



CONNECTICUT STATE
COLLEGES & UNIVERSITIES

BOARD OF REGENTS FOR HIGHER EDUCATION

**REQUEST FOR PROPOSALS
RFP BOR-1605**

Solar Photovoltaic System(s)

**Power Purchase and Licensing Agreement
for
Southern Connecticut State University (SCSU)**

ISSUE DATE: April 4, 2016
RFP NO: RFP-BOR-1605

DUE DATE: April 29, 2016
TIME: 12:00 p.m. (EST)

Proposals must be received by the due date and time to be considered

NON-MANDATORY PRE-PROPOSAL CONFERENCE:

1:00pm on Friday, April 15, 2016 at Southern Connecticut State University

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1. RFP PURPOSE AND BACKGROUND

1.1 ORGANIZATIONAL CONTEXT

The Connecticut State Colleges & Universities (CSCU) provide affordable, innovative and rigorous programs for students to achieve their personal and career goals as well as contribute to the economic growth of Connecticut. CSCU System is comprised of four state universities, 12 community colleges and one online state college. The total System includes 92,000 enrolled students and 15,000 graduates annually. For additional information, please visit our website: <http://www.ct.edu/>

This RFP is for Southern Connecticut State University (SCSU), located in New Haven, CT.

1.2 PROJECT BACKGROUND

CSCU has a long-standing commitment to energy conservation and sustainability. Examples of this commitment include the purchasing of “Green Electricity” and constructing, utilizing and/or planning for modern central heat/steam generation plants, geothermal heating systems, photovoltaic solar panels, thermal glazing, increasing building insulation, LED lighting, light fixture re-lamping/ballast modifications and room occupancy sensors. Most new CSCU facilities and major building renovations are required to comply with LEED silver energy performance standards or equivalent. CSCU currently has seven (7) buildings certified to a level of LEED, including two (2) LEED Silver and ten (10) new facilities in the planning stage, or Final Closeout Phase, all LEED Silver or equivalent; including 2 LEED Gold (1 pending) and 2 LEED Silver buildings on the SCSU campus. CSCU is in the process of awarding a 100-kW AC PV System through a PPA Contract at Middlesex Community College.

1.3 RFP PURPOSE

CSCU is requesting proposals from qualified developers (referred to within this document as “proposer” or “contractor”) to finance, design, install, operate, and maintain solar photovoltaic system(s) on building roof(s) and/or ground mount location(s) at SCSU, and to sell the electricity output to SCSU. Proposer will be required to submit for the CSCU to United Illuminating’s large LREC/ZREC Program.

The project delivery approach is commonly known as a “power purchase agreement” (PPA). The agreement will not be a “Lease” but a license agreement to put the photovoltaic support systems (pedestals, etc.) on the ground, roof and/or canopy of the proposed location.

Any award(s) arising from this RFP may be extended to other constituent units of higher education, for the installation of similarly sized PV systems at other College or University campus locations at the rates proposed, if mutually agreed upon by both parties.

2. INSTRUCTIONS TO PROPOSERS

2.1 MANDATORY PRE-PROPOSAL CONFERENCE

A non-mandatory Pre-Proposal Conference will be held at:

At 1:00pm on Friday April 15, 2016 at SCSU. Proposers shall meet in the Facilities/Operations building, 3rd Floor Conference Rm 615 Fitch Street Hamden, CT.

The purpose of the Pre-Proposal Conference will be to clarify the contents of this RFP in order to ensure a thorough understanding of the requirements. The pre-proposal conference will provide a forum by which interested parties will have equal access to relevant site information prior to proposal submission, and an opportunity for questions, which will be recorded and published on the BOR website along with questions received by e-mail.

ATTENDANCE IS STRONGLY ENCOURAGED TO THE PRE-PROPOSAL CONFERENCE.

Register in advance for the pre-proposal conferences. RSVP to Sharon Kromas via email at kromass@ct.edu with a copy to Chris Dupuis, dupuisc@ct.edu no later than **12:00 Noon on April 14** of your plan to attend the pre-proposal conference. Multiple representatives from each proposer team may attend, but the names and titles of all potential attendees should be included in the RSVP.

2.1.1 NON-MANDATORY FOLLOW UP SITE INSPECTION

Proposers are strongly encouraged to take advantage of the scheduled Follow-Up Site Inspection at 1:00pm on Friday, April 22, 2016 at SCSU to bring additional team members, take notes of existing site conditions, etc...

All site visits, including the visit on April 22nd and any additional visits must be coordinated in advance via email to Eric Lessne, elessne@commnet.edu with a copy to Sharon Kromas, kromass@ct.edu and Chris Dupuis, dupuisc@ct.edu. All site visits must be coordinated through Eric Lessne. Additional site visit requests outside of the 4/22/16 opportunity may not be granted. No site visit requests will be considered after April 22, 2016.

2.2 ISSUING OFFICE AND CSCU CONTACT

This RFP is being issued by the CSCU Real Estate, Facilities & Infrastructure Planning Department which is the only office authorized to change, modify, clarify, etc., the provisions of this RFP and to award any contract(s) resulting from the RFP.

The point of contact for administrative issues regarding this RFP is:

Sharon Kromas
Associate for Contract Compliance and Procurement
Board of Regents for Higher Education
39 Woodland Street
Hartford, CT 06105

E-mail kromass@ct.edu

All questions related to this RFP must be submitted in writing via E-mail according to Section 2.5. All other questions will not be responded to.

2.3 PROJECT SCHEDULE

Issuance of RFP	April 4, 2016
SCSU Non-Mandatory Pre-Proposal Conference	1:00pm, April 15, 2016
SCSU Non-Mandatory Follow Up Site Inspection	1:00pm, April 22, 2016
Deadline for Questions regarding RFP	2:00pm, April 25, 2016
Publication of Questions & Answers	on or before April 26, 2016
Proposal Due Date and Time	12:00pm, April 29, 2016
Opening of Proposals (attendance non-mandatory ¹).....	12:15pm, April 29, 2016
Anticipated Contract Commencement	September 1, 2016
Anticipated Project Completion	April 30, 2017

Note: The above dates are subject to change at the discretion of CSCU

¹ Attendance at the proposal opening is non-mandatory. There shall be no discussion of any proposals submitted. Only the names of the firms submitting proposals will be read aloud.

2.4 PROPOSAL RECEIPT

Proposals are to be addressed and delivered as follows:

7 original hardcopies and 2 USB Drives:

Sharon Kromas
Associate for Contract Compliance and Procurement
Board of Regents for Higher Education
39 Woodland Street
Hartford, CT 06105

Proposals shall be in a sealed envelope marked:

Name and Address of Proposer
RFP Title and Number BOR-1605
Date and Time Proposal Due

No telephone, email, or facsimile proposals will be considered. Proposals received after the time for closing will not be considered for this Bid. **CSCU is not responsible for delivery delays or errors by any type of delivery carrier.**

2.5 PROPOSER QUESTIONS

Proposers are expected to exercise their best professional independent judgment in analyzing the requirements of this RFP to ascertain whether additional clarification is necessary or desirable before responding. If there are any discrepancies in, or omissions to the RFP, or if there are any questions as to any information provided in the RFP or by any other source, a request must be submitted via email for clarification, interpretation or correction by the date listed in Section 2.3 Project Schedule. Such inquiries must be directed to the CSCU Designee listed below.

Questions regarding this RFP must be submitted via email to Sharon Kromas, kromass@ct.edu with a copy to Douglas Ginsberg, ginsbergd@ct.edu on or before the deadline stated in Section 2.3, Project Schedule. Include the RFP #1605 in the subject line.

Questions with answers will be posted on the CSCU website, www.ct.edu/about/rfp as stated in Section 2.3. **It is the responsibility of proposers to visit the website to retrieve questions and answers.**

2.6 RESTRICTION ON COMMUNICATIONS

Except for the designated contact(s) listed above, Proposers are not permitted to communicate with College or University staff regarding this solicitation during the period between the Request for Proposal issue date and the announcement of awards, except during:

- The course of the non-mandatory Pre-Proposal Conference.
- The course of the non-mandatory Follow Up Site Inspection.

Proposers are strongly encouraged to take advantage of the scheduled Follow Up Site Inspections on 4/22/16 to bring additional team members, take notes of existing site conditions, etc... Any requests for additional site visits must be submitted via email to Eric Lessne, elessne@commnet.edu with a copy to Sharon Kromas, kromass@ct.edu and [Chris Dupuis, dupuis@ct.edu](mailto:dupuis@ct.edu). All site visits must be coordinated through Eric Lessne. Additional site visit requests outside of the 4/22/16 opportunity may not be granted. No site visit requests will be considered after April 22, 2016.

If a Proposer is found to be in violation of this provision, CSCU reserves the right to reject the bid.

2.7 PROPOSAL FORMAT AND REQUIRED SUBMITTALS

Proposers are to provide a written proposal addressing the full scope specified under this RFP.

Proposals shall be submitted in the following format. Proposals in any other format will be considered informal and will be rejected. Conditional proposals will not be considered. **An individual authorized to extend a formal proposal must sign all proposals.** If the proposer fails to provide any of the following information, CSCU may at its sole option, ask the proposer to provide the missing information or evaluate the proposal without the missing information. Proposals must include all of the elements listed, be clearly indexed and assembled (in accordance with the numbers and order listed below) and reference the corresponding RFP Sections and paragraphs.

1. Table of Contents - Proposals must include a table of contents with page numbers covering all parts including exhibits and addenda, with sufficient detail to facilitate easy reference to all requested information.
2. Company Introduction and Management Overview - This section should present an introduction and general description of the company's background, nature of business activities, and experience in providing the required products and related services. This section should also provide a statement of the Proposer's understanding of the major objectives of the solicitation and the Proposer's approach to fulfilling CSCU requirements.
3. Technical Response as required by RFP Section 4, Technical and Narrative Response, inclusive of sections 4.1 through 4.11
4. Complete Proposal Submission Requirements, RFP Section 6
5. Completed Project Information Statement, RFP Section 9
6. Terms and Conditions Acceptance - Indicate acceptance/compliance with all items in RFP including Section 4, Paragraph 4.8 and Attachment 8, contract provisions
7. Identify any RFP Exceptions as described in Section 4.8
8. Supplementary Information and Additional Comments as desired

2.8 PROPOSAL MODIFICATIONS OR WITHDRAWAL

No modification of submitted proposals will be permitted in any form. Any proposal may be withdrawn prior to the time set for the receipt of proposals. No proposal shall be withdrawn for a period of one hundred twenty (120) calendar days thereafter.

2.9 PROPOSER REPRESENTATION

Each proposer, by submitting a proposal, represents that he/she has:

- Read and completely understands the RFP and associated documents.
- Based the proposal upon the requirements described in the RFP.

2.10 SIMPLICITY OF PREPARATION

Proposals should be prepared simply and economically, providing a straightforward, concise description of the Proposer's capability to satisfy the requirements of the RFP. Emphasis should be on completeness and clarity of content. Promotional materials are especially discouraged.

2.11 COMPLETE PROPOSALS

All proposals must be full and complete at the time of due date submission. Lack of compliance will be at the CSCU's sole discretion.

2.12 SPECIFICATIONS

Proposers are expected to meet or exceed the specifications in their entirety. Each proposal shall be in accordance with this specification. If products and/or services as proposed do not comply with specifications as written, proposer shall attach to proposal a complete detailed itemization and explanation for each and every deviation or variation from these specifications. Absence of any such itemization and explanation shall be understood to mean that proposer proposed to meet all details of these specifications. Successful proposer delivering products and/or services pursuant to these specifications shall guarantee that they meet specifications as set forth herein. If it is found that materials/equipment and/or services delivered do not meet requirements of this specification, the successful proposer shall be required to correct same at proposer's own expense.

2.13 AMENDMENTS TO RFP BEFORE DUE DATE

No individual is authorized to amend any part of this RFP in any respect, by an oral statement, or to make any representation of interpretation in conflict with provision of this RFP prior to the proposal submission date. However, if necessary, supplemental information in addenda form will be published on the CSCU website, www.ct.edu/about/rfp. **It is the responsibility of any potential proposer to visit this website to retrieve any addenda.** Failure of any Proposer to receive such addenda shall not relieve the Proposer from any obligation under their proposal as submitted. All addenda so issued shall become part of this RFP.

2.14 FIRM PROPOSALS

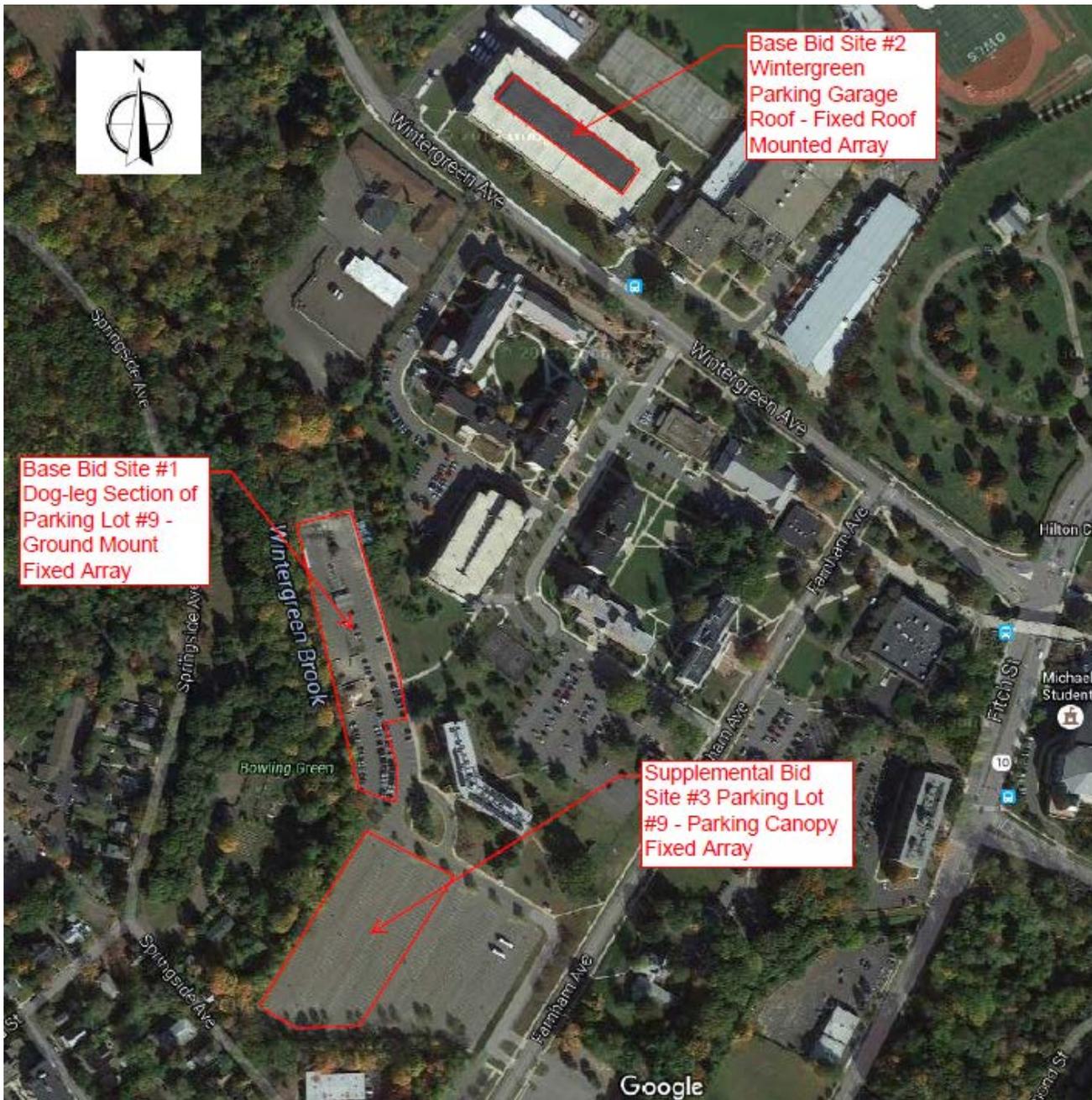
All Proposals shall be firm and fixed for 120 days following the deadline for RFP submissions, or until a contract is signed which establishes future pricing/discounts, whichever comes first. The Proposer warrants that the prices offered herein are equal to or lower than those offered for equivalent quantities of products or services to similar institutional accounts. If Proposer offers a general price reduction that lowers the cost for any product or service below the cost provided in a resulting contract, the Proposer shall offer the appropriate cost reductions to CSCU.

3 SCOPE AND SPECIFICATIONS

The intent of these specifications is to describe our contract requirements for the furnishing and delivering of photovoltaic systems under power purchase and licensing agreements between both parties.

3.1 SOLAR PROJECTS

SCSU Project Location Map:



Base bid:

The base bid shall consist of two project site locations as further described below. Site #1 is a ground mounted array in the “Dog-leg” section of Parking Lot #9. Site #2 is a roof mounted array on the upper roof section of the Wintergreen Parking Garage. It is the intent to maximize the total capacity of the arrays at both locations to get as close to the Large ZREC program upper limit of 1,000 KW AC as possible. Proposers must submit a base bid response that includes both the Site #1 and Site #2 locations. Both locations are within SCSU’s west side medium voltage loop and are located “behind” the same utility company electric meter.

At SCSU Site #1, a ground mounted photovoltaic system is being considered for installation within the existing interior curb line limits of the “Dog-leg” section of Parking Lot #9, near Brownell Hall,

as further defined by the limit lines shown. The approximate 72,000-sf footprint is shown in the figure below.

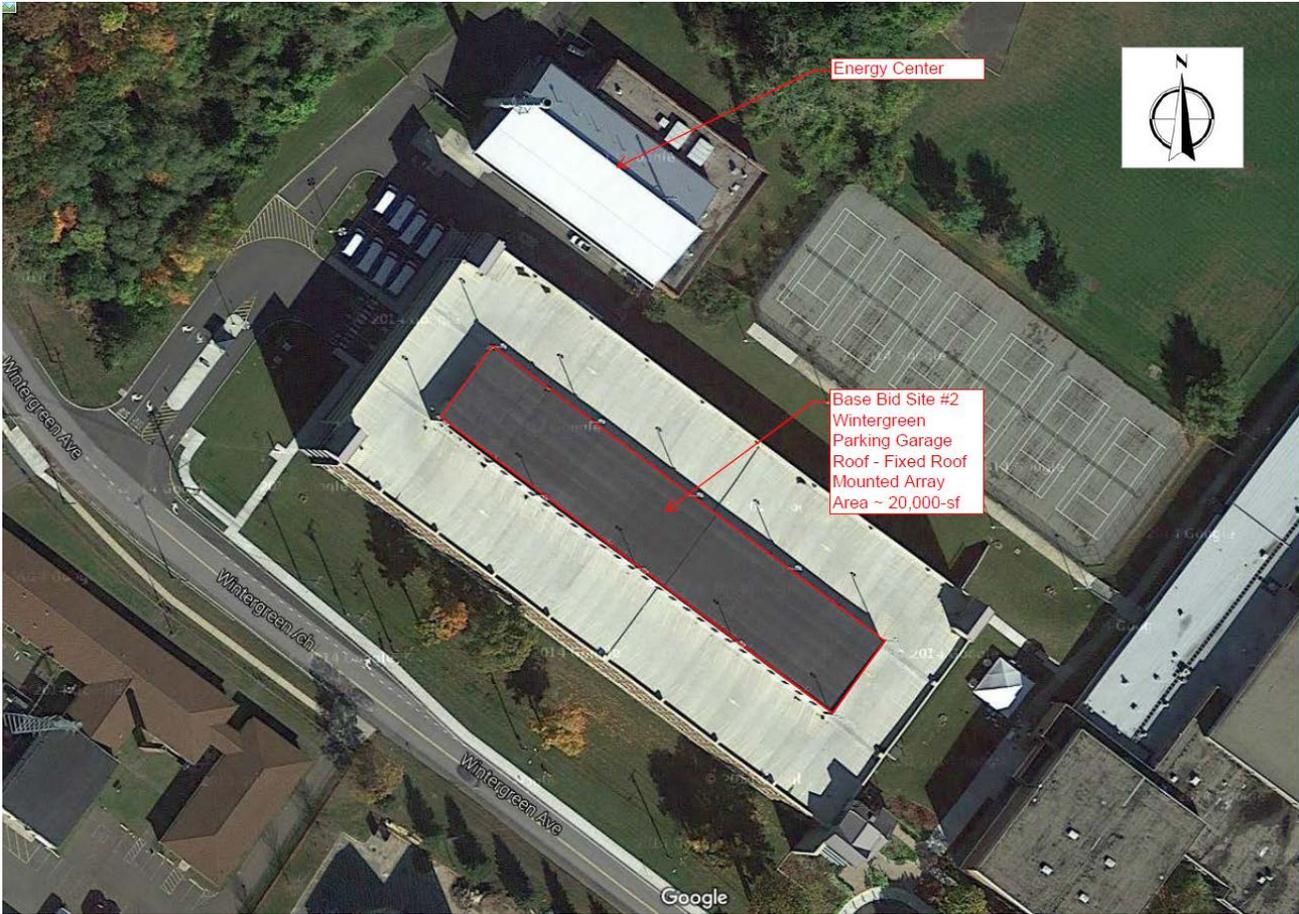
- It is anticipated that a nominal 400 - 500KW AC ground mounted PV system shall be configured for grid interactive tie-in with United Illuminating. Proposer shall determine capacity of system.
- The point of connection (POC) shall be determined by the developer. The nearest campus building is Brownell Hall. A photo of the Brownell Hall motor control center nameplate information is provided in Section 10, Attachment M for your convenience.
- Additionally, there are two nearby electric manholes that contain portions of the University's 13,800V medium voltage cable distribution system. These manhole locations are shown more clearly in Section 10, Attachment J.
- Upon approval of CSCU, the proposed system should fit within the limits shown on the image below. A more detailed site plan is included in Section 10, Attachment J.
- Both the 100-yr and 500-yr floodplain limits cover portions of Lot #9, including the "Dog-leg" section. A partial copy of FEMA Firm Map Panel 0429J is included in Section 10, Attachment K.
- Based upon the 2013 FEMA Flood Insurance Study, the 100-year floodplain elevation ranges from 18.5' to 19.4'. The 500-year floodplain elevation ranges from 19.4' to 20.8'.



At SCSU Site #2, a roof mounted photovoltaic system is being considered for installation on the existing roof of the upper level of the Wintergreen Parking Garage, as further defined by the limit lines shown. The approximate 20,000-sf footprint is shown in the figure below.

- It is anticipated that a nominal 100 - 150KW AC roof mounted PV system shall be configured for grid interactive tie-in with United Illuminating. Proposer shall determine capacity of system.
- The point of connection (POC) shall be determined by the developer. The nearest campus building is the Energy Center located to the north of the garage.
- In Section 10, Attachment L, there are several as-built drawings of the Wintergreen Parking Garage that show relevant site, structural, electrical and architectural features.

- Upon approval of CSCU, the proposed system should fit within the limits shown on the image below. More detailed plans are included in Section 10, Attachment L.



Supplemental Bid:

At SCSU Site #3, a parking canopy fixed photovoltaic system is being considered for installation over approximately 335 parking spaces in Lot #9, as further defined by the limit lines shown. The approximate 95,000-sf footprint is shown in the figure below.

- It is anticipated that a nominal 650 - 750KW AC Parking Canopy fixed PV system shall be configured for grid interactive tie-in with United Illuminating. Proposer shall determine capacity of system.
- The point of connection (POC) shall be determined by the developer. The nearest campus building is Brownell Hall. A photo of the Brownell Hall motor control center nameplate information is provided in Section 10, Attachment M for your convenience.
- Additionally, there are two nearby electric manholes that contain portions of the University’s 13,800V medium voltage cable distribution system. These manhole locations are shown more clearly in Section 10, Attachment J.
- Upon approval of CSCU, the proposed system should fit within the limits shown on the image below. A more detailed site plan is included in Section 10, Attachment J.
- Both the 100-yr and 500-yr floodplain limits cover portions of Lot #9, including the “Dog-leg” section. A partial copy of FEMA Firm Map Panel 0429J is included in Section 10, Attachment K.

- Based upon the 2013 FEMA Flood Insurance Study, the 100-year floodplain elevation ranges from 18.5’ to 19.4’. The 500-year floodplain elevation ranges from 19.4’ to 20.8’.
- It is anticipated that the parking canopy structure shall have a complete, water-tight roof system with drainage and gutters as required, underneath the array.
- The number of parking spaces to be displaced by the canopy structure system shall be minimized.



3.2 GENERAL SCOPE AND SPECIFICATIONS

3.2.1 Scope shall include a “turnkey” system that includes all engineering, design, materials, labor, equipment, electric panels, breakers, services, permits, approvals, taxes, financing, procurement, installation, construction, operation, maintenance, monitoring, billing, and incidentals necessary to install, operate and maintain a complete solar photovoltaic generation system as specified hereinafter, and including, but not limited to, the work included in this RFP. Any/All existing facility structural enhancements and roof modifications required for a code compliant installation and to protect the facilities integrity are to be included within the “turnkey” system.

3.2.2 The Proposer will be responsible for the delivery of electricity to the institution under a long term power purchase agreement. SCSU intends to contract for production from the project site for a 20-year base contract term.

3.2.3 At a minimum, the system shall consist of the supply and installation of a solar photovoltaic generation system, mounting structure, terminal and combiner box(es), quick-connect electrical connectors, conduit, DC wiring, DC disconnect, grid-connected inverter, AC disconnect, AC wiring, all metering equipment, a system monitoring and data retrieval system, and everything necessary to interconnect with each institution’s electrical distribution system.

3.2.4 Each Proposer is responsible for ascertaining relevant site conditions and making their own findings as to site conditions and appropriate system size during the site visits.

3.2.5 The selected Proposer shall prepare and submit all of the required incentive paperwork and reporting in support of any potential incentives available from State of Connecticut energy programs/initiatives. Unless otherwise noted, all incentives shall be received by the Proposer.

3.2.6 All current Connecticut Building Codes including, but not limited to the Connecticut Department of Energy and Environmental Protection standards and regulations, and all other applicable codes shall apply. Any Solar Photovoltaic Installation Guidelines issued by the Office of the State Building Inspector (OSBI) shall apply. The system shall be designed to meet all applicable Local, State, and Federal seismic and wind-load requirements. Please note, however, project construction is not subject to permitting or inspection by the City of New Haven, County of New Haven. OSBI and CSCU will review the design documents before authorizing construction documents, and review construction documents and specifications of the project and shall inspect the installation of the system for compliance and code issues.

3.2.7 The solar photovoltaic generation system or system installation activities shall not negate or invalidate any existing roof warranties on any of the building roofs on which the system is installed. 3.2.7.1 Should any of the roofing warranties be negated and / or invalidated by the solar photovoltaic generation system and / or the work done to install the photovoltaic generation system, the selected Proposer shall provide a new warranty for the affected roof(s) at no cost to the institution.

3.2.8 The selected Proposer shall ensure that the integrity of the roofing systems will remain intact. Any damages caused by the installation or use of the solar photovoltaic generation system to any of the roofing materials of any project building, shall be repaired or replaced at no cost to the institution by the selected proposer.

3.2.9 The panel installation design documents will also require approval from the States' Insurance provider, F.M. Global (or current provider at the time of submission). Compliance with F.M. Global is to be included as part of this "turnkey" project. Some of the F.M. Global requirements include but are not limited to minimum standards set forth in FM Global Property Loss Prevention Data Sheets 7-106: Ground Mounted Solar Voltaic Power, 1-28 Wind Design and 1-54 Roof Loads. Proposers are strongly encouraged to visit FM Global's website and to familiarize themselves with all of their design standards. Access to their data sheets is free and only requires a no cost registration to access these data sheets: <https://www.fmglobal.com/research-and-resources/fm-global-data-sheets>

3.3 SOLAR PHOTOVOLTAIC GENERATION SYSTEM DESIGN

3.3.1 The solar photovoltaic systems will be installed on the ground and the building roof locations identified in Section 3.1.

3.3.2 The systems shall be interconnected to the SCSU medium voltage electricity distribution system. Proposers should include all equipment required for interconnection in the proposal. Supplier to suggest the most feasible connection option provided they meet all applicable design, metering and connectivity requirements. The project must include all equipment and modifications to the existing campus distribution systems to accommodate the photovoltaic systems.

3.3.3 While the distribution system is owned by the institution, the interconnection must comply with all metering and interconnection standards including public utility requirements. The proposed

system must include all provisions to provide safe, reliable power that is fully integrated with the campus distribution system.

3.3.4 Any necessary upgrades or modifications to the existing main electrical panels, wiring, etc or new panels as required for the proper operation of the solar photovoltaic system shall be included.

3.3.5 Major electrical components, including the inverter, isolation transformer, and metering shall be installed in enclosures.

3.3.6 A system monitoring and data retrieval system shall be furnished and installed, integrated to the campus energy management control system (EMCS)/building management system (BMS).

3.3.7 Structural engineering analysis and documentation (stamped and signed by a Structural Engineer registered in the State of Connecticut) shall be provided certifying that the solar photovoltaic system can support any loads resulting from local applicable seismic and wind-load activity in addition the facilities structural integrity can support the revised roof loading.

3.3.8 The project design will be reviewed by CSCU System Office and SCSU. The seismic component of the design will also be subject to a peer review, which will be arranged and funded by CSCU. Plans must be approved by the State Fire Marshal and DCS, Office of the State Building Official and FM Global. CSCU staff will assist in taking the design through any required review.

3.4 MATERIALS

3.4.1 General

3.4.1.1 All aspects of construction shall meet the more stringent of Federal, State, and Local building codes.

3.4.1.2 All components shall be new and direct from the respective manufacturer; used or refurbished materials are not permitted.

3.4.1.3 Materials shall be designed to withstand year-round temperatures and conditions to which they are exposed (sunlight, heat, rain, cold, etc.).

3.4.1.4 All PV systems structural components shall be designed in a manner commensurate with attaining a minimum 30 year design life.

3.4.1.5 All required disconnect and over-current protection devices shall be included in the system and accessible for maintenance.

3.4.1.6 All systems shall include all equipment necessary to interconnect with the utility and meet all of the utility's requirements for protection equipment, etc.

3.4.2 Modules

3.4.2.1 PV modules specified must conform to any Connecticut Department of Energy & Environmental Protection's regulations/requirements and must qualify for eligibility under any State of Connecticut Solar Initiatives.

3.4.2.2 System must comply with IEEE 1262 “Recommended Practice for Qualifications of Photovoltaic Modules.”

3.4.2.3 Modules shall use crystalline silicon technology. Thin film/amorphous technologies will not be allowed.

3.4.2.4 The solar module manufacturer shall provide a warranty on the solar modules for the duration of this agreement rated with at least 85 percent power output guaranteed over 25 years.

3.4.2.5 The solar module manufacturer shall confirm that the warranty applies on an “as installed basis,” i.e., it will confirm the panels were installed according to its requirements and specifications for installation.

3.4.3 Mounts

3.4.3.1 Photovoltaic mounts for systems on roofs (if/when applicable) must not require penetrating the roof.

3.4.4 Electric Power Requirements:

3.4.4.1 Power provided must be compatible with the onsite distribution system.

3.4.4.2 Power capacity should be measured at the inverter AC output using the PVUSA Test Conditions (PTC), i.e. 1,000 Watts/m² 20 degree C ambient temperature and wind speed of 1 m/s.

3.4.4.3 Systems must be designed and installed using UL or ETL listed components, including mounting systems

3.4.4.4 Modules must be certified to UL 1703 – “Flat-Plate Photovoltaic Modules and Panels”

3.4.4.5 Inverters must comply with the following requirements:

- IEEE 929-2000 – “Recommended Practice for Utility Interface of Photovoltaic Systems”
- UL 1741 – “Standard for Static Inverters and Charge Controllers for use in Photovoltaic Systems” listed on the CEC list of eligible inverters

3.4.4.6 All Balance of Systems (wiring, component, wiring, conduits, and connections) must be suited for conditions for which they are to be installed. Inverters shall be installed in all-weather enclosures (NEMA 4) suitable for exterior location. An interval data meter must be installed to measure the AC output of the inverter. This meter should be located in close proximity to the billing meter and in a location accessible to institution facilities personnel.

3.4.4.7 Interconnection must comply with “Rule 21” affecting the IOUs in Connecticut. Interconnection must be acceptable to the distribution utility. Licensee will assist the institutions in preparing and submitting appropriate interconnection agreements with the local utility company. This shall be done at no cost or liability to the institution.

3.4.5 Structural Requirements

3.4.5.1 All structures, including array structures, shall be designed to resist dead load, live load, plus wind and seismic loads to the geographic area.

3.4.5.2 Solar photovoltaic systems must be able to withstand wind speeds of at least 110 mph.

3.4.5.3 Thermal loads caused by fluctuations of component and ambient temperatures must be combined with all the above load combinations.

3.4.5.4 All structural components, including array structures, shall be designed in a manner commensurate with attaining a minimum 30 year design life. Particular attention shall be given to the prevention of corrosion at the connections between dissimilar metals.

3.4.5.5 The structural design should provide for easy and cost effective repair or replacement of the roof. Licensee shall expect to remove and replace roof mounted solar systems no more than one time per building during the contract period at no expense to the institution.

3.4.6 Metering

3.4.6.1 Revenue grade Interval Data Recording (IDR) meters shall be provided complete with industry standard telemetry for communication with Ethernet, cellular or other common output capabilities.

3.4.6.2 Meters must provide minimum 1-minute intervals.

3.4.6.3 Meters shall conform to any requirements of DEEP metering, programs, and all other applicable State and Federal incentive programs.

3.4.7 Fencing

3.4.7.1 Fencing shall conform to any minimum requirements of utility company interconnection agreements, governing code requirements, LREC/ZREC funding programs, OSBI and FM Global requirements.

3.4.7.2 Fencing shall be chain link, at least 6' high, black coated vinyl, 9-gauge minimum mesh, with top and bottom rails, concrete footings for support posts and a sufficient number of vehicular gates to facilitate proper maintenance access within the limits of the ground mounted array area as determined by SCSU.

3.4.8 Lighting

3.4.8.1 The existing four (4) 4-head parking lot light poles that serve the "Dog-leg" section of Lot #9 shall be retrofitted by the Proposer with the SCSU standard Cree LED retrofit light fixture with equal lighting foot-candle output and throw coverage as part of this project.

3.4.8.2 For the duration of the PPA agreement, the Proposer shall be responsible for the operation, maintenance and replacement of these light fixtures at no additional cost to SCSU.

3.4.8.3 Any existing parking lot lighting that needs to be removed in Lot #9 for the bid supplement option (Site #3) Parking Lot Canopy array shall be replaced with suitable LED lighting fixtures as

needed on the underside of the parking canopy structure to provide foot-candle output and throw coverage equal to or greater than the existing lighting output in the same area.

3.5 ENVIRONMENTAL PERMITTING

Proposers are responsible for any required environmental permitting process and should determine whether the project is subject to any DEEP environmental impact assessment/report.

Proposers shall design, furnish and install and operate the system to accommodate the existing known floodplain elevations that cover a portion of the existing parking lot #9, including the “dog-leg” section, and the proposed PV ground and parking canopy array project areas.

3.6 PROJECT MANAGEMENT

Proposers are expected to provide a dedicated project manager who will guide the implementation of the project from contract execution through to operation. The institution will expect regular meetings and sufficient documentation during the project implementation to verify progress against a schedule and to effectively identify and resolve issues during the implementation process. The Proposer’s contractor must maintain qualified on-site project management/supervision whenever work is proceeding on site.

3.7 QUALITY ASSURANCE

3.7.1 All generating equipment shall be certified by Underwriter Laboratories (UL). The system shall be comprised of UL listed components or in cases where a UL listed component is not available; the component shall be listed by another OSHA recognized National Recognized Testing Laboratory (NRTL).

3.7.2 All installations shall meet or exceed Conn-OSHA requirements for safety and equipment access.

3.7.3 The design, construction, and finalized installation shall be completed in accordance with the latest applicable version of the National Electrical Code (NEC), Uniform Building Code (UBC), California Building Code (CBC), International Building Code (IBC), American Society of Civil Engineers (ASCE), American Society of Mechanical Engineers (ASME), American Society for Testing and Materials (ASTM), American National Standards Institute (ANSI), Underwriters Laboratory (UL), Institute of Electrical and Electronics Engineers (IEEE), American Concrete Institute (ACI), Connecticut Occupational Safety and Health (Conn-OSHA), all Federal, State, and Local construction and interconnections codes, and all other incentive and rebate programs.

3.7.4 Contractor shall submit to the institutions a copy of its quality assurance/quality control (QA/QC) plan for review not later than 45 days after contract execution for review and comment. The system shall be managed in accordance with the program. The QA/QC program shall include, but is not limited to, such procedures and systems as the following:

- All wire insulation testing—Megger testing or very low frequency testing
- Mechanical system— mounting structures

- Factory testing of inverters and transformers by the manufacturer
- PV source open-circuit measurements—VOC at combiner boxes
- Fuse tests
- Termination pull testing
- All visual inspections
- Grounding continuity testing
- Earth-ground resistivity testing
- PV module inspection and manufacturer documentation of factory test per the manufacturer’s existing program
- Metering and instrumentation calibration testing
- Step-up transformer testing
- Inverter phase rotation and matching with utility if required
- Relay settings at the point of interconnection to institutions if required
- Other Contractor-prescribed procedures

All QA/QC testing procedures onsite shall be witnessed and documented by a qualified representative of Contractor. The institutions shall observe and witness QA/QC as necessary and at its discretion. A qualified engineer of Contractor or Designee, shall date and sign documentation indicating completion and acceptance of each onsite QA/QC test procedure.

3.8 PROPOSER / INSTALLER CONTRACTOR EXPERIENCE

The selected Proposer and/or any installer shall be licensed with the Connecticut Contractors State License Board to perform all phases of system construction, shall be approved by the equipment manufacturer to install each component and have no less than five (5) years experience installing similar systems. Additionally, any subcontractors shall be licensed by the Connecticut Contractors State License Board to perform any and all ancillary work that may be required, including but not limited to concrete, trenching, etc.

3.9 INSTALLATION

1. The Designee shall meet and confer with CSCU and SCSU staff throughout the installation process (from design through final signoff) to ensure that the installed PV equipment and auxiliaries do not create problems for the operation and maintenance of SCSU’s operations. At two points during the Contractor’s design process, namely Preliminary Engineering (SD), and Detail Engineering (DD), the Contractor shall submit design documents to CSCU with sufficient information to allow CSCU to determine if the proposed design is compatible with campus operations. CSCU technical approvals will consist of PV equipment placement, interconnections with existing equipment and utilities, interface with existing conditions, verification that developer will obtain required approvals and inspections and permits, safe conditions and access to existing equipment are maintained, developers proposal appears practical and feasible. The Developer shall respond to all review comments made by CSCU. Installation shall not begin until the Detail Engineering documents are accepted by CSCU.
2. The Contractor shall provide a critical path schedule of the PV project. The critical path time schedule will include no fewer than the following major project phases. (The

Contractor's construction activities shall adhere to the Project Schedule set forth in Section I of this RFP.)

- a. Pre-construction:
 - (i) The Contractor shall obtain, at its expense, all permits and/or certificates required for installation and operation of the photovoltaic system(s); and
 - (ii) The Contractor shall obtain all approvals from CSCU, SCSU, FM Global, OSBI and any other third parties necessary for installation and operation of the PV Systems;
 - b. Delivery of the PV;
 - c. Installation of the PV; and
 - d. Complete PV testing and commissioning.
3. The Contractor will be solely responsible for all work, including but not limited to: (i) all professional fees, permits costs, and material and labor expenses related to the installation, commissioning, maintenance, operation and decommissioning of the PV System; and (ii) all auxiliary equipment required to provide a fully operational system that meets the requirements of this RFP.
4. The Contractor shall provide a measurement and verification (M&V) plan showing all associated instrumentation and data collection to CSCU for approval.

3.9.1 General

3.9.1.1 All safety, electric, building, and labor code requirements at the Federal, State, and Local levels shall be met.

3.9.1.2 The installation shall be completed per the Manufacturer's written installation manual.

3.9.1.3 All cables, conduit, exposed conductors, and electrical boxes shall be secured and supported according to code requirements.

3.9.1.4 All applicable environmental regulations shall be met.

3.9.1.5 The Supplier shall obtain all required approvals.

3.9.2 System Electrical

3.9.2.1 Electrical construction shall meet all Federal, State, and Local electric codes.

3.9.2.2 All outdoor panel enclosures shall be weatherproof and capable of surviving intact under the site environmental conditions.

3.9.2.3 All electrical/electronic equipment shall have surge and lightning protection. All electrical/electronic equipment and metal surfaces shall be properly grounded as required in the NEC and as required by the equipment manufacturer for protection of personnel and equipment due to fault.

3.9.2.4 Other technical codes that will apply include:

3.9.2.5 AMSE PTC 50 (solar PV performance)

- ANSI Z21.83 (solar PV performance and safety)
- NFPA 853 (solar PVs near buildings)
- NEPA 70 (electrical components)
- IEEE 1547 (interconnections)
- National Electrical Safety Code – ANSI C2 – 1999
- All applicable State Building Codes and requirements

3.9.3 Installation Standards

3.9.3.1 The Supplier shall obtain appropriate certifications from a Professional Engineer for all structural, seismic, building code, fire code, FM Global, and wind-loading requirements for the specific application and provide them as part of the post-installation package.

3.9.3.2 System installation shall conform to Manufacturers' installation manuals and approved project drawings and specifications.

3.9.3.3 Mounting hardware shall be compatible with the site considerations and environment.

3.9.4 Meters, Monitoring, And Data Acquisition System

3.9.4.1 The Supplier shall develop and provide a remote monitoring program that will allow the College to monitor the performance of the solar photovoltaic generation system in historical and real-time for the life of the equipment.

3.9.4.2 Meters shall be integrated to the institution's Energy Management Control System (EMCS)/BMS for the purposes of metering, monitoring and data collection of electricity production.

3.9.5 System Start-Up

3.9.5.1 All start-up and testing activities shall be witnessed by the institution's Project Manager, Construction Inspector, and/or other appropriate Designees.

3.9.5.2 The Supplier shall thoroughly inspect the installation to ensure compliance with all applicable safety regulations and requirements and obtain approval of institutional staff or Designee, prior to operation.

3.9.5.3 Start-up shall be per all manufacturers' instruction.

3.9.5.4 The system shall be started and tested in accordance with any regulations of the local utility and net metering programs.

3.9.5.5 Contractor shall supply the University with all manuals and/or handbooks (in printable electronic format) that provide, either in a single manual or handbook or collectively, complete operating and maintenance instructions (including inventories of spare parts and tools and parts lists with ordering instructions) for each major piece of equipment and system.

3.9.6 System Commissioning

Complete a system commissioning per the Specifications and equipment manufacturer's written instructions. System commissioning shall meet all requirements of utility and state rebate programs. Contractor shall provide the proposed commissioning and startup plan for the installation. Contractor shall coordinate with the institution to develop an acceptable commissioning plan that includes a checkout and startup procedure.

This work will assure that:

- Systems are activated in a manner that is safe for personnel as well as for the equipment;
- Contractor work is complete and according to the contract documents;
- Systems perform as required by the contract documents and are ready to be turned over to the institution.

As the construction and installation of the systems nears completion, Contractor shall prepare punch lists and conduct system walk-downs, sub-system and system checkouts, startups, testing, and turnovers.

The final approved Acceptance Test and Commissioning Procedures shall, at minimum, include the following:

- Safety plan during startup and commissioning
- Review of all QA/QC testing on the DC and AC sides of inverters
- Detailed procedure for PV System startup, including switching sequencing
- Confirm testing and energizing inverters in conformance with manufacturer's recommended procedures; note operating voltages; and confirm inverter is performing as expected
- Under full sun conditions, and after at least 15 minutes of operation, taking and recording
- PV System operating data—such as but not limited to MWDC, MWAC, VDC, VAC, IDC, IAC, Solar Radiation, etc.
- Testing the system control and monitoring system to verify that it is performing correctly
- Testing the communication system for offsite monitoring
- Testing the installation of metering and protective relaying to verify they meet utility requirements
- Detailed procedure for interface and initialization with the grid
- Documentation of successful startup and commissioning procedure
- Written notification submitted by Contractor to University that the completion of Acceptance Testing and Commissioning has occurred

Upon successful completion of energizing and startup, the system will be considered operable. The system will then move to the Interim Operating Period where Contractor shall make the installations ready for Capacity Testing.

3.9.7 Final Installation and Commissioning Tasks

Contractor shall perform the following tasks without limitation prior to final acceptance by the College:

3.9.7.1 Identify punch-list items and provide timeline for completion. Contractor shall complete the items on the punch-list in accordance with the standards described herein, and as quickly as reasonably practical. Contractor shall coordinate with the institution regarding continued site access.

3.9.7.2 Conduct a final clean-up of the Site.

3.9.7.3 Remove all materials and equipment belonging to the Contractor or its subcontractor(s) from the site (other than equipment, supplies, and materials necessary or useful to the operation or maintenance of the site, and equipment, supplies, and materials directed by College to remain at the site).

3.9.7.4 Tear down and remove all temporary structures on the site built by Contractor or its subcontractors and restore such areas to a condition consistent with that of a newly constructed solar PV system, except as required by any provision of this Agreement.

3.9.7.5 Remove all waste, rubbish, and hazardous material from and around the site.

3.9.7.6 Provide College with copies of all O&M manuals and warranties for the installed systems.

3.9.7.7 Provide final as-built documents upon completion.

3.9.8 Interim Operating Period

Following successful completion of the startup and commissioning of the systems, the Contractor shall have a maximum of 45 days “Interim Operating Period” to resolve any operating issues. The College designated operating and maintenance team shall receive training regarding the systems during this period. After the successful execution of the Interim operating period, the Contractor shall perform a capacity test procedure to verify the rated output for the system. Contractor is not required to use the maximum 45 days, rather it is an allowance of time. For example, Contractor may be ready for capacity testing after 10 days.

3.10 FINAL ACCEPTANCE DATE

3.10.1 The institution shall determine when the system is working and acceptable per the specifications, scope, terms and conditions as specified by this RFP document and the resultant agreement.

3.10.2 At least 30 days before the expected Final Acceptance Date, selected proposer shall train the institution in the operation and recommended maintenance of the PV systems. It is expected that training will be provided for Facilities Maintenance staff and other interested institution personnel to promote understanding, monitoring, and maintenance of the system. A portion of this training shall specifically include how to properly and safely isolate the PV system from the existing institutionally owned and operated equipment and systems that the institutions will need to continue to maintain and service.

3.11 MAINTENANCE REPAIRS

3.11.1 The proposer shall be responsible for all maintenance and repairs of the system. However, the institution does understand that some regular, maintenance and repair activity is required. The institution will provide access to the facilities interior, when needed, as soon as feasible but the Proposer should anticipate a minimum 24 hour notice to gain access for interior maintenance/repair work.

3.11.2 Selected proposer shall supply institution with all manuals and/or handbooks (in printable electronic format) that provide, either in a single manual or handbook or collectively, complete operating and maintenance instructions (including inventories of spare parts and tools and parts lists with ordering instructions) for each major piece of equipment and system that is a responsibility of the institution.

3.12 EMERGENCY SHUT-OFF TRAINING

Selected proposer will train the institution's Facilities Maintenance staff on how to perform emergency shut-off procedures.

4 TECHNICAL & NARRATIVE RESPONSE

4.1 TECHNICAL DESCRIPTION

Provide a technical description of the system. Information to be included in the description:

- Power capacity (DC kW) measured at the inverter(s) input
- Power capacity (AC kW) measured at the electrical interconnection point
- Total System efficiency
- Annual expected minimum output AC kWh production with a description of the estimation methodology used. This must be consistent with values provided in the price proposal.
- Output demand and energy data by month and time of use period. This level of output data is considered optional for Proposers but will be helpful to the Institutions in accurately assessing the value of the system.
- A description of the equipment deployed, including manufacturer, model number, efficiency, and warranty
- A description of the interconnection with the campus electricity distribution system
- A description of other balance of system components
- A description of the mounting and structural support systems for the system.
- Note that the aesthetic character of the mounting structure and overall system installation will be considered. Thus, the proposal should include enough information to assess the solution's aesthetic characteristics. Inclusion of photographs, photo simulations, material samples, and architectural elevations are required under this item. Please include the height of the proposed system. For the ground mount system, include all relevant details of the fencing system and components to be used to enclose and secure the PV system area. For the roof mounted

system, include any and all required roof guards necessary along the perimeter of the proposed system.

4.2 PROJECT TEAM

Describe the proposed project team, including:

- Contact information for the lead of the proposal team, responsible for the response submittal. This person will be contacted with questions and communications regarding the RFP response.
- An organizational chart that includes all key project members. Members provided as part of the proposal shall be identified by name and title (and organization if required for clarity). The organization chart should include all components of the project including contract management, design, equipment sourcing, system integration, installation, financing, metering, and billing.
- A description of the roles and responsibilities for each team member.

4.3 PROJECT APPROACH

Give a detailed description of your approach to project delivery, including an overview of the project implementation process. This overview should describe specific implementation phases or steps that will be conducted to deliver the product.

4.4 PROJECT SCHEDULE

Provide a schedule for the project that includes major work streams and milestones. The format should be a list of project activities with start and end dates. Include a schedule section pertaining to each of the project locations.

4.5 MONITORING AND DATA PRESENTATION

Provide a description of the monitoring system for the project including:

- Monitoring systems – what systems will be included in the proposed system to monitor, diagnose, and track the solar photovoltaic output of the system. At a minimum, a dashboard shall be created and/or linked to the SCSU sustainability website, details to be determined during the project submittal process.
- Access to and presentation of data.
- EMCS Integration – how monitoring data is integrated to the institution’s building energy management and control system.

4.6 OPERATIONS AND MAINTENANCE

Provide a complete description of all operations and maintenance activities that will be provided for the system. Please:

- List and describe each maintenance activity
- Include the frequency at which the activity will be performed
- Identify any O&M activity that is required of University personnel
- Identify maintenance and repair costs that will not be covered in the proposal.
- Describe training that is included in the proposal.
- Provide warranty periods for any parts of the system as applicable.

4.7 PAST PROJECT EXPERIENCE

Provide a list of past projects completed by the proposed team that are similar in scope as that proposed. The description for each project/program should include:

- The project name
- Location
- Project size (total cost and project capacity in kW (DC))
- Project delivery type – for example, provided for direct purchase, lease or provided through a power purchase agreement
- Year completed
- Name of client contact and contact information
- Brief physical description of the project (equipment manufacturer, model, etc.)

4.8 TERMS AND CONDITIONS ACCEPTANCE AND EXCEPTIONS

Please indicate any exceptions to the RFP documents, including all exhibits. Also, please confirm acceptance of all remaining portions of the RFP including all exhibits, not identified as an exception.

- Technical Exceptions: The Proposer shall clearly describe any and all deviations in its Proposal from the functional requirements stated in this RFP and also describe any product enhancements that could be made by the Proposer to satisfy those requirements.
- General Exceptions: The Proposer shall also clearly state its objections, exceptions, or alternatives to the general (non-technical) requirements stated in this RFP, including the provisions of Attachment H, Contract Provisions. If the Proposer has no general exceptions to present, this fact should be stated in the Proposal.
- CSCU will not consider the submission of the Proposer's standard software license and maintenance agreements to be a presentation of exceptions. Every exception must be stated as such in the document mentioned above.
- Proposers are cautioned that if CSCU is unwilling or unable to approve a request for exception to the RFP requirements and the Proposer does not withdraw the request, the proposal will be deemed to be non-responsive and ineligible for contract award.

