# SECTION 01720

# PREPARATION REQUIREMENTS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Construction Drawings, Technical Specifications, Addenda, and general provisions of the Contract, including Contract General Conditions and Supplementary General Conditions and other Division 1 Specification Sections, apply to this Section.

### 1.2 SECTION INCLUDES

A. Requirements for preparation prior to installing, applying and placing products to determine acceptable conditions for the Work.

B. Layout of the Work and other engineering services necessary to accomplish the Work.

### 1.3 RELATED SECTIONS

A. Section 01310 - Coordination: Requirements for proper sequencing and interfacing of the Work.

B. Section 01312 - Project Meetings: General requirements for pre-installation conferences.

C. Section 01732 - Cutting and Patching: Work performed to provide access for performing the Work.

D. Section 01770 - Contract Closeout Procedures: Project record documents, including layout data.

E. Section 01781 - Survey and Layout Data: Requirements for survey and layout data submittals.

F. Section 024116 - Building Demolition: Removal of existing construction in preparation of performance of specified Work.

G. Individual Division 02 through 33 Product Specification Sections: Specific requirements for preparation prior to performance of the Work.

### 1.4 LAYOUT OF WORK

A. Surveyor: Contractor shall select and pay for services of a land surveyor, registered in the State of California, for proper performance of the Work.

1. Services of surveyor shall be suitable for layout and verification of location of buildings and site elements.
2. For the Project record, Contractor shall submit the name, address and telephone number of land surveyor before starting survey Work.

## PART 2 - PRODUCTS

Not Applicable to this Section.

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. Manufacturer's Requirements: Contractor shall determine product manufacturer's requirements and recommendations prior to commencing Work.

B. Preparations: Contractor shall perform preparation actions according to manufacturer's instructions and recommendations and according to specified procedures.

1. Contractor shall perform surface preparation as necessary to create suitable substrates for application, installation and placement of products.

2. Contractor shall notify University's Representative in writing of unsuitable conditions preventing proper performance of the Work.

C. Existing Utility Information: Contractor shall furnish information to serving utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Contractor shall coordinate with University's Representative and with authorities having jurisdiction.

D. Existing Utility Interruptions: Contractor shall not interrupt utilities serving facilities occupied by University or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Contractor shall notify University's Representative not less than two working days in advance of proposed utility interruptions.

2. Contractor shall not proceed with utility interruptions without written permission from University's Representative.

E. Field Measurements: Contractor shall take field measurements as required to fit the Work properly. Contractor shall recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, Contractor shall verify dimensions of other construction by field measurements before fabrication. Contractor shall coordinate fabrication schedule with construction progress to avoid delaying the Work.

F. Space Requirements: Contractor shall verify space requirements and dimensions of items shown diagrammatically on Drawings.

G. Review of Contract Documents and Field Conditions: Immediately upon discovery of the need for clarification of the Contract Documents, Contractor shall submit a Request for Interpretation (RFI) to Architect. Contractor shall include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Contractor shall submit requests in accordance with requirements specified in Section 01340 - Requests for Interpretation (RFI), using form as directed by University's Representative.

H. Verification of Construction Layout: Before proceeding to lay out the Work, Contractor shall verify layout information shown on Drawings, in relation to the property survey and existing benchmarks, and locate survey reference points. If discrepancies are discovered, Contractor shall promptly notify University's Representative, Architect and Project Inspector.

## 3.2 FIELD ENGINEERING

A. Examination: Contractor shall verify locations of survey control and reference points prior to starting Work. If discrepancies are discovered, Contractor shall promptly notify University's Representative, Architect and Project Inspector.

B. Survey Control and Reference Points: Contractor shall locate and protect survey control and reference points. Control datum for survey shall be as indicated on Civil Drawings. Notwithstanding the data on Civil Drawings, Contractor shall use NAD 83 State Plane Coordinate System for survey control and reference points.

1. Business and Professions Code section 8771 provides for the preservation of Survey Monuments in

construction projects. This legislation mandates that, prior to construction, monuments shall be referenced in the field and "Corner Records" shall be prepared for filing in the Office of the County Surveyor. Contractor shall ensure that these shall be performed prior to Contract Completion of the Work.

1. Contractor shall comply with requirements of authorities having jurisdiction for survey monumentation preservation on capital improvement projects where monumentation points are present.

2. Contractor shall be responsible for preparing and submitting proper documentation to the Office of the County Surveyor in compliance with Business and Professions Code section 8771.

3. Contract Completion and release of retainage shall be contingent upon obtaining documentation from Contractor's project surveyor or engineer that monuments have been set or restored and that Corner Records have been filed with and to the satisfaction of the County Surveyor.

4. All costs and actions necessary for compliance with Business and Professions Code section 8771 shall be included in the Contract Sum and Contract Time.

## 3.3 SURVEYING AND FIELD ENGINEERING SERVICES

A. Surveying and Field Engineering Services: Contractor shall provide surveying and field engineering services as necessary for performance of the Work. Refer to Section 01781 - Survey and Layout Data.

1. Contractor shall be responsible for the accuracy and adequacy of surveying and field engineering services.

2. Contractor shall utilize recognized engineering practices.

3. Contractor shall check the location, level and plumb, of every major element as the Work progresses.

4. Contractor shall preserve construction survey stakes and marks for the duration of their usefulness.

5. If construction survey stakes are lost or disturbed, and require replacement, Contractor shall perform replacement at no change in Contract Sum and Contract Time.

6. Contractor shall excavate all holes necessary for line and grade stakes.

B. Surveying for Layout and Control of the Work: Contractor shall establish elevations, lines and levels for all Work under the Contract. Contractor shall locate and lay out by instrumentation and similar appropriate means:

1. Site improvements, including pavements, curbs, headers, sewers, storm drains, structures, and paving. Note on Project Record Drawings utility locations, slopes and invert elevations.

2. Stakes for cutting, filling, grading and topsoil placement, to establish finished grade or flow line indicated on Contract Drawings.

   a. Contractor shall preserve construction survey stakes and marks for the duration of their usefulness.
   b. If construction survey stakes are lost or disturbed, and require replacement, Contractor shall perform replacement at no change in Contract Sum and Contract Time.
   c. Contractor shall excavate all holes necessary for line and grade stakes.

3. Grid or axis for structures, building foundation, column locations and ground floor elevations.

4. Contractor shall establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.

5. Contractor shall establish dimensions within tolerances indicated. Contractor shall not scale Drawings to

obtain required dimensions.

6. Contractor shall inform installers of lines and levels to which they must comply.

7. When deviations from required lines and levels exceed allowable tolerances, Contractor shall notify University's Representative, Architect and Project Inspector.

8. Contractor shall close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Monuments: Contractor shall establish a minimum of two permanent monuments on site, referenced to established control points. Contractor shall record locations, with horizontal and vertical data, on Project Record Drawings.

1. In accordance with Business and Professions Code section 8772, any monument set by a licensed land surveyor or registered civil engineer to mark or reference a point on a property or land line shall be permanently and visibly marked or tagged with the certificate number of the surveyor or civil engineer setting it, each number preceded by the letters "L.S." or "R.C.E." respectively, as the case may be, or, if the monument is set by a public agency, it shall be marked with the name of the agency and the political subdivision it serves.

2. Nothing in this Section shall prevent the inclusion of other information on the tag which will assist in the tracing or location of survey records which relate to the tagged monument.

3. Contractor shall ensure that centerline ties filed with the County Surveyor will be checked for compliance with this law.

D. Site Grading Verification: Upon completion of grading, Contