separate trade packages for all of the subcontractors who will construct the Project. Trade package may be awarded concurrently with other trade packages or individually, at different points in time, which may result in the ARCHITECT completing portions of the design after commencement of construction of the Project and/or providing construction phase services before completion of all design phase services.

The ARCHITECT shall develop, manage, and maintain multi-dimensional design BIM's and reports, integrating information from engineering disciplines to collaborate and fully coordinate the design and construction features as described in the BIM Management Plan and Delivery Matrix. The ARCHITECT

shall provide such models to the CM/GC for purposes of verifying constructability, compatibility, and compliance with design intent. The ARCHITECT shall consult with the CM/GC and provide the CM/GC an opportunity to review and comment upon all designs, drawings, models, and other materials developed by the ARCHITECT. The ARCHITECT shall incorporate into the Design BIM and Construction Documents constructability refinements resulting from the interactive collaboration with the CM/GC including accepted value engineering proposals. At the earliest moment the CITY, ARCHITECT, and CM/GC shall develop and execute BIM Management Plan and BIM Delivery Matrix (Attachment 4) based on the AIA E 202 *BIM Protocol Exhibit*, which will be used to specify the level of detail required in the Design, CM, and As-Built BIMs) and the system development level at agreed upon milestones. The ARCHITECT is not expected to prepare standalone Construction Documents and Specifications for each trade package. While the CM/GC is responsible for preparing the trade packages, the ARCHITECT will cooperate with the CM/GC and provide design assistance and coordination that is required to timely prepare the trade packages and subcontracts for bid and/or negotiation and award.

The CM/GC will develop, manage and maintain a multi-dimensional CM BIM or BIM's during construction to collaborate with the ARCHITECT. The CM/GC shall utilize the CM BIM(s) to verify constructability and to develop cost estimates, sequencing plans, and schedule. The CM/GC shall consult with the ARCHITECT to review and comment upon designs, drawings, models, and other materials developed by the ARCHITECT.

Nothing in the foregoing shall create any contractual relationship between THE CITY and any consultants employed by the ARCHITECT under the terms of this Agreement. The ARCHITECT is as responsible for the performance of its consultants as it would be if it had rendered these services itself. The ARCHITECT's services are intended for the sole benefit of THE CITY and are not intended to create any rights or benefits to third parties.

Basic Services shall include the following:

4.1 CONSULTING SERVICES

The ARCHITECT shall provide the following consulting services as part its Basic Services under this Agreement:

- 4.1.1** Consult with authorized employees, agents and/or representatives and consultants of THE CITY and as required or as requested by THE CITY, to develop and complete the design phase, construction phase, and construction administration phase services of the Project.
- 4.1.2** Review and validate furniture, fixture, and equipment described in the Bridging document. Where required, verify the conditions and availabilities of equipment at the existing facility for incorporation at the TCFSD facility.

- 4.1.3** Review program requirements, site surveys, existing record documents, seismic data, mechanical, geotechnical, and other test reports, environmental documents, and any other documentation furnished by THE CITY. From an examination of the site and a review of available information and based on its experience and training, the ARCHITECT shall determine whether such data are sufficient for purposes of design or whether additional data are needed and, if so, recommend to the CITY in as timely a fashion as possible the manner in which it may be provided and needed services obtained to avoid any delay that could otherwise occur
- 4.1.4** Contract for or employ, at the ARCHITECT's expense within the Basic Services fee, ARCHITECT's employees and ARCHITECT's subconsultants as may be necessary or required including, but not limited to, Mechanical, Civil, Electrical, Plumbing and/or Structural Engineers; Cost Estimator; Landscape ARCHITECT (Peer Review); LEED Coordinator, Energy Management & Building Automation Coordinator, and other specialty consultants and services for fire protection and life safety, acoustical, lighting, specifications, security, computer infrastructure, and disabled access, and others as may be necessary for complete design, or criteria design package as indicated by the CITY, of the Project; all parties shall be licensed by the State of California if so required. The ARCHITECT shall submit any proposed changes to the subconsultants listed in Attachment 7 to THE CITY for its approval.

4.2 DESIGNATION OF KEY EMPLOYEES AND CONSULTANTS

- 4.2.1** The key employees and consultants shall remain in charge of the professional services for the Project, so long as their respective performance continues to be acceptable to THE CITY. A list of the ARCHITECT's team members with their key employees are listed in Attachment 7. Attachment 8 sets forth some of the key employees of the entire Project team and their respective commitment to the Project.
- 4.2.2** The ARCHITECT commits to maintain the continuous involvement of the designated and approved key employees for the entire duration of the Project through the Construction Administration Phase. Absent the death, physical or mental incapacity or departure of the key employees from their respective firms, or the dissolution of their respective firms, or approval in writing by THE CITY to a different commitment, the key employees have committed to provide their percentages of involvement for each phase as described in Attachment 8. The ARCHITECT and THE CITY are both fully aware that change in key personnel on a project can result in great detriment to the Project. Accordingly, any request by the ARCHITECT to change the amount of the key personnel's involvement shall be made with 60 days prior written notice and any approval or denial of such request shall be at the sole discretion of THE CITY and not subject to challenge by the ARCHITECT. THE CITY reserves the right to audit the key

employees' time records if there are concerns about the time commitments of the employees identified in Attachment 8.

- 4.2.3** Because the evaluation of Contractors' Proposals were largely based on the qualifications of key personnel and because a change in key personnel on a project can result in great detriment to the project, the ARCHITECT agrees to maintain the continuous involvement of the designated and approved key employees for the entire duration of the Project through the Construction Administration Phase. ARCHITECT shall not substitute key personnel or change the amount of the key personnel's involvement as described in Attachment 7 without the prior written approval of the CITY. Requests for approval of substitutions shall be in writing and made at least 30 calendar days prior to the proposed substitution. Such notification shall include a detailed explanation of the circumstances necessitating the proposed substitution, a complete resume for the proposed substitute, and any other information requested or needed by the City to approve or disapprove the request. Proposed substitutes must have qualifications that are equal to or higher than the key personnel being replaced. The CITY shall evaluate such requests and promptly notify the ARCHITECT in writing whether the proposed substitution is acceptable. Approval or denial of such request is at the sole discretion of the CITY. The CITY reserves the right to audit the key employees' time records if there are concerns about the time commitments of the employees identified in Attachment 7. Failure to notify City prior to substitution of key personnel may result in City withholding payment(s) due.

- 4.2.4** The ARCHITECT will assign additional staff as needed to complete all of the services required by this Agreement at no cost to THE CITY.

4.3 COORDINATION OF DESIGN TEAM

Commensurate with the standard of care, the ARCHITECT shall coordinate its work with the work of all of its consultants to produce comprehensive, complete, coordinated and accurate drawings and specifications. The ARCHITECT shall use and manage BIM applications and methods for all portions of the Project.

4.4 COORDINATION WITH CM/GC AND ITS SUBCONTRACTORS

The ARCHITECT shall coordinate its work with the CM/GC and its subcontractors, and collaborate with each of them in a manner consistent with the Construction Manager/General Contractor Mode of Contracting as defined herein. The ARCHITECT shall use and manage BIM applications and methods as an integral part of this effort, as described in the BIM Management Plan and Delivery Matrix. The ARCHITECT shall participate in meetings and workshops with the CM/GC and its team for purposes of design coordination and design review for accuracy, constructability, and value engineering.

4.5 QUALITY ASSURANCE/QUALITY CONTROL

Quality Assurance/Quality Control (QA/QC) are the responsibility of the ARCHITECT, and shall be rendered as defined in Attachment 5. The ARCHITECT shall provide THE CITY the QA/QC plan the ARCHITECT intends to utilize for the Project for approval by THE CITY. At the indicated percentage of completion shown as milestone dates of each phase, the ARCHITECT shall provide to THE CITY documentation that evidences the completeness of the QA/QC activity for that phase. The review and acceptance by THE CITY of this documentation is, in part, a necessary precondition for establishing the completion of the phase and the approval to continue on to the next phase.

4.6 COORDINATION WITH PUBLIC AGENCIES AND PUBLIC UTILITIES

Coordinate with THE CITY and the CITY's agencies, including the Fire Department, and all other state and federal public agencies and/or utility providers and TCFSD's Facility operations staff as necessary to identify design requirements that affect the Project, review designs and obtain agency and/or utility provider approvals. Where engineering designs would be prepared by such agencies and utility providers, coordinate their designs with the Project, and incorporate their designs into the Construction Documents and/or Contract Documents.

4.6.1 San Francisco Departments: Coordinate with and work with departments of the CITY and County of San Francisco as necessary to determine relevant CITY requirements, develop and review designs, and obtain required CITY approvals. Such departments include, but are not limited to, the Department of Public Works, Department of Environment, Department of Building Inspection, and Redevelopment Agency (currently known as Office Community Investment and Infrastructure (OCII)).

4.6.2 San Francisco Arts Commission: The ARCHITECT is required to coordinate the design and structure of the building and the Project site with any art work commissioned by THE CITY or CITY's Art Commission that is to be incorporated in the Project as an integral building or site element, including assisting with information necessary for the Art Commission to make the selection. These services are included as part of the ARCHITECT's Basic Services under this Agreement. As directed by THE CITY or CITY, ARCHITECT shall coordinate with and work with the Arts Commission, its committees, and any representatives from THE CITY or CITY that the Arts Commission may designate in the selection of artists for THE CITY Public Art Program. Once the art work is selected, the ARCHITECT shall coordinate with and work with the Arts Commission, and the chosen artists, and any representatives the Commission may designate and provide design and engineering services necessary to incorporate requirements for the chosen artwork into the design for the facility. The ARCHITECT is not responsible for the design of the artwork or any stand-alone structure to accommodate the artwork. Substantial changes to design documents or other like work required of the

ARCHITECT to incorporate requirements for the chosen artwork into the Project after the completion and acceptance by THE CITY of the Design documents shall be reviewed with and approved by THE CITY prior to incorporation into the Construction Documents. The ARCHITECT may be compensated for approved changes as Additional Services for work after the art work is selected, depending on the amount and complexity of the work.

4.7 COORDINATION WITH THE CITY

- 4.7.1** The ARCHITECT and key members of its design team shall meet regularly with the Program Director, Project Manager, THE CITY staff, consultants, and others as directed by the Program Director and Project Manager so as to keep the design and/or construction on budget and on schedule. Design Team includes the ARCHITECT's Key Employees and consultants assigned to work on this Project as described in Section 4.2 of this agreement.
- 4.7.2** Assist in establishing a means of electronic communication using the mutually agreed to software or equivalent software program employed by THE CITY, and fully participate in THE CITY's effort to develop electronic files for this Project.
- 4.7.3** Assist the Program Director and Project Manager in developing requests for proposals and/or requests for qualifications to acquire professional services from specialized consultants that THE CITY deems necessary for the successful completion of the Project.

4.8 THE CITY COST CHANGE CONTROL PROCEDURE

During all phases of the Project, the ARCHITECT shall cooperate with THE CITY and the CM/GC to control design and scope changes that could affect the cost of the Project. The ARCHITECT shall comply with a Cost Change Control Procedure to be established by the CITY for the Project. The Cost Change Control Procedure is intended to serve several purposes, including:

- (1) Assuring that the Project requirements are met,
- (2) Assuring timely and regular estimates of construction costs as the design is developed to ensure that these costs remain within the FCBL,
- (3) Assuring that all proposed changes to the design include an analysis of the cost impact of those changes,
- (4) Avoiding unnecessary re-design work by the ARCHITECT, and
- (5) Avoiding unnecessary additional costs to the CM/GC or THE CITY.

- 4.8.1** For purposes of implementing the Cost Change Control Procedure, the ARCHITECT will use the RFQ, the Statement of Cost (see section 1.1.3, above), and the 100% Bridging Documents dated 12/2012 to validate cost of the Project. However, nothing in any of these reference documents is intended to change the FCBL.

4.8.2 The ARCHITECT shall promptly inform THE CITY of any proposed changes to the design or to the scope of the Project, that would, in the ARCHITECT's opinion, affect the estimated (whether increased or decreased) construction cost for the Project. The ARCHITECT shall review with THE CITY the benefits as well as costs of the proposed changes. For each significant proposed change, the ARCHITECT shall submit to THE CITY a completed Change Request Form, (provided by THE CITY), that describes the proposed change and analyzes the impact the change is likely to have on the cost to build the Project. Should the proposed change increase the estimated cost of the Project, the ARCHITECT shall cooperate with THE CITY to identify other changes to the Project that could reduce and/or offset the cost of the proposed change.

4.9 DESIGN CHANGES

4.9.1 No substantive change shall be incorporated into the design documents unless it has been approved by THE CITY in writing.

4.9.2 The ARCHITECT shall maintain a Change Log of all recommended, pending, approved and incorporated changes, and submit the Change Log to THE CITY monthly during the design phase.

4.9.3 THE CITY approval of any change shall not entitle the ARCHITECT to a change in ARCHITECT's compensation, unless approved in writing by THE CITY.

4.10 COST ESTIMATING

The ARCHITECT will review and validate the Probable Opinion of Construction Cost (cost estimate) prepared for the Bridging Documents' Estimate. The ARCHITECT will submit that Cost Evaluation Report to THE CITY for its approval as part of the package report at completion of Program Validation Phase cost verification.

4.10.1 During each subsequent design phase, (issuance of report at completion of Conceptual Design, Schematic Design, 50% and 100% Design Development, and 50% and 95% Construction Documents), the ARCHITECT shall update the cost estimate, both for the Project as a whole and for each trade package, changing the format to the MASTERFORMAT 2012 and according to the CSI 50 Division classifications.

4.10.2 With each cost estimate prepared by the ARCHITECT, all changes to estimated cost shall be considered a Cost Trend, shall be analyzed by the ARCHITECT to determine the cause of the cost change, and shall be presented to THE CITY for approval according to THE CITY Cost Change Control Procedure.

4.10.3 At all times during the design and construction bid phases, the ARCHITECT shall be responsible for monitoring and confirming that the total cost of all trade packages awarded to date, whether bid or

negotiated, together with the estimated costs of trade packages that have not yet been bid or negotiated, are less than 5% of the FCBL.

4.11 CODE COMPLIANCE

The ARCHITECT shall comply with requirements of all applicable federal, state, and local codes, regulations, and current written interpretation thereof published and in effect at the time of submission of the building permit. In the event of changes in such codes, regulations or interpretations during the course of the Project that were not and should not have been reasonably anticipated by the ARCHITECT and which result in a substantive change to the construction documents, the ARCHITECT shall not be held responsible for the resulting additional costs, fees or time, and shall be entitled to reasonable additional compensation for the time and expense of responding to such changes. The ARCHITECT shall be responsible, however, to identify, analyze and report to THE CITY pending changes to codes and regulations that would reasonably be expected to affect the design of the Project, including pending changes to the California Building Codes and San Francisco Building Code.

4.12 MEETINGS WITH THE CITY AND OTHERS

The ARCHITECT shall attend meetings concerning the Project with the CITY, CM/GC and others as necessary, including the following, to the extent required:

- 4.12.1 CITY Departments and their Staff including the Department of Public Works, and Planning Department:** The purpose of these meetings will be to assist the Program Director and Project Manager to present design concepts, solicit comments and answer questions, and report on the progress of the Project.
- 4.12.2 Art Commission and Others:** Preparation of submissions to the Civic Design Committee or similar committee established by the CITY shall be made in keeping with the current requirements of the "San Francisco Art Commission Civic Design Review Committee Guidelines". Attend meetings with the Visual Arts Committee of the Art Commission and/or similar committee established by the CITY for the purposes of selecting artists to participate in the CITY Public Art Program, and for coordination with the artists.
- 4.12.3 SF Fire Department and Department of Building Inspection:** Attend meetings to coordinate and obtain comments, permits and approvals, including support coordination and cooperation with Environmental Impact Review Study (EIR) process and consultants.
- 4.12.4 Community Groups, Strategic Advisory Group and Public Meetings:** Attend up to six (6) meetings as requested by THE CITY to provide information regarding Project design issues and solicit community comments.
- 4.12.5 State Authorities:** Attend meetings to review design issues, receive and respond to comments, and obtain approvals as required.

4.12.6 Compliance with Americans with Disabilities Act. ARCHITECT acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a contractor, must be accessible to the disabled public. ARCHITECT shall provide the services specified in this Agreement in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. ARCHITECT agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agrees that any violation of this prohibition on the part of ARCHITECT, its employees, agents or assigns will constitute a material breach of this Agreement.

The ARCHITECT shall meet with the Public Works - Disability Access Coordinator (DAC) for early planning and input in order to identify accessibility requirements that are critical to the budget and schedule of the PROJECT. The ARCHITECT shall expect to meet multiple times with the Public Works-DAC at each phase of the project, to review all aspects of accessibility compliance. The ARCHITECT shall expect to document all meetings and related communications to record the progress of review and/or agreements made with the Public Works-DCA on conformance to understood accessibility requirements.

5 ARCHITECT'S BASIC SERVICES / DESIGN PHASES

Upon execution of the Agreement THE CITY will issue a separate Notice-to-Proceed (NTP) authorizing the ARCHITECT to perform design services for each design phase of the Project as set forth below in Section 5, Attachment 3 and as applicable by Program increments. The parties understand and agree that those services delineated below and in Attachment 3 are to be performed only upon the written NTP by THE CITY. While THE CITY intends to authorize the ARCHITECT to provide the Design Services described below and in Attachment 3 THE CITY shall do so only when (a) sufficient funds for such services have been appropriated in accordance with the budget and fiscal provisions of THE CITY and, (b) THE CITY, in its sole discretion, without waiving any rights, has found that prior services of the ARCHITECT to date have been adequately performed and completed.

The ARCHITECT must obtain design review approval for each design phase. THE CITY is not obligated to pay ARCHITECT for services attributable to a design phase until the ARCHITECT has obtained design review approval for the preceding phase.

5.1 PROGRAM VALIDATION

The Program Validation is the first phase of the Project. Upon NTP for the Program Validation, the ARCHITECT shall:

- 5.1.1 Review thoroughly the Bridging Documents dated August 08, 2014, which includes the Conceptual Planning document prepared by Crime Lab Design and published in June 2013.
- 5.1.2 The ARCHITECT will advise THE CITY of the sufficiency and appropriateness of the design delineated thus far in the provided documents, and identify opportunities for functional enhancements and/or revisions of purpose and value for THE CITY to review.
- 5.1.3 The ARCHITECT to compile, prioritize, organize, and coordinate consultants' reviews.
- 5.1.4 The ARCHITECT to coordinate Program Validation meetings with the design team and THE CITY.
- 5.1.5 The ARCHITECT and its consultants will ensure that the functional enhancements and/or revisions accepted are within the project budget.
- 5.1.6 Refer to Attachment 3 for detailed description of additional Program Validation tasks and services.
- 5.1.7 The ARCHITECT to compile, proof read, format and submit final Program Validation Report for THE CITY's approval.

5.2 CONCEPTUAL DESIGN

Upon approval by THE CITY of the Program Validation Phase and receipt of written NTP from THE CITY to proceed with the Conceptual Design Phase, the ARCHITECT shall:

- 5.2.1 The Conceptual Design documents shall include a Room by Room Review electronic database establishing and documenting all specific room utilization and operational needs including utilities, furnishings, equipment, and other specific room characteristics required for program THE CITY room usage and types. The Room by Room Review shall establish room typical drawings as required for clarity of requirements.
- 5.2.2 Prepare Conceptual Design drawings and other documents to conceptually illustrate and describe the preliminary design of the Project, establishing the scope, relationships, form, size and appearance of the Project by means of plans, sections and elevations, typical for this type of project and this type of project delivery.
- 5.2.3 Refer to Attachment 3 for additional Conceptual Design tasks and services to be performed during this phase.

- 5.2.4 Together with its subconsultants, make presentations to THE CITY and State agencies, stakeholders and community groups as directed by the Program Director or Project Manager.
- 5.2.5 Establish preliminary strategy and goals for achieving minimum of LEED Gold v.2009, and register the project with USGBC/ GBCI.
- 5.2.6 Prepare preliminary Opinion of Probable Construction Cost Estimate.

6 ADDITIONAL SERVICES

As defined in paragraph 2.1 above, Additional Services are services in addition to the Basic Services of this Agreement. The ARCHITECT shall not proceed with any Additional Services without the prior written authorization of THE CITY. The written authorization to perform Additional Services must include a statement describing the services as Additional Services. In the event THE CITY believes certain services to be part of Basic Services which the ARCHITECT contends are Additional Services, the ARCHITECT shall not perform such services until (a) the ARCHITECT provides THE CITY with written notice of the contention with factual support, and (b) THE CITY then instructs the ARCHITECT in writing to proceed, in which case the ARCHITECT shall perform the services required and pursue any monies or other compensation which it believes it is owed, by filing a claim with THE CITY and/or pursuing any other available remedies.

Additional Services include the following:

- 6.1 Financial feasibility studies.
- 6.2 Office systems furniture design, specifications, or procurement.
- 6.3 Services for future systems and equipment that are not intended to be constructed or provided for during the Construction Administration Phase. However, provisions for advances in computer technology (e.g., software upgrades) are to be made as part of Basic Services.
- 6.4 Detailed quantity surveys or inventories of material, equipment, furnishings and labor.
- 6.5 Services required in connection with construction performed by others that is not part of the Project work, except as indicated in the Agreement.
- 6.6 Providing consultation concerning replacement of any work damaged by fire or other cause during construction and furnishing services as may be required in connection with the replacement of such work.
- 6.7 Providing services made necessary by the default of the CM/GC, or by major defects or deficiencies in the work of the CM/GC, or otherwise caused by the CM/GC or others during construction, excluding the ARCHITECT's consultants or employees.
- 6.8 Preparing design and construction documents for procurement or manufacture or creation of art work that is to be incorporated in the Project as an integral building

or site element, beyond those services necessary to coordinate the design and structure of the building or site to accommodate the installation of such art work.

- 6.9 Providing services after Warranty Phase completion, unless such services are required as a result of the ARCHITECT's negligent error or omissions.
- 6.10 Providing services, consultants, or scope of work not stipulated as included in this Agreement, and not customarily provided as part of the ARCHITECT's Basic Services, which includes but is not limited to:
 - 6.10.1 Shadow study, wind studies, noise analysis, AB-32 carbon footprint analysis, traffic/parking and environmental or CEQA consultants;
 - 6.10.2 Structural analysis beyond code requirements;
 - 6.10.3 Archeological and Historic consultants;
 - 6.10.4 Hazardous materials consultants; and,
 - 6.10.5 Additional Services made necessary by reversals of authorizations, approvals or instructions previously given by THE CITY but only such services as are substantial and in excess of what would have been required if there had not been such reversals.
 - 6.10.6 Additional Services to incorporate substantial structural changes to integrate the artwork administered by the Art Commission after the completion and acceptance of the Design Drawings.
- 6.11 Services in connection with substantial changes in the scope or schedule of the Project directed by THE CITY, but not including changes proposed and recommended by the ARCHITECT, and not including changes or value engineering proposals by trade subcontractors during construction bidding/negotiations phase required to keep the Project within the FCBL.
- 6.12 Coordination of tenant moves and relocations, and move management.
- 6.13 On-site representation beyond those services defined as Basic Services.

7 COMPENSATION

No charge shall be incurred under this Agreement nor shall any payments become due to the ARCHITECT until final reports, documents, or services as required under this Agreement have been completed and are received from the ARCHITECT and approved by THE CITY as being in accordance with this Agreement, or until THE CITY agrees that services covered under the payment request have been satisfactorily performed.

THE CITY shall compensate the ARCHITECT as follows:

7.1 BASIC SERVICES

The Contract Sum, which shall be a Lump Sum Fixed Fee, includes all subconsultant fees and normal costs to the Project including all phone calls, faxes, in-house and subconsultant coordination, presentations, printing, and

reproductions as required by this Agreement and the like, and those specific costs defined in Article 8.4.5., excluding only those costs for Additional Services and amounts for Reimbursable Expenses. For all of the ARCHITECT's Basic Services, including all services performed under the Agreement, the ARCHITECT shall be paid a Contract Sum not to exceed \$993,952 as is set forth in the Fee Schedule (Attachment 2).

The Certified Contract Sum is the amount of the Contract Sum certified by the Controller at any point in time. Certified Contract Sum initially shall not exceed \$993,952. THE CITY will adjust the value of the Certified Contract Sum during the course of the PROJECT. Upon certification of funds, the ARCHITECT will develop and monitor the Project according to the schedule. THE CITY, in its sole discretion, reserves the right to cancel any subsequent phase if it determines it is in THE CITY's best interest.

The Fee Schedule (Attachment 2) represents the ARCHITECT's estimate of the level of effort required of it over the life of this Agreement to earn the fees identified as "Architectural."

The CITY fully expects that the Lump Sum Fixed Fee for Basic Services, as represented by the ARCHITECT, adequately covers the cost to successfully complete the work across all phases according to the agreed upon schedule and with a professional level of quality. As such, only significant modification to the design directed by the CITY shall be considered an Additional Service. In the event that the building program or requirement reduces in complexity from that as represented in the RFQ document (e.g. a substantive reduction in area for the parking structure), the design fee shall be correspondingly reduced to reflect the adjusted level of effort.

7.2 ADDITIONAL SERVICES

As defined in Article 2.1. above, Additional Services are services not specified or required in the Agreement as Basic Services. THE CITY shall not compensate the ARCHITECT for Additional Services unless such services are authorized in writing prior to performance by the ARCHITECT. Payment for Additional Services shall be made in accordance with the Hourly Rate Schedule set forth in Attachment 6 which shall be adjusted annually consistent with the Consumer Price Index for the nine Bay Area counties as published on July 1 or the first date thereafter. ARCHITECT shall submit a letter requesting the rate change, which must be approved by THE CITY before revised rates may be invoiced.

7.3 FURNISHINGS, FIXTURES AND EQUIPMENT NOT AFFIXED

At the request of THE CITY, the ARCHITECT shall provide services to plan and prepare documents for procurement and installation of furnishings, laboratory furniture and equipment (FFE) not affixed to the building. The ARCHITECT shall provide these services as Basic Services. Inventory of laboratory equipment and non-laboratory equipment and furnishing shall be completed by others retained by THE CITY. The ARCHITECT will, however, coordinate such design, procurement or installation in the building as part of the ARCHITECT's Basic Services, as described in Article 9.7 below.

7.4 REIMBURSABLE EXPENSES

THE CITY has established an allowance of \$50,620 for Reimbursable Expenses, inclusive of Trip Allowance. Reimbursable Expenses shall be invoiced by the ARCHITECT's accounting categories and shall be subject to the audit provisions of this Agreement.

- 7.4.1** Only the actual costs incurred by the ARCHITECT shall be allowed and invoiced as Reimbursable Expenses. The ARCHITECT shall not exceed the Reimbursable Expense allowance set forth in Article 7.4 above without prior written authorization from THE CITY. There shall be no mark-ups of any kind allowed on Reimbursable Expenses.
- 7.4.2** If requested by THE CITY, the ARCHITECT will obtain and submit to THE CITY a quote from its insurance carrier for the cost of premiums for Project specific professional liability insurance. If approved by THE CITY, the actual cost for the insurance coverage will be included in this contract as a Reimbursable Expense. There will be no mark-ups allowed on these costs.
- 7.4.3** All documents shall be transmitted electronically to THE CITY.
- 7.4.4** All activities and work product resulting from implementation of BIM are considered Basic Services. Renderings, computer animated presentations and presentation models that are not otherwise part of the BIM work product, are considered reimbursable expenses when requested and approved by THE CITY in advance and in writing. Such documents prepared by the ARCHITECT without THE CITY's written advance approval shall be considered part of the ARCHITECT's Basic Services.
- 7.4.5** The following items are considered normal Project costs and a part of the Basic Services Fee, not Reimbursable Expenses: (a) phone calls, faxes, mail, express mail, courier delivery or overnight delivery service charges, or other communications charges between members of the ARCHITECT's team and/or the CM/GC and its team, regardless of location; (b) regional phone calls and faxes for all area codes having any geographical land area within 100 miles of San Francisco even though its outlying boundary exceeds the 100 mile limitation; (c) Internet gateways, FTP sites or data file transfer or research services; (d) in-house coordination materials among the ARCHITECT and its team, including photocopy and drawing materials and messenger services; (e) all CAD and other computer-related time and expenses in support of those items specifically listed in articles 4, 5 and 6 of this Agreement; and (f) food and beverage charges of any kind unless approved in writing in advance by THE CITY.
- 7.4.6** Travel within 100 mile radius of San Francisco is considered a part of the Basic Services fee, not Reimbursable Expenses. If the needs of the project require the ARCHITECT or its subconsultants to travel outside 100 mile radius of San Francisco, THE CITY will reimburse the ARCHITECT for the actual travel expenses incurred.

7.4.6.1 Mileage shall be subject to the Internal Revenue Service (IRS) standard mileage rate for business use of an automobile, with no markup. This rate is subject to change, yearly.

7.4.6.2 For all travel within the continental United States, travel expenses will be reimbursed according to the federal maximum lodging by locality rates. Any exceptions to the Federal rates must be approved in advance by the Project Manager. Federal rates for lodging can be found at: <http://www.gsa.gov/> > Per Diem Rates.

7.4.6.3 Air travel expenses shall be based on lowest available Economy Class ticket prices. The ARCHITECT or its subconsultants shall reserve flight tickets as early as possible to ensure the most economical rate.

7.4.7 An allowance of trips by the Architect's consultant, RG Vanderweil & HOK Laboratory Planning staff located in their Washington DC office, has been incorporated into the Fee Schedule (Attachment 2). Each trip is subject to THE CITY's approval in writing two weeks in advance. Additional travel must be approved in advance by the Project Manager. All travel expenses are subject to final approval by the Project Manager at the time of invoice submittal.

Program Validation: 2 trips/2 Persons Program Interviews Session 1 & 2

Concept Design: 2 trips/6 Persons Design Meetings

1 trip/6 Persons Lab Planning Meetings

1 trip/4 Persons Lab MEP Coordination Meeting WDC

7.5 PAYMENT SCHEDULE AND INVOICES

7.5.1 PAYMENT SCHEDULE AND INVOICES

The Fee Schedule:

The design services are divided into phases: Program Validation Phase (5.1) and Conceptual Design Phase (5.2). Each phase is assigned a value representing the total fee (ARCHITECT and subconsultants) for that phase. The total of all of the values assigned to each phase equals the total fee (ARCHITECT and subconsultants).

Each phase is considered complete when that phase has achieved the benchmark set forth in the following table or mutually agreed to benchmarks:

PHASE	COMPLETION BENCHMARK
Program Validation and review of Bridging Documents	Issue Program Validation Report
Conceptual Design	Incorporate data from Program Validation and develop and submit Conceptual Design documents.

7.5.2 The ARCHITECT will submit invoices for work in progress no more than once each month for Basic Services. All fees, including those of the ARCHITECT's subconsultants, are to be charged on a lump sum percent complete basis within the course of each phase. Lump sum fees will be invoiced based on the ARCHITECT's calculation of the percentage of design services that have been satisfactorily completed and approved by THE CITY, relative to the percentage of the total lump sum fee approved for completion of the, all as set forth in the table below.

With respect to each completed phase, THE CITY will pay no more than the total amount budgeted for that phase. The ARCHITECT is responsible for any fees in excess of the amount budgeted for that phase.

All invoices that the ARCHITECT submits for payment for services performed under this Agreement must conform to THE CITY's Form of Invoice as it may be modified during the course of the Project. The invoices must identify each phase for which payment is being sought, the percentage of completion of each phase so identified, and the total amount being requested for each phase so identified.

PHASE	PERCENTAGE OF FEE (rounded to nearest whole number)
Program Validation Phase	23%
Conceptual Design Phase	77%
TOTAL:	100.00%

7.5.3 Payment to the ARCHITECT during the Construction Administration Phase will be made monthly in relation to the percentage of completion of the work by the CM/GC. Along with its invoice, the ARCHITECT shall furnish copies of invoices submitted by subconsultants to substantiate reimbursement. The ARCHITECT's invoices must identify the percentage and cost of the work completed by all subconsultants, on the Fee Schedule (Attachment 2).

THE CITY will retain 10% of the amount of each invoice submitted by the ARCHITECT for Basic Services, including costs of subconsultants, pending satisfactory completion by the ARCHITECT of all work in the phase, and approval by THE CITY; Retention shall be released following the Owner's end of phase review and comment period and the Owner's

acceptance of the work for that phase. There shall be no retention on Reimbursable Expenses or Additional Services.

- 7.5.4** The ARCHITECT shall receive compensation only for those Additional Services authorized in writing by THE CITY in advance of the ARCHITECT's performance of the work, and in accordance with the rate schedule found in the Hourly Rate Schedule, Attachment 6, which includes the subconsultants' fee schedules.
- 7.5.5** The hourly rates on Attachment 6 shall be the standard rates given to any client of the ARCHITECT under similar circumstances.
- 7.5.6** With respect to any hourly work (e.g., Additional Services), reimbursable fees paid will be based on the actual hours charged, subject to any specified maximums. For hourly work, the ARCHITECT shall submit copies of certified timesheet records for all persons performing the work, and shall indicate the number of hours worked by period, and the approved billing rate.
- 7.5.7** Alternatively, a lump sum or guaranteed maximum fee for Additional Services may be authorized by THE CITY prior to commencement of work on these services, in which case these services shall be invoiced according to the terms of Article 7.5.2 above.
- 7.5.8** There shall be no mark-ups by the ARCHITECT for the cost of professional consultants retained by the ARCHITECT in the performance of its Basic Services. Allowable mark-ups for professional consultants retained for approved Additional Services shall be 1.1 x the subconsultant's bill to the ARCHITECT. No markups of any kind shall be allowed for any reimbursable expenses, whether invoiced by or to the ARCHITECT.
- 7.5.9** If during the course of construction, THE CITY determines at its sole and reasonable discretion that modifications to Design Development Documents or Construction Documents are required due to errors or omissions on the part of the ARCHITECT or its subconsultants, the ARCHITECT shall not be compensated for the cost of developing, preparing or reproducing the necessary revised drawings and specifications to correct those errors or omissions nor shall the ARCHITECT be compensated in its fee for the cost of any related extra design work. The ARCHITECT's rights for such payment shall be reserved until Project completion.
- 7.5.10** No deductions shall be made from the ARCHITECT's compensation on account of penalty, liquidated damages or other sums withheld from payments to the CM/GC or on account of the cost of changes in the work other than those for which the ARCHITECT is responsible based on its negligent errors or omissions.
- 7.5.11** Payments of Reimbursable Expenses shall be made monthly upon presentation by the ARCHITECT of an itemized statement of actual

expenses incurred with a detailed cost breakout and supporting invoices and copies of original receipts.

7.5.12 The Reimbursable Expense allowances set forth in Article 7.4 above provide only for costs which are defined as part of Basic or Additional Services Fees and are not subject to the LBE participation requirements of THE CITY.

7.5.13 Subject to the provisions of Article 11 below, if the Project is suspended for more than a total of ninety days (90) days or abandoned in whole or in part, except for time for the bond initiative, or the Project extends more than 30 days beyond the anticipated conclusion of the Conceptual Design phase, the ARCHITECT shall be compensated for services satisfactorily performed prior to receipt of written notice from THE CITY of such suspension or abandonment. If the Project is resumed after being suspended for more than 90 days, the ARCHITECT's compensation for the remainder of the services to be provided for the Project shall be subject to renegotiation.

7.6 WITHHOLDING OF PAYMENT

THE CITY may withhold payment from the ARCHITECT for work not satisfactorily completed or delivered as required by this Agreement or for amounts incurred by THE CITY as a result of the ARCHITECT's negligent errors or omissions. Payments for other amounts due on the same or other invoice shall not be unreasonably withheld or delayed. THE CITY shall endeavor to issue payments of undisputed amounts to the ARCHITECT within thirty (30) days following the receipt of complete and accurate invoices.

7.7 DISALLOWANCE

In the event the ARCHITECT claims or receives payment from THE CITY for a service, including progress payment, reimbursement for which is later disallowed by THE CITY, the ARCHITECT shall promptly refund the disallowed amount to THE CITY upon THE CITY's request. At its option, THE CITY may offset the amount disallowed from any payment due or to become due to the ARCHITECT.

7.8 PAYMENT DOES NOT IMPLY ACCEPTANCE OF WORK

The issuance of any progress payment by THE CITY, or the receipt thereof by the ARCHITECT, shall in no way lessen the liability of the ARCHITECT to correct unsatisfactory work although the unsatisfactory nature of such work may or may not have been apparent or detected at the time such payment was made.

8. THE CITY'S RESPONSIBILITIES

THE CITY shall:

8.1 APPROVALS

Obtain approvals from Appropriate Authorities, as defined herein, with the assistance of the ARCHITECT and promptly render decisions when it is within THE CITY's power to do so.

8.2 BIDS

Advertise and receive bids for the construction of the Project when THE CITY funds are utilized. When public funds are used for trade package bidding, the CITY will bid the packages and will assign them to the CM/GC which would then become wholly part of the CM/GC's trade subcontractors.

8.3 BUILDING INSPECTORS

Provide Building Inspectors for the construction phase.

8.4 DEFICIENCIES

Promptly notify the ARCHITECT in writing of apparent deficiencies in materials or workmanship discovered within twelve (12) months from submission of the final punchlist.

8.5 FEES

Pay all fees required to secure building permits, utilities and LEED registration and certification.

8.6 HAZARDOUS SUBSTANCES

THE CITY acknowledges that the discovery, presence, handling or removal of asbestos, asbestos products, polychlorinated biphenyl (PCB) or other hazardous substances which may presently exist at the job site is outside of the ARCHITECT's expertise and is not included in the scope of work the ARCHITECT is to perform nor included in the ARCHITECT's insurance. THE CITY therefore agrees to hire one or more expert consultants in this field to deal with these problems if the Project involves such materials. Even though the Construction Documents may incorporate the work of such other consultants, the ARCHITECT shall not be responsible for the discovery, presence, handling or removal of such materials.

8.7 NON-AFFIXED FURNITURE AND EQUIPMENT

THE CITY will be responsible for purchase and coordination with successful vendors for delivery, assembly, storage and placement of loose furniture, furnishings and equipment not included within the Construction Documents and Contract Documents prepared by the ARCHITECT.

8.8 PROJECT DATA

Furnish the following Project data to the ARCHITECT:

- (1) Civil Engineering Data: Furnish an Existing Site Utilities Plan including water, gas, drainage, sewer, power, telecommunications and site

drainage. Data shall be provided in hard copy and electronic (CADD) file formats.

- (2) Mapping and Surveying Data: Furnish reproducible drawings including a site plan of the Project site that are clear and legible, and accurate within accepted industry standards. Furnish relevant and necessary survey information, including the following: topographic map with utility locations (surface features), utility tunnel alignment locations (including height and width), building locations, and site boundaries to be shown based on available legal description. Data shall be provided in hard copy and electronic (CADD) file formats. Except that, if the ARCHITECT discovers an error or discrepancy in the mapping and survey data provided by THE CITY, it is the ARCHITECT's responsibility to advise THE CITY in a timely manner of such error or discrepancy and to request THE CITY perform and provide additional field survey verification.
- (3) Geotechnical Data: Furnish soil and geological reports and data, including test logs; allowable soil bearing pressures under dead, live and short-term lateral loading; retaining wall design criteria; soil profile type; and near source factors per the applicable building codes; and other data reasonably necessary to define subsoil conditions. Furnish special testing and inspection services as required for the aforementioned items.
- (4) Electrical Engineering Data: Furnish data regarding capacity, location and routing of existing building systems: electrical power and distribution, fire / life safety, communications, and security.
- (5) Mechanical Engineering Data: Furnish data concerning water supply, drainage, sewage collection and disposal.
- (6) The services, information, surveys, and reports required by Section 9.8 shall be furnished at THE CITY's expense, and ARCHITECT shall be entitled to rely upon their accuracy and completeness, except that ARCHITECT may not rely upon and must question in writing to THE CITY any information that appears incorrect based upon the ARCHITECT's experience with or knowledge of the Project.

8.9 PROJECT MANAGER AND PROGRAM DIRECTOR

Designate a Program Director and a Project Manager who shall coordinate his/her duties with the ARCHITECT as provided herein.

8.10 RESPOND TO SUBMITTALS

During each phase identified below, review and respond, in writing, to all submittals within fifteen (15) working days from receipt of the complete submittal:

- (1) Program Validation
- (2) Conceptual Design Phase

8.11 TESTS AND INSPECTIONS

Furnish tests and inspections as required during the construction phase. Furnish Commissioning or Enhanced Commissioning during construction.

