

EXHIBIT A

GENERAL CONDITIONS AND DIVISION 1

Proforma copies of the University's Construction Design Standards (CDS) Division 1 and the General Conditions for the Design-Bid-Build delivery method are available at the Facilities Services website under the following URLs:

CDS Div 1: http://www.cp.berkeley.edu/CDS_ucb/CDS_Division1/Div_1_TOC.html

General Conditions: http://www.cp.berkeley.edu/LongForm_GeneralConditions.pdf

These documents may be modified for use in other delivery methods.

EXHIBIT B

DESIGN PROFESSIONAL HOURLY RATE SCHEDULE FOR ADDITIONAL SERVICES

Principal I	\$
Principal II	\$
Architectural Staff 1	\$
Architectural Staff 2	\$
Architectural Staff 3	\$
Architectural Staff 4	\$

EXHIBIT C

SUPPLEMENTAL REQUIREMENTS

ARTICLE 1: GENERAL PROVISIONS

1.1 GENERAL INFORMATION

These Supplemental Requirements are part of the Executive Design Professional Agreement (hereinafter called "Executive Agreement").

1.2 CONSTRUCTION BUDGET

Throughout the Project, and in accordance with the Executive Agreement, Design Professional is expected to keep the Project Cost within the Construction Budget and is responsible periodically to submit a current Estimated Project Construction Cost to verify that the Project is within the Construction Budget.

1.3 UNIVERSITY REVIEW AND APPROVAL

In accordance with the Executive Agreement, each design phase is subject to review and approval by University.

1.4 APPLICABLE CODES, RULES & REGULATIONS

It is Design Professional's responsibility to design the Project in compliance with applicable requirements of federal and state laws, codes, rules, regulations, ordinances, and standards, including, but not limited to, those outlined below. Design Professional shall have copies available of applicable codes and regulations for ready reference.

.1 California Building Standards Code, Title 24, California Code of Regulation (CCR):

- Part 1 Building Standards Administrative Code
- Part 2 California Building Code
- Part 3 California Electrical Code
- Part 4 California Mechanical Code
- Part 5 California Plumbing Code
- Part 6 California Energy Code
- Part 7 California Elevator Safety Construction Code
- Part 8 California Historical Building Code
- Part 9 California Fire Code
- Part 12 California Reference Standards Code

.2 Air Quality Management District regulations, if applicable.

.3 Americans with Disabilities Act (ADA), Title II, ADAAG.

.4 California Coastal Commission Regulations.

.5 Local Building Codes. University is not subject to local jurisdictions' building codes, nor is it required to obtain building permits from local jurisdictions for construction on real estate owned or controlled by University. However, the design and construction of utility connections and fire-protection systems may require liaison with local jurisdictions. This liaison shall be coordinated only through University's Designated Administrator. Construction or encroachment upon city- or county-owned property is subject to local codes and permit requirements.

.6 University Policy, "Seismic Safety" and "Green Building Design and Clean Energy.

.7 Campus Standards and Campus Green Building Baseline.

1.5 GREEN BUILDING AND ENERGY ANALYSIS GENERAL REQUIREMENTS

.1 Design Professional shall design in accordance with the UC Policy on Green Building Design and Clean Energy standards which is available online at the following website: <http://www.ucop.edu/facil/pd/sustain.html>

Comment: Cite website for reference.

.2 Design Professional shall enroll the Project in the Savings by Design Program administered by the local utility using a whole building approach to energy efficiency including computer simulation of energy efficiency options, energy life cycle cost analysis, and a detailed report. The qualifications and experience of the Savings by Design representative(s) assigned to perform such simulation and analysis shall be subject to approval of the University. The Design Professional shall participate in meetings with Savings by Design representatives. The Design Professional shall apply to Savings by Design for financial incentives, as applicable.

Comment: The Design Professional shall participate in meetings with SBD representatives.

.3 Design Professional shall design the Project as follows:

.1 Design Professional shall design the Project to exceed Title 24 California Energy Code energy efficiency standards by at least {INSERT PERCENTAGE e.g. at least 20%}. Projections of energy use are to be calculated using the Savings by Design whole building method.

.2 Design Professional shall design the Project to achieve {INSERT ONE OF THE FOLLOWING, AS APPLICABLE:}

{INSERT FOR NEW BUILDINGS EXCEPT NEW LABORATORY BUILDINGS:}
a standard equivalent to a LEED {INSERT number of points e.g. 26 points for "Certified" equivalent or 33 points for "Silver" equivalent} rating.

{OR INSERT FOR NEW LABORATORY BUILDINGS:}
all pre-requisites and a minimum of {INSERT number of criteria e.g. 32 of a possible 86 for a "Certified" equivalent, 41 of a possible 86 for a "Silver" equivalent} Laboratories for the 21st Century (Labs21) Environmental Performance Criteria (EPC)

Comment: Should target and maintain a minimum of 3 points over 26 and 33 points respectively at EACH of the design phases to ensure achieving minimum goals upon occupancy.

.3 Design Professional shall prepare and submit a Sustainability Score Sheet on the form contained in the Exhibits; supporting documentation sufficient to establish credit for each point or criteria for which credit is sought; and a completed letter template based on the Campus Green Building Baseline, if applicable, to be signed by the University. The Sustainability Score Sheet, supporting documentation, and completed letter templates shall be submitted at the Schematic Design Phase and updated in each subsequent design phase. A LEED accredited professional shall prepare the Sustainability Score Sheet and any supporting documents and meet with Facility's building committee to review the score sheet, supporting documentation, and completed letter templates. The minimum qualifications of such professional shall include experience on two projects which achieved a rating of at least "Certified" level from USGBC or equivalent.

.4 In addition, Design Professional shall comply with the following Facility requirements: {NOTE: LIST SPECIFIC FACILITY REQUIREMENTS.}

Comment: Prepare a "Basis of Design" document with input from the Building Committee in the initial Schematic Design Phase.

1.6 REGULATORY APPROVALS

Design Professional shall be responsible for obtaining review and approval by applicable regulatory agencies as stated in Exhibit D. University's Designated Administrator will arrange all meetings with these agencies and will arrange to pay application fees that may be required. Design Professional and its consultants shall discuss University projects with representatives of these agencies only when University's Designated Administrator is also present. Meetings may also be required with agencies from which University is responsible to obtain permits or approvals.

1.7 AGREEMENT CHANGES

An Agreement Change Authorization will be used to amend the Executive Agreement if the project schedule, project scope or the construction budget is changed. This document will also be used to authorize additional services if required.

1.8 EXAMINATION OF SITE

At the beginning of the schematic design phase, Design Professional and Design Professional's consultants shall:

- .1 Visit the Project site to become familiar with existing site conditions, including the site location and size, utility capacities, and connection options of external utilities.
- .2 For alteration projects, visit all relevant areas of the existing buildings to be altered.

NOTE: PARAGRAPH 1.9 IS OPTIONAL. IF 1.9 IS NOT APPLICABLE, RETAIN THE NUMBER AND ADD THE WORDS "NOT USED."