Please indicate any known CSCU and/or Southern Connecticut State University employees or near relatives that own or control more than a ten percent (10%) interest in your organization. If there are none, so state.

4.9 PRICE PROPOSAL

Proposers should make the following assumptions as part of their pricing:

- Taxes on Solar Power Sales: Proposers shall assume that institution facilities will not pay property, city energy or utility user's tax on solar energy purchased or on proposers equipment.
- Renewable Energy Credits (RECs): Ownership of Renewable Energy Credits, Green Tags, or similar credits generally, "RECs" associated with the project shall go to the Proposer.
- The proposer shall submit a minimum of 4 pricing proposal as detailed below:
 - One base bid and one supplemental bid pricing proposal shall carry the following assumptions for all proposers to facilitate an equalized proposal comparison:
 - Large ZREC bid pricing shall be \$50/REC.
 - PPA contract term shall be 20-years, fixed pricing.
 - At least two additional pricing proposal(s) shall be submitted by all proposers with their recommended ZREC bid pricing, PPA duration and pricing structure – one each for the base bid option and the supplemental bid option. A brief summary description of the recommended ZREC bid pricing shall be included to demonstrate the Proposer's understanding of the ZREC market and their risk/reward logic of their proposed alternative ZREC pricing structure.
- Innovative Pricing Structures or Additional Pricing Information: Proposers should clearly and concisely outline and explain their proposed pricing structure to the institutions. The institution will consider, contract terms that may include, but are not limited to, floor and ceiling prices, prices indexed to market or tariff rates, short and long term transactions, purchase and sale of renewable energy credits, and other provisions that will optimize the financial benefits to the institutions and ensure project viability for the Proposers. In any case, the institutions ask that Proposers provide a reasonable representation of the pricing in their proposal.

4.10 BILLING

Provide a description of the billing process. Please include:

- Options for bill access (mail, e-mail, on-line)
- A description of any true-up billing processes

4.11 FINANCING

1. The Proposer will be responsible for obtaining any federal tax credits and carbon offsets available to it.
2. It is presently anticipated that the term of the Energy Purchase Agreement to be negotiated and executed by the Proposer and the institution will be twenty (20) years, with the option of one (1) five-year contract extension if agreed upon by the parties. However, CSCU realizes that the useful life of PV components vary depending upon the manufacturer. Accordingly, if a proposer determines that the anticipated contract term described in this section is not optimal, it may propose an alternate contract term of lesser or greater length (not to exceed a total base and extended contract length of twenty-five years). Any proposer proposing an alternate contract term should provide an explanation for its proposal.
3. The Proposer will be paid an agreed-upon fee by the institution on a monthly basis for electricity by operation of the PV systems. The amount of the monthly invoice will be stated by the Proposer within the “Project Information Statement.”
4. The Proposer is encouraged to seek supplemental grant funding that will reduce the overall program cost to the institution.

CSCU and SCSU make no representations regarding the potential of any available grant funding. Neither CSCU nor WCSU will provide information regarding the availability of grant funding or respond to questions asked regarding such funding.

4.12 PROPOSAL SUBMITTALS

The following submittals shall be provided with the proposal:

- Solar photovoltaic system layout, preliminary design documents and ground/roof plans.
- System description including dimensions, type of installation, product data sheets, single line electrical diagram, structural engineer certification.
- Description of the anchorage structures showing details of how the system will be anchored.
- System annual electricity output.
- A summary of all anticipated approvals that will be required for the proposed project.
- Schematic and preliminary designs
- Project implementation and completion schedule.
- Product description information
- Equipment details, descriptions, and specifications
- Equipment/system decommissioning plan

5. EVALUATION OF PROPOSALS

Proposals will be evaluated by a CSCU Committee against the following criteria:

5.1. EVALUATION OF PROPOSAL:

Twenty Five percent (25%) of the evaluation of submitted proposals will concern the strength of the financial commitment demonstrated by the proposal. Factors demonstrating the strength of the financial commitment include, but are not limited to:

- Examples of similar projects that include cost details, operating performance data and owner contract information;
- Experience, length of service providing similar projects
- Strength of funding commitment (funding commitment sources are to be identified);
- Project readiness (a shorter timeline for project implementation is preferred); and
- Schematic design, written project outline, and product information.
- Locality of project team members, offices & relevant projects.

5.2. COST EFFECTIVENESS:

Seventy Five percent (75%) of the evaluation of submitted proposals will concern the cost-effectiveness of the project. Factors demonstrating cost-effectiveness include, but are not limited to:

- Minimum yearly kilowatt-hours of PV system electricity to be provided to SCSU for twelve consecutive months as stated in Section 9.2; and
- Generation cost per each kilowatt-hour of electricity.

CSCU RESERVES THE RIGHT TO REJECT ANY AND ALL PROPOSALS IRRESPECTIVE OF SCORE.

6. PROPOSAL SUBMISSION REQUIREMENTS

6.1 Each proposer must provide the following information:

- Provide information on its company, including a minimum of three (3) client references and any relevant certifications for similar installations
- The name, title, telephone number, and e-mail address of the appropriate person to contact concerning the proposal
- The location of the office that will be serving CSCU
- The number of years the proposing company has been in business under this name
- If the company is a subsidiary of another company, the name of the parent company
- Financial rating of the company, or other indicator of financial strength and stability
- Completed RFP Attachments A through G, inclusive
- Information on factory approved installers (if system is not installed by Proposer)
- Identify all project partners, including but not limited to significant subcontractors, subconsultants, financiers and their respective roles to be used on this project.

NOTE: Missing or non-notarized affidavits may result in proposal rejection. Be sure that all affidavits are completed and notarized. New affidavits must be submitted with a response to this RFP. Previously submitted affidavits may not be used to satisfy this requirement.

7. GENERAL INSTRUCTIONS TO PROPOSERS

7.1 GENERAL

- A. RFP responses must be submitted in sealed envelopes upon which must be written: (i) the proposer's name and address (ii) the RFP title and number (iii) the date and time the proposal is due
- B. In order for its proposal to be considered, the proposer must answer all questions and supply all required materials.
- C. Because the State of Connecticut is exempt from the payment of state and federal excise, transportation, and sales taxes, such taxes must not be included in prices proposed.
- D. If the proposer is a business entity, an authorized official of the entity must sign the proposal and the proposal must include the names, titles, addresses, telephone numbers

and e-mail addresses of individuals with authority to negotiate and contractually bind the entity.

E. General Conditions:

1. The State of Connecticut reserves the right to accept or reject any or all proposals submitted for consideration. All proposals will be kept sealed until the date, time and place of public opening.
2. The State of Connecticut reserves the right to make an award in whole or in part, and to contract with one or more proposers for services.
3. Any contract awarded as a result of this RFP must be in full conformance with statutory requirements of the State of Connecticut and the federal government.
4. All proposals submitted in response to this RFP will become the property of the State of Connecticut and subject to the provisions of section 1-210, *et. seq.*, of the Connecticut General Statutes (the Connecticut Freedom of Information Act). Due regard will be given for the protection of proprietary or confidential information contained in all proposals received. However, all materials associated with this RFP are subject to the terms of the Connecticut Freedom of Information Act (“FOIA”) and all applicable rules, regulations and administrative decisions. If a firm is interested in preserving the confidentiality of any part of its proposal, it will not be sufficient merely to state generally that the proposal is proprietary or confidential in nature and not, therefore, subject to release to third parties. Instead, those particular sentences, paragraphs, pages or sections that a firm believes to be exempt from disclosure under FOIA must be specifically identified as such. Convincing explanation and rationale sufficient to justify each exemption consistent with Section 1-210(b) of FOIA must accompany the proposal. The rationale and explanation must be stated in terms of the reasons the materials are legally exempt from release pursuant to FOIA. Firms should not require that their entire proposal, note the majority of the proposal, be confidential. Any submitted proposal, once execution of a contract is complete and any completed contract will be considered public information. The Board of Regents has no obligation to initiate, prosecute or defend any legal proceeding or to seek a protective order or other similar relief to prevent disclosure of any information that is sought pursuant to a FOIA request. The contractor has the burden of establishing the availability of any FOIA exemption in any proceeding where it is an issue. In no event shall the Board of Regents have any liability for the disclosure of any documents or information in its possession which the Board of Regents believes are required to be disclosed pursuant to FOIA or other requirements of law.
5. Any proposal must be valid for a period of 120 days from the due date.
6. CSCU reserves the right to amend or cancel this RFP prior to the due date and time, if it is in the best interests of CSCU to do so.

7. CSCU reserves the right to reject the proposal of any proposer who or which is in default of any prior contract or for misrepresentation.
8. CSCU reserves the right to correct inaccurate awards resulting from its clerical errors.
9. Proposals are subject to rejection in whole or part if they limit or modify any of the terms and conditions and/or specifications of the RFP.
10. A proposer, if requested to do so, must be prepared to present evidence of experience, ability, service facilities, and financial standing necessary to satisfactorily meet the requirements set forth or implied in its proposal.
11. No additions or changes to the original proposal will be allowed after submittal. While changes are not permitted, clarification at the request of the agency may be required at the proposer's expense.
12. By responding, the proposer implicitly states that the proposal is not made in connection with any competing proposer submitting a separate response to the RFP, and is in all respects fair and without collusion or fraud. It is further implied that the proposer did not participate in the RFP development process, had no knowledge of the specific contents of the RFP prior to its issuance, and that no employee of CSCU participated directly or indirectly in the preparation of the proposal.
13. The proposer shall bear all costs associated with its response to this RFP, including the costs of any presentations and/or demonstrations.
14. The proposal must include a summary of the proposer's affirmative action plan and a copy of the proposer's affirmative action policy statement.

Regulations of Connecticut State Agencies Section 4-114a-3(10) requires agencies to consider the following factors when awarding a contract:

- a. The proposer's success in implementing an affirmative action plan
- b. The proposer's success in developing an apprenticeship program complying with Section 46a-68-1 to 46a-68-17 of the Connecticut General Statutes, inclusive;
- c. The proposer's promise to develop and implement a successful Affirmative Action Plan;
- d. The proposer's submission of EE0-1 data indicating that the composition of its work force is at or nearby parity when compared to the racial and sexual composition of the work force in the relevant labor market area, and
- e. The proposer's promise to set aside a portion of the contract for legitimate small contractors and minority enterprises.

15. The State reserves the right to award in part, to reject any and all proposals in whole or in part, and to waive technical defects, irregularities and omissions if, in its judgment, the best interest of the State will be served thereby.

8. RIGHTS RESERVED TO CSCU SYSTEM

CSCU reserves the right to reject any and all proposals in whole or in part, award in part, award to multiple contractors, and waive technical defects, irregularities and omissions if, in its judgment, the best interest of CSCU is served. CSCU reserves the right to negotiate with any proposer prior to awarding a contract and to negotiate with the proposer to which an award is made the terms of the contract to be entered into between that proposer and CSCU. It is anticipated that the details of the final ZREC pricing to be submitted to the United Illuminating large LREC/ZREC program shall be negotiated between the Proposer and CSCU.

CSCU reserves the right to negotiate a buyout of the PV system at any time during the contract duration and/or to negotiate additional extension(s) of the contract duration.

Any award(s) arising from this RFP may be extended to other constituent units of higher education, for the installation of similarly sized PV systems at other College or University campus locations at for the rates proposed, if mutually agreed upon by both parties.

9. PROJECT INFORMATION STATEMENT

9.1 PROJECT INFORMATION STATEMENT FOR SOUTHERN (SCSU)

1. Provide a brief description of the technology proposed to be used and value to SCSU for that technology.
2. Discuss how and to what degree your proposal will technically benefit SCSU.
3. Discuss how and to what degree your proposal will economically benefit SCSU.
4. Describe maintenance needs and any projected down time required of the PV systems.
5. What is the service life of the PV system?
6. What is the system's electrical power output?
7. How does the system operate relative to the power grid?

8. What is the reliability record of the system?

9. What is the annual degradation of the system for each year of operation over a 25-year life? Provide annual % decrease and total expected system capacity at the 25-year milestone.

10. Explain the efficiency of a proposed PV panel.

11. The proposer will guarantee a PV availability rate of _____% that accounts for _____ total annual hours.

12. The PV system provided by the proposer will be capable of producing _____ kilowatts of power (AC).

13. The proposer will provide no less than _____ kWh of electrical energy on a yearly basis at the voltage at the Point(s) of Interconnection.

14. Annual cost to Southern (SCSU):
 - a. The proposer shall issue a single monthly invoice to Southern for all useable electricity

supplied to Southern from the PV system. No other payments will be made to the proposer. Respondent shall fill in the matrix boxes below (Table 9.1.14.a) for the total cost per kWh per year for each proposed contract year.

16. The proposal is contingent on the Proposer obtaining ZREC funds for each project. Since the proposal submission costs listed in item 14 of this section, “IX Project Information Statement,” are contingent of supplemental funding that would be provided from the United Illuminating Large LREC/ZREC program then the proposer shall include in their proposal a minimum of four (4) pricing proposals:
 - a. Table 9.1.14.a Proposer shall use an assumed value of (\$50/REC) that may be submitted to the Large ZREC program for the base bid option
 - b. Table 9.1.14.b Proposer shall use their preferred REC value for the base bid option.
 - c. Table 9.1.14.c Proposer shall use an assumed value of (\$50/REC) that may be submitted to the Large ZREC program for the supplemental bid option
 - d. Table 9.1.14.d Proposer shall use their preferred REC value for the supplemental bid option.
 - e. Additionally, Proposer shall use Table 9.1.14.e to show the individual unit costs of the 3 different site locations and array types for all of their pricing proposal options. If additional pricing options are submitted beyond the four (4) minimum requested Proposers shall submit a breakdown in a similar format to Table 9.1.14.e for the additional pricing proposals.
 - f. The final REC value to be submitted by the Proposer on behalf of the CSCU shall be negotiated. Final pricing to be submitted shall be determined solely by the CSCU.

17. Discuss the proposed system decommissioning process and how the proposer will restore the site to its original conditions including the complete removal of all of system equipment including ancillary system components.

**Table 9.1.14.a Cost of Electricity Per kWh – BaseBid \$50/REC, Fixed Price
(SCSU): Site #1(ground array) & Site #2(roof array)**

	Base Term Contract (Fixed Pricing)	Contract Extension One
YEAR 1		
YEAR 2		
YEAR 3		
YEAR 4		
YEAR 5		
YEAR 6		
YEAR 7		
YEAR 8		
YEAR 9		
YEAR 10		
YEAR 11		
YEAR 12		
YEAR 13		
YEAR 14		
YEAR 15		
YEAR 16		
YEAR 17		
YEAR 18		
YEAR 19		
YEAR 20		
YEAR 21		
YEAR 22		
YEAR 23		
YEAR 24		
YEAR 25		

ZREC Value for this table shall be \$50/REC, fixed 20-year pricing for equalized proposal comparison and may be used for submission to the United Illuminating Large LREC/ZREC program.

Table 9.1.14.b Cost of Electricity Per kWh – BaseBid Proposer defined
\$ ____/REC (SCSU): Site #1(ground array) & Site #2(roof array)

	Base Term Contract	Contract Extension One
YEAR 1		
YEAR 2		
YEAR 3		
YEAR 4		
YEAR 5		
YEAR 6		
YEAR 7		
YEAR 8		
YEAR 9		
YEAR 10		
YEAR 11		
YEAR 12		
YEAR 13		
YEAR 14		
YEAR 15		
YEAR 16		
YEAR 17		
YEAR 18		
YEAR 19		
YEAR 20		
YEAR 21		
YEAR 22		
YEAR 23		
YEAR 24		
YEAR 25		

ZREC Value for this table shall be determined by Proposer \$____/REC and may be used for submission to the United Illuminating Large LREC/ZREC program.

Table 9.1.14.c Cost of Electricity Per kWh – Supplemental Bid \$50/REC, Fixed Price (SCSU): Site #3 (Parking Canopy Array)

	Base Term Contract (Fixed Pricing)	Contract Extension One
YEAR 1		
YEAR 2		
YEAR 3		
YEAR 4		
YEAR 5		
YEAR 6		
YEAR 7		
YEAR 8		
YEAR 9		
YEAR 10		
YEAR 11		
YEAR 12		
YEAR 13		
YEAR 14		
YEAR 15		
YEAR 16		
YEAR 17		
YEAR 18		
YEAR 19		
YEAR 20		
YEAR 21		
YEAR 22		
YEAR 23		
YEAR 24		
YEAR 25		

ZREC Value for this table shall be \$50/REC, fixed 20-year pricing for equalized proposal comparison and may be used for submission to the United Illuminating Large LREC/ZREC program.

Table 9.1.14.d Cost of Electricity Per kWh – Supplemental Bid Proposer defined \$ ___/REC (SCSU): Site #3 (Parking Canopy Array)

	Base Term Contract	Contract Extension One
YEAR 1		
YEAR 2		
YEAR 3		
YEAR 4		
YEAR 5		
YEAR 6		
YEAR 7		
YEAR 8		
YEAR 9		
YEAR 10		
YEAR 11		
YEAR 12		
YEAR 13		
YEAR 14		
YEAR 15		
YEAR 16		
YEAR 17		
YEAR 18		
YEAR 19		
YEAR 20		
YEAR 21		
YEAR 22		
YEAR 23		
YEAR 24		
YEAR 25		

ZREC Value for this table shall be determined by Proposer \$ ___/REC and may be used for submission to the United Illuminating Large LREC/ZREC program.

Table 9.1.14.e SCSU PPA PV Array Proposal Detail Summary

Base Bid - CSCU Defined ZREC Unit Price of \$50/REC, 20-yr fixed price				
		Available Space	PV Size/ Capacity (AC-kW)	Yr 1 Unit Elec. Cost (\$/kwh)
Site #	Description	Area (sf)		
1	Lot #9 Dogleg - Ground Mounted Array	72,000-sf		
2	Wintergreen Garage - Roof Mounted Array	20,000-sf		
3	Lot #9 - Solar Parking Canopy	N/A - Not part of base bid		
			Blended Yr 1 Unit Cost	
Base Bid - Proposer Defined ZREC Unit Price of \$_____/REC				
		Available Space	PV Size/ Capacity (AC-kW)	Yr 1 Unit Elec. Cost (\$/kwh)
Site #	Description	Area (sf)		
1	Lot #9 Dogleg - Ground Mounted Array	72,000-sf		
2	Wintergreen Garage - Roof Mounted Array	20,000-sf		
3	Lot #9 - Solar Parking Canopy	N/A - Not part of base bid		
			Blended Yr 1 Unit Cost	
Supplemental Bid - CSCU Defined ZREC Unit Price of \$50/REC, 20-year fixed price				
		Available Space	PV Size/ Capacity (AC-kW)	Yr 1 Unit Elec. Cost (\$/kwh)
Site #	Description	Area (sf)		
1	Lot #9 Dogleg - Ground Mounted Array	N/A - Not part of supplemental bid		
2	Wintergreen Garage - Roof Mounted Array	N/A - Not part of supplemental bid		
3	Lot #9 - Solar Parking Canopy	95,000-sf		
Supplemental Bid - Proposer Defined ZREC Unit Price of \$_____/REC				
		Available Space	PV Size/ Capacity (AC-kW)	Yr 1 Unit Elec. Cost (\$/kwh)
Site #	Description	Area (sf)		
1	Lot #9 Dogleg - Ground Mounted Array	N/A - Not part of supplemental bid		
2	Wintergreen Garage - Roof Mounted Array	N/A - Not part of supplemental bid		
3	Lot #9 - Solar Parking Canopy	95,000-sf		

CONTRACT PROPOSAL

Board of Regents for Higher Education
 Finance Department
 39 Woodland Street
 Hartford, CT 06105-2337

THIS FORM MUST BE RETURNED WITH PROPOSAL

Please read carefully

RFP NUMBER BOR-1605	DATE OF OPENING April 29, 2016	TIME OF OPENING 12:15 P.M. E.S.T.	AMOUNT OF SURETY (if required) - None -	DATE ISSUED April 4, 2016
COMMODITY CLASS/SUBCLASS AND DESCRIPTION			PRE-PROPOSAL SITE VISIT: 4/15/16 at SCSU	
CONTACT: Sharon Kromas		E-MAIL: kromass@ct.edu		
FOR Board of Regents for Higher Education			CONTRACT PERIOD: To be determined	

REQUEST FOR PROPOSAL

Pursuant to the provisions of Sections 10a-151b and 4-217 of the General Statutes of Connecticut as amended. SEALED PROPOSALS WILL BE RECEIVED by the Finance Department of the Board of Regents for Higher Education, for furnishing the services herein listed.

AFFIRMATION OF PROPOSER

The undersigned affirms and declares:

1. That this proposal is executed and signed with full knowledge and acceptance of the provisions of the laws of the State of Connecticut, and the terms and conditions listed herein.
2. That should any part of this proposal be accepted in writing by the Board within one hundred twenty (120) calendar days from the date of opening unless an earlier date for acceptance is specified in proposal schedule, said proposer will furnish and deliver the commodities and / or services for which this proposal is made, at the rates offered and fee schedule proposed, and in compliance with the provisions listed herein. Should award of any part of this proposal be delayed beyond the period of one hundred twenty (120) days or an earlier date specified in proposal schedule, such award shall be conditioned upon proposer's acceptance.

PROPOSAL. The undersigned, accepting the conditions set forth herein, hereby agrees in strict accordance therewith, to furnish and deliver the services to the state agency or state agencies named in the proposal at the prices proposed therein.

SIGNATURE WHEN PROPOSER IS AN INDIVIDUAL	TYPE OR PRINT NAME OF INDIVIDUAL		DOING BUSINESS AS (Trade Name)				
	BUSINESS ADDRESS	STREET	CITY	STATE	ZIP CODE		
	WRITTEN SIGNATURE OF INDIVIDUAL SIGNING THIS PROPOSAL		SOCIAL SECURITY NUMBER		DATE EXECUTED		
	TYPEWRITTEN NAME			TELEPHONE NUMBER			
SIGNATURE WHEN PROPOSER IS A FIRM	NAME (Type or print names of all partners)		TITLE	NAME		TITLE	
	NAME		TITLE	NAME		TITLE	
	DOING BUSINESS AS (Trade Name)		BUSINESS ADDRESS	STREET	CITY	STATE	ZIP CODE
	WRITTEN SIGNATURE OF PARTNER SIGNING THIS PROPOSAL		F.E.I. NUMBER		DATE EXECUTED		
	TYPEWRITTEN NAME			TELEPHONE NUMBER			
SIGNATURE WHEN PROPOSER IS A CORPORATION	FULL NAME OF CORPORATION				INCORPORATED IN WHAT STATE		
	BUSINESS ADDRESS		STREET	CITY	STATE	ZIP CODE	
	PRESIDENT		SECRETARY		TREASURER		
	WRITTEN SIGNATURE OF CORPORATE OFFICIAL OR PERSON DULY AUTHORIZED TO SIGN PROPOSALS ON BEHALF OF THE ABOVE CORPORATION				TITLE		
	TYPEWRITTEN NAME			TELEPHONE NUMBER		DATE EXECUTED	
FOR ALL PROPOSERS	NAME AND TITLE OF INDIVIDUAL TO CONTACT CONCERNING THE PROPOSAL			E-MAIL		TELEPHONE	



STATE OF CONNECTICUT
GIFT AND CAMPAIGN CONTRIBUTION CERTIFICATION

Written or electronic certification to accompany a State contract with a value of \$50,000 or more, pursuant to C.G.S. §§ 4-250, 4-252(c) and 9-612(f)(2) and Governor Dannel P. Malloy's Executive Order 49.

INSTRUCTIONS:

Complete all sections of the form. Attach additional pages, if necessary, to provide full disclosure about any lawful campaign contributions made to campaigns of candidates for statewide public office or the General Assembly, as described herein. Sign and date the form, under oath, in the presence of a Commissioner of the Superior Court or Notary Public. Submit the completed form to the awarding State agency at the time of initial contract execution and if there is a change in the information contained in the most recently filed certification, such person shall submit an updated certification either (i) not later than thirty (30) days after the effective date of such change or (ii) upon the submittal of any new bid or proposal for a contract, whichever is earlier. Such person shall also submit an accurate, updated certification not later than fourteen days after the twelve-month anniversary of the most recently filed certification or updated certification.

CHECK ONE: Initial Certification 12 Month Anniversary Update (Multi-year contracts only.)
 Updated Certification because of change of information contained in the most recently filed certification or twelve-month anniversary update.

GIFT CERTIFICATION:

As used in this certification, the following terms have the meaning set forth below:

- 1) "Contract" means that contract between the State of Connecticut (and/or one or more of its agencies or instrumentalities) and the Contractor, attached hereto, or as otherwise described by the awarding State agency below;
- 2) If this is an Initial Certification, "Execution Date" means the date the Contract is fully executed by, and becomes effective between, the parties; if this is a twelve-month anniversary update, "Execution Date" means the date this certification is signed by the Contractor;
- 3) "Contractor" means the person, firm or corporation named as the contractor below;
- 4) "Applicable Public Official or State Employee" means any public official or state employee described in C.G.S. §4-252(c)(1)(i) or (ii);
- 5) "**Gift**" has the same meaning given that term in C.G.S. § 4-250(1);
- 6) "Principals or Key Personnel" means and refers to those principals and key personnel of the Contractor, and its or their agents, as described in C.G.S. §§ 4-250(5) and 4-252(c)(1)(B) and (C).