9 DOCUMENTS AND CITY OWNERSHIP OF DOCUMENTS

9.1 CITY OWNERSHIP OF DOCUMENTS

- (a) All designs, drawing sets, specifications, documents, presentation models and drawings, electronic data and other work products created by the ARCHITECT and the subconsultants for this Project ("Instruments of Service"), and all copyrights in them shall become the property of THE CITY immediately upon creation of such Instruments of Services. As part of Basic Services, the ARCHITECT shall provide THE CITY with one licensed copy of software, paid for by THE CITY that will allow THE CITY to view the electronic BIM/Revit/CADD files prepared by the ARCHITECT or its subconsultants. Additionally, the ARCHITECT shall provide technical specifications for any computer hardware required to use the provided software and files.
- (b) All presentation drawings, models, films and videos, simulations or other presentation materials shall be and remain the property of THE CITY.
- (c) Should THE CITY or any other person, firm or legal entity under the authority and control of THE CITY, without the ARCHITECT's participation, use, reuse, or modify the ARCHITECT's drawings, specifications or other documents prepared under this Agreement, THE CITY agrees to notify the ARCHITECT of the intended use. The ARCHITECT shall not be responsible for any loss, costs or expenses incurred by any party arising out of such use, reuse or modification of the ARCHITECT's drawings, specifications, and other documents.
- (d) THE CITY acknowledges that in using magnetic data may be lost in translation from one format to another, or that electronic data may be altered, whether inadvertently or otherwise, and that there is a risk that errors or omissions may appear in any subsequent output as a result of software/hardware failure.

The ARCHITECT and the subconsultants shall defend (subject to THE CITY's right of consultation prior to selection of counsel), indemnify, and hold harmless THE CITY from any claim that the Instruments of Service infringe the copyright or similar rights of another. The ARCHITECT and the subconsultants shall retain ownership of their original sketches, study models and study materials made for their own purposes (i.e., creative development and internal discussion).

9.2 USE BY THE ARCHITECT OR THE ARCHITECT'S CONSULTANTS

The ARCHITECT and the subconsultants may retain copies of their Instruments of Service, such copies made at their expense. The ARCHITECT and the subconsultants may use the Instruments of Service for their own marketing purposes without the express written consent of THE CITY if the marketing materials have been previously approved by THE CITY and they have not been altered in any way since approval other than minor changes in format,

organization or wording. Any other publication or use shall require the prior written approval of THE CITY. The ARCHITECT and the subconsultants may use architectural/engineering details contained in the Instruments of Service for other projects without the express written consent of THE CITY only to the extent such use would not infringe on THE CITY's copyright in the overall form of the Project as well as the arrangement and composition of spaces and elements in the design, as expressed in the Instruments of Service or any of them.

9.3 USE BY THE CITY

THE CITY may reproduce, distribute, and make any use of the Instruments of Service, whether or not the Project is executed, without further notice or compensation to the ARCHITECT or subconsultants, provided that such Instruments of Service shall not be used on other unrelated projects. If the ARCHITECT is not terminated for fault, the ARCHITECT and the subconsultants shall not be liable for any claim to the extent arising out of the use by or through THE CITY of the Instruments of Service, without the ARCHITECT's professional involvement.

9.4 COVENANT NOT TO SELL

THE CITY promises and agrees to refrain from selling, donating, or exchanging the Instruments of Service for use on any other project or building. However, THE CITY may sell, assign or otherwise appropriate any right, title or interest in the Instruments of Service for any purpose relative to the Traffic Company and Forensic Services Division Facility without notice to the ARCHITECT or the subconsultants. In such event, THE CITY shall make a good faith effort to include this covenant as a term of any such transaction.

10 TERMINATION OF AGREEMENT

10.1 BY EITHER PARTY FOR FAULT

Either party may terminate this Agreement, in whole or in part, in writing, if the other party substantially fails to fulfill its obligations under this Agreement through no fault of the terminating party. However, no such termination may be effected unless the other party is given (a) not fewer than ten (10) calendar days written notice (delivery by hand delivery or certified mail) of its intent to terminate; and (b) an opportunity for consultation and to rectify failures of obligations within thirty (30) days of consultation with the terminating party before termination becomes effective.

10.2 BY THE CITY FOR CONVENIENCE

THE CITY may, in its sole discretion, terminate this Agreement, in whole or in part, in writing, for its convenience (such as for legal or financial reasons, major changes in the work or program requirements) and without cause. In such event, THE CITY shall provide the ARCHITECT with (a) thirty (30) calendar days written notice (delivered by hand delivery or certified mail) of THE CITY's intent to

terminate; and (b) an opportunity for consultation with THE CITY before termination becomes effective.

10.3 PROCEDURE UPON TERMINATION

10.3.1 If THE CITY terminates this Agreement for convenience, THE CITY shall acknowledge additional costs the ARCHITECT has incurred in the performance of the Agreement, the termination of which was due to no fault of the ARCHITECT, and shall authorize an equitable adjustment to the Agreement price as follows: The equitable adjustment in price shall include a reasonable profit for services or other work performed prior to the effective date of termination. The equitable adjustment shall provide for payment to the ARCHITECT for services rendered and expenses incurred before the termination in addition to termination settlement costs the ARCHITECT reasonably incurs relating to commitments which had become firm before the termination. ARCHITECT shall submit a final invoice for services actually performed and/or reimbursable expenses incurred, plus any markup as allowed under the Agreement; no amount shall be allowed for anticipated profit on unperformed or unauthorized services or charges.

10.3.2 In the event that THE CITY terminates the Agreement for fault, THE CITY may reduce any amount earned or otherwise due the ARCHITECT by the sum of any additional costs THE CITY has or will incur as a result of the Consultant's default.

10.3.3 Upon receipt of any notice for termination, the ARCHITECT shall (a) promptly discontinue all services affected (unless the notice directs otherwise); and (b) deliver or otherwise make available to THE CITY all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as the ARCHITECT and its consultants may have accumulated in performing this Agreement, whether completed or in progress.

10.3.4 Upon termination of this Agreement, THE CITY may take over the work and prosecute the same to completion by agreement with another party, with THE CITY resources, or otherwise. THE CITY may be free to engage another architect or to utilize such plans, drawings, specifications and other work prepared by the ARCHITECT for the Project. Such replacement architect shall expressly assume the responsibility of "ARCHITECT of Record," and shall be responsible for its own negligent errors and omissions on such plans, drawings, specifications and other work. If the termination is for fault, the ARCHITECT shall remain liable for any damages or additional costs incurred by THE CITY as a result of completing or correcting the ARCHITECT's plans and/or specifications.

11 INSURANCE COVERAGES

- 11.1** Without in any way limiting Contractor's liability pursuant to the "Indemnification" section of this Agreement, ARCHITECT must maintain in force, during the full term of the Agreement, insurance in the following amounts and coverages:
- a. Workers' compensation, in statutory amounts, with employers' liability limits not less than \$1,000,000 each accident for bodily injury or disease; and,
 - b. Commercial General Liability Insurance with limits not less than \$1,000,000 each occurrence / \$2,000,000 general aggregate combined single limit for Bodily Injury and Property Damage, including Contractual Liability, Personal Injury, Products and Completed Operations; and,
 - c. Commercial Automobile Liability Insurance with limits not less than \$1,000,000 each occurrence Combined Single Limit for Bodily Injury and Property Damage, including Owned, Non-Owned and Hired auto coverage, as applicable, and,
 - d. Professional Liability insurance with limits of \$10,000,000 each claim/aggregate with respect to negligent acts, errors or omission in connection with professional services to be provided under this Agreement.
- 11.2** Commercial General Liability (CGL) and Commercial Automobile Liability insurance policies must be endorsed to provide:
- a. Name as Additional Insured the CITY and County of San Francisco, its Officers, Agents, and Employees.
 - b. That such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that insurance applies separately to each insured against whom claim is made or suit is brought.
- 11.3** Regarding Workers' Compensation, ARCHITECT hereby agrees to waive subrogation which any insurer of ARCHITECT may acquire from ARCHITECT by virtue of the payment of any loss. ARCHITECT agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the CITY for all work performed by the ARCHITECT, its employees, agents and subconsultants.
- 11.4** All policies shall provide thirty (30) days' advance written notice to THE CITY of reduction or nonrenewal of coverages or cancellation of coverages for any reason. Notices shall be sent to THE CITY address in the "Notices" section (Article 23).
- 11.5** Should any of the required insurance be provided under a claims-made form, the ARCHITECT shall maintain such coverage continuously throughout the term of this Agreement and, without lapse, for a period of three years beyond the expiration of this Agreement, to the effect that, should occurrences during the

contract term give rise to claims made after expiration of the Agreement, such claims shall be covered by such claims-made policies.

- 11.6** Should any of the required insurance (except for Professional Liability) be provided under a form of coverage that includes a general annual aggregate limit or provides that claims investigation or legal defense costs be included in such general annual aggregate limit, such general annual aggregate limit shall be double the occurrence of claims limits specified above.
- 11.7** Should any required insurance lapse during the term of this Agreement, requests for payments originating after such lapse shall not be processed until THE CITY receives satisfactory evidence of reinstated coverage as required by this Agreement, effective as of the lapse date. If insurance is not reinstated, THE CITY may, at its sole option, terminate this Agreement effective on the date of such lapse of insurance.
- 11.8** Before commencing any operations under this Agreement, the ARCHITECT shall furnish to THE CITY certificates of insurance and additional insured policy endorsements from insurers with ratings comparable to A-, VIII or higher that are authorized to do business in the State of California, that are satisfactory to THE CITY in form evidencing all coverages set forth above and furnish complete endorsements with insurers with ratings comparable to A-, VIII or higher, that are authorized to do business in the State of California, and that are satisfactory to CITY, in form evidencing all coverages set forth above. Failure to maintain insurance shall constitute a material breach of this Agreement.
- 11.9** Approval of the insurance by THE CITY shall not relieve or decrease the liability of the ARCHITECT hereunder.
- 11.10** If a subcontractor or subconsultant will be used to complete any portion of this Agreement, the ARCHITECT will ensure that the subcontractor or subconsultant provides all necessary insurance and shall name the CITY and County of San Francisco, its officers, agents and employees and the ARCHITECT listed as additional insureds.

12 INDEMNIFICATION

12.1 GENERAL INDEMNITY

To the fullest extent permitted by law the ARCHITECT shall assume the defense of (with legal counsel subject to approval of THE CITY), indemnify, defend and save harmless THE CITY, and its boards, commissions, officers, and employees (collectively "Indemnitees"), from any and all claims, loss, cost, damage, injury (including, without limitation, injury to or death of an employee of the ARCHITECT or its subconsultants), expense and liability of every kind, nature, and description (including, without limitation, incidental and consequential damages, court costs, reasonable attorney's fees and costs of investigation), that arise out of, pertain to, or relate to, directly or indirectly, in whole or in part, the negligence, recklessness, or willful misconduct of the ARCHITECT and/or subcontractors or subconsultants to the ARCHITECT, anyone directly or

indirectly employed by them, or anyone that they control (collectively, "Liabilities"), subject to the provisions set forth herein.

12.2 LIMITATIONS

No insurance policy covering the ARCHITECT's performance under this Agreement shall operate to limit the ARCHITECT's Liabilities under this provision. Nor shall the amount of insurance coverage operate to limit the extent of such Liabilities. The ARCHITECT assumes no liability whatsoever for the sole negligence, active negligence, or willful misconduct of any Indemnitee or the contractors of any Indemnitee.

12.3 COPYRIGHT INFRINGEMENT

The ARCHITECT shall also indemnify, defend and hold harmless all Indemnitees from all suits or claims for infringement of the patent rights, copyright, trade secret, trade name, trademark, service mark, or any other proprietary right of any person or persons in consequence of the use by THE CITY and its respective past, present and future directors, boards, commissions, officers, employees or agents of articles or services to be supplied in the performance of the ARCHITECT's services under this Agreement. Infringement of patent rights, copyrights, or other proprietary rights in the performance of this Agreement, if not the basis for indemnification under the law, shall be considered a material breach of contract.

13 MODIFICATIONS

The Agreement may not be modified, nor may compliance with any of its terms be waived, except by written instrument executed and approved in the same manner as this Agreement. The ARCHITECT shall do no work in addition to or beyond the scope of the services set forth and contemplated by this Agreement unless and until it is authorized to do so by the issuance to it of a "Modification of Contract," duly executed and bearing THE CITY's certification that funds are available for additional work.

Contract Modifications (Mods) will be processed and approved electronically utilizing the Microsoft SharePoint® software. Participating ARCHITECTs and consultants agree to execute Mods electronically after, 1) executing a Confidentiality Agreement provided by the CITY on behalf of its company, 2) having all authorized company representatives that will execute Mods complete training on using this electronic approval system (training to be provided by the CITY at no expense to ARCHITECTs and consultants), and 3) submitting a completed executed User Access Setup form for each company representative using the electronic Modification approval system. ARCHITECT and consultants shall also agree to immediately notify the CITY of any changes to authorized users of this Mod approval system.

14 INDEPENDENT CONTRACTOR

The ARCHITECT or any agent or employee of the ARCHITECT shall be deemed at all times to be an independent contractor and is wholly responsible for the manner in which it performs the services and work requested by THE CITY under this Agreement. The ARCHITECT or any agent or employee of ARCHITECT shall not have employee status with THE CITY, nor be entitled to participate in any plans, arrangements, or distributions by THE CITY pertaining to or in connection with any retirement, health or other benefits that THE CITY may offer its employees. The ARCHITECT or any agent or employee of the ARCHITECT is liable for the acts and omissions of itself, its employees and its agents. The ARCHITECT shall be responsible for all obligations and payments, whether imposed by federal, state or local law, including, but not limited to, FICA, income tax withholdings, unemployment compensation, insurance, and other similar responsibilities related to the ARCHITECT's performing services and work, or any agent or employee of the ARCHITECT providing same. Nothing in this Agreement shall be construed as creating an employment or agency relationship between THE CITY and the ARCHITECT or any agent or employee of the ARCHITECT.

Should THE CITY, in its discretion, or a relevant taxing authority such as the Internal Revenue Service or the State Employment Development Division, or both, determine that the ARCHITECT is an employee for purposes of collection of any employment taxes, the amounts payable under this Agreement shall be reduced by amounts equal to both the employee and employer portions of the tax due (and offsetting any credits for amounts already paid by the ARCHITECT which can be applied against this liability). THE CITY shall then forward those amounts to the relevant taxing authority.

Should a relevant taxing authority determine a liability for past services performed by the ARCHITECT for THE CITY, upon notification of such fact by THE CITY, the ARCHITECT shall promptly remit such amount due or arrange with THE CITY to have the amount due withheld from future payments to the ARCHITECT under this Agreement (again, offsetting any amounts already paid by the ARCHITECT which can be applied as a credit against such liability).

A determination of employment status pursuant to the preceding two paragraphs shall be solely for the purposes of the particular tax in question, and for all other purposes of this Agreement, the ARCHITECT shall not be considered an employee of THE CITY. Notwithstanding the foregoing, should any court, arbitrator, or administrative authority determine that the ARCHITECT is an employee for any other purpose, then the ARCHITECT agrees to a reduction in THE CITY's financial liability so that THE CITY's total expenses under this Agreement are not greater than they would have been had the court, arbitrator, or administrative authority determined that the ARCHITECT was not an employee.

15 AUDIT AND INSPECTION OF RECORDS

The ARCHITECT agrees to maintain and make available to THE CITY accurate books and accounting records relative to all of its activities under this Agreement. The ARCHITECT will permit THE CITY to audit, examine and make excerpts and transcripts from such books and records and to make audits of all invoices, materials, payrolls, records or personnel and other data related to all of the services required under this Agreement, including basic services, reimbursable expenses, and additional services provided on an hourly basis, whether funded in whole or in part under this Agreement.

The ARCHITECT shall maintain such data and records in an accessible location and condition for a Period of not less than five (5) years after final payment under this Agreement or until after a final audit has been resolved, whichever is later.

A clause similar to this shall be included in all sub-agreements between the ARCHITECT and subconsultants giving THE CITY the same rights against the subconsultants. Canceled checks of payments to subconsultants must be maintained by the ARCHITECT and made available to THE CITY upon request.

THE CITY may initiate an audit under this Agreement by written notice, upon not fewer than seven (7) calendar days.

16 SUBCONSULTANTS

The ARCHITECT is permitted to subcontract portions of the services to be performed under this Agreement only after the prior written approval by THE CITY. The ARCHITECT shall be responsible for its subconsultants or subcontractors throughout the course of the work to be performed under this Agreement. Execution of this Agreement shall constitute approval of the firms and individuals listed on Attachment 7 as subconsultants and/or subcontractors on this Project.

Substitutions may be made for any consultants listed on Attachment 7 for: (1) failure to perform to a reasonable level of professional competence, (2) inability to provide sufficient staff to meet the Project requirements and schedules, or (3) unwillingness to negotiate reasonable contract terms or compensation.

THE CITY reserves the right to request specific consultants with specific expertise to be added to the team to provide Basic Services or Additional Services, if THE CITY determines that specific expertise is lacking in the Project team or if THE CITY believes it is in THE CITY's best interest to assign a particular subconsultant to the ARCHITECT.

Substitutions of LBE firms shall be made on equal basis upon written request and recommendation by the ARCHITECT and written approval by THE CITY. The ARCHITECT shall hold harmless, indemnify and defend THE CITY from any claim that may arise out of any approval of substitutions.

17 TAXES

All taxes levied upon this Agreement, the transaction, or the services delivered pursuant hereto, shall be borne by the ARCHITECT. The ARCHITECT is to provide Business Tax Registration Certification in order to certify this contract.

18 PROPRIETARY INFORMATION OF THE CITY

The ARCHITECT understands and agrees that, in the performance of the work or services under this Agreement or in contemplation thereof, the ARCHITECT may have access to private or confidential information which may be owned or controlled by THE CITY and that such information may contain proprietary details, the disclosure of which to third parties would be damaging to THE CITY. The ARCHITECT agrees that all such information disclosed by THE CITY to the ARCHITECT shall be held in confidence and used only in the performance of the Agreement. The ARCHITECT shall exercise the same standard of care to protect such information as is used to protect its own proprietary data.

19 ADMINISTRATIVE REMEDY FOR AGREEMENT INTERPRETATION

The parties shall attempt in good faith to resolve by negotiation any disagreements between them concerning the interpretation of this Agreement. If a dispute persists, the ARCHITECT shall continue to perform services in accordance with THE CITY's interpretation of the Agreement, provided that if the dispute is resolved in the ARCHITECT's favor, the ARCHITECT shall be compensated for extra costs incurred in complying with THE CITY's interpretation but not legal fees and costs incurred in resolving the dispute.

Government Code Claims. No suit for money or damages may be brought against the CITY until a written claim therefor has been presented to and rejected by the CITY in conformity with the provisions of San Francisco Administrative Code Chapter 10 and California Government Code Section 900, et seq. Nothing set forth in this Agreement shall operate to toll, waive or excuse ARCHITECT's compliance with the Government Code Claim requirements set forth in Administrative Code Chapter 10 and Government Code Section 900, et seq.

19.1.1 Default; Remedies

(a) Each of the following shall constitute an event of default ("Event of Default") under this Agreement:

(i) ARCHITECT fails or refuses to perform or observe any term, covenant or condition contained in any of the following Sections of this Agreement:

- | | |
|-----------------------------|--------------------------------|
| 34. Submitting False Claims | 47. Drug-free workplace policy |
| 17. Taxes | 31. Compliance with laws |
| 11. Insurance | 28. Assignment |

18. Proprietary information of the CITY
49. Nondisclosure of private information

(ii) ARCHITECT fails or refuses to perform or observe any other term, covenant or condition contained in this Agreement, and such default continues for a period of ten days after written notice thereof from CITY to ARCHITECT.

(iii) ARCHITECT (a) is generally not paying its debts as they become due, (b) files, or consents by answer or otherwise to the filing against of, a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction, (c) makes an assignment for the benefit of its creditors, (d) consents to the appointment of a custodian, receiver, trustee or other officer with similar powers of ARCHITECT or of any substantial part of ARCHITECT's property or (e) takes action for the purpose of any of the foregoing.

(iv) A court or government authority enters an order (a) appointing a custodian, receiver, trustee or other officer with similar powers with respect to ARCHITECT or with respect to any substantial part of ARCHITECT's property, (b) constituting an order for relief or approving a petition for relief or reorganization or arrangement or any other petition in bankruptcy or for liquidation or to take advantage of any bankruptcy, insolvency or other debtors' relief law of any jurisdiction or (c) ordering the dissolution, winding-up or liquidation of ARCHITECT.

(b) On and after any Event of Default, CITY shall have the right to exercise its legal and equitable remedies, including, without limitation, the right to terminate this Agreement or to seek specific performance of all or any part of this Agreement. In addition, CITY shall have the right (but no obligation) to cure (or cause to be cured) on behalf of ARCHITECT any Event of Default; ARCHITECT shall pay to CITY on demand all costs and expenses incurred by CITY in effecting such cure, with interest thereon from the date of incurrence at the maximum rate then permitted by law. CITY shall have the right to offset from any amounts due to ARCHITECT under this Agreement or any other agreement between CITY and ARCHITECT all damages, losses, costs or expenses incurred by CITY as a result of such Event of Default and any liquidated damages due from ARCHITECT pursuant to the terms of this Agreement or any other agreement.

(c) All remedies provided for in this Agreement may be exercised individually or in combination with any other remedy available hereunder or under applicable laws, rules and regulations. The exercise of any remedy shall not preclude or in any way be deemed to waive any other remedy.

20 SEVERABILITY

Should the application of any provision of this Agreement to any particular facts or circumstances be found by a court of competent jurisdiction to be invalid or unenforceable, then (a) the validity of other provisions of this Agreement shall not be affected or impaired thereby, and (b) such provision shall be enforced to the maximum extent possible so as to effect the intent of the parties and shall be reformed by the CITY without further action by the parties to the extent necessary to make such provision valid and enforceable.

21 ENTIRE AGREEMENT

This Agreement sets forth the entire agreement between the parties, and supersedes all other oral or written provisions, including any prior Interim Agreement for professional services related to this Project. The terms of any prior Interim Agreement as well as any modifications to those terms are incorporated by reference into this Agreement to the extent they do not conflict with this Agreement. In the event of any conflict between the two, the terms of this Agreement shall prevail. This Agreement may not be modified, nor may compliance with any of its terms be waived, except by written instrument executed and approved in the same manner as this Agreement.

22 NOTICES

Unless otherwise indicated elsewhere in this Agreement, all written communications sent by the parties may be by U.S. mail, e-mail or by fax, and shall be addressed as follows:

To CITY: San Francisco Public Works
Division of Contract Administration
1155 Market Street, 4th Floor
San Francisco, CA 94103

To ARCHITECT: Hellmuth, Obata & Kassabaum, Inc.
One Bush Street, Suite 200
San Francisco, CA 94104

Any notice of default must be sent by registered mail.

From time to time, the parties may designate new address information by notice in writing, delivered to the other Party.

The delivery to the ARCHITECT at the legal address listed above, as it may be amended upon written notice, or the depositing in any post office or post office box regularly maintained by the United States Postal Service in a postage paid wrapper directed to the ARCHITECT at such address, of any drawing, notice,

letter or other communication shall be deemed legal and sufficient service thereof upon the ARCHITECT.

23 GUARANTEED MAXIMUM COSTS

THE CITY's obligation hereunder shall not at any time exceed the amount certified by the Controller for the purpose and period stated in such certification.

Except as may be provided by laws governing emergency procedures, officers and employees of THE CITY are not authorized to request, and THE CITY is not required to reimburse the ARCHITECT for, commodities or services beyond the agreed upon contract scope set forth in this Agreement unless the changed scope is authorized by amendment and approved as required by law.

Officers and employees of THE CITY are not authorized to offer or promise, nor is THE CITY required to honor, any offered or promised additional funding in excess of the maximum amount of funding for which the contract is certified without certification of the additional amount by the Controller.

The Controller is not authorized to make payments on any contract for which funds have not been certified as available in the budget or by supplemental appropriation.

24 LIABILITY OF THE CITY

THE CITY's payment obligations under this Agreement shall be limited to the payment of the compensation provided for in section 8 of this Agreement. Notwithstanding any other provision of this Agreement, in no event shall THE CITY be liable, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including but not limited to, lost profits, arising out of or in connection with this Agreement or the services performed in connection with this Agreement.

25 QUALIFIED PERSONNEL

Work under this Agreement shall be performed only by qualified and competent personnel under the supervision of and in the employment of the ARCHITECT or its subconsultants. The ARCHITECT's Key Personnel and subconsultants shall all be licensed by the State of California in their respective professional fields as Architects and Engineers. The ARCHITECT will comply with THE CITY's reasonable requests regarding assignment and/or removal of personnel, but all personnel including those assigned at THE CITY's request, shall be supervised by the ARCHITECT.

26 RESPONSIBILITY FOR EQUIPMENT

THE CITY shall not be responsible for any damage to persons or property as a result of the use, misuse or failure of any equipment used by the ARCHITECT, or

by any of its employees, even though such equipment is furnished, rented or loaned to the ARCHITECT by THE CITY. The acceptance or use of such equipment by the ARCHITECT or any of its employees shall be construed to mean that the ARCHITECT accepts full responsibility for and agrees to exonerate, indemnify, defend and save harmless THE CITY, from and against any and all claims for any damage or injury of any type arising from the use, misuse or failure of such equipment, whether such damage be to the ARCHITECT, its employees, THE CITY employees or third parties, or to property belonging to any of the above.

27 CITY OWNERSHIP OF EQUIPMENT

Any equipment vehicles, computer programs (software licenses and the CITY media), and the like, purchased by the ARCHITECT or its subconsultants in connection with services to be performed under this Agreement and reimbursed by THE CITY, shall become property of and will be transmitted to THE CITY at the conclusion of the ARCHITECT's services under the Agreement.

28 ASSIGNMENT

The services to be performed by the ARCHITECT are personal in character and neither this Agreement nor any duties or obligations hereunder shall be assigned or delegated by the ARCHITECT unless approved by written instrument executed and approved in the same manner as this Agreement. The ARCHITECT, the partners of any Joint Venture or Association that the ARCHITECT may establish for the Project, or any of the ARCHITECT's subconsultants may incorporate or change their business names, provided, such incorporation or change does not decrease their obligations or liabilities under this Agreement.

29 SUCCESSORS AND ASSIGNS

This Agreement shall be binding upon THE CITY and the ARCHITECT and their respective successors and assigns. Neither the performance of this Agreement nor any part thereof, nor any funds due or to become due thereunder may be assigned by the ARCHITECT without the prior written consent and approval of THE CITY.

30 NON-WAIVER OF RIGHTS

The omission by either party at any time to enforce any default or right reserved to it, or to require performance of any of the terms, covenants, or provisions hereof by the other party at the time designated, shall not be a waiver of any such default or right to which the party is entitled, nor shall it in any way affect the right of the party to enforce such provisions thereafter.

31 COMPLIANCE WITH LAWS

The ARCHITECT shall keep itself fully informed of THE CITY's Charter, codes, ordinances, regulations, and policies, and of all state, and federal laws in any manner affecting the performance of this Agreement, and must at all times comply with such local codes, ordinances, regulations, policies and all applicable laws as they may be amended from time to time.

32 COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT

The ARCHITECT acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through an ARCHITECT, must be accessible to the disabled public. The ARCHITECT shall provide the services specified in this Agreement and shall prepare all designs for the Project in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. In addition, the ARCHITECT agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agree that any violation of this prohibition on the part of the ARCHITECT, its employees, agents or assigns will constitute a material breach of this Agreement.

33 AGREEMENT MADE IN CALIFORNIA; VENUE

The formation, interpretation and performance of this Agreement shall be governed by the laws of the State of California, without regard to its conflict of laws provisions. Venue for all litigation arising out of or related to this Agreement, whether relating to formation, interpretation, performance, or anything else, shall be in a court of competent jurisdiction in County of San Francisco, California, and the parties hereby agree to the exclusive jurisdiction of such court.

34 SUBMITTING FALSE CLAIMS

Pursuant to San Francisco Administrative Code Chapter 6, Article V, any contractor, subcontractor or consultant who submits a false claim shall be liable to THE CITY for statutory penalties as provided by law. A contractor, subcontractor or consultant will be deemed to have submitted a false claim to THE CITY if the contractor, subcontractor or consultant (a) knowingly presents or causes to be presented to an officer or employee of THE CITY a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by THE CITY; (c) conspires to defraud THE CITY by getting a false claim allowed or paid by THE CITY; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to pay or transmit money or property to THE CITY; (e) is a beneficiary of an inadvertent submission of a false claim to THE CITY, subsequently discovers the falsity of

the claim, and fails to disclose the false claim to THE CITY within a reasonable time after discovery of the false claim.

35 INCIDENTAL AND CONSEQUENTIAL DAMAGES

The ARCHITECT shall be responsible for incidental and consequential damages resulting from the ARCHITECT's negligent acts or omissions. Nothing in this Agreement shall constitute a waiver or limitation of any rights that THE CITY may have under applicable law.

36 OTHER AGREEMENTS BETWEEN THE CITY AND THE ARCHITECT

The ARCHITECT and its consultants shall provide a list of other Agreements with THE CITY that are in place at the time of execution of this Agreement.

37 WORKS FOR HIRE

If, in connection with services performed under this Agreement, the ARCHITECT or its subconsultants create artwork, copy, posters, billboards, photographs, videotapes, audio tapes, systems designs, software, reports, diagrams, surveys, source codes or any other original works of authorship, such works of authorship shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in such works are the property of THE CITY. If it is ever determined that any works created by the ARCHITECT or its subconsultants under this Agreement are not works for hire under U.S. law, the ARCHITECT hereby assigns all copyrights to such works to THE CITY, and agrees to provide any material and execute any documents necessary to effectuate such assignment. THE CITY hereby grants to the ARCHITECT a non-exclusive, non-transferable or assignable, royalty-free license to use such works solely for the purpose of marketing, i.e., to document the ARCHITECT's experience and capabilities, and to use or re-use details that are not unique to the design of the Project, which details would not otherwise be copyrightable under Title 17 of the United States Code. With respect to any other use or purpose, the ARCHITECT must obtain the prior express written permission of THE CITY. The requirements of this clause are only applicable in those situations where the requirements of section 10 do not apply.

38 CONSTRUCTION

All paragraph captions are for reference only and shall not be considered in construing this Agreement.

39 SOLE BENEFIT

This Agreement is intended for the sole benefit of THE CITY and the ARCHITECT, and is not intended to create any third-party rights or benefits;

provided, however, that notwithstanding the above, THE CITY is an express third party beneficiary of this Agreement, is anticipated to become an assignee of this Agreement upon conclusion of the Project, and has certain rights under this Agreement as set forth more particularly herein.

40 NON-DISCRIMINATION IN THE CITY CONTRACTS AND BENEFITS ORDINANCE

40.1 ARCHITECT SHALL NOT DISCRIMINATE

In the performance of this Agreement, the ARCHITECT agrees not to discriminate against any employee, THE CITY and/or CITY's employee working with it or any of its subcontractors, applicant for employment with it or its subcontractors, or against any person seeking accommodations, advantages, facilities, privileges, services, or membership in all business, social, or other establishments or organizations, on the basis of the fact or perception of a person's race, color, creed, religion, national origin, ancestry, age, height, weight, sex, sexual orientation, gender identity, domestic partner status, marital status, disability or Acquired Immune Deficiency Syndrome or HIV status (AIDS/HIV status), or association with members of such protected classes, or in retaliation for opposition to discrimination against such classes.

40.2 SUBCONTRACTS

The ARCHITECT shall incorporate by reference in all subcontracts the provisions of Sections 12B.2 (a), 12B.2(c)-(k), and 12C.3 of the San Francisco Administrative Code and shall require all subcontractors to comply with such provisions. The ARCHITECT's failure to comply with the obligations in this subsection shall constitute a material breach of this Agreement.

40.3 NON-DISCRIMINATION IN BENEFITS

The ARCHITECT will not as of the date of this Agreement and will not during the term of this Agreement, in any of its operations in San Francisco or where the work is being performed for THE CITY, or elsewhere within the United States, discriminate in the provision of bereavement leave, family the MEDICAL leave, health benefits, membership or membership discounts, moving expenses, pension and retirement benefits or travel benefits, as well as any benefits other than the benefits specified above, between employees with domestic partners and employees with spouses, and/or between the domestic partners and spouses of such employees, where the domestic partnership has been registered with a governmental entity pursuant to state or local law authorizing such registration, subject to the conditions set forth in Section 12B.2(b) of the San Francisco Administrative Code.

40.4 CONDITION TO CONTRACT

As a condition to this Agreement, the ARCHITECT shall execute the "Chapter 12B Declaration: Nondiscrimination in Contracts and Benefits" form (Form CMD-

12B-101) with supporting documentation and secure the approval of the form by the San Francisco Contract Monitoring Division.

40.5 INCORPORATION OF ADMINISTRATIVE CODE PROVISIONS BY REFERENCE

The provisions of Chapters 12B and 12C of the San Francisco Administrative Code are incorporated in this Section by reference and made a part of this Agreement as though fully set forth herein. The ARCHITECT shall comply fully with and be bound by all of the provisions that apply to this Agreement under such Chapters of the Administrative Code, including but not limited to the remedies in such Chapters. Without limiting the foregoing, the ARCHITECT understands that pursuant to Sections 12B.2(h) and 12C.3(g) of the San Francisco Administrative Code, a penalty of \$50 for each person for each calendar day during which such person was discriminated against in violation of the provisions of this Agreement may be assessed against the ARCHITECT and/or deducted from any payments due the ARCHITECT.

41 The LBE Ordinance

ARCHITECT, shall comply with all the requirements of the Local Business Enterprise and Non-Discrimination in Contracting Ordinance set forth in Chapter 14B of the San Francisco Administrative Code as it now exists or as it may be amended in the future (collectively the "LBE Ordinance"), provided such amendments do not materially increase ARCHITECT's obligations or liabilities, or materially diminish ARCHITECT's rights, under this Agreement. Such provisions of the LBE Ordinance are incorporated by reference and made a part of this Agreement as though fully set forth in this section. ARCHITECT's willful failure to comply with any applicable provisions of the LBE Ordinance is a material breach of ARCHITECT's obligations under this Agreement and shall entitle CITY, subject to any applicable notice and cure provisions set forth in this Agreement, to exercise any of the remedies provided for under this Agreement, under the LBE Ordinance or otherwise available at law or in equity, which remedies shall be cumulative unless this Agreement expressly provides that any remedy is exclusive. In addition, ARCHITECT shall comply fully with all other applicable local, state and federal laws prohibiting discrimination and requiring equal opportunity in contracting, including subcontracting.

41.1 Compliance and Enforcement. If ARCHITECT willfully fails to comply with any of the provisions of the LBE Ordinance, the rules and regulations implementing the LBE Ordinance, or the provisions of this Agreement pertaining to LBE participation, ARCHITECT shall be liable for liquidated damages in an amount equal to ARCHITECT's net profit on this Agreement, or 10% of the total amount of this Agreement, or \$1,000, whichever is greatest. The Director of the CITY's Contract Monitoring Division or any other public official authorized to enforce the LBE Ordinance (separately and collectively, the "Director of CMD") may also impose other sanctions against ARCHITECT authorized in the LBE Ordinance, including declaring the ARCHITECT to be irresponsible and ineligible to contract with the CITY for a period of up to five years or revocation of the ARCHITECT's LBE certification. The Director of CMD will determine the sanctions to be imposed, including the amount of liquidated damages, after investigation pursuant to Administrative Code §14B.17. By entering into this Agreement,

ARCHITECT acknowledges and agrees that any liquidated damages assessed by the Director of the CMD shall be payable to CITY upon demand. ARCHITECT further acknowledges and agrees that any liquidated damages assessed may be withheld from any monies due to ARCHITECT on any contract with CITY. ARCHITECT agrees to maintain records necessary for monitoring its compliance with the LBE Ordinance for a period of three years following termination or expiration of this Agreement, and shall make such records available for audit and inspection by the Director of CMD or the Controller upon request.

If the contract will involve the use of subcontracts, then include subparagraphs (2), (3) and (4). If the contract will not involve subcontracts, then omit (2), (3), and (4) and delete the subsection title above, "(1) Enforcement," but keep the text of the subparagraph.

- 41.2 Subcontracting Goals.** The LBE subcontracting participation goal for this contract is 20%. ARCHITECT shall fulfill the subcontracting commitment made in its bid or proposal. Each invoice submitted to CITY for payment shall include the information required in the CMD Progress Payment Form and the CMD Payment Affidavit. Failure to provide the CMD Progress Payment Form and the CMD Payment Affidavit with each invoice submitted by ARCHITECT shall entitle CITY to withhold 20% of the amount of that invoice until the CMD Payment Form and the CMD Subcontractor Payment Affidavit are provided by ARCHITECT. ARCHITECT shall not participate in any back contracting to the ARCHITECT or lower-tier subcontractors, as defined in the LBE Ordinance, for any purpose inconsistent with the provisions of the LBE Ordinance, its implementing rules and regulations, or this Section.
- 41.3 Subcontract Language Requirements.** ARCHITECT shall incorporate the LBE Ordinance into each subcontract made in the fulfillment of ARCHITECT's obligations under this Agreement and require each subcontractor to agree and comply with provisions of the ordinance applicable to subcontractors. ARCHITECT shall include in all subcontracts with LBEs made in fulfillment of ARCHITECT's obligations under this Agreement, a provision requiring ARCHITECT to compensate any LBE subcontractor for damages for breach of contract or liquidated damages equal to 5% of the subcontract amount, whichever is greater, if ARCHITECT does not fulfill its commitment to use the LBE subcontractor as specified in the bid or proposal, unless ARCHITECT received advance approval from the Director of CMD and contract awarding authority to substitute subcontractors or to otherwise modify the commitments in the bid or proposal. Such provisions shall also state that it is enforceable in a court of competent jurisdiction. Subcontracts shall require the subcontractor to maintain records necessary for monitoring its compliance with the LBE Ordinance for a period of three years following termination of this contract and to make such records available for audit and inspection by the Director of CMD or the Controller upon request.
- 41.4 Payment of Subcontractors.** ARCHITECT shall pay its subcontractors within three working days after receiving payment from the CITY unless Contractor notifies the Director of CMD in writing within ten working days prior to receiving payment from the CITY that there is a bona fide dispute between Contractor and its subcontractor and the Director waives the three-day payment requirement, in which case Contractor may withhold the disputed amount but shall pay the undisputed amount. ARCHITECT further agrees, within ten working days following receipt of payment from the CITY, to file the CMD Payment Affidavit

with the Controller, under penalty of perjury, that the ARCHITECT has paid all subcontractors. The affidavit shall provide the names and addresses of all subcontractors and the amount paid to each. Failure to provide such affidavit may subject ARCHITECT to enforcement procedure under Administrative Code §14B.17.

42 REQUIRING MINIMUM COMPENSATION FOR EMPLOYEES

The ARCHITECT agrees to comply fully with and be bound by all of the provisions of the Minimum Compensation Ordinance (MCO), as set forth in San Francisco Administrative Code Chapter 12P (Chapter 12P), including the remedies provided, and implementing guidelines and rules. The provisions of Chapter 12P are incorporated herein by reference and made a part of this Agreement as though fully set forth. The text of the MCO is available on the web at www.sfgov.org/olse. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12P. Consistent with the requirements of the MCO, ARCHITECT agrees to all of the following:

- a. For each hour worked by a Covered Employee during a Pay Period on work funded under the Agreement during the term of this Agreement, ARCHITECT shall provide to the Covered Employee no less than the Minimum Compensation, which includes a minimum hourly wage and compensated and uncompensated time off consistent with the requirements of the MCO. For the hourly gross compensation portion of the MCO, ARCHITECT shall pay a minimum of \$10.77 an hour for the term of this Agreement; provided, however, that Contractors that are Nonprofit Corporations or public entities shall pay a minimum of \$9 an hour for the term of this Agreement.
- b. If a Covered Employee of a Nonprofit Corporation works in San Francisco, then that employee is covered by San Francisco's Minimum Wage Ordinance, which is Chapter 12R of the Administrative Code. As of January 1, 2007, Chapter 12R's minimum wage is \$9.14 per hour.
- c. ARCHITECT shall not discharge, reduce in compensation, or otherwise discriminate against any employee for complaining to THE CITY and/or CITY with regard to ARCHITECT's compliance or anticipated compliance with the requirements of the MCO, for opposing any practice proscribed by the MCO, for participating in proceedings related to the MCO, or for seeking to assert or enforce any rights under the MCO by any lawful means.
- d. The ARCHITECT understands and agrees that the failure to comply with the requirements of the MCO shall constitute a material breach by ARCHITECT of the terms of this Agreement. CITY, acting through the Contracting Department, shall determine whether such a breach has occurred.