1.9 SPECIFICATION FORMAT

University will provide a set of sample specifications reflecting a format and use of terminology that is generally acceptable for University projects; these sample specifications are intended to serve as a guide. Design Professional shall review the sample specifications and determine the extent to which the various sections and paragraphs are applicable and the extent to which modifications are required. Where, in the opinion of Design Professional, modifications in either format or terminology are required, Design Professional shall mark the modifications in the specifications for University attention, review, and approval. The sample specifications are not intended to limit Design Professional's discretion to specify products, materials, or construction methods and procedures. Neither the provisions of the sample specifications established by University nor Design Professional's use of the samples as a guide in preparing specifications shall derogate from Design Professional's responsibility to prepare the construction documents.

NOTE: PARAGRAPH 1.10 IS OPTIONAL. IF NOT APPLICABLE, RETAIN THE NUMBER AND ADD THE WORDS "NOT USED."

1.10 PARTNERING

University and Design Professional will cooperate and participate fully in Partnering at all levels and among all the parties involved in this Project, and at their own expense. Partnering shall mean both formal and informal interaction between and among all the parties involved in the Project, including but not limited to University representatives, Design Professionals, Construction Contractors, Subcontractors and outside entities as designated by University to promote the desired goal of a successful, non-adversarial completion of the Project on time and within budget. The requirement for partnering shall not be construed as a change in the terms or conditions of the Executive Agreement.

ARTICLE 2: BASIC SERVICES

2.1 SCHEMATIC DESIGN PHASE

- .1 GENERAL. The following items outlined in this Article 2 constitute the minimum schematic design phase submittal requirements for a Project involving the construction of a new building or the alteration of, or addition to, an existing building. If required by the Executive Agreement, drawings and other materials produced during this phase will be used in presentations for the design review meetings. For presentations to The Regents, simplicity and clarity shall be the governing factors in the development of all drawings and written documents.

Design Professional shall enroll in the Savings-by-Design program at the beginning of the Schematic Design Phase and shall apply for incentives, as applicable, pursuant to subparagraph 1.5.2 above. The Design Professional shall participate in meetings with Savings by Design representatives.

Design Professional shall prepare and submit both a hardcopy and an electronic copy of the Sustainability Score Sheet, supporting documentation, and letter templates pursuant to subparagraph 1.5.3.3 above.

- .2 PROGRAM AND BUDGET. Design Professional shall prepare a written evaluation for University's Designated Administrator of any imbalance between the Construction Budget and the Project Program requirements. Design Professional shall be prepared to present program or design adjustment alternatives for University consideration when adjustments are needed to bring the Project scope, Project schedule, and construction budget into alignment.
- .3 ARCHITECTURAL REQUIREMENTS:
 - .1 Site Plan (Scale: Not less than 1 inch = 40 feet 0 inches). The Design Professional shall:
 - .1 Depict the overall dimensions of the proposed new building.

- .2 Depict and identify (name) all existing structures within a radius of 300 feet of the Project site. Indicate the distances from each proposed new building to
 - (1) existing buildings,
 - (2) property lines (setbacks), and
 - (3) roadways.
- .3 Depict all major new exterior elements and, for alterations and additions, all existing exterior elements that will remain in place. These elements include but are not limited to streets, service drives, easements, loading docks, parking areas, paved areas, walks, stairs, ramps, pools, retaining walls, fences, fire hydrants, and equipment.
- .4 Depict the elevations of building entrances and major exterior elements.
- .5 Depict existing and proposed contours at 5-foot intervals.
- .6 Provide sections through the site as needed to explain changes in levels within the proposed building as related to the site.
- .7 Depict the placement of ramps and other provisions for disabled access to the site and building.
- .8 Provide a site utilities plan indicating both existing Facility utilities and proposed new utilities work.
- .9 Provide a landscape design plan.
- .10 Provide a site demolition plan.
- .2 Floor Plans (Scale: Not less than 1/8 inch = 1 foot 0 inches). The Design Professional shall:
 - .1 Indicate the locations, room names, sizes (in assignable square feet), and space numbers for all programmed spaces and required gross area spaces including entrances, lobbies, corridors, stairs, elevators, toilet rooms, janitors' closets, and mechanical/electrical equipment rooms.
 - .2 Indicate the overall dimensions of major elements of the building.
 - .3 Indicate such building elements as walls, columns, doors, windows, openings, and major built-in equipment.
 - .4 Indicate the means for complying with applicable disabled access codes.
 - .5 Provide a demolition plan whenever a Project requires the demolition of a building or portions thereof. The demolition plan shall differentiate between new work (walls, doors, finishes, and so on), existing work to be removed, and existing work to remain in place.
- .3 Elevations and Sections (Scale: Not less than 1/16 inch = 1 foot 0 inches). The Design Professional shall:
 - .1 Show all elevations of the building. Depict floor-to-floor dimensions and the overall building height.
 - .2 Include sections as needed to explain the structure and any unusual design features. Depict existing and proposed grades.
- .4 Presentation Materials. The Design Professional shall:

- .1 Color and mount on { x } inch boards for ease of presentation, prints of all floor plans, elevations, sections, the site plan, and other drawings, as deemed appropriate.
- .2 On new building projects, provide a display board with mounted samples of the actual exterior materials proposed by Design Professional.
- .3 On new building projects, provide study models as needed to analyze various alternative siting and massing schemes.
- .4 On new building projects, provide a narrative description setting forth the design concept and important features of the Project.
- .5 When requested, and using 35-mm slide film, photograph the presentation drawings and samples for those projects requiring design review meetings and Regents' presentations. Return the presentation drawings to University after the slides are prepared.
- .6 If Regents' review is required, prepare a color-rendered perspective drawing of a size large enough to convey the overall design. A normal (eye-level) view of the Project is preferred; in some instances, however, a "birds-eye" view will be needed to convey the full scope of the Project. The landscape features of the site development shall be shown in a realistic manner but shall not obscure the structure. The perspective drawing shall be mounted and matted on a { x } inch board.

.4 STRUCTURAL REQUIREMENTS

- .1 Provide a detailed written description of the recommended structural system and the basis for recommending this system over other approaches.
- .2 Provide a conceptual structural framing plan of a typical floor that indicates the grid system (dimensioned), columns, shear walls, and related items.

.5 PLUMBING REQUIREMENTS

- .1 Provide a written analysis of the calculated load demands of proposed new plumbing systems, the design demands of the Project, and the capacity of the existing plumbing systems, if any.
- .2 Indicate the proposed points of connection to the existing Facility utility systems. Refer to the site plan requirements outlined in subparagraph 2.1.3.1.

