**NOTE TO CRITERIA ARCHITECT & DCS PROJECT MANAGER:**

**This version is for a Major Capital Project authorized by the Commissioner to be a Design-Build Project.**

EDITING: To Show the Editing Notes in this MS Word document the show/hide symbol (¶) button must be must turned on in the MS Word Toolbar. To print this document show/hide symbol (¶) must be turned off in the MS Word Toolbar, this will enable the document to indicate the correct number of total pages. The below blue text are project specific information that must be completed by the Criteria Architect as applicable to the specific project. When complete change blue text to black text. The *bold and italicized text* is for example purposes only and must be modified and edited by the Criteria Architect to make it project specific. For text boxes, left click on Insert and then insert project specific information over the word Insert in the underlined space.

**TABLES:** To view the Table Grid in this MS Word document, click inside any table, then go to the **Table Tools > Layout** tab, **Table** group, and click **View Gridlines.**

HEADERS AND FOOTERS: The header and footer for each page of the Project Manual shall match the format, font (Arial), size (9 pt), font style (BOLD & CAPITALIZED) and line borders of the header and footer shown herein. The header of each page shall contain the Division 01 General Requirements, and the page number & number of pages as shown herein. The footer shall contain the project number in the right hand side as shown herein. Division 00 and 01 contain a revision date in the left side of the footer. This date is to remain as it is for DCS informational purposes only and should not be altered by the Criteria Architect.

SECTIONS, SUBSECTIONS, PARAGRAPHS: If a Section is not part of the project scope, delete the Section in the General Requirements, then check “NOT USED” in the Table of Contents. DO NOT delete the Section title from the Table of Contents.

If a Sub-Section is not applicable to the project, DO NOT delete the Sub-Section title from the General Requirements OR from the Table of Contents. Check “NOT USED” in the Table of Contents, and then state “NOT USED” beneath the Sub-Section Title in the General Requirements. Delete the contents of the Sub-Section.

Edit Paragraphs carefully to reflect specific project requirements, or delete them if they do not apply. DO NOT include Paragraphs or parts of Paragraphs in the project manual, which have no applicability to the specific project. KEEP IN NUMERICAL SEQUENCE.

DIVISION 00 SECTIONS contain the bidding documents as required by the Connecticut Department of Administrative Services (CT DAS) Procurement Services Unit and the Connecticut General Statutes. Any and all revisions to this section are the sole responsibility of the CT DAS Procurement Services Unit, and the Criteria Architect shall under no circumstances change these documents. The Criteria Architect is responsible to list these sections in the Project Manual Table of Contents.

GENERAL CONDITIONS: Please review the General Conditions carefully and coordinate the requirements of those Articles including the Definitions.

DIVISION 01 SECTIONS are the organizational key of the Project Manual. All revisions to this Division are the responsibility of the Criteria Architect. Division 01 must be closely coordinated with Division 00, Division 02 through 49, the Drawings, and Available Information.

LEED REQUIREMENTS: The “Division 01 General Requirements - Design -Build Capital Projects” include the Requirements for LEED & Commissioning. For D-B Capital Projects that DO NOT require LEED & Commissioning, the DCS PM and Criteria Architect must delete LEED & Commissioning sections designated in the Edit Notes, and then check “NOT USED” in the Table of Contents. DO NOT delete the Section title from the Table of Contents.

NOTES TO CRITERIA ARCHITECT, DCS PROJECT MANAGER, & USER AGENCY: The DCS PM, Criteria Architect, and User Agency must determine whether this Project must comply with the following requirements of CGS § 16a-38k:

1. Project is approved and funded on or after January 1, 2008;
2. New construction of a state facility that is projected to cost not less than five million dollars;
3. renovation of a state facility that is projected to cost not less than two million dollars, that is financed with state funds and is approved and funded on or after January 1, 2008,

**01 50 00 TEMPORARY FACILITIES AND CONTROLS**

1. **Summary:** Section 01 50 00 Temporary Facilities And Controls contains the following subsections:

|  |  |
| --- | --- |
| **01 51 13** | **Temporary Electricity And Lighting** |
| **01 51 16** | **Temporary Fire Protection** |
| **01 51 23** | **Temporary Heating, Cooling And Ventilating** |
| **01 51 33** | **Temporary Telecommunications** |
| **01 51 36** | **Temporary Water** |
| **01 52 13** | **Field Offices And Sheds** |
| **01 52 19** | **Temporary Sanitary Facilities** |
| **01 54 00** | **Construction Aids** |
| **01 55 13** | **Temporary Access Roads** |
| **01 55 16** | **Haul Routes** |
| **01 56 00** | **Temporary Barriers And Enclosures** |
| **01 56 43** | **Temporary Protection** |
| **01 57 19** | **Temporary Environmental Controls NOTE:** If the specific project **requires** LEED then state **“NOT USED”** in *this* Table of Contents and **delete the Section** from the General Requirements. |
| **01 57 21** | **Environmental Management NOTE:** If the specific project **does not require** LEED then state **“NOT USED”** in *this* Table of Contents and **delete the Section** from the General Requirements. |
| **01 57 23** | **Temporary Storm Water Control NOTE:** If the specific project **does not** require a Stormwater Pollution Permit then state **“NOT USED”** in *this* Table of Contents and **delete the Section** from the General Requirements. Consult with Project Manager. |
| **01 57 30** | **Indoor Environmental Control NOTE:** If the specific project **does not require** LEED then state **“NOT USED”** in *this* Table of Contents and **delete the Section** from the General Requirements. |
| **01 57 40** | **Construction Indoor Air Quality Management Plan NOTE:** If the specific project **does not require** LEED then state **“NOT USED”** in *this* Table of Contents and **delete the Section** from the General Requirements. |
| **01 58 13** | **Temporary Project Signage** |

### **01 51 13 TEMPORARY ELECTRICITY AND LIGHTING**

NOTE: PM and Architect, pay close attention to coordinate these needs with the Division of Construction Services and User Agency. Revise as necessary.

NOTE: Modify paragraph and subparagraph below to include special power loads, such as continued operation of the existing facility, while power changeover is being made.

### **A. Related Documents:** All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## Power and lighting may be taken from the power company's nearest pole with temporary poles, if needed, to extend the line to project. If permanent power lines have been installed before beginning project, then temporary lines can be brought in from the last pole.

### Provide service required for construction with branch wiring and distribution boxes located to provide power and lighting by construction-type extension cords. Meter shall be provided and installed by the Design-Builder.

### All costs of temporary power and light shall be paid by the Design-Builder.

### **OR:**

OR

NOTE: If work involves an existing facility, the following may be used if approved by the Agency. If paragraph below is used then delete the above 3 paragraphs, if not delete paragraph below.

### Connect to existing service, provide branch wiring and distribution boxes located to provide power and lighting by construction-grade extension cords. Owner will pay cost of energy used. Take measures to conserve energy. Provide lighting for construction operations. At the termination of construction, return the facilities to their original condition.

**E.** **Power Distribution System:** Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.

NOTE: Insert additional provisions for power distribution to suit project requirements.

#### **F.** **Temporary Lighting:** When overhead floor or roof deck has been installed, provide temporary lighting with local switching. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.

**End Section 01 51 13**

#### **Temporary Electricity and Lighting**

### **01 51 16 TEMPORARY FIRE PROTECTION**

NOTE: PM and Architect, pay close attention to coordinate these needs with the Division of Construction Services and User Agency. Revise as necessary.

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### The Design-Builder, during construction, shall be responsible for loss or damage by fire to the work until Acceptance of the Work. Any fire used within the structure for working purposes shall be extinguished when not in use. Bitumen or tar shall be melted on the ground only. No flammable material shall be stored in the structure in excess of amounts allowed by the authorities. No gasoline shall be stored in or close to the building at any time. The Design-Builder shall assign a responsible employee to be in charge of fire protection measures.

### If an EPDM or other single-ply roof is included in the work that requires cleaning of mating surfaces of laps with gasoline, limit amount of gasoline on roof to 2 gallons which shall be in U.L. listed containers. Also provide one 30 B:C fire extinguisher within 75 feet of any point on the roof.