I, the undersigned, am a Principal or Key Personnel of the person, firm or corporation authorized to execute this certification on behalf of the Contractor. I hereby certify that, no gifts were made by (A) such person, firm, corporation, (B) any principals and key personnel of the person firm or corporation who participate substantially in preparing bids, proposals or negotiating state contracts or (C) any agent of such, firm, corporation, or principals or key personnel who participates substantially in preparing bids, proposals or negotiating state contracts, to (i) any public official or state employee of the state agency or quasi-public agency soliciting bids or proposals for state contracts who participates substantially in the preparation of bid solicitations or request for proposals for state contracts or the negotiation or award of state contracts or (ii) any public official or state employee of any other state agency, who has supervisory or appointing authority over such state agency or quasi-public agency.

I further certify that no Principals or Key Personnel know of any action by the Contractor to circumvent (or which would result in the circumvention of) the above certification regarding **Gifts** by providing for any other Principals, Key Personnel, officials, or employees of the Contractor, or its or their agents, to make a **Gift** to any Applicable Public Official or State Employee. I further certify that the Contractor made the bid or proposal for the Contract without fraud or collusion with any person.

CAMPAIGN CONTRIBUTION CERTIFICATION:

I further certify that, on or after January 1, 2011, neither the Contractor nor any of its principals, as defined in C.G.S. § 9-612(f)(1), has made any **campaign contributions** to, or solicited any contributions on behalf of, any exploratory committee, candidate committee, political committee, or party committee established by, or supporting or authorized to support, any candidate for statewide public office, in violation of C.G.S. § 9-612(f)(2)(A). I further certify that **all lawful campaign contributions** that have been made on or after January 1, 2011 by the Contractor or any of its principals, as defined in C.G.S. § 9-612(f)(1), to, or solicited on behalf of, any exploratory committee, candidate committee, political committee, or party committee established by, or supporting or authorized to support any candidates for statewide public office or the General Assembly, are listed below:

Lawful Campaign Contributions to Candidates for Statewide Public Office:

<u>Contribution Date</u>	<u>Name of Contributor</u>	<u>Recipient</u>	<u>Value</u>	<u>Description</u>

Lawful Campaign Contributions to Candidates for the General Assembly:

<u>Contribution Date</u>	<u>Name of Contributor</u>	<u>Recipient</u>	<u>Value</u>	<u>Description</u>

Sworn as true to the best of my knowledge and belief, subject to the penalties of false statement.

Printed Contractor Name

Printed Name of Authorized Official

Signature of Authorized Official

Subscribed and acknowledged before me this _____ day of _____, 20____.

Commissioner of the Superior Court (or Notary Public)

My Commission Expires



STATE OF CONNECTICUT
CONSULTING AGREEMENT AFFIDAVIT

Affidavit to accompany a bid or proposal for the purchase of goods and services with a value of \$50,000 or more in a calendar or fiscal year, pursuant to Connecticut General Statutes §§ 4a-81(a) and 4a-81(b). For sole source or no bid contracts the form is submitted at time of contract execution.

INSTRUCTIONS:

If the bidder or vendor has entered into a consulting agreement, as defined by Connecticut General Statutes § 4a-81(b)(1): Complete all sections of the form. If the bidder or contractor has entered into more than one such consulting agreement, use a separate form for each agreement. Sign and date the form in the presence of a Commissioner of the Superior Court or Notary Public. If the bidder or contractor has not entered into a consulting agreement, as defined by Connecticut General Statutes § 4a-81(b)(1): Complete only the shaded section of the form. Sign and date the form in the presence of a Commissioner of the Superior Court or Notary Public.

Submit completed form to the awarding State agency with bid or proposal. For a sole source award, submit completed form to the awarding State agency at the time of contract execution.

This affidavit must be amended if there is any change in the information contained in the most recently filed affidavit not later than (i) thirty days after the effective date of any such change or (ii) upon the submittal of any new bid or proposal, whichever is earlier.

AFFIDAVIT: [Number of Affidavits Sworn and Subscribed On This Day: ____]

I, the undersigned, hereby swear that I am a principal or key personnel of the bidder or contractor awarded a contract, as described in Connecticut General Statutes § 4a-81(b), or that I am the individual awarded such a contract who is authorized to execute such contract. I further swear that I have not entered into any consulting agreement in connection with such contract, except for the agreement listed below:

Form fields for Consultant's Name and Title, Name of Firm (if applicable), Start Date, End Date, Cost, and Description of Services Provided.

Is the consultant a former State employee or former public official? [] YES [] NO

If YES: Name of Former State Agency, Termination Date of Employment

Sworn as true to the best of my knowledge and belief, subject to the penalties of false statement.

Form fields for Printed Name of Bidder or Contractor, Signature of Principal or Key Personnel, Date, Printed Name (of above), and Awarding State Agency.

Sworn and subscribed before me on this ____ day of ____, 20__.

Commissioner of the Superior Court or Notary Public



STATE OF CONNECTICUT
AFFIRMATION OF RECEIPT OF STATE ETHICS LAWS SUMMARY

Written or electronic affirmation to accompany a large State construction or procurement contract, having a cost of more than \$500,000, pursuant to Connecticut General Statutes §§ 1-101mm and 1-101qq

INSTRUCTIONS:

Complete all sections of the form. Submit completed form to the awarding State agency or contractor, as directed below.

CHECK ONE:

- I am a person seeking a large State construction or procurement contract. I am submitting this affirmation to the awarding State agency with my bid or proposal. [Check this box if the contract will be awarded through a competitive process.]
I am a contractor who has been awarded a large State construction or procurement contract. I am submitting this affirmation to the awarding State agency at the time of contract execution. [Check this box if the contract was a sole source award.]
I am a subcontractor or consultant of a contractor who has been awarded a large State construction or procurement contract. I am submitting this affirmation to the contractor.
I am a contractor who has already filed an affirmation, but I am updating such affirmation either (i) no later than thirty (30) days after the effective date of any such change or (ii) upon the submittal of any new bid or proposal, whichever is earlier.

IMPORTANT NOTE:

Within fifteen (15) days after the request of such agency, institution or quasi-public agency for such affirmation contractors shall submit the affirmations of their subcontractors and consultants to the awarding State agency. Failure to submit such affirmations in a timely manner shall be cause for termination of the large State construction or procurement contract.

AFFIRMATION:

I, the undersigned person, contractor, subcontractor, consultant, or the duly authorized representative thereof, affirm (1) receipt of the summary of State ethics laws* developed by the Office of State Ethics pursuant to Connecticut General Statutes § 1-81b and (2) that key employees of such person, contractor, subcontractor, or consultant have read and understand the summary and agree to comply with its provisions.

* The summary of State ethics laws is available on the State of Connecticut's Office of State Ethics website.

Signature

Date

Printed Name

Title

Firm or Corporation (if applicable)

Street Address

City

State

Zip

Awarding State Agency



STATE OF CONNECTICUT

an or electronic PDF copy of the written certification to accompany a large state contract pursuant to P.A. 13-162 (Prohibiting State Contracts With Entities Making Certain Investments In Iran)

Respondent Name: _____

INSTRUCTIONS:

CHECK ONE: Initial Certification.
 Amendment or renewal.

A. Who must complete and submit this form. Effective October 1, 2013, this form must be submitted for any large state contract, as defined in section 4-250 of the Connecticut General Statutes. This form must always be submitted with the bid or proposal, or if there was no bid process, with the resulting contract, regardless of where the principal place of business is located.

Pursuant to P.A. No. 13-162, upon submission of a bid or prior to executing a large state contract, **the certification portion of this form must be completed** by any corporation, general partnership, limited partnership, limited liability partnership, joint venture, nonprofit organization or other business organization **whose principal place of business is located outside of the United States**. United States subsidiaries of foreign corporations are exempt. For purposes of this form, a "foreign corporation" is one that is organized and incorporated outside the United States of America.

Check applicable box:

- Respondent's principal place of business is within the United States or Respondent is a United States subsidiary of a foreign corporation. Respondents who check this box **are not required to complete the certification portion of this form**, but must submit this form with its Invitation to Bid ("ITB"), Request for Proposal ("RFP") or contract package if there was no bid process.
- Respondent's principal place of business is outside the United States and it is not a United States subsidiary of a foreign corporation. **CERTIFICATION required.** Please complete the certification portion of this form and submit it with the ITB or RFP response or contract package if there was no bid process.

B. Additional definitions.

- 1) "Large state contract" has the same meaning as defined in section 4–250 of the Connecticut General Statutes;
- 2) "Respondent" means the person whose name is set forth at the beginning of this form; and
- 3) "State agency" and "quasi-public agency" have the same meanings as provided in section 1–79 of the Connecticut General Statutes.

C. Certification requirements.

No state agency or quasi-public agency shall enter into any large state contract, or amend or renew any such contract with any Respondent whose principal place of business is located outside the United States and is not a United States subsidiary of a foreign corporation unless the Respondent has submitted this certification.

Complete all sections of this certification and sign and date it, under oath, in the presence of a Commissioner of the Superior Court, a Notary Public or a person authorized to take an oath in another state.

CERTIFICATION:

I, the undersigned, am the official authorized to execute contracts on behalf of the Respondent. I certify that:

- Respondent has made no direct investments of twenty million dollars or more in the energy sector of Iran on or after October 1, 2013, as described in Section 202 of the Comprehensive Iran Sanctions, Accountability and Divestment Act of 2010.
- Respondent has either made direct investments of twenty million dollars or more in the energy sector of Iran on or after October 1, 2013, as described in Section 202 of the Comprehensive Iran Sanctions, Accountability and Divestment Act of 2010, or Respondent made such an investment prior to October 1, 2013 and has now increased or renewed such an investment on or after said date, or both.

Sworn as true to the best of my knowledge and belief, subject to the penalties of false statement.

Printed Respondent Name

Printed Name of Authorized Official

Signature of Authorized Official

Subscribed and acknowledged before me this _____ day of _____, 20____.

Commissioner of the Superior Court (or Notary Public)

My Commission Expires

**COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS**

(Revised 09/3/15)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” “Minority business enterprise” is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: “(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n.” “Minority” groups are defined in Section 32-9n of the Connecticut General Statutes as “(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . .” An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder’s qualifications under the contract compliance requirements:

- (a) the bidder’s success in implementing an affirmative action plan;
- (b) the bidder’s success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the bidder’s promise to develop and implement a successful affirmative action plan;
- (d) the bidder’s submission of employment statistics contained in the “Employment Information Form”, indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder’s good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) Definition of Small Contractor

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding ten million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

2) Description of Job Categories (as used in Part IV Bidder Employment Information) (Page 2)

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

3) Definition of Racial and Ethnic Terms (as used in Part IV Bidder Employment Information) (Page 3)

<p><u>White</u> (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.</p> <p><u>Black</u>(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa.</p> <p><u>Hispanic</u>- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.</p>	<p><u>Asian or Pacific Islander</u>- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa.</p> <p><u>American Indian or Alaskan Native</u>- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.</p>
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BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

<p>Company Name Street Address City & State Chief Executive</p>	<p>Bidder Federal Employer Identification Number _____ Or Social Security Number _____</p>
<p>Major Business Activity (brief description)</p>	<p>Bidder Identification (response optional/definitions on page 1)</p> <p>-Bidder is a small contractor. Yes__ No__ -Bidder is a minority business enterprise Yes__ No__ (If yes, check ownership category) Black__ Hispanic__ Asian American__ American Indian/Alaskan Native__ Iberian Peninsula__ Individual(s) with a Physical Disability__ Female__</p>
<p>Bidder Parent Company (If any)</p>	<p>- Bidder is certified as above by State of CT Yes__ No__</p>
<p>Other Locations in Ct. (If any)</p>	

PART II - Bidder Nondiscrimination Policies and Procedures

<p>1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes__ No__</p>	<p>7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes__ No__</p>
<p>2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes__ No__</p>	<p>8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes__ No__</p>
<p>3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes__ No__</p>	<p>9. Does your company have a mandatory retirement age for all employees? Yes__ No__</p>
<p>4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes__ No__</p>	<p>10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes__ No__ NA__</p>
<p>5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes__ No__</p>	<p>11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes__ No__ NA__</p>
<p>6. Does your company have a collective bargaining agreement with workers? Yes__ No__</p> <p>6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes__ No__</p> <p>6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes__ No__</p>	<p>12. Does your company have a written affirmative action Plan? Yes__ No__ If no, please explain.</p> <p>13. Is there a person in your company who is responsible for equal employment opportunity? Yes__ No__ If yes, give name and phone number. _____ _____</p>

Part III - Bidder Subcontracting Practices

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above?

Yes__ No__

PART IV - Bidder Employment Information

Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg' Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation, Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

PART V - Bidder Hiring and Recruitment Practices

(Page 5)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)		3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source			
State Employment Service					Work Experience	
Private Employment Agencies					Ability to Speak or Write English	
Schools and Colleges					Written Tests	
Newspaper Advertisement					High School Diploma	
Walk Ins					College Degree	
Present Employees					Union Membership	
Labor Organizations					Personal Recommendation	
Minority/Community Organizations					Height or Weight	
Others (please identify)					Car Ownership	
					Arrest Record	
					Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)
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1. Professional Standards:

In rendering services under this contract, the Contractor shall conform to high professional standards of work and business ethic. The Contractor warrants that the services shall be performed: 1) in a professional and workmanlike manner; and 2) in accordance with generally and currently accepted principles and practices. During the term of this contract, the Contractor agrees to provide to the College in a good and faithful manner, using its best efforts and in a manner that shall promote the interests of said College, such services as the College requests, provided in this contract.

2. Quality Surveillance, Examination of Records and Inspection of Work:

Pursuant to C.G.S. §§ 4e-29 and 4e-30, all services performed by the Contractor and all records pertaining to this contract shall be subject to the inspection and approval of the State and the State Contracting Agency at reasonable times.

3. Assignment:

This contract shall not be assigned by either party without the express prior written consent of the other.

4. Confidential Information

(a) The Contractor acknowledges that it may have access to Confidential Information (as hereinafter defined). The Contractor agrees that it will use the Confidential Information solely for the purpose of performing its duties as a consultant and agrees that it will not divulge, furnish, publish or use for its own benefit or for the direct or indirect benefit of any other person or entity, whether or not for monetary gain, any Confidential Information.

(b) For purposes of this Agreement, the term "Confidential Information" shall mean (i) all information related to the business operations, marketing plans, financial position and (ii) other business information and any other information disclosed to the Contractor. Confidential Information shall not include information which (i) is or becomes part of the public domain through no act or omission attributable to the Contractor, (ii) is released after prior written authorization or (iii) the Contractor receives from any third party who is unrelated to it and who is not under any obligation to maintain the confidentiality of such information.

5. Family Educational Rights and Privacy Act (FERPA):

In all respects, Contractor shall comply with the provisions of the Family Educational Rights and Privacy Act (FERPA). For purposes of this contract, FERPA includes any amendments or other relevant provisions of federal law, as well as all requirements of Chapter 99 of Title 34 of the Code of Federal Regulations, as amended from time to time. Nothing in this agreement may be construed to allow Contractor to maintain, use, disclose or share student information in a manner not allowed by federal law or regulation or by this contract. Contractor agrees that it shall not provide any student information obtained under this contract to any party ineligible to receive data protected by FERPA. This section shall survive the termination, cancellation or expiration of the contract.

6. Claims Against The State:

The Contractor agrees that the sole and exclusive means for the presentation of any claim against the State arising from this Agreement shall be in accordance with Chapter 53 of the Connecticut General Statutes (Claims Against the State) and the Contractor further agrees not to initiate legal proceedings in any state or federal court in addition to, or in lieu of, said Chapter 53 proceedings.

7. Indemnification and Insurance:

(a) The Contractor shall indemnify, defend and hold harmless the State and its officers, representatives, agents, servants, employees, successors and assigns from and against any and all (1) claims arising, directly or indirectly, in connection with the Contract, including the acts of commission or omission (collectively, the "Acts") of the Contractor or contractor parties; and (2) liabilities, damages, losses, costs and expenses, including but not limited to, attorneys' and other professionals' fees, arising, directly or indirectly, in connection with claims, Acts or the contract. The Contractor shall use counsel reasonably acceptable to the State in carrying out its obligations under this section. The Contractor's obligations under this section to indemnify, defend and hold harmless against claims includes claims concerning confidentiality of any part of or all of the Contractor's bid, proposal or any records, any intellectual property rights, other proprietary rights of any person or entity, copyrighted or uncopyrighted compositions, secret processes, patented or unpatented inventions, articles or appliances furnished or used in the performance.

- (b) The Contractor shall not be responsible for indemnifying or holding the State harmless from any liability arising due to the negligence of the State or any third party acting under the direct control or supervision of the State.
- (c) The Contractor shall reimburse the State for any and all damages to the real or personal property of the State caused by the Acts of the Contractor or any contractor parties. The State shall give the Contractor reasonable notice of any such claims.
- (d) The Contractor's duties under this section shall remain fully in effect and binding in accordance with the terms and conditions of the Contract, without being lessened or compromised in any way, even where the Contractor is alleged or is found to have merely contributed in part to the Acts giving rise to the claims and/or where the State is alleged or is found to have contributed to the Acts giving rise to the claims.
- (e) The Contractor shall carry and maintain at all times during the term of the Contract, and during the time that any provisions survive the term of the Contract, sufficient general liability insurance to satisfy its obligations under this Contract. The Contractor shall cause the State to be named as an additional insured on the policy and shall provide (1) a certificate of insurance, (2) the declaration page and (3) the additional insured endorsement to the policy to the Client Agency prior to the Effective Date of the Contract evidencing that the State is an additional insured. The Contractor shall not begin Performance until the delivery of these 3 documents to the Client Agency. State shall be entitled to recover under the insurance policy even if a body of competent jurisdiction determines that State is contributorily negligent.
- (f) This section shall survive the termination of the contract and shall not be limited by reason of any insurance coverage.

8. Sovereign Immunity:

The parties acknowledge and agree that nothing in this Contract shall be construed as a modification, compromise or waiver by the State of any rights or defenses of any immunities provided by Federal law or the laws of the State of Connecticut to the State or any of its officers and employees, which they may have had, now have or will have with respect to all matters arising out of this Contract. To the extent that this section conflicts with any other section, this section shall govern.

9. Contracting with State Employees or Related Family/Business:

Section 1-84 (i) of the Connecticut General Statutes prohibits the College to engage in contracts over \$100 with State employees and certain related family or businesses as defined by Sections 1-79 (b) and (f), unless awarded through an open and public process. Contractor has disclosed to State whether it is an employee, related family member or associated business as defined by the statute. The Contractor and State each represent that they have fully complied with all applicable requirements of this statute, which is set forth below (emphasis added), or as it may be amended from time to time:

C.G.S. § 1-84 (i) No public official or state employee or member of the official or employee's immediate family or a business with which he is associated shall enter into any contract with the state, valued at one hundred dollars or more, other than a contract of employment as a state employee, or a contract with a public institution of higher education to support a collaboration with such institution to develop and commercialize any invention or discovery, or pursuant to a court appointment, unless the contract has been awarded through an open and public process, including prior public offer and subsequent public disclosure of all proposals considered and the contract awarded. In no event shall an executive head of an agency, as defined in section 4-166, including a commissioner of a department, or an executive head of a quasi-public agency, as defined in section 1-79, or the executive head's immediate family or a business with which he is associated enter into any contract with that agency or quasi-public agency. Nothing in this subsection shall be construed as applying to any public official who is appointed as a member of the executive branch or as a member or director of a quasi-public agency and who receives no compensation other than per diem payments or reimbursement for actual or necessary expenses, or both, incurred in the performance of the public official's duties unless such public official has authority or control over the subject matter of the contract. Any contract made in violation of this subsection shall be voidable by a court of competent jurisdiction if the suit is commenced not later than one hundred eighty days after the making of the contract.

C.G.S. § 1-79 (b) provides: "Business with which he is associated" means any sole proprietorship, partnership, firm, corporation, trust or other entity through which business for profit or not for profit is conducted in which the public official or state employee or member of his immediate family is a director, officer, owner, limited or general partner, beneficiary of a trust or holder of stock constituting five per cent or more of the total outstanding stock of any class, provided, a public official or state employee, or member of his immediate family, shall not be deemed to be associated with a not for profit entity solely by virtue of the fact that the public official or state employee or member of his

immediate family is an unpaid director or officer of the not for profit entity. "Officer" refers only to the president, executive or senior vice president or treasurer of such business.

C.G.S. 1-79 (f) provides: "Immediate family" means any spouse, children or dependent relatives who reside in the individual's household.

10. Forum and Choice of Law:

The parties deem the Contract to have been made in the City of Hartford, State of Connecticut. Both parties agree that it is fair and reasonable for the validity and construction of the contract to be, and it shall be, governed by the laws and court decisions of the State of Connecticut, without giving effect to its principles of conflicts of laws. To the extent that any immunities provided by Federal law or the laws of the State of Connecticut do not bar an action against the State, and to the extent that these courts are courts of competent jurisdiction, for the purpose of venue, the complaint shall be made returnable to the Judicial District of Hartford only or shall be brought in the United States District Court for the District of Connecticut only, and shall not be transferred to any other court, provided, however, that nothing here constitutes a waiver or compromise of the sovereign immunity of the State of Connecticut. The Contractor waives any objection which it may now have or will have to the laying of venue of any claims in any forum and further irrevocably submits to such jurisdiction in any suit, action or proceeding.

11. Termination:

- (a) Notwithstanding any provisions in this contract, the College, through a duly authorized employee, may terminate the contract whenever the College makes a written determination that such termination is in the best interests of the State. The College shall notify the Contractor in writing of termination pursuant to this section, which notice shall specify the effective date of termination and the extent to which the Contractor must complete its performance under the contract prior to such date.
- (b) Notwithstanding any provisions in this contract, the College, through a duly authorized employee, may, after making a written determination that the Contractor has breached the contract, terminate the contract in accordance with the following breach provision.
 - i. Breach. If either party breaches the contract in any respect, the non-breaching party shall provide written notice of the breach to the breaching party and afford the breaching party an opportunity to cure within ten (10) days from the date that the breaching party receives the notice. In the case of a Contractor breach, any other time period which the College sets forth in the notice shall trump the ten (10) days. The right to cure period shall be extended if the non-breaching party is satisfied that the breaching party is making a good faith effort to cure but the nature of the breach is such that it cannot be cured within the right to cure period. The notice may include an effective contract termination date if the breach is not cured by the stated date and, unless otherwise modified by the non-breaching party in writing prior to the termination date, no further action shall be required of any party to effect the termination as of the stated date. If the notice does not set forth an effective contract termination date, then the non-breaching party may terminate the contract by giving the breaching party no less than twenty four (24) hours' prior written notice. If the College believes that the Contractor has not performed according to the contract, the College may withhold payment in whole or in part pending resolution of the performance issue, provided that the College notifies the Contractor in writing prior to the date that the payment would have been due.
- (c) The College shall send the notice of termination via certified mail, return receipt requested, to the Contractor at the most current address which the Contractor has furnished to the College for purposes of correspondence, or by hand delivery. Upon receiving the notice from the College, the Contractor shall immediately discontinue all services affected in accordance with the notice, undertake all College all records. The records are deemed to be the property of the College and the Contractor shall deliver them to the College no later than thirty (30) days after the termination of the contract or fifteen (15) days after the Contractor receives a written request from the College for the records. The Contractor shall deliver those records that exist in electronic, magnetic or other intangible form in a non-proprietary format, such as, but not limited to, ASCII or .TXT.
- (d) Upon receipt of a written notice of termination from the College, the Contractor shall cease operations as the College directs in the notice, and take all actions that are necessary or appropriate, or that the College may reasonably direct, for the protection, and preservation of the goods and any other property. Except for any work which the College directs the Contractor to perform in the notice prior to the effective date of termination, and except as otherwise provided in the notice, the Contractor shall terminate or conclude all existing subcontracts and purchase orders and shall not enter into any further subcontracts, purchase orders or commitments.
- (e) The College shall, within forty-five (45) days of the effective date of termination, reimburse the Contractor for its performance rendered and accepted by the College in accordance with the terms of this contract, in addition to all actual and reasonable costs incurred after termination in completing those portions of the performance which

the notice required the Contractor to complete. However, the Contractor is not entitled to receive and the College is not obligated to tender to the Contractor any payments for anticipated or lost profits. Upon request by the College, the Contractor shall assign to the College, or any replacement Contractor which the College designates, all subcontracts, purchase orders and other commitments, deliver to the College all records and other information pertaining to its performance, and remove from State premises, whether leased or owned, all of Contractor's property, equipment, waste material and rubbish related to its performance, all as the College may request.

- (f) For breach or violation of any of the provisions in the section concerning representations and warranties, the College may terminate the contract in accordance with its terms and revoke any consents to assignments given as if the assignments had never been requested or consented to, without liability to the Contractor or Contractor parties or any third party.
- (g) Upon termination of the contract, all rights and obligations shall be null and void, so that no party shall have any further rights or obligations to any other party, except with respect to the sections which survive termination. All representations, warranties, agreements and rights of the parties under the contract shall survive such termination to the extent not otherwise limited in the contract and without each one of them having to be specifically mentioned in the contract.
- (h) Termination of the contract pursuant to this section shall not be deemed to be a breach of contract by the College.

12. Entire Agreement:

This written contract shall constitute the entire agreement between the parties and no other terms and conditions in any document, acceptance or acknowledgment shall be effective or binding unless expressly agreed to in writing by College. This contract may not be changed other than by a formal written contract amendment signed by the parties hereto and approved by the Connecticut Attorney General.