- e. If, within 30 days after receiving written notice of a breach of this Agreement for violating the MCO, the ARCHITECT fails to cure such breach or, if such breach cannot reasonably be cured within such period of 30 days, the ARCHITECT fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, CITY, acting through the Contracting Department, shall have the right to pursue the following rights or remedies and any rights or remedies available under applicable law:
- (1) The right to charge the ARCHITECT an amount equal to the difference between the Minimum Compensation and any compensation actually provided to a Covered Employee, together with interest on such amount from the date payment was due at the maximum rate then permitted by law;
 - (2) The right to set off all or any portion of the amount described in Subsection (d)(1) of this Section against amounts due to the ARCHITECT under this Agreement;
 - (3) The right to terminate this Agreement in whole or in part;
 - (4) In the event of a breach by the ARCHITECT of the covenant referred to in Subsection (b) of this Section, the right to seek reinstatement of the employee or to obtain other appropriate equitable relief; and
 - (5) The right to bar the ARCHITECT from entering into future contracts with THE CITY and/or CITY for three years.

Each of the rights provided in this Subsection (e) shall be exercisable individually or in combination with any other rights or remedies available to THE CITY and/or CITY. Any amounts realized by CITY pursuant to this subsection shall be paid to the Covered Employee who failed to receive the required Minimum Compensation.

- f. The ARCHITECT represents and warrants that it is not an entity that was set up, or is being used, for the purpose of evading the intent of the MCO.
- g. The ARCHITECT shall keep itself informed of the current requirements of the MCO, including increases to the hourly gross compensation due Covered Employees under the MCO, and shall provide prompt written notice to all Covered Employees of any increases in compensation, as well as any written communications received by the ARCHITECT from CITY, which communications are marked to indicate that they are to be distributed to Covered Employees.
- h. The ARCHITECT shall provide reports to CITY in accordance with any reporting standards promulgated by CITY under the MCO, including reports on subcontractors.
- i. The ARCHITECT shall provide THE CITY and/or CITY with access to pertinent records after receiving a written request from THE CITY and/or

CITY to do so and being provided at least five (5) business days to respond.

- j. CITY may conduct random audits of the ARCHITECT. Random audits shall be (i) noticed in advance in writing; (ii) limited to ascertaining whether Covered Employees are paid at least the minimum compensation required by the MCO; (iii) accomplished through an examination of pertinent records at a mutually agreed upon time and location within ten days of the written notice; and (iv) limited to one audit of the ARCHITECT every two years for the duration of this Agreement. Nothing in this Agreement is intended to preclude CITY from investigating any report of an alleged violation of the MCO.
- k. Any subcontract entered into by the ARCHITECT shall require the subcontractor to comply with the requirements of the MCO and shall contain contractual obligations substantially the same as those set forth in this Section. A subcontract means an agreement between the ARCHITECT and a third party which requires the third party to perform all or a portion of the services covered by this Agreement. The ARCHITECT shall notify the Department of Administrative Services when it enters into such a subcontract and shall certify to the Department of Administrative Services that it has notified the subcontractor of the obligations under the MCO and has imposed the requirements of the MCO on the subcontractor through the provisions of the subcontract. It is the ARCHITECT's obligation to ensure that any subcontractors of any tier under this Agreement comply with the requirements of the MCO. If any subcontractor under this Agreement fails to comply, THE CITY and/or CITY may pursue any of the remedies set forth in this Section against the ARCHITECT.
- l. Each Covered Employee is a third-party beneficiary with respect to the requirements of subsections (a) and (b) of this Section, and may pursue the following remedies in the event of a breach by the ARCHITECT of subsections (a) and (b), but only after the Covered Employee has provided the notice, participated in the administrative review hearing, and waited the 21-day period required by the MCO. The ARCHITECT understands and agrees that if the Covered Employee prevails in such action, the Covered Employee may be awarded: (1) an amount equal to the difference between the Minimum Compensation and any compensation actually provided to the Covered Employee, together with interest on such amount from the date payment was due at the maximum rate then permitted by law; (2) in the event of a breach by the ARCHITECT of subsections (a) or (b), the right to seek reinstatement or to obtain other appropriate equitable relief; and (3) in the event that the Covered Employee is the prevailing party in any legal action or proceeding against the ARCHITECT arising from this Agreement, the right to obtain all costs and expenses as provided by statute, incurred by the Covered Employee. The ARCHITECT also understands that the MCO provides

that if the ARCHITECT prevails in any such action, the ARCHITECT may be awarded costs and expenses as provided by statute, from the Covered Employee if the court determines that the Covered Employee's action was frivolous, vexatious or otherwise an act of bad faith.

- m. If the ARCHITECT is exempt from the MCO when this Agreement is executed because the cumulative amount of agreements with this department for the fiscal year is less than \$25,000 (\$50,000 for nonprofits), but the ARCHITECT later enters into an agreement or agreements that cause contractor to exceed that amount in a fiscal year, the ARCHITECT shall thereafter be required to comply with the MCO under this Agreement. This obligation arises on the effective date of the agreement that causes the cumulative amount of agreements between the ARCHITECT and this department to exceed \$25,000 (\$50,000 for nonprofits) in the fiscal year.

43 REQUIRING HEALTH BENEFITS FOR COVERED EMPLOYEES

The ARCHITECT agrees to comply fully with and be bound by all of the provisions of the Health Care Accountability Ordinance (HCAO), as set forth in San Francisco Administrative Code Chapter 12Q, including the remedies provided, and implementing regulations, as the same may be amended from time to time. The provisions of Chapter 12Q are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the HCAO is available on the web at www.sfgov.org/olse. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12Q.

- a. For each Covered Employee, the ARCHITECT shall provide the appropriate health benefit set forth in Section 12Q.3 of the HCAO. If the ARCHITECT chooses to offer the health plan option, such health plan shall meet the minimum standards set forth by the San Francisco Health Commission.
- b. Notwithstanding the above, if the ARCHITECT is a small business as defined in Section 12Q.3(e) of the HCAO, it shall have no obligation to comply with part (a) above.
- c. The ARCHITECT's failure to comply with the HCAO shall constitute a material breach of this agreement. THE CITY and/or CITY shall notify the ARCHITECT if such a breach has occurred. If, within 30 days after receiving written notice of a breach of this Agreement for violating the HCAO, the ARCHITECT fails to cure such breach or, if such breach cannot reasonably be cured within such period of 30 days, the ARCHITECT fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, CITY shall have the right to pursue the remedies set forth in 12Q.5.1 and 12Q.5(f)(1-6). Each of these remedies shall be exercisable individually or in

combination with any other rights or remedies available to THE CITY and/or CITY.

- d. Any Subcontract entered into by the ARCHITECT shall require the Subcontractor to comply with the requirements of the HCAO and shall contain contractual obligations substantially the same as those set forth in this Section. The ARCHITECT shall notify CITY's Office of Contract Administration when it enters into such a Subcontract and shall certify to the Office of Contract Administration that it has notified the Subcontractor of the obligations under the HCAO and has imposed the requirements of the HCAO on Subcontractor through the Subcontract. Each ARCHITECT shall be responsible for its Subcontractors' compliance with this Chapter. If a Subcontractor fails to comply, THE CITY and/or CITY may pursue the remedies set forth in this Section against the ARCHITECT based on the Subcontractor's failure to comply, provided that THE CITY and/or CITY has first provided the ARCHITECT with notice and an opportunity to obtain a cure of the violation.
- e. The ARCHITECT shall not discharge, reduce in compensation, or otherwise discriminate against any employee for notifying THE CITY and/or CITY with regard to the ARCHITECT's noncompliance or anticipated noncompliance with the requirements of the HCAO, for opposing any practice proscribed by the HCAO, for participating in proceedings related to the HCAO, or for seeking to assert or enforce any rights under the HCAO by any lawful means.
- f. The ARCHITECT represents and warrants that it is not an entity that was set up, or is being used, for the purpose of evading the intent of the HCAO.
- g. The ARCHITECT shall maintain employee and payroll records in compliance with the California Labor Code and Industrial Welfare Commission orders, including the number of hours each employee has worked on THE CITY Contract.
- h. The ARCHITECT shall keep itself informed of the current requirements of the HCAO.
- i. The ARCHITECT shall provide reports to CITY in accordance with any reporting standards promulgated by CITY under the HCAO, including reports on Subcontractors and Subtenants, as applicable.
- j. The ARCHITECT shall provide CITY with access to records pertaining to compliance with HCAO after receiving a written request from THE CITY to do so and being provided at least ten business days to respond.
- k. The ARCHITECT shall allow CITY to inspect the ARCHITECT's job sites and have access to the ARCHITECT's employees in order to monitor and determine compliance with HCAO.

- l. CITY may conduct random audits of the ARCHITECT to ascertain its compliance with HCAO. The ARCHITECT agrees to cooperate with THE CITY when it conducts such audits.
- m. If the ARCHITECT is exempt from the HCAO when this Agreement is executed because its amount is less than \$25,000 (\$50,000 for nonprofits), but the ARCHITECT later enters into an agreement or agreements that cause the ARCHITECT's aggregate amount of all agreements with THE CITY and/or CITY to reach \$75,000, all the agreements shall be thereafter subject to the HCAO. This obligation arises on the effective date of the agreement that causes the cumulative amount of agreements between the ARCHITECT and THE CITY and/or CITY to be equal to or greater than \$75,000 in the fiscal year.

44 FIRST SOURCE HIRING PROGRAM

a. Incorporation of Administrative Code Provisions by Reference

The provisions of Chapter 83 of the San Francisco Administrative Code are incorporated in this Section by reference and made a part of this Agreement as though fully set forth herein. The Architect shall comply fully with, and be bound by, all of the provisions that apply to this Agreement under such Chapter, including but not limited to the remedies provided therein.

b. First Source Hiring Agreement

The Architect shall enter into a First Source Hiring Agreement as set out in Attachment 9.

45 CONSIDERATION OF CRIMINAL HISTORY IN HIRING AND EMPLOYMENT DECISIONS.

a. Contractor agrees to comply fully with and be bound by all of the provisions of Chapter 12T "CITY Contractor/Subcontractor Consideration of Criminal History in Hiring and Employment Decisions," of the San Francisco Administrative Code (Chapter 12T), including the remedies provided, and implementing regulations, as may be amended from time to time. The provisions of Chapter 12T are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the Chapter 12T is available on the web at www.sfgov.org/olse/fco. A partial listing of some of Contractor's obligations under Chapter 12T is set forth in this Section. Contractor is required to comply with all of the applicable provisions of 12T, irrespective of the listing of obligations in this Section. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12T.

b. The requirements of Chapter 12T shall only apply to a Contractor's or Subcontractor's operations to the extent those operations are in furtherance of the performance of this Agreement, shall apply only to applicants and employees who would be or are performing work in furtherance of this Agreement, shall apply only when the physical location of the employment or prospective employment of an individual is wholly or substantially within the CITY of San

Francisco, and shall not apply when the application in a particular context would conflict with federal or state law or with a requirement of a government agency implementing federal or state law.

c. Contractor shall incorporate by reference in all subcontracts the provisions of Chapter 12T, and shall require all subcontractors to comply with such provisions. Contractor's failure to comply with the obligations in this subsection shall constitute a material breach of this Agreement.

d. Contractor or Subcontractor shall not inquire about, require disclosure of, or if such information is received base an Adverse Action on an applicant's or potential applicant for employment, or employee's: (1) Arrest not leading to a Conviction, unless the Arrest is undergoing an active pending criminal investigation or trial that has not yet been resolved; (2) participation in or completion of a diversion or a deferral of judgment program; (3) a Conviction that has been judicially dismissed, expunged, voided, invalidated, or otherwise rendered inoperative; (4) a Conviction or any other adjudication in the juvenile justice system; (5) a Conviction that is more than seven years old, from the date of sentencing; or (6) information pertaining to an offense other than a felony or misdemeanor, such as an infraction.

e. Contractor or Subcontractor shall not inquire about or require applicants, potential applicants for employment, or employees to disclose on any employment application the facts or details of any conviction history, unresolved arrest, or any matter identified in subsection 32(d), above. Contractor or Subcontractor shall not require such disclosure or make such inquiry until either after the first live interview with the person, or after a conditional offer of employment.

f. Contractor or Subcontractor shall state in all solicitations or advertisements for employees that are reasonably likely to reach persons who are reasonably likely to seek employment to be performed under this Agreement, that the Contractor or Subcontractor will consider for employment qualified applicants with criminal histories in a manner consistent with the requirements of Chapter 12T.

g. Contractor and Subcontractors shall post the notice prepared by the Office of Labor Standards Enforcement (OLSE), available on OLSE's website, in a conspicuous place at every workplace, job site, or other location under the Contractor or Subcontractor's control at which work is being done or will be done in furtherance of the performance of this Agreement. The notice shall be posted in English, Spanish, Chinese, and any language spoken by at least 5% of the employees at the workplace, job site, or other location at which it is posted.

h. Contractor understands and agrees that if it fails to comply with the requirements of Chapter 12T, the CITY shall have the right to pursue any rights or remedies available under Chapter 12T, including but not limited to, a penalty of \$50 for a second violation and \$100 for a subsequent violation for each employee, applicant or other person as to whom a violation occurred or continued, termination or suspension in whole or in part of this Agreement.

46 **MACBRIDE PRINCIPLES-NORTHERN IRELAND**

Pursuant to San Francisco Administrative Code §12F.5, CITY urges companies doing business in Northern Ireland to move towards resolving employment

inequities, and encourages such companies to abide by the MacBride Principles. CITY urges San Francisco companies to do business with corporations that abide by the MacBride Principles. By signing below, the person executing this agreement on behalf of the ARCHITECT acknowledges and agrees that it has read and understood this section.

47 DRUG-FREE WORKPLACE POLICY

The ARCHITECT acknowledges that pursuant to the Federal Drug-Free Workplace Act of 1989, the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited on CITY premises. The ARCHITECT agrees that any violation of this prohibition by the contractor, its employees, agents or assigns shall be deemed a material breach of contract.

48 SUNSHINE ORDINANCE

In accordance with San Francisco Administrative Code §67.24(e), contracts, contractor's bids, responses to requests for proposals and all other records of communications between the department and persons or firms seeking contracts shall be open to inspection immediately after a contract has been awarded. Nothing in this provision requires the disclosure of a private person's or organization's net worth or other proprietary financial data submitted for qualification for a contract or other benefit until and unless that person or organization is awarded the contract or benefit. Information provided which is covered by this subdivision will be made available to the public upon request.

49 NONDISCLOSURE OF PRIVATE INFORMATION

The ARCHITECT has read and agrees to the terms set forth in San Francisco Administrative Code Sections 12M.2, "Nondisclosure of Private Information," and 12M.3, "Enforcement" of Administrative Code Chapter 12M, "Protection of Private Information," which are incorporated herein as if fully set forth. The ARCHITECT agrees that any failure of the ARCHITECT to comply with the requirements of Section 12M.2 of this Chapter shall be a material breach of the Contract. In such an event, in addition to any other remedies available to it under equity or law, THE CITY may terminate the Contract, bring a false claim action against the ARCHITECT pursuant to Chapter 6 or Chapter 21 of the Administrative Code, or debar the ARCHITECT.

50 LIMITATIONS ON CONTRIBUTIONS

Through execution of this Agreement, the ARCHITECT acknowledges that it is familiar with section 1.126 of CITY's Campaign and Governmental Conduct Code, which prohibits any person who contracts with CITY for the rendition of personal services, for the furnishing of any material, supplies or equipment, for the sale or lease of any land or building, or for a grant, loan or loan guarantee, from making any campaign contribution to (1) an individual holding a CITY elective office if the contract must be approved by the individual, a board on which that individual serves, or a board on which an appointee of that individual

serves, (2) a candidate for the office held by such individual, or (3) a committee controlled by such individual, at any time from the commencement of negotiations for the contract until the later of either the termination of negotiations for such contract or six months after the date the contract is approved. The ARCHITECT acknowledges that the foregoing restriction applies only if the contract or a combination or series of contracts approved by the same individual or board in a fiscal year have a total anticipated or actual value of \$50,000 or more. The ARCHITECT further acknowledges that the prohibition on contributions applies to each prospective party to the contract; each member of the ARCHITECT's board of directors; the ARCHITECT's chairperson, chief executive officer, chief financial officer and chief operating officer; any person with an ownership interest of more than 20 percent in the ARCHITECT; any subcontractor listed in the bid or contract; and any committee that is sponsored or controlled by the ARCHITECT. Additionally, the ARCHITECT acknowledges that the ARCHITECT must inform each of the persons described in the preceding sentence of the prohibitions contained in Section 1.126.

51 PROHIBITING USE OF THE CITY OR CITY FUNDS FOR POLITICAL ACTIVITY

In accordance with San Francisco Administrative Code Chapter 12.G, the ARCHITECT may not participate in, support, or attempt to influence any political campaign for a candidate or for a ballot measure (collectively, "Political Activity") in the performance of the services provided under this Agreement. The ARCHITECT agrees to comply with San Francisco Administrative Code Chapter 12.G and any implementing rules and regulations promulgated by CITY's Controller. The terms and provisions of Chapter 12.G are incorporated herein by this reference. In the event the ARCHITECT violates the provisions of this section, THE CITY may, in addition to any other rights or remedies available hereunder, (i) terminate this Agreement, and (ii) prohibit the ARCHITECT from bidding on or receiving any new THE CITY contract for a period of two (2) years. The Controller will not consider the ARCHITECT's use of profit as a violation of this section.

52 LEED STATEMENT

The LEED Green Building Rating System or similar environmental guidelines ("LEED") utilizes certain design, construction and usage criteria in order to promote environmentally friendly building. In addressing LEED, the ARCHITECT shall perform its services in a manner consistent with that degree of skill and care ordinarily exercised by design professionals performing similar services in the same locality, and under the same or similar circumstances and conditions.

The ARCHITECT shall not be responsible for CM/GC's failure to adhere to the Contract Documents and any applicable laws, codes and regulations incorporated therein, nor for any changes to the design made by THE CITY

without the direct participation and written approval of the ARCHITECT. Likewise, the ARCHITECT shall not be responsible for any environmental or energy issues arising out of the failure of THE CITY's use and operation of the completed Project as designed.

53 Rights and Duties upon Termination or Expiration

This Section and the following Sections of this Agreement shall survive termination or expiration of this Agreement:

- | | |
|--|--|
| 34. Submitting false claims | 18. Proprietary information of the CITY |
| 7.7. Disallowance | 9. Documents and CITY Ownership of Documents |
| 17. Taxes | 37. Works for Hire |
| 7.8. Payment does not imply acceptance of work | 15. Audit and Inspection of Records |
| 26. Responsibility for equipment | 13. Modifications |
| 14. Independent Contractor | 19. Administrative Remedy for Agreement Interpretation |
| 11. Insurance | 33. Agreement Made in California; Venue |
| 12. Indemnification | 89. Construction |
| 35. Incidental and Consequential Damages | 21. Entire Agreement |
| 24. Liability of the CITY | 20. Severability |
| | 49. Nondisclosure of private information |

Subject to the immediately preceding sentence, upon termination of this Agreement prior to expiration of the term specified in Section 2, this Agreement shall terminate and be of no further force or effect. The Architect shall transfer title to CITY, and deliver in the manner, at the times, and to the extent, if any, directed by CITY, any work in progress, completed work, supplies, equipment, and other materials produced as a part of, or acquired in connection with the performance of this Agreement, and any completed or partially completed work which, if this Agreement had been completed, would have been required to be furnished to CITY. This subsection shall survive termination of this Agreement.

54 Conflict of Interest

Through its execution of this Agreement, the Architect acknowledges that it is familiar with the provision of Section 15.103 of the CITY's Charter, Article III, Chapter 2 of CITY's Campaign and Governmental Conduct Code, and Section 87100 et seq. and Section 1090 et seq. of the Government Code of the State of California, and certifies that it does not know of any facts which constitutes a violation of said provisions and agrees that it will immediately notify the CITY if it becomes aware of any such fact during the term of this Agreement.

55 Tropical Hardwood and Virgin Redwood Ban

Pursuant to §804(b) of the San Francisco Environment Code, the CITY and County of San Francisco urges contractors not to import, purchase, obtain, or use for any purpose, any tropical hardwood, tropical hardwood wood product, virgin redwood or virgin redwood wood product.

56 Automated Clearing House (ACH) "electronic" payments

The CITY will issue payments to ARCHITECT through the CITYCITY's electronic payment system called PayMode-X®. ARCHITECT acknowledges and agrees to receive payment electronically through this system. ARCHITECT shall not be entitled to any additional cost or charge under this Contract for using or failing to use the electronic payment system. Nor shall ARCHITECT be entitled to any additional cost or charge for delays or failures of the electronic payment system to complete a payment transaction.

57 Certification of Funds; Budget and Fiscal Provisions; Termination in Event of Non-Appropriation

This Agreement is subject to the budget and fiscal provisions of the CITYCITY's Charter. Charges will accrue only after prior written authorization certified by the Controller, and the amount of CITYCITY's obligation hereunder shall not at any time exceed the amount certified for the purpose and period stated in such advance authorization. This Agreement will terminate without penalty, liability or expense of any kind to CITY at the end of any fiscal year if funds are not appropriated for the next succeeding fiscal year. If funds are appropriated for a portion of the fiscal year, this Agreement will terminate, without penalty, liability or expense of any kind at the end of the term for which funds are appropriated. CITY has no obligation to make appropriations for this Agreement in lieu of appropriations for new or other agreements. CITY budget decisions are subject to the discretion of the Mayor and the Board of Supervisors. ARCHITECT's assumption of risk of possible non-appropriation is part of the consideration for this Agreement.

THIS SECTION CONTROLS AGAINST ANY AND ALL OTHER PROVISIONS OF THIS AGREEMENT.

58 Effective Date of Agreement

This Agreement shall become effective when the Controller has certified to the availability of funds and ARCHITECT has been notified in writing.

59 Resource Conservation

Chapter 5 of the San Francisco Environment Code ("Resource Conservation") is incorporated herein by reference. Failure by ARCHITECT to comply with any of the applicable requirements of Chapter 5 will be deemed a material breach of contract.

60 Public Access to Meetings and Records

If the Contractor receives a cumulative total per year of at least \$250,000 in CITY funds or CITY-administered funds and is a non-profit organization as defined in Chapter 12L of the San Francisco Administrative Code, Contractor shall comply with and be bound by all the applicable provisions of that Chapter. By executing this Agreement, the Contractor agrees to open its meetings and records to the public in the manner set forth in §§12L.4 and 12L.5 of the Administrative Code. Contractor further agrees to make-good faith efforts to promote community membership on its Board of Directors in the manner set forth in §12L.6 of the Administrative Code. The Contractor acknowledges that its material failure to comply with any of the provisions of this paragraph shall constitute a material breach of this Agreement. The Contractor further acknowledges that such material breach of the Agreement shall be grounds for the CITY to terminate and/or not renew the Agreement, partially or in its entirety.

61 Preservative-treated Wood Containing Arsenic

Contractor may not purchase preservative-treated wood products containing arsenic in the performance of this Agreement unless an exemption from the requirements of Chapter 13 of the San Francisco Environment Code is obtained from the Department of the Environment under Section 1304 of the Code. The term "preservative-treated wood containing arsenic" shall mean wood treated with a preservative that contains arsenic, elemental arsenic, or an arsenic copper combination, including, but not limited to, chromated copper arsenate preservative, ammoniacal copper zinc arsenate preservative, or ammoniacal copper arsenate preservative. Contractor may purchase preservative-treated wood products on the list of environmentally preferable alternatives prepared and adopted by the Department of the Environment. This provision does not preclude Contractor from purchasing preservative-treated wood containing arsenic for saltwater immersion. The term "saltwater immersion" shall mean a pressure-treated wood that is used for construction purposes or facilities that are partially or totally immersed in saltwater.

62 Services Provided by Attorneys

Any services to be provided by a law firm or attorney must be reviewed and approved in writing in advance by the CITY Attorney. No invoices for services provided by law firms or attorneys, including, without limitation, as subcontractors of Contractor, will be paid unless the provider received advance written approval from the CITY Attorney.

63 Food Service Waste Reduction Requirements

Contractor agrees to comply fully with and be bound by all of the provisions of the Food Service Waste Reduction Ordinance, as set forth in San Francisco Environment Code Chapter 16, including the remedies provided, and implementing guidelines and rules. The provisions of Chapter 16 are incorporated herein by reference and made a part of this Agreement as though fully set forth. This provision is a material term of this Agreement. By entering into this Agreement, Contractor agrees that if it breaches this provision, City will suffer actual damages that will be impractical or extremely difficult to determine; further, Contractor agrees that the sum of one hundred dollars (\$100) liquidated

damages for the first breach, two hundred dollars (\$200) liquidated damages for the second breach in the same year, and five hundred dollars (\$500) liquidated damages for subsequent breaches in the same year is reasonable estimate of the damage that City will incur based on the violation, established in light of the circumstances existing at the time this Agreement was made. Such amount shall not be considered a penalty, but rather agreed monetary damages sustained by City because of Contractor's failure to comply with this provision.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day first mentioned above.

ARCHITECT

Recommended by:



Samuel Chui, Project Manager

Mike E. Retford

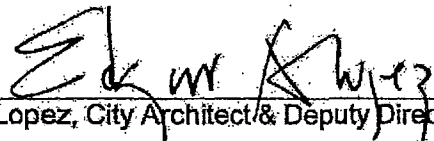
Name

One Bush Street, Suite 200

Address

San Francisco, CA. 94104

CITY State Zip



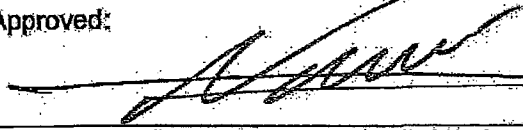
Edgar Lopez, City Architect & Deputy Director

Approved as to Form:
Dennis J. Herrera
CITY Attorney

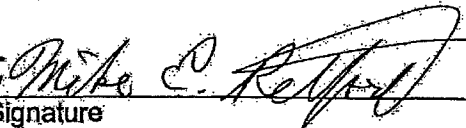
I have read and understood Sec. 31, the CITY's statement urging companies doing business in Northern Ireland to move towards resolving employment inequities, encouraging compliance with the MacBride Principles, and urging San Francisco companies to do business with corporations that abide by the MacBride Principles.

By 

Deputy CITY Attorney

Approved:


Mohammed Nuru, Director of Public Works

By 

Signature

Principal-In-Charge

Name Title

(415) 356-8558

Area Code Phone Number

43-1723985

Federal Employer Number

Attachment 1 –Schedule of Services

PHASE AND TASKS	DURATION	SCHEDULE
1. Program Validation	7 weeks	October - November 2015
Owner Review	3 weeks	
2. Conceptual Design	12 weeks	November 2015 – February 2016
Owner Review	3 weeks	

Attachment 2 -Fee Schedule

City / County of San Francisco
 Traffic Company Forensic Science Division Laboratory
 September 01, 2015

Overall A-E Fee Per Phase

Discipline	Program Verification		Concept Design		Phase 1: A-E - 09/01/2015	
	DURATION (WEEKS)	7	12	19		
Architecture/Int./Equip/LA - HOK	55.29%	\$ 118,800	57.68%	\$ 420,200	\$ 539,000	57.14%
Forensic Prog./Planning - HOK/DC	32.11%	\$ 69,000	5.29%	\$ 38,500	\$ 107,500	11.40%
Architecture - MEI - LBE	1.12%	\$ 2,400	6.33%	\$ 46,100	\$ 48,500	5.14%
Structural - SOHA	0.00%	\$ -	4.12%	\$ 30,000	\$ 30,000	3.18%
MEP, FP & Energy Mdl - RGV	4.77%	\$ 10,250	16.34%	\$ 119,000	\$ 129,250	13.70%
MEP & FP - Peer Review - HOK	0.00%	\$ -	1.15%	\$ 8,400	\$ 8,400	0.89%
Civil - Telemon	0.00%	\$ -	0.82%	\$ 6,000	\$ 6,000	0.64%
Cost Estimating - Cumming	5.62%	\$ 12,075	3.94%	\$ 28,725	\$ 40,800	4.33%
Acous/Low Voltage/IT/Sec - SFM	0.00%	\$ -	0.00%	\$ -	\$ -	0.00%
Vibration - CGA	0.00%	\$ -	0.58%	\$ 4,200	\$ 4,200	0.45%
Lighting Design - JS Nolan	0.00%	\$ -	0.00%	\$ -	\$ -	0.00%
Waterproofing: Skin & Roof - AB&B	0.00%	\$ -	0.00%	\$ -	\$ -	0.00%
Parking - Watry	0.00%	\$ -	1.65%	\$ 12,000	\$ 12,000	1.27%
Security Hardware - HOK	0.00%	\$ -	0.00%	\$ -	\$ -	0.00%
Code - Building	0.00%	\$ -	0.00%	\$ -	\$ -	0.00%
Code - ADA - ARC	0.00%	\$ -	0.00%	\$ -	\$ -	0.00%
Signage - K Keating	0.00%	\$ -	0.00%	\$ -	\$ -	0.00%
LEED Documentation - HOK	0.00%	\$ -	1.55%	\$ 11,300	\$ 11,300	1.20%
Vertical Transportation - Syska	0.00%	\$ -	0.00%	\$ -	\$ -	0.00%
ASCLAD Advisor	1.09%	\$ 2,349	0.55%	\$ 4,033	\$ 6,382	0.68%
TOTALS A-E Fees Per Phase	100.00%	\$ 214,874	100.00%	\$ 728,458	\$ 943,332	100.00%

HOK Percentage/Fee	87.40%	\$ 187,800	65.67%	\$ 478,400	\$ 666,200	70.62%
LBE Percentage/Fee	1.12%	\$ 2,400	7.15%	\$ 52,100	\$ 54,500	5.78%
Other Percentage/Fee	11.48%	\$ 24,674	27.17%	\$ 197,958	\$ 222,632	23.60%
TOTALS A-E Fees	2.03%	\$ 214,874	6.89%	\$ 728,458	\$ 943,332	100.00%
HOK - Reimbursable Expenses		\$4,132		\$10,288	\$ 14,420	
Travel Allowance:		\$ 6,000		30200	\$ 36,200	
	22.64%	\$ 225,006	77.36%	\$ 768,946	\$ 993,952	
				Total Phase 1 A-E Fees:	\$ 993,952	

Attachment 3 – HOK Exhibit - A Compensation, Services & Schedule



Exhibit – A

Compensation, Services & Schedule

Architecture

City of San Francisco Traffic Company and Forensic Services Division Facility

City of San Francisco Department of Public Works

Current version date: 2015-09-01

Revisions		
1	2015-05-29	Final Issued to DPW
2	2015-09-01	Phase 1 - Final
3		
4		
5		

EXHIBIT-A COMPENSATION, SERVICES & SCHEDULE

Dated: September 16, 2015

A1.0 PROJECT INFORMATION

A1.1 An index of defined terms and expressions is stated in the Agreement.

A1.2 **“Project Information”** means the information stated in this Article and forms the basis of the Services, Compensation and Schedule stated in this Exhibit. If the Project Information is modified, the Services, Schedule and/or Compensation will be adjusted as necessary to accommodate the change.

A1.3 **“Client’s Program”** means the Client’s requirements for the Project as stated in the following document:

Title: Request For Qualifications Document for Traffic Company & Forensic Services Division Facility

Date: August 8, 2014

A1.4 **“Project”** is described as:

New 107,000 gross square foot four-story building to house City of San Francisco Police Department's Traffic Company Division & Forensic Services Division Facility.

A1.5 **“Project Site”** means the physical location of the Project as follows:

The new facility will be located at 1995 Evans Street on a site located at the southeast corner of Evans & Toland in San Francisco, California. The site is approximately 2.28 acres.

A1.6 **“Subconsultants”** are the following third-parties retained by HOK to perform a portion of the Basic Services under this Agreement:

<u>Discipline:</u>	<u>Subconsultant:</u>
Associate Architect	MEI Architects
Mechanical/Electrical/Plumbing	R.G. Vanderweil Engineers & HOK Engineering – San Francisco
Structural Engineer	SOHA Engineers
Civil Engineer	Telamon Engineering Consultants, Inc
Cost Estimating	Cumming Construction Management
A-V, Low Voltage, IT, Security Electronics, Acoustics & Noise Engineer	Smith, Fause & McDonald, Inc.
Vibration Engineering	Collin Gordon & Associates
Lighting Design	JS Nolan + Associates
Waterproofing, Roofing & Curtain Wall Peer Review	Allana Buick & Bers, Inc
Security Hardware	HOK - Architecture
Parking Design	Watry Design, Inc.
Building Code Consultant	The Fire Consultants
ADA Code Consultant	A.R. Sanchez-Corea & Associates, Inc.
Signage Consultant	Kate Keating Associates, Inc.
LEED Documentation	HOK – San Francisco
Fire Protection Engineer	R.G. Vanderweil Engineers & HOK Engineering – San Francisco
Energy Modeling	R.G. Vanderweil Engineers
Vertical Transportation	Syska Hennessy Group
ASCLAD Advisor	Bennie Del Re

- A1.7 **"Sustainable Design Objective"** means the Client's objective for the Project to obtain certified rating of:
LEED - Gold
- A1.8 **"Sustainable Design Guidelines"** mean the applicable criteria for achieving the Sustainable Design Objective as follows:
LEED Version 3]
- A2.0 **COMPENSATION**
- A2.1 **"Basic Compensation"** is the fee Client will pay HOK for performing Basic Services as follows (*select one*):
- The stipulated sum of: Refer to Prime Agreement – Article 8 () distributed on a monthly basis in accordance with the following schedule:
 - On an hourly basis in accordance with the Hourly Billing Rates stated in Section A2.3; up to the maximum sum of: [ENTER WRITTEN AMOUNT] (ENTER NUMERIC AMOUNT).
- A2.2 **"Additional Compensation"** is the additional fee Client will pay HOK for performing Additional Services described under Section A3.2. Additional Compensation will be mutually agreed to in writing by HOK and Client. In the absence of mutual agreement, Additional Compensation for HOK is determined by multiplying the number of hours required to perform Additional Services, multiplied by the applicable Hourly Billing Rates stated in Section A2.3. Additional Compensation for a Subconsultant is determined by multiplying the number of hours required to perform Additional Services, multiplied by the applicable hourly rate stated in the contract between HOK and the Subconsultant.
- A2.3 **"Hourly Billing Rates"** are the billing rates for HOK personnel stated below and the billing rates specified in HOK's contracts with its Subconsultants.
- | | |
|--|-----------------------------|
| <u>Billable Employee:</u> | <u>Hourly Billing Rate:</u> |
| REFER TO ATTACHMENT 6 OF THE PRIME A/E DESIGN SERVICES AGREEMENT | |
- A2.4 **"Reimbursable Expenses"** are paid in addition to Compensation at the rate of one times the actual cost of Reimbursable Expenses. Reimbursable Expenses include any expense reasonably incurred by HOK and/or its Subconsultants in performance of this Agreement. Reimbursable Expenses include, but are not limited to, the following:
- .1 REFER TO ARTICLE 8.4 OF THE A/E DESIGN SERVICES AGREEMENT
- A3.0 **SERVICES**
- A3.1 **"Basic Services"** consist of those described below and include Services of the Subconsultants identified in Section A1.6.
- A3.1.1 Project Administration Services
- .1 Project administrative services shall be as described in the Prime A/E Design Services Agreement
 - .2 HOK shall manage the Services performed by HOK and its Subconsultants. HOK will consult with the Client, research applicable design criteria, attend Project meetings, communicate with members of the Project team and report progress to the Client.
 - .3 Consistent with the Standard of Care, HOK shall coordinate its Services with services performed by Client and Client's other consultants. HOK may rely on the accuracy and completeness of services and information furnished by Client and Client's other consultants. HOK shall provide notice to Client if it becomes aware of any error, omission or inconsistency in services performed by or through Client.
 - .4 HOK shall offer for Client's consideration and approval environmentally responsible design alternatives, such as material choices and building orientation, together with other considerations based on Client's Program and aesthetics.
 - .5 HOK shall consider the value of alternative materials, building systems and equipment, together with other considerations based on Client's Program and aesthetics in developing a design for the Project that is consistent with Client's Program, Schedule and Budget.

- .6 Meeting Minutes: HOK to document all project meeting minutes during design phase. HOK shall maintain a log of various project design action items. Items will be closed once resolutions is recorded.
- .7 HOK shall contact as necessary, the Governing Authorities required to approve the Contract Documents and the entities providing utility services to the Project. In designing the Project, HOK shall respond to applicable design requirements imposed by Governing Authorities and by such entities providing utility services. HOK shall assist Client in connection with Client's responsibility for filing documents required for the approval of Governing Authorities.

A3.1.2 Program Validation:

- .1 HOK shall review Client's RFP Bridging Documents and other Project Information, each in terms of the other, to ascertain the general requirements of the Project. HOK shall notify Client of: (1) any inconsistencies discovered in the Project Information; and (2) other information or consulting services that may be reasonably needed for the Project.
 - .1 Bridging Document cost estimate validation: HOK to review & validate cost estimate values included in Bridging Document.
- .2 Detailed Program Validation meetings with City Traffic Company & Forensic Services Division staff to expand on details of each space shown in the RFP Bridging Documents, dated June 2013. HOK shall seek additional information to validate spaces/rooms/function noted in Space Program. Each unit/department will be interviewed separately. Topics to be discussed include:
 - .1 Confirm functions/space/rooms.
 - .2 Confirm staffing numbers and positions.
 - .3 Identify tasks performed in each unit/space/room.
 - .4 Confirm space relationships to other room/lab functions.
 - .5 Identify equipment to be located in each unit. (new & existing)
 - .6 Discuss evidence flow and circulation patterns as noted in the RFP Bridging Document.
 - .7 Discuss internal security and safety requirements in regards to evidence handling as noted in the RFP Bridging Document.
 - .8 Discuss special storage requirements as noted in the RFP Bridging Document.
 - .9 Discuss building utilities required for each space.
 - .10 Discuss parking requirements as noted in the RFP Bridging Document.
- .3 Prepare meeting summaries. HOK to issue for owner confirmation of information gathered.
- .4 Project research: To support evaluation of area/space/room square footage projections HOK shall:
 - .1 Review Bridging Documents and previous studies (including pertinent strategic planning and long-range operational procedures.)
 - .2 Identify new technologies or advancements technologies, which may impact spaces/rooms/functions noted in the RFP Bridging Documents.
 - .3 Obtain and document applicable City space planning requirements for office and lab spaces, if any.
 - .4 Review applicable advancements in equipment technology and procedures.
 - .5 Research applicable demographics, crime trends, and caseload trending. City to provide historical data for caseload.
 - .6 Research applicable regulatory trends, which impact the programming and planning of each function.
 - .7 Verify ASCLD accreditation factors.
 - .8 Review inventory list of laboratory equipment & non-laboratory equipment/furnishing provided by the client and as noted in the RFP Bridging Documents.
- .5 Additional Program Validation interviews will be performed with:
 - .1 Department Directors to review proposed organizational structure, operational procedures, goals, evidence flow.

- .2 Administration/support staff.
 - .3 Training facilities.
 - .4 Evidence unit interviews (evidence intake, evidence flow, and storage).
 - .5 Facility and site security and communication requirements interview.
 - .6 Interviews with Special City Focus Groups (e.g. safety, biohazards, chemical storage, ASCLD issues, etc.).
 - .7 City General Services and facilities management personnel.
 - .8 Follow-up interviews with Traffic Company & Forensic Science Lab Representatives to review draft space/room spreadsheets and room criteria sheets.
- .6 Program Validation Task:
- .1 Prepare final evaluation report regarding RFP Bridging Documents and information gather during interviews with building users.
 - .2 Define shared spaces and operational efficiencies.
 - .3 Upgrade space program and support documents based upon information gathered during program validation.
 - .4 Provide descriptions of departments and spaces.
 - .5 Evaluate general building and site security strategy as noted in the RFP Bridging Document.
 - .6 Evaluate evidence intake, storage & disposition needs as noted in the RFP Bridging Document.
 - .7 Evaluate safety & biohazard issues as noted in the RFP Bridging Document.
 - .8 Review site planning criteria as noted in the RFP Bridging Document.
 - .9 Submit preliminary project report for owner review.
- .7 Prepare Program Validation Report to include for City review:
- .1 Preface and introduction.
 - .2 Executive summary.
 - .3 Narrative addressing program validation findings and research data collected during evaluation process.
 - .4 Update preliminary equipment data list/sheets. (Based upon equipment & furniture inventory documents prepared by others.)
 - .5 Narrative and/or diagram of ideal lab module.
 - .6 Adjacency diagrams.
 - .7 Flow diagrams for evidence.
 - .8 Narrative addressing RFP Bridging Document cost estimate.
- .8 Review Program Validation report with Owner & Key Stake Holders.
- .1 Revise report per Owner review comments.
 - .2 Submit final document.
- .9 Deliverables: Program Validation Report. Report shall be in 8-1/2" x 11" format. One electronic PDF copy shall be submitted to the City of San Francisco.
- .10 HOK shall submit the Program Validation report for Client's review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen (15) days following receipt of the Program Validation report. HOK shall provide written respond to Client's written comments within ten (10) days following receipt.