**End Section 01 51 16**

#### **Temporary Fire Protection**

**01 51 23 TEMPORARY HEATING, COOLING, AND VENTILATING**

### **Related Documents:** All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

NOTE: Use the appropriate paragraph below that is applicable to the project. Delete paragraphs that are not applicable.

## B. Temporary Heating, Cooling and Ventilating:

NOTE: Paragraph below includes general requirements.

#### Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

NOTE: Modify paragraph below as necessary. LP-gas or fuel oil heaters are commonly used. Steam or hot-water heaters, gas-fired space heaters, or electric unit heaters are also often used.

##### **Heating Facilities:** Except where the Owner authorizes use of the permanent system, provide vented, self-contained, LP-gas or fuel oil heaters with individual space thermostatic control.

NOTE: Usually retain subparagraph below. Gasoline burning and salamander heating units are usually prohibited.

##### Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.

#### Provide temporary heat during construction for interior areas included in the Contract to counteract low temperatures or excessive dampness. Maintain during said period or periods until final completion of the Contract, unless otherwise approved by the Owner in writing. Windows, doors, ventilators and similar openings shall be temporarily closed. Provide heat and ventilation to maintain specified conditions for construction operations and to protect materials and finishes from damage by temperature or humidity. The permanent heating system is not to be used for temporary heating unless approved, in writing, by the Owner. If approved, use of the permanent heating system by the Design-Builder does not constitute beneficial use by the Owner. The warrantee for said system will not commence until Substantial Completion is granted. Costs shall be paid by the Design-Builder. See individual Sections for temperature/humidity limits. Temporary heating methods shall comply with OSHA regulations and other applicable codes, statutes, rules and regulations and shall be approved by the Construction Administrator and Owner.

#### Permanent air handling equipment, when used for temporary heating, shall be equipped with disposable "construction" filters. The construction filters shall have an average efficiency at least equal to the filters specified under **Division 23**, but not less than 30 percent when tested in accordance with ASHRAE 52.2 "Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size." The filters shall have an average arrestance of not less than 90 percent efficiency on one (1) micron size particles. Before turning over the system for final acceptance, the Design-Builder shall remove and dispose of the construction filters; clean the ductwork; spray clean the heating and cooling coils, and drain pans to "like new" condition; and install the filters specified in the Design-Builder’s **Division 23 Section 23 40 00 "HVAC Air Cleaning Devices."**

#### **NOTE:** If Section 01 57 30 "Indoor Environmental Control” **is utilized** for this project then **add** the paragraph below.

#### If Section 01 57 30 "Indoor Environmental Control” **is not utilized** for this project then **delete** the paragraph below.

#### Refer to the Design-Builder’s **Section 01 57 30 "Indoor Environmental Control”** for additional requirements regarding means and methods of providing temporary heating, cooling and ventilating. Meet manufacturer’s standards for minimum and maximum temperatures and humidity governing installation of materials and systems.

OR

NOTE: If work involves an existing facility, the following may be used if approved by the Agency.

NOTE: If Paragraph B. below is used, then delete Paragraph B and subparagraphs above.

NOTE: If paragraph B. below is not used then delete it.

#### **B.** **Existing Heating System:**

#### **1.** The Design-Builder may use the existing heating system with temporary extensions, radiators or unit heaters, but such use is subject to the Owner's approval. Coordinate use of existing facilities with Owner. Provide additional, temporary extensions and units to satisfy the criteria given in the preceding paragraph. Owner will pay cost of energy used. Take measures to conserve energy. At the termination of construction, return the facilities to their original condition. Before operation of permanent facilities, verify that installation is approved for operation and that filters are in place.

OR

NOTE: If applicable to the project, and if steam is available, use the following paragraph and delete both B paragraphs and subparagraphs above.

NOTE: If paragraph B. below is not used then delete it.

#### **B. Existing Steam:**

#### Steam from the Agency's lines shall be metered and paid for by the Design-Builder at a price approved by the Agency and Owner. The Design-Builder shall arrange with their Heating Subcontractor to install and maintain temporary piping, radiators or unit heaters, reducing valves, steam traps and other necessary fittings and accessories. Traps shall be provided to prevent steam from entering main returns. The temporary layout shall meet the approval of the Construction Administrator. Condensate meter (or meters) shall be installed to record usage of steam. At the termination of construction, return the facilities to their original condition.

#### **Note:** Add the following sentence when steam is supplied free. If it is not supplied free, then delete the sentence.

#### **2.** Steam from the Agency's lines will be furnished to the Design-Builder without cost, but may be discontinued if use is unreasonable or wasteful.

**End Section 01 51 23**

#### **Temporary Heating, Cooling, & Ventilating**

### **01 51 33 TEMPORARY TELECOMMUNICATIONS**

NOTE: PM and Architect, pay close attention to coordinate these needs with the Division of Construction Services and User Agency. Revise as necessary.

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### **B. Temporary Telephone Service and Data:** The Design-Builder shall provide temporary telephone service throughout the design- construction period for all personnel engaged in the construction activities. Install telephone on a separate line for each temporary office and first aid station. The Design-Builder shall provide telephone service in their offices and a separate telephone service in the Owner and Construction Administrator’s (CA) Office. It is preferred the Design-Builder use a cellular phone. Basic service and local calls will be paid for by the Design-Builder. Toll calls will be paid for by the respective users.

#### **Separate Telephone Lines:** Provide additional telephone lines as required below and as required by **Section 01 52 13 Field Offices** **and Sheds**:

NOTE: Modify list below to suit project requirements.

**1.1** Where an office has more than **two (2)**occupants, install a telephone for each additional occupant.

**1.2** Provide dedicated telephone lines for a separate fax machine in both the Design-Builder’s office and the DCS / CA office.

#### At each telephone, post a list of important telephone numbers, including but not limited to the following:

**2.1 Local police and fire departments;**

**2.2 Ambulance service;**

**2.3 Design-Builder;**

**2.4 Design-Builder’s Architect & Engineers offices;**

**2.5 Design-Builder’s Subcontractors;**

**2.6 Design-Builder’s Suppliers;**

**2.7 DCS PM;**

**2.8 Construction Administrator;**

**2.9 OSBI and OSFM Inspectors;**

**2.10 User Agency representative**.

OR

NOTE: In existing facilities, coordinate with the Owner, and, if applicable, use the following:

### **B.** Pay phones are available at the existing facility; the Design-Builder may use this equipment.

OR

### Public pay phones are not available at the existing facility, but the Agency, with prior notification, will make a phone available for local calls. All pay calls shall be logged and paid by the Design-Builder.

**End Section 01 51 33**

#### **Temporary Telecommunications**

**01 51 36 TEMPORARY WATER**

NOTE: PM and Criteria Architect, pay close attention to coordinate these needs with the needs of the specific project and User Agency. Revise as necessary.

### **A. Related Documents:** All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**B.** Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.

#### **Sterilization:** Sterilize temporary water piping prior to use.

NOTE: Use the appropriate paragraph below that is applicable to the project. Delete paragraphs that are not applicable.

### **Existing Water Service:** Water for construction purposes may be taken from the existing service. The Design-Builder shall provide connections, approved backflow prevention device, meter and pipe to the water main or nearest hydrant, subject to the approval of the Authority Having Jurisdiction. Upon completion of work, the Design-Builder shall remove the temporary connections and backfill if necessary. If new water service is installed before construction is complete, the new system may be used provided it is returned to the Owner in as-new condition. The Design-Builder shall pay for the water used, as metered.

OR

NOTE: Where water is not available on site, use Paragraph C below, and delete Paragraph C. above.

**C. Water Service Not Available At Site:** Water is not available on site and the Design-Builder shall transport water to the project. Cost shall be paid by the Design-Builder.

**End Section 01 51 36**

#### **Temporary Water**

**01 52 13 FIELD OFFICES AND SHEDS**

NOTE: DCS PM and Criteria Architect must determine the requirements from Section 01 52 13 "Field Office and Sheds” support facilities, field offices, and storage that are appropriate to support this Project. Edit paragraphs carefully to reflect specific project requirements, or delete them if they do not apply.