.6 HVAC REQUIREMENTS

- .1 Prepare and submit a "Basis of Design" document that satisfies commissioning pre-requisite (if this document is not already prepared by University).
- .2 Provide a written analysis of the calculated loads of proposed new HVAC systems.
- .3 Provide a conceptual single-line mechanical diagram showing major ducts and equipment. Identify the sizes and locations of major equipment items including cooling towers, chillers, pumps, fans, air-handling units, compressors, and related items.
- .4 Identify the capacity of existing systems if any, based on an examination of the Facility's Record Drawings, an inspection of the existing system, and test reports.
- .5 Provide a description of the proposed fume hood ducting and exhaust system. The Design Professional shall use applicable codes of Title 24, such as Part 4, California Mechanical Code and applicable agencies or district regulations to design the fume hoods.

.7 ELECTRICAL REQUIREMENTS

- .1 Provide a site plan showing the proposed method of service for the electrical power, telephone, and fire alarm systems. See also subparagraph 1.5.
- .2 Provide a single-line diagram showing the following:
 - .1 Method of service (Facility or local utility)
 - .2 Major transformers and transformer substations
 - .3 Major switchboards, motor control centers, and panel and distribution boards
 - .4 Major components of the emergency power system
- .8 **OUTLINE SPECIFICATIONS.** Include in the outline specifications a general description of the Project's site, architectural design, building, and type of construction. Identify the structural system, including materials and systems, a strategy for dealing with special conditions, subsurface conditions, and substructure. Describe the mechanical and electrical systems conceptually. Identify all special systems including special laboratory control systems, energy management systems, and special exhaust systems. Identify finishes at a gross level, indicating the type and quality level. In addition, define case-work systems conceptually. Include a separate paragraph in the electrical specifications describing proposed new systems for the power, lighting, communication, fire alarm, and security systems. Indicate in sufficient detail the proposed power system voltages including the main points of connection to existing systems.
- .9 **ESTIMATED PROJECT CONSTRUCTION COST.** Base the estimate on the completed schematic design documents using an estimation method appropriate for the type and scale of the Project and using a building component format that breaks down the costs by all major components and systems such as foundations, structures, partitions, mechanical, electrical, plumbing, and communication systems. Compare the estimate with the Construction Budget. See also subparagraph 1.5.3.4 of these Supplemental Requirements. Bring any unusual cost item to the attention of University's Designated Administrator.
- .10 **AREA TABULATION.** Tabulate assignable square footage (ASF) and gross square footage (GSF). Develop a space-by-space comparison of the schematic design documents' ASF with the Project program's ASF. These tabulations shall be made by floor and program component and include totals for the building, or renovated area as a whole.

2.2 DESIGN DEVELOPMENT PHASE

- .1 **GENERAL.** The items listed in this Article 2 are minimum design development phase submittal requirements. Design Development drawings which are to be developed into working drawings require Mylar copies. These copies must be capable of enduring any corrections by erasure that may be required and of withstanding the wear they will undergo while working drawings are being produced. The completed tracings must be of excellent quality for the production of good-quality duplicates.

Design Professional shall update and submit both a hardcopy and an electronic copy of the Sustainability Score Sheet, supporting documentation, and letter templates pursuant to subparagraph 1.5.3.3 above.

Design Professional shall obtain and submit a formal report from the Savings by Design representatives that addresses energy efficiency control options and energy life cycle cost analysis pursuant to subparagraph 1.5.2 above.

.2 ARCHITECTURAL REQUIREMENTS

- .1 Site, Civil, and Landscape Drawings (Scale: Not less than 1 inch = 40 feet 0 inches). The Design Professional shall:
 - .1 Depict the overall dimensions of any proposed new building. Indicate all references to a bench mark and a baseline. Indicate the distances from each proposed new building to
 - (1) existing buildings,
 - (2) property lines (setbacks), and
 - (3) roadways.
 - .2 Depict all existing structures within a radius of at least 300 feet of the Project. Identify all structures and streets by name.
 - .3 Depict all new exterior elements and all existing exterior elements that will remain in place after an alteration or addition. These elements include, but are not limited to streets, service drives, easements, loading docks, parking areas, paved areas, walks, stairs, ramps, retaining walls, fences, fire hydrants, and equipment.
 - .4 Depict the elevations of building entrances and major exterior elements.
 - .5 Provide a site plan indicating existing and proposed contours at 1-foot intervals. Indicate the method of general site drainage as it is affected by the location of each proposed building.
 - .6 Provide sections through the site as needed to explain changes in levels within the proposed building as related to the site.
 - .7 Depict the placement of ramps and other provisions for disabled access to the site and building. Depict the parking area and drop-off location nearest the building and the routes and travel distances to all building entrances.
 - .8 Provide a site utilities plan that depicts existing utilities, including underground lines, located within the Project site and that depicts any proposed new utility services. Indicate the points of connection between new work and the existing utility systems.
 - .9 Provide a site demolition plan indicating existing structures and utilities that are to be removed either by the construction contractor or by others.
 - .10 Provide landscape design drawings.
- .2 Floor Plans (Scale: Not less than 1/8 inch = 1 foot 0 inches). The Design Professional shall:
 - .1 Indicate the locations, room names, sizes (in assignable square feet), and space numbers for all programmed spaces and required gross areas including entrances, lobbies, corridors (with widths), stairs, elevators, toilet rooms, janitors' closets, and mechanical/electrical equipment rooms. Floor plans for additions or alterations to existing buildings shall show the existing floor plan and indicate the existing space usages and any proposed changes.
 - .2 Indicate the locations of all doors (showing door swings) and windows.
 - .3 Indicate the overall dimensions of the major elements of each building.
 - .4 Indicate the locations and fire ratings of all fire separations, exit enclosures, fire doors, and similar elements, as required by applicable codes.
 - .5 Indicate the provisions for making facilities accessible to and usable by the disabled. Indicate all accessible toilets and drinking fountains.

- .6 Indicate the location of all plumbing fixtures such as lavatories, floor drains, water closets, urinals, service sinks, drinking fountains, eyewash fountains, deluge showers, and fire-hose cabinets.
 - .7 Indicate all principal built-in features such as fixed auditorium seats, kitchen equipment, display cases, counters, shelves, lockers, laboratory benches, case work, glass washers, sterilizers, fume hoods, and similar items.
 - .8 Indicate the locations of movable furniture, which in most cases is "not in contract" (NIC), including "interior landscape" partitions and equipment. Differentiate between movable furniture and equipment and built-in furniture and equipment (built-in items are usually included in the construction contract).
 - .9 Provide a demolition plan whenever a Project requires the demolition of any building or portions thereof. The demolition plan shall differentiate between new work (walls, doors, finishes, and so on), existing work to be removed, and existing work to remain in place.
 - .10 Provide a roof plan showing associated equipment, slopes, ridges, drains, and other items.
- .3 Elevations and Sections (Scale: Not less than 1/8 inch = 1 foot 0 inches). The Design Professional shall:
- .1 Depict in building elevations, all building elements including penthouses, entrances, windows, doors, stairs, platforms, louvers, vents, exhaust stacks, retaining walls, and similar items. Indicate proposed finished grades.
 - .2 Indicate the overall building and floor to-floor heights.
 - .3 Include longitudinal and transverse sections for each major area, indicating floor elevations, existing and proposed exterior grades, ceiling heights, pipe tunnels, unexcavated areas, basement areas, roof lines, and parapets. Where appropriate, show connections to adjoining buildings.
 - .4 Reference all sections and elevations on the floor plans.
 - .5 Indicate in the sections, provisions for HVAC distribution and hood venting.
- .4 Interior Details (Scale: Not less than 1/4 inch = 1 foot 0 inches). The Design Professional shall provide detail plans, sections, and elevations for the following types of space:
- .1 Classrooms and lecture halls
 - .2 Kitchens and related service areas
 - .3 Laboratories and laboratory support areas
 - .4 Toilet and locker rooms
 - .5 Other areas of special design
- .5 Schedules. The Design Professional shall:
- .1 Provide a door schedule indicating each door's type, size, material, hardware group and pertinent comments.