A3.1.3 Conceptual Design:

- .1 Project Kick-off (Visioning & Goals) Session: Prior to start of Conceptual Design the design team shall lead a one-day Project kick-off / Visioning session with the Owner and key project stake.

holder. Intent of Kick-off Session is: introduction of all key personnel involved in this project, discuss role in project of key personnel, discuss project schedule, scope of work, owner goals and HOK project design approach. HOK shall review topics and issues to be discussed during the interview process. HOK shall conduct a "Forensic Science Laboratory Planning Seminar" to discuss what it takes to design a forensic science lab.

- .2 Tour of existing Forensic Science facilities within the State of California: At the beginning of the Conceptual Design phase the Owner, key project stake holders and HOK shall tour existing facilities within California for benchmarking comparison for the new Traffic Company & Forensic Services Division (TCFSD) Facility. Tour will consist of 2-3 day travel within California. HOK shall photo document and prepare report highlighting key features viewed during tours.
- .3 Design Charrette Meeting: The HOK design team and client shall attend and participate in a one day design charrette. Design team shall meet prior to meeting prepare, gather and document project design issues and possible design solutions. Design Charrette meeting shall involve design team presentation to client of design issues and discuss possible design solutions. Design team participants to include architectural, lab designer, structural, mechanical, electrical, plumbing, civil, landscape.
- .4 Architectural
 - .1 Based upon Program Validation finding HOK will present Client alternative approaches to design and construction of the Project, including the feasibility of incorporating environmentally responsible design approaches consistent with achievement of the Sustainable Design Objective. HOK shall reach an understanding with Client regarding the requirements of the Project.
 - .2 Prepare conceptual site plan. Showing building block, parking garage, on-site parking, driveways, proposed site amenities and building support spaces. (No less than three concepts.)
 - .3 Prepare overall floor plans for each floor level. Showing office spaces/rooms, laboratory suites, circulation paths, corridors, vertical circulation (stairways and elevators.)
 - .4 Prepare conceptual forensic services lab floor plans for each laboratory department/unit. (up to three refined, fully-developed concepts).
 - .5 Develop conceptual lab module(s) and overall adjacency diagram(s).
 - .6 Prepare conceptual exterior elevations. (up to three concepts).
 - .7 Provide building/site sections
 - .8 Prepare stacking diagrams.
 - .9 Prepare massing models for each concept.
 - .10 Prepare space/room data sheets based upon information gather during interview sessions. Square footage numbers will be shown for move-in day, as well as future space projections. Future projection duration to be confirmed with the City. Room data sheets shall note building utilities, equipment, casework, furniture, room finishes, special issues impacting design, adjacencies, security, etc.
 - .11 Compile design guidelines/room criteria sheets.
 - .12 Collect catalog cut-sheets of new owner-furnished equipment (laboratory and office equipment) and new equipment (Laboratory & Non-laboratory). (Inventory of existing equipment & furniture shall be prepared by others.)
 - .13 Prepare narrative for program descriptions, evidence flow report, safety/biohazards report, and site analysis report.
 - .14 Narrative covering demographics and trends summary.
 - .15 Narrative designer guidelines.
- .5 Structural
 - .1 Prepare report addressing Structural System options, foundation system options and seismic recommendations, including cost impacts.

- .2 Coordinate structural system recommendation with Geotechnical Report.
- .6 Civil
 - .1 This work will include preparation of conceptual design level exhibits, programming level, for use in design team coordination. (Civil document will be prepared based upon site survey data provided by others.)
 - .2 Site Improvements (Coordinate with City Landscape Architects on landscape design.).
- .7 Prepare Basis of Design (BOD) Report. BOD to address the following:
 - .1 Mechanical/Electrical/Plumbing/Fire Protection:
 - .1 Meet with City personnel to understand the operations, maintenance and fiscal requirements of City Building Systems. Discuss proposed systems for new TCFSD Facility.
 - .2 Meet with City's Commissioning Agent to review and discuss project requirements for commissioning, which will be performed by a 3rd party retained by the City.
 - .3 Identify potential Building Systems.
 - .4 List the most cost effective Building Systems for the new TCFSD Facility, including cost impacts.
 - .5 Building Management System options and selected system
 - .6 Identify special systems (fire alarm, public address, audio/visual, etc)
 - .7 Mechanical, Plumbing & Electrical Engineers to verify if existing off-site utilities can accommodate new TCFSD Facility needs. Coordinate point of connection with Civil Engineer.
 - .8 Lighting Design overall approach, design criteria, target illumination and luminance levels, preliminary power densities, color temperatures and switching and control design intent.
 - .2 Life Cycle Cost Analysis and study of energy savings measures to assist in the system selection.
 - .3 Security (Electronic & Hardware):
 - .1 Meet with Forensic Science Lab Staff to discuss security issues related to building and site.
 - .2 Meet with City General Services Staff to discuss and review City security requirements related to new TCFSD Facility.
 - .3 Coordinate with Lab Planning Consultant to review internal TCFSD Facility security issues and needs.
 - .4 Prepare report addressing Security System recommendations, including cost impacts.
 - .4 Acoustical & Vibration:
 - .1 Provide a report identifying vibration and acoustical requirements for each space, building and site.
 - .2 Provide comparison to previous studies related to current and future usages.
 - .3 Meet with City's TCFSD Facility staff to review and discuss acoustical and vibration issues.
 - .5 Telecommunication:
 - .1 Meet with TCFSD Facility Staff to discuss telecommunication issues.
 - .2 Meet with City General Services Staff to discuss and review City telecommunication requirements related to new TCFSD Facility.
 - .3 Prepare report addressing telecommunication system recommendations, including cost impacts.

- .6 Audio Visual:
 - .1 Meet with client representatives review proposed facility and receive criteria for function of project audio-visual system(s).
 - .2 Identify image sizes appropriate to each room size, configuration and use based on the criteria outlined by the Client for the use of the system(s).
 - .3 Provide information to client on aspects of audio-visual systems impact on architectural design, including AV Systems equipment casework/credenza/room/control room requirements (size, location, adjacencies) screen location sizes and items in public view. Provide catalog cuts for review.
- .7 Public Address System:
 - .1 Meet with client representatives review proposed facility and receive criteria for function of public address system(s).
 - .2 Provide information to Client on aspects of public address systems impacting architectural design, including public address requirements (size, head end location, adjacencies) and items in public view.
 - .3 Provide catalog cuts for review.
- .8 Parking Planning:
 - .1 Review the project's parking program provided by the client, and the City's requirements for this project as they relate to parking.
 - .2 Assist in establish the parking design criteria agreed upon by the Client to be used by the team throughout the remaining phases of the project. This may include but is not limited to: Parking stall sizes, Parking Geometrics, Drive aisle widths, ADA Criteria, Other Special Criteria furnished by the Owner, Loading and site access requirements.
 - .3 Conduct Parking Demand Analysis.
- .8 LEED
 - .1 Conduct Sustainable Charrette with owner and design team at start of programming phase.
 - .2 Prepare preliminary LEED credit checklist.
- .9 Probable Cost Estimate
 - .1 Prepare preliminary probable project cost estimate based upon program report, conceptual design and BOD selected building systems.
 - .2 Cost estimate will be prepared for each design schemes.
- .10 Client Meetings: Bi-weekly (every two weeks) HOK meeting with City project manager and TCFSD Facility representative.
- .11 Design Team Meetings: Bi-weekly Design Team meeting at HOK San Francisco office.
- .12 HOK shall perform a quality control review of documents prior to issuance to client.
- .13 Deliverables: Conceptual Design drawings, report, and probable cost estimate. Reports shall be in 8 ½" x 11" report format and drawings in 30" x 42" format. One electronic PDF copy shall be submitted to the City of San Francisco.
- .14 HOK shall submit the Conceptual Design Documents for Client's review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen (15) days following receipt of the Conceptual Design Documents. HOK shall provide written respond to Client's written comments within ten (10) days following receipt.

A3.1.4 Schematic Design Phase Services (NIC)

- .1 Based the approved conceptual design, HOK shall prepare Schematic Design Documents for Client's approval. The Schematic Design Documents will consist of drawings and other documents, including site plan, preliminary building plans, sections and elevations; and may include some combination of study models, perspective sketches, or digital modeling. Preliminary

selections of major building systems and construction materials will be noted on the drawings or described in writing.

- .2 Pre-design meeting: The design team shall meet with the owner and TCFSD Facility representative to discuss various issues of the project prior to starting the schematic design phase. (Architectural, lab designer, structural, civil, landscape, cost estimator, sustainable LEED, acoustical, mechanical and electrical to attend).
- .3 Design-Build Systems: The building mechanical, electrical, lighting design, low voltage electronic (telecom/data, electronic security and AV), plumbing and fire protection systems, exterior curtain wall system and facility signage will be completed under a design-build CM/GC approach. During the SD phase HOK's design team will develop design criteria for these systems so they can be bid at the completion of the SD phase.
 - .1 HOK shall prepare the SD level criteria package for the early core-trades and design-build components, fully coordinated with all other aspects of design, and sufficient for the purpose of soliciting design-build core trade subcontractors.
- .4 Architectural:
 - .1 Develop and present Schematic Design level site plan layout and building floor plan. Plans to indicate potential expansion areas for future.
 - .2 Develop and present Schematic Design level building exterior for the design of this project (with cost estimate of each.)
 - .3 Prepare a report identify possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, and structural systems.
 - .4 Prepare Schematic Design Drawings. Package to include:
 - .1 Site plan-showing walks, parking, site flow and required off-site features.
 - .2 Prepare single line floor plans (Identifying the various major areas, elevator cores, mechanical shafts, laboratory space layout and their relationship).
 - .3 Building sections and wall sections to dictate design intent.
 - .4 Building elevations
 - .5 Roof plans.
 - .6 Parking Garage layout.
 - .5 Prepare a chart/report comparing changes in size of each space from the final program to the final Schematic design plan.
 - .6 Update room data sheets. Itemize all requirements for each space. Show staff positions, furnishings, equipment, security requirements, electrical, telecom, phone and special needs
 - .7 Electronic rendering / perspective drawing, as determined by HOK, to convey design intent. Rendering / Perspective to be color computer generated, at 600 DPI.
 - .8 Material list (outline specifications).
 - .9 Furniture, Furnishings and related Equipment Services: HOK shall prepare preliminary report covering new and existing furniture, furnishings and related equipment – both Laboratory items and Non-Laboratory items. Existing equip & furnishing list will be based upon inventory list prepared and provided by client.
 - .10 Perform code search for proposed design (Title 24, CBC, ADA). Code search to be included in Schematic Design Report.
 - .11 Meet with City and City Building officials to review zoning and code issues.
 - .12 Meet with Planning and Building Departments to review project.(two meetings each.)
 - .13 Meet with San Francisco Fire Department to review project.
- .5 Civil:
 - .1 Prepare civil grading & drainage plan of proposed site. Coordinate with Architect and City Landscape Architect on site design.

- .2 Prepare preliminary horizontal layout locating building and site features. (Driveways and roads).
- .3 Prepare preliminary storm, sanitary & water plans.
- .4 Identify site location of all utilities (new & existing) to 5 feet outside building.
- .5 Indicate off-site requirements (new & existing) such as sidewalks, curbing, bus stops, and site lights. Coordinate with City & County utility agencies.
 - .1 Develop off-site civil engineering plans for the surrounding streets fronting project. Include demolition, coordination with utility agencies, show off-site improvements, show grading and drainage design within public right of way.
- .6 Prepare preliminary fire protection site plan. Locate fire hydrants, FDC's & PIV's.
- .7 SFPUC Storm water Management Control – Pre-application Meeting
 - .1 Coordinate with team members on a schematic level of Storm water Management Plan and set up the Pre-application
 - .2 Meet with owner's representative, design team members and the SFPUC.
- .6 Landscape & Irrigation: City & County of San Francisco Landscape Architecture department will prepare SD documents for landscape and irrigation. HOK to provide peer review and design assist for landscape and irrigation design documents.
 - .1 Landscape drawings to include site features such as planters, bollards and concrete paving.
- .7 Structural:
 - .1 Show structural system selection on plans
 - .2 Foundation
 - .3 Bay size and story heights
 - .4 Type of construction
 - .5 Preliminary frame sizes and extent of lateral bracing
 - .6 Seismic description
 - .7 Coordination with Soils Engineer for report modifications.
 - .8 Assist in the preparation of a report identifying possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, structural systems and construction delivery methods.
- .8 Mechanical:
 - .1 Update HVAC System selection (including Building Management System).
 - .2 Assist in the preparation of a report identifying possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, structural systems and construction delivery methods.
 - .3 Provide preliminary building load calculation.
 - .4 Provide preliminary meter and sewer main locations.
 - .5 Preliminary HVAC equipment layout and single line duct layout.
 - .6 Catalog cut of new HVAC equipment.
 - .7 Prepare design criteria documents plan and specification. At the end of SD phase CITY will issue mechanical system documents for Design-Build Contractor pricing.
- .9 Plumbing:
 - .1 Update plumbing system selection in report
 - .2 Assist in the preparation of a report identifying possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, structural systems and construction delivery methods.

- .3 Identify special plumbing needs and areas on plumbing plan.
 - .4 Preliminary plumbing equipment layout on plumbing plan.
 - .5 Preliminary building loads and calculations for report.
 - .6 Show Roof drain locations on plumbing plans. Coordinate with civil engineer
 - .7 Coordination with utility companies of point of connection and available service capacity. Coordinate with civil engineer.
 - .8 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue plumbing system documents for Design-Build Contractor pricing.
- .10 Electrical:
- .1 Lighting fixtures at key room/spaces, located on single line electrical plan. Prepare conceptual lighting studies and analysis.
 - .2 Assist in the preparation of a report identifying possible alternate approaches to design and construction of the project. Report to address possible exterior finishes, MEP systems, structural systems and construction delivery methods.
 - .3 Coordination with utility companies of point of connection and available service capacity.
 - .4 Finalize Electrical System selection shown on one line electrical distribution diagrams
 - .5 Probable pre-ordered equipment identified.
 - .6 Wire management system: Power, voice, and data.
 - .7 Preliminary electrical equipment schedule indicating size and capacity.
 - .8 UPS design requirements (identify equipment on UPS power).
 - .9 Provide feasibility studies that shall analyze methods of reducing electrical energy usage and summer peak electrical demand.
 - .10 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue plumbing system documents for Design-Build Contractor pricing.
- .11 Electronic Security:
- .1 Develop security diagram on single line floor plans.
 - .2 Security system selection in report.
 - .3 Meet with City Staff and TCFSD Facility Staff to update security issues.
 - .4 Prepare specifications. Coordinate with City standard specifications. Document where deviations are made to City standards.
 - .5 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue electronic security system documents for Design-Build Contractor pricing.
- .12 Telecommunications/data:
- .1 Prepare single line floor plans locating telecommunication devices and special space.
 - .2 Finalize telecommunication system selection.
 - .3 Meet with City Staff and TCFSD Facility Staff to update telecommunication issues.
 - .4 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue telecommunication/data system documents for Design-Build Contractor pricing.
- .13 Fire Protection:
- .1 Identify fire protection system(s).
 - .2 Identify special areas and fire protection system in report.
 - .3 Locate service connection point on site plans. Coordinate with civil engineer and City & County of San Francisco Fire Department.
 - .4 Identify riser location on floor plans.
 - .5 Attend meeting with City & County of San Francisco Fire Department.

- .6 Prepare design criteria documents plans and specifications. At the end of SD phase CITY will issue fire protection system documents for Design-Build Contractor pricing.
- .14 LEED:
 - .1 Analyze schematic design documents for LEED compliance.
 - .2 Produce a written report noting LEED issues pertaining to building systems such as mechanical, electrical, structural, security systems.
 - .3 Conduct sustainable design progress meeting with design team and client
 - .4 Coordinate green issues in regards to project outline specifications. Coordinate with City standard specifications.
- .15 Acoustical and Vibration:
 - .1 Prepare report identifying acoustical and vibration issues based upon schematic design documents.
 - .2 Review equipment list (Laboratory and Building Systems) and provide recommendation for noise and vibration remediation.
 - .3 Provide noise design criteria for interior spaces.
 - .4 Coordinate with structural engineer & mechanical engineer on vibration remediation issues. Prepare guidelines to address potential vibration issues.
 - .5 Conduct on-site vibration survey to determine existing ambient vibration levels.
- .16 Audio Visual:
 - .1 Coordinate with Client and other Design Team members as to requirements for audio-visual systems to be incorporated in documents by other disciplines, including at least:
 - .2 Architectural:
 - .1 Presentation Podium: Equipment enclosure, control and A/V input requirements.
 - .2 Projection screen integration with reflected ceiling and wall elevations.
 - .3 Structural: Hanging, support and restraint provisions.
 - .4 Electrical: AC main power, grounding, power conditioning,
 - .5 Lighting Design: Requirements for ambient/glare lighting control in vicinity of screens and in large public spaces.
 - .6 Provide criteria sketches for use by other disciplines of the Project Design Team.
 - .7 Prepare Design Criteria documents for Audio-visual/Video Projection system subcontract drawings in Project standard format including at least:
 - .1 Conduit, wiring and device floor plans, rcp's and elevations of major public spaces.
 - .2 System functional diagrams
 - .3 Screen and projector section views
 - .4 Equipment rack elevations
 - .5 Wiring details
 - .6 Receptacle panel details
 - .8 Provide specification Section 27 41 16 - Integrated Audio-Video Systems and Equipment in project standard format.
 - .9 At end of SD phase issue Audio Visual documents for Design-Build Contractor pricing.
- .17 Public Address System:
 - .1 Coordinate with Client and other Design Team members as to requirements for public address systems to be incorporated in documents by other disciplines.
 - .2 Prepare design criteria documents for public address system drawing. At end of SD phase issue public address documents for Design-Build Contractor pricing.

- .3 Provide specification section.
- .18 Signage Design: prepare design criteria for building identification signage and wayfinding signage. Develop options for exterior and interior signage components showing approximate size, shape and typographics. Coordinate color and material scheme with architect and owner. Incorporate required code and ADA signage.
 - .1 At end of SD phase, prepare and issue Signage Design Criteria documents for Design-Build trade contractor procurement.
- .19 Client Meetings: Bi-weekly HOK meeting with City project manager and TCFSD Facility representative.
- .20 Design Team Meetings: Bi-weekly Design Team meeting at HOK San Francisco office.
- .21 Prepare probable construction cost estimate based on selected building systems. Cost Estimate to be based on square footage cost. Cost estimate to include a preliminary statement of probable construction cost. Cost Estimate is to include a chart comparing the change in cost elements from final Program phase cost estimate to final Schematic Design phase cost estimate.
- .22 Project specifications covering material, system, and equipment. Coordinate with City requirements. HOK to document where deviations are made to City requirements.
- .23 Update BOD report narratives report by each discipline. Describing proposed design philosophy with a description of, and rationale for the following: proposed lab design & layout, proposed structural systems, types of MEP & FP equipment, electronic security systems, architectural materials and finishes, audio visual systems, public address systems, site development and landscaping. The rationale shall include initial cost, life cycle cost and life expectancy considerations.
- .24 Exterior Envelope Peer Review Report: Prepare report addressing design guidelines for slab-on-grade vapor barriers, exterior curtain wall systems, exterior walls, exterior glazing system and building roofing system.
- .25 Elevator traffic analysis: Perform elevator traffic analysis to review proposed elevator schemes and verify the selected design is appropriate. Review Elevator core and layout with architect and owner.
- .26 Update Project Schedule with critical dates identified. Project Schedule to show progress and submittal dates for documents.
- .27 HOK shall perform a quality control review of documents prior to issuance to client.
- .28 Deliverables: Schematic Design report, rendering / perspective drawing (30" x 40"), specifications, probable cost estimate in 8 1/2" x 11" format and 30" x 42" drawings. One electronic PDF copy shall be submitted to the City.
- .29 HOK shall submit the Schematic Design Documents for Client's review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen (15) days following receipt of the Schematic Design Documents. HOK shall provide written respond to Client's written comments within ten (10) days following receipt.

A3.1.5 Design Development Phase Services (NIC)

- .1 Based the approved Schematic Design Documents, HOK shall prepare Design Development Documents for Client's approval. The Design Development Documents will illustrate and describe the development of the approved Schematic Design Documents and will consist of drawings and other documents including plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, and such other elements as may be appropriate.
- .2 Architectural:
 - .1 Site plan – showing paved area, landscape areas, site furniture and features, fences, gates, vehicle parking areas and building outline. Note off-site features effecting project design.
 - .2 Building floor plans– identify rooms, wall types, firewalls, openings and primary building dimensions.
 - .3 Building Roof plan- showing roof slopes, roof top equipment, rooftop accessories and roof drainage.

- .4 Building sections and typical wall sections.
 - .5 Reflected Ceiling Plans show various ceiling types with lights, diffusers, etc. (coordinate with mechanical and electrical).
 - .6 Large scale plans – Restrooms, laboratory spaces/suites, stairs and elevator cores.
 - .7 Interior elevations of restrooms, non-laboratory spaces and casework.
 - .8 Building exterior elevations – Indicating materials, vertical dimensions and gridlines.
 - .9 Special interior and exterior details.
 - .10 Outline color schedule and material boards.
 - .11 Interior space planning for laboratory spaces.
 - .12 Casework/Finish and Equipment Schedules.
 - .13 Preliminary Finish Schedule.
 - .14 Preliminary Door and Hardware Schedule.
 - .15 Project equipment (laboratory & office equipment) Contractor Furnished and Owner Furnished.
 - .16 Update room data sheets. Itemize all requirements for each space. Show staff positions, furnishings, equipment, security requirements, electrical, telecom, phone and special needs.
 - .17 Parking garage – continue refinement of parking garage design.
- .3 Civil:
- .1 Develop site grading plan. Show preliminary site contours, improvements on-site and typical off-site frontage improvements. Indicate all benchmarks. Location of major elements relative to benchmarks, corners etc.
 - .2 Prepare storm, drainage and water plans.
 - .3 Continue to develop drainage plan (coordinated with plumbing)
 - .4 Prepare preliminary site details (driveway sections, etc.) and civil project notes.
 - .5 Off-site utility coordination, show location of all point-of-connections, including invert elevations.
 - .6 Preliminary on-site Utility layout plans.
 - .7 Preliminary fire protection site plan.
 - .8 Develop Storm Water Management Plan (SCP)
 - .1 Provide preliminary calculation for the sizes of various LIDs concepts to the team members. Provide typical LID elements sections and details.
 - .2 Gather information provided by other team members, including Architect, Plumbing Engineer and Landscape Architect on LID elements, watershed and piping system. Prepare Preliminary SCP application package and submittal to SFPUC.
- .4 Landscape & Irrigation: City & County of San Francisco Landscape Architecture department will prepare DD documents for landscape and irrigation. HOK to provide peer review and design assist for landscape and irrigation design documents, and to coordinate the work of the landscape architect with those of other architectural and engineering disciplines.
- .1 Landscape drawings to include site features such as planters, bollards and concrete paving.
- .5 Structural:
- .1 Structural floor plans showing all column, shears walls, shaft openings and stairs, etc.
 - .2 Structural roof framing plans showing primary dimensions, all framing members
 - .3 Foundation and framing grids

- .4 Typical framing section and details
- .5 All loads defined, lateral defined and major elements located
- .6 Preliminary footing, beam, column, and connection schedules
- .7 Preliminary structural member sizes, based on all typical vertical loads
- .6 Mechanical / Electrical / Plumbing / Fire Protection:
 - .1 Provide peer review for mechanical, electrical, plumbing, and fire protection drawings and specifications prepared by design-build MEP & FP engineers.
- .7 Telecommunication/data:
 - .1 Provide peer review for telecommunication/data drawings and specifications prepared by design-build telecom/data engineers.
- .8 Electronic Security System:
 - .1 Provide peer review for electronic security drawings and specifications prepared by design-build electronic security engineers.
- .9 Audio Visual:
 - .1 Provide peer review for audio/visual drawings and specifications prepared by design-build A/V engineers.
- .10 LEED:
 - .1 Coordinate green issues with project specifications.
 - .2 Review documents for LEED certification requirements.
 - .3 Prepare a life cycle cost-benefit analysis to evaluate solar, renewable & other alternate energy sources.
 - .4 Participate in energy modeling study.
 - .5 Prepare daylight modeling study.
 - .6 Produce a written report noting LEED issues pertaining to building systems such as mechanical, electrical, structural, security systems.
- .11 Acoustical and Vibration:
 - .1 Prepare report identifying acoustical and vibration issues based upon Design Development documents.
 - .2 Review equipment list (Laboratory and Building Systems) and provide recommendation for noise and vibration remediation.
 - .3 Review documents for noise design criteria for interior spaces.
 - .4 Review documents for vibration issues.
- .12 Public Address System:
 - .1 Provide peer review for public address drawings and specifications prepared by design-build low voltage electronic engineers.
- .13 Elevator Design:
 - .1 Provide detailed design arrangement for all selected vertical transportation equipment including the number, size, speed, and arrangement of the vertical transportation equipment.
 - .2 Provide design information for interface with other engineering disciplines including:
 - .1 Equipment loads
 - .2 Electrical power requirements
 - .3 Heat emissions
 - .4 Ventilation requirements
 - .5 Space requirements
 - .6 Equipment outlines

- .7 Security interface
 - .3 Provide design information for interface with related work to be accomplished by other disciplines.
 - .4 Review architectural drawings as they relate to vertical transportation equipment. Provide written comments along with advice, assistance or information on any items related to the drawings, as required by the Architect.
 - .5 Prepare a draft specification using the standard C.S.I. format. The specification will include performance criteria and establish the quality of equipment required in sufficient detail to obtain preliminary budget pricing. Performance specifications shall include reference to applicable codes and standards.
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- .14 Signage Design:
 - .1 Provide peer review for interior and exterior signage drawings and specifications prepared by design-build signage vendor.
 - .15 Preliminary probable construction cost estimate – quantity take-off based upon a building component format. Cost estimates to be prepared at 50% & Final DD. Cost Estimate is to include a chart comparing the change in cost elements from prior cost estimate.
 - .16 Client Meetings: Bi-weekly HOK meeting with County's project manager.
 - .17 Design Team Meetings: Bi-weekly Design Team meeting at HOK San Francisco office.
 - .18 HOK to meet with planning/building officials to review project design goals & code issues. HOK to document meeting minutes.
 - .19 At completion of Design Development, the design team shall attend and participate in a two-day workshop or two one-day workshops to review the project design and specifications to identify value engineering solutions.
 - .20 The Design Development Documents will also include project specifications that identify major materials and systems and establish in general their quality levels. Project specifications to include product catalog cut-sheets and samples. Design-Build contractors/engineers to provide specification for their area of responsibility.
 - .21 Update BOD report noting probable construction cost, code analysis, ADA review. Design-Build contractors/engineers to address building system such as mechanical, electrical, structural, security systems and communication network. Include in Design Development phase report.
 - .22 Exterior Envelope Peer Review Report: Update report addressing assessment of current building design for slab-on-grade vapor barriers, exterior curtain wall systems, exterior walls, exterior glazing system and building roofing system.
 - .1 Incorporate recommendations for exterior curtain wall number and type of mock-ups and testing requirements.
 - .23 Project schedule – update. Prepare Project Schedule with critical dates identified. Project Schedule to show progress and submittal dates for documents.
 - .24 HOK shall perform quality assurance/ quality control review of documents prior to issuance to client.
 - .25 Deliverables: Design Development phase report, specifications, probable cost estimate in 8 1/2" x 11" format and 30" x 42" drawings. One electronic PDF copy shall be submitted to the City of San Francisco at 50% and 100% final DD review.
 - .26 HOK shall submit the Design Development Documents for Client's review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen (15) days following receipt of the Design Development Documents. HOK shall provide written respond to Client's written comments within ten (10) days following receipt.

A3.1.6 Contract Documents Phase Services (NIC)

- .1 HOK shall incorporate into the Contract Documents the design requirements of Governmental Authorities.
- .2 Design-Build Systems: City & County of San Francisco have determined the building mechanical, electrical, lighting design, low voltage electronics (telecommunication/data, electronic security & AV), signage, plumbing and fire protection systems will be completed under a design-build CM/GC approach. During the CD phase HOK's design team will provide peer review services.

- .3 Design-Build Exterior Curtain Wall System: City & County of San Francisco have determined Exterior Curtain Wall will be completed under a design-build CM/GC approach. During the CD phase HOK shall develop contract documents for the exterior curtain wall system with design-assistance from Exterior Curtain Wall sub-contractor.
- .4 During the development of the Contract Documents, HOK shall assist Client in the development and preparation of bidding and procurement information that describes the time, place and conditions of bidding, including bidding or proposal forms. Client shall provide HOK with a copy of the Conditions of the Contract for Construction (General, Supplementary and other Conditions) for review and written acceptance of any responsibilities assigned to HOK therein. HOK shall also compile a project manual that includes the Conditions of the Contract for Construction, specifications, and bidding requirements and bid forms.
- .5 Based the approved Design Development Documents, HOK shall prepare Contract Documents for Client's approval. The Contract Documents will illustrate and describe the further development of the approved Design Development Documents. Contract Documents will consist of Drawings and Specifications setting forth in detail the quality levels of materials and systems and other requirements for permitting and construction of the Work. Contract documents shall at minimum include the following documents:
- .6 Architectural:
- .1 Site Plan
 - .2 Code Analysis & ADA analysis drawings.
 - .3 Floor Plans – showing the type and location of interior partitions, doors, openings, plumbing, and building standard items.
 - .1 All doors, windows, and special doors numbers.
 - .2 All major dimensions.
 - .3 Major Building Sections and Wall Sections.
 - .4 All built-in items.
 - .4 Roof Plans
 - .1 Roof drains & overflow drains.
 - .2 All penetrations.
 - .3 Screens or railings.
 - .4 Gutters and downspouts.
 - .5 Roof and steel slopes.
 - .5 Door Schedule:
 - .1 Door and hardware specifications and schedules showing the type, size, locations, and manufacturer of doors, hardware keying based on Owner's instruction.
 - .6 Room Finish Schedule and Color Schedule: Show all room finishes, paint and material colors and ceiling heights.
 - .7 Building Sections: Indicating all heights.
 - .8 Major Wall Sections: Indicating all heights. Indicating all finishes.
 - .9 Building Elevations
 - .1 Show all glazing types.
 - .2 Indicating all materials.
 - .3 Indicating all finishes
 - .10 Exterior Curtain Wall Details – HOK shall provide peer review & design assistance on exterior curtain wall drawings prepared by Design-build Exterior Curtain wall subcontractor.
 - .11 Exterior Details: exterior roof details, exterior details (not included in the exterior curtain wall system) and other miscellaneous details to clarify the building design.

- .12 Interior Details. HOK to prepare details for such items as major interior wall types, interior windows and doors, interior wall details and other miscellaneous details.
- .13 Interior Elevations at key rooms (Restrooms and standard casework).
- .14 Large Scale Plans – restrooms, laboratory spaces, stairs and elevator cores.
- .15 Reflected Ceiling Plans – showing the pattern and type of ceiling, ceiling heights, breaks, and window shading pockets, dimension, and location of lighting fixtures, air conditioning diffusers and any special features, such as skylights or laboratory fixtures suspended from the ceiling.
 - .1 Lighting
 - .2 Exit signs and speakers
 - .3 Diffusers
 - .4 Tile types
 - .5 All wall penetrating ceiling
 - .6 Fire sprinkler heads at key locations (Lobby)
- .16 Interior color boards.
- .17 Laboratory schedules for Casework, sink, countertops, laboratory equipment and fume hoods.
- .18 Parking Garage – include plans, building sections, park garage details and signage.
- .7 Civil:
 - .1 Continue to develop and finalize civil drawings indicating horizontal, driveway, pavement sections and on-site concrete walkways & patios (indicate finish and texture)
 - .2 Grading Plans.
 - .3 Drainage plans
 - .4 Site utilities; indicate invert elevations at all point-of-connections.
 - .5 On-site storm, sanitary and water plans.
 - .6 Prepare site fire design plan with pipe sizing, flow analysis, fire system layout, including fire hydrants, FDC's & PIV's.
 - .7 Final Off-site plans for typical frontage improvements. Coordinate with local building officials.
 - .8 Civil details & construction notes
 - .9 Provide storm drainage calculation for site.
 - .10 Final Storm water Management Plan (SCP)
 - .1 Set up and attend follow up meeting with owner's representative, design team members and SFPUC.
 - .2 Coordinate with design team members to finalize SCP design and prepare Final SCP application package and submittal, including obtaining other design consultants documentations and final SCP calculation.
- .8 Landscape & Irrigation: City & County of San Francisco Landscape Architecture department will prepare CD documents for landscape and irrigation. HOK to provide peer review and design assist for landscape and irrigation design documents.
 - .1 Landscape drawings to include site features such as planters, bollards and concrete paving.
- .9 Structural:
 - .1 Detail structural drawings showing structural systems, foundations, and calculations.
 - .2 Foundation plans
 - .3 All footing depths (input needed for elevators, sumps, depressions, etc.)

- .4 All major penetrations
- .5 Framing plans
- .6 All major members sized (input needed for elevators, stairs, ducts, etc.)
- .7 All major openings shown
- .8 Building sections
- .9 Wall sections
- .10 All schedules: foundation, beam, columns, waffle slab, etc., with general sizes shown.
- .11 Typical and special structural details.
- .10 Mechanical / Electrical / Plumbing / Fire Protection:
 - .1 Provide peer review for mechanical, electrical, plumbing, and fire protection drawings and specifications prepared by design-build MEP & FP engineers.
- .11 Telecommunication/data:
 - .1 Provide peer review for telecommunication/data drawings and specifications prepared by design-build telecommunication contractor.
- .12 Electronic Security:
 - .1 HOK to provide peer review electronic security drawings and specifications prepared by design-build electronic security sub-contractor.
 - .2 Design-build electronic security sub-contractor to coordinate security requirements with door hardware provided in division 8.
- .13 Audio Visual
 - .1 HOK to provide peer review audio visual drawings and specifications prepared by design-build low voltage electronics sub-contractor.
- .14 Public Address System
 - .1 HOK to provide peer review audio visual drawings and specifications prepared by design-build low voltage electronics sub-contractor.
- .15 LEED
 - .1 Coordinate green issues with project specifications.
 - .2 Review documents for LEED certification requirements.
 - .3 Prepare a life cycle cost-benefit analysis to evaluate solar, renewable & other alternate energy sources.
 - .4 Participate in energy modeling study.
 - .5 Prepare daylight modeling study.
 - .6 Produce a written report noting LEED issues pertaining to building systems such as mechanical, electrical, structural, security systems.
- .16 Acoustical and Vibration
 - .1 Prepare report identifying acoustical and vibration issues based upon Contract Documents. Includes review of Design Build documents for building MEP systems.
 - .2 Review equipment list (Laboratory and Building Systems) and provide updated recommendation for noise and vibration remediation.
 - .3 Review documents for noise design criteria for interior spaces.
 - .4 Review documents for vibration issues.
- .17 Elevator Design
 - .1 Review architectural, structural, mechanical, electrical design and construction documents related to vertical transportation equipment. Provide written comments, diagrams and other information required to insure coordination of systems with vertical transportation equipment. Effort will be ongoing during the construction document phase.

- .2 Prepare detailed and complete vertical transportation specifications appropriate for competitive bidding. The specification will address applicable codes, appropriate materials, representative product/model examples, minimum qualifications of bidders, system performance criteria and establish the quality of the equipment required.
- .18 Design-Build Signage: HOK's design team shall provide peer review of the signage package.
- .19 Exterior Envelope Peer Review Report: Update report addressing assessment of current building design for slab-on-grade vapor barriers, exterior curtain wall systems, exterior walls, exterior glazing system and building roofing system. Finalize specifications for exterior curtain wall number and type of mock-ups and testing requirements.
- .20 Client Meetings: Bi-weekly HOK meetings with City's project manager and TCFSD Facility representatives.
- .21 Design Team Meetings: Bi-weekly Design Team meeting at HOK San Francisco office.
- .22 Prepare probable budget – construction cost estimate for the City review and approval. Cost estimates to be prepared at 50% & 95% CD. Cost Estimate is to include a chart comparing the change in cost elements from previous cost estimate.
- .23 Specifications and finish schedules to set standards for the project to be used by contractor, installers, fabricators, and suppliers. Specifications using the Construction Specification Institute's current format listing products equivalent in quality from no fewer than three manufacturers. The City shall provide General and Supplementary Conditions of the contract and Division One of the specifications indicating General Requirements. HOK shall prepare and furnish Division One of the specifications pertaining to LEED requirements. HOK shall provide catalog cut-sheets of all specified items. Provide list of all required contractor submittals. Provide list of all required testing & inspection. Design-Build contractors/engineers to provide specification for their area of responsibility.
- .24 Update BOD report noting probable construction cost, code analysis, ADA review, Peer Review comments regarding design build building system such as mechanical, electrical, structural, security systems and communication network. Include in Contract Document Phase report.
- .25 Furniture, Furnishings and related Equipment Report: HOK shall prepare final report covering new and existing furniture, furnishings and related equipment – both Laboratory items and Non-Laboratory items. Equipment & Furnishing list will be based upon inventory list provided by client.
- .26 Project Rendering: Building rendering will be provided at the start of Contract Document phase. Rendering shall be based on the approved Design Development. Rendering shall be in electronic format, at no less than 600 DPI.
- .27 HOK shall perform a quality control review of documents prior to issuance to client.
- .28 Submission of documents to Planning and Building Departments, and Fire Marshal/City Plan Check review. HOK to meet with Building Officials prior to document plan check submission and during permit review to ensure the successful issuance of the required permit document. HOK to document meeting minutes. As agreed to by the City, and noted in the prime agreement, to be in the best interest of the Project, there may be multiple or phased submission, or permit addenda, to the Building Department.
- .29 Deliverables: Contract Document phase specifications, probable cost estimate in 8 1/2" x 11" format and 30" x 42" drawings. One electronic PDF copy shall be submitted to the City of San Francisco at 50%, 95% and 100% CD final reviews.
- .30 HOK shall submit the Contract Documents for Client's review and written approval or further comment. Client will strive to provide its written approval or comments within fifteen (15) days following receipt of the Contract Documents. HOK shall provide written response to Client's written comments within seven (7) days following receipt.
- A3.1.7 Bidding or Negotiation Phase Services (NIC)**
- .1 HOK shall assist Client and CM/GC in establishing a list of prospective trade subcontractors. Following Client's approval of the Contract Documents, HOK shall assist Client in (1) obtaining either competitive bids or negotiated proposals; (2) confirming responsiveness of bids or proposals; (3) determining the successful bid or proposal, if any; and (4) awarding contracts for construction.
- .2 Assist the City in modifications, clarifications or additions to Owner's Standard Invitation to Bid, Information of Bidders, and Proposal Form, based upon City provided data.

- .3 Prepare addenda and clarification documents, interpret drawings and specifications where required to clarify the intent of the construction documents during the bidding phase.
- .4 Review responses to Request for Qualification for all trade packages.
- .5 Participate at Value Engineering sessions to evaluate VE proposals from trade subcontractor bidders.
- .6 Participate in pre-bid conferences and attend bid openings.
- .7 Prior to start of construction and upon issuance of the final permit addendum, HOK shall prepare "Conformed Set" of documents, and as described in A/E Design Services agreement.