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## B Support Facilities Installation:

### **1.** **General:** Locate field offices, storage sheds, and other temporary construction and support facilities in designated area(s) as shown in the Design-Builder’s approved **"Plan of Use".** Final placement of the field office trailers is to be approved by the Construction Administrator.

#### **1.1** Maintain support facilities until Acceptance of the Work. Remove prior to Acceptance of the Work with permission from the Owner.

### **2. Field Offices:** Provide insulated, weathertight temporary offices of sufficient size to accommodate required office personnel at the Project Site. Keep all offices clean and orderly, sweep weekly, and remove rubbish on a daily basis. Furnish and equip offices as follows:

#### **C. Design-Builder Provided Field Offices/Equipment:** The Design-Builder shall provide an office for their own use and a method to contact them by e-mail and telephone at any point and time.

#### **NOTE:** Select either **OPTION “A”** or **OPTION “B”** below. **DELETE** the option not used.

**ALSO DELETE** the bold blue text **[OPTION “A or B”]** in brackets.

OPTION A: The subparagraph below is for Agencies providing space in an existing building. Typically Projects less than $2,500,000 when the Agency can provide space. Add or delete items of furniture or supplies as needed.

NOTE: Also, check with the Project Manager and Agency if the following paragraph can be used for alteration, renovation or rehabilitation projects.

#### **1. [OPTION “A”] State User Agency Provided Field Offices:** The State User Agency will furnish, without charge, **one (1)** room for the Design-Builder’s use as an office in an existing building. The Owner and Construction Administrator will share space with the Design-Builder. The Design-Builder shall provide and install a 5-lb ABC fire extinguisher and an approved first aid kit. The Design-Builder shall be responsible for furniture and shall keep this area clean and return it to its original condition after use. The Design-Builder shall provide the following furniture and Equipment, which will remain his property. The furniture may be used but shall be in good condition as judged by the Owner and Construction Administrator. The Design-Builder shall supply the State User Agency provided office or trailer(s) with a water cooler for hot and cold water.

NOTE: Revise subparagraph below by updating, adding, or deleting equipment items, furniture, and supplies examples as needed.

|  |  |
| --- | --- |
| **1.1** | **The Design-Builder shall provide a lockable chemical toilet(s) with toilet tissue for the owners’ use. The Design-Builder shall maintain the facility in a sanitary condition. (See 01 52 19 Temporary Sanitary Facilities).** |
| **1.2** | **One (1) Lockable, double-pedestal, office desks, each with an executive chair.** |
| **1.3** | **One (1) Plan tables.** |
| **1.4** | **One (1) Plan racks.** |
| **1.5** | **Six (6) Conference chairs and a conference table (approx. 5 feet x 12 feet).** |
| **1.6** | **One (1) Side tables (approx. 3 feet x 5 feet).** |
| **1.7** | **One (1) Wall mounted, cork display boards (4 foot x 6 foot).** |
| **1.8** | **One (1) Wall mounted, white, wipe-off board, with markers (3 foot x 4 foot).** |
| **1.9** | **Two (2) File cabinets (lockable four drawer letter size).** |
| **1.10** | **Two (2) Bookshelves each with 10 linear feet x 12 inch wide shelving.** |
| **1.11** | **Two (2) Large capacity waste receptacles.** |
| **1.12** | **One (1) Plain paper, Fax Machine with dedicated telephone line approved by Owner.** |
| **1.13** | **Two (2) Telephones with telephone lines and voice mail.** |
| **1.14** | **One (1) Telephones lines (dedicated to computer use) with high-speed Internet connection (minimum of DSL or cable modem service).** |

NOTE: The DCS PM & the Criteria Architect shall edit & revise all subparagraphs below by updating, adding, or deleting additional hardware or software examples as needed for the Specific Project.

**2. Field Office Computer System**

The Design Builder shall provide **Insert number of computers** Field Office Computer System(s) for the Department’s exclusive use for each field office specified. The Design Builder has the option to provide **either** a desktop **or** a laptop computer system in accordance with the minimum requirements listed below.

2.1 Field Office Desktop Computer System:

|  |  |  |
| --- | --- | --- |
| **2.1** | **Processor:**  |  |
| **2.2** | **Memory:** |  |
| **2.3** | **Hard Drive:** |  |
| **2.4** | **Optical Drive:** |  |
| **2.5** | **Ports:** |  |
| **2.6** | **Network/Wireless:**  | Ethernet or wireless card to be compatible with the selected internet and office network connections; |
| **2.7** | **Graphics:** |  |
| **2.8** | **Monitor:**  |  |
| **2.9** | **Keyboard:** |  |
| **2.10** | **Mouse:** |  |

**OR**

**OR:**

**2.1 Field Office Laptop Computer System:**

|  |  |  |
| --- | --- | --- |
| **2.1** | **Processor:**  |  |
| **2.2** | **Memory:** |  |
| **2.3** | **Hard Drive:** |  |
| **2.4** | **Optical Drive:** |  |
| **2.5** | **Ports:** |  |
| **2.6** | **Network/Wireless:**  | Ethernet or wireless card to be compatible with the selected internet and office network connections; |
| **2.7** | **Graphics:** |  |
| **2.8** | **Display:**  |  |
| **2.9** | **Battery:** |  |
| **2.10** | **External Monitor:** |  |
| **2.11** | **External Keyboard** |  |
| **2.12** | **External Mouse:** |  |
| **2.13** | **Miscellaneous:** | One compatible port replicator with AC adapter, one additional AC adapter, one DC adapter and one padded carrying case |

**3. Computer Software:**

The Design Builder shall provide software for the computer system in accordance with the minimum requirements listed below.

|  |  |  |
| --- | --- | --- |
| **3.1** | **Operating System Software:** |  |
| **3.2** | **Productivity Software:**  |  |
| **3.3** | **Security Software:** |  |
| **3.4** | All software shall include the most current updates and patches at the time the computer system is provided to the Owner. The Design Builder shall provide for installation of updates and patches for the operating system, productivity and security software during the term of use of the computer system by the Owner. Updates and patches shall be provided by an automatic update method. |
| **3.5** | The Owner may install and maintain proprietary software on the computer in order to run the Owner’s construction management programs. |

4. Miscellaneous Computer Requirements

The initial condition of the computer system shall be nearly pristine. All owner installed e-mail accounts, games, spyware, online services, applications, network or other profiles previously set up on the system shall be removed prior to placement in the field office. If the system was provided for in a previous CT DAS / DCS contract, all software not specified shall be removed prior to placement in the current field office.

**4.1** The Design-Builder shall provide an uninterruptible power supply (UPS), minimum **Insert** VA, **Insert** Watts and full time surge suppression for each field office computer system specified in this Section.

**4.2** The Design-Builder shall provide all cables, connections and software required to connect the field office computer system to the printer and the scanner.

**4.3** When more than one computer system is specified for a field office, the Design-Builder shall provide either an Ethernet or wireless office network to allow all computer systems in the field office to access the field office internet service, the printer and the scanner.

**4.4** The Design-Builder shall provide appropriate dust covers for all field office desktop computer systems.

**4.5** The Design-Builder shall provide all manuals necessary for operation of the computer system and software with the system and shall include all documentation normally furnished with the equipment and software when purchased.

**4.6** The Owner will be utilizing the computer system to run or access Owner provided construction management software applications. These applications are known to run on Intel and AMD compatible equipment when using the Windows **Insert** operating system. If the Owner experiences problems running these applications due to hardware or software compatibility, the Design-Builder shall replace the equipment to ensure compatibility to the satisfaction of the Owner within **five (5)** business days.

**4.7** The computer system shall be maintained in good working order. If a portion of the system becomes defective, inoperable, damaged, or stolen, that portion shall be repaired or replaced within **five (5)** business days after the Design-Builder is notified by the Owner. If the computer system and related accessories are not maintained by the Design-Builder as required, the Owner may withhold partial payments until the computer system is operational to the Owner’s satisfaction.