13. Nondiscrimination:

(a) For purposes of this Section, the following terms are defined as follows:

- i. "Commission" means the Commission on Human Rights and Opportunities;
- ii. "Contract" and "contract" include any extension or modification of the Contract or contract;
- iii. "Contractor" and "contractor" include any successors or assigns of the Contractor or contractor;
- iv. "Gender identity or expression" means a person's gender-related identity, appearance or behavior, whether or not that gender-related identity, appearance or behavior is different from that traditionally associated with the person's physiology or assigned sex at birth, which gender-related identity can be shown by providing evidence including, but not limited to, medical history, care or treatment of the gender-related identity, consistent and uniform assertion of the gender-related identity or any other evidence that the gender-related identity is sincerely held, part of a person's core identity or not being asserted for an improper purpose;
- v. "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations;
- vi. "good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements;
- vii. "marital status" means being single, married as recognized by the state of Connecticut, widowed, separated or divorced;
- viii. "mental disability" means one or more mental disorders, as defined in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders", or a record of or regarding a person as having one or more such disorders;
- ix. "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in subsection (a) of Connecticut General Statutes § 32-9n; and
- x. "public works contract" means any agreement between any individual, firm or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the State, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

For purposes of this Section, the terms “Contract” and “contract” do not include a contract where each contractor is (1) a political subdivision of the state, including, but not limited to, a municipality, (2) a quasi-public agency, as defined in Conn. Gen. Stat. Section 1-120, (3) any other state, including but not limited to any federally recognized Indian tribal governments, as defined in Conn. Gen. Stat. Section 1-267, (4) the federal government, (5) a foreign government, or (6) an agency of a subdivision, agency, state or government described in the immediately preceding enumerated items (1), (2), (3), (4) or (5).

- (b) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut; and the Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by the Contractor that such disability prevents performance of the work involved; (2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an “affirmative action-equal opportunity employer” in accordance with regulations adopted by the Commission; (3) the Contractor agrees to provide each labor union or representative of workers with which the Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which the Contractor has a contract or understanding, a notice to be provided by the Commission, advising the labor union or workers’ representative of the Contractor’s commitments under this section and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor agrees to comply with each provision of this Section and Connecticut General Statutes §§ 46a-68e and 46a-68f and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes §§ 46a-56, 46a-68e and 46a-68f; and (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this Section and Connecticut General Statutes § 46a-56. If the contract is a public works contract, the Contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works projects.
- (c) Determination of the Contractor’s good faith efforts shall include, but shall not be limited to, the following factors: The Contractor’s employment and subcontracting policies, patterns and practices; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.
- (d) The Contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission, of its good faith efforts.
- (e) The Contractor shall include the provisions of subsection (b) of this Section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes § 46a-56; provided if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

- (f) The Contractor agrees to comply with the regulations referred to in this Section as they exist on the date of this Contract and as they may be adopted or amended from time to time during the term of this Contract and any amendments thereto.
- (g) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the laws of the United States or the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation; (2) the Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (3) the Contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes § 46a-56; and (4) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor which relate to the provisions of this Section and Connecticut General Statutes § 46a-56.
- (h) The Contractor shall include the provisions of the foregoing paragraph in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes § 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

14. Executive Orders:

The Contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill, promulgated June 16, 1971, concerning labor employment practices, Executive Order No. Seventeen of Governor Thomas J. Meskill, promulgated February 15, 1973, concerning the listing of employment openings and Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a part of the Contract as if they had been fully set forth in it. The Contract may also be subject to Executive Order No. 14 of Governor M. Jodi Rell, promulgated April 17, 2006, concerning procurement of cleaning products and services and to Executive Order No. 49 of Governor Dannel P. Malloy, promulgated May 22, 2015, mandating disclosure of certain gifts to public employees and contributions to certain candidates for office. If Executive Order 14 and/or Executive Order 49 are applicable, they are deemed to be incorporated into and are made a part of the Contract as if they had been fully set forth in it. At the Contractor's request, CSCU shall provide a copy of these orders to the Contractor

15. SEEC:

For all state contracts as defined in Connecticut General Statutes §9-612(g)(2), as amended by P.A. 10-1 having a value in a calendar year of \$50,000 or more or a combination or series of such agreements or contracts having a value of \$100,000 or more, the authorized signatory to this Agreement expressly acknowledges receipt of the State Election Enforcement Commission's notice advising state contractors of state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice. See Notice below.

NOTICE TO EXECUTIVE BRANCH STATE CONTRACTORS AND PROSPECTIVE STATE CONTRACTORS OF CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

This notice is provided under the authority of Connecticut General Statutes §9-612(g)(2), as amended by P.A. 10-1, and is for the purpose of informing state contractors and prospective state contractors of the following law (italicized words are defined below):

CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

No *state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor*, with regard to a *state contract* or *state contract solicitation* with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee (which includes town committees).

In addition, no holder or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of State senator or State representative, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

On and after January 1, 2011, no state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a state contract or state contract solicitation with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall **knowingly solicit** contributions from the state contractor's or prospective state contractor's employees or from a *subcontractor* or *principals of the subcontractor* on behalf of (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

DUTY TO INFORM

State contractors and prospective state contractors are required to inform their principals of the above prohibitions, as applicable, and the possible penalties and other consequences of any violation thereof.

PENALTIES FOR VIOLATIONS

Contributions or solicitations of contributions made in violation of the above prohibitions may result in the following civil and criminal penalties:

Civil penalties: Up to \$2,000 or twice the amount of the prohibited contribution, whichever is greater, against a principal or a contractor. Any state contractor or prospective state contractor which fails to make reasonable efforts to comply with the provisions requiring notice to its principals of these prohibitions and the possible consequences of their violations may also be subject to civil penalties of up to \$2,000 or twice the amount of the prohibited contributions made by their principals.

Criminal penalties: Any knowing and willful violation of the prohibition is a Class D felony, which may subject the violator to imprisonment of not more than 5 years, or not more than \$5,000 in fines, or both.

CONTRACT CONSEQUENCES

In the case of a state contractor, contributions made or solicited in violation of the above prohibitions may result in the contract being voided.

In the case of a prospective state contractor, contributions made or solicited in violation of the above prohibitions shall result in the contract described in the state contract solicitation not being awarded to the prospective state contractor, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

The State shall not award any other state contract to anyone found in violation of the above prohibitions for a period of one year after the election for which such contribution is made or solicited, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

Additional information may be found on the website of the State Elections Enforcement Commission, www.ct.gov/seec. Click on the link to “Lobbyist/Contractor Limitations.”

DEFINITIONS

“State contractor” means a person, business entity or nonprofit organization that enters into a state contract. Such person, business entity or nonprofit organization shall be deemed to be a state contractor until December thirty-first of the year in which such contract terminates. “State contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person’s capacity as a state or quasi-public agency employee.

“Prospective state contractor” means a person, business entity or nonprofit organization that (i) submits a response to a state contract solicitation by the state, a state agency or a quasi-public agency, or a proposal in response to a request for proposals by the state, a state agency or a quasi-public agency, until the contract has been entered into, or (ii) holds a valid prequalification certificate issued by the Commissioner of Administrative Services under section 4a-100. “Prospective state contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person’s capacity as a state or quasi-public agency employee.

“Principal of a state contractor or prospective state contractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a state contractor or prospective state contractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a state contractor or prospective state contractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a state contractor or prospective state contractor, which is not a business entity, or if a state contractor or prospective state contractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any state contractor or prospective state contractor who has *managerial or discretionary responsibilities with respect to a state contract*, (v) the spouse or a *dependent child* who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the state contractor or prospective state contractor.

“State contract” means an agreement or contract with the state or any state agency or any quasi-public agency, let through a procurement process or otherwise, having a value of fifty thousand dollars or more, or a combination or series of such agreements or contracts having a value of one hundred thousand dollars or more in a calendar year, for (i) the rendition of services, (ii) the furnishing of any goods, material, supplies, equipment or any items of any kind, (iii) the construction, alteration or repair of any public building or public work, (iv) the acquisition, sale or lease of any land or building, (v) a licensing arrangement, or (vi) a grant, loan or loan guarantee. “State contract” does not include any agreement or contract with the state, any state agency or any quasi-public agency that is exclusively federally funded, an education loan, a loan to an individual for other than commercial purposes or any agreement or contract between the state or any state agency and the United States Department of the Navy or the United States Department of Defense.

“State contract solicitation” means a request by a state agency or quasi-public agency, in whatever form issued, including, but not limited to, an invitation to bid, request for proposals, request for information or request for quotes, inviting bids, quotes or other types of submittals, through a competitive procurement process or another process authorized by law waiving competitive procurement.

“Managerial or discretionary responsibilities with respect to a state contract” means having direct, extensive and substantive responsibilities with respect to the negotiation of the state contract and not peripheral, clerical or ministerial responsibilities.

“Dependent child” means a child residing in an individual’s household who may legally be claimed as a dependent on the federal income tax of such individual.

“Solicit” means (A) requesting that a contribution be made, (B) participating in any fund-raising activities for a candidate committee, exploratory committee, political committee or party committee, including, but not limited to, forwarding tickets to potential contributors, receiving contributions for transmission to any such committee or bundling contributions, (C) serving as chairperson, treasurer or deputy treasurer of any such committee, or (D)

establishing a political committee for the sole purpose of soliciting or receiving contributions for any committee. Solicit does not include: (i) making a contribution that is otherwise permitted by Chapter 155 of the Connecticut General Statutes; (ii) informing any person of a position taken by a candidate for public office or a public official, (iii) notifying the person of any activities of, or contact information for, any candidate for public office; or (iv) serving as a member in any party committee or as an officer of such committee that is not otherwise prohibited in this section.

“Subcontractor” means any person, business entity or nonprofit organization that contracts to perform part or all of the obligations of a state contractor's state contract. Such person, business entity or nonprofit organization shall be deemed to be a subcontractor until December thirty first of the year in which the subcontract terminates.

“Subcontractor” does not include (i) a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or (ii) an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Principal of a subcontractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a subcontractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a subcontractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a subcontractor, which is not a business entity, or if a subcontractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any subcontractor who has managerial or discretionary responsibilities with respect to a subcontract with a state contractor, (v) the spouse or a dependent child who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the subcontractor.

16. Summary of State Ethics Laws: Pursuant to the requirements of section 1-101qq of the Connecticut General Statutes, the summary of State ethic laws developed by the State Ethics Commission pursuant to section 1-81b of the Connecticut General Statutes is incorporated by reference into and made a part of the contract as if the summary had been fully set forth in the contract.

17. Whistleblower:

This contract may be subject to the provisions of Section 4-61dd of the Connecticut General Statutes. In accordance with this statute, if an officer, employee or appointing authority of the Contractor takes or threatens to take any personnel action against any employee of the Contractor in retaliation for such employee's disclosure of information to any employee of the contracting state or quasi-public agency or the Auditors of Public Accounts or the Attorney General under the provisions of subsection (a) of such statute, the Contractor shall be liable for a civil penalty of not more than five thousand dollars for each offense, up to a maximum of twenty per cent of the value of this contract. Each violation shall be a separate and distinct offense and in the case of a continuing violation, each calendar day's continuance of the violation shall be deemed to be a separate and distinct offense. The State may request that the Attorney General bring a civil action in the Superior Court for the Judicial District of Hartford to seek imposition and recovery of such civil penalty. In accordance with subsection (f) of such statute, each large state contractor, as defined in the statute, shall post a notice of the provisions of the statute relating to large state contractors in a conspicuous place which is readily available for viewing by the employees of the contractor.

18. Disclosure of Records:

This Contract may be subject to the provisions of section 1-218 of the Connecticut General Statutes. In accordance with this statute, each contract in excess of two million five hundred thousand dollars between a public agency and a person for the performance of a governmental function shall (a) provide that the public agency is entitled to receive a copy of records and files related to the performance of the governmental function, and (b) indicate that such records and files are subject to the Freedom of Information Act (FOIA) and may be disclosed by the public agency pursuant to FOIA. No request to inspect or copy such records or files shall be valid unless the request is made to the public agency in accordance with FOIA. Any complaint by a person who is denied the right to inspect or copy such records or files shall be brought to the Freedom of Information Commission in accordance with the provisions of sections 1-205 and 1-206 of the Connecticut General Statutes.

**CONNECTICUT STATE COLLEGES & UNIVERSITIES
39 WOODLAND STREET
HARTFORD, CT 06105-2337**

PROPOSAL SUBMISSION CHECK LIST

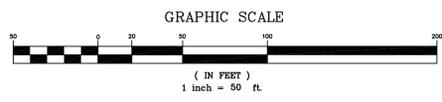
This form need not be returned with your proposal. It is suggested that you review and check off each action as you complete it.

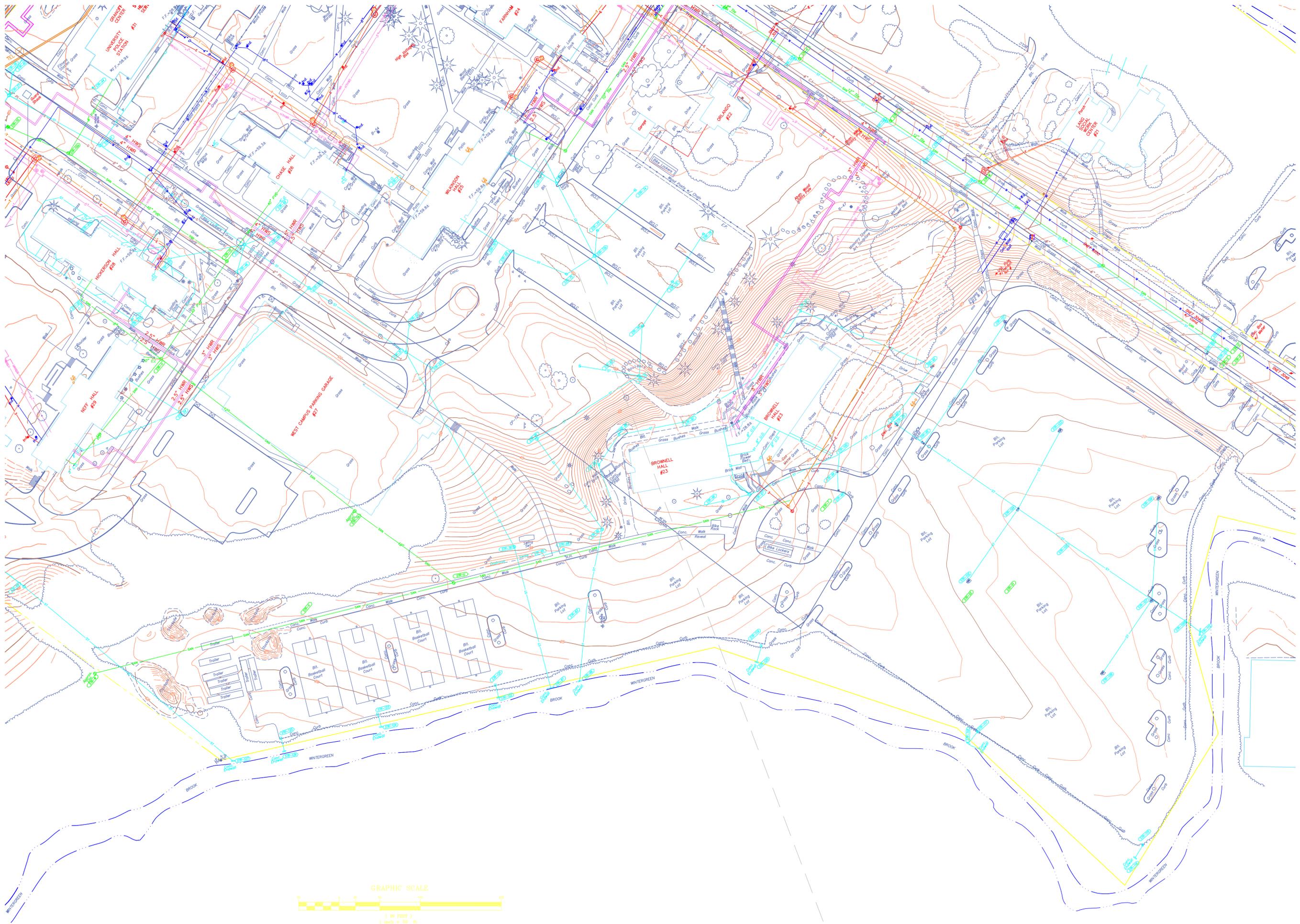
- ___ 1. The proposal includes all requested information and follows the format set forth in Section 2.7.
- ___ 2. The name, title, telephone number, and e-mail address of the appropriate person to contact concerning the proposal is clearly stated and easily identifiable.
- ___ 3. The prices you have offered have been reviewed and verified.
- ___ 4. If applicable, price extensions and totals have been checked. (In case of discrepancy between unit prices and total prices, the unit price will govern the evaluation.)
- ___ 5. Any technical or descriptive literature, drawings or samples that are required have been included with the proposal.
- ___ 6. The Contract Proposal, included as Attachment A, is complete and has been signed by a person duly authorized to sign on behalf of the firm or corporation.
- ___ 7. The forms included as Attachments B through G are completed, notarized when applicable, and included in the proposal package.
- ___ 8. The envelope(s) containing the proposal(s) are addressed to:
Sharon Kromas
Associate for Contract Compliance and Procurement
Board of Regents for Higher Education
39 Woodland Street
Hartford, CT 06105
- ___ 9. The outermost envelope containing the proposal has been clearly marked with the name and address of the proposer, RFP title and number, the date and time the proposal is due.
- ___ 10. If multiple copies of the proposal are required, the original is clearly marked.
- ___ 11. The proposal has been mailed or hand-delivered in time to be received no later than the designated opening date and time.



Electric Manhole Location

Electric Manhole Location





Town of Hamden
090078



MAP SCALE 1" = 500'



NFP

PANEL 0429J

FIRM
FLOOD INSURANCE RATE MAP
NEW HAVEN COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)

PANEL 429 OF 635
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HAMDEN, TOWN OF	090078	0429	J
NEW HAVEN, CITY OF	090084	0429	J

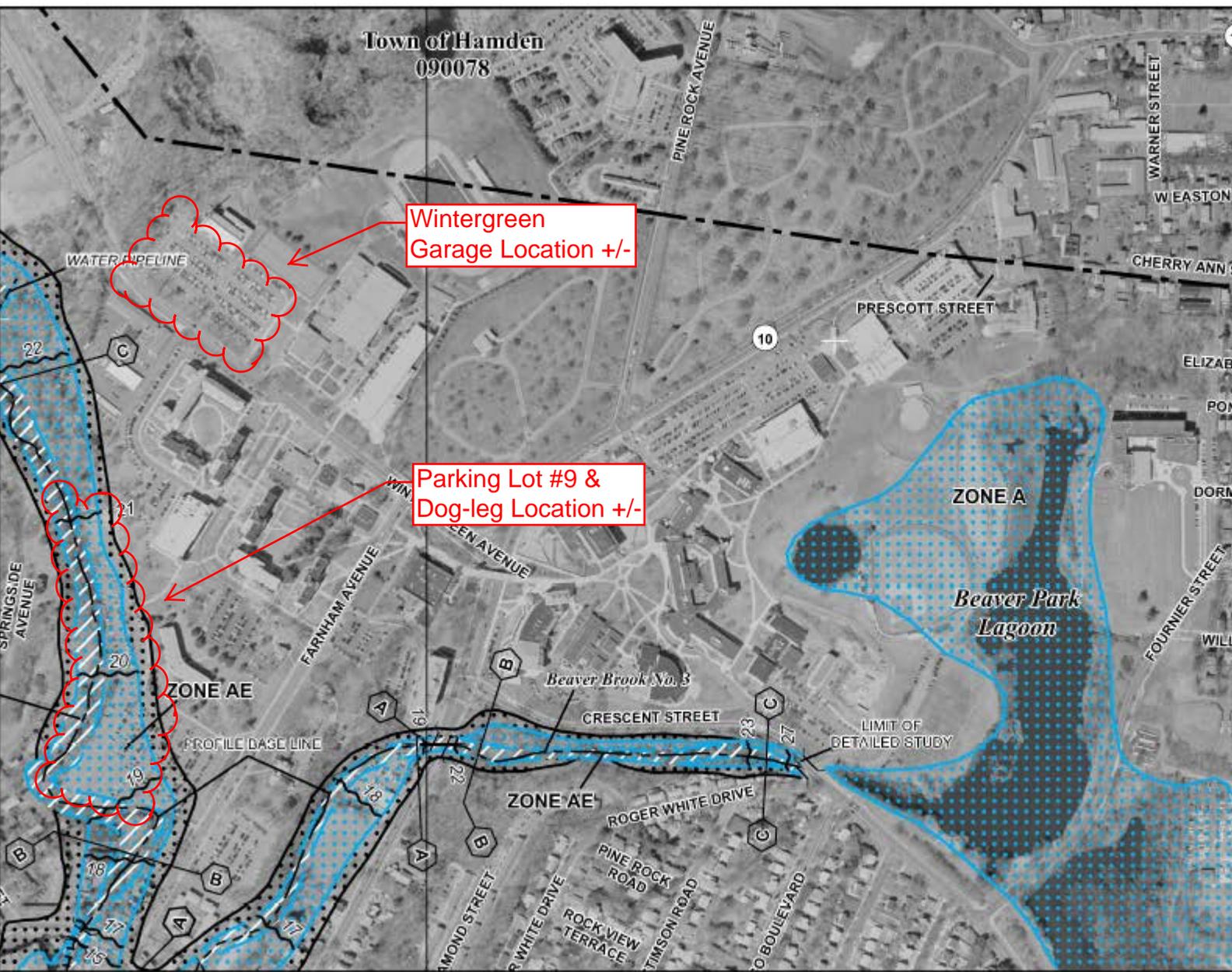
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
09009C0429J
MAP REVISED
JULY 8, 2013

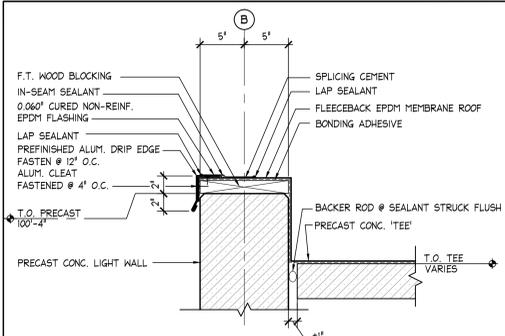
Federal Emergency Management Agency

Wintergreen
Garage Location +/-

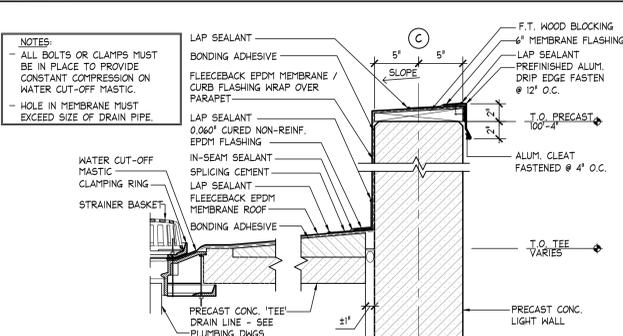
Parking Lot #9 &
Dog-leg Location +/-



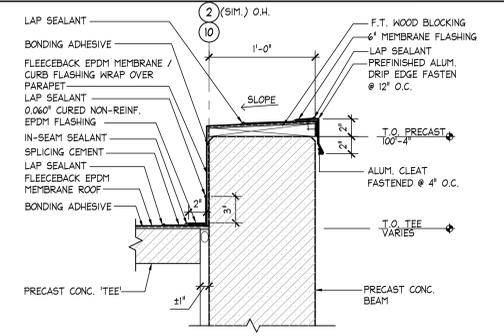
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



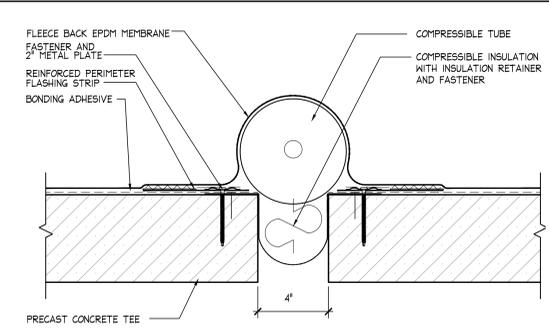
1 PARAPET DETAIL ALT#3
1 1/2" = 1'-0"



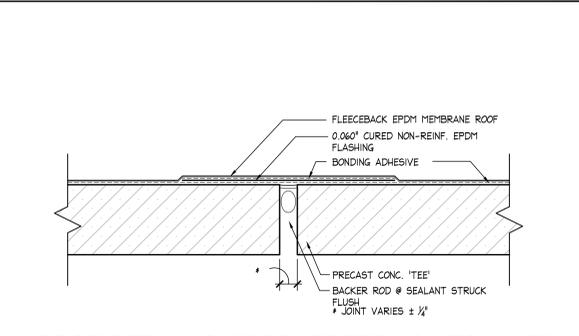
2 ROOF DRAIN ALT#3
1 1/2" = 1'-0"



3 PARAPET DETAIL ALT#3
1 1/2" = 1'-0"

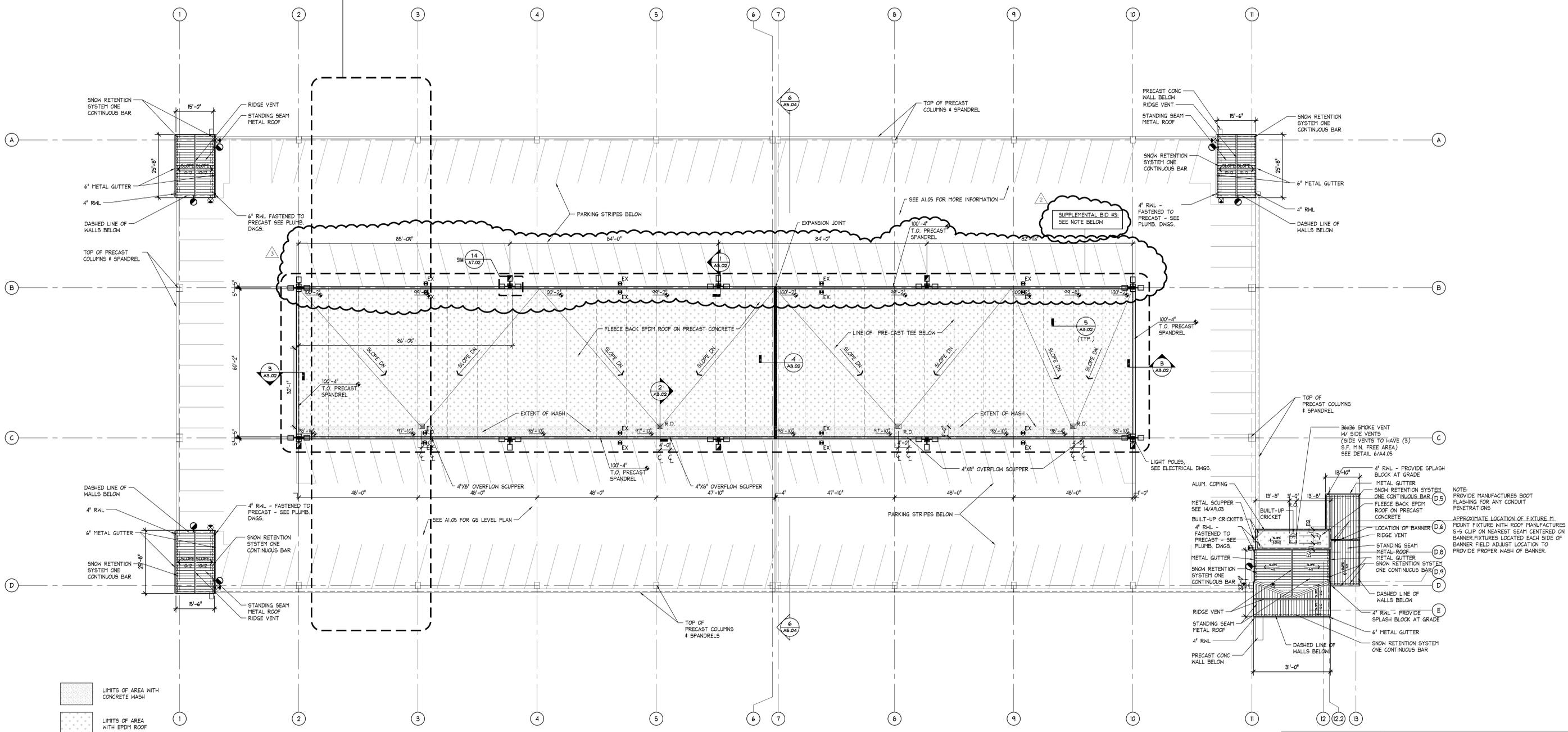


4 EXPANSION JOINT DETAIL ALT#3
3" = 1'-0"



5 ROOF DETAIL @ PRECAST TEE JOINTS ALT#3
3" = 1'-0"

SUPPLEMENTAL BID #2:
INCLUDE GARAGE STRUCTURE, FINISHES, ELECTRICAL, FIRE STANDPIPE AND PLUMBING BETWEEN COLUMN LINES 2 AND 3.
BASE BID SHOULD NOT INCLUDE THIS AREA. DRAINS WILL SHIFT ONE BAY OVER AND HIGH END OF TEE SLOPE WILL SHIFT A HALF OF BAY OVER.