- .2 Provide a preliminary interior finish schedule indicating the material, texture, and color of each finish material proposed for use in the Project.
- .6 **Materials Boards.** The Design Professional shall provide samples of all finish materials listed in the materials/color schedule. These samples shall be accurate with respect to the actual finishes, textures, and colors being proposed. Materials samples shall be mounted and displayed on presentation boards for review and approval by University. Proprietary materials proposed must allow for equal products to be substituted.
- .3 **STRUCTURAL REQUIREMENTS.** The Design Professional shall provide a structural plan for each level of the structure at the same scale as that used for the architectural plans, which shall indicate the grid system (dimensioned), columns, load-bearing walls, shear walls, footings, and related items.
- .4 **PLUMBING REQUIREMENTS**
 - .1 **Existing Capacity.** The Design Professional shall indicate proposed points of connection to existing Facility utility systems. Refer to the site plan requirements outlined in subparagraph 2.2.2.1.
 - .2 **Site Utilities Plan (Scale: Not less than 1 inch = 40 feet 0 inches).** The Design Professional shall:
 - .1 Indicate the routing of proposed new external utilities from each new building to each point of connection to the Facility's utility systems. Indicate all utility lines that are to be abandoned, removed, or rerouted.
 - .2 Show all existing utilities within the Project site based on both the information provided by University and on Design Professional's field investigation.
 - .3 **Floor Plans (Scale: Not less than 1/8 inch = 1 foot 0 inches).** Design Professional shall:
 - .1 Indicate all piping on the floor-level plan in which it will be installed.
 - .2 Indicate the locations of main waste lines and stacks and vents as well as all service mains, including those for water, air, gas, and vacuum.
 - .3 Indicate all pieces of equipment, including pumps, tanks, generators, pressure-reducing valves, and so on, showing their locations and required piping connections.
- .5 **HVAC REQUIREMENTS**
 - .1 **Floor Plans (Scale: Not less than 1/8 inch = 1 foot 0 inches).** The Design Professional shall:
 - .1 Indicate the location of each piece of equipment including air handling units, chillers, cooling towers, pumps, converters, expansion tanks, boilers, fans, fan coil units, and other equipment.
 - .2 Indicate all mains for each duct system.
 - .3 Indicate the typical supply and return air zones for each type of occupancy. Occupancy types include offices, laboratories, computer rooms, conference rooms, and special application rooms. A typical air zone shall include the terminal unit with all applicable branch ducts and air outlets and inlets.
 - .4 Indicate the typical exhaust air duct for each type of application. Application types include hoods, toilet rooms, janitors' closets, transformers, mechanical/electrical equipment rooms, and other rooms as required for a satisfactory indoor environment. A typical duct shall include an air inlet and a source destination for exhaust air.

- .2 Large-Scale Drawings (Scale: Not less than 1/4 inch = 1 foot 0 inches). The Design Professional shall provide a layout of all equipment rooms to ensure that the proposed equipment will fit in the allotted space.
- .6 ELECTRICAL REQUIREMENTS. The power, signal, and communications layouts shall be shown on one set of drawings, and the lighting layouts shall be shown on a different set of drawings. Use standard symbol conventions.
 - .1 Floor Plans (Scale: Not less than 1/8 inch = 1 foot 0 inches). The Design Professional shall:
 - .1 Provide a single-line electrical distribution diagram showing primary service to substations and secondary service to distribution switchboards, motor control centers, and panel boards for power and lighting. This diagram shall include and show the permanent as well as temporary points of connection to external utilities such as high-voltage, telephone, and all signal systems.
 - .2 Indicate each load center unit substation, motor control center, distribution switchboard, telephone equipment room, and closet. Indicate the types and locations of lighting fixtures in typical offices, laboratories, corridors, examination rooms, and similar spaces, and use a schedule for detail.
 - .2 Large-Scale Drawings (Scale: Not less than 1/4 inch = 1 foot 0 inches). The Design Professional shall provide a layout of all equipment rooms to ensure that the proposed equipment will fit in the allotted space.
- .7 OUTLINE SPECIFICATIONS. Prior to beginning production of the specifications, Design Professional shall schedule a meeting with University's Design and Construction, and Contract Administration units to discuss specifications guidelines. At this meeting, University will provide guidelines for preparing specifications. Attendees at this meeting shall include Design Professional, Design Professional's Consultants, and Design Professional's specifications writer.

The outline specifications shall provide a more detailed description of all building components and systems as compared with the schematic design documents submittal. The outline specifications shall include the following:

 - .1 An index showing all divisions and sections intended to be used. The format shall be that recommended by the Construction Specifications Institute (CSI), narrow scope type.
 - .2 A general description of the construction, including the structural system; wall, ceiling, roofing, and waterproofing systems; exterior and interior finishes; and doors, windows, and case work. These descriptions shall include applicable code references.
 - .3 Descriptions of the plumbing and HVAC systems including controls, ducts, filtration, and piping. These descriptions shall include applicable code references.
 - .4 A general description of electrical services including the voltage and the number of feeders. The specifications shall provide a specific description of items to be served by emergency power and shall describe design considerations for special areas. This description shall include applicable code references.
 - .5 A description of fire safety items including all mechanical and electrical devices required by the State Fire Marshal for the intended occupancy of the building.
 - .6 A description of special systems including laboratory control systems, energy management systems, special exhaust systems, and similar items.
- .8 ESTIMATED PROJECT CONSTRUCTION COST. Design Professional shall provide an updated estimate as part of the Design Development documents submittal. Design Professional shall use the

same estimation method and building component format as used for Schematic Design Phase estimate. The estimate shall be sufficiently detailed so that all construction components are considered, and quantities of materials and unit costs are provided. In addition, the estimate shall include unit costs per gross square foot for all major items of the Work, broken down by building component. Design Professional shall provide a subtotal for each component, compare this estimate with the Approved Construction Budget, and bring any unusual cost item to the attention of University's Designated Administrator.

- .9 AREA TABULATION. The Design Professional shall tabulate assignable square footage (ASF) and gross square footage (GSF), provide a tabulation of rentable square footage (RSF) for projects exceeding 5 million dollars according to specifications of the Building Owners and Managers Association, and provide a space-by-space comparison of design development phase ASF and programmed ASF. The Design Professional shall tabulate by floor and program component, and include a recapitulation showing the totals for the building as a whole, if applicable. (Refer to Exhibit E)
- .10 SOILS AND MATERIALS TESTING. Design Professional shall make initial recommendations for construction phase testing and special inspections such as soils and materials testing, welding inspections, and dewatering requirements.