### **Field Office Internet Service:**

The Design-Builder shall provide broadband internet service for the field office. Broadband internet service shall be capable of a minimum average upload speed of **Insert** unless otherwise approved by the Owner.

**OR:**

OR

NOTE: Select either OPTION “A” above or OPTION “B” below. DELETE the option not used.

**ALSO DELETE** the bold blue text **[OPTION “A or B”]** in brackets.

NOTE: The subparagraph below is for Projects typically between $2,500,000 and below $5,000,000 that require a field office trailer. Add or delete items of equipment items, furniture, and supplies examples as needed.

#### **[OPTION “B”] Owner and Construction Administrator’s Field Offices / Equipment:** The Design-Builder shall provide a field office for the Owner and Construction Administrator. The field office shall be ***one (1) single wide trailer 12’ x 60’****.* The trailer shall have to be in “new condition” as determined by the Construction Administrator. ***The trailer shall have a minimum of two (2) offices, each with a minimum of 150 square feet each, and a main meeting area***.The trailers shall have ample natural light, heating of sufficient capacity to maintain 70 degrees (F) in winter and air conditioning of sufficient capacity to maintain 75 degrees (F) in summer. The operational noise level of the supplied HVAC systems shall be low enough so as not to impede the conducting of meetings. The Design-Builder shall provide a 5-lb. ABC fire extinguisher and an OSHA- approved first aid kit. The Design-Builder shall provide the following furniture, and equipment which will remain his property. The furniture may be used but shall be in good condition as judged by the Owner and Construction Administrator. The Design Builder shall supply the Owner and Construction Administrator’s provided office or trailer(s) with a water cooler for hot and cold water.

NOTE: Revise subparagraph below by updating, adding, or deleting equipment items, furniture, and supplies examples as needed.

|  |  |
| --- | --- |
| **1.1** | **The Design-Builder shall provide a lockable chemical toilet(s) with toilet tissue for the owners’ use. The Design-Builder shall maintain the facility in a sanitary condition. (See Section 01 52 19 Temporary Sanitary Facilities).** |
| **1.2** | **Two (2) Lockable, double-pedestal, office desks, each with an executive chair.** |
| **1.3** | **Two (2) Plan tables.** |
| **1.4** | **Two (2) Plan racks.** |
| **1.5** | **Ten (10) Conference chairs and a conference table (approx. 5 feet x 12 feet).** |
| **1.6** | **Two (2) Side tables (approx. 3 feet x 5 feet).** |
| **1.7** | **Two (2) Wall mounted, cork display boards (4 foot x 6 foot).** |
| **1.8** | **Two (2) Wall mounted, white, wipe-off board, with markers (3 foot x 4 foot).** |
| **1.9** | **Four (4) File cabinets (lockable four drawer letter size).** |
| **1.10** | **Two (2) Bookshelves each with 10 linear feet x 12 inch wide shelving.** |
| **1.11** | **Two (2) Large capacity waste receptacles.** |
| **1.12** | **One (1) Plain paper, Fax Machine with dedicated telephone line approved by Owner.** |
| **1.13** | **Two (2) Telephones with telephone lines and voice mail.** |
| **1.14** | **Two (2) Telephones lines (dedicated to computer use) with high-speed Internet connection (minimum of DSL or cable modem service).** |

NOTE: The DCS PM & the Criteria Architect shall edit & revise all subparagraphs below by updating, adding, or deleting additional hardware or software examples as needed for the Specific Project.

**2. Field Office Computer System**

The Design Builder shall provide **Insert number of computers** Field Office Computer System(s) for the Department’s exclusive use for each field office specified. The Design Builder has the option to provide **either** a desktop **or** a laptop computer system in accordance with the minimum requirements listed below.

2.1 Field Office Desktop Computer System:

|  |  |  |
| --- | --- | --- |
| **2.1** | **Processor:**  |  |
| **2.2** | **Memory:** |  |
| **2.3** | **Hard Drive:** |  |
| **2.4** | **Optical Drive:** |  |
| **2.5** | **Ports:** |  |
| **2.6** | **Network/Wireless:**  | Ethernet or wireless card to be compatible with the selected internet and office network connections; |
| **2.7** | **Graphics:** |  |
| **2.8** | **Monitor:**  |  |
| **2.9** | **Keyboard:** |  |
| **2.10** | **Mouse:** |  |

**OR**

**OR:**

**2.1 Field Office Laptop Computer System:**

|  |  |  |
| --- | --- | --- |
| **2.1** | **Processor:**  |  |
| **2.2** | **Memory:** |  |
| **2.3** | **Hard Drive:** |  |
| **2.4** | **Optical Drive:** |  |
| **2.5** | **Ports:** |  |
| **2.6** | **Network/Wireless:**  | Ethernet or wireless card to be compatible with the selected internet and office network connections; |
| **2.7** | **Graphics:** |  |
| **2.8** | **Display:**  |  |
| **2.9** | **Battery:** |  |
| **2.10** | **External Monitor:** |  |
| **2.11** | **External Keyboard** |  |
| **2.12** | **External Mouse:** |  |
| **2.13** | **Miscellaneous:** | One compatible port replicator with AC adapter, one additional AC adapter, one DC adapter and one padded carrying case |

**3. Computer Software:**

The Design Builder shall provide software for the computer system in accordance with the minimum requirements listed below.

|  |  |  |
| --- | --- | --- |
| **3.1** | **Operating System Software:** |  |
| **3.2** | **Productivity Software:**  |  |
| **3.3** | **Security Software:** |  |
| **3.4** | All software shall include the most current updates and patches at the time the computer system is provided to the Owner. The Design Builder shall provide for installation of updates and patches for the operating system, productivity and security software during the term of use of the computer system by the Owner. Updates and patches shall be provided by an automatic update method. |
| **3.5** | The Owner may install and maintain proprietary software on the computer in order to run the Owner’s construction management programs. |

4. Miscellaneous Computer Requirements

The initial condition of the computer system shall be nearly pristine. All owner installed e-mail accounts, games, spyware, online services, applications, network or other profiles previously set up on the system shall be removed prior to placement in the field office. If the system was provided for in a previous CT DAS / DCS contract, all software not specified shall be removed prior to placement in the current field office.

**4.1** The Design-Builder shall provide an uninterruptible power supply (UPS), minimum **Insert** VA, **Insert** Watts and full time surge suppression for each field office computer system specified in this Section.

**4.2** The Design-Builder shall provide all cables, connections and software required to connect the field office computer system to the printer and the scanner.

**4.3** When more than one computer system is specified for a field office, the Design-Builder shall provide either an Ethernet or wireless office network to allow all computer systems in the field office to access the field office internet service, the printer and the scanner.

**4.4** The Design-Builder shall provide appropriate dust covers for all field office desktop computer systems.

**4.5** The Design-Builder shall provide all manuals necessary for operation of the computer system and software with the system and shall include all documentation normally furnished with the equipment and software when purchased.

**4.6** The Owner will be utilizing the computer system to run or access Owner provided construction management software applications. These applications are known to run on Intel and AMD compatible equipment when using the Windows **Insert** operating system. If the Owner experiences problems running these applications due to hardware or software compatibility, the Design-Builder shall replace the equipment to ensure compatibility to the satisfaction of the Owner within **five (5)** business days.

**4.7** The computer system shall be maintained in good working order. If a portion of the system becomes defective, inoperable, damaged, or stolen, that portion shall be repaired or replaced within **five (5)** business days after the Design-Builder is notified by the Owner. If the computer system and related accessories are not maintained by the Design-Builder as required, the Owner may withhold partial payments until the computer system is operational to the Owner’s satisfaction.

### **Field Office Internet Service:**

The Design-Builder shall provide broadband internet service for the field office. Broadband internet service shall be capable of a minimum average upload speed of **Insert** unless otherwise approved by the Owner.

### **Storage and Fabrication Sheds:** Install storage and fabrication sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on-site.