[Pattern] LIMITS OF AREA WITH CONCRETE WASH
 [Pattern] LIMITS OF AREA WITH EPDM ROOF

SUPPLEMENTAL BID #3:
INCLUDE ROOF OVER AREA FROM STRUCTURAL LINE '2'-10' & '3'-0', AS SHOWN ON DRAWING A1.06, A3.02, A5.01, E1.04, E1.04A & H1.04. THIS ALTERNATE APPLIES ONLY IN ADDITION TO SUPPLEMENTAL BID #2

6 OVERALL SUPPLEMENTAL BID #3 ROOF PLAN
1/16" = 1'-0"

REVISIONS			DRAWING PREPARED BY:		DATE
MARK	DATE	DESCRIPTION	BY	SCALE	
2	5/26/10	ISSUED FOR ABBEND #4	BL COMPANIES	AS NOTED	07/10/09
3	1/27/12	LIGHT POLE LOCATIONS RECORD SET	BL COMPANIES	M.G.	
	12/26/12				

STATE OF CONNECTICUT DEPARTMENT OF PUBLIC WORKS		DRAWING NO. CF-RS-273 PROJECT 100% CONSTRUCTION DOCUMENTS PACKAGE SCSU PARKING GARAGE CF-RS-273	DATE 07/10/09 SCALE AS NOTED DRAWN BY M.G. APPROVED BY DRAWING NO. A3.02
---	--	--	--



PANEL RP1													
VOLTAGE:		208/120		MAIN BUS RATING:		225 A		MOUNTING:		SURFACE			
PHASE:		3		MAIN DEVICE TYPE:		MCB		LOCATION:		ELECTRICAL ROOM 103			
ENCLOSURE TYPE:		NEMA 1		MAIN SIZE:		225 A		INTERRUPTING RATING:		22 KAIR RMS SYMM			
CKT No	DESCRIPTION	WIRE SIZE	CB TRIP	POLES	KVA	PER PHASE	PHASE	POLES	CB TRIP	WIRE SIZE	DESCRIPTION	CKT No	
1	G1 SECURITY	6	15	1	1.2	1.2		1	15	6	G2 SECURITY	2	
3	G1 SECURITY	6	15	1				1	15	6	G2 SECURITY	4	
5	G1 SECURITY	6	15	1				1	15	6	G2 SECURITY	6	
7	G3 SECURITY	6	15	1	1.2	1.2		1	15	6	G2 SECURITY	8	
9	G3 SECURITY	6	15	1				1	15	6	G2 SECURITY	10	
11	G3 SECURITY	6	15	1				1	15	6	G2 SECURITY	12	
13	G5 SECURITY	6	15	1	1.2	0.5		1	20	8	CODE BLUE PHONE	14	
15	G5 SECURITY	6	15	1				1	20	12	TELECOMM ROOM	16	
17	G5 SECURITY	6	15	1				1	20	12	TELECOMM ROOM	18	
19	CODE BLUE PHONE WEST	6	20	1	0.5	1.2		1	20	12	TELECOMM ROOM	20	
21	CODE BLUE PHONE WEST	6	20	1				1	20	12	TELECOMM ROOM	22	
23	RECEPT. ELEV. LOBBY 101	12	20	1				1	20	12	FACP	24	
25	RECEPT. LOBBY 202 TO 205	12	20	1	0.8	0.6		1	20	12	WAITING 202	26	
27	RECEPT. LOBBY 202 TO 205	12	20	1				1	20	6	CODE BLUE PHONE NORTH	28	
29	RECEPT. ELEC. ROOM 103	12	20	1				1	20	10	RECEPT. ELEV. PIT	30	
31	RECEPT. ELEV. MACHINE ROOM	12	20	1	0.2	0.5		1	20	10	LIGHT. ELEV. PIT	32	
33	MAIN FACP	12	20	1				1	20	12	PS-100 AND PS-300	34	
35	MAIN FACP	12	20	1				1	20	12	DIRECTIONAL SIGNS	36	
37	VEHICLE DETECTION LOOP CTR	8	20	1	1.0	10.2		3	125	2	RP2	40	
39	GUARD BOOTH	1	125	2								42	
41	GUARD BOOTH	1											
					6.1	15.4	7.9	15.6	7.6	15.0	TOTAL KVA :	67.6	
					21.5	23.5	22.8				TOTAL AMPS :	187.6	

NOTES:
Provide 225A Fully Rated Main Circuit Breaker

PANEL RP2														
VOLTAGE:		208/120		MAIN BUS RATING:		125 A		MOUNTING:		SURFACE				
PHASE:		3		MAIN DEVICE TYPE:		MLO		LOCATION:		ELECTRICAL ROOM 103				
ENCLOSURE TYPE:		NEMA 1		MAIN SIZE:		225 A		INTERRUPTING RATING:		22 KAIR RMS SYMM				
CKT No	DESCRIPTION	WIRE SIZE	CB TRIP	POLES	KVA	PER PHASE	PHASE	POLES	CB TRIP	WIRE SIZE	DESCRIPTION	CKT No		
1	G1 SECURITY OR SYSTEM	6	15	1	1.5	1.5		1	15	6	G3 SECURITY OR SYSTEM	2		
3	G2 SECURITY OR SYSTEM	6	15	1				1	15	6	G4 SECURITY OR SYSTEM	4		
5	AG-1	12	15	2				0.1	1.5	1	G5 SECURITY OR SYSTEM	6		
7		12			0.1	0.4						8		
9	GJ-1	12	30	2				1.7	0.4	3	20	8	SANITARY PUMP	10
11		12											12	
13	CHARGER #1	8	40	2	3.1	0.5		1	20	12	MAIN FACP	14		
15		8						3.1	0.5	1	20	12	MAIN FACP	16
17	CHARGER #2	8	40	2				3.1	1.0	1	20	12	REMOTE COMMAND CENTER	18
19		8			3.1	0.0							20	
21	CHARGER 3#	8	40	2				3.1	0.0				22	
23		8						3.1	0.0				24	
25													26	
27													28	
29													30	
31													32	
33													34	
35													36	
37													38	
39													40	
41													42	
					7.8	2.4	9.4	2.4	8.0	2.9	TOTAL KVA :	33.0		
					10.2	11.8	10.9				TOTAL AMPS :	91.7		

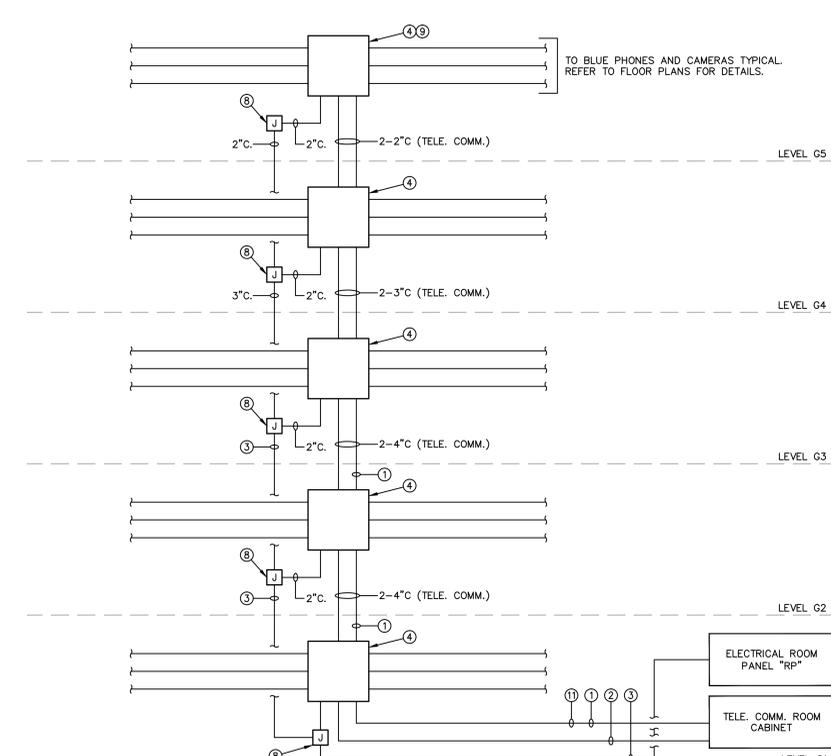
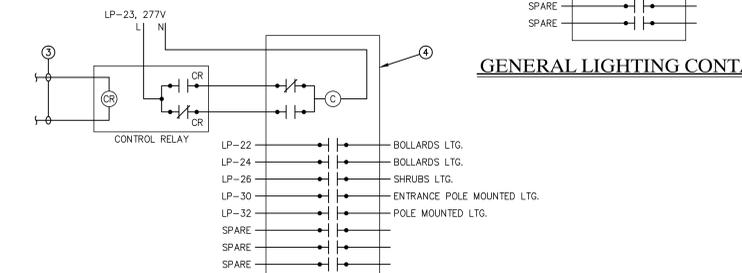
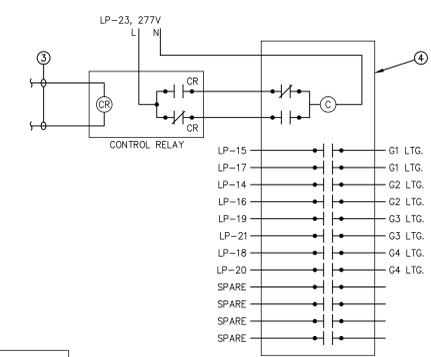
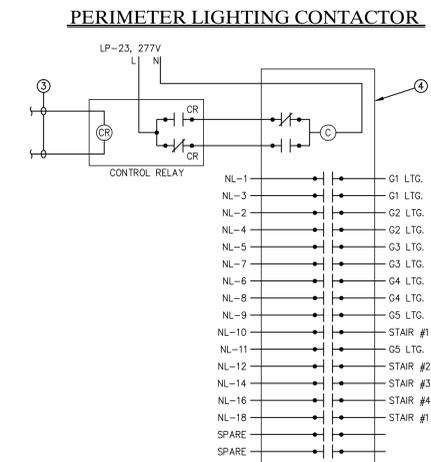
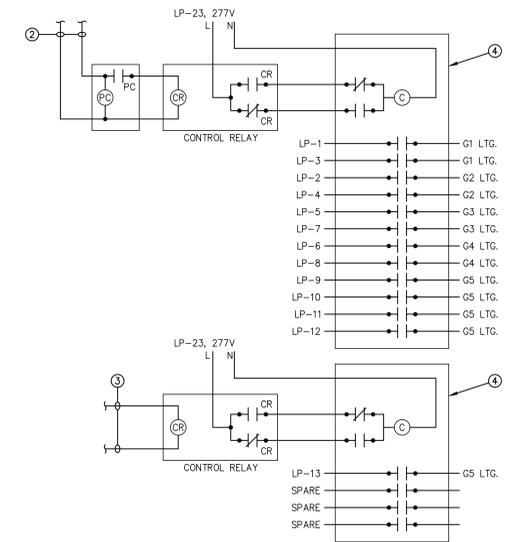
NOTES:

PANEL LP													
VOLTAGE:		480/277		MAIN BUS RATING:		225 A		MOUNTING:		SURFACE			
PHASE:		3		MAIN DEVICE TYPE:		MLO		LOCATION:		ELECTRICAL ROOM 103			
ENCLOSURE TYPE:		NEMA 1		MAIN SIZE:		225 A		INTERRUPTING RATING:		22 KAIR RMS SYMM			
CKT No	DESCRIPTION	WIRE SIZE	CB TRIP	POLES	KVA	PER PHASE	PHASE	POLES	CB TRIP	WIRE SIZE	DESCRIPTION	CKT No	
1	LTG G1 - P1	6	20	1	3.0	3.0		1	20	6	LTG G2 - P1	2	
3	LTG G1 - P2	6	20	1				1	20	6	LTG G2 - P2	4	
5	LTG G3 - P1	6	20	1				1	20	6	LTG G4 - P1	6	
7	LTG G3 - P2	6	20	1	3.0	3.0		1	20	6	LTG G4 - P2	8	
9	LTG G5 - L1	6	20	1				1	20	6	LTG G5 - L4	10	
11	LTG G5 - L2	6	20	1				1	20	6	LTG G5 - L5	12	
13	LTG G5 - L3	6	20	1	3.0	3.0		1	20	6	LTG G2 - L	14	
15	LTG G1 - L	6	20	1				1	20	6	LTG G2 - L	16	
17	LTG G1 - L	6	20	1				1	20	6	LTG G4 - L	18	
19	LTG G3 - L	6	20	1	3.0	3.0		1	20	6	LTG G4 - L	20	
21	LTG G3 - L	6	20	1				1	20	8	LTG BOLLARDS	22	
23	CONTACTOR COOL	12	20	1				1	20	8	LTG BOLLARDS	24	
25	SPARE	20	1	0.0	1.0			1	20	8	LTG SHRUBS	26	
27	SPARE	20	1					1	20	8	LTG SIGNL AND M	28	
29	SPARE	20	1					1	20	6	LTG ENTRANCE POLE	30	
31	SPARE	20	1	0.0	2.0			1	20	8	LTG POLE MOUNTED	32	
33	SPARE	20	1					1	20		SPARE	34	
35	SPARE	20	1					1	20		SPARE	36	
37	SPARE	20	1					1	20		SPARE	38	
39	SPARE	20	1					1	20		SPARE	40	
41	SPARE	20	1					1	20		SPARE	42	
					12.0	15.0	11.6	11.0	8.0	13.1	TOTAL KVA :	70.7	
					27.0	22.6	21.1				TOTAL AMPS :	85.0	

NOTES:

PANEL NL (NIGHT LIGHTS)													
VOLTAGE:		480/277		MAIN BUS RATING:		125 A		MOUNTING:		SURFACE			
PHASE:		3		MAIN DEVICE TYPE:		MLO		LOCATION:		ELECTRICAL ROOM 103			
ENCLOSURE TYPE:		NEMA 1		MAIN SIZE:		225 A		INTERRUPTING RATING:		22 KAIR RMS SYMM			
CKT No	DESCRIPTION	WIRE SIZE	CB TRIP	POLES	KVA	PER PHASE	PHASE	POLES	CB TRIP	WIRE SIZE	DESCRIPTION	CKT No	
1	LTG G1 - NL1	6	20	1	1.8	1.4		1	20	6	LTG G2 - NL1	2	
3	LTG G1 - NL2	6	20	1				1	20	6	LTG G2 - NL2	4	
5	LTG G3 - NL1	6	20	1				1	20	6	LTG G4 - NL1	6	
7	LTG G3 - NL2	6	20	1	1.4	1.4		1	20	6	LTG G4 - NL2	8	
9	LTG G5 - NL1	6	20	1				1	20	8	LTG STAIR #1 (G1-G2)	10	
11	LTG G5 - NL2	6	20	1				1	20	6	LTG STAIR #2 (G1-G5)	12	
13	SPARE	20	1	0.0	1.4			1	20	6	LTG STAIR #3 (G1-G5)	14	
15	SPARE	20	1					1	20	8	LTG STAIR #4 (G1-G5)	16	
17	SPARE	20	1					1	20	8	LTG STAIR #5 (G3-G5)	18	
19	SPARE				0.0	0.0		1	20	8	SPACE	20	
21	SPARE				0.0	0.0					SPACE	22	
23	SPARE										SPACE	24	
25											SPACE	26	
27											SPACE	28	
29											SPACE	30	
31											SPACE	32	
33											SPACE	34	
35											SPACE	36	
37											SPACE	38	
39											SPACE	40	
41											SPACE	42	
					3.0	4.2	4.6	5.8	3.4	5.7	TOTAL KVA :	26.7	
					7.2	10.4	9.1				TOTAL AMPS :	32.1	

NOTES:



SECURITY RISER DIAGRAM KEY NOTES:

- FURNISH AND INSTALL 4" EMT MULTIGUARD 3 CELL CONDUIT FOR INSIDE THE GARAGE, WITH 3 INNERDUCT EACH 1 1/2". CARLON CATALOG #MESS35-010.
- 4" EMT CONDUIT TERMINATE IN TELECOMMUNICATION ROOM CABINET PER SCSU.
- 4" EMT CONDUIT, (POWER CIRCUITS). REFER TO PANEL SCHEDULE "RP".
- DOUBLE HINGED WALL MOUNT CABINET HOFFMAN CATALOG #P1DHS24242464 NEMA 4 TYPE. (TYPICAL OF 5).
- FURNISH AND INSTALL 1-4" CARLON MULTIGUARD MESS35-010 PVC EMT CONDUIT SUPPLIED WITH THREE 1 1/2" INNERDUCTS, FROM TELECOM ROOM CABINET UP TO STAIRS #4 AS SHOWN ON DWG. EP2.01 INSIDE THE PARKING GARAGE AND ONE 4" PVC SCHEDULE 80 MULTIGUARD WITH 3 INNERDUCTS CARLON #MSS35-020 UNDERGROUND TO THE TELECOM MANHOLE. THE DESIGNATED MANHOLE SHALL PROVIDE BACKBONE CONNECTION TO GRANOFF HALL VIA UNDERGROUND CONDUITS.
- FURNISH AND INSTALL 1-4" EMT CONDUIT FROM TELECOM ROOM UP TO STAIR #4, INSIDE THE GARAGE AND ONE 4" PVC SCHEDULE 80 UNDERGROUND TO THE TELECOM MANHOLE. THE CONDUITS ARE INSTALLED FOR COMMUNICATION, SECURITY COPPER AND OPTICAL FIBER BACKBONE TO GRANOFF HALL.
- EXISTING BACKBONE TO GRANOFF HALL VIA UNDERGROUND CONDUITS.
- POWER WIRING JUNCTION BOX 12" X 12" X 8" (TYPICAL OF 5).
- HOFFMAN CABINET FOR G5 LEVEL SHALL BE MOUNTED UNDER THE G5 LEVEL SLAB. EXACT LOCATION TO BE FIELD VERIFIED.
- CABLING: 4UTP CATEGORY 6 CABLE FOR CAMERAS (BY OTHERS), 4UTP CATEGORY 5E CABLE FOR CODE BLUE PHONES (BY OTHERS).
- FURNISH AND INSTALL LIGHTING CONTROL CABLES VIA TELECOM CONDUIT TO EXISTING TELECOM MANHOLE.
- ALL WIRING FOR SECURITY CAMERAS AND BLUE PHONES SHALL BE BY SCSU.

CONTACTOR KEY NOTES:

INVERTER SPECIFICATIONS:

HIGH-LITES MODEL H3FT-24000-U-P-OCB-SEISMIC-MOD-SNMP-FS (OR EQUAL).

INPUT VOLTAGES: 277/480 3Ø, 4-WIRE PLUS GROUND
 VOLTAGE RANGE: +10% -15%
 INPUT FREQUENCY: 60HZ ± 3%
 POWER FACTOR: 0.5 LEAD LAG
 INRUSH CURRENT: 1.25 TIMES NOMINAL INPUT CURRENT.
 CURRENT LIMIT: 125% OF NOMINAL INPUT CURRENT
 CURRENT DISTORTION: <3% THD MAXIMUM FROM 50% TO FULL LOAD
 SURGE PROTECTION: MEETS ANSI C62.41 (IEEE 587) AND ANSI C62.42.45 (CAT. A&B) STANDARDS

OUTPUT VOLTAGES: 277/480 3Ø, 4-WIRE PLUS GROUND.
 STATIC VOLTAGE STABILITY: LOAD CURRENT CHANGE ± 2%
 DYNAMIC VOLTAGE STABILITY: ± 2% FOR 25% STEP LOAD, ± 3% FOR 50% STEP LOAD.
 DYNAMIC RECOVERY TIME TO WITHIN 1% OF NOMINAL: 3 HZ
 OUTPUT DISTORTION: <3% THD (WITH LINEAR LOAD)
 OUTPUT FREQUENCY: 60HZ (± .05HZ IN EMERGENCY MODE)
 TRANSFER TIME: 2 MS
 LOAD POWER FACTOR RANGE: 0.5 LEAD TO 0.5 LAG
 OUTPUT POWER RATING: KVA = KW
 OVERLOAD PROTECTION: 110% CONTINUOUS, 115% FOR 5 MINUTES
 CREST FACTOR: <= 2.8

BATTERIES AND CHARGER:
 CHARGER TYPE: FULLY AUTOMATIC, MICROPROCESSOR CONTROLLED.
 TEMPERATURE COMPENSATING CHARGER
 RECHARGE DUTY CYCLE: 24 HOURS
 CHARGER PROTECTION: FUSED OUTPUT AND AUTOMATIC LOW VOLTAGE BATTERY DISCONNECT.
 STANDARD BATTERY: SEALED LEAD CALCIUM (10 YEAR LIFE)
 BATTERY VOLTAGE: 240VDC
 RUNTIME: 90 MINUTES STANDARD - BASED ON BATTERY PERFORMANCE AT 77°F (25°C).

ENVIRONMENTAL:
 ALTITUDE: < 10,000 FEET ABOVE SEA LEVEL WITHOUT DERATING
 OPERATING TEMPERATURE RANGE: 20 TO 30°C.
 RELATIVE HUMIDITY: 95% NON-CONDENSING.
 FURNISH SEISMIC MOUNTING KIT, MEETS ZONE 4 REQUIREMENTS.

CONTROL PANEL:
 TYPE: 2X20-CHARACTER DISPLAY WITH TOUCH PAD CONTROL, FIVE LED FUNCTION INDICATORS AND ALARM ANNUNCIATOR WITH RINGBACK FEATURE.
 COMMUNICATIONS TYPE: RS-232 PORT (DB9) STANDARD ON ALL MODELS.

INSTALLATION:
 MOUNTING: FREESTANDING CABINETS BOLT TOGETHER WHEN MORE THAN ONE CABINET IS REQUIRED. A SEISMIC KIT FOR SECURING SYSTEMS SHALL BE INSTALLED.

WIRING: ALL BATTERY AND INTER-CABINET WIRING IS PROVIDED PRE-CUT AND TERMINATED ALONG WITH THE NECESSARY INTER-CABINET HARDWARE AND ELECTRICAL FITTINGS REQUIRED FOR PROPER INSTALLATION.

CODE INFORMATION:
 UL924 LISTED AND MEETS NFPA 101 LIFE SAFETY CODE, NFPA 70, NFPA 110, UBC, SBCCI, NEC, OSHA, LOCAL AND STATE CODES

WARRANTY:
 SYSTEM: 1-YEAR FULL COVERAGE AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FROM DATE OF SHIPMENT
 BATTERY: STANDARD LEAD CALCIUM BATTERY: 1 YEAR FULL WARRANTY PLUS 9 YEARS OF PRO-RATA COVERAGE.