A3.1.8 Construction Phase Services (NIC)

- .1 **General.** HOK shall provide administration of the Contract between Client and the Contractor as stated in prime agreement and supplemented in this Article. HOK's responsibility to provide Construction Phase Services commences with the award of the Contract for Construction and terminates on the date HOK issues the final Certificate for Payment.
- .2 **Authority.** HOK shall advise and consult with Client during the Construction Phase Services. HOK shall have authority to act on behalf of Client only to the extent provided in this Agreement. HOK shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, nor will HOK be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. HOK shall be responsible for HOK's negligent acts or omissions, but will not have control over or charge of, and will not be responsible for, acts or omissions of the Contractor or of any other persons or entities performing portions of the Work.
- .3 **Project Site Visits.** HOK shall visit the Project Site to become generally familiar with the progress and quality of the portion of the Work completed, and to determine, in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. On the basis of the site visits HOK shall keep Client reasonably informed about the progress and quality of the portion of the Work completed, and report to Client known: (1) deviations from the Contract Documents; (2) deviations from the most recent construction schedule submitted by the Contractor; and (3) defects and deficiencies observed in the Work.
- .4 **Non-conforming Work.** HOK shall advise the Client when it is necessary to reject Work that does not conform to the Contract Documents. Whenever HOK considers it necessary or advisable, HOK shall have the authority to require inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed or completed. Neither this authority of HOK nor a decision made in good faith either to exercise or not to exercise such authority will give rise to a duty or responsibility of HOK to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees or other persons or entities performing portions of the Work.
- .5 **Interpret Contract Documents.** HOK shall interpret and decide matters concerning the requirements of, the Contract Documents on written request of either Client or Contractor. HOK's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of HOK shall be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, HOK shall endeavor to secure faithful performance by both Client and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.
- .6 **Submittals.** All submittals shall be transmitted electronically to HOK. In accordance with Prime Agreement and City-approved submittal schedule, HOK shall review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples (collectively "Submittals") as follows:
 - .1 Submittals shall be reviewed and returned to the CM/GC within 21 calendar days. HOK's action in reviewing submittals will be taken in accordance with the approved submittal schedule or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in HOK's professional judgment to permit adequate review. HOK's will review each Submittal after the Contractor provides written confirmation that it conforms to: (1) the requirements of the Contract Documents (or reflects approved deviations therefrom); (2) existing field conditions; and (3) other

conditions that affect incorporation of the Submittal into the Work. Each review of a Submittal beyond the number specified in this Section is an Additional Service.

- .2 HOK shall review each Submittal according to the Architect's Standard of Care, only for the design intent. HOK shall review each Submittal only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. HOK's review will not constitute approval of safety precautions or, unless otherwise specifically stated by HOK, of any construction means, methods, techniques, sequences or procedures. HOK's approval of a specific item will not indicate approval of an assembly of which the item is a component.
- .3 If the Contract Documents specifically require the Contractor to provide professional design services or certifications by a design professional related to systems, materials or equipment, HOK shall specify the appropriate performance and design criteria that such services must satisfy. HOK shall review shop Drawings and other submittals related to the Work designed or certified by the design professional retained by the Contractor that bear such professional's seal and signature when submitted to HOK. HOK shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals.
- .4 HOK shall maintain a record of submittals and copies of submittals supplied by the Contractor in accordance with the requirements of the Contract Documents.
- .7 Requests for Information. HOK shall review properly prepared, timely requests by the Contractor for additional information about the Contract Documents ("RFI"). A properly prepared RFI about the Contract Documents will be in a form prepared or approved by the City and HOK and will include a detailed written statement that indicates the specific Drawings or Specifications in need of clarification and the nature of the clarification requested. HOK may provide additional requirements for RFIs in the Contract Documents and may return without response any request that does not reasonably comply with the requirements stated in this Agreement and the Contract Documents. HOK's response to RFIs will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, HOK shall prepare and issue supplemental Drawings and Specifications in response to RFIs.
- .8 Changes in the Work shall be addressed as noted in the Prime Agreement.
- .9 Change Order Review: assist the City with the review of proposed change orders submitted by the contractor, by carefully reviewing the justification for merit of the change, the quantity of work, and reasonableness of the proposed material and labor costs.
- .10 Project Completion. HOK shall: (1) conduct on-site observation trips to determine the date or dates of Substantial Completion and the date of final completion; (2) issue Certificates of Substantial Completion; (3) receive from the Contractor and forward to Client, for Client's review and records, written warranties and related documents required by the Contract Documents and assembled by the Contractor; and (4) issue a final Certificate for Payment based upon a final inspection indicating the Work complies with the requirements of the Contract Documents. HOK's inspections will be conducted with Client to check conformance of the Work with the requirements of the Contract Documents and to verify the accuracy and completeness of the list submitted by the Contractor of Work to be completed or corrected. When the Work is found to be substantially complete, HOK shall inform Client about the balance of the Cost of the Work remaining to be paid the Contractor, including the amount to be retained from the Cost of the Work, if any, for final completion or correction of the Work. HOK shall forward to Client the following information received from the Contractor: (a) consent of surety or sureties, if any, to reduction in or partial release of retainage or the making of final payment; (b) affidavits, receipts, releases and waivers of liens or bonds indemnifying Client against liens; and (c) any other documentation required of the Contractor under the Contract Documents.
- .11 Record Drawings: Prepare a set of reproducible record drawings showing significant changes in the Work made during construction based on marked-up prints, drawings and other data furnished by the Contractor to HOK. (Refer to Article 6.2.8 of the A/E Design Services Agreement)
- .12 Deliverables: Updated Exterior and interior color schedule,
- .13 Warranty Phase: **(NIC)** Refer to Article 6.3 of the A/E Design Services agreement:
- .14

A3.2 "Additional Services" are services HOK and/or its Subconsultants are qualified to perform, but are not specifically identified as Basic Services or Excluded Services in this Exhibit. HOK shall perform Additional

Services if requested by the Client or if otherwise required for the Project. Upon recognizing the need to perform the following Additional Services, HOK shall notify Client with reasonable promptness and explain the facts and circumstances giving rise to the need. Additional Services include, but are not limited to, the following:

- .1 Refer to Article 7 "ADDITIONAL SERVICES" in A/E Design Services Agreement.
- .2 Final presentation models.
- .3 Services required to revise Drawings, Specifications or other documents necessitated by:
 - .1 A change in the Project Information, previous instructions of the Client or approvals given by the Client;
 - .2 Revisions of Contract Documents due to the enactment or revision of codes, laws or regulations after completion of the Design Development documents;
 - .3 Client's failure to provide timely decisions, approvals or information;
 - .4 A substantive scope of work change in the Project after completion of schematic design phase
- .4 Services of design consultants other than the Basic Services performed by the Sub consultants identified in the Project Information.
- .5 Modification to contract documents due to inaccurate information (drawings or other documents) provided by the client.
- .6 Services related to assistance in the utilization of equipment or systems such as testing, adjusting and balancing, initial start-up, preparation of operation maintenance manuals, training personnel for operation and maintenance, and consultation during operation.
- .7 Providing services designated in other parts of the Prime Agreement as Additional Services.

A3.3 "Excluded Services" are not required of HOK or its Subconsultants, unless otherwise agreed to in writing by HOK and Client. Excluded Services consist of any service outside of HOK's expertise and/or not ordinarily furnished in accordance with generally accepted practices of other design professionals performing services similar to those under this Agreement. Examples of Excluded Services include the following:

- .1 Services related to the detection, removal, disposal or otherwise rendering harmless Hazardous Materials.
- .2 Services related to geotechnical engineering or soil analysis.
- .3 Permitting Fees.
- .4 Detailed inventory of existing laboratory equipment, per agreement with city services to be performed by others.
- .5 Detailed inventory of existing Furniture, Fixtures & Equipment, per agreement with city services to be performed by others.
- .6 Engineering of off-site utilities.
- .7 Chemical inventory and analysis.
- .8 Alternate site studies.

A4.0 SCHEDULE

"Schedule" is the time period(s) for performing the Basic Services as follows:

Refer to Attachment 1 - Schedule of Services

[END OF EXHIBIT-A]

Attachment 4 – BIM Management Plan & Delivery Matrix



Design Team Project Execution Plan

*City/County of San Francisco Traffic Company
Division & Forensic Science Division Laboratory*

Current version date: 09-01-2015

Revisions		
1	2015-01-27	Draft for internal HOK review.
2	2015-02-20	Draft for Project Team Review.
3	2015-03-25	Issued as exhibit to contract.
4	2015-04-20	Issued revised exhibit for contract inclusion
5	2015-05-29	Issued Final to County
6	2015-09-01	Issued Final to City – Phase 1 Contract

NOTE: During the life of the Project, changes to the software versions listed within this document must be coordinated with and agreed to by all BIM Managers/Coordinators involved in the Project.

Template: BTM01-PxP . Template version: 3.0

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BTM01-PXP (PROJECT EXECUTION PLAN) CITY/COUNTY OF SAN FRANCISCO TRAFFIC
COMPANY DIVISION & FORENSIC SCIENCE DIVISION LABORATORY**Project Execution Plan Overview**

This Project Execution Plan ("PxP") describes the design team process for the project and includes key information regarding the project goals, schedule, deliverables, building information model ("BIM") platform, supporting tools, and responsibilities of team members to execute the work. The PxP is an organizational tool for Project planning to be used by the "Project Leaders" who include: HOK and Subconsultant Project Managers, HOK and Subconsultant Project Designers, HOK Project Architects, HOK and/or Subconsultant Project Engineers HOK and Subconsultant BIM Coordinators and the BIM Manager.

Except to the extent otherwise provided in the HOK/Client Agreement ("Prime Agreement"), BIM data is not a contract deliverable. The terms used in this PxP have the same meaning as those assigned in the Prime Agreement governing the Project.

NOTE: During the life of the Project, changes to the software versions listed within this document must be coordinated with and agreed to by all BIM Managers/Coordinators involved in the Project.

PxP Development/Presentation Schedule

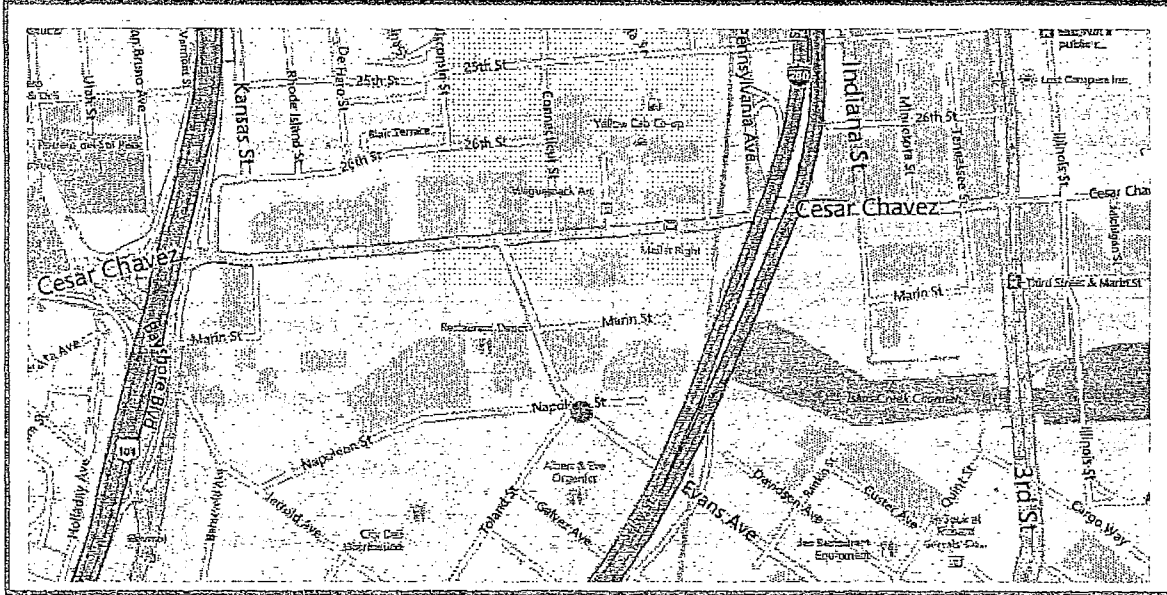
<u>Meeting Type</u>	<u>Project Stage</u>	<u>Date</u>	<u>Participants</u>	<u>Location</u>
BIM Requirements Kick-Off	Pre-Design	11/13/2015	All project stakeholders	HOK San Francisco
Project Execution Plan Demonstration (beginning of phase)	Schematic Design	NIC	All project stakeholders	HOK San Francisco/WebEx
	Design Development	NIC	All project stakeholders	HOK San Francisco/WebEx
	Construction Documents	NIC	All project stakeholders	HOK San Francisco/WebEx
Project Execution Plan Lessons Learned (end of phase)	Schematic Design	NIC	PIC, PM, PD, PA, BIM Coordinator, BIM Manager	HOK San Francisco
	Design Development	NIC	PIC, PM, PD, PA, BIM Coordinator, BIM Manager	HOK San Francisco

Project Summary & Goals

PROJECT LOCATION AND ADDRESS

Project Address 1994 Evans Avenue, San Francisco, California.

(<http://www.bing.com/maps/default.aspx?q=1994+Evans+Ave%2c+San+Francisco%2c+California%2c+United+States&mkt=en&FORM=HDRSC4#Y3A9MzcuNzQ3MTY5fi0xMjluMzk1NzQ0Jmx2bD0xNiZzdHk9ciZ0b0t0IN0iIMjJXZWxjb211UGFuZwXUjYXNrJT10JT10MSUyMiUzQW51bGwlnOQ=>)



PROJECT NUMBERS

Description	Number
Client Contract Number	TBD
Client Task Order	TBD
Project Number (HOK)	14.04024.00

PROJECT DESCRIPTION

New 107,000 gross square foot four-story building to house City/County of San Francisco Police Department's Traffic Company Division & Forensic Services Division Laboratory.

The new facility will be located at 1994 Evans Avenue on a site located at the southeast corner of Evans Avenue & Toland Street in San Francisco, California. The site is approximately 2.28 acres.

CONTRACT TYPE / DELIVERY METHOD

The project is Construction Manager/General Contractor method of delivery, with Design/Build delivery of mechanical, electrical, plumbing and building envelope core trades.

PROJECT DELIVERABLES PLAN

1. Program Validation

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COMPANY DIVISION & FORENSIC SCIENCE DIVISION LABORATORY

2. Program Validation Report (in 8-1/2" x 11" report format.) One electronic PDF copy shall be submitted to the City/County of San Francisco. HOK to provide written response to Owner review comments.
3. Conceptual Design: Conceptual Design drawings, Basis of Design report and probable construction cost estimate. (in 8 1/2" x 11" report format and 30" x 42" drawings.) One electronic PDF copy shall be submitted to the City/County of San Francisco. HOK to provide written response to Owner review comments.
4. Schematic Design: NIC
5. Design Development: NIC
6. Contract Documents: NIC
7. Bidding and Negotiation: NIC
8. Construction Phase: NIC
9. Project Schedule

<u>Project Phase / Milestone</u>	<u>Estimated Start Date</u>	<u>Estimated Completion</u>
Programming Validation	2015-09-07	2015-10-23
Concept Design	2015-11-16	2016-03-04
Schematic Design	NIC	NIC
Design Development	NIC	NIC
Construction Documents	NIC	NIC
Bidding	NIC	NIC
Construction	NIC	NIC
Warranty Period	NIC	NIC

CONSULTANTS

<u>Company</u>	<u>Location</u>	<u>Discipline or Service</u>
A.R. Sanchez-Corea & Associates Inc.	301 Junipero Serra Blvd., Suite 270 San Francisco, CA 94127	ADA Code Consultant
Allana Buick & Bers, Inc.	990 Commercial St. Palo Alto, CA 94303	Waterproofing, Roofing & Curtain Wall Peer Review
Bennie Del Re	Modesto, CA.	ASCLAD Advisor
Collin Gordon & Associates	150 N. Hill Drive, Suite 15 Brisbane, CA 94005	Vibration Engineering
Cumming Construction Management	475 Sansome Street, Suite 520 San Francisco, CA 94111	Cost Estimating
HOK	One Bush Street, Suite 200 San Francisco, CA 94104	Security Hardware
HOK	One Bush Street, Suite 200 San Francisco, CA 94104	LEED Documentation
HOK Engineering	One Bush Street, Suite 200 San Francisco, CA 94104	Peer Review – Mechanical, Plumbing, Electrical and Fire Protection
HOK	Canal House, 3223 Grace Street, N.W. Washington, DC 20007	Laboratory Planning

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COMPANY DIVISION & FORENSIC SCIENCE DIVISION LABORATORY

<u>Company</u>	<u>Location</u>	<u>Discipline or Service</u>
JS Nolan + Associates	601 4th Street, Suite 115 San Francisco, CA 94107	Lighting Design
Kate Keating Associates, Inc.	1045 Sansome Street, Ste. 202 San Francisco, CA 94111	Signage Consultant
MEI Architects	239 9th Street San Francisco, CA 94103	Associate Architect
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Mechanical Engineers
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Electrical Engineers
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Plumbing Engineers
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Fire Protection Engineer
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Energy Modeling
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	Audio Visual
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	IT
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	Security Electronics
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	Acoustics & Noise Engineer
SOHA Engineers	48 Colin P. Kelly Jr. Street San Francisco, CA 94107	Structural Engineer
Syska Hennessy Group	425 California Street, Suite 700 San Francisco, CA 94104	Vertical Transportation
Telamon Engineering Consultants Inc.	855 Folsom Street, Unit 142 San Francisco, CA 94107	Civil Engineer
The Fire Consultants	1981 North Broadway, Suite 400 Walnut Creek, CA. 94596	Building Code Consultant
Watry Design Inc.	100 Century Center Court, Suite 600 San Jose, CA 95112	Parking Design

BIM MANAGERS / COORDINATORS

<u>Organization</u>	<u>Name</u>	<u>Location</u>	<u>Email</u>	<u>Phone</u>
Cumming Construction Management	Nick Mata	475 Sansome Street, Suite 520 San Francisco, CA 94111	nmata@ccorpusa.com	415-748-3093
HOK	Cesar Escalante	1 Bush Street Suite: 200 San Francisco, CA 94104	cesar.escalante@hok.com	415-356-8627
HOK	Larry Lane	1 Bush Street Suite: 200	larry.lane@hok.com	415-356-8747

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<u>Organization</u>	<u>Name</u>	<u>Location</u>	<u>Email</u>	<u>Phone</u>
		San Francisco, CA 94104		
JS Nolan + Associates	Janet Nolan	601 4th Street, Suite 115 San Francisco, CA 94107	jnolan@jsnald.com	415-618-0101
Kate Keating Associates, Inc.	Julia Vogel	1045 Sansome Street, Ste. 202 San Francisco, CA 94111	julie@kkainc.com	415-773-1000
MEI Architects	Steven J. Juergens	239 9th Street San Francisco, CA 94103	SJuergens@meiarchitects.com	415-703-0328
R.G. Vanderweil Engineers	Gavin Barbosa	274 Summer Street Boston, MA 02210	gbarbosa@vanderweil.com	617-556-9387
Smith, Fause & McDonald Inc.	Alfred Calado	351 8th Street San Francisco, CA 94103	alfred@sfmi.com	415-255-9140
SOHA Engineers	Frank M Espino	48 Colin P. Kelly Jr. Street San Francisco, CA 94107	fespino@soha.com	415-989-9900
Syska Hennessy Group	John Moran	425 California Street, Suite 700 San Francisco, CA 94104	Jmoran@syska.com	415-288-9060
Telamon Engineering Consultants Inc.	Doug Zuuring	855 Folsom Street, Unit 142 San Francisco, CA 94107	doug.z@telamoninc.com	415-837-1336
Watry Design Inc.	Taylor Kim	100 Century Center Court, Suite 600 San Jose, CA 95112	tkim@watrydesign.com	408-392-7900

SPECIAL PROJECT GOALS

Special Project goals of the Client that may not be included as part of Basic Services are:

<u>Priority</u>	<u>Goal Description</u>	<u>Proposed BIM Uses</u>
	Utilize BIM as a tool for project coordination and the reduction of change orders. (Paraphrased from the RFQ)	

CLIENT BIM REQUIREMENTS

EDITOR'S NOTE: If a client provides BIM standards or requirements, indicate the document reference here or cite a few key requirements, but do not copy/paste the entire requirements. If there are no client BIM requirements, simply enter: No client BIM requirements have been provided.

1.1 DEFINITIONS

- 1.1.1 BIM means a Building Information Model (BIM) that is a digital representation of physical and functional characteristics of a facility. As such it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life-cycle from inception onward.
- 1.1.2 Design BIM means a Building Information Model developed and maintained by the ARCHITECT for the purpose of developing the design.
- 1.1.3 CM BIM means a Building Information Model developed and maintained by the CM/GC as a tool to support collaboration and construction management.
- 1.1.4 As-Planned BIM means a Building Information Model that is updated through-out the project design phases to reflect changes in the design.
- 1.1.5 As-Built BIM means a Building Information Model that reflects the Project as constructed.

- 1.2 ARCHITECT'S BASIC SERVICES / GENERAL PROVISIONS
 - 1.2.1 The ARCHITECT shall develop, manage, and maintain multi-dimensional design BIM's and reports, integrating information from engineering disciplines to collaborate and fully coordinate the design and construction features. The ARCHITECT shall provide such models to the CM/GC for purposes of verifying constructability, compatibility, and compliance with design intent. The ARCHITECT shall consult with the CM/GC and provide the CM/GC an opportunity to review and comment upon all designs, drawings, models, and other materials developed by the ARCHITECT. The ARCHITECT shall incorporate into the Design BIM and Construction Documents constructability refinements resulting from the interactive collaboration with the CM/GC including accepted value engineering proposals. At the earliest moment the CITY, ARCHITECT, and CM/GC shall develop and execute BIM Management Plan and BIM Delivery Matrix (Attachment 4) based on the AIA E 202 BIM Protocol Exhibit and Model Element Table include in Appendix D, which will be used to specify the level of detail required in the Design, CM, and As-Built BIMs) and the system development level at agreed upon milestones. Level of Development for Design BIM shall in no case exceed LOD 300. The ARCHITECT is NOT expected to prepare stand alone Construction Documents and Specifications for each trade package. While the CM/GC is responsible for preparing the trade packages, the ARCHITECT will cooperate with the CM/GC and provide design assistance and coordination that is required to timely prepare the trade packages and subcontracts for bid and/or negotiation and award.
 - 1.2.2 The CM/GC will develop, manage and maintain a multi-dimensional CM BIM or BIM's during construction to collaborate with the ARCHITECT. The CM/GC shall utilize the CM BIM(s) to verify constructability and to develop cost estimates, sequencing plans, and schedule. The CM/GC shall consult with the ARCHITECT to review and comment upon designs, drawings, models, and other materials developed by the ARCHITECT.
- 1.3 DESIGNATION OF KEY EMPLOYEES AND CONSULTANTS
 - 1.3.1 COORDINATION OF DESIGN TEAM

Commensurate with the standard of care, the ARCHITECT shall coordinate its work with the work of all of its consultants to produce comprehensive, complete, coordinated and accurate drawings and specifications. The ARCHITECT shall use and manage BIM applications and methods for all portions of the Project.
 - 1.3.2 COORDINATION WITH CM/GC AND ITS SUBCONTRACTORS

The ARCHITECT shall coordinate its work with the CM/GC and its subcontractors, and collaborate with each of them in a manner consistent with the Construction Manager/General Contractor Mode of contracting as defined herein. The ARCHITECT shall use and manage BIM applications and methods as an integral part of this effort. The ARCHITECT shall participate in meetings and workshops with the CM/GC and its team for purposes of design coordination and design review for accuracy, constructability, and value engineering.
 - 1.3.3 The following checklist will be used to track BIM use through-out the project.

<u>BIM Use</u>	<u>Responsible Party</u>	<u>Resources</u>	<u>Experience</u>	<u>Notes</u>	<u>Proceed</u>
Program Validation	Architect				
Design Authoring (Design BIM)	Architect and Sub-Consultants				
3D Coordination prior to permitting approval.	Architect and Sub-Consultants				
3D Coordination-post permitting approval.	CM/GC				
Record Modeling (As-Built BIM)	CM/GC				
CM BIM	CM/GC				

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BIM USE	As-Planned BIM	Architect and Sub-Consultants				
	Sustainable Integration	Architect				
	Sustainability Evaluation	Architect and Sub-consultants				
	Structural Analysis	Structural Engineer				
	Existing Conditions Modeling- prior to permitting approval.	Architect and Sub-consultants				
	Existing Conditions Modeling- post permitting.	CM/GC				
	Cost Estimation- prior to permitting approval.	Cost Estimating				
	Cost Estimation- prior to permitting approval.	CM/GC				

ANALYSIS

Select sections of this document to be included:

<input checked="" type="checkbox"/> Program Validation	<input checked="" type="checkbox"/> Design Authoring	<input checked="" type="checkbox"/> 3D Coordination
<input checked="" type="checkbox"/> Sustainability	<input checked="" type="checkbox"/> Energy	<input checked="" type="checkbox"/> Sustainability Evaluation (LEED)
<input checked="" type="checkbox"/> Structural Analysis	<input checked="" type="checkbox"/> Existing Conditions Modeling	<input checked="" type="checkbox"/> Cost Estimation
<input checked="" type="checkbox"/> Phase Planning (4D)	<input checked="" type="checkbox"/> Record Modeling	<input checked="" type="checkbox"/> Remote Applications

[End of Section]

Project Process Overview

This section will provide an overview of the BIM uses selected for implementation on the Project.

IMPLEMENTED BIM USES

In the following table, indicate the BIM uses selected for implementation *after a BIM Use Analysis has been completed.*

<u>Phase</u>	<u>BIM Use</u>	<u>Responsible Parties</u>
Concept Design	Program Validation	Architect, Laboratory Planning
	Design Authoring (Design BIM)*	Architect, Laboratory Planning, Civil Engineer, Transportation Engineer, Parking Design
Schematic Design (NIC)	Program Validation	Architect, Laboratory Planning
	Design Authoring (Design BIM)*	Architect, Structural Engineer, Mechanical Engineer, Electrical Engineer, Plumbing Engineer, Fire Protection Engineer, Civil Engineer, , AV, IT, Security Electronics, Vertical Transportation, Parking Design
	Energy Analysis	Architect, Mechanical Engineer, Sustainability leaders
	3D Coordination*	Architect, Laboratory Planning, Structural Engineer, Mechanical Engineer, Electrical Engineer, Plumbing Engineer, Fire Protection Engineer, Civil Engineer,, AV, IT, Security Electronics, Vertical Transportation, Parking Design
	Structural Analysis	Structural Engineer
Design Development (NIC)	Program Validation	Architect, Laboratory Planning
	Design Authoring (Design BIM)*	Architect, Laboratory Planning, Structural Engineer, Mechanical Engineer, Electrical Engineer, Plumbing Engineer, Fire Protection Engineer, Civil Engineer,, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
	Energy Analysis	Architect, Mechanical Engineer, Sustainability leaders
	3D Coordination	Architect, Laboratory Planning, Structural Engineer, Mechanical Engineer, Electrical Engineer, Plumbing Engineer, Fire Protection Engineer, Civil Engineer, , AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage

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<u>Phase</u>	<u>BIM Use</u>	<u>Responsible Parties</u>
Construction Documents (NIC)	Design Authoring (Design BIM)*	Architect, Laboratory Planning, Structural Engineer, Design-build Mechanical Engineer, Design-build Electrical Engineer, Design-build Plumbing Engineer, Design-build Fire Protection Engineer, Civil Engineer, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
	Energy Analysis	Architect, Mechanical Engineer, Sustainability leaders
	3D Coordination	Architect, Laboratory Planning, Structural Engineer, Design-build Mechanical Engineer, Design-build Electrical Engineer, Design-build Plumbing Engineer, Design-build Fire Protection Engineer, Civil Engineer, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
Conformed Set (NIC)	Design Authoring (Design BIM)*	Architect, Laboratory Planning, Structural Engineer, Design-build Mechanical Engineer, Design-build Electrical Engineer, Design-build Plumbing Engineer, Design-build Fire Protection Engineer, Civil Engineer, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
Construction Administration** (NIC)	Record Modeling (As-Built BIM)	CM/GC
	As-Planned BIM	Architect, Laboratory Planning, Structural Engineer, Design-build Mechanical Engineer, Design-build Electrical Engineer, Design-build Plumbing Engineer, Design-build Fire Protection Engineer, Civil Engineer, AV, IT, Security Electronics, Vertical Transportation, Parking Design, Lighting Design, Signage
	CM BIM	CM/GC

* - These BIM uses are part of HOK's Basic Services unless otherwise noted. Design-Build engineers at CD phase and later phases are contracted to CM/GC.

** - BIM uses in construction and operation of the Project are only listed here if they are dependent on BIM uses implemented by the Design Team.

BIM USE WORKFLOWS

Process maps provide a valuable overview of the timing and specific work flows of each BIM use. The Level 1 process map is intended to be an executive summary of the entire project timeline and will indicate when the selected BIM strategies are to be implemented. The Level 2 process maps (one map for each BIM strategy) provide a detailed overview of the input, work flow, and intended results of the respective BIM strategy.

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The Project Leaders will review and edit the template process maps and include image exports of each map in the following document appendices:

- Appendix B: Level 1 Process Map (overview of all BIM uses for Project)
- Appendix C: Level 2 Process Maps (detailed processes for each BIM use)

PROJECT DELIVERABLES PROCESS

BIM files shall be submitted as outlines in the Prime Agreement. HOK will be the lead organizer for document-based Project Deliverables. All document deliverables shall be transmitted to HOK in the format(s) listed below:

Format of Document Deliverables

Drawings/Sheets: Provide individual PDF files for each sheet. The files should be named by the sheet number and sheet name, for example "A201A-FLOOR PLAN LEVEL 1 PART A", "E301-LIGHTING PLAN LEVEL 1", "S705-STEEL DETAILS" etc. The PDF files should be full size (30" x 42") and should include electronic stamps and signatures in the title block. Files should be vector based, flattened and have optical character recognition. Raster based files are not acceptable. From the point of initial submittal for AHJ approval and/or bidding and negotiation all changes to the drawings should be indicated with clouds and deltas. The Architect will combine all of the individual files for each discipline and collate the drawing sets.

Specifications: Provide individual PDF (.pdf) files and word (.doc) files for each section. The files should be named by the section number and section name, for example "07 21 00 – Thermal Insulation", "08 80 00 - Glazing", "09 51 13 – Acoustical Panel Ceilings" etc. Sections are to include all cut-sheets, schedules attachments, etc; these are not to be provided separately. Add a blank page to each section with an odd number of pages so that each section has an even number of pages. Sections with an even number of pages allow for the sections to be printed double sided. From the point of initial submittal for AHJ approval and/or bidding and negotiation all changes to the specifications should be clearly indicated with additions underlined and deletions with a ~~strike through~~. The Architect will combine all of the individual files for each discipline and collate the specifications.

Reports: Provide individual PDF (.pdf) files and word (.doc) files for each report or section. Report format shall be based upon 8 1/2" x 11" paper size. Drawings included in reports shall be 11" x 17" format.

CAD Backgrounds: DWG (AutoCAD R2012). The files should be named by the sheet number, for example "A201A", "E301", "S705" etc.

Bulletin or Addenda: Provide Please provide a written narrative of all of the changes to the drawings and specifications using the word file (.doc) template document. The narrative for drawings changes are required to identify the drawing sheet number, name and written description of the changes for drawings that are added, deleted and/ or modified. Complete sentences written in the past tense is to be used for the descriptions. The narrative for specification changes are to identify the section name and number that are added, deleted and/ or modified. The Architect will combine all of the individual narratives into a complete narrative.

The aforementioned Deliverables shall be transmitted to Architect no later than five (5) days prior to any Project milestone deadline.

Requirements for CAD Data Deliverables

CAD Deliverables will be exported from BIM data and will adhere to *US National CAD Standards, Version 4*.

Floor plan backgrounds will be exported from specifically designated plan views (not sheet views) using the *Shared* coordinate system basis.

Naming convention for floor plan backgrounds:

FLOOR PLAN – LEVEL 1

View settings for floor plan backgrounds:

TBD

Format of BIM Data Deliverables

Provide Revit 2015 models, or current version utilized by the City and the Architect, to the project team on a weekly basis and at every milestone deliverable.

QUALITY CONTROL OVERVIEW

Refer to Attachment 5 of the Prime Agreement.

QUALITY CONTROL SCHEDULE

Refer to Attachment 5 of the Prime Agreement.

COMMUNICATION AND DATA PROCEDURES

HOK's Info Exchange site will be the main medium through which all project design files will be transmitted. All external team members will receive a user account for Info Exchange access. Design files are NOT to be transmitted as email attachments.

HOK Info Exchange login site: <https://infoexchange.hok.com>

Newforma training resources: http://www.newforma.com/News--Resources/How-To_Resources.aspx

[End of Section]

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Program Validation

For more information: <http://bim.psu.edu/Uses/Programming.aspx>

ORGANIZATIONAL ROLES / STAFFING FOR PROGRAMMING (VALIDATION)

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>
HOK (Lead)	One Bush Street, Suite 200 San Francisco, CA 94104	James Aguilar
HOK	Canal House, 3223 Grace Street N.W. Washington, DC 20007	Tim O'Connell

(Full contact information can be found in [BIM Managers/Coordinators list](#))

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
ALL	dRofus (view User Guide) (Download client application)	1.3.9

Programming Database/Server Information

Server: drofus.hok.com Database: << enter database name here >>

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Excel to dRofus	XLS/XLSX	Information to be organized into unique rows to allow for automated dRofus import. See HOK BIM Support site for additional instructions.

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

PROGRAMMING SCHEDULE

<u>Action</u>	<u>Frequency or Date</u>	<u>Participants</u>	<u>Location</u>
Visioning Session	Refer to Attachment 1	Stakeholders & Design Team	HOK- San Francisco
Programming Workshops	Refer to Attachment 1	Stakeholder Groups & Design Team	City Department Offices
Program validation	(see QC schedule – Attachment 5)	HOK	HOK

QUALITY CONTROL

Spatial Validation

The net area of designed spaces shall be within +/- 5% of the required area

Furniture & Equipment Validation

SCOPE OF WORK SHALL BE AS DEFINED IN PRIME AGREEMENT ARTICLE 5 AND ATTACHMENT 3. PROGRAM PARAMETERS

The following parameters shall be coordinated between the Programming database and the Design Authoring models:

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<u>Parameter Name</u>	<u>dRofus Attribute</u>	<u>Model Category(ies)</u>	<u>Format</u>	<u>Source</u>
RoomID	Room ID	Rooms	Integer	Revit == dRofus
Area	Designed Area	Rooms	Area (square feet)	Revit → dRofus
Program Area	Program Area	Rooms	Area (square feet)	Revit ← dRofus
Name	Room Name	Rooms	Text	Revit ← dRofus
Number	User room no.	Rooms	Text	Revit → dRofus
Comments	Note	Rooms	Text	Revit ← dRofus
FF&E parameters				
Article ID	article_id	Furniture, Equipment, Specialty Equipment	Integer	Revit == dRofus
Family Name + Type	BIM ID		Text	Revit → dRofus
Family Name	Name		Text	Revit → dRofus

[End of Section]

Design Authoring

Definition: A process in which 3D software is used to develop a Building Information Model based on criteria that are important to the translation of the building's design. Authoring tools create models while audit and analysis tools study or add to the richness of information in a model. Design authoring tools are a first step towards BIM and the key is connecting the 3D model with various data from other sources.

All design team organizations listed below are responsible for providing accurately modeled elements representing the respective scope of work according to the Project's Model Element Table (Appendix D). **Any 2D drawings, details, schedules, or CAD backgrounds are to be extracted from the BIM platform – not drafted in CAD software.**

Each design team member is to model all of the components of their work (see Model Element Table) to scale, at elevation, and free from interference with the structure, their own components, and other MEP trades' work.

It is understood that elements of smaller detail may not be modeled; however, such details must correspond to the appropriate condition in the 3D model. Design team members are encouraged to use the actual model as an underlay to smaller scale details.

ORGANIZATIONAL ROLES / STAFFING FOR DESIGN AUTHORING

<u>Organization</u>	<u>Location</u>	<u>Contact</u>
HOK (Lead)	1 Bush Street Suite: 200 San Francisco, CA 94104	Kyle Prenzlou
HOK – WDC (Lab)	Canal House, 3223 Grace Street N.W. Washington, DC 20007	Tim O'Connell
JS Nolan + Associates	601 4th Street, Suite 115 San Francisco, CA 94107	Janet Nolan
Kate Keating Associates, Inc.	1045 Sansome Street, Ste. 202 San Francisco, CA 94111	Julia Dobroff
MEI Architects	239 9th Street San Francisco, CA 94103	Ruairi O'Connell
R.G. Vanderweil Engineers	274 Summer Street Boston, MA 02210	Gavin Barbosa
Smith, Fause & McDonald Inc.	351 8th Street San Francisco, CA 94103	Dennis Mill
SOHA Engineers	48 Colin P. Kelly Jr. Street San Francisco, CA 94107	Frank Espino
Syska Hennessy Group	425 California Street, Suite 700 San Francisco, CA 94104	John Moran
Telamon Engineering Consultants Inc.	855 Folsom Street, Unit 142 San Francisco, CA 94107	Mennor Chan
Watry Design Inc.	100 Century Center Court, Suite 600 San Jose, CA 95112	Taylor Kim

(Full contact information can be found in [BIM Managers/Coordinators list](#))

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
Architecture	Revit (Architecture)	2015

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<u>Discipline</u>	<u>Software</u>	<u>Version</u>
Structure	Revit (Structure)	2015
Mechanical (HVAC)	Revit (MEP)	2015
Electrical	Revit (MEP)	2015
Plumbing	Revit (MEP)	2015
Civil	AutoCad Civil 3D	2015
Laboratory Planning	Revit (Architecture)	2015
Lighting Design	Revit (Architecture)	2015
Signage Consultant	Revit (Architecture)	2015
Fire Protection	Revit (MEP)	2015
Fire Alarm	Revit (MEP)	2015
Audiovisual	Revit (MEP)	2015
IT	Revit (MEP)	2015
Security Electronics	Revit (MEP)	2015
Vertical Transportation	Revit (Architecture)	2015
Parking Design	Revit (Architecture)	2015

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to AutoCAD	DWG (2010)	Layer export template to comply with client CAD standards. If none, AIA layering standards will be used.

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

DESIGN AUTHORING SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Design team meeting	Bi-weekly	All disciplines	HOK office
Upload model files	Weekly (Fri)	All disciplines	InfoExchange or Citrix
Model Audit (QC)	Ends of phases	All disciplines	n/a

MODEL ORGANIZATION

As most projects utilizing BIM do not store all data in a single file, this section will describe the method by which the project work will be divided and then recombined for referencing purposes.

MODEL OWNERSHIP OVERVIEW

<u>Model</u>	<u>Model Author</u>	<u>Contents/Notes</u>
SFTCFL-HOK-AR-central.rvt	HOK/MEI	Architecture

Model	Model Author	Contents/Notes
SFTCFL-HOK-ID-central.rvt	HOK/MEI	Interiors
SFTCFL-HOK-AS-central.rvt	HOK/MEI	Site
SFTCFL-SOHA-ST-central.rvt	SOHA	Structure
SFTCFL-HOK-QL-central.rvt	HOK	Laboratory
SFTCFL-RGV-ME-central.rvt	R.G. Vanderweil Engineers	Mechanical
SFTCFL-RGV-EL-central.rvt	R.G. Vanderweil Engineers	Electrical
SFTCFL-RGV-PL-central.rvt	R.G. Vanderweil Engineers	Plumbing
SFTCFL-RGV-FP-central.rvt	R.G. Vanderweil Engineers	Fire Protection
SFTCFL-DPW-LD-central.rvt	San Francisco Department of Public Works	Landscape
SFTCFL-TEC-CI-central.rvt	Telamon Engineering Consultants Inc.	Civil
SFTCFL-JSN-LT-central.rvt	JS Nolan + Associates	Lighting
SFTCFL-KKA-AG-central.rvt	Kate Keating Associates Inc.	Signage
SFTCFL-SFM-AV-central.rvt	Smith, Fause & McDonald Inc.	Audio Visual
SFTCFL-SFM-TC-central.rvt	Smith, Fause & McDonald Inc.	IT
SFTCFL-SFM-SC-central.rvt	Smith, Fause & McDonald Inc.	Security Electronics
SFTCFL-SHG-VT-central.rvt	Syska Hennessy Group	Vertical Transportation
SFTCFL-WDI-PK-central.rvt	Watry Design Inc.	Parking

For more detailed model element authorship, refer to the **Model Element Table** in Appendix D.

MODEL ELEMENT AUTHORSHIP AND LEVELS OF DEVELOPMENT

The Design Team will agree to develop model elements within respective project models according to the accepted industry practice known as levels of development (LOD). Refer to the Model Element Table in Appendix D. The LOD definitions are based on those set forth by the American Institute of Architects (AIA) in document E202 (BIM Protocol Exhibit). These are explained as follows:

LOD 100 – Project description/narrative accompanied by overall program area.

LOD 200 – Model elements are created as generalized systems or assemblies with approximate quantities, size, shape, location, and orientation. Non-geometric information may also be attached to model elements.

LOD 300 – Model elements are created as manufacturer-specific assemblies that are accurate in terms of quantity, size, shape, location, and orientation. Non-geometric information may also be attached to model elements.

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LOD 400 – Model elements are created as specific assemblies that are accurate in terms of size, shape, location, quantity, and orientation with complete fabrication, assembly, and detailing information.

LOD 500 – Model elements are created as constructed assemblies that are actual and accurate in terms of size, shape, location, quantity, and orientation. Non-geometric information may also be attached to modeled elements.

MODELING CONTENT AND REFERENCE INFORMATION

Identify items such as families, templates, and databases.

<u>Discipline</u> (if applicable)	<u>Model Content /</u> <u>Reference Information</u>	<u>Version</u>	<u>Instructions / Comments</u>
ALL	Shared parameters		HOK shall provide a shared parameters text file for all design team members.

MODEL STANDARDS**File Naming Convention**

File names for Revit models shall be formatted as:

< Project Name> - < Model Owner > - < Discipline > - <Model Type> - <Identifier> -central

Ex: SFTCFLL-HOK-AR-SH-central.rvt (SF Traffic and Forensics Lab, HOK, Architectural Shell model)

A table of models used on this project will be completed at the start of the Conceptual Design phase.

Measurement System

The measurement system utilized on this project shall be *Imperial* and the base unit of measurement shall be <feet – inches – mm – cm – m>.

Coordinates/Survey Description

Survey provided by: San Francisco Department of Public Works

Name of Shared Coordinate System: SFTCFLL-Shared Coordinates

Model designated as source of Shared Coordinates: SFTCFLL-HOK-AS-central.rvt

Location of Project Origin: TBD

Location of Shared Origin: TBD

Location of origin marker: TBD

Model Accuracy and Tolerances

Models should include all appropriate dimensioning as needed for design intent, analysis, and construction. Level of detail and included model elements are provided in the Model Element Table found in Appendix D.

<u>Phase</u>	<u>Discipline</u>	<u>Tolerance</u>
Design Documents (sheets)	All	Dimension rounding to +/- 1/4"
Design Models	All	Accuracy of modeled elements and placement to +/- 1/4" of actual size and location
Record Documents (sheets)	All	Dimension rounding to +/- 1/8"
Record Models	All	Accuracy of modeled elements and placement to +/- 1/8" of actual size and location

MODEL DEPENDENCIES

When design team stakeholders utilize the Coordination features, the following elements will be managed:

<u>Element</u>	<u>Owner</u>	<u>Usage by others</u>
Grids	Architect	Copy + monitor
Levels	Architect	Copy + monitor

QUALITY CONTROL

File naming check; dimension rounding; verify project information is correct in all models

Coordination: Proper copy/monitoring as per plan; linked models utilizing shared coordinates

Periodic Review: Review warnings, eliminate extraneous modeling (outside scope of actual project boundaries), compliance with Model Element Table (multi-category assembly code report)

Model Deficiency Check (in Solibri; if BIM is deliverable outside design team)

[End of Section]

3D Coordination

Definition: A process in which Clash Detection software is used during the coordination process to determine field conflicts by comparing 3D models of building systems. The goal of clash detection is to reduce or eliminate the major system conflicts prior to installation.

ORGANIZATIONAL ROLES / STAFFING FOR 3D COORDINATION

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>
Architecture - HOK (Lead)	San Francisco, CA	Kyle Prenzlów
Laboratory Planning - HOK-WDC (Lab)	Washington, DC	Tim O'Connell
Structural Engineer – SOHA Engineers	San Francisco, CA	Frank Espino
Mechanical Engineer – R.G. Vanderweil Engineers	Boston, MA	Gavin Barbosa
Plumbing Engineer – R.G. Vanderweil Engineers	Boston, MA	Gavin Barbosa
Electrical Engineer – R.G. Vanderweil Engineers	Boston, MA	Gavin Barbosa
Fire Protection Engineer – R.G. Vanderweil Engineers	Boston, MA	Gavin Barbosa
Civil Engineer – Telamon Engineering Consultants Inc.	San Francisco, CA	Mennor Chan
Lighting Designer – JS Nolan + Associates	San Francisco, CA	Janet Nolan
Signage Consultant – Kate Keating Associates Inc.	San Francisco, CA	Julia Dobroff
Audio Visual – Smith, Fause & McDonald Inc.	San Francisco, CA	Dennis Mill
IT – Smith, Fause & McDonald Inc.	San Francisco, CA	Dennis Mill
Security Electronics - HOK	San Francisco, CA	Kyle Prenzlów
Vertical Transportation – Syska Hennessy Group	San Francisco, CA	Dewin Essary
Parking Design – Watry Design Inc.	San Jose	Taylor Kim

(Full contact information can be found in [BIM Managers/Coordinators list](#))

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
All	Navisworks Manage	2013

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to Navisworks	NWC	Use Navisworks Exporter add-in for Revit; set location to Shared Coordinates.

PROCESS OVERVIEW

See Appendix C for Level 2 process diagrams

Project Leaders will:

- Provide accurate and complete model content representative of their discipline requirements according to the Model Element Table in Appendix D.
- Take the appropriate action to resolve identified clashes within the time frame specified.

3D COORDINATION SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Upload model files	Weekly (Wed)	Structure, MEP	InfoExchange
Run clash tests	Weekly (Thu)	Architecture	n/a
Coordination meeting	Bi-weekly (Thu)	Architecture, Structure, MEP	HOK San Francisco office

CLASH TESTS

From the list below, select the clash tests most appropriate for use on this project and indicate the agreed tolerance to which the final results will be measured.

NOTE: Multiple disciplines being modeled from a single organization are to be coordinated BEFORE delivering models to HOK for overall coordination. See below for indication of DISCIPLINE-SPECIFIC tests.

NOTE: Clearance zones (maintenance/service/installation) are NOT included unless otherwise specified.

STATUS: Y=Yes; N=No; R=Required; D=Discipline-specific (must be run by authoring discipline before transferring models to 3D Coordination leader)

TOLERANCE: Negative distances represent allowable overlap (for example, if tolerance is -2" then objects must overlap more than 2" to indicate a clash); positive distances represent clearance clashes (for example, if tolerance is +2" then objects any closer than 2" will generate a clash).

<u>Status</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>
Structural Coordination			
R	1.1 Structural Framing – Arch. Ceiling	Structure, Arch.	0 in.
MEP Coordination			
	2.1 Equipment	(roll-up test)	
R	2.1.1 Equipment – Structural Framing	M/E/P, S	

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<u>Status</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>
R	2.1.2 Equipment – Architecture	M/E/P, A	
	2.2 Mechanical Ventilation	<i>(roll-up test)</i>	
R,D	2.2.1 Mech. Ventilation – Equipment	M	
R	2.2.2 Mech. Ventilation – Struct. Framing	M, S	
R	2.2.3 Mech. Ventilation – Arch. Ceiling	M, A	
R,D	2.2.4 Mech. Ventilation – Mech. Ventilation	M (self check)	
	2.3 Mechanical Piping	<i>(roll-up test)</i>	
R,D	2.3.1 Mech. Piping – Equipment	M	
	2.3.2 Mech. Piping – Struct. Framing	M, S	
	2.3.3 Mech. Piping – Arch. Ceiling	M, A	
R,D	2.3.4 Mech. Piping – Mech. Ventilation	M	
R,D	2.3.5 Mech. Piping – Mech. Piping	M (self check)	
	2.4 Plumbing	<i>(roll-up test)</i>	
R	2.4.1 Plumbing – Equipment	P, M	
R	2.4.2 Plumbing – Structural	P, S	
R	2.4.3 Plumbing – Arch. Ceiling	P, A	
R,D	2.4.4 Plumbing – Mech. Ventilation	P, M	
R,D	2.4.5 Plumbing – Mech. Piping	P, M	
R,D	2.4.6 Plumbing – Plumbing	P (self check)	
	2.5 Electrical	<i>(roll-up test)</i>	
R,D	2.5.1 Electrical – Equipment	E, M	
	2.5.2 Electrical – Struct. Framing	E, S	
R	2.5.3 Electrical – Arch. Ceiling	E, A	
R,D	2.5.4 Electrical – Mech. Ventilation	E, M	
R,D	2.5.5 Electrical – Mech. Piping	E, M	
R,D	2.5.6 Electrical – Plumbing	E, P	
R,D	2.5.7 Electrical – Electrical	E (self check)	
	2.6 Fire Protection	<i>(roll-up test)</i>	
R,D	2.6.1 Fire Protection – Equipment	F, M	
R	2.6.2 Fire Protection – Struct. Framing	F, S	
R	2.6.3 Fire Protection – Arch. Ceiling	F, A	
R,D	2.6.4 Fire Protection – Mech. Ventilation	F, M	
R,D	2.6.5 Fire Protection – Mech. Piping	F, M	
R,D	2.6.6 Fire Protection – Plumbing	F, P	

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<u>Status</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>
R,D	2.6.7 Fire Protection – Electrical	F, E	
R,D	2.6.8 Fire Protection - Fire Protection	F (self check)	
Interior Construction Coordination			
	3.1 Casework – Walls, Elec. Fixtures/Devices	A, E	
	3.2 Furnishings – Walls, Elec. Fixtures/Devices	A, E	
AV, TC, SC Coordination			
	4.1 Equipment	<i>(roll-up test)</i>	
R	4.1.1 Equipment – Structural Framing	AV, TC, SC, S	
R	4.1.2 Equipment – Architecture	AV, TC, SC, A	
	4.2 Audio Visual Equipment	<i>(roll-up test)</i>	
R,D	4.2.1 Audio Visual Equipment – Equipment	AV	
R	4.2.2 Audio Visual Equipment – Struct. Framing	AV, S	
R	4.2.3 AV Equipment – Arch. Ceiling	AV, A	
R	4.2.4 AV Equipment – Mechanical	AV, M	
R	4.2.5 AV Equipment – Electrical	AV, E	
R	4.2.6 AV Equipment – Plumbing	AV, P	
R	4.2.7 AV Equipment – Fire Protection	AV, F	
R,D	4.2.8 AV Equipment – AV Equipment	AV (self check)	
	4.3 AV Pathways	<i>(roll-up test)</i>	
R,D	4.3.1 AV Pathway – Equipment	AV	
	4.3.2 AV Pathway – Struct. Framing	AV, S	
	4.3.3 AV Pathway – Arch. Ceiling	AV, A	
	4.3.4 AV Pathway – Mechanical	AV, M	
	4.3.5 AV Pathway – Electrical	AV, E	
	4.3.6 AV Pathway – Plumbing	AV, P	
	4.3.7 AV Pathway – Fire Protection	AV, F	
R,D	4.3.8 AV Pathway – AV Equipment	AV	
R,D	4.3.9 AV Pathway – AV Pathway	AV (self check)	
	4.4 IT Equipment	<i>(roll-up test)</i>	
R	4.4.1 IT – Equipment	IT	
R	4.4.2 IT – Structural	IT, S	
R	4.4.3 IT – Arch. Ceiling	IT, A	

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<u>Status</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>
R,D	4.4.4 IT – Mechanical	IT, M	
R,D	4.4.5 IT – Electrical	IT, E	
R,D	4.4.6 IT – Plumbing	IT, P	
R,D	4.4.7 IT – Fire Protection	IT, F	
R,D	4.4.8 IT – IT	IT (self check)	
	4.5 IT Pathways	<i>(roll-up test)</i>	
R,D	4.5.1 IT Pathways – Equipment	IT, M	
R	4.5.2 IT Pathways – Struct. Framing	IT, S	
R	4.5.3 IT Pathways – Arch. Ceiling	IT, A	
R,D	4.5.4 IT Pathways – Mechanical	IT, M	
R,D	4.5.5 IT Pathways – Electrical	IT, E	
R,D	4.5.6 IT Pathways – Plumbing	IT, P	
R,D	4.5.7 IT Pathways – Fire Protection	IT, F	
R,D	4.5.8 IT Pathways – Electrical	IT (self check)	
	4.6 Security Electronics Equipment	<i>(roll-up test)</i>	
R,D	4.6.1 Security Electronics Equipment	SC	
R	4.6.2 Security Electronics Equipment – Struct. Framing	SC, S	
R	4.6.3 Security Electronics Equipment – Arch. Ceiling	SC, A	
R,D	4.6.4 Security Electronics Equipment – Mechanical	SC, M	
R,D	4.6.5 Security Electronics Equipment – Electrical	SC, E	
R,D	4.6.6 Security Electronics Equipment – Plumbing	SC, P	
R,D	4.6.7 Security Electronics Equipment – Fire Protection	SC, F	
R,D	4.6.8 Security Electronics Equipment - Security Electronics Equipment	SC (self check)	
	4.6 Security Electronics Pathways	<i>(roll-up test)</i>	
R,D	4.7.1 Security Electronics Pathways	SC	
R	4.7.2 Security Electronics Pathways – Struct. Framing	SC, S	
R	4.7.3 Security Electronics Pathways – Arch. Ceiling	SC, A	
R,D	4.7.4 Security Electronics Pathways – Mechanical	SC, M	
R,D	4.7.5 Security Electronics Pathways – Electrical	SC, E	
R,D	4.7.6 Security Electronics Pathways – Plumbing	SC, P	
R,D	4.7.7 Security Electronics Pathways – Fire Protection	SC, F	
R,D	4.7.8 Security Electronics Pathways - Security Electronics Pathways	SC (self check)	

Additional clash sub-tests to be performed on this project:

<u>Y/N</u>	<u>Clash Test</u>	<u>Disciplines</u>	<u>Final Tolerance</u>

[End of Section]

Sustainability Plan

The Project Leaders have shared responsibility for the successful integration of sustainable performance into the project. Based on project scope and approach, the project manager should assign a team member to serve as the Project Sustainable Coordinator. The Project Sustainable Coordinator is the day to day sustainable advocate for the project, acts as a resource on the Project team, tracks sustainable performance against project goals throughout the design, and coordinates the sustainable strategy implementation. The Office Sustainable Leader acts as a resource and in a review capacity for the Sustainable Project Coordinator.

For each designated Sustainable task below, identify the team member(s) within the respective organization(s) who will coordinate and perform that function

ORGANIZATIONAL ROLES / STAFFING FOR SUSTAINABLE INTEGRATION

<u>Role</u>	<u>Firm/Location</u>	<u>Contact</u>	<u>Phone</u>
Project Sustainable Coordinator	HOK / San Francisco, CA	Breffni O'Rourke	(415) 356-8604
Office Sustainable Design Leader	HOK / San Francisco, CA	Zorana Bosnic	415) 356-8771
Energy Modeler	R.G. Vanderweil / Boston, MA	Suzanne Robinson	(617) 423-7423
Design Analyst	R.G. Vanderweil / Boston, MA	John Saad	(617) 423-7423
Commissioning Agent	TBD	TBD	TBD

SOFTWARE

<u>Discipline</u>	<u>Analysis</u>	<u>Software</u>	<u>Version</u>
Architecture	Climate Study	HOK Climate Tool Climate Consultant	1.0
Architecture	Benchmarking	HOK Benchmarking Tool Energy Star Target Finder	
Architecture	Climate Study	Climate Consultant	
Architecture	Climate Study, Massing/Orientation Study, Daylighting Study, Façade Study	Ecotect Analysis	2012

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Weather file data to MS Excel	.epw file	See HOK Climate Tool
Ecotect to MS Excel	.wea file	See HOK Climate Tool
Others...		

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

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SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Confirm Project Sustainable Scope	At project scoping	PM, Sustainable Design Leader	HOK SF
Visioning/Goal and Performance Setting Session.	Concept Design	PM, Project Designer, Sustainable Design Leader, Design Analyst, all project stakeholders including client	HOK SF
Climate Study	Concept Design	Design Analyst	HOK SF
Benchmarking study	Concept Design	Design Analyst	HOK SF
Sustainable Charrette *Include in section 8 for LEED	Concept Design or Schematic Design (NIC)	PM, Project Designer, Sustainable Design Leader, Design Analyst, all project stakeholders	HOK SF
Sustainable Status Project Review	Monthly	PM, Project Designer, Sustainable Design Leader, Design Analyst, all project stakeholders	HOK SF
Sustainable Performance Tracking and compliance	Bi-weekly; or as needed at phase end (SD/DD/CD – (NIC))	PM, Project Architect, Sustainable Design Leader, Design Analyst, w/ related project team members	HOK SF
Sustainable Construction Coordination	Kick-off and periodic during Construction Phase (NIC)	GC, Subs, HOK CA, Sustainable Design Leader	Project Job Site Office
Post Occupancy and Performance Evaluation	12 months after occupancy (NIC)	Commissioning Agent, Owner, Design-Build MEP Engineer, HOK-MEP	Project Location

MODEL STANDARDS

Site Data Description

Survey provided by: San Francisco Department of Public Works

Weather file source:

Other:

IDENTIFY PERFORMANCE TARGETS

<u>Type of Goal</u>	<u>Value Target #, Comparative</u>	<u>Governing Authority</u>	<u>Client Requirement</u>
Energy	TBD		Yes/No
Water	TBD		Yes/No
Materials	TBD		Yes/No
Indoor Environmental Quality	TBD		Yes/No
Certification	Level TBD	LEED USGBC	Yes/No
OTHER (based on project)	TBD		Yes/No

MEASUREMENT & VERIFICATION

TBD

[End of Section]

Energy Analysis

Definition: A process in the facility design phase which one or more building energy simulation programs use a properly adjusted Building Information Model to conduct energy assessments for the current building design. The core goal of this BIM use is to inspect building energy standard compatibility and seek opportunities to optimize proposed design to reduce structure's life-cycle costs and harmful environmental impacts.

ORGANIZATIONAL ROLES / STAFFING FOR ENERGY ANALYSIS

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
HOK – Energy Modeling	Boston, MA	Suzanne Robinson	(617) 423-7423
MEP Engineer - Design Criteria - R.G. Vanderweil (Up to DD Phase)	Boston, MA	John Saad	(617) 423-7423
HOK – Sustainability	San Francisco, CA	Zorana Bosnic	(415) 356-8771
Design – Build Mechanical Engineer (CD Phase)	TBD	TBD	TBD

SOFTWARE

<u>Discipline</u>	<u>Analysis</u>	<u>Software</u>	<u>Version</u>
Energy Model & Architecture	Massing/Orientation Study	Ecotect, Radiance, IESVE	2.1
Energy Model & Architecture	Facade Study	Ecotect, IESVE	4.0
Architecture	Daylighting Study	Ecotect, Radiance	
MEP Engineer	Energy Model	IESVA	

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to Ecotect	dwg.dxf	See HOK Guidelines
Revit to Radiance	dwg.dxf	See HOK Guidelines
Revit to IESVE	dwg.dxf	See HOK Guidelines
Others...		

PROCESS OVERVIEW

ENERGY ANALYSIS SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>
Massing & Orientation	Concept Design, Schematic Design (NIC)	Design Analyst/ Design Team
Facade Optimization	Concept Design, Schematic Design (NIC), Design Development (NIC)	Design Analyst/ Design Team

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<u>Action</u>	<u>Frequency</u>	<u>Participants</u>
Daylight Study	Concept Design, Schematic Design (NIC), Design Development (NIC)	Design Analyst/ Design Team
Energy Model	Per Energy Modelling Agreement	MEP Engineer/ consultant

MODEL STANDARDS**File Naming Convention**

File names for analysis models shall be formatted as:

YYYY-MM-DD Phase-Option-Description

Ex: 2012-01-02 Concept-Option2-DaylightStudy

Refer to HOK BIM Standards for more information.

Measurement System

The measurement system utilized on this project shall be *<Imperial or Metric>* and the base unit of measurement shall be *<feet – inches or mm – cm – m>*.

MEASUREMENT & VERIFICATION

TBD

[End of Section]

Sustainability Evaluation – LEED (Basic)

This section covers the basic HOK activities and responsibilities on projects pursuing LEED certification, but where HOK is not acting as the projects overall LEED Facilitator/Manager. Additional responsibilities when HOK acts as the overall LEED Facilitator/Manager for the entire project team is covered in the LEED – Management section (TBD).

For each designated Sustainable task below, identify the team member(s) within the respective organization(s) who will coordinate and perform that function.

<u>Role</u>	<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>
Sustainable Coordinator/ LEED Prime Certification Manager	HOK	San Francisco, CA	Zorana Bostic Breffni O'Rourke
Energy Modeling	RGV - MEP Engineer	Boston, MA	Suzanne Robinson
Mechanical Engineer – Design Criteria	RGV - MEP Engineer	Boston, MA	Harris Zeidman

SOFTWARE

NOTE: During the life of the Project, changes to the software versions listed below must be coordinated with and agreed to by all parties to this document.

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
Energy Modeling & Architecture	Revit	2015

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to MS Excel		See HOK Revit LEED Guidelines

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Feasibility assessment	Once	LEED Prime, PM, Project Designer, Mechanical Engineer, w/ related project team members	HOK - SF
Project Registration and LEED® Online team management	Once	LEED Prime, PM, client	HOK - SF
Sustainable Design Objective Confirmation	Bi-weekly, or as needed at phase end (SD/DD/CD – (NIC))	Architecture, Structure, HVAC, Electrical, Plumbing, w/ related project team members	HOK - SF

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<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Specification development and plan review	Schematic Design (NIC), Design Development (NIC), Construction Documentation (NIC)	PM, Project Architect, LEED Prime, Project Designer, Specification writer, w/ related project team members	HOK - SF

QUALITY CONTROL

Refer to Attachment 5 in Prime Agreement.

[End of Section]

Structural Analysis

Definition: A process in which analytical software utilizes the BIM Design Authoring model to determine the behavior of a given structural system. With the modeling minimum required standards for structural design and analysis are used for optimization. Based on this analysis, further development and refinement of the structural design takes place to create effective, efficient, and constructible structural systems.

ORGANIZATIONAL ROLES / STAFFING FOR 3D COORDINATION

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
SOHA Engineers	San Francisco, CA	Frank Espino	(415) 989-9900

SOFTWARE

NOTE: During the life of the Project, changes to the software versions listed below must be coordinated with and agreed to by all parties to this document.

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
Structure	ETAB Version 13.1.4 SAP 2000 Version 16 SAFE Version 12.3.2	

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>

PROCESS OVERVIEW

SCHEDULE

QUALITY CONTROL

[End of Section]

Existing Conditions Modeling

Definition: A process in which a project team develops a 3D model of the existing conditions for a site, facilities on a site, or a specific area within a facility. This model can be developed in multiple ways: including laser scanning and conventional surveying techniques, depending on what is desired and what is most efficient. Once the model is constructed, it can be queried for information, whether it is for new construction or a modernization project

ORGANIZATIONAL ROLES / STAFFING

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
City / County of San Francisco	San Francisco, CA	Marilyn Lopes	(415) 554-5901

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
ALL	AutoCAD 2012 Civil 3D	2012

Existing conditions shall be modeled in accordance with the standards and requirements specified in Design Authoring. All elements shall be modeled on the *Existing* phase.

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Point Cloud to Revit	PTX or PTC	City / County of San Francisco DPW to confirm.

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

EXISTING CONDITIONS MODELING SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Complete ECM service request form (HOK)	Once	City / County of San Francisco DPW, HOK, Telamon.	DPW
ECM service kick-off	Once	ECM provider, applicable engineers, City / County of San Francisco DPW, HOK, Telamon.	DPW
ECM milestone review	At milestones	ECM provider, applicable engineers, City / County of San Francisco DPW, HOK, Telamon.	DPW

QUALITY CONTROL

Revit model of existing conditions shall be compared to original point cloud in Navisworks Manage.

IMPLEMENTATION NOTES

[End of Section]

Cost Estimation (Quantity Take-Off)

Definition: Commonly referred to as '5D,' a process in which BIM is used to assist in the generation of accurate quantity take-offs and cost estimates throughout the lifecycle of a project. This process allows the project team to see the cost effects of their changes, during all phases of the project.

ORGANIZATIONAL ROLES / STAFFING

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
HOK	San Francisco, CA	James Aguilar	(415) 356-8724
Cost Consultant – Cumming Corp.	San Francisco, CA	Nick Mata	(415) 748-3094

SOFTWARE

NOTE: During the life of the Project, changes to the software versions listed below must be coordinated with and agreed to by all parties to this document.

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
All Design Disciplines	(see Design Authoring)	
Estimator		

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to QTO	DWFX	

PROCESS OVERVIEW

See [Appendix C](#) for Level 2 process diagrams

COST ESTIMATING SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
Design team meeting - Coordination	Bi-weekly	All disciplines	HOK office
Upload model files	Weekly (Fri)	All disciplines	InfoExchange
Model Audit (QC)	Ends of phases	All disciplines	n/a
Conceptual Design	End of phase	Cost Consultant	n/a
Schematic Design (NIC)	End of phase	Cost Consultant	n/a
Design Development (NIC)	50% & 100%	Cost Consultant	n/a
Contract Documents (NIC)	50% & 95%	Cost Consultant	n/a

QUALITY CONTROL

IMPLEMENTATION NOTES

[End of Section]

Record Modeling

Definition: The process used to depict an accurate representation of the physical conditions, environment, and assets of a facility. At a minimum, the record model should contain information relating to the main architectural, structural, and MEP elements. It is the culmination of all the Design Authoring throughout the project, including linking Operation, Maintenance, and Asset data to the As-Built model (created from the Design, Construction, 4D Coordination Models, and Subcontractor Fabrication Models) to deliver a record model to the owner or facility manager. Additional information including equipment and space planning systems may be necessary if the owner intends to utilize the information in the future. As noted in the Prime Agreement HOK shall provide a As-Planned BIM file to the CM/GC at the start of the Construction phases. CM/GC shall a BIM reflecting "As-Built" conditions throughout the construction phase and submit to the owner at completion of the project construction.

ORGANIZATIONAL ROLES / STAFFING

<u>Organization</u>	<u>Location</u>	<u>Lead Contact</u>	<u>Phone</u>
CM/GC	TBD	TBD	TBD
HOK (Prime)	San Francisco, CA	James Aguilar	(415) 356-8724
HOK (Lab)	Washington, DC	Tim O'Connell	(202) 944-1456
MEI Architects	San Francisco, CA	Steven Juergens	(415) 703-0328
SOHA Engineers	San Francisco, CA	Steve Lau	(415) 989-9900
Telamon Engineering Consultants Inc.	San Francisco, CA	Mennor Chan	(415) 837-1336
Kate Keating & Associates	San Francisco, CA	Julie Vogel	(415) 773-1000
Syska Hennessy Group	San Francisco, CA	John Moran	(415) 288-9060
Design-Build Mechanical Engineer	TBD	TBD	TBD
Design-Build Electrical Engineer	TBD	TBD	TBD
Design-Build Plumbing Engineer	TBD	TBD	TBD
Design-Build Fire Protection Engineer	TBD	TBD	TBD
Design-Build Low Voltage Engineer	TBD	TBD	TBD

SOFTWARE

<u>Discipline</u>	<u>Software</u>	<u>Version</u>
All	Revit	2015

DATA EXCHANGE REQUIREMENTS

<u>Transaction</u>	<u>Format</u>	<u>Instructions/Comments</u>
Revit to COBie	XLS	

PROCESS OVERVIEW

See Appendix C for Level 2 process diagrams

RECORD MODELING SCHEDULE

<u>Action</u>	<u>Frequency</u>	<u>Participants</u>	<u>Location</u>
As-Planned BIM kick-off	Once	Architect, engineers, contractor, owner	TBD
Record Modeling deliverable review	Once (end of construction)	Architect, engineers, CM/GC, owner	TBD

QUALITY CONTROL

IMPLEMENTATION NOTES

Remote Application Collaboration

HOK uses Citrix XenApp (www.citrix.com/xenapp) for enhanced remote application sharing. Direct access to

HOK Citrix XenApp host office(s): << >>

Applications authorized for Project: << >>

Procedures for HOK employees: Send an email to *_HOK Citrix Support Request* to be added to the Project.

Procedures for non-HOK team members: Contact the HOK Project Manager or BIM Coordinator who will submit a request to *_HOK Citrix Support Request*. A form will be transmitted to the requesting party(ies) for completion.

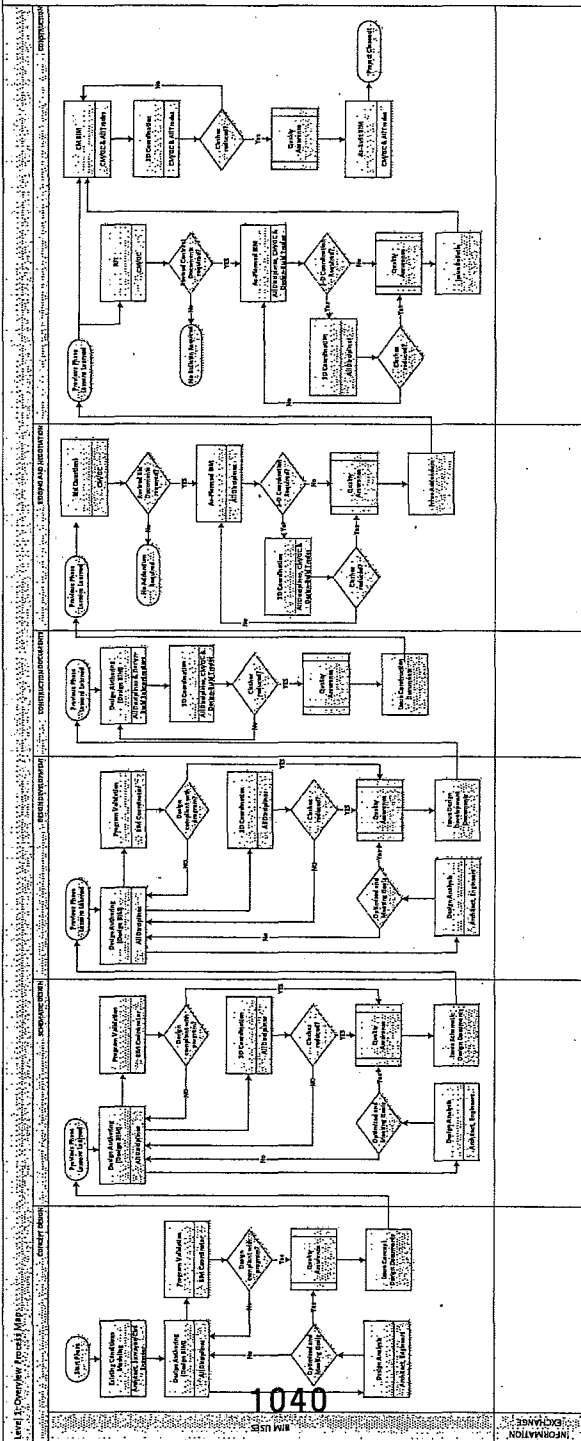
HOK XenApp address: <https://remote.hok.com>

Server address for project files: << to be determined >>

Appendix B: Level 1 Process Map

1039

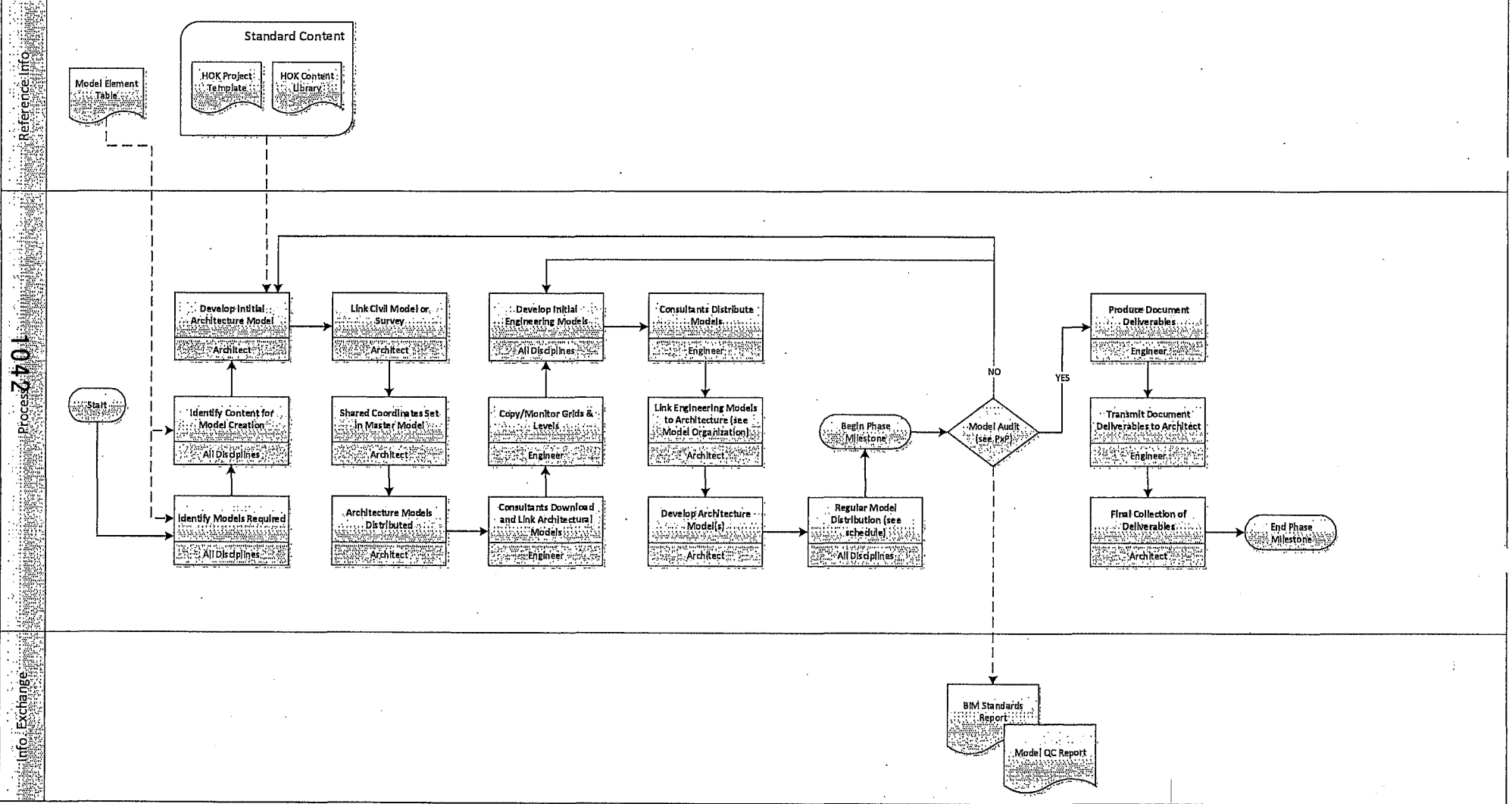
City/County of San Francisco Traffic Company Division & Forensic Science Division Laboratory



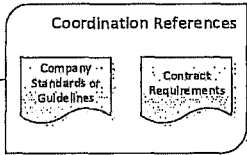
1040

Appendix C: Level 2 Process Maps

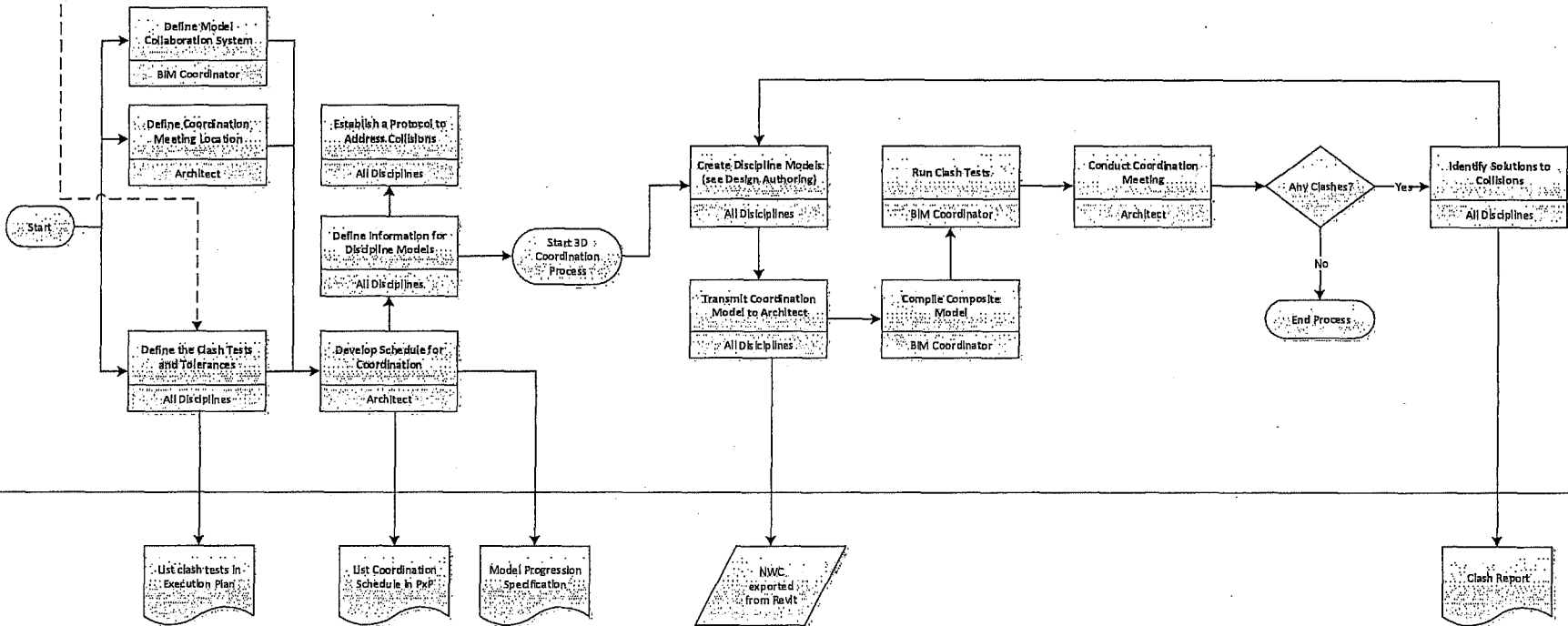
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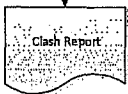
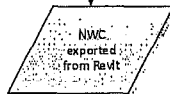
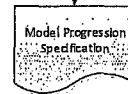
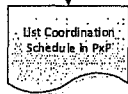
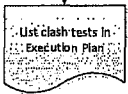
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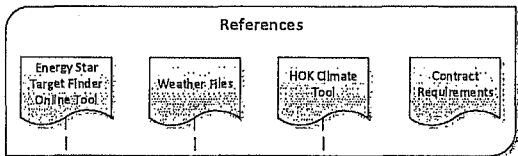
Process 1043