#### Storage sheds for tools, materials and equipment shall be weathertight with heat, lighting and ventilation for products requiring controlled conditions.

#### Remove temporary materials, equipment services and construction before Substantial Completion.

#### Clean and repair damage caused by installation or use of temporary facilities. Restore existing facilities used during construction to be specified or to original condition.

**End Section 01 52 13**

#### **Field Offices and Sheds**

### **01 52 19 TEMPORARY SANITARY FACILITIES**

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### **Design-Builder’s Construction Work:** Provide toilet facilities for Design-Builder’s and Design-Builder’s subcontractor’s employees engaged on the Project, including employees of other contractors in accordance with the OSHA Table D-1 (29CFR CH.XVII, OSHA Standard 1926.51) below. Locate toilets where directed and maintain them in a sanitary condition.

**NOTE:** Table below is from 29CFR CH.XVII, OSHA Standard 1926.51. Do Not Edit or Delete Table.

|  |  |
| --- | --- |
| **Number Of Employees** | **Minimum Number Of Facilities\*** |
| 20 or less | 1 toilet |
| 20 or more | 1 toilet and 1 urinal per 40 employees |
| 200 or more | 1 toilet and 1 urinal per 50 employees |
| \*Toilet/Urinal Combinations shall count as only one facility. |

**NOTE:** Edit subparagraphs below to suit project.

**1.** Job sites, not provided with a sanitary sewer, shall be provided with one of the following toilet facilities unless prohibited by State Codes:

**1.1** Chemical toilets;

**1.2** Recirculating toilets;

**1.3** Combustion toilets.

**2.** Inside buildings, locate toilet facilities no more than 4 stories or 60 feet above or below, nor more than 500 feet travel on the same level from the work location of any person.

**3.** Locate toilet facilities no more than 1000 feet from any work location.

### The Design-Builder’s shall provide, where directed, chemical toilets with toilet tissue, plus wash basins with water, soap and paper towels. The Design-Builder’s shall maintain the facilities in a sanitary condition.

### If women are employed in the work, provide separate, designated facilities for them of the same kind. Provide an adequate number of each kind of facility for each gender.

**End Section 01 52 19**

#### **Temporary Sanitary Facilities**

### **01 54 00 CONSTRUCTION AIDS**

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### The Design-Builder shall furnish tools, apparatus and appliances, hoists and/or cranes and power for same, scaffolding, runways, ladders, temporary supports and bracing and similar work or material necessary to insure convenience and safety in the execution of the Contract Documents except where this is otherwise specified in any Technical Specification Section. All such items shall meet the approval of DCS but responsibility for design, strength, and safety shall remain with the Design-Builder. All such items shall comply with Federal OSHA regulations and applicable codes, statutes, rules and regulations, including compliance with the requirements of the current edition of the "Manual of Accident Prevention in Construction" published by the A.G.C. (Associated General Contractors of America) and the standards of the Connecticut Department of Labor (DOL).

### Staging/laydown areas, exterior, and interior, required for the execution of the Contract Documents, shall be furnished, erected, relocated if necessary, and removed by the Design-Builder. Staging/laydown shall be maintained in a safe condition without charge to the Owner and for the use of all trades as needed.

**End Section 01 54 00**

#### **Construction Aids**

**01 55 13 TEMPORARY ACCESS ROADS**

### **Related Documents:** All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### **B. Temporary Roads and Paving:** Construct and maintain temporary roads and paving to support the indicated loading adequately and to withstand exposure to traffic during the construction period. Locate temporary paving for roads, storage areas, and parking where the same permanent facilities will be located. Review proposed modifications to permanent paving with the Construction Administrator and Owner.

#### Provide paving for pedestrian access and parking for field offices.

#### **Paving:** Comply with Design-Builder’s Division 32 Section 32 12 16 "Asphalt Paving" for construction and maintenance of temporary paving.

#### Coordinate temporary paving development with sub-grade grading, compaction, installation and stabilization of sub-base and installation of base and finish courses of permanent paving.

#### Install temporary paving to minimize the need to rework the installations and to result in permanent roads and paved areas without damage or deterioration when occupied by the Owner.

NOTE: Revise subparagraph below if concrete is the permanent pavement material.

#### Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration, and supervision.

**End Section 01 55 13**

#### **Temporary Access Roads**

### **01 55 16 HAUL ROUTES**

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### The Design-Builder may use on-site paved roads and parking areas but shall not encumber same or their access. Public highways shall not be blocked by standing trucks, parked cars, material storage, and construction operations or in any other manner.

### Public roads and existing paved roads, drives and parking areas on Owner's property shall be kept free from scrap or debris due to construction operations and any damage to their surface caused by the Design-Builder shall be repaired by him at his own expense.

### If the work of the Contract affects public use of any street, road, highway, or thoroughfare, the Design-Builder shall confer with the police authority having jurisdiction to determine if and how many police are needed for public safety in addition to any barriers and signals that may be needed. The Design-Builder will be responsible for payment of any needed police services.

**End Section 01 55 16**

#### **Haul Routes**

### **01 56 00 TEMPORARY BARRIERS AND ENCLOSURES**

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### Provide barriers to prevent public entry into construction areas and to protect existing facilities from damage by construction operations.

### Before excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated on the Construction Documents, or enclose the entire construction site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.

#### **1.** **Chain Link Fence:** Provide chain link construction fencing with posts set in a compacted mixture of gravel and earth. Use a ***six (6)*** foot-high (minimum) chain link fence with top rail and filter fabric screening.  At completion of the project, the Design-Builder must remove the construction fence completely, including all portions of below-ground footings. Fence posts must be removed, not sawn off flush with the soil line.

### **Security Enclosure and Lockup:** Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Provide keys to the Construction Administrator.

### **Storage/laydown areas:** Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

### Provide covered walkways as required by governing authorities for public rights-of-way and for public access to existing buildings.

### Provide barriers around **all** trees and plants designated to remain. Protect against vehicular traffic, materials' dumping, chemically injurious materials, puddles, or running water.

### Provide temporary, insulated, weathertight closures at openings to the exterior to provide acceptable working conditions and protection for materials, to allow for temporary heating and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.

### Barriers and enclosures shall be in conformance with code requirements. Do not block egress from occupied buildings unless necessary to further the work of the Contract. In this case, secure the Department's approval of an alternate egress plan.

### See also **Division 00 General Conditions,** **Article 19 “Protection of the Work, Persons, and Property.**

**End Section 01 56 00**

#### **Temporary Barriers and Enclosures**

### **01 56 43 TEMPORARY PROTECTION**

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### Protect buildings, equipment, furnishings, grounds, and plantings from damage. Any damage shall be repaired or otherwise made good at no expense to the State.

### Provide protective coverings and barricades to prevent damage. The Design-Builder shall be held responsible for, and must make good at his own expense, any water, or other type of damage due to improper coverings. Protect the public and building personnel from injury.

### Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.

### Provide protective coverings for walls, projections, jambs, sills and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects and storage. Prohibit traffic and storage on waterproofed and roofed surfaces and on lawn and landscaped areas.

### See also **Division 00 General Condition,** **Article 18 “Protection of the Work, Persons, and Property.**

**End Section 01 56 43**

#### **Temporary Protection**

### **01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS**

**NOTE:** If the specific project **requires** LEED then **delete** this Section from this document.

**NOTE:** Delete this Section only when cost considerations are paramount. Expand if specific pests, such as termites or pigeons, are known to be a problem. Refer to governing codes, such as OSHA, EPA, and USDA covering most temporary environmental controls. However, work involving alterations and additions may require more specific job-related controls; the following are examples. Confer with Project Manager for specifics. Edit as required.

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### **Temporary Environmental Controls:** Design-Builder is to provide the following controls.

#### **Rodent and Pest Control:** Before deep foundation work has been completed, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Employ this service to perform extermination and control procedures at regular intervals so the Project will be free of pests and their residues at materials.