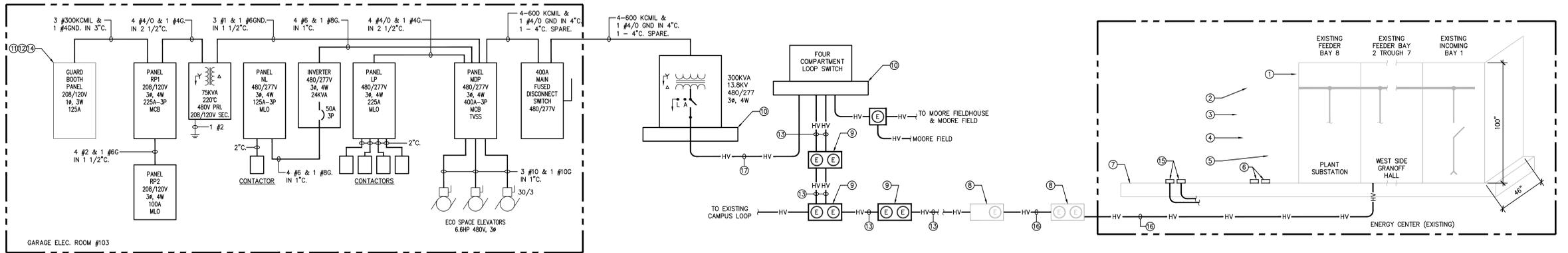
SWITCH GEAR SPECIFICATION:

- THE PROPOSED FEDERAL PACIFIC METAL ENCLOSED SWITCHGEAR SECTION SHALL MATCH THE EXISTING FEDERAL PACIFIC METAL ENCLOSED, AUTO-LET SWITCHGEAR, 333F, SERIAL #H452A MANUFACTURED DATE 03/03. HEIGHT 100", WIDTH 41" AND DEPTH 46".
- METAL ENCLOSED SWITCHGEAR SHALL BE RATED:
 - MAIN BUS 1200A.
 - VOLTAGE 15 KV.
 - FREQUENCY 60 HZ.
 - INSULATION LEVEL 95 KV.
 - CONTINUOUS CURRENT 600 AMPS.
 - LOAD CURRENT 600 AMPS.
 - 40 KA RMS SYMM.
 - MOMENTARY 40 KA RMS ASYM.
 - FAULT CLOSING 40 KA RMS ASYM.
 - DIE ELECTRIC STRENGTH WITHSTAND 36 KV.
 - MVA 3Ø SYM. 550.
- SWITCH SHALL BE MECHANICALLY INTERLOCKED SUCH THAT THE SWITCH SHALL BE IN OPEN STATUS BEFORE ALLOWING ACCESS TO FUSE COMPARTMENT.
- NAME PLATE SIGN SHALL INDICATE (13,800 VOLTS, FEEDER FOR PARKING GARAGE, POSITION 9).
- PROVIDE A BLACK PHENOLIC LABEL WITH WHITE LETTERS OR A RED PHENOLIC LABEL WITH WHITE LETTERS ON THE 400A MAIN DISCONNECT SWITCH STATING "OPENING OF THE MAIN DISCONNECT SWITCH WILL CAUSE THE INVERTER TO ENERGIZE".
- OPENING OF THE MAIN DISCONNECT SWITCH WILL CAUSE THE INVERTER TO ENERGIZE.

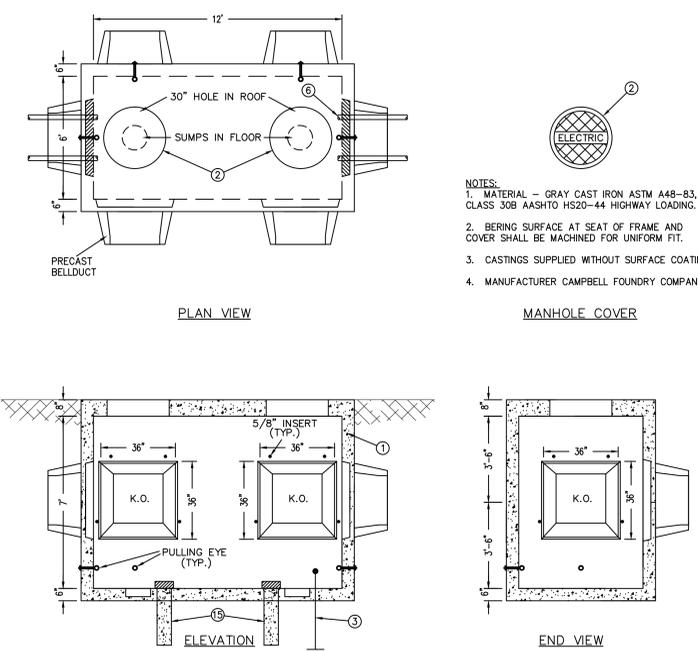
NOTE:
 ELECTRICAL CONTRACTOR TO PROVIDE LISTED CHOKES OR BONDING BUSHINGS AS REQUIRED PER NEC WHEN BONDING GROUND CONDUCTORS TO TRANSFORMERS OR BUILDING STEEL.

KEY NOTES:

- EXISTING METAL ENCLOSED SWITCHGEAR 15KV INDOOR.
- NOT USED.
- NOT USED.
- NOT USED.
- NOT USED.
- EXISTING CONDUITS 5" DIA.
- EXISTING PAD.
- EXISTING ELECTRIC MANHOLES.
- PROPOSED MANHOLE. REFER TO DETAILS ON THIS DWG.
- PROPOSED CONCRETE PAD. REFER TO TRANSFORMER PAD DETAILS ON DWG. E4.01 DETAIL #5.
- THE ELECTRICAL CONTRACTOR SHALL INSTALL FEEDER TO GUARD BOOTH AND CONNECT TO PANEL. FURNISH AND INSTALL GROUNDING PER CODE AND SCSU AUTHORITIES. FURNISH EMT CONDUIT INSIDE THE BOOTH.
- FURNISH AND INSTALL MAIN LUG KIT OR CABLE SIZE REDUCER TO CONNECT FEEDER TO BOOTH PANEL.
- FURNISH AND INSTALL PROPOSED 15KV FEEDER 3 #4/0 & 1 #4/0 GND. IN 5°C. 5-5°C. SPARE FOR FUTURE USE.
- BOOTH PANEL SHALL BE SUPPLIED BY BOOTH MANUFACTURER.
- EXISTING TWO 5" DIA. CONDUITS UNDER FLOOR TO GENERATOR ROOM.
- FURNISH AND INSTALL 3 #2 CU & 1 #4/0 GND. 15KV FEEDER IN EXISTING CONDUIT.
- FURNISH AND INSTALL 15 KV FEEDER 3 #1/0 CU & 1 #4/0 GND IN 5°C. 1-5" SPARE.



1 ONE - LINE RISER DIAGRAM
 N.T.S.



2 ELECTRIC MANHOLE DETAIL
 N.T.S.

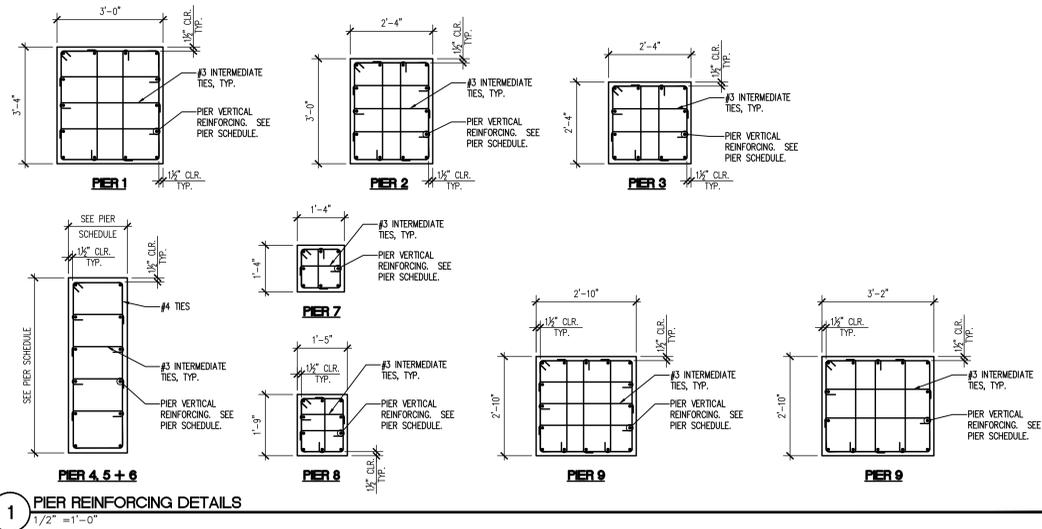
KEY NOTES:

- MANHOLE 12" L X 6" W X 7"D.
- HEAVY DUTY CAST IRON ROUND TRAFFIC RATED WATER TIGHT FRAME AND COVER. 30" MINIMUM DIAMETER LABELED "ELECTRIC".
- GROUND ROD 5/8" DIAMETER X 10' LONG WITH #4/0 BARE COPPER CABLE THROUGH WATERTIGHT SEAL TO INSIDE MANHOLE.
- BOND ALL INTERNAL MANHOLE METAL PARTS WITH #4/0 BARE COPPER CONDUCTOR.
- SUPPORT CABLES WITH CABLE CLAMPS TO MANHOLE WALL.
- CONDUIT END BELL AND SEAL.
- MANHOLE TO SIT ON A MINIMUM OF 12" CRUSHED STONE AND SET LEVEL OF COMPACTED SUB-GRADE WITH A MINIMUM SOIL BEARING CAPACITY OF 1000 LBS PER SQUARE FOOT.
- THIS MANHOLE IS INTENDED FOR THE INSTALLATION OF 600A, 15KV CABLING AND EQUIPMENT. REFER TO UTILITIES DWG. GU-1 FOR QUANTITY REFER TO DWG. EP2.02 AND E6.01.
- CONCRETE 5000 PSI @ 28 DAYS.
- REINFORCEMENT-ASTM, A-615, GR. 60.
- LOADING-HS20-44.
- JOINTS SEALED WITH BUTYL RUBBER.
- CONFORMS TO UNITED ILLUMINATING SPECS.
- MANUFACTURER: ARROW CONCRETE PRODUCTS.
- CAST IRON DRAIN GRATING, 12" SQUARE.
- 6" PIPE 18" LONG FIELD WITH CRUSHED STONE.

MAIN DISTRIBUTION PANEL MDP										TVSS 120KA			
VOLTAGE: 480/277V		MAIN BUS RATING: 400 A		MOUNTINGS: SURFACE		PHASE: 3		MAIN DISCONNECT TYPE: MCB		LOCATION: ELECTRICAL ROOM 103			
ENCLOSURE TYPE: NEMA 1		MAIN SIZE: 400 A		INTERRUPTING RATING: 35		KAIR RMS SYMM							
CKT No	DESCRIPTION	WIRE SIZE	CB TRIP	POLES	KVA PER PHASE	A	B	C	POLES	CB TRIP	WIRE SIZE	DESCRIPTION	CKT No
1		10	20	3	2.2 25.0				1	1	1		2
3	ELEVATOR 6.6HP	10	20	3	2.2 25.0		2.2 25.0		3	125	1	TX (RPI AND RPI2)	4
5		10	20	3	2.2 25.0			2.2 25.0		1	1		6
7		10	20	3	2.2 25.0				3	50	6	INVERTER (PANEL NL)	8
9	ELEVATOR 6.6HP	10	20	3	2.2 25.0		2.2 25.0		3	50	6		10
11		10	20	3	2.2 25.0			2.2 25.0		6	6		12
13		10	20	3	2.2 25.0					4/0	4/0		14
15	ELEVATOR 6.6HP	10	20	3	2.2 22.9		2.2 22.9		3	225	4/0	LIGHTING PANEL (LP)	16
17		10	20	3	2.2 22.9			2.2 22.9		4/0	4/0		18
19	SPARE	20	1	0.0 1.5					1	20	12	RADIANT PANEL	20
21	SPARE	20	1	0.0 1.5					1	20	12	RADIANT PANEL	22
23	SPARE	20	1	0.0 1.5				0.0 1.5	1	20	12	RADIANT PANEL	24
25	SPARE	20	1	0.0 3.0					1	20	12	HEATER IN ELEC. ROOM	26
27	SPARE	20	1	0.0 0.0					1	20		SPARE	28
29	SPARE	20	1	0.0 0.0					1	20		SPARE	30
31	SPARE	20	1	0.0 0.0					1	20		SPARE	32
33	SPACE											SPACE	34
35	SPACE											SPACE	36
37	SPACE											SPACE	38
39	SPACE											SPACE	40
41	SPACE											SPACE	42
					6.6 61.3	6.6 58.3	6.6 58.3		TOTAL KVA :		197.7		
					67.9	64.9	64.9		TOTAL AMPS:		237.8		

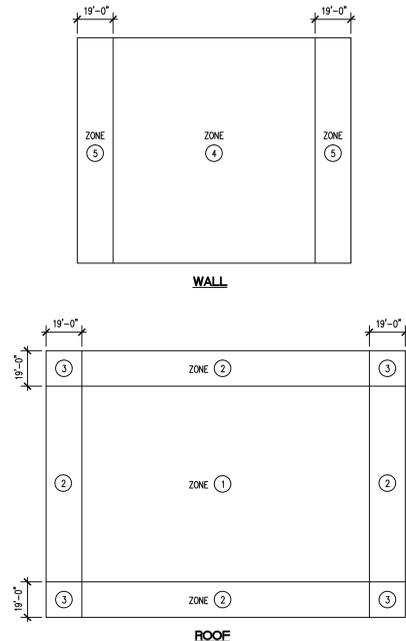
NOTES:
 1. FURNISH TVSS RATED 120KA.

drawing title ELECTRICAL POWER ONE-LINE DIAGRAM & DETAILS		STATE OF CONNECTICUT DEPARTMENT OF PUBLIC WORKS	
REVISIONS			
mark	date	description	
-	12.6.18	RECORD SET	
DRAWING PREPARED BY: BL COMPANIES		date 07/10/09	
100% CONSTRUCTION DOCUMENTS PACKAGE		scale AS NOTED	
SCSU PARKING GARAGE		drawn by R.Z.	
CF-RS-273		approved by G.M.K.	
drawing no.		drawing no.	
E6.01		E6.01	
CAD no. E07D1007601A		project no. CF-RS-273	



ASCE 7-02 WIND LOADS ON COMPONENTS + CLADDING
WIND VELOCITY 110 MPH
EXPOSURE "B"

ZONE	FT ²	TRIBUTORY AREA			
		10	20	50	100
①	+11.3	+10.4	+9.4	+9.0	
	-27.8	-27.1	-26.6	-25.4	
②	+11.3	+10.4	+9.4	+9.0	
	-46.6	-41.4	-34.8	-30.1	
③	+11.3	+10.4	+9.4	+9.0	
	-70.2	-57.7	-42.1	-30.1	
④	+25.4	+24.5	+22.8	+21.7	
	-27.5	-26.6	-25.0	-23.8	
⑤	+25.4	+24.5	+22.8	+21.7	
	-33.9	-31.8	-28.7	-26.6	



FOOTING SCHEDULE

FIG. MARK	SIZE (LxWxH)	REINFORCEMENT (BOTTOM, U.N.O.)
F7	7'-0" x 7'-0" x 1'-4"	(6)-#6 BARS, EACH WAY
F8	8'-0" x 8'-0" x 1'-6"	(9)-#7 BARS, EACH WAY
F8A	8'-0" x 8'-0" x 2'-6"	(9)-#7 BARS, EACH WAY
F10	12'-0" x 10'-0" x 1'-10"	#8 BARS AT 10" OC, EACH WAY
F12	12'-0" x 12'-0" x 2'-6"	(13)-#9 BARS, EACH WAY
F14	14'-0" x 14'-0" x 3'-0"	(15)-#10 BARS, EACH WAY
F14A	14'-6" x 14'-6" x 3'-2"	(16)-#10 BARS, EACH WAY
F16	16'-0" x 16'-0" x 3'-4"	(20)-#10 BARS, EACH WAY
F18	50'-0" x 18'-0" x 4'-0"	SEE PLANS FOR HORIZ. REINFG. #4 VERT AT 12" OC, EACH VERT. FACE. HOOK ENDS OF #4 VERT AT 12" OC
F20	52'-0" x 20'-0" x 4'-0"	SEE PLANS FOR HORIZ. REINFG. #4 VERT AT 12" OC, EACH VERT. FACE. HOOK ENDS OF #4 VERT AT 12" OC

PIER SCHEDULE

PIER MARK	SIZE (LxW)	REINFORCEMENT	REFERENCE
P1	3'-4"x3'-0"	(4)-#9 VERT. SHORT FACE (5)-#9 VERT. LONG FACE	-
P2	3'-0"x2'-4"	(4)-#8 VERT. SHORT FACE (5)-#8 VERT. LONG FACE	-
P3	2'-4"x2'-4"	(4)-#8 VERT. EACH FACE	-
P4	5'-10"x1'-8"	(6)-#7 VERT. EA. LONG FACE	-
P5	16'-0"x1'-8"	(17)-#7 VERT. EA. LONG FACE	-
P6	17'-1"x1'-8"	(18)-#7 VERT. EA. LONG FACE	-
P7	1'-4"x1'-4"	(3)-#6 VERT. EACH FACE	-
P8	1'-9"x1'-5"	(3)-#6 VERT. SHORT FACE (4)-#6 VERT. LONG FACE	-
P9	2'-10"x2'-10"	(5)-#8 VERT. EACH FACE	-
P10	3'-2"x2'-10"	(4)-#7 VERT. SHORT FACE (5)-#7 VERT. LONG FACE	-

NOTE: USE #3 TIES AT 12" OC AT PIERS, TYP., U.N.O. (DOUBLED AT TOP OF PIER)
SEE PIER REINFORCING DETAILS, THIS SHEET, FOR ADDITIONAL INFORMATION.

PRECAST CONCRETE NOTES

ALL STRUCTURAL PRECAST CONCRETE SHALL BE DESIGNED FOR THE SPAN AND LOADING CONDITIONS SHOWN ON THE DRAWINGS OR AS REQUIRED BY APPLICABLE CODES, INCLUDING BUT NOT LIMITED TO THE ERECTION SEQUENCES AND METHODS, BY A PRECAST MANUFACTURER'S PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CONNECTICUT. ALL DESIGN CALCULATIONS, INCLUDING THE ANALYSIS AND DESIGN FOR LATERAL AND GRAVITY LOADS AND THE DESIGN OF ALL STRUCTURAL ELEMENTS AND CONNECTIONS, SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO THE START OF FABRICATION. FOUNDATION FOR THE STRUCTURE HAS BEEN DESIGNED FOR PRELIMINARY LATERAL AND GRAVITY LOADS. FINAL FOUNDATION DESIGN MAY CHANGE BASED ON ACTUAL PRECAST DESIGN LATERAL AND GRAVITY LOADS.

DETAILED AND CHECKED SHOP DRAWINGS SHOWING ALL STRUCTURAL ELEMENTS, DETAILS AND CONNECTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO THE START OF FABRICATION.

THE PRECAST CONCRETE MANUFACTURER SHALL BE RESPONSIBLE FOR FULL COORDINATION OF ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DETAILS AS THEY AFFECT THE STRUCTURAL SYSTEM.

THERE SHALL BE NO FIELD CUTTING OF PRECAST ELEMENTS WITHOUT THE PRIOR REVIEW OF THE ENGINEER OF RECORD AND SUBSEQUENT WRITTEN CONSENT BY THE PRECAST MANUFACTURER.

ALL DETAILING, FABRICATION, AND PLACING OF REINFORCING BARS SHALL CONFORM TO ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI-318-02, AND "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI-315.

SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR SPECIAL ARCHITECTURAL CONCRETE REQUIREMENTS TO INCLUDE LOCATION, MIX DESIGN, FORMWORK, FINISH, ETC.

THE CONTRACTOR SHALL COORDINATE PRECAST, CAST-IN-PLACE AND STRUCTURAL STEEL WORK WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND PROVIDE ALL NECESSARY INSERTS, REGLETS, ETC. REQUIRED.

CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT TWENTY-EIGHT (28) DAYS.

ALL REINFORCING SHALL CONFORM TO ASTM A615 GRADE 60, UNLESS OTHERWISE NOTED.

REINFORCING STEEL BARS WELDED TO STEEL INSERTS AND STRUCTURAL SHAPES SHALL CONFORM TO ASTM A615 GRADE 40 OR ASTM A706 GRADE 60, AND WELDING SHALL CONFORM TO AWS D1.4 "STRUCTURAL WELDING CODE - REINFORCING STEEL". ALL WELDMENTS SHALL RECEIVE TWO (2) COATS OF PRIMER.

ALL WELDED WIRE MESH SHALL CONFORM TO ASTM A185.

ALL PRESTRESSING STEEL SHALL CONFORM TO ASTM A416, STRESS RELIEVED, LOW RELAXATION, 7-WIRE STRAND, GRADE 270 KSI.

ALL FLANGE-TO-FLANGE CONNECTIONS BETWEEN ADJACENT DOUBLE TEES AND EXPANSION BEARING ASSEMBLIES SHALL BE STAINLESS STEEL. ALL CONNECTION PLATES, INSERTS, BOLTS, NUTS AND WASHERS, COIL RODS AND COIL INSERTS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123, OR ASTM A153, AS APPLICABLE. SURFACE PREPARATION OF THE COMPONENTS PRIOR TO GALVANIZING SHALL BE CONSISTENT WITH RECOMMENDATIONS BY THE STRUCTURAL STEEL PAINTING COUNCIL (SSPC). AREAS OF EMBEDS DESIGNATED FOR FIELD WELDING SHALL BE FREE OF GALVANIZING WITHIN 3" OF THE WELD.

ALL DAMAGED GALVANIZING, AS WELL AS FIELD WELDED CONNECTIONS, SHALL BE CLEANED OF LOOSE AND DELETERIOUS MATERIALS AND TOUCHED UP WITH TWO (2) COATS OF ZINC RICH PAINT IN ACCORDANCE WITH SSPC-PAINT 20.

THREAD COIL RODS OR EQUIVALENT ALONG SPANDRELS TO EXTEND IN TO C.I.P. TOPPING FOR DIAPHRAGM ACTION AS REQUIRED.

ALL GROUT SHALL BE OF THE NON-SHRINK, NON-FERROUS TYPE WITH MINIMUM $f_c = 6000$ PSI 28-DAY STRENGTH.

PRECAST UNITS SHALL BE ERECTED WITHOUT EXCEEDING TOLERANCE LIMITS SPECIFIED IN PCI MNL-127.

THE FOUNDATION FOR THE PRECAST STRUCTURE IS DESIGNED TO SUPPORT THE COMPLETED SUPERSTRUCTURE. DURING ERECTION OF THE SUPERSTRUCTURE, THE CONTRACTOR SHALL FURNISH ALL TEMPORARY BRACING AND SUPPORTS AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCE SO THAT STRUCTURAL INTEGRITY OF THE FOUNDATION IS NOT COMPROMISED.

SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

STEEL ROOF DECK NOTES

STEEL ROOF DECK SHALL CONFORM TO AISI SPECIFICATION FOR THE DESIGN OF LIGHT GAGE, COLD-FORMED STRUCTURAL STEEL MEMBERS AND THE STEEL DECK INSTITUTE'S DESIGN REQUIREMENTS. COMPOSITE STEEL FLOOR DECK SHALL CONFORM TO ASTM A-611, GRADE C AND D, OR FROM A-653-94 STRUCTURAL QUALITY GRADE 33 OR HIGHER.

STEEL ROOF DECK, UNLESS SPECIFIED OTHERWISE, SHALL BE 1.5" DEEP, 20 GAGE MINIMUM, TYPE "B" BY VULCRRAFT OR APPROVED EQUAL. STEEL DECK SHALL BE GALVANIZED 660.

STEEL ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS, AND SHALL BE FASTENED TO THE SUPPORTS AT THE UNIT ENDS AND AT INTERMEDIATE SUPPORTS AS RECOMMENDED BY THE STEEL DECK MANUFACTURER. MINIMUM ATTACHMENT REQUIREMENTS SHALL BE #6 TEK SCREWS AT 12" OC AT EVERY SUPPORT AND 4" OC AT DECK PERIMETER. #6 PUDDLE WELDS MAY BE SUBSTITUTED IN LIEU OF #6 TEK SCREWS WHERE STEEL DECK BEARS ON STRUCTURAL STEEL.

ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 - "STRUCTURAL WELDING CODE - SHEET STEEL".

PROVIDE FIELD TOUCH UP OF ALL WELDS IN DECK WITH ZRC COLD GALVANIZING COMPOUND.

ALL ACCESSORIES TO THE STEEL DECK, INCLUDING EDGE ANGLES, POUR STOPS, COLUMN CLOSURES, END CLOSURES, COVER PLATES AND GRIDER FILLERS, ETC., SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE.

COLD FORMED METAL FRAMING NOTES

ALL LIGHTWEIGHT STEEL PRODUCTS, DETAILING, FABRICATION AND INSTALLATION SHALL MEET THE REQUIREMENTS OF AISI NASPEC 2001, "NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".

ALL PREMANUFACTURED METAL TRUSS PRODUCTS, DETAILING, FABRICATION AND INSTALLATION SHALL MEET THE REQUIREMENTS OF "STANDARD FOR COLD-FORMED STEEL FRAMING - TRUSS DESIGN", 2001 EDITION.