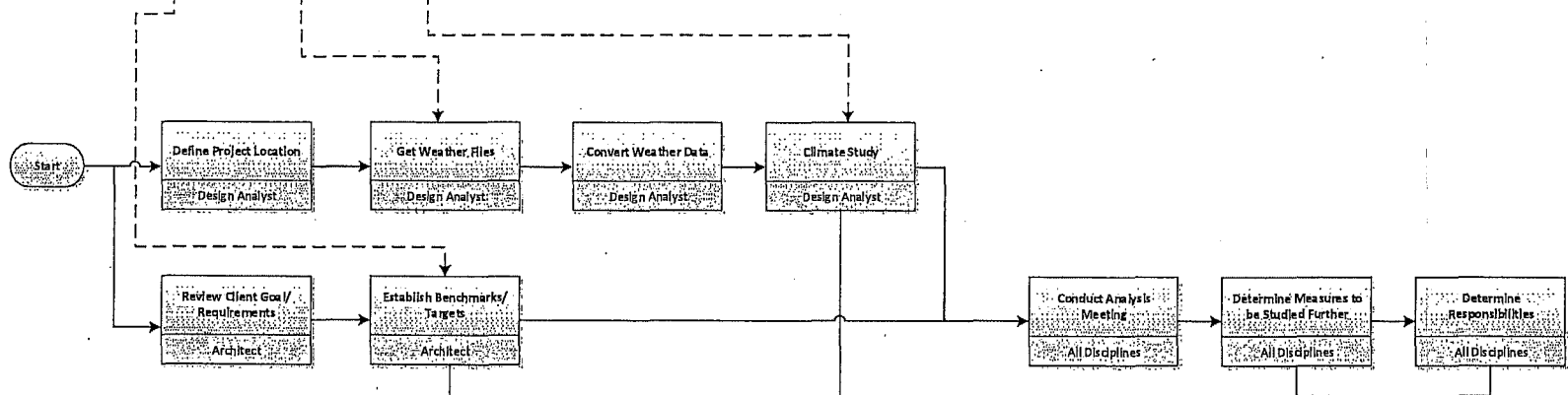
Info Exchange



Reference Info



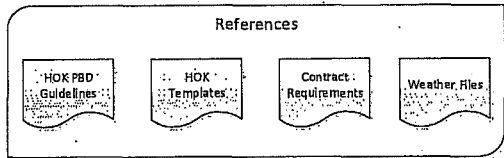
Process



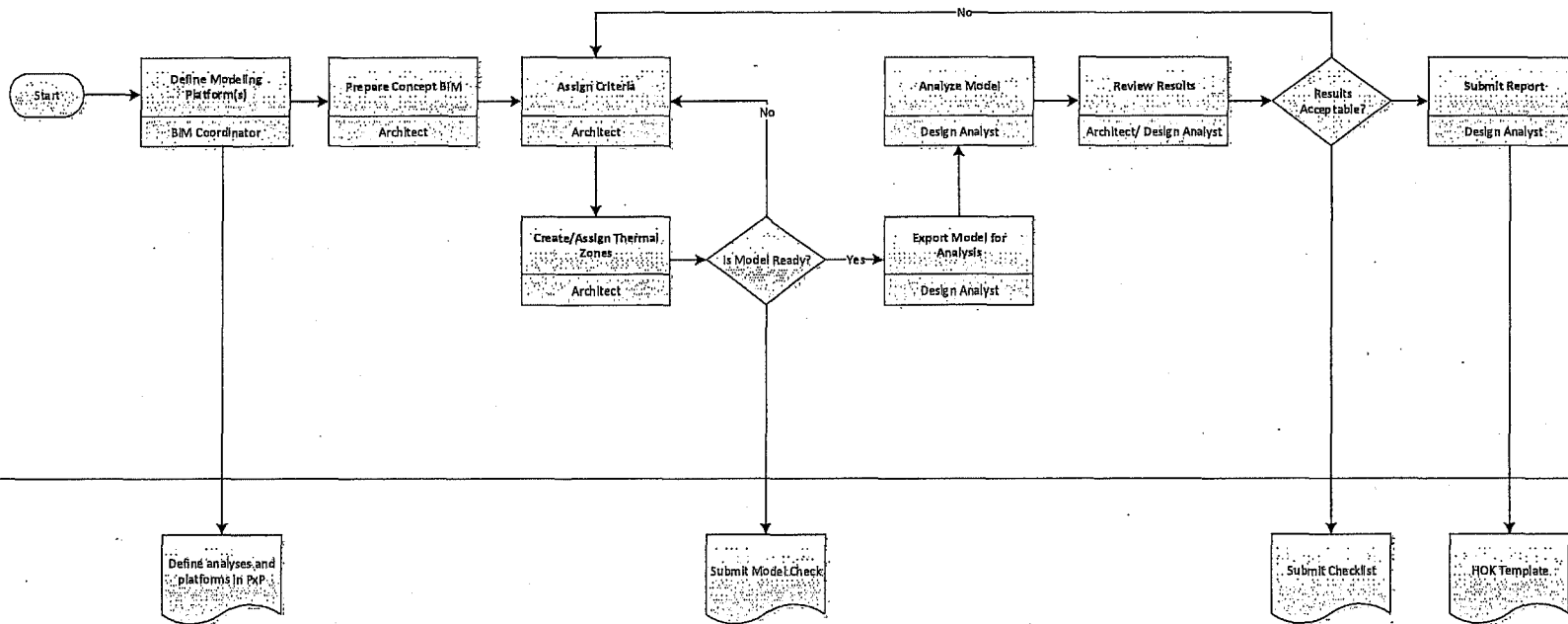
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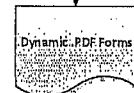
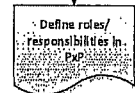
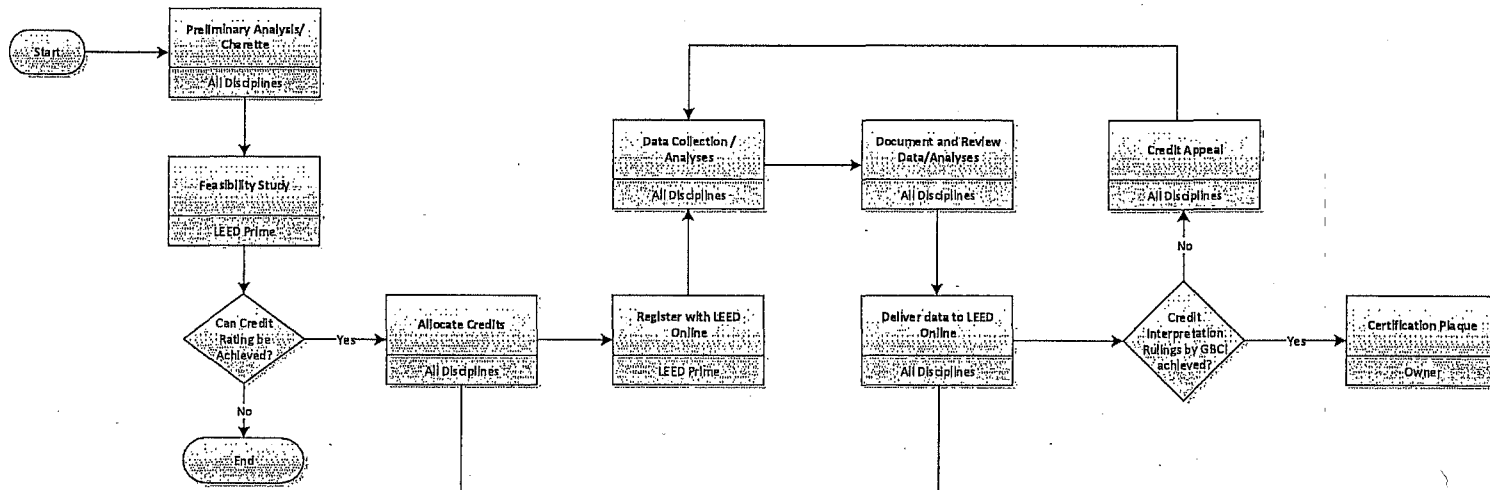
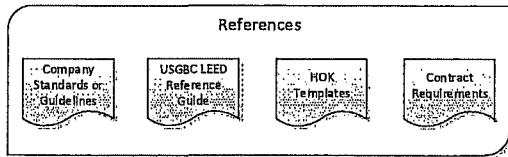
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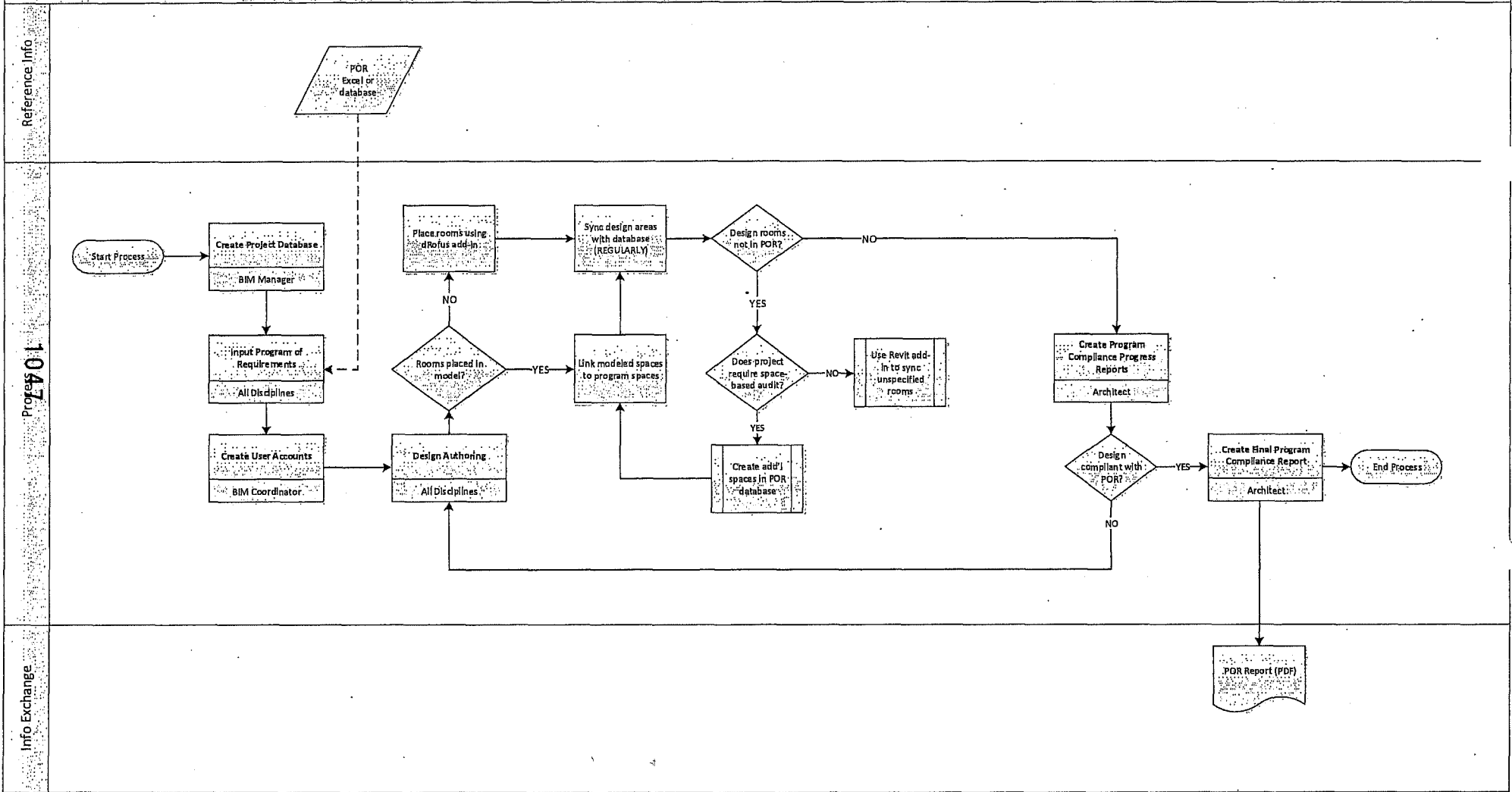


1045
Process



Info Exchange

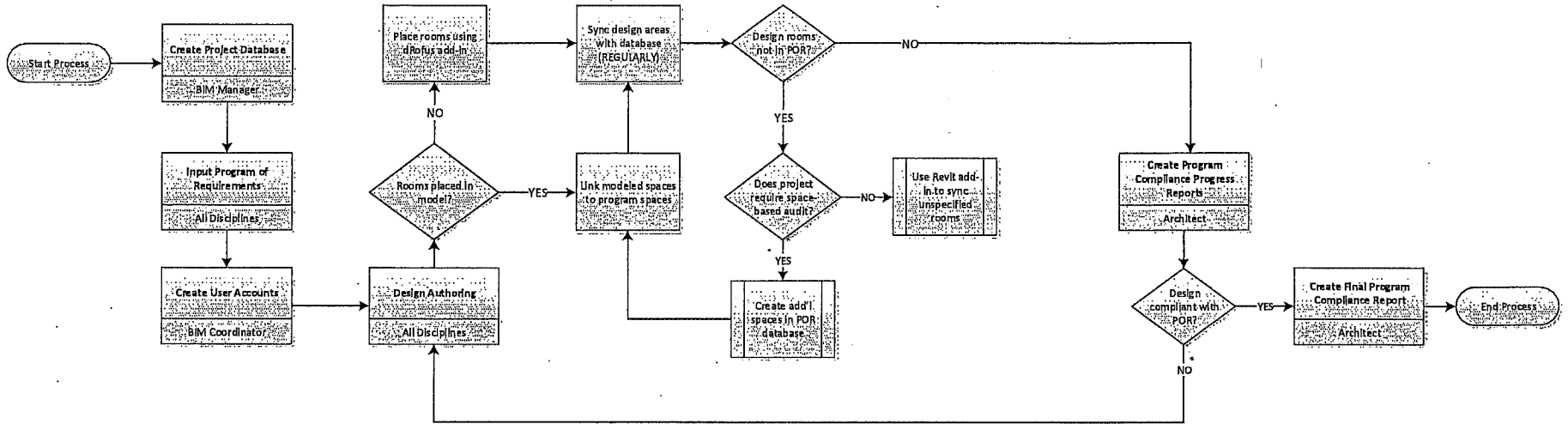




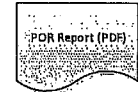
Reference Info



Process 1048



Info Exchange



Appendix D. Model Element Table

1049

Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)	LOD for (CM BIM)	LOD for (As-Built BIM)	Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer						
	Schematic Design		Design Development		Construction Documents							Construction		Construction		Construction	
	LOD	MEA	LOD	MEA	LOD	MEA						LOD	MEA	LOD	MEA	LOD	MEA
GENERAL MODEL INFORMATION																	
3040.35 Datum																	
Levels	300	AR	300	AR	300	AR	300	AR	300	PC	300	PC					
Grids	200	AR	300	SE	300	SE	300	SE	300	TC	300	TC					
Coordinate System (Survey Info)	300	AR	300	AR	300	AR	300	AR	300	PC	300	PC					
3040.35 Rooms																	
Room Names	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC					
Room Numbers	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC					
Room Finishes	100	AR	200	AR	300	AR	300	AR	300	PC	300	PC					
Room Areas (POR)	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC					
3040.35 Areas																	
Area Boundaries	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC					
Area Names	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC					
Area Types	200	AR	300	AR	300	AR	300	AR	300	PC	300	PC					
A SUBSTRUCTURE																	
A1000 FOUNDATIONS																	
A1010 Standard Foundations																	
A1010.10 Wall Foundations	200	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1010.30 Column Foundations	200	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1010.90 Standard Foundation Supplementary Component	200	SE	200	SE	250	SE	250	SE	250	PC	250	PC					
Usually in 2D details: Perimeter insulation, dampproofing, etc.																	
A1020 Special Foundations																	
A1020.10 Driven Piles	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1020.15 Bored Piles	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1020.20 Caissons	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1020.30 Special Foundation Walls	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1020.40 Foundation Anchors	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1020.50 Underpinning	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1020.60 Raft Foundations	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1020.70 Pile Caps	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A1020.80 Grade Beams	100	SE	200	SE	300	SE	300	SE	400	TC	400	TC					
A2000 SUBGRADE ENCLOSURES																	
A2010 Walls for Subgrade Enclosures																	
A2010.10 Subgrade Enclosure Wall Construction	100	AR	200	CE	300	CE	300	CE	400	TC	400	TC					
A2010.20 Subgrade Enclosure Wall Interior Skin	100	AR	200	CE	300	CE	300	CE	400	TC	400	TC					
A2010.90 Subgrade Enclosure Wall Supplementary Component	100	AR	200	CE	300	CE	300	CE	400	TC	400	TC					
Waterproofing, insulation, etc.																	
A4000 SLABS ON GRADE																	
A4010 Standard Slabs-on-Grade	100	AR	200	AR	300	AR	300	AR	400	PC	400	PC					
A4020 Structural Slabs-on-Grade	100	AR	200	SE	300	SE	300	SE	400	TC	400	TC					
A4030 Slab Trenches	100	AR	200	SE	300	SE	300	SE	400	TC	400	TC					
A4040 Pits & Bases	100	AR	200	SE	300	SE	300	SE	400	TC	400	TC					
A4090 Slab-On-Grade Supplementary Components	100	AR	200	AR	300	AR	300	AR	400	PC	400	PC					
A6000 WATER AND GAS MITIGATION																	
A6010 Building Subdrainage																	
A6020 Off-Gassing Mitigation																	
B SHELL																	
B1000 SUPERSTRUCTURE																	
B1010 Floor Construction																	
B1010.10 Floor Structural Frame	200	SE															
B1010.20 Floor Decks, Slabs, and Toppings	100	SE															
B1010.30 Balcony Floor Construction	100	AR	200	SE													
B1010.40 Mezzanine Floor Construction	200	SE															
B1010.50 Ramps	100	AR	200	AR	200	AR/SE	200	AR	200	PC	200	PC					
B1010.90 Floor Construction Supplementary Components	-	-															
B1020 Roof Construction																	
B1020.10 Roof Structural Frame	200	SE	200	SE	300	SE	300	SE	400	TC	200	TC					

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
B1020.20	Roof Decks, Slabs, and Sheathing	100	SE	200	SE	300	SE	300	SE	400	TC	200	TC	
B1020.30	Canopy Construction	100	SE	200	SE	300	SE	300	SE	400	TC	200	TC	
B1020.90	Roof Construction Supplementary Components	-	-	-	-	300	SE	300	SE	400	TC			Insulation, fireproofing, firestopping, etc.
B1080.10	Stair Construction	200	AR	200	AR	300	AR	300	AR	400	PC	400	PC	
B1080.30	Stair Soffits	-	-	200	AR	300	AR	300	AR	400	PC	400	PC	
B1080.60	Stair Railings	-	-	200	AR	300	AR	300	AR	400	PC	400	PC	
B1080.80	Fire Escapes	-	-	200	AR	300	AR	300	AR	400	PC	400	PC	
B1080.70	Metal Walkways	-	-	200	AR	300	AR	300	AR	400	PC	400	PC	
B1080.80	Ladders	-	-	200	AR	300	AR	300	AR	400	PC	400	PC	
B2000 EXTERIOR VERTICAL ENCLOSURES														
B2010.10	Exterior Walls	-	-	-	-	-	-	-	-	-	-	-	-	
B2010.10	Exterior Wall Veneer	-	-	-	-	-	-	-	-	-	-	-	-	
B2010.20	Exterior Wall Construction	100	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
B2010.30	Exterior Wall Interior Skin	100	AR	-	-	-	-	-	-	-	-	-	-	See also: C2010 Wall Finishes
B2010.40	Fabricated Exterior Wall Assemblies	100	AR	-	-	-	-	-	-	-	-	-	-	See also: B2020.30 Window Wall
B2010.50	Parapets	100	AR	200	AR	300	AR	300	AR	300	PC	300	PC	
B2010.60	Equipment Screens	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC	See also: B2080.10 Exterior Fixed Grilles and Screens
B2010.80	Exterior Wall Supplementary Components	-	-	-	-	-	-	-	-	-	-	-	-	Weather barriers, insulation, expansion joints, etc.
B2010.90	Exterior Wall Opening Supplementary Components	-	-	-	-	-	-	-	-	-	-	-	-	Lintels, joint sealants, flashing, etc.
B2020.10	Exterior Windows	-	-	-	-	-	-	-	-	-	-	-	-	
B2020.10	Exterior Operating Windows	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2020.20	Exterior Fixed Windows	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2020.30	Exterior Window Wall	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	Glazed facades may be represented as a generic wall with model pattern in SD
B2020.50	Exterior Special Function Windows	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2050.10	Exterior Doors and Grilles	-	-	-	-	-	-	-	-	-	-	-	-	
B2050.10	Exterior Entrance Doors	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2050.20	Exterior Utility Doors	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2050.30	Exterior Oversize Doors	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2050.40	Exterior Special Function Doors	-	-	-	-	-	-	-	-	-	-	-	-	
B2050.60	Exterior Grilles	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2050.70	Exterior Gates	-	-	-	-	-	-	-	-	-	-	-	-	
B2050.90	Exterior Door Supplementary Components	-	-	-	-	-	-	-	-	-	-	-	-	Frames, hardware, glazing, louvers
B2070.10	Exterior Louvers and Vents	-	-	-	-	-	-	-	-	-	-	-	-	
B2070.10	Exterior Louvers	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2050.20	Exterior Vents	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2080.10	Exterior Opening Protection Devices	-	-	-	-	-	-	-	-	-	-	-	-	
B2080.10	Exterior Fixed Grilles and Screens	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2080.30	Exterior Opening Protection Devices	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2080.50	Exterior Balcony Walls and Railings	-	-	200	AR	300	AR	300	AR	300	PC	300	PC	
B2080.70	Exterior Fabrications	-	-	200	AR	200	AR	200	AR	200	PC	200	PC	Column covers, decorative metal, composites...
B2080.80	Bird Control Devices	-	-	-	-	-	-	-	-	-	-	-	-	
B2090.10	Exterior Wall Specialties	-	-	-	-	-	-	-	-	-	-	-	-	
B3000 EXTERIOR HORIZONTAL ENCLOSURES														
B3010.10	Roofing	-	-	-	-	-	-	-	-	-	-	-	-	
B3010.10	Steep Slope Roofing	100	AR	200	AR	200	AR	200	AR	200	PC	200	PC	Lapped shingles, shakes, roofing tiles, etc.
B3010.50	Low Slope Roofing	100	AR	200	AR	200	AR	200	AR	200	PC	200	PC	Membrane roofing
B3010.70	Canopy Roofing	-	-	200	AR	200	AR	200	AR	200	PC	200	PC	
B3010.90	Roofing Supplementary Components	-	-	200	AR	200	AR	200	AR	200	PC	200	PC	Insulation, stops, coping, expansion joints, etc.
B3020.10	Roof Accessories	-	-	200	AR	200	AR	200	AR	200	PC	200	PC	Ladders, curbs, vents, walkways, etc.
B3020.30	Roof Specialties	-	-	-	-	-	-	-	-	-	-	-	-	Cupolas, spires, steeples, weathervanes, etc.
B3020.70	Rainwater Management	-	-	200	AR	200	AR	200	AR	200	PC	200	PC	Gutters, downspouts, scuppers, etc.
B3040.10	Traffic Bearing Horizontal Enclosures	-	-	-	-	-	-	-	-	-	-	-	-	
B3040.10	Traffic Bearing Coatings	-	-	-	-	-	-	-	-	-	-	-	-	
B3040.30	Horizontal Waterproofing Membrane	-	-	-	-	-	-	-	-	-	-	-	-	
B3040.50	Wear Surfaces	-	-	-	-	-	-	-	-	-	-	-	-	
B3040.90	Horizontal Enclosure Supplementary Components	-	-	-	-	-	-	-	-	-	-	-	-	Substrate board, insulation, flashing, copings, etc.

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)	LOD for (CM BIM)	LOD for (As-Built BIM)	Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer	
	Schematic Design		Design Development		Construction Documents		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD			MEA
B3060.10 Horizontal Openings												
B3060.50 Roof Windows and Skylights												
B3060.50 Vents and Hatches												
B3060.90 Horizontal Opening Supplementary Components											Frames, hardware, glazing, flashing, etc.	
B3080.10 Overhead Exterior Enclosures												
B3080.10 Exterior Ceilings												
B3080.20 Exterior Soffits												
B3080.30 Exterior Bulkheads											Frames, hardware, glazing, flashing, etc.	
C INTERIORS												
C10 INTERIOR CONSTRUCTION												
C1010 Interior Partitions												
C1010.10 Interior Fixed Partitions	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC
C1010.20 Interior Glazed Partitions	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC
C1010.40 Interior Demountable Partitions											Partitions which can be demounted and relocated with minimum labor.	
C1010.50 Interior Operable Partitions											Track-supported, operable panels and partitions, top hung and floor supported, manual or power operated. Includes auditorium partitions/dividers. Includes overhead supports.	
C1010.70 Interior Screens											Portable and open dividers.	
C1010.90 Interior Partition Supplementary Components											Sound isolation, acoustic insulation, firestopping, expansion control.	
C1020 Interior Windows												
C1020.10 Interior Operating Windows	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC
C1020.20 Interior Fixed Windows	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC
C1020.50 Interior Special Function Windows	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC
C1020.90 Interior Window Supplementary Components											Frames, sills, operating hardware, etc.	
C1030 Interior Doors												
C1030.10 Interior Swinging Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC
C1030.20 Interior Entrance Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC
C1030.25 Interior Sliding Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC
C1030.30 Interior Folding Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC
C1030.40 Interior Colling Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC
C1030.50 Interior Panel Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC
C1030.70 Interior Special Function Doors	200	AR	200	AR	300	AR	300	AR	300	PC	300	PC
C1030.80 Interior Access Doors and Panels			200	AR	200	AR	200	AR	200	PC	200	PC
C1030.90 Interior Door Supplementary Components											Frames, hardware, glazing and louvers.	
C1040 Interior Grilles and Gates												
C1040.10 Interior Grilles												
C1040.60 Interior Gates												
C1060 Raised Floor Construction												
C1060.10 Access Flooring			200	AR	200	AR	200	AR	200	PC	200	PC
C1060.30 Platform/Stage Floors												
C1070 Suspended Ceiling Construction												
C1070.10 Acoustical Suspended Ceilings			200	AR	300	AR	300	AR	300	PC	300	PC
C1070.20 Suspended Plaster and Gypsum Board Ceilings			200	AR	300	AR	300	AR	300	PC	300	PC
C1070.50 Specialty Suspended Ceilings			200	AR	300	AR	300	AR	300	PC	300	PC
C1070.70 Special Function Suspended Ceilings												
C1070.90 Ceiling Suspension Components											Hangers and framing to suspend ceiling and sound isolation components to be included with suspended ceiling construction elements above as appropriate.	
C1090 Interior Specialties												
C1090.10 Interior Railings and Handrails			200	AR	200	AR	200	AR	200	PC	200	PC
C1090.16 Interior Louvers			200	AR	200	AR	200	AR	200	PC	200	PC
C1090.20 Information Specialties											Louvers and other items for ventilation that are not an integral part of the mechanical system.	
C1090.25 Compartments & Cubicles											Display units, chalkboards, markerboards, panels, etc.	
C1090.30 Service Walls												
C1090.35 Wall and Door Protection											Patient bed service walls	

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
C1090.40 Toilet, Bath, and Laundry Accessories C1090.50 Fireplaces and Stoves C1090.60 Safety Specialties C1090.70 Storage Specialties C1090.90 Other Interior Specialties													Pest control, flags, banners, mirrors, etc.	
C20000 INTERIOR FINISHES														
C2010.10 Tile Wall Finish C2010.20 Wall Paneling C2010.30 Wall Coverings C2010.50 Stone Facing C2010.60 Special Wall Surfacing C2010.70 Wall Painting and Coating C2010.80 Acoustical Wall Treatment C2010.90 Wall Finish Supplementary Components													Determine limitations of material takeoffs Determine limitations of material takeoffs	
C2020.00 Interior Fabrications C2030.00 Flooring C2030.10 Flooring Treatment C2030.20 Tile Flooring C2030.30 Specialty Flooring C2030.40 Masonry Flooring C2030.45 Wood Flooring C2030.50 Resilient Flooring C2030.60 Terrazzo Flooring C2030.70 Fluid-Applied Flooring C2030.75 Carpeting C2030.80 Athletic Flooring C2030.85 Entrance Flooring C2030.90 Flooring Supplementary Components	200	AR	200	AR	200	AR	200	AR	200	PC	200	AR	Various materials formed to a variety of profiles for purposes such as column covers	
C2040.20 Tile Stair Finish C2040.40 Masonry Stair Finish C2040.45 Wood Stair Finish C2040.50 Resilient Stair Finish C2040.60 Terrazzo Stair Finish C2040.75 Carpeted Stair Finish C2050.00 Ceiling Finishes C2050.10 Plaster and Gypsum Board Finish C2050.20 Ceiling Paneling C2050.70 Ceiling Painting and Coating C2050.80 Acoustical Ceiling Treatment			200	AR	200	AR	200	AR	200	PC	200	PC	Thick flooring materials such as stone should be modeled as separate floors	
D SERVICES														
D10000 CONVEYING														
D1010.10 Vertical Conveying Systems Elevators D1010.20 Lifts D1010.30 Escalators D1010.50 Dumbwaiters D1010.60 Moving Ramps	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC	Wheelchair, platform, stage, vehicle lifts.	
D1030.10 Horizontal Conveying Moving Walks D1030.30 Turntables D1030.50 Passenger Loading Bridges D1030.70 People Movers	200	AR	200	AR	200	AR	200	AR	200	PC	200	PC		
D1060.00 Material Handling Cranes													Monorails, cable cars, etc.	

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
D1050.20 Holsts														
D1050.30 Derricks														
D1050.40 Conveyors														
D1050.50 Baggage Handling Equipment														
D1050.50 Chutes														
D1050.70 Pneumatic Tube Systems														
D1080.00 Operable Access Systems														
D1080.10 Suspended Scaffolding														
D1080.20 Rope Climbers														
D1080.30 Elevating Platforms														
D1080.40 Powered Scaffolding														
D1080.50 Building Envelope Access														Window washing scaffolding Façade access equipment
D2010.00 Domestic Water Distribution														
D2010.10 Facility Potable-Water Storage Tanks														
D2010.20 Domestic Water Equipment			200	ME	300	TC	300	TC	300	TC	300	TC		
D2010.40 Domestic Water Piping			200	ME	300	TC	300	TC	300	TC	300	TC		
D2010.60 Plumbing Fixtures			200	AR/ME	300	AR/TC	300	AR/TC	300	PC/TC	300	PC/TC		** Architect or Engineer placement?
D2010.90 Domestic Water Distribution Supplementary Components														Meters, gages, hangers/supports, insulation, etc.
D2020.00 Sanitary Drainage														
D2020.10 Sanitary Sewerage Equipment														
D2020.30 Sanitary Sewerage Piping														Waste and vent piping, drains, manholes, etc.
D2020.90 Sanitary Drainage Supplementary Components														Supports, meters, gages, valves, insulation, etc.
D2030.00 Building Support Plumbing Systems														
D2030.10 Stormwater Drainage Equipment														
D2030.20 Stormwater Drainage Piping			200	PE	300	TC	300	TC	300	TC	300	TC		
D2030.30 Facility Stormwater Drains			200	AR/PE	300	AR/TC	300	AR/TC	300	PC/TC	300	PC/TC		** Architect or Engineer placement?
D2030.60 Gray Water Systems														
D2030.90 Building Support Plumbing System Supplementary Components														
D2060.00 General Service Compressed Air Process Support Plumbing Systems														
D2060.10 Compressed-Air Systems														
D2060.20 Vacuum Systems														
D2060.30 Gas Systems														
D2060.40 Chemical Waste Systems														
D2060.50 Processed Water Systems														
D2060.90 Process Support Plumbing System Supplementary Components														
D3010.00 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) Facility Fuel Systems														
D3010.10 Fuel Piping														
D3010.20 Fuel Pumps														
D3010.50 Fuel Storage Tanks														
D3020.00 Heating Systems														
D3020.10 Heat Generation														Boilers, furnaces, etc.
D3020.30 Thermal Heat Storage														
D3020.70 Decentralized Heating Equipment														Convection units, chilled beams, air coils, etc.
D3020.90 Heating System Supplementary Components														Supports, meters, gages, valves, insulation, etc.
D3030.00 Cooling Systems														
D3030.10 Central Cooling														Compressors, condensers, chillers, cooling towers. Equipment used to reject heat from the refrigeration process by evaporation.
D3030.30 Evaporative Air-Cooling														
D3030.50 Thermal Cooling Storage														
D3030.70 Decentralized Cooling														Air conditioners, heat pumps, air coils, etc.
D3030.90 Cooling System Supplementary Components														Supports, meters, gages, insulation, etc.
D3050.00 Facility HVAC Distribution Systems														
D3050.10 Facility Hydronic Distribution														
D3050.30 Facility Steam Distribution														
D3050.50 HVAC Air Distribution														
D3050.90 Facility Distribution System Supplementary Components														

Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
D3060 Ventilation														
D3060.10 Supply Air													Fans, ducts, casings, plenums, chases, outlets/inlets.	
D3060.20 Return Air													Fans, ducts, casings, plenums, chases, outlets/inlets.	
D3060.30 Exhaust Air													Fans, ducts, casings, plenums, chases, outlets/inlets.	
D3060.40 Outside Air														
D3060.60 Air-to-Air Energy Recovery														
D3060.70 HVAC Air Cleaning														
D3060.90 Ventilation Supplementary Components														
D3070 Special Purpose HVAC Systems														
D3070.10 Snow Melting													Electric cables and hydronic piping used for snow and ice control.	
D4010 FIRE PROTECTION														
D4010.10 Fire Suppression														
D4010.10 Water-Based Fire Suppression													Piping, standpipes, pumps, sprinkler systems.	
D4010.50 Fire-Extinguishing													CO2, clean-agent, wet/dry chemical extinguishing systems.	
D4010.90 Fire Suppression Supplementary Components													Supports, meters, gages, valves, insulation, etc.	
D4030 Fire Protection Specialties														
D4030.10 Fire Extinguisher Cabinets			200	AR	300	AR	300	AR	300	PC	300	PC		
D4030.30 Fire Extinguishers			200	AR	300	AR	300	AR	300	PC	300	PC		
D4030.50 Breathing Air Replenishment Systems														
D4030.70 Fire Extinguisher Accessories														
D5010 ELECTRICAL														
D5010.10 Facility Power Generation														
D5010.10 Packaged Generator Assemblies														
D5010.20 Battery Equipment														
D5010.30 Photovoltaic Collectors														
D5010.40 Fuel Cells														
D5010.60 Power Filtering and Conditioning														
D5010.70 Transfer Switches														
D5010.90 Facility Power Generation Supplementary Components														
D5020 Electrical Service & Distribution														
D5020.10 Electrical Service														
D5020.30 Power Distribution														
D5020.70 Facility Grounding														
D5020.90 Electrical Service and Distribution Supplementary Components														
D5030 General Purpose Electrical Power														
D5030.10 Branch Wiring System														
D5030.50 Wiring Devices			200	AR/EE	300	AR/TC	300	AR/TC	300	PC/TC	300	PC/TC	** Architect to determine device location?	
D5030.90 General Purpose Electrical Power Supplementary Components													Hangers, supports, etc.	
D5040 Lighting														
D5040.10 Lighting Control			200	AR/EE	300	AR/TC	300	TC	300	PC/TC	300	PC/TC	Lighting equipment may be modeled by both the AR and EE	
D5040.20 Branch Wiring for Lighting														
D5040.50 Lighting Fixtures			200	AR/EE	300	AR/TC	300	AR/TC	300	PC/TC	300	PC/TC	Lighting equipment may be modeled by both the AR and EE	
D5040.90 Lighting Supplementary Components													Hangers, supports, etc.	
D5080 Miscellaneous Electrical Systems														
D5080.10 Lightning Protection														
D5080.40 Cathodic Protection														
D5080.70 Transient Voltage Suppression														
D5080.90 Misc. Electrical Systems Supplementary Components														
D6010 COMMUNICATIONS														
D6010.10 Data Communications														
D6010.10 Data Communications Network Equipment													Firewalls, routers, switches, hubs, WAPs	
D6010.20 Data Communications Hardware													Servers, desktops, laptops, etc.	
D6010.30 Data Communications Peripheral Equipment													Printers, scanners, VR equipment, etc.	
D6010.50 Data Communications Software														
D6010.60 Data Communication Program and Integration Services														

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AR Architect
SE Structural Engineer
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	Schematic Design		Design Development		Construction Documents						Construction		Construction	
	LOD	MEA	LOD	MEA	LOD	MEA					LOD	MEA	LOD	MEA
D6020 Voice Communications														
D6020.10 Voice Communications Switching and Routing Equipment														
D6020.20 Voice Communications Terminal Equipment			200	AR/EE	300	AR/EE	300	AR/EE	300	PC/TC	300	PC/TC	Telephones, transceivers, modems, TTY, radio	
D6020.30 Voice Communications Messaging	n/a		n/a		n/a		n/a		n/a		n/a			
D6020.40 Call Accounting	n/a		n/a		n/a		n/a		n/a		n/a			
D6020.50 Call Management	n/a		n/a		n/a		n/a		n/a		n/a			
D6030 Audio-Video Communication														
D6030.10 Audio-Video Systems														
D6030.50 Electronic Digital Systems														
D6060 Distributed Communications and Monitoring														
D6060.10 Distributed Audio-Video Communications Systems														
D6060.30 Healthcare Communications and Monitoring														
D6060.50 Distributed Systems														
D6090 Communications, Supplementary Components														
D6090.10 Supplementary Components														
D7000 ELECTRONIC SAFETY AND SECURITY														
D7010 Access Control and Intrusion Detection														
D7010.10 Access Control														
D7010.50 Intrusion Detection														
D7030 Electronic Surveillance														
D7030.10 Video Surveillance														
D7030.50 Electronic Personal Protection														
D7050 Detection and Alarm														
D7050.10 Fire Detection and Alarm														
D7050.20 Radiation Detection and Alarm														
D7050.30 Fuel-Gas Detection and Alarm														
D7050.40 Fuel-Oil Detection and Alarm														
D7050.50 Refrigeration Detection and Alarm														
D7050.60 Water Intrusion Detection and Alarm														
D7070 Electronic Monitoring and Control														
D7070.10 Electronic Detention Monitoring and Control														
D7090 Electronic Safety and Security, Supplementary Components														
D7090.10 Supplementary Components														
D8000 INTEGRATED AUTOMATION														
D8010 Integrated Automation Facility Controls														
D8010.10 IA Control of Equipment														
D8010.20 IA Control of Conveying														
D8010.30 IA Control of Fire-Suppression														
D8010.40 IA Control of Plumbing Systems														
D8010.50 IA Control of HVAC Systems														
D8010.60 IA Control of Electrical Systems														
D8010.70 IA Control of Communication Systems														
D8010.80 IA Control of Electronic Safety and Security Systems														
D8010.90 IA Supplementary Components														
E EQUIPMENT AND FURNISHINGS														
E1000 EQUIPMENT														
E1010 Vehicle and Pedestrian Equipment														
E1010.10 Vehicle Servicing Equipment														
E1010.30 Interior Parking Control Equipment														
E1010.50 Loading Dock Equipment			200	AR	300	AR	300	AR	300	PC	300	PC	Gates, fare collection, security, etc.	
E1010.70 Interior Pedestrian Control Equipment														
E1030 Commercial Equipment														
E1030.10 Mercantile and Service Equipment														
E1030.20 Vault Equipment														
E1030.25 Teller & Service Equipment														
E1030.30 Refrigerated Display Equipment														
E1030.35 Laundry & Dry Cleaning Equipment														

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments	AR Architect SE Structural Engineer ME Mechanical Engineer EE Electrical Engineer PE Plumbing Engineer
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
E1030.40 Maintenance Equipment														
E1030.50 Hospitality Equipment														
E1030.55 Unit Kitchens														
E1030.60 Photographic Processing Equipment														
E1030.70 Postal, Packaging, and Shipping Equipment														
E1030.75 Office Equipment														
E1030.80 Foodservice Equipment														
E1040.00 Institutional Equipment														
E1040.10 Educational and Scientific Equipment														
E1040.20 Healthcare Equipment			200	AR	300	AR	300	AR	300	PC	300	PC		
E1040.40 Religious Equipment														
E1040.60 Security Equipment														
E1040.70 Detention Equipment														
E1060.00 Residential Equipment														
E1060.10 Residential Appliances														
E1060.50 Retractable Stairs														
E1060.70 Residential Ceiling Fans														
E1070.00 Entertainment and Recreational Equipment														
E1070.10 Theater and Stage Equipment														
E1070.20 Musical Equipment														
E1070.50 Athletic Equipment														
E1070.60 Recreational Equipment														
E1090.00 Other Equipment														
E1090.10 Solid Waste Handling Equipment														
E1090.30 Agricultural Equipment														
E1090.40 Horticultural Equipment														
E1090.60 Decontamination Equipment														
E20: FURNISHINGS														
E2010.00 Fixed Furnishings														
E2010.10 Fixed Artwork														
E2010.20 Window Treatments														
E2010.30 Casework			200	AR	300	AR	300	AR	300	PC	300	PC		
E2010.70 Fixed Multiple Seating			200	AR	300	AR	300	AR	300	PC	300	PC		
E2010.80 Other Fixed Furnishings														
E2050.00 Movable Furnishings														
E2050.10 Movable Artwork														
E2050.30 Furniture			200	AR	300	AR	300	AR	300	PC	300	PC		
E2050.40 Accessories			200	AR	300	AR	300	AR	300	PC	300	PC		
E2050.60 Movable Multiple Seating														
E2050.90 Other Movable Furnishings														
F SPECIAL CONSTRUCTION AND DEMOLITION														
F10: SPECIAL CONSTRUCTION														
F1010.00 Integrated Construction														
F1010.10 Building Modules														
F1010.50 Manufactured/Fabricated Rooms														
F1010.70 Modular Mezzanines														
F1020.00 Special Structures														
F1020.10 Fabric Structures														
F1020.20 Space Frames														
F1020.30 Geodesic Structures														
F1020.40 Manufacturer-Engineered Structures														
F1020.60 Manufactured Canopies														
F1020.65 Rammed Earth Construction														
F1020.70 Towers														
F1030.00 Special Function Construction														