#### Dust Control (construction and demolition);

#### Noise Control;

#### Erosion and Sediment Control;

#### Pollution Control;

#### Traffic Control.

**End Section 01 57 19**

#### **Temporary Environmental Controls**

**01 57 21 ENVIRONMENTAL MANAGEMENT**

**NOTE:** If the specific project **does not require** LEED Certification and Commissioning then **delete** this Section from this document.

**NOTE:** This Section 01 57 21 "Environmental Management” includes requirements for the protection of natural resources. This section emphasizes an integrated team approach to address environmental issues. This section does not address environmental remediation, abatement, regulatory requirements, or requirements for environmental impact statements/reports. Coordinate with requirements of other sections; verify that products and installation methods specified in other sections are environmentally appropriate.

##### **NOTE:** Revise paragraphs carefully to reflect specific project requirements, or delete them if they do not apply.

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**B. Summary:**

**1.** Section includes:

**1.1** Special requirements for environmental management during construction operations.

**1.2** Monitoring requirements.

**NOTE:** Coordinate requirements specified under this section with work specified under related sections. Edit below to suit project.

**C. Related Sections:**

**1.** **01 45 00 – Quality Control:** Meetings and project coordination.

**2.** **01 81 13 – Sustainable Design Requirements:** Closeout Documentation

**D. Definitions**

**1.** Definitions pertaining to sustainable development: As defined in ASTM E2114.

**2.** Environmental pollution and damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; or degrade the utility of the environment for aesthetic, cultural, or historical purposes.

**E. Preconstruction Meeting**

**1.** After award of Contract and prior to the commencement of the Work, schedule and conduct meeting with Owner and Construction Administrator to discuss the proposed Environmental Protection Plan and to develop mutual understanding relative to details of environmental protection.

**2.** Schedule meeting in conjunction with preconstruction meeting for Environmental Regulatory Requirements.

**3.** Verify procedures and requirements necessary to ensure implementation of Environmental Protection Plan is coordinated with applicable environmental regulatory requirements.

**F. Submittals**

**1. Environmental Protection Plan:** Not less than **ten (10)** days before the Pre-construction meeting, prepare and submit an Environmental Protection Plan.

**1.1** **Format:** At a minimum, address the following elements:

**.1 Identification of Project;**

**.2 Identification and contact information for Environmental Manager;**

**.3 General site information;**

**.4 Summary of Plan;**

**.5 Procedures to address water resources;**

**.6 Procedures to address land resources;**

**.7 Procedures to address air resources;**

**.8 Procedures to address fish and wildlife resources;**

**.9 Monitoring procedures.**

**1.2** Revise and resubmit Plan as required by Owner.

**.1** Approval of Design-Builder’s Plan will not relieve the Design-Builder of responsibility for compliance with applicable environmental regulations.

**2.** Reports for Field Quality Control.

**G. Environmental Protection**

**1.** **Protection of natural resources:** Comply with applicable regulations and these specifications. Preserve the natural resources within the Project boundaries and outside the limits of permanent Work performed under this Contract in their existing condition or restore to an equivalent or improved condition as approved by Owner.

**NOTE:** Green building rating systems often include provisions for minimizing disturbance of the site’s topography, soils and vegetation. USGBC-LEED™ v3.0, or latest version for example, includes credit for reduced site disturbance, limiting site disturbance to maximum 40 feet beyond the building perimeter, 10 feet beyond solid paving for pedestrian areas and parking, 15 feet beyond solid paving for roadways, and 25 feet beyond pervious paving.

**1.1** Confine demolition and construction activities to **[work area limits indicated on the Drawings] [maximum 40 feet beyond the building perimeter, 10 feet beyond solid paving, and 25 feet beyond pervious paving].**

**1.1.1** Disposal operations for demolished and waste materials that are not identified to be salvaged, recycled or reused:

**.1** Remove debris, rubbish, and other waste materials resulting from demolition and construction operations, from site.

**.2** No burning permitted.

**.3** Transport materials with appropriate vehicles and dispose off‑site to areas that are approved for disposal by governing authorities having jurisdiction.

**.4** Avoid spillage by covering and securing loads when hauling on or adjacent to public streets or highways. Remove spillage and sweep, wash, or otherwise clean project site, streets, or highways.

**1.2** **Water resources:** Protect groundwater resources from contaminants.

**1.2.1** Comply with requirements of the National Pollutant Discharge Elimination System (NPDES) and the State Pollutant Discharge Elimination System (SPDES).

**1.2.2** Oily substances: Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water.

**.1** Store and service construction equipment at areas designated for collection of oil wastes.

**1.2.3** **Mosquito abatement:** Prevent ponding of stagnant water conducive to mosquito breeding habitat.

**1.2.4** Prevent run-off from site during demolition and construction operations.

**1.2.5** **Stream Crossings:** **[Equipment will not be permitted to ford live streams.] [Equipment will be permitted to ford live streams if temporary culverts or bridges are constructed for the purpose. Remove temporary culverts and bridges upon completion of work and repair the area to its original condition, unless otherwise accepted in writing by Owner.]**

**1.3** **Land resources:** Prior to construction, identify land resources to be preserved within the Work area. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and landforms without permission from Owner.

**1.3.1** Conserve distinctive **[geological] [topographical] [historic]** features and character

**1.3.2** **Earthwork:** As specified in the applicable Specification Section under Division 31 Earth Work and as follows:

**.1** **Erodible soils:** Plan and conduct earthwork to minimize the duration of exposure of unprotected soils, except where the constructed feature obscures borrow areas, quarries, and waste material areas. Clear areas in reasonably sized increments only as needed to use the areas developed. Form earthwork to final grade as shown. Immediately protect side slopes and back slopes upon completion of rough grading.

**.2** Delineate work zones so as to restrict compaction of soil elsewhere.

**.3** Delineate buffer zones around moist **areas [and shorelines].**

**.4** Erosion and sedimentation control devices: Construct or install temporary and permanent erosion and sedimentation control features as required.

**NOTE:** For old growth and other significant trees and plants, it may be useful to have a more aggressive approach to protection than the standard prohibitions. The following is an example.

**1.3.3** **Tree and plant protection:**

**.1** Prior to start of construction, tag each tree and plant scheduled to remain with value as approved by Owner. In the event of damage to tree or plant, Owner may at Owner's discretion, deduct the indicated value of the damaged tree or plant from the Design-Builder’s Contract Sum.

**1.4** **Air Resources:** Comply with IAQ Management Plan and as follows:

**1.4.1** Prevent creation of dust, air pollution, and odors.

**1.4.2** Sequence construction to avoid disturbance to site to the greatest extent possible.

**1.4.3** Use mulch, water sprinkling, temporary enclosures, and other appropriate methods to limit dust and dirt rising and scattering in air to lowest practical level.

**.1** Do not use water when it may create hazardous or other adverse conditions such as flooding and pollution.

**1.4.4** Store volatile liquids, including fuels and solvents, in closed containers.

**1.4.5** Properly maintain equipment to reduce gaseous pollutant emissions.

**1.5** **Fish and Wildlife Resources:** Manage and control construction activities to minimize interference with, disturbance of, and damage to fish and wildlife.

**1.5.1** Do not disturb fish and wildlife.

**1.5.2** Do not alter water flows or otherwise significantly disturb the native habitat related to the project and critical to the survival of fish and wildlife, except as indicated or specified.

**1.5.3** Identify and conserve wildlife corridors that intersect the site.

**H. Field Quality Control**

**1. General:**

**1.1** Comply with requirements of agencies having jurisdiction and as specified herein.

**1.2** Provide field practices, shipping, and handling of samples in accordance with ASTM D4840.

**2. Field Quality Control Reports:** Provide in accordance with approved Environmental Protection Plan.

**End Section 01 57 21**

#### **Environmental Management**

### **01 57 23 TEMPORARY STORM WATER CONTROL**

Note: This section to be used when a Stormwater Pollution Permit is required, otherwise delete. Consult with DCS Project Manager.