2.3 CONSTRUCTION DOCUMENTS PHASE

- .1 GENERAL. The construction documents phase submittal shall include, at minimum, all items that are required for the Design Development Phase and those that are enumerated in subparagraph 2.3.3. Working drawings shall show all elements previously shown on the Design Development documents but with greater detail and specificity. University's Design and Construction and Contract Administration units will review the 50%, 100% and corrected 100% backcheck Construction Documents Phase submittals. Other University personnel, or external consultants, or public agencies also may review the Construction Documents at the Facility's discretion or as required by applicable regulations. These reviews shall not relieve Design Professional of responsibility for errors and omissions in Design Professional's work. Design Professional shall update and submit both a hardcopy and an electronic copy of the Sustainability Score Sheet, supporting documentation, and letter templates pursuant to subparagraph 1.5.3.3 above.
- .2 PROGRAM AND BUDGET. Prior to completing the 50% and 100% construction documents phase submittals, Design Professional shall evaluate the programmatic requirements and call to the attention of University's Designated Administrator any discrepancy contained therein and request direction regarding any discrepancies. Design Professional shall inform University's Designated Administrator of any imbalance between the Approved Construction Budget and the Project Program requirements. Design Professional shall be prepared to present program or design adjustment alternatives for University consideration when adjustments are needed to bring the Project scope, Project schedule and construction budget into alignment.
- .3 50% COMPLETED MINIMAL SUBMITTAL REQUIREMENT. Products and materials specified on the drawings must be identical to the products and materials required in the written Contract Documents Specifications. (Note: Proprietary materials proposed must allow for equal products to be substituted.)

.1 Civil Drawings:

- Existing civil survey
- Site plan
- Grading and drainage plan
- Site profile sections
- Details
- Site utilities plan
- Site demolition plan

.2 Architectural Drawings:

- Title sheet with index, general notes, legends, and a small-scale Facility/Project location map.
General notes shall not include General Conditions items. Notes must coordinate with and conform to the written Contract Documents.
- Site plan.
- Floor plans indicating fixed (built-in) equipment
- Roof plan
- Reflected ceiling plans showing all penetrations
- Demolition plan (when appropriate)
- Elevations and sections
- Details
- Schedules:
 - Door and window schedules
 - Interior finish schedule
 - Other schedules as appropriate
 - Updated Materials Board

.3 Structural Drawings:

- Plans that indicate the location, type of member, size, and material of each structural element for foundations, floors, roofs, and any intermediate levels
- Schedules (beam, column, slab, and so on)
- Details of all connections, assemblies, expansion joints, and similar items
- Details of the structural framing systems required to support nonstructural elements and fixed equipment

.4 Plumbing Drawings:

- Locations, sizes, and elevations of the site sewer, building sewer, drains, street water main, and water service into the building
- Locations and sizes of the waste, and waste vent stacks with connections to drains, fixtures, and equipment
- Locations and sizes of hot, cold, and circulation water mains, branches, and risers from the service entrance and tanks
- Riser diagrams for each system showing all plumbing stacks with vents, water risers, and fixture connections for multistory buildings; materials, gauges, and sizes for all elements
- Fire-extinguishing equipment such as sprinklers and wet/dry standpipes
- Plumbing fixtures and any equipment that requires water and drainage connections including pumps and storage tanks
- Locations and sizes of natural gas vacuums and medical gas systems
- All required equipment piping connections including those for pumps, tanks, and generators
- Sections that show structural, HVAC, and piping systems through congested areas

.5 HVAC Drawings:

- Schedule and legend starting on sheet M-1 or its equivalent and continuing on the following sheets
- Sequence of operations diagram
- Detailed (scale: not less than 1/4 inch = 1 foot 0 inches) floor plans and sections as needed to indicate clearly the work required for all mechanical equipment rooms
- Air and piping systems, including all branches, on each floor plan
- Air balance schedule indicating the CFM (cubic feet per minute) of outside air, supply air, return air, and exhaust air for each air system; elevations of built-up fan units to ensure required air flows and access to the component parts of the units
- Flow diagram for each of the following types of water systems:
 - Chilled water

- Condenser water
 - Hot water
 - Others as needed to clearly define the scope of work
 - Air riser diagram for each type of system
 - Mechanical drawings that show the complete HVAC systems including the following items:
 - Heating and steam mains, including branches, with pipe sizes
 - Air-conditioning systems including refrigerators, water and refrigerant piping, and duct work
 - Exhaust and supply ventilating systems showing duct sizes for steam or water connections and piping
- .6 Electrical Drawings:
- Electrical service to the building
 - Transformers and their connections, whether in the building or on the Project site
 - Main switchboard, power panels, light panels, and associated equipment
 - Feeder and conduit sizes
 - Light fixtures, receptacles, switches, and power outlets
 - Telephone outlets, conduits, terminal cabinets, and backboards
 - Complete fire alarm system including its connection to the Facility's system
 - Emergency electrical power system including generator transfer switches, fuel tanks, and all auxiliaries
 - Electrical service entrance and its service switches, the service feeds to the public service feeders, and the characteristics of the light and power currents
 - Other systems as required
- .7 Landscape Drawings:
- Finished grading plan
 - Irrigation plan
 - Irrigation details
 - Planting plan
 - Planting details
 - Hardscape (paving) plan
 - Hardscape details (walls, walks, planters, and so on)
 - Other details as appropriate
- .8 Specifications. University will prepare its Bidding Documents including a draft of Specifications, Division 1, "General Requirements" (see University of California, Berkeley, "Construction Design Standards"). Design Professional shall:
1. Submit with 50% review sets, a single marked-up set of University draft Specifications, Division 1, General Requirements, showing recommended changes. University will review and comment. Design Professional will prepare a complete and revised Division 1, incorporating University comments except as follows: submit the full text of Division 1 Commissioning requirements in the format recommended by Construction Specifications Institute (CSI).
 2. Submit the specifications Division 2 through 16 in the format recommended by the Construction Specifications Institute (CSI), narrow scope type.
 3. Include in the 50% completed submittal, at minimum, any six completed architectural sections from Divisions 2 through 13, one completed mechanical section from Division 15, and one completed electrical section from Division 16. If Division 14 is used include one completed Section.

- .4 Fully describe in the architectural, structural, mechanical, and electrical specifications the materials and workmanship and the types, sizes, capacities, finishes, and other characteristics of all materials, products, articles, and devices. Incorporate within each specifications section, in Part 1 a list of all required submittals such as shop drawings, materials lists, samples, and certifications.
- .5 Compile and draft all specifications on IBM-compatible computer equipment using the Microsoft Word 6.0 for Windows word processing program. Store the specifications files on 3.5-inch, high-density (1.44-MB) diskettes.
- .9 California Energy Code Certification. Design Professional shall ensure that designs of new buildings and designs of alterations to existing buildings in which the space is heated or cooled comply with the California Code of Regulations, Title 24, Part 6, California Energy Code with the exception of the energy efficiency standards. Design Professional shall ensure that the designs exceed the energy efficiency standards by the percentage specified in paragraph 1.5 of these Supplemental Requirements. University, acting as the enforcement agency, is required to check the designs independently and certify that they are in compliance with the code.