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction		
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	
F1030.10	Sound and Vibration Control												
F1030.30	Seismic Control												
F1030.50	Radiation Protection												
F1050.00	Special Facility/Components												
F1050.10	Pools												
F1050.20	Interior Fountains												
F1050.30	Interior Water Features												
F1050.40	Aquariums												
F1050.50	Amusement Park Structures and Equipment												
F1050.60	Ice Rinks												
F1050.70	Animal Containment												
F1060.00	Athletic and Recreational (Special Construction)												
F1060.10	Indoor Soccer Boards												
F1060.20	Safety Netting												
F1060.30	Arena Football Boards												
F1060.40	Floor Sockets												
F1060.50	Athletic and Recreational Court Walls												
F1060.60	Demountable Athletic Surfaces												
F1080.00	Special Instrumentation												
F1080.10	Stress Instrumentation												
F1080.20	Seismic Instrumentation												
F1080.40	Meteorological Instrumentation												
F1080.60	Earth Movement Monitoring												
F2000.00	FACILITY REMEDIATION												
F2010.00	Hazardous Materials Remediation												
F2010.10	Transportation and Disposal of Hazardous Materials												
F2010.20	Asbestos Remediation												
F2010.30	Lead Remediation												
F2010.40	Polychlorinate Biphenyl Remediation												
F2010.50	Mold Remediation												
F3000.00	DEMOLITION												
F3010.00	Structure Demolition												
F3010.10	Building Demolition												
F3010.30	Tower Demolition												
F3010.50	Bridge Demolition												
F3010.70	Dam Demolition												
F3030.00	Selective Demolition												
F3030.10	Selective Building Demolition												
F3030.30	Selective Tower Demolition												
F3030.50	Selective Bridge Demolition												
F3030.70	Selective Dam Demolition												
F3050.00	Structure Moving												
F3050.10	Structure Relocation												
F3050.30	Structure Raising												
G	SITWORK												
G1000.00	SITE PREPARATION												
G1010.00	Site Clearing												
G1010.10	Clearing & Grubbing												
G1010.30	Tree and Shrub Removal & Trimming												
G1010.50	Earth Stripping and Stockpiling												
G1020.00	Site Element Demolition												
G1020.10	Utility Demolition												
G1020.30	Infrastructure Demolition												
G1020.50	Selective Site Demolition												
G1030.00	Site Element Relocations												
G1030.10	Utilities Relocation												
G1050.00	Site Remediation												
G1050.10	Physical Decontamination												

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	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction			
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA		
G1050.15	Chemical Decontamination													
G1050.20	Thermal Decontamination													
G1050.25	Biological Decontamination													
G1050.30	Remediation Soil Stabilization													
G1050.40	Site Containment													
G1050.45	Sinkhole Remediation													
G1050.50	Hazardous Waste Drum Handling													
G1050.60	Contaminated Site Material Removal													
G1050.80	Water Remediation													
G1070.00	SITE EARTHWORK													
G1070.10	Grading													
G1070.20	Excavation and Fill													
G1070.30	Embankments													
G1070.35	Erosion and Sedimentation Controls													
G1070.40	Soil Stabilization													
G1070.45	Rock Stabilization													
G1070.50	Soil Reinforcement													
G1070.55	Slope Protection													
G1070.60	Gabions													
G1070.65	Riprap													
G1070.70	Wellands													
G1070.80	Earth Dams													
G1070.90	Site Soil Treatment													
G2000.00	SITE IMPROVEMENTS													
G2010.00	ROADWAYS													
G2010.10	Roadway Pavement													
G2010.20	Roadway Curbs and Gutters													
G2010.40	Roadway Appurtenances													
G2010.70	Roadway Lighting													
G2010.80	Vehicle Fare Collection													
G2020.00	PARKING LOTS													
G2020.10	Parking Lot Pavement													
G2020.20	Parking Lot Curbs and Gutters													
G2020.40	Parking Lot Appurtenances													
G2020.70	Parking Lot Lighting													
G2020.80	Exterior Parking Control Equipment													
G2030.00	PEDESTRIAN PLAZAS AND WALKWAYS													
G2030.10	Pedestrian Pavement													
G2030.20	Pedestrian Pavement Curbs and Gutters													
G2030.30	Exterior Steps & Ramps													
G2030.40	Pedestrian Pavement Appurtenances													
G2030.70	Plaza and Walkway Lighting													
G2030.80	Exterior Pedestrian Control Equipment													Gates, fare collection, security equipment
G2040.00	AIRFIELDS													
G2040.10	Aviation Pavement													
G2040.20	Aviation Pavement Curbs and Gutters													
G2040.40	Aviation Pavement Appurtenances													
G2040.70	Aviation Lighting													
G2040.80	Airfield Signaling and Control Equipment													
G2050.00	ATHLETIC, RECREATIONAL, AND PLAYFIELD AREAS													
G2050.10	Athletic Areas													
G2050.30	Recreational Areas													
G2050.50	Playfield Areas													
G2060.00	SITE DEVELOPMENT													
G2060.10	Exterior Fountains													
G2060.20	Fences & Gates													
G2060.25	Site Furnishings													
G2060.30	Exterior Signage													
G2060.35	Flagpoles													

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Element Classification	Level of Development for (Design BIM)						LOD for (As-Planned BIM)		LOD for (CM BIM)		LOD for (As-Built BIM)		Comments
	Schematic Design		Design Development		Construction Documents		Construction		Construction		Construction		
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	
G2080.40 Covers and Shelters													
G2060.45 Exterior Gas Lighting													
G2060.50 Site Equipment													
G2060.60 Retaining Walls													
G2060.70 Site Bridges													
G2080.80 Site Screening Devices													
G2080.85 Site Specialties													Bellards
G2080.90 Landscaping													
G2080.10 Planting Irrigation													
G2080.20 Turf and Grasses													
G2080.30 Plants													
G2080.50 Planting Accessories													
G2080.70 Landscape Lighting													
G3010.00 LIQUID AND GAS SITE UTILITIES													
G3010.00 Water Utilities													
G3010.10 Site Domestic Water Distribution													
G3010.30 Site Fire Protection Water Distribution													
G3010.50 Site Irrigation Water Distribution													
G3020.00 Sanitary Sewerage Utilities													
G3020.10 Sanitary Sewerage Utility Connection													
G3020.20 Sanitary Sewerage Piping													
G3020.40 Utility Septic Tanks													
G3020.50 Sanitary Sewerage Structures													
G3020.60 Sanitary Sewerage Lagoons													
G3030.00 Storm Drainage Utilities													
G3030.10 Storm Drainage Utility Connection													
G3030.20 Storm Drainage Piping													
G3030.30 Culverts													
G3030.40 Site Storm Water Drains													
G3030.50 Storm Drainage Pumps													
G3030.60 Site Subdrainage													
G3030.70 Storm Drainage Ponds and Reservoirs													
G3050.00 Site Energy Distribution													
G3050.10 Site Hydronic Heating Distribution													
G3050.20 Site Steam Energy Distribution													
G3050.40 Site Hydronic Cooling Distribution													
G3040400 Pumping Stations													
G3060.00 Fuel Distribution													
G3060.10 Site Gas Distribution													
G3060.20 Site Fuel-Oil Distribution													
G3060.30 Site Gasoline Distribution													
G3060.40 Site Diesel Fuel Distribution													
G3060.60 Site Aviation Fuel Distribution													
G3080.00 Liquid and Gas Site Utilities Supplementary Components													
G3080.10 Supplementary Components													Manholes and structures, utility structures, trenchless utility installations, etc.
G4010.00 ELECTRICAL SITE IMPROVEMENTS													
G4010.00 Site Electrical Distribution Systems													
G4010.10 Electrical Utility Services													
G4010.20 Electric Transmission and Distribution													
G4010.30 Electrical Substations													
G4010.40 Electrical Transformers													
G4010.50 Electrical Switchgear and Protection Devices													
G4010.70 Site Grounding													
G4010.90 Electrical Distribution System Instrumentation													
G4050.00 Site Lighting													
G4050.10 Area Lighting			200	AR/EE	200	AR/TC	200	AR/TC	200	PC/TC	200	PC/TC	
G4050.20 Flood Lighting			200	AR/EE	200	AR/TC	200	AR/TC	200	PC/TC	200	PC/TC	
G4050.50 Building Illumination			200	AR/EE	200	AR/TC	200	AR/TC	200	PC/TC	200	PC/TC	

AR Architect
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	Schematic Design		Design Development		Construction Documents		Construction		Construction					
	LOD	MEA	LOD	MEA	LOD	MEA	LOD	MEA	LOD			MEA		
G4050.90 Exterior Lighting Supplementary Components			200	AR/VEE	200	AR/TC	200	AR/TC	200	PC/TC	200	PC/TC	Lighting poles and standards, instrumentation and controls.	
G5010.00 SITE COMMUNICATIONS														
G5010.00 Site Communications Systems														
G5010.10 Site Communications Structures													Transmission towers, utility poles, vaults, etc.	
G5010.30 Site Communications Distribution														
G5010.50 Wireless Communications Distribution														
G9010.00 MISCELLANEOUS SITE CONSTRUCTION														
G9010.00 Tunnels														
G9010.10 Vehicular Tunnels														
G9010.20 Pedestrian Tunnels														
G9010.40 Service Tunnels														
G9010.90 Tunnel Construction Related Activities														

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**Attachment 5 – Quality Assurance/Quality Control Plan for the Traffic Company
and Forensic Services Division Facility**



Design Team Quality Assurance and Quality Control Plan

*City/County of San Francisco Traffic Company
Division & Forensic Science Division Laboratory*

Current version date: 2015-09-01

Revisions		
1	2015-04-28	Draft Issued to DPW
2	2015-05-29	Final Issued to DPW
3	2015-09-01	Phase 1 – Final
4		
5		

Attachment 5

Quality Assurance and Quality Control Plan for the Traffic Company and Forensic Services Division Facility

The team will implement a Quality Assurance/Quality Control (QA/QC) Plan to be used throughout the design process for the San Francisco Traffic Company and Forensic Lab Building. This QA/QC plan is tailored to the specifics of the project using principles of HOK's firm-wide Quality Management Program. The plan is developed to facilitate delivery of project documents that are technically sound, complete, and coordinated to accurately communicate the design intent and scope of the project, as well as in conformance with the program and project scope requirements.

The QA/QC Plan is based on the following principles of quality management:

- Quality management begins at the outset of the project and is continuous during the entire course of the work.
- All project team members are responsible to contribute to the quality management process.
- The ability to affect change and take corrective action diminishes during the course of the project.

Project Manager James Aguilar (PM) and Project Architect Kyle Prenzlöw (PA) will lead Quality Assurance and Quality Control respectively for the TC&FSD Facility. They are supported by Mike Retford, Principal-in-Charge for HOK's San Francisco office and liaison to HOK's firm-wide project delivery board, which administers HOK's quality management program.

Quality Assurance

Quality Assurance begins with the development and documentation of QA/QC procedures and guidelines in a Quality Assurance Manual. These procedures and guidelines will establish protocols for daily work on the project as well as outline standards for Milestone Document Reviews. The preparation of the Quality Manual will commence as soon as the team has received the Notice to Proceed for the Project.

The PM and PA will conduct a QA/QC kick-off meeting with the Consultant team prior to commencing Concept Design. During the meeting the Quality Assurance Manual will be distributed to each team member and each aspect of the QA/QC process will be reviewed.

QA/QC Procedures and Guidelines

The Quality Assurance Manual will address the following standards and procedures:

1. QA/QC objectives and scope:
 - a. QA/QC program summary
 - b. QA/QC team responsibilities
 - c. QA/QC schedule and milestones
2. Team Communications:
 - a. Team Organization
 - b. Filing and Data Management standards
 - c. Communication protocol

3. Project Scope and Deliverables:
 - a. Project Scope of work/contract
 - b. Project goals and objectives
 - c. Project schedule
4. Project Execution Plan (PxP) Implementation
5. Document standards:
 - a. Construction document standards
 - b. CAD/BIM standards
6. Coordination
7. Document Review
 - a. Milestone Quality Review
 - b. Peer Review
 - c. Integrated Project Review
8. Project QA/QC Measurement and Reporting

Quality Control

While quality assurance measures are employed throughout the design process, formal milestone reviews focus on quality control. These reviews are performed for verification of quality, coordination, and completeness of the work prior to the milestone deliverables in every phase of every project. All disciplines will be reviewed for coordination and conformance with the contract and program requirements. Critical systems including mechanical, laboratory design, fire/life safety, and exterior envelope will undergo a peer review at certain milestones. Comments will be generated, addressed, and tracked for the project record through the use of Bluebeam Studio, a cloud based collaboration tool. All team members have access to the same review documents and can see the comments made by others, so that no compilation is required, and duplicative and contradictory comments are eliminated. Reports will be generated to capture comments from the quality review and then shared and archived along with the annotated documents in PDF or printed format.

Milestone Quality Reviews will occur at each phase of the project tailored to the relevant information for that phase. Quality reviews are coordinated to include participation of the Project Team, Peer Review, and the independent Quality Reviewers. Comments from the milestone QC review will be address as required with prior to the commencement of the quality review by the client and the CM/GC. At the completion of the review process, comments and feedback from all participants are synthesized with responses documented. Information will be reviewed into the milestone workshops and relevant revisions will be incorporated into the project documents.

A senior project architect (Quality Reviewer), not assigned to the project, will lead the Quality Review. Comments that carry over to a subsequent phase can be added to the project issues log for tracking. This information can be accessed by multiple team members from any location.

1. Quality review:
 - a. The Quality Review will be done sufficiently in advance of the milestone deadline to be able to check and incorporate required changes into the work. The Quality Review will focus on the following key issues:
 - Codes and Life Safety
 - Accessibility

- Interdisciplinary Coordination
- Sub-Consultants Quality Assurance
- Building Performance

b. Constructability The Quality Review will be performed using Bluebeam Studio. Comments are color coded by author. The Quality Reviewer will check the deliverables for the phase, including drawings, specifications, and reports against the key issues, marking directly on the documents. Upon the completion of the review, the Project Architect will review all of the comments, and assign the responsibility for each actionable comment to a team member within the file. The team member will either respond to clarify or make the correction and change the comment status to CLOSED. Comments that require review and discussion with the owner will be coded and extracted to an issues log for follow up. A PDF of the Quality Review documents will be provided to the owner at the end of the phase to ensure the transparency and efficacy of the process.

2. Peer Reviews:

a. Concurrent with the Milestone quality review, independent Peer Reviews will be performed by one or more senior staff from each primary discipline; Architecture, Structure, Mechanical, Electrical, Plumbing, and Tel/Data. The review will be by staff or consultants outside of the immediate project team to provide a fresh look at the work. The focus of the review will be to evaluate the progress of the work against the milestone deliverable, provide feedback on design considerations, evaluate technical approach and quality, and check for interdisciplinary coordination. Comments will be in a consistent format with the Quality Review, sharing the same Bluebeam session for coordination with other reviewers.

	Schematic Design (NIC)	50% Design Development (NIC)	Design Development (NIC)	50% Construction Documents (NIC)	90% Construction Documents (NIC)	Construction Documents (NIC)
Peer Review	MEP/FP Lab planning	MEP/FP Enclosure Lab planning	MEP/FP Enclosure Lab planning	Enclosure Lab planning	Enclosure Lab planning	Enclosure Lab planning
Design-Build Peer Review				MEP/FP	MEP/FP	MEP/FP

3. Integrated Project Review:

4. The Integrated Project Review is an full day interactive session held at the outset of the Owner's Quality review period. Project stakeholders (project management, users, facilities and operations, authorities having jurisdiction) gather for the day in a group workshop with the design and construction team, participating in multiple concurrent discipline and systems based project reviews. The intent is to orient the greater project team to the design, focus the discussion on the relevant issues in that phase, and daylight overarching concerns in a big room format prior to the client review period. At the end of the day, each focus group will present critical findings for discussion. Client Review:

a. Documents will be issued electronically to the City for their review and approval. The City will review documents for program compliance, durability, ease of operations and accommodation of City standards, capturing their comments electronically. Client review comments will be issued to the Project Team using the same formats as the CM/GC reviews.

5. CM/GC Review:
 - a. Concurrent with the client review, documents will be issued electronically to the CM/GC for cost and constructability review. The CM/GC reviews will commence at 50% DD. CM/GC review comments will be captured and documented in a common format with the Client Review.

6. Reconciliation:
 - a. After completion of the CM/GC and City Reviews, all review comments will be distributed to the design team for review and evaluation. Project team leaders will synthesize information and respond to each of the items identified. Items requiring clarification will be incorporated into the milestone workshops. Review comments with cost implications will be flagged and tracked in the Cost Estimate. At the completion of this process, items will be flagged for integration into the project or synthesized information will be red-marked by the Project Architect and Discipline leaders into the project Team Check Set. The Team Check Set will be distributed and a 'yellowed-out' set produced for verification to the client that the comments relative to that phase have been incorporated into the documents.

7. Milestone Workshops
 - a. Milestone workshops are attended by the project stakeholders and the Project Team immediately following the reconciliation exercise. The intent is to focus on three things – resolution of outstanding questions from the milestone review, reconciliation of cost, and an evaluation of the team's progress.
 - i. In order to resolve outstanding comments, the workshop will focus on comments where there is conflicting direction, a deviation from the program or previous design direction, or where there are cost implications. Items that cannot be closed in the workshop will be identified for a research subgroup in the subsequent phase.
 - ii. The cost portion of the workshop will be planned and led collaboratively by both the CM/GC and the design team. The focus will be on Value Analysis instead of Value engineering.
 1. Re-confirm priorities for program and goals
 2. Analyze contributing design features
 3. Seek improvements - Eliminate or reduce the cost of components that add little value. Enhance the value added by components that contribute significantly.
 - iii. As a team, review the results of the previous phase and assess the progress against the project goals. The team will use a plus/delta format to capture feedback from the team, and ideas for improvement going forward.

Schedule and Content of QA/QC milestone and Reviews

1. Program Verification
 - a. Quality review:
 - i. Program Compliance
 - ii. Cost
 - b. Client Review

2. Concept Phase - 90%:
 - a. Quality review
 - i. Key Issues
 - b. Integrated Project Review
 - c. Client Review

3. Schematic Design - 90%: (NIC)
 - a. Quality review
 - i. Key Issues
 - ii. Peer Review

- b. Integrated Project Review
 - c. Client Review
 - d. Milestone Workshop
4. Design Development Phase – 50% (NIC)
- a. Quality review
 - i. Key Issues
 - ii. Peer Review
 - b. Integrated Project Review
 - c. CM/GC Review
 - d. Client Review
 - e. Milestone Workshop
5. Design Development Phase – 90% (NIC)
- a. Quality review
 - i. Key Issues
 - ii. Peer Review
 - b. Integrated Project Review
 - c. Client Review
 - d. CM/GC Review
 - e. Milestone Workshop
6. Construction Document Phase – 50% (NIC)
- a. Quality review
 - i. Key Issues
 - ii. Peer Review
 - b. Integrated Project Review
 - c. CM/GC Review
 - d. Client Review
 - e. Milestone Workshop
7. Construction Document Phase – 90% (NIC)
- a. Quality review
 - i. Key Issues
 - ii. Peer Review
 - b. CM/GC Review
 - c. Client Review
 - d. Milestone Workshop
8. Bid Documents (NIC)
- a. Quality review
 - i. Key issues
 - b. CM/GC Review

Attachment 6- Hourly Rate Schedule**Include all Prime and Sub-consultant 2014 Billing Rates****HOK**

Principal in Charge	\$361.84
Project Manager	\$223.57
Project Designer	\$291.12
Project Architect	\$199.62
Lab Planner / Programmer	\$200.75
Lab Equipment Planner	\$209.98
Urban Planning / Landscape	\$255.49
Sustainable Design / LEED	\$207.59
Senior Architect	\$215.89
Architect	\$152.79
Specifications	\$225.86
BIM Manager	\$172.72
Jr. Designer	\$89.68
Senior Interior Designer	\$166.07
Interior Designer	\$119.57
Senior Design Professional (Revit)	\$116.25
Design Professional (Revit)	\$89.68
Administration Support	\$83.04
Landscape Design Director	\$255.75
Landscape Architect	\$149.47

MEI Architects

Technical Principal	\$220.80
CA Manager	\$232.00
Design Director	\$195.00
Project Designer	\$136.73
Project Architect	\$195.36
Job Captain	\$156.29
Graphic Production	\$123.73
Administration Support	\$97.68
Construction Administrator	\$63.48

RG Vanderweil

Project Manager	\$199.64
Lead HVAC Engineer	\$174.86
Lead Electrical Engineer	\$163.41
Lead Plumbing Engineer	\$145.61
Lead Fire Protection Engineer	\$178.03

SOHA

Principal	\$221.33
Sr. Project Manager	\$157.11
Sr. Project Engineer	\$116.14
CAD Drafter	\$106.56

Telamon Engineering Consultants, Inc.

Principal/Project Manager	\$192.65
Sr. Project Engineer	\$174.41
Civil Engineer III	\$148.16
Engineer II	\$126.85
Civil Engineer IA	\$99.10
Civil Engineer IB	\$95.14
CAD Drafter III	\$110.99
CAD Drafter II	\$95.14
CAD Drafter I	\$88.79
Survey Manager	\$190.27
Office Surveyor	\$119.14
Survey Party Chief	\$128.97
Survey Field Crew	\$110.04

Cumming

Sr. Cost Manager	\$175.01
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Smith, Fause & McDonald, Inc.

Principal	\$190.58
Senior Engineer	\$145.20

Project Engineer	\$117.98
Revit	\$105.88
CAD	\$78.65

Allana Buick Bers AE

Principal IV	\$350.00
Principal III	\$300.00
Principal II	\$275.00
Principal I	\$250.00
Associate IV	\$235.00
Associate III	\$225.00
Associate II	\$210.00
Associate I	\$195.00
Consultant IV	\$200.00
Consultant III	\$185.00
Consultant II	\$165.00
Consultant I	\$145.00
Executive Project Manager	\$200.00
Project Manager III	\$185.00
Project Manager II	\$165.00
Project Manager I	\$145.00
Building Technologist III	\$140.00
Building Technologist II	\$125.00
Building Technologist I	\$110.00
Field Monitor (Part Time)	\$145.00
Field Monitor III	\$140.00
Field Monitor II	\$130.00
Field Monitor I	\$110.00
CAD Specialist III	\$145.00
CAD Specialist II	\$130.00
CAD Specialist I	\$115.00
Forensic Documentation Specialist	\$140.00
IT Consultant	\$135.00
Administrative	\$85.00

Watry Design, Inc.

Principal	\$308.35
Project Manager	\$176.93
Senior Designer	\$110.40

JS Nolan + Associates Lighting Design, LLC

Principal	\$219.04
Designer 1	\$95.83
Designer 2	\$84.88
Designer 3	\$69.82
Admin	\$67.08

Kate Keating & Associates

Principal-in-Charger	\$314.57
Principal	\$207.82
Project Manager	\$180.71
Designer	\$158.96
Junior Designer	\$133.86
Design Assistant	\$108.76
Administration	\$76.13

The Fire Consultants

Principal	\$181.13
Fire Protection Engineer	\$181.13
Technical	\$96.60

A.R. Sanchez

Principal	\$295.00
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Syska Hennessy Group

Principal	\$267.16
Project Manager	\$189.34
Project Engineer	\$136.43

Collin Gordon Associates

Principal Consultant	\$300.00
Senior Consultant	\$250.00
Consultant I	\$175.00
Consultant II	\$150.00
Technical Assistant I	\$125.00
Technical Assistant II	\$100.00
Staff Assistant	\$100.00

Benny Del Re

Forensic Science Advisor	\$125.00
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Attachment 7 – Design Team and Key Employees

<u>DISCIPLINE:</u>	<u>FIRM:</u>	<u>KEY EMPLOYEE:</u>
Prime Architect, Interiors Forensic Lab Program/Planning Interior Design/Planning Lab Equipment Planning Specifications Landscape Arch. (Peer Review) Security Hardware Construction Support	HOK	Mike Retford – Principal In Charge James Aguilar – Project Manager Kyle Prenzlow - Project Architect Alan Bright – Senior Project Designer Tim O'Connell - Senior Lab Planner Jack Baker, Lab Planner Stuart Lewis - Lab Equipment Planner Mike Retford – Security Hardware Anne Whitacre – Specifications Joe Winters - Lab Specs
Associate Architect Interiors Construction Admin Support	MEI Architects	Mei Mei Chan - Technical Principal Steven Juegens - Architect Ruairi O'Connell - Project Designer David Wilson, AIA - CA support
Mechanical Engineering Electrical Engineering Plumbing Engineering Fire Protection Engineering	R.G. Vanderweil Engineers	John Saad – MEP Principal Michael Walsh - MEP PM Harris Zeidman – HVAC Engineer Robert Chaves – Electrical Engineer Seth Johnson – Plumbing Engineer Demetri Tsatsarones – Fire Protection
Design Peer Review for Mechanical / Electrical / Plumbing	HOK – Engineering	Dick Powers – MEP Art Morrissey – Plumbing John Santos – Mechanical Daniel Huang - Electrical
Structural Engineer	SOHA Engineers	Steve Lau – Structural Engineer Farshad Khodayari – Structural Engineer
Civil Engineer	Telamon Engineering Consultants, Inc	Mennor Chan – Principal Civil Engineer
Cost Estimating	Cumming Construction Management	Nick Mata – Senior Cost Estimator
A-V, Low Voltage, IT, Security Electronics, Acoustics & Noise Engineer	Smith, Fause & McDonald, Inc.	Peter McDonald
Vibration Engineering	Collin Gordon & Associates	Stephen Jaeger – Senior Consultant Hal Amick – Vibration Engineer
Lighting Design	JS Nolan + Associates	Janet Nolan – Lighting Designer
Waterproofing, Roofing & Curtain Wall Peer Review	Allana Buick & Bers, Inc	Gerson Bers Jerome Jeffers

Parking Design	Watry Design, Inc.	Michelle Wendler – Parking Planner Taylor Kim – Parking Planner
Building Code Consultant	The Fire Consultants	Jeff Maddox – Building Code Consultant John Stauder – Building Code Consultant
ADA Code Consultant	A.R. Sanchez-Corea & Associates, Inc.	Tony Sanchez-Corea – ADA Code Consultant
Signage Consultant	Kate Keating Associates, Inc.	Julie Vogel
LEED Documentation	HOK – San Francisco	Zorana Bosnic - Sustainable Design Leader Breffni O'Rourke - Sustainable Design Specialist
Energy Modeling	HOK Engineering – San Francisco	Lindsey Willman - Building Physics Engineer
Vertical Transportation	Syska Hennessy Group	John Moran – Elevator Engineer
ASCLAD Advisor	Bennie Del Re	Bennie Del Re – Forensic Science Consultant

Attachment 8 – Percentage of Key Participants of Each Firm/Employees

Name	Role	Firm	Prog. Phase	Con. Desg.	SD Phase (NIC)	DD Phase (NIC)	GD Phase (NIC)	CA Phase (NIC)	Warr. Phase (NIC)
			2%	6.9%	16.5%	22.8%	25.3%	24.6%	0.7%
Mike Retford	PIC	HOK	20	20	40	25	25	20	5
James Aguilar	Project Manager	HOK	80	80	90	90	90	40	5
Kyle Prenzlow	Project Architect	HOK	5	75	90	90	90	40	40
Alan Bright	Sr. Project Designer	HOK	10	70	90	30	10	5	5
Tim O'Connell	Lab Planner & Program	HOK	80	60	70	40	20	5	0
Emily Fowlkes	Lab Equipment Planner	HOK	5	40	40	40	20	5	0
Mei Mei Chan	Technical Principal	MEI	5	80	60	60	70	40	0
Ruairi O'Connell	Project Designer	MEI	0	50	80	30	30	5	0
David Wilson	Construc. Admin.	MEI	0	10	10	30	35	80	0
Farshad Khodayari	Structural Engineer	SOHA	0	30	60	60	60	30	0
Mennor Chan	Civil Engineer	Telamon	0	35	50	60	60	25	0
Michael Walsh	Mechanical Engineer	RGV	10	30	75	15	0	0	0
Harris Zeidman	HVAC Engineer	RGV	5	60	70	10	0	0	0
John Santos	HVAC Engineer	HOK-Eng	0	3	5	10	20	20	0
Robert Chaves	Electrical Engineer	RGV	5	60	75	15	0	0	0
Daniel Hueng	Electrical Engineer	HOK-Eng	0	3	5	10	20	20	0
Seth Johnson	Plumbing Engineer	RGV	5	60	75	15	0	0	0
Art Morrissey	Plumbing & FP Engineer	HOK-Eng	0	3	5	5	20	20	0
Demetri Tsatsarones	Fire Protection Engineer	RGV	3	40	70	15	20	10	0
Nick Mata	Senior Cost Manager	Cumming	40	40	60	50	10	0	0

Attachment 9 – First Source Hiring

PROFESSIONAL SERVICES

SPECIFICATIONS SECTION FOR CITYBUILD REQUIREMENTS

1.1 SUMMARY

- A. This Document incorporates the requirements of the First Source Hiring Program pursuant to San Francisco Administrative Code Chapter 83. The CityBuild Program managed by the Office of Economic and Workforce Development (OEWD) is the sole administrator of the First Source Hiring Program. CityBuild partners with various educational programs dedicated to the training and job placement of Trainees who are Economically Disadvantaged Workers of all ethnic backgrounds and genders. The goal of the First Source Hiring Program is to fill every available Entry Level Position with a qualified and job ready CityBuild Trainee.
- B. Consultant agrees to participate in the CityBuild Program managed by the Office of Economic and Workforce Development (OEWD) and comply with the provisions of SF Administrative Code Chapter 83.
- C. The CityBuild requirements are set forth below. As part of its participation, the Consultant shall incorporate the provisions of this Document into any Joint Venture Partnership and subconsultant on this Contract regardless of tier and shall require its subconsultants to do the same.

1.2 DEFINITIONS

For the purposes of this Document only, the following definitions shall apply:

- A. Economically Disadvantaged Worker: An individual who is either (a) eligible for services under the Workforce Investment Act of 1998 (29 U.S.C.A. 2801, *et seq.*), as may be amended from time to time, or (b) designated as by the CityBuild Program as an individual at risk of relying upon or returning to public assistance.
- B. Entry Level Position: Any non-managerial position that requires no education above a high school diploma or certified equivalency, and less than two (2) years training or specific preparation, and shall include temporary, permanent and intern positions. Trainees are considered Entry Level Positions.
- C. CityBuild Program: The First Source Hiring Administrator established by the CITY and County of San Francisco and managed by the Office of Economic and Workforce Development (OEWD).
- D. Trainee: Economically Disadvantaged Worker who is a member of the CityBuild Program and has been identified by CityBuild staff as having the appropriate training, employment background and skill sets for a Consultant specified Entry Level Position. Trainees do not require a college degree.

- E. Consultant: Prime Consultant, Joint Venture Partner and any other subconsultant of all tiers for the purpose of performing work under this Professional Service Contract.

1.3 CITYBUILD REQUIREMENTS

- A. Consultants are required to notify CityBuild staff of all available Entry Level Positions. In addition, the CITY requires the Consultant to hire a minimum number of Trainees in the area of the Consultant's expertise. Trainees hired by the Consultant count toward the First Source Hiring requirements
- B. The intent of hiring Trainees is to provide Economically Disadvantaged Workers technical training and job opportunities in a professional environment. The Trainee must be hired in a discipline related to technical services or meaningful support for the Consultant.
- C. Trainees must be obtained through the CityBuild Program and the Consultants must consider all Trainees fairly, equally and comply with the non-discrimination provisions pursuant to local, state and federal laws. The final decision to hire a Trainee shall be made by the Consultant.
- D. Consultant shall make good faith efforts to hire Trainees referred by the CityBuild Program. Consultant may decline to hire a Trainee if the Consultant considers the Trainee in good faith but deems the Trainee is not qualified. The final decision to hire a Trainee shall be made by the Consultant. The number of Trainees to be hired is based on the Consultant Fee Schedule below:

Consultant Fee Schedule	Number of Trainees to be Hired
\$0 – \$499,999	0
\$500,000 – \$899,999	1
\$900,000 – \$1,999,999	2
\$2,000,000 – \$4,999,999	3
\$5,000,000 – \$7,999,999	4
\$8,000,000 – \$10,999,999	5
\$11,000,000 – \$13,999,999	6
(> = \$14M, for each additional \$3 million in consultant fees, add one additional Trainee)	

- E. The Consultant shall hire the Trainee on a full-time basis for at least 12 months or on part-time basis for 24 months, offering him/her On The Job Training (OJT) Training, which allows the Trainee to progress on a career path. The hiring of Trainees can be phased over a period of time.
- F. The Trainees will be hired as regular employees of the firm and shall receive any benefits that they may be entitled to under State labor laws. No existing employee may be counted towards meeting the Trainee goal.
- G. The Consultant shall design a training program specifically for the Trainee. The program shall include, but not limited to company's personnel policy and

procedures manual, benefit package and OJT duties and responsibilities. The Trainees are not permitted to perform work in construction trade positions. These opportunities will be executed throughout the duration of this contract.

- H. The Consultant may hire the Trainee(s) for the duration of the project and may utilize Trainees on other contracts it has within the San Francisco Bay Area
- I. The Consultant can replace a Trainee if there is documentation demonstrating the Trainee did not perform the job requirements at a satisfactory level.
- J. The Consultant shall provide the necessary tools and office equipment (i.e., computers, desks and chairs) for Trainees to perform the assigned duties. The Consultant shall provide travel costs if the Trainee has to travel 50 miles or more from his/her assigned work site for the purposes of the scope of work under this contract.
- K. Designate a Consultant representative to monitor all employment-related activity and be the main contact for CityBuild staff.
- L. Consultant shall permit CityBuild staff to interview regular employees and Trainees during working hours of this contract.

1.4 DOCUMENT REQUIREMENTS

- A. Bid Document Requirements: Consultant shall complete, sign and submit *CityBuild Trainee Form* with Consultant's bid proposal. Failure to submit a completed and signed *CityBuild Trainee Form* with the Consultant's proposal will result in a rejected bid.
- B. Awarded Consultant Document Requirements: Within 30 days of award of contract, the Consultant shall provide the CityBuild program the following information:
 - 1. Indicate number of Trainees to be hired, Trainee's start date, and Trainees rate of pay.
 - 2. Provide the name, telephone number and email of the Consultant representative with hiring authority.
 - 3. Provide a job description for all Trainee positions. Indicate the specific skill sets and disciplines for the position. A College degree is not a requirement for a Trainee position.
- B. The Consultant shall submit to the CityBuild Program a monthly report on the status of hired Trainees.
- C. Upon request by CityBuild staff, the Consultant shall maintain a CityBuild compliance binder which shall include copies of all documentation and records supporting good faith efforts toward the requirements set forth under this Document.

1.5 KICKOFF MEETING

- A. Prior to commencement of work, Consultant shall attend a kickoff meeting convened by CityBuild staff. A Consultant representative present at the kickoff

meeting must have hiring authority. Any kickoff or pre-mobilization meeting convened by the awarding CITY department and attended by CityBuild staff and a Consultant representative with hiring authority will satisfy this provision.

- B. Failure to comply with this kickoff meeting provision may result in the CITY ordering a suspension of work by the Consultant until the breach has been cured; any delay resulting from such suspension shall be considered the fault of the Consultant and an avoidable delay.

1.6 PROGRESS PAYMENTS

Failure to demonstrate good faith efforts in conformance with the provisions of this Document may result in the withholding of progress payments under this Contract. The Consultant agrees that the CITY may withhold pending and future progress payments should the Consultant not demonstrate good faith efforts toward satisfying the required number of Trainees hired.

1.7 LIQUIDATED DAMAGES

- A. The Consultant acknowledge and agree that their commitment to comply with the CityBuild requirements set forth in this Document is a material element of the CITY's consideration for this Contract; that the failure of the Consultant to comply with the terms and conditions of this Specification Section will cause harm to the CITY and the public which is significant and substantial but extremely difficult to quantify; that the harm to the CITY includes not only the financial cost of funding public assistance programs but also the insidious but impossible-to-quantify harm that this community and its families suffer as a result of unemployment; and that the assessment of liquidated damages of up to \$5,000 for every notice of a new hire for an Trainee and an Entry Level Position improperly withheld by the Consultant from the CityBuild Program, as determined by the CityBuild Director during his/her first investigation of the Contract, does not exceed a fair estimate of the financial and other damages that the CITY suffers as a result of the failure by the Consultant to this Specification to comply with its CityBuild Program contractual obligations.
- B. The Consultant further acknowledge and agree that the continued failure to comply with its CityBuild Program obligations will cause further significant and substantial harm to the CITY and the public, and that a second assessment of liquidated damages of up to \$10,000.00 for each Trainee and Entry Level Position improperly withheld from the CityBuild Program from the time of the conclusion of the first investigation forward, does not exceed the financial and other damages that the CITY suffers as a result of the Consultant's continued failure to comply with the CityBuild Program.

1.7 TERM

The obligations of the Consultant, as set forth in this Document, shall remain in effect until Substantial Completion of all work to be performed by the Consultant under the terms and conditions of this Contract.

END OF SECTION

FORM SFEC-126:
NOTIFICATION OF CONTRACT APPROVAL
 (S.F. Campaign and Governmental Conduct Code § 1.126)

City Elective Officer Information <i>(Please print clearly.)</i>	
Name of City elective officer(s): Members, Board of Supervisors	City elective office(s) held: Members, Board of Supervisors

Contractor Information *(Please print clearly.)*

Name of contractor:
Hellmuth, Obata, & Kassabaum, Inc.

Please list the names of (1) members of the contractor's board of directors; (2) the contractor's chief executive officer, chief financial officer and chief operating officer; (3) any person who has an ownership of 20 percent or more in the contractor; (4) any subcontractor listed in the bid or contract; and (5) any political committee sponsored or controlled by the contractor. Use additional pages as necessary.

Patrick MacLeamy – Chief Executive Officer
 Gordie Beittenmiller – Chief Financial Officer
 Tom Robson – Chief Operating Officer

Board of Directors *(ownership of 20 percent or more)*

Patrick MacLeamy
 Tom Robson

Subcontractors:

- A.R. Sanchez-Corea & Associates
- Allana Buick & Bers
- Benny Del Re
- Collin Gordon Associates
- Cumming Construction Management, Inc.
- JS Nolan + Associates Lighting Design, LLC
- Kate Keating Associates, Inc.
- MEI Architects
- R. G. Vanderweil
- Smith Fause & McDonald Inc.
- SOHA Engineers
- Syska Hennessy Group
- Telamon Engineering Consultants Inc.
- The Fire Consultants, Inc.
- Watry Design

Contractor address:
 2 Bush Street, San Francisco, CA

Date that contract was approved: <i>(By the SF Board of Supervisors)</i>	Amount of contracts: \$ 11,862,305
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Describe the nature of the contract that was approved:
 Architecture and Engineering services for the design and construction of the general obligation bond ESER 2014's Traffic Company & Forensics Services Division project

Comments:

This contract was approved by (check applicable):

the City elective officer(s) identified on this form

a board on which the City elective officer(s) serves: San Francisco Board of Supervisors

Print Name of Board

the board of a state agency (Health Authority, Housing Authority Commission, Industrial Development Authority Board, Parking Authority, Redevelopment Agency Commission, Relocation Appeals Board, Treasure Island Development Authority) on which an appointee of the City elective officer(s) identified on this form sits

Print Name of Board

Filer Information <i>(Please print clearly.)</i>	
Name of filer: Angela Calvillo, Clerk of the Board	Contact telephone number: (415) 554-5184
Address: City Hall, Room 244, 1 Dr. Carlton B. Goodlett Pl., San Francisco, CA 94102	E-mail: Board.of.Supervisors@sfgov.org

Signature of City Elective Officer (if submitted by City elective officer)

Date Signed

Signature of Board Secretary or Clerk (if submitted by Board Secretary or Clerk)

Date Signed