STEEL GRADES:
12, 14, & 16 GAGE COMPONENTS F_y (MIN) = 50 ksi (ASTM A-446 GRADED)
18 GAGE COMPONENTS F_y (MIN) = 33 ksi (ASTM A-446 GRADE B)
20 GAGE COMPONENTS F_y (MIN) = 33 ksi (ASTM A-446 GRADE A)

ALL COMPONENTS SHALL BE ZINC COATED (660 GALVANIZED) IN ACCORDANCE WITH ASTM A-525.

FLAME CUTTING OF MEMBERS OR HOLES IS NOT PERMITTED.

ALL FIELD CONNECTIONS SHALL CONFORM TO DETAILS SHOWN ON FABRICATION PLANS.

ALL STUDS, HARDWARE, ACCESSORIES, AND FASTENERS SHALL BE GALVANIZED.

ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 - "STRUCTURAL WELDING CODE - SHEET STEEL".

CONCRETE NOTES

ALL CONCRETE WORK SHALL CONFORM TO ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI-318-02, AND "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI-315.

BASIC STRUCTURAL SYSTEM = BEARING WALL SYSTEMS
SEISMIC RESISTING SYSTEM = ORDINARY REINFORCED CONCRETE SHEAR WALLS
RESPONSE MODIFICATION COEFFICIENT, $R = 4$
DEFLECTION AMPLIFICATION FACTOR, $C_d = 4$
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE ANALYSIS
DESIGN BASE SHEAR = 1,200k EAST
1,400k WEST

ALL CONCRETE FOR FOUNDATIONS AND SLABS ON GRADE SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,500 PSI.

REMOVE ALL DEBRIS FROM BOTTOM OF FOOTINGS PRIOR TO PLACING CONCRETE. DO NOT PLACE CONCRETE ON FROZEN SOIL, ICE, MUD, OR IN STANDING WATER. ALL FOUNDATION SUBGRADES SHALL BE INSPECTED AND APPROVED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER WITH GEOTECHNICAL ENGINEERING EXPERIENCE PRIOR TO BEING CONCREDED.

ALL CONCRETE SHALL BE CONTINUOUSLY MOIST CURED FOR SEVEN (7) DAYS MINIMUM. CONCRETE SHALL BE KEPT MOIST BY FOG SPRAYING, CURING PAPER AND/OR ACCEPTABLE CURING COMPOUNDS.

CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR APPROVAL. MIX DESIGN SHALL INDICATE 28-DAY STRENGTHS, CEMENT CONTENT, AIR CONTENT, WATER-CEMENT RATIO, AMOUNT OF FINE AND COARSE AGGREGATES, AND ADMIXTURES.
MAX. WATER-CEMENT RATIO = 0.42 FOR 4,500 PSI SLUMP:
4" FOR SLABS
5" FOR ALL OTHER CONCRETE
MAX. AGGREGATE SIZE -
FOOTINGS & FOUNDATIONS - 3/4" TO 1 1/2"
SLAB-ON-GRADE - 3/4" TO 1"
CONCRETE FILL - 1/2"

CEMENT SHALL BE PORTLAND CEMENT, TYPE I OR II, CONFORMING TO ASTM C-150. AGGREGATES SHALL CONFORM TO ASTM C-33. AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C-260. NON-SHRINK GROUT SHALL CONFORM TO ASTM C-109. EXPANSION JOINTS SHALL BE 1/2" THICK ASPHALT IMPREGNATED FIBERBOARD JOINT MATERIAL, CONFORMING TO ASTM D-1751. CURING COMPOUND SHALL BE CLEAR, CONFORMING TO ASTM C-309.

COLD WEATHER CONCRETE WORK SHALL CONFORM TO ACI-306. HOT WEATHER CONCRETE WORK SHALL CONFORM TO ACI-305.

GROUND FLOOR CONCRETE SLAB-ON-GRADE IS NOT DESIGNED AS A STRUCTURAL DIAPHRAGM.

THE MAXIMUM LENGTH BETWEEN CONSTRUCTION JOINTS OF WALLS AND FOOTINGS SHALL NOT EXCEED 40 FEET, EXCEPT AS INDICATED ELSEWHERE ON THESE DRAWINGS.

ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60. WELDED WIRE MESH SHALL CONFORM TO ASTM A185 AND ASTM A82.

WELDED WIRE MESH SHALL HAVE MINIMUM END AND SIDE LAPS OF 1'-0".

CONCRETE ACCESSORIES SHALL BE ADEQUATE TO MAINTAIN REINFORCING ACCURATELY IN PLACE AND BE NON-CORROSIVE, NON-STAINING TYPE.

LAP ALL BAR REINFORCING PER ACI-318. STAGGER SPLICES IN WALLS AND ALL HORIZONTAL REINFORCEMENT.

CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS AND COLUMNS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. USE HOPPERS, CHUTES OR TRUNKS OF VARYING LENGTHS SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED FIVE (5) FEET.

MINIMUM REINFORCEMENT COVER, UNLESS NOTED OTHERWISE:
-CONCRETE CAST AGAINST EARTH: 3"
-CONCRETE EXPOSED TO EARTH OR WEATHER:
No. 6 TO No. 18 BARS - 2"
No. 5 AND SMALLER - 1 1/2"
-CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
No. 11 AND SMALLER - 3/4"

MASONRY NOTES

NEW MASONRY WALLS ARE DESIGNED IN ACCORDANCE WITH ACI 530-02 USING WORKING STRESS DESIGN, WITH APPENDIX A.3 SPECIAL PROVISIONS FOR SEISMIC DESIGN.

CONSTRUCTION SHALL CONFORM TO ACI 530I-02, "SPECIFICATIONS FOR MASONRY STRUCTURES."

ALL MASONRY CONSTRUCTION SHALL BE INSPECTED AND TESTED TO ASSURE CONFORMANCE WITH THE DETAILS SHOWN ON THESE PLANS.

MASONRY UNITS SHALL CONFORM TO ASTM C90 WITH COMPRESSIVE STRENGTH OF 1900 PSI, LIGHT WEIGHT BLOCK.

MASONRY MORTAR FOR STRUCTURAL CMU SHALL BE TYPE "S," CONFORMING TO ASTM C270.

ALL BAR REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60.

ALL BAR REINFORCING SHALL BE GROUTED SOLID FULL HEIGHT USING LOW LIFT METHOD.

ALL BOND BEAMS SHALL BE GROUTED SOLID.

GROUT SHALL CONFORM TO ASTM C94 OF C476.

PROVIDE No. 9 WIRE STANDARD LAJUR-TYPE HORIZONTAL REINFORCEMENT AT 16" o.c. TYPICAL, UNLESS OTHERWISE NOTED.

PROVIDE GALVANIZED TRI-TIES AT 16" o.c. AT ALL STEEL COLUMNS IN CONTACT WITH MASONRY.

PROVIDE (2)-#5 VERTICAL (ONE IN EACH CORE) SOLIDLY GROUTED AT ALL DOOR, WINDOW, AND CONSTRUCTION JOINTS.

GENERAL NOTES

DESIGNED IN ACCORDANCE WITH THE STATE OF CONNECTICUT BASIC BUILDING CODE, 2003 IBC WITH STATE OF CONNECTICUT AMENDMENTS.

IF ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THESE DRAWINGS AND/OR CONDITIONS SPECIFIED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH THE AFFECTED WORK.

TYPICAL DETAILS AND NOTES SHOWN HEREIN SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

ALL UNDERGROUND UTILITY LOCATIONS SHALL BE VERIFIED PRIOR TO STARTING EXCAVATION WORK. CALL BEFORE YOU DIG PRIOR TO STARTING ANY EXCAVATION.

WORK AREAS SHALL BE MARKED, FENCED, AND OTHERWISE SECURED SO AS TO PROVIDE PROPER PROTECTION FOR THE PUBLIC, AND AS REQUIRED BY THE BUILDING INSPECTOR.

IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING AND FORMWORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. THIS INCLUDES PROVIDING TEMPORARY BRACING, SHORING, GUYS OR TIE-DOWNS. THESE TEMPORARY SUPPORTS SHALL REMAIN IN PLACE UNTIL ALL STRUCTURAL COMPONENTS ARE STABLE AND COMPLETED.

FOUNDATION DESIGN BASED ON GEOTECHNICAL ENGINEERING REPORT BY "DR. CLARENCE WELT, P.E., P.C. GEOTECHNICAL ENGINEERING" DATED JUNE 4, 2008.

ROOF (LEVEL GS) LOADS:
LIVE LOAD = 40 PSF UNIFORM, 3000 LBS CONCENTRATED (PARKING)
GROUND SNOW LOAD, $P_g = 30$ PSF (CT SUPPLEMENT - APPENDIX K)
EXPOSURE FACTOR, $C_e = 0.9$
THERMAL FACTOR, $C_t = 1.2$
IMPORTANCE FACTOR, $I_s = 1.0$
FLAT ROOF SNOW LOAD, $P_f = 23$ PSF (USE 30 PSF MIN. PER STATE OF CONNECTICUT AMENDMENTS)
SNOW LOADS INCREASED FOR DRIFT, SLIDING, ETC. WHERE APPLICABLE.

FLOOR LIVE LOADS:
PARKING GARAGE = 40 PSF UNIFORM, 3000 LBS CONCENTRATED
STAIRS AND LOBBIES = 100 PSF UNIFORM

WIND LOADS:
BASIC WIND SPEED (3-SEC. GUST) = 110 MPH (CT SUPPLEMENT - APPENDIX K)
IMPORTANCE FACTOR = 1.00
EXPOSURE = "B"
INTERNAL PRESSURE COEFFICIENT, $C_{pi} = \pm 0.18$
WIND LOADS DETERMINED USING ASCE 7-02 PROVISIONS.
MAIN WIND-FORCE PRESSURES: NORMAL TO RIDGE, $W_{HLW} = 23.2$ PSF
PARALLEL TO RIDGE, $W_{HLW} = 19.3$ PSF
SEE TABLE, THIS SHEET, FOR COMPONENTS AND CLADDING PRESSURES

SEISMIC DESIGN CRITERIA:
 $S_a = 0.243$ $S_1 = 0.062$ (CT SUPPLEMENT - APPENDIX K)
SEISMIC IMPORTANCE FACTOR, $I_e = 1.00$
SEISMIC USE GROUP = 1
SITE CLASS = "D"
 $S_{ds} = 0.259$ $S_{d1} = 0.099$
SEISMIC DESIGN CATEGORY = "B"
BASIC STRUCTURAL SYSTEM = BEARING WALL SYSTEMS
SEISMIC RESISTING SYSTEM = ORDINARY REINFORCED CONCRETE SHEAR WALLS
RESPONSE MODIFICATION COEFFICIENT, $R = 4$
DEFLECTION AMPLIFICATION FACTOR, $C_d = 4$
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE ANALYSIS
DESIGN BASE SHEAR = 1,200k EAST
1,400k WEST

MISCELLANEOUS LOADS:
HANDRAILS AND GUARDS = 50 PLF OR 200 LBS AT ANY POINT
VEHICLE BARRIERS = 6000 LBS HORIZONTALLY APPLIED AT 18 INCHES ABOVE FLOOR LEVEL
SOIL LATERAL LOADS: AT-REST COEFFICIENT FOR RESTRAINED RETAINING WALLS, $K_a = 0.45$
ACTIVE PRESSURE COEF. FOR CANTILEVERED RET. WALLS, $K_a = 0.28$

ALL COMPACTED CONTROLLED FILL BEING PLACED MUST BE TESTED BY AN APPROVED TESTING LABORATORY DURING THE FILL OPERATION. SLABS AND FOOTINGS SHALL NOT BE PLACED UNTIL FILL TEST REPORTS HAVE BEEN CHECKED AND APPROVED BY THE ENGINEER. PRIOR TO PLACING CONCRETE, EXISTING SOIL CONDITIONS SHALL BE INSPECTED AND VERIFIED BY THE GEOTECHNICAL ENGINEER. ALL UNSUITABLE SOIL SHALL BE REMEDIATED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. BUILDING PAD PREPARATION SHALL BE IN ACCORDANCE WITH THE SITE DRAWINGS, SPECIFICATIONS, AND GEOTECHNICAL REPORT REQUIREMENTS.

ALL SPECIAL INSPECTION REPORTS PREPARED IN ACCORDANCE WITH THE STATEMENT OF SPECIAL INSPECTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW IN A TIMELY MANNER. THE FINAL REPORT OF SPECIAL INSPECTIONS SHALL NOT BE ISSUED UNTIL ALL SPECIAL INSPECTION REPORTS HAVE BEEN RECEIVED AND APPROVED BY THE ENGINEER.

STRUCTURAL STEEL NOTES

STEEL SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN", AISC 335-89/91, OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A992, EXCEPT AS MODIFIED BELOW:
ALL MISCELLANEOUS STRUCTURAL STEEL SHALL CONFORM TO ASTM A36.
ALL HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE B.
ALL ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36.

ALL WELDS SHALL USE E70XX ELECTRODES AND CONFORM TO THE "STRUCTURAL WELDING CODE (STEEL)", AWS D1.1, LATEST EDITION. ALL WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH AWS REQUIREMENTS.

ALL BOLTED CONNECTIONS SHALL BE BEARING TYPE, UTILIZING 3/4" DIA. ASTM A325-N TENSION CONTROL BOLTS, UNLESS SHOWN OTHERWISE.

ALL BOLTS, NUTS, AND WASHERS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS. USE DIRECT TENSION INDICATORS, CONFORMING TO ASTM F959, ON ALL A325 BOLTS.

ALL STRUCTURAL STEEL SHALL BE SHOP PRIMED (ONE COAT OF 2 MIL DRY FILM, MIN.). SHOP PRIMER TO BE FABRICATOR'S STANDARD COLOR.

OPENINGS THROUGH BEAMS AND COLUMNS SHALL NOT BE PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

FIELD FLAME CUTTING OF ANY STRUCTURAL MEMBERS IS NOT PERMITTED.

EXPOSED TOPS OF ALL STEEL HOLLOW STRUCTURAL SECTION COLUMNS SHALL BE COVERED WITH A SHOP WELDED CAP PLATE AND SHALL BE WATERTIGHT.

ALL STEEL SHALL BE FABRICATED, ERECTED, AND TESTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"

STRUCTURAL STEEL SHOP DRAWINGS, PREPARED BY THE STEEL SUBCONTRACTORS, SHOWING COMPLETE DIMENSIONS, DETAILS, SIZES, AND GRADES OF STEEL MEMBERS AND CONNECTIONS, TYPE AND NUMBER OF WELDS AND BOLTS, SHALL BE SUBMITTED FOR APPROVAL PRIOR TO THE FABRICATION OF THE STEEL COMPONENTS. THE STRUCTURAL STEEL SUBCONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING, VERIFICATION AND COORDINATION OF DIMENSIONS AND DETAILS WITH THE STRUCTURAL AND OTHER PORTIONS OF THE CONTRACT DRAWINGS. THE STEEL SUBCONTRACTOR SHALL REPRODUCE ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR UTILIZATION AS SHOP DRAWINGS, UNLESS APPROVAL OF THE STRUCTURAL ENGINEER IS OBTAINED.

THE STEEL FABRICATOR SHALL BE AISC (AMERICAN INSTITUTE OF STEEL CONSTRUCTION) CERTIFIED.

ALL STRUCTURAL STEEL ERECTION AND SHORING SHALL BE INSPECTED BY AN INDEPENDENT TESTING AGENCY RETAINED BY THE OWNER FOR THE FOLLOWING ITEMS:
USUALLY INSPECT ALL CONNECTIONS, INCLUDING, BUT NOT LIMITED TO, BOLTS, WELDS, METAL DECK WELDS TO SUPPORT STRUCTURE, AND METAL DECK SIDE LAPS.
INSPECT WELDS AT MOMENT CONNECTIONS.
INSPECT STEEL ERECTION FOR ORIENTATION AND PLUMBNESS.

ALL STEEL CONNECTIONS SHALL BE DESIGNED BY THE STEEL FABRICATOR TO RESIST MINIMUM THE REACTIONS SHOWN THUS XXX ON THESE DRAWINGS. REACTIONS NOT SHOWN SHALL BE DESIGNED TO RESIST 5 KIPS MINIMUM.

GEOTECHNICAL NOTES

ALL FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE NET SOIL BEARING PRESSURE OF 6,000 PSF, PER GEOTECHNICAL ENGINEERING REPORT BY "DR. CLARENCE WELT, P.E., P.C. GEOTECHNICAL ENGINEERING" DATED JUNE 4, 2008. NO FOOTINGS SHALL BEAR ON LOAM OR SOIL FILL. IF UNSUITABLE SOIL OR ROCK IS ENCOUNTERED AT PROPOSED BOTTOM OF FOOTING ELEVATIONS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

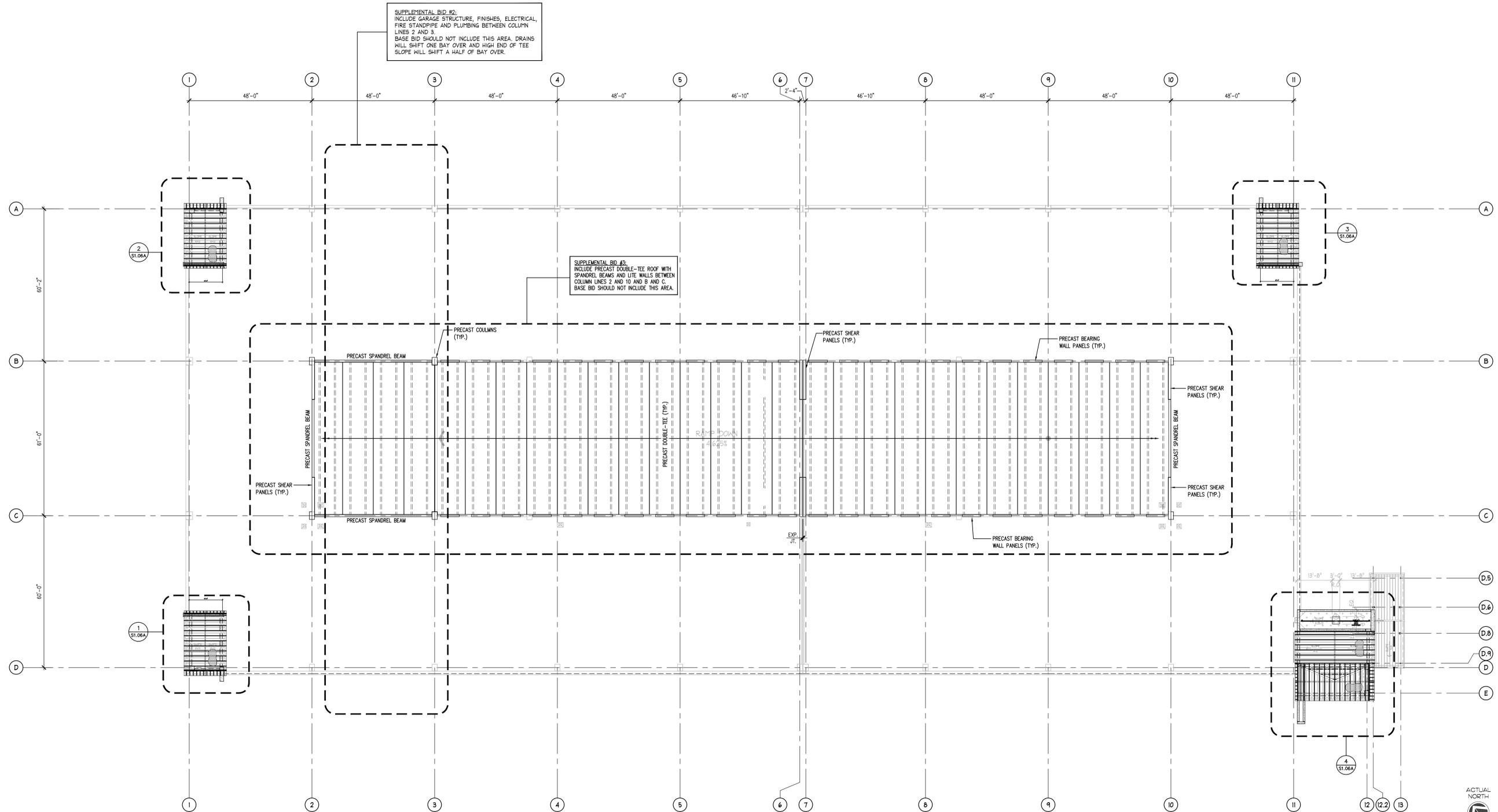
PLACE THREE (3) FEET OF 3/4" MINUS COMPACTED PROCESSED STONE BASE BENEATH ALL FOUNDATIONS AND PROOF ROLL THE SUBGRADES TO AT LEAST 85% OF MODIFIED OPTIMUM DENSITY WITH A 6+ TON VIBRATORY COMPACTOR. THE PROCESSED STONE BASE SHALL EXTEND BEYOND THE FOOTINGS FOR A HORIZONTAL DISTANCE EQUAL TO AT LEAST THE DEPTH OF THE FILL BENEATH THE FOOTINGS. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

THE BOTTOM OF ALL EXTERIOR FOOTING ELEVATIONS SHALL BE A MINIMUM OF 3'-6" BELOW FINISHED EXTERIOR GRADE, UNLESS NOTED OTHERWISE. COMPACT BOTTOM OF FOOTING SUBGRADE WITH A GRANULAR COMPACTOR. SEE GEOTECHNICAL REPORT FOR ADDITIONAL FOOTING SUBGRADE PREPARATION AND REQUIREMENTS.

CONTROLLED FILL SHALL BE INERT, GRANULAR FILL FREE FROM ORGANICS. SEE GEOTECHNICAL REPORT FOR CONTROLLED FILL REQUIREMENTS.

ALL CONTROLLED FILL PLACED SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY UNIT WEIGHT AS DETERMINED BY THE MODIFIED PROCTOR TEST, ASTM D1557. MINIMUM COMPACTION REQUIREMENTS REFER TO PERCENTAGES OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557C.

drawing title GENERAL NOTES		STATE OF CONNECTICUT DEPARTMENT OF PUBLIC WORKS	
REVISIONS			
mark	date	description	
-	12/06/13	RECORD SET	
DRAWING PREPARED BY:		DATE	
BL COMPANIES		07/10/09	
959 RESEARCH PARKWAY		SCALE	AS NOTED
MERIDEN, CONNECTICUT, 06450		DRAWN BY	LP
PROJECT		APPROVED BY	CA
100% CONSTRUCTION DOCUMENTS PACKAGE		DRAWING NO.	
SCSU PARKING GARAGE			
CF-RS-273			
CAD no.	project no.		
507D1007100	CF-RS-273		\$1.00

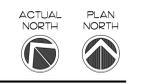


SUPPLEMENTAL BID #2:
 INCLUDE GARAGE STRUCTURE, FINISHES, ELECTRICAL,
 FIRE STANDPIPE AND PLUMBING BETWEEN COLUMN
 LINES 2 AND 3.
 BASE BID SHOULD NOT INCLUDE THIS AREA. DRAINS
 WILL SHIFT ONE BAY OVER AND HIGH END OF TEE
 SLOPE WILL SHIFT A HALF OF BAY OVER.

SUPPLEMENTAL BID #3:
 INCLUDE PRECAST DOUBLE-TEE ROOF WITH
 SPANDREL BEAMS AND LITE WALLS BETWEEN
 COLUMN LINES 2 AND 10 AND B AND C.
 BASE BID SHOULD NOT INCLUDE THIS AREA.

1 ROOF LEVEL FRAMING PLAN
 1/16"=1'-0"

1. ROOF CONSTRUCTION CONSISTS OF PRECAST DOUBLE TEES SUPPORTED ON PRECAST SPANDREL BEAMS OR PRECAST BEARING WALL PANELS.
2. FOR DOOR OPENING SIZES AND LOCATIONS SEE ARCHITECTURAL DRAWINGS. FOR SLAB AND TEE PENETRATIONS, SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.



drawing title G5 LEVEL FRAMING PLAN		STATE OF CONNECTICUT DEPARTMENT OF PUBLIC WORKS	
REVISIONS			
mark	date	description	
-	12/06/13	RECORD SET	
DRAWING PREPARED BY:		date	07/10/09
BL COMPANIES		scale	AS NOTED
355 RESEARCH PARKWAY		drawn by	LP
MERIDEN, CONNECTICUT, 06450		approved by	CA
project		drawing no.	S1.06
100% CONSTRUCTION DOCUMENTS PACKAGE			
SCSU PARKING GARAGE			
CF-RS-273			
CAD no. S07D1007106	project no. CF-RS-273		

ILSCO
91-000

Westinghouse



WLI Load Interrupter Switchgear

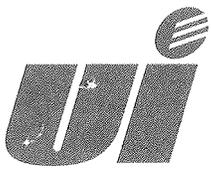
Built on Order # HR-86082U
Drawing #

Switch Style SM8256A9 A01 GPI
7274A62G06

KV Rating
Nominal 13.8kV
Maximum 15kV
B.I.L. 95

Ampere Rating
Continuous 600A
Interrupting 600A
Momentary 40KA
Fault Close 40KA

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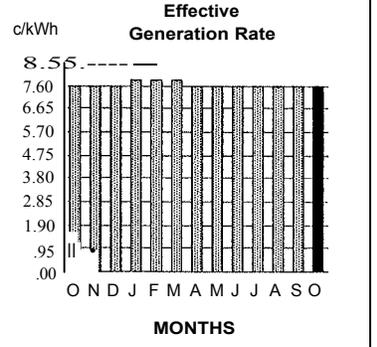
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		Current	Last				
014014849	29 days	10778	10682	X	2100 =	201600 kWh	1562.4
Shoulder	29 days	10767	10668	X	2100 =	207900 kWh	1738.8
Off Peak	29 days	21717	21526	X	2100 =	401100 kWh	1537.2
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