With the 50% completed submittal, Design Professional shall submit documentation, on appropriate California Energy Commission forms, certifying that the design complies with the code. Any noncomplying aspect of the design, as determined by University's Designated Administrator, shall be corrected by Design Professional before the design can be certified by the Facilities Design and Construction unit.

- .10 Cost Estimate. Design Professional shall provide and updated estimate as part of the 50% completed Construction Documents Phase submittal. Design Professional shall use the same estimation method and building component format as used in the Design Development Phase.
- .4 100% COMPLETED SUBMITTAL REQUIREMENTS. Products and materials specified on the drawings must be identical to the products and materials required in the written Contract Documents Specifications. All drawings, specifications, and other documents enumerated in Paragraph 2.3.3 for inclusion in the 50% completed submittals shall be further developed by Design Professional in sufficient detail as to be deemed 100% complete and buildable. Prior to submitting the 100% construction documents, Design Professional and Design Professional's consultants shall have thoroughly checked, coordinated, and revised all documents to bring them to 100% completed level. General Conditions items shall not be included on Drawings or Schedules. Notes must coordinate with, and conform to the written Contract Documents. Products and materials specified on the drawings must be identical to the products and materials required in the written Contract Documents specifications. In addition to the documents enumerated for the 50% completed submittal, Design Professional shall submit the items listed below for the 100% completed submittal:
 - .1 Architectural Drawings. Detail the anchorage of all fixed equipment in accordance with the California Building Standards Code, Title 24, CCR, all applicable parts.
 - .2 Structural Drawings. Structural drawings shall be accompanied by computations, stress diagrams, and other pertinent data and shall be complete to the extent that the calculations for individual structural members can be readily interpreted. The computations shall be prefaced by a statement outlining the basis for the structural design and indicating the manner in which the proposed building will resist vertical loads and horizontal forces. The computations shall be sufficiently complete as to establish that the structure will resist the loads and forces prescribed by the California Code of Regulations, Title 24, all applicable parts. Assumed safe bearing pressures on soils and the ultimate strengths of concrete shall be provided in computations and noted on the drawings. Where unusual conditions occur, any additional data that are pertinent to the work shall be submitted.
 - .3 Plumbing Drawings. All plumbing drawings shall indicate the complete plumbing system in detail and shall include methods for fastening equipment to the structure to resist seismic forces.

- .4 HVAC Drawings. All HVAC drawings shall indicate the complete heating, ventilating, and air-conditioning systems in detail and shall include methods for fastening equipment to the structure to resist seismic forces.
- .5 Electrical Drawings. Electrical drawings shall indicate all components of the electrical system in place and connected to the sources of services. A sufficient level of detail shall be provided to illustrate connections, routings, and other items in complex areas. All wiring shall be final-sized. Detailed methods for fastening equipment to the structure to resist seismic forces shall be indicated. At minimum, the following shall be provided:
 - Feeder and conduit sizes and a schedule of feeder breakers or switches
 - Locations of light fixtures, receptacles, switches, power outlets, and all circuits
 - Other systems as required
- .6 Materials Board. A 100% final updated materials board shall be submitted.
- .7 Contract Documents. University will prepare its Bidding Documents including Specifications Division 1. The final Contract Documents shall be bound and shall include the documents listed below. The entire 100% completed final specifications Divisions 2 through 16 shall also be provided in Microsoft Word 6.0 for Windows word processing format, stored on 3.5-inch, high-density (1.44-MB) diskettes. (The entity responsible for providing each item is indicated below within parentheses: "CA" means the Facility's Contract Administration unit; "DP" means Design Professional.)
 - Cover Page (CA)
 - Certification Page (prepared by CA, signed and stamped by DP)
 - Table of Contents (CA)
 - Project Description (furnished by DP, prepared by CA)
 - Advertisement for Bids (CA)
 - Project Directory (CA)
 - Instructions to Bidders (CA)
 - Supplementary Instructions to Bidders (CA)
 - Information Available to Bidders (CA)
 - Bid Form (CA)
 - Bonds (CA)
 - Agreement (CA)
 - General Conditions (CA)
 - Supplemental Conditions (CA)
 - Affirmative Action Program (CA)
 - Exhibits (CA)
 - Index to Specifications (furnished by DP, prepared by CA)
 - Specifications, Division 1, General Requirements (CA)
 - Specifications, Divisions 2 through 16 (DP)
 - List of Drawings (with dates; furnished by DP, prepared by CA)
- .8 Estimated Project Construction Cost. Design Professional shall provide, with the 100% completed submittal, an updated Estimated Project Construction Cost based on an actual take-off of all materials, products, and services derived from the 100% completed submittal and from those materials, products, and services required to accomplish the Project's construction. The final 100% completed Estimated Project Construction Cost shall be revised and updated from the 100% submittal Estimated Project Construction Cost to reflect any changes in the design of the Project as well as all revisions made to the construction documents since the 100% submittal.

The 100% and final 100% Estimated Project Construction Cost shall be in the form of a building contractor's estimate in which the quantities of materials and unit prices are shown. The Esti-

mates shall include itemized cost breakdowns of all work activities on the Project; these breakdowns shall establish the format to be used by Contractor in applying for progress payments.

Design Professional shall compare the 100% and final 100% Estimated Project Construction Cost with the Construction Budget. Any significant differences between the new Estimates and the Construction Budget shall be brought to the immediate attention of University's Designated Administrator.

- .9 Calculation of Areas. Design Professional shall include, with the 100% completed submittal, calculations of the gross square footage (GSF) and the assignable square footage (ASF) and shall make a direct comparison of these areas with the original Project program areas.
- .10 Soils and Materials Testing. Design Professional shall include, with the 100% completed submittal, a list of requirements for special testing and inspections, such as soils and materials testing, welding inspections, and dewatering requirements, to be conducted during the construction phase, as specified in Divisions 1 through 16 of the Contract Documents.

The corrected 100% and University approved backcheck drawings and specifications shall be submitted in both reproducible hard copy form and on computer diskette in the format of Microsoft Word 6.0 for Windows and AutoCAD release 12.