## A. Related Documents: All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### The Design-Builder shall assume responsibility by submitting the registration required by a general permit for Storm Water pollution control as required by the Connecticut Department of Energy and Environmental Protection (DEEP) “General Permit for the Discharge of Storm Water and Dewatering Wastewaters from Construction Activities"; permit requirements. Refer to CT DEEP Web Site: [**www.ct.gov/deep/site/default.asp**](http://www.ct.gov/deep/site/default.asp)

### Conform to the Storm Water Pollution Control Plan in the Design-Builder’s Contract Documents or have another plan prepared at the Design-Builder’s expense, which has which has been approved by DCS and CT Department of Energy and Environmental Protection (DEEP).

### The Design-Builder shall sign and cause to be signed by each of their appropriate subcontractor(s), the Certification Statement required by the General Permit.

### The Design-Builder shall provide, maintain, and monitor a rain gauge on the site; monitoring shall include maintaining a log of the readings. The rain gauge shall remain the property of the Design-Builder.

**End Section 01 57 23**

#### **Temporary Storm Water Control**

### **01 57 30 INDOOR ENVIRONMENTAL CONTROL**

**NOTE:** If the specific project **does not require** LEED Certification and Commissioning then **delete** this Section from this document.

##### **NOTE:** This Section 01 57 30 "Indoor Environmental Control” provides requirements for control of indoor pollutants and contaminations. Use this Section for a Project that **requires** LEED Certification and Commissioning.

##### **NOTE:** Revise paragraphs carefully to reflect specific project requirements, or delete them if they do not apply.

**A.** **Related Documents:** All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## B. Summary:

#### **1.** This Section includes the following:

##### **1.1** Microbial and fungal contamination control.

##### **1.2** Indoor air quality and pollution control.

##### **1.3** Heating, ventilating, and air conditioning.

#### **2.** **Related Sections:** The following Sections contain requirements that relate to this Section:

##### **2.1** Division 01 **Section** **01 45 23 "Testing for IAQ, Baseline IAQ & Materials"** for building flush out requirements.

##### **2.2** Division 01 **Section 01 57 40 "Construction IAQ Management Plan"** for a description of the IAQ management plan.

## C. References:

#### **1.** **ASTM International (ASTM):**

##### **1.1** ASTM D5116-2006, Standard Guide for Small-Scale Environmental Chamber Determination of Organic Emissions From Indoor Materials/Products.

## D. Microbial And Fungal Contamination Control:

#### **1.** Perform, schedule, and sequence Work as required to limit conditions supporting formations of microbes, molds, and fungi.

##### **1.1** Control water penetration, dampness, and humidity to prevent products not treated for exterior use from becoming soaked or damp.

##### **1.2** Enclose building prior to installing interior materials and finishes.

##### **1.3** Do not install interior products subject to moisture absorption until building is enclosed and wet work generating moisture and humidity is complete.

#### **2.** When visible formations are observed and when formations cannot be completely removed by non-abrasive surface cleaning:

##### **2.1** Remove and replace materials identified as food sources for microbes, molds, and fungi.

##### **2.2** Correct conditions supporting microbial, mold, and fungal growth.

#### **3.** Remove interior products and finishes, identified as food sources that have absorbed sufficient moisture to become damp whether or not microbial, mold, or fungal growth is observed. Include:

##### **3.1** Gypsum board cores.

##### **3.2** Organic materials composed of cellulose fiber or paper.

##### **3.3** Materials containing sucrose or other binders identified as supporting microbial growth.

#### **4.** Remove fibrous insulation materials subject to retaining moisture such as duct liner, insulation, and other materials that are made wet or damp and cannot immediately be made dry.

#### **5.** Repair or replace ductwork, pans, and other conditions subject to moisture condensation, water penetration, or other water source not drained and made dry.

##### **5.1** Remove conditions that have become an environment for microbes, molds, or fungi.

##### **5.2** Do not permit conditions leading to standing water.

#### **6.** Install wet work and allow time needed to dry and cure prior to installing materials such as carpet, acoustical material, textiles, and other material of type that may attract and retain moisture.

## E. Indoor Air Quality and Pollution Control:

#### **1.** Product Emission Rate Standards: Test to ASTM D5116 for maximum indoor air concentration levels.

##### **1.1** **Formaldehyde:**

**1.1.1** 0.03 parts per million where no other requirements are specified.

**1.1.2** 0.005 parts per million where products are specified as formaldehyde free.

##### **1.2** **Total VOC Emissions for Carpet Tile, Adhesives, and Sealers:** 0.05 mg/m2 per hour.

##### **1.3** **4 Phenyl Cyclohexene (4-PC) Particulate Emissions for Carpet:** One (1) part per billion.

##### **1.4 Total Particulate Emission Rate Levels:** 50 ug/m3.

##### **1.5** **Primary and Secondary Regulated Pollutants:** Conform to USEPA, Code of Federal Regulations, Title 40, Part 50 National Air Ambient Air Quality Standard. Refer to EPA Web Site:

##### **http://www.epa.gov/epahome/rules.html#codified.**

##### **1.6** Other Pollutants Not Listed: Not greater than 1/10 of Threshold Limit Value - Time Weighted Average (TLV-TWA) industrial workplace standard.

#### **2. Architectural Coatings - Volatile Organic Compound (VOC) Content Limits:** Conform to US Environmental Protection Agency (EPA) Federal Register 48886/Vol. 63, No.176 Friday, September 11, 1998/ Rules and Regulations. Refer to EPA Web Site: [**http://www.epa.gov/ttn/atw/eparules.html**](http://www.epa.gov/ttn/atw/eparules.html)**.**

#### **3.** Do not use products in combination with or in contact with other products that can be identified as combining to form toxic fumes or sustained odors.

#### **4.** Do not use solvents within interior areas that may penetrate and be retained in absorptive materials such as concrete, gypsum board, wood, cellulose products, fibrous material, and textiles.

#### **5.** Protect construction materials from contamination and pollution from contact with construction dust, debris, fumes, solvents, and other environmentally polluting materials.

#### **6.** Allow furnishings and materials such as carpet, floor tile, acoustical tile, textiles, office furniture, and casework, to air out in clean environment prior to installation.

## F. Heating, Ventilating, and Air Conditioning (HVAC)

#### **1.** Do not run permanent HVAC system during course of construction. Seal ductwork intake and exhaust vents.

#### **2.** Heat, dehumidify, and ventilate building during course of Work as necessary to maintain environmental conditions suitable for drying and curing materials and for prevention of conditions suitable for mold and mildew growth.

##### **2.1** Ventilate building to remove moisture, dust, fumes, and odors.

##### **2.2** Temper and dehumidify air as needed to remove excess moisture.

##### **2.3** Do not use propane heaters and other moisture generating heating systems.

#### **3.** Flush out building prior to commissioning. Refer to **Section 01 45 23 Testing For Indoor Air Quality, Baseline IAQ, & Materials** for procedure.

#### **4.** Inspect ductwork for refuse, contaminants, moisture and other foreign contamination prior to commissioning. Notify Commissioning Authority (CxA) of satisfactory inspection prior to beginning of Commissioning.

#### **5.** Clean underfloor plenum at access flooring acting as supply air duct, prior to occupancy.

## G. Remedial Action:

#### **1.** Promptly take action as necessary to inspect and remediate conditions suspected of supporting microbial, fungal or mold conditions and where contaminated by indoor air pollution.

#### **2.** Notify and consult with Architect prior to beginning remedial action where contamination by hazardous chemicals, microbes, and fungi is suspected.

**End Section 01 57 30**

#### **Indoor Environmental Control**

**01 57 40 CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN**

**NOTE:** If the specific project **does not require** LEED Certification and Commissioning then **delete** this Section from this document.

##### **NOTE:** This Section 01 57 40 "Construction Indoor Air Quality Management Plan” provides the requirements for a construction indoor air quality management plan and HVAC air filters, building flush-out and indoor air quality testing to improve indoor air quality before occupancy. Use this Section for Project that **requires** LEED Certification and Commissioning

##### **NOTE:** Revise paragraphs carefully to reflect specific project requirements, or delete them if they do not apply.

**A. Related Documents:** All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## B. Summary:

#### **1.** This Section includes:

##### **1.1** Description of a Construction Indoor Air Quality (IAQ) Management Plan.

##### **1.2** IAQ construction requirements.

#### **2.** **Related Sections:** The following Sections contain requirements that relate to this Section:

##### **2.1** Divisions 01 through 49 sections for green building rating system requirements specific to the Work of each of those sections. These requirements may or may not include reference to LEED.

##### **2.2** Division 01 Section 01 45 23 "Testing for IAQ, Baseline IAQ, & Materials."

##### **2.3** Division 01 Section 01 57 30 Indoor Environmental Control."

##### **2.4** Design-Builder’s Division 23 – Section 23 05 93 "Testing, Adjusting and Balancing for HVAC" for additional requirements for baseline testing for IAQ.

##### **2.5** Design-Builder’s Division 23 – Section 23 05 93 "Testing, Adjusting and Balancing for HVAC" for cleaning of HVAC system including ductwork, air intakes and returns, and changing of filters.

## C. References:

#### **1.** **American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE):**

##### **1.1** ASHRAE Standard 52.1 INT1-2007, Gravimetric and Dust Spot Procedures for Testing Air Cleaning Devices in General Ventilation for Removing Particulate Matter.

#### **2.** **ASTM International, Inc. (ASTM):**

##### **2.1** ASTM D5116-2006, Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.

#### **3. Sheet Metal and Air Conditioning National Contractors’ National Association (SMACNA):**

##### **3.1** IAQ Guidelines for Occupied Buildings Under Construction ANSI/SMACNA 008-2008.

## D. Indoor Air Quality:

#### **1.** **Goals:** The Owner has set the following indoor air quality goals for jobsite operations on the project, within the limits of the design-construction schedule, Contract Sum, and available materials, equipment, products and services. Goals include:

##### **1.1** Protect workers on the site from undue health risks during construction.

##### **1.2** Prevent residual problems with indoor air quality in the completed building.

## E. Submittals:

#### **1.** **Indoor Air Quality Plan:** Within **fourteen 14** Calendar Days after receipt of **[Notice of Award]** [**Insert**] and prior to any waste removal from the project, develop and submit for review a healthy indoor air quality plan. The plan shall include:

##### **1.1** List of IAQ protective measures to be instituted on the site.

##### **1.2** Schedule for inspection and maintenance of IAQ measures.

## F. Quality Assurance:

#### **1.** Perform material tests and report results in accordance with ASTM D5116.

## G. Substitutions:

#### **1.** Should the Design-Builder desire to use procedures, materials, equipment, or products that are not specified but meet the intent of the specifications to protect indoor air quality on the site, the Design-Builder shall propose these substitutions in accordance with **Section 01 60 00 "Product Requirements".**

## H. Materials:

#### **1.** Low emitting products have been specified in appropriate sections.

## I. Construction IAQ Management Plan:

#### **1.** Meet or exceed the minimum requirements of the **SMACNA "IAQ Guidelines for Occupied Buildings Under Construction ANSI/SMACNA 008-2008."**

##### **1.1** Protect the ventilation system components from contamination, OR provide cleaning of the ventilation components exposed to contamination during construction prior to occupancy.

##### **1.2** After construction ends, prior to occupancy and with all interior finishes installed, perform a building flush-out by supplying a total air volume of 14000 cu ft of outdoor air per sq ft of floor area while maintaining an internal temperature of at least 60 degrees F and relative humidity no higher than 60 percent.

###### 1.2.1 [Insert reference to specification section where building air flush-out is specified in detail or insert requirements here.]

##### **1.3** If building occupancy is to occur before completion of the flush-out, deliver a minimum of 3500 cu ft of outdoor air per sq ft of floor area to the space. Once the space is occupied, ventilate it at a minimum rate of 0.30 cfm/sq ft of outside air or the design minimum outside air rate determined in accordance with the applicable Sections of **ANSI/ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality**or applicable local code, whichever is more stringent. During each day of the flush-out period, begin ventilation a minimum of three (3) hours prior to occupancy and continue during occupancy. Maintain these conditions until a total of 14000 cu ft/sq ft of outside air has been delivered to the space.

#### **2.** During installation of carpet, paints, furnishings, and other VOC-emitting products, provide supplemental (spot) ventilation for at least **seventy-two (72)**hours after work is completed. Preferred HVAC system operation uses supply air fans and ducts only; exhaust provided through windows. Use exhaust fans to pull exhaust air from deep interior locations. Stair towers and other paths to exterior can be useful during this process.

#### **3.** Conduct regular inspection and maintenance of indoor air quality measures including ventilation system protection, and ventilation rate.

#### **4.** Require VOC-safe masks for workers installing VOC-emitting products (interior and exterior) defined as products that emit 150 gpl or more UNLESS local jurisdiction’s requirements are stricter, in which case the strictest requirements shall be followed for use of VOC-safe masks.

#### **5.** Use low-toxic cleaning supplies for surfaces, equipment, and worker’s personal use. Options include several domestically produced biobased, soybean-based solvents cleaning products options, and citrus-based cleaners.

#### **6.** Use wet sanding for gypsum board assemblies. ***Exception:*** Dry sanding allowed subject to the Construction Administrator’s approval of the following measures:

##### **6.1** Full isolation of space undergoing finishing.

##### **6.2** Plastic protection sheeting is installed to provide air sealing during sanding.

##### **6.3** Closure of all air system devices and ductwork.

##### **6.4** Sequencing of construction precludes the possibility of contamination of other spaces with gypsum dust.

##### **6.5** Worker protection is provided.

#### **7.** Use safety meetings, signage, and Design-Builder’s agreements to communicate the goals of the construction indoor air quality plan.

**End Section 01 57 40**

#### **Construction Indoor Air Quality Management Plan**

**01 58 13 TEMPORARY PROJECT SIGNAGE**

**A.** **Related Documents:** All Volumes of the Design-Build Request for Proposals for this Project, including, but not limited to, the D-B Agreement General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **B. Project Sign:** Design-Builder shall engage an experienced sign painter to apply graphics. The Design-Builder shall request the Construction Administrator shall provide Design-Builder with all of the detailed illustration of the sign of the project sign, including but limited, format, wording, font size, color selection, and State Seal. Within **seven (7)** Calendar Days of the Date of the Commencement of the Work the Design-Builder shall erect a Project Sign at the construction site, in a location designated by the DCS Project Manager and Construction Administrator.

##### **Groundbreaking Ceremonies Sign:** For groundbreaking ceremonies only, provide a temporary tripod for the sign illustrated and described below. Make the tripod of 12 ft long 2" x 4"s (Stud Grade), beveled and bolted at the top. Provide approximately 5-ft between legs at grade. Provide a 6-ft long, 2" x 4" seat for the sign; locate 5-ft above grade and nail in place. Nail sign at **four (4)** places where edges intersect tripod legs. Drive a 24" long, pointed 2" x 4" stake into the earth next to each leg and nail to legs.

NOTE: If required, insert a list of required signs.

NOTE: Revise paragraph below as desired. Insert specific requirements, such as parking lot lighting and illumination of project identification sign.

NOTE: Revise subparagraphs below to suit project.

#### **Project Sign**: The Design-Builder shall fabricate the Project Sign as follows:

#### **2.1** ¾ inch, exterior grade, A-B Fir plywood;

#### **2.2** mounted on preservative treated fir posts;

#### **2.3** painted both sides and all edges of sign and the posts with two coats of exterior, white, alkyd primer;

#### **2.4** borders and letters painted with "bulletin" (sign) paint;

#### **2.5** have a self-adhesive decal of the State seal to be provided by the Construction Administrator;

##### **Project Sign Detail:** Sign letter sizes, fonts, colors and related information are shown in the illustration available for download from the on-line DCS Library (3000 Series – Design Phase Forms).

### **C.** The Design-Builder shall remove and properly dispose of the Project Sign within **seven (7)** Calendar Days after Acceptance of the Work of the project.

**End Section 01 58 13**

**Temporary Project Signage**

**END SECTION 01 50 00**

**TEMPORARY FACILITIES AND CONTROLS**