**NOTES TO ARCHITECT/ENGINEER (A/E) & DAS/CS PROJECT MANAGER:**

This version of the Division 01 General Requirements is for **ALL** CT Department of Administrative Services (DAS) Construction Services (CS) **Design-Bid-Build (DBB) AND Construction Manager at Risk (CMR) Capital Construction Projects.**

IMPORTANT NOTE: Section 01 71 23 Field Engineering includes requirements for contractor provision of survey and field engineering services for a project. If there are multiple contracts, responsibility for Work of this section should be identified in Section 01 11 00 “Summary of Work”. Delete them if they do not apply.

**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.

**TEXT:** The below **blue text** are project specific information that must be completed by the A/E 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 A/E 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: The header** 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 shown herein. The header of each page shall contain the Section Number, the Section Title, and the page number & number of pages as shown herein.

**FOOTERS: The 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 footer shown herein. The footer shall contain the project number in the right hand side as shown herein. The revision date in the left side of the footer is to remain as it is for Department informational purposes only and should not be altered by the Architect/Engineer.

**SECTIONS AND PARAGRAPHS:** If a **Section** is not part of the project scope, **do not use** the Section in the General Requirements. Check “**NOT USED**” in the Table of Contents. **DO NOT delete** the Section title from the Table of Contents.

If a **Paragraph** is not applicable to the project, **delete the contents** of the Paragraph and renumber the subsequent Paragraphs. Edit **Paragraphs** carefully to reflect specific project requirements. DO NOT include Paragraphs or parts of Paragraphs in the project manual, which have no applicability to the specific project. KEEP IN NUMERICAL SEQUENCE and re-number as necessary.

**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 A/E. Division 01 must be closely coordinated with Division 00, Divisions 02 through 49, Division 50 (Project-Specific Available Information), the Drawings, and the Department’s Consultant Bid Data Statement (Form 6005, to be filled out by the A/E for bidding).

**IMPORTANT NOTE REGARDING “HIDDEN TEXT”:**

Each document contains Editing Notes in the form of “hidden text”. The Editing Notes assist the Architect in modifying and editing the document to make it project-specific. In order to show the “hidden text”, click the **Home** tab, and in the **Paragraph** group, click the **Show/Hide** symbol (¶). **Turn off** the Show/Hide symbol (¶) **before printing the document** in order to indicate the correct number of pages. **DELETE THIS NOTE.**

**IMPORTANT NOTE REGARDING FORMATTING:**

Insert a blank page at the end of all *odd numbered* specification sections that states “THIS PAGE INTENTIONALLY LEFT BLANK”. **DELETE THIS NOTE.**

# PART 1 - GENERAL

## RELATED DOCUMENTS

### A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## SUMMARY

NOTE: Revise paragraph below if the project is constructed under multiple prime contracts.

### **General:** This Section specifies administrative and procedural requirements for field engineering services including, but not limited to, the following:

NOTE: Delete engineering services not required. Civil and structural engineering services in this section are basic requirements only. Include special requirements, such as concrete form-work design or hydraulic design for control of groundwater, in the appropriate specification section. Add or delete examples as applicable.

#### Land survey work.

#### Civil Engineering services.

#### Damage surveys.

#### Geotechnical monitoring.

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

NOTE: Revise sub-paragraph below if the project is constructed under multiple prime contracts.

#### Division 01 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.

#### Division 01 Section 01 33 00 "Submittal Procedures" for submitting Project record surveys.

NOTE: Revise subparagraph below to suit project requirements.

#### Division 01 Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents and recording of Owner-accepted deviations from indicated lines and levels.

## SUBMITTALS

NOTE: Revise subparagraphs below to suit project requirements.

### **Certificates:** Submit a certificate from the Land Surveyor stating that the control information furnished by the Owner is accurate or identify inaccuracies, if they exist. The Contractor shall not take advantage of errors, which may be included in the control information. Stakes and markings shall be preserved.

### **Final Property Survey:** Prepare and submit 10 copies of the final property survey.

### **Project Record Documents:** Submit a record of Work performed and record survey data as required under provisions of "Submittals" and "Project Closeout" Sections.

## QUALITY ASSURANCE

NOTE: Revise subparagraphs below to suit project requirements.

### Provide field engineering services to establish and record grades, lines and elevations.

### The Contractor shall retain a Land Surveyor registered by the State of Connecticut to confirm State furnished base lines and benchmarks, lay out the building, underground utility lines and other site work from the information furnished by the Owner and to establish and record the necessary elevations, at no additional cost to the State.

# PART 2 - PRODUCTS (Not Applicable)

# PART 3 - EXECUTION

## 3.1 EXAMINATION

### **Identification:** The Owner will identify two (2) base lines on the Contract Drawings.

### Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks. Notify the Construction Administrator of any discrepancies immediately in writing before proceeding to lay out the Work. Locate and protect existing benchmarks and base line. Preserve permanent reference points during construction.

#### Do not change or relocate benchmarks or base line without prior written approval. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.

#### Promptly replace lost or destroyed Project baseline benchmarks. Base replacements on the original survey control points.

NOTE: Revise paragraphs below to reflect the number of permanent benchmarks required to accommodate project requirements.

### Establish and maintain a sufficient quantity of (minimum of 2) permanent benchmarks on the site, referenced to data established by Owner supplied information.

#### Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

NOTE: Revise paragraph and subparagraph below as necessary to suit project requirements. Check with local authorities and utility companies. Coordinate with Division 31 Earthwork and 32 Earthwork sections.

### **Existing Utilities and Equipment:** The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction.

#### 1. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping. Notify the Construction Administrator of any discrepancies prior to proceeding.

## 3.2 PERFORMANCE

### Work from lines and levels established by the property survey. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.

#### Advise entities engaged in construction activities of benchmarks and control points for their use.

#### As construction proceeds, check every major element for line, level, and plumb.

### **Surveyor's Log:** Maintain a surveyor's log of control and other survey work. Make this log available for reference.

#### Record deviations from required lines and levels, and advise the Construction Administrator when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.

NOTE: Retain subparagraph below to suit project requirements.

#### On completion of foundation walls, major site improvements, underground utilities, and other Work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, elevations of construction, as-built locations and site work.

### **Site Improvements:** Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes, and invert elevations.

### **Building Lines and Levels:** Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels, and control lines and levels required for mechanical and electrical work.

NOTE: Revise paragraphs below to suit project requirements.

### **Existing Utilities:** Furnish information necessary to adjust, move, or relocate existing structures, utility poles, lines, services, or other appurtenances located in or affected by construction. Coordinate with local authorities having jurisdiction.

### **Final Property Survey:** Prepare a final property survey showing significant features (real property) for the Project. Include on the survey a certification, signed by the surveyor, that principal metes, bounds, lines, and levels of the Project are accurately positioned as shown on the survey.

NOTE: Insert other special field-engineering requirements as needed, such as damage surveys, settlement surveys and reports, environmental impact surveys, and similar requirements.

END OF SECTION 01 71 23