2.4 BIDDING PHASE

- .1 PREQUALIFICATION PROCESS. Design Professional shall work with University to identify an appropriate bidder prequalification process if one is required.
- .2 PRE-BID CONFERENCE AND SITE VISIT. University's Representative shall conduct, and Design Professional and Design Professional's Consultants shall attend and participate in all scheduled pre-bid conferences and pre-bid site visits with potential bidders to help identify questions that bidders may raise during the Bidding phase. Questions from prospective Bidders shall be written down by University's Representative during these conferences and job site visits. No questions shall be answered at these events which require interpretation, clarification or modifications of the Contract Documents. Interpretation, clarification, and modification of the Contract Documents shall be issued only in the form of an Addendum to the Contract Documents. Design Professional shall furnish the information required for the interpretation, clarification or modification to University for preparation of Addendum. Addenda will be issued only by University. Addenda which require interpretation, clarification or modification of the Contract Documents must be issued not less than three days prior to the bid opening.
- .3 BIDDERS CALLS. During the Bidding phase, University shall designate one individual to receive all calls from Bidders, and have that individual log in the date, time, and caller's name and question. The individual so appointed shall be that person named in the Project Directory of the Contract Documents as University's Representative.
- .4 PRE-AWARD CONFERENCE. Design Professional may (at the University's discretion) participate in a pre-award meeting to include review of Contractors submittals which are received with the signed Agreement of the Construction Contract. Submittals to be reviewed and approved by University Representative prior to issuance of a Notice to Proceed include: Affirmative Action Appendices, Certificates of Insurance, Superintendent information, Subcontractors information, Cost Breakdown, and Preliminary Contract Schedule.

2.5 CONSTRUCTION PHASE

- .1 GENERAL. The presence of University professional staff does not relieve Design Professional from performing the services required by the Executive Agreement.
- .2 CONSTRUCTION MEETINGS

- .1 Pre-Construction Meeting. (Kick-off) University's Representative shall schedule and conduct a kick-off meeting. The agenda for the meeting shall be as determined by University and University's Representative. Construction scheduling and the establishment of working relationships shall be included. The Design Professional may submit items to the University Representative for inclusion in the agenda.
 - .2 Construction Meetings. Construction meetings shall be held at the Project site and chaired by University's Representative as established in the Executive Agreement and Contract Documents. Attending shall be Contractor's field supervisors, Subcontractors as needed and as specified in the Contract Documents, Design Professional's consultants as necessary, University professional staff and others as determined to be required by University's Representative and University. The minutes of these meetings shall be prepared by University's Representative.
 - .3 As-Built Documents. Design Professional shall review Contractor's As-Built Documents prior to or immediately following each construction meeting to verify that Contractor's work is in compliance with the Contract Documents. Design Professional shall initial any changes to the As-Built Documents made by Contractor.
- .3 INTERPRETATIONS. Design Professional decisions or interpretations regarding the Contract Documents, or disputes arising out of the Contract Documents shall be issued by University's Representative following University review, but shall be based upon Design Professional's independent judgment. Information regarding, or changes to, the Contract Documents shall be issued on the following forms furnished or approved by University:
- Bulletins
 - Requests for Estimate
 - Field Orders
 - Change Orders
- .4 INSPECTION. Construction Phase inspection will be provided and paid for by University.
- .1 Design Professional shall
 - (1) provide technical direction to, and interpretation of, the Contract Documents for resident building inspectors and advise these inspectors of all decisions rendered;
 - (2) review inspection reports submitted by these inspectors and any reports furnished by others who may be retained or employed by University to review the Work; and,
 - (3) issue any directives that, based on the evaluation of the report data, are deemed necessary to obtain compliance with the requirements of the Contract Documents.
 - .2 The building inspector, acting under the direction of University's Representative, shall:
 - Be responsible for milestone inspections (spot checks) to assess compliance with the requirements of the Contract Documents.
 - Prepare a written report following each milestone inspection. The building inspector shall notify University's Representative when work that does not comply with the Contract Document requirements is observed in the field. Observed instances of noncompliance shall be noted in the inspector's report.
 - Comment in subsequent inspector's reports on whether or not instances of noncompliance have been corrected.
 - Participate in punch list inspections for beneficial occupancy, substantial completion and final completion.
 - Assist University's Representative in reviewing test and inspection results from testing laboratories. If University contracts for specialty inspection services, the building inspector shall report the results of these inspections to University's Representative.
 - Not authorize deviations from the Contract Documents.

- Not advise or issue directions to contractor regarding any aspect of construction means, methods, techniques, sequences, or procedures or regarding safety programs in connection with the Project.
- Where applicable, perform tasks and file reports as required by Office of Statewide Health Planning and Development.

.5 MATERIALS TESTING

- .1 Upon Design Professional's recommendations, and as required by the Specifications, University will contract with soils and materials testing laboratories.
- .2 As required by the Specifications, Contractor may be responsible for providing and paying for certain tests.
- .3 University's Representative shall coordinate the activities of Contractor and University's testing consultants.

.6 Not used.

.7 MATERIALS/COLOR SCHEDULE AND MATERIALS BOARDS. Design Professional shall revise and update the materials/color schedule and materials boards, which were prepared during the Design Development Phase and updated during the Construction Document Phase, as necessary to reflect the actual manufacturers' products that have been submitted by Contractor and approved for use on the Project.

.8 PUNCH LIST. Design Professional shall review the construction with University Representative and Contractor when notified by contractor that the construction is substantially complete, and again when notified by Contractor that the construction is fully complete. University's Representative, Design Professional, and Contractor shall also inspect the construction when Beneficial Occupancy is required by University or stipulated in the Contract Documents. University's Representative shall compile a punch list indicating any lack of compliance with Contract Document requirements based on Design Professional's recommendations.

.9 FINAL APPROVAL AND INSPECTION ACCEPTANCE

- .1 Design Professional shall assist University's Representative to review contractor's As-Built Documents, guarantees, and operating data to assess compliance with the Contract Document requirements.
- .2 Design Professional shall assist University's Representative to assemble written guarantees, operating and maintenance instruction books, diagrams, and charts required of Contractor. University's Representative is responsible for verifying that all required submittals have been received.
- .3 Design Professional shall recommend final acceptance of the construction with University and Contractor and shall advise University of the acceptability of the work performed by Contractor.
- .4 An Inspection Acceptance form must be executed by University's Representative and received by University within seven calendar days from the inspection acceptance date. All parties required to sign the Inspection Acceptance form must be present for the final inspection.

.10 RECORD DOCUMENTS

- .1 As required in the Executive Agreement, Design Professional shall provide reproducible Record Documents to University. Any revisions or changes that have been made during construction shall be incorporated in the Record Documents. During construction, University's Representative shall have reviewed all revisions and changes and shall have approved the set of drawings and specifications maintained by contractor prior to Design Professional's preparation

of the final Record Documents. If required by the Executive Agreement, Record Documents shall be submitted on AutoCAD and other computer disks.

- .2 HVAC drawings shall include the following items:
 - .1 An actual air balance report CFM (cubic feet per minute) for each air outlet and each air inlet on all drawings.
 - .2 An added schedule for each fan motor indicating
 - (1) the actual ampere measured in each conductor,
 - (2) the full-load ampere noted on the motor's nameplate,
 - (3) the service factor noted on the motor's nameplate,
 - (4) the motor voltages noted on the motor's nameplate, and
 - (5) the actual voltage between each conductor: for example, A to B, A to C, and B to C on single-winding three-phase motors.
 - .3 The final sequence for each mechanical system.
 - .4 Revisions of each schedule in the original Contract Documents reflecting the actual equipment installed (by manufacturer's name and model number) and all other revisions.
- .11 **GUARANTEE TO REPAIR PERIOD SERVICES.** As required by the Executive Agreement, Design Professional shall review the work at eleven months after Substantial Completion, or Final Completion, as applicable and shall submit written recommendations to University for the correction of any deficiencies. Design Professional shall be accompanied by University during these inspections. Dates for inspections shall be as mutually agreed by the parties within the eleven-month time frame.

EXHIBIT D

REGULATORY AGENCIES & APPROVALS REQUIREMENTS

In accordance with the Executive Design Professional Agreement, of which this Exhibit is an attachment thereto, the Construction Document phase shall not be considered 100% complete until all required agency and University approvals have been received by the Design Professional.

The Design Professional shall submit applications to, and obtain approvals/permits from the following:

Campus Fire Marshal
Division of the State Architect

The University will submit applications to, and obtain approvals/permits from the following:

None

EXHIBIT E

FORMAT FOR LISTING ROOMS AND SPACES

Not used.

EXHIBIT F

VALUE ENGINEERING PROGRAM

Not used.

EXHIBIT G

TRANSPORTATION, PER DIEM, AND MILEAGE REIMBURSEMENT SCHEDULE

All travel expenses which will be reimbursed must be authorized by University's Designated Administrator in advance, in writing.

The following are the maximum daily amounts authorized to reimburse travelers for meal and incidental expenses (M&IE) incurred while traveling on official University business in the United States or its possessions. Each expense of \$25 or more must be supported by a receipt.

Daily Meal and Incidental Expenses (For periods in excess of 24 hours)	\$50.00
Daily Meal and Incidental Expenses (For periods between 12 hours and 24 hours)	\$33.00
Private vehicle use on University- related business	48.5 cents/mile

Receipts must be submitted for actual cost of lodging.

First class air travel is not permitted without express written authorization. Receipts must be submitted for actual cost of airline travel.

EXHIBIT H

PROJECT PROGRAM

Attached

EXHIBIT I

UNIVERSITY OF CALIFORNIA CERTIFICATE OF INSURANCE

Facility shall attach the insurance certificate

EXHIBIT J

CONSTRUCTABILITY ANALYSIS

SAMPLE ONLY

1. Can the Work be priced?
2. Is required technology available?
3. Are documents coordinated within and between trades?
4. Are documents complete?
5. Are specified materials and equipment available?
6. Other, specify.

Each reviewer shall list under each item any deficiencies noted during the analysis.

EXHIBIT K

Phase	Amount
BASIC SERVICES	
Concept	\$
Feasibility Study	\$
Program Dev	
Schematic Design	
Design Dev	
Construction Docs	
Bidding	
Construction	
Delivery/RecDocs	
Guar/Repair	
TOTAL	

EXHIBIT L

PROJECT SCHEDULE

{Insert the agreed upon milestones and a completion date for each milestone.}

<u>Milestone</u>	<u>Completion Date</u>
SCHEMATIC DESIGN PHASE	{MM/DD/YYYY}
DESIGN DEVELOPMENT PHASE	{MM/DD/YYYY}
CONSTRUCTION DOCUMENTS PHASE	
100% DESIGN PACKAGE 1 - {e.g. Foundations}	{MM/DD/YYYY}
100% DESIGN PACKAGE 2 - {e.g. Structural}	{MM/DD/YYYY}
100% DESIGN PACKAGE 3 - { }	{MM/DD/YYYY}
100% DESIGN PACKAGE 4 - { }	{MM/DD/YYYY}
100% DESIGN PACKAGE 5 - {e.g. Tenant Improvements}	{MM/DD/YYYY}

{Note: The above examples are for projects with multiple Design Packages. When there is only one Design Package, insert "All" as the Design Package as shown in the following example:}

100% DESIGN PACKAGE 1 – All	{MM/DD/YYYY}
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<u>Milestone</u>	<u>Early Start Date</u>	<u>Early Finish Date</u>	<u>Late Finish Date</u>
PHASE 1–PRECONSTRUCTION SERVICES	{MM/DD/YYYY}	{MM/DD/YYYY}	n/a
PHASE 2–CONSTRUCTION SERVICES	{MM/DD/YYYY}	{MM/DD/YYYY}	{MM/DD/YYYY}

- Credit WE3.1 **Water Use Reduction, 20% Reduction**
- Credit WE3.2 **Water Use Reduction, 30% Reduction**

The following Labs21 credits** are applicable to **laboratory** buildings:

✓

- Prereq 1 **Laboratory Equipment Water Use**
- Credit WE4.1 **Process Water Efficiency, 20% Reduction**
- Credit WE4.2 **Process Water Efficiency, 30% Reduction**

Energy & Atmosphere

The following credits* are applicable to **all** buildings:

✓
✓
✓

- Prereq EA 1 **Fundamental Building Systems Commissioning**
- Prereq EA 2 **Minimum Energy Performance**
- Prereq EA 3 **CFC Reduction in HVAC&R Equipment**
- Credit EA1 **Optimize Energy Performance**
- Credit EA2.1 **Renewable Energy, 5%**
- Credit EA2.2 **Renewable Energy, 10%**
- Credit EA2.3 **Renewable Energy, 20%**
- Credit EA3 **Additional Commissioning**
- Credit EA4 **Ozone Depletion**
- Credit EA5 **Measurement & Verification**
- Credit EA6 **Green Power**

The following Labs21 credits** are applicable to **laboratory** buildings:

✓

- Prereq EA3 **Assess Minimum Ventilation Requirements**
- Credit EA7 **Energy Supply Efficiency**
- Credit EA8 **Improve Laboratory Equipment Efficiency**
- Credit EA9 **Right-size Laboratory Equipment Load**
- Credit EA10 **Right-size Laboratory Equipment Load, Metering**

Materials & Resources

The following credits* are applicable to **all** buildings:

✓

- Prereq MR 1 **Storage & Collection of Recyclables**
- Credit MR1.1 **Building Reuse, Maintain 75% of Existing Shell**
- Credit MR1.2 **Building Reuse, Maintain 100% of Shell**
- Credit MR1.3 **Building Reuse, Maintain 100% Shell & 50% Non-Shell**
- Credit MR2.1 **Construction Waste Management, Divert 50%**
- Credit MR2.2 **Construction Waste Management, Divert 75%**

Innovation & Design Process

The following credits* are applicable to **all** buildings:

Credit ID1.1	Innovation in Design: Provide Specific Title
Credit ID1.2	Innovation in Design: Provide Specific Title
Credit ID1.3	Innovation in Design: Provide Specific Title
Credit ID1.4	Innovation in Design: Provide Specific Title
Credit ID2	LEED® Accredited Professional

Project Total

*Source: LEED®2.1, US Green Building Council, www.usgbc.org, **Source: Labs21 EPC, UC Department of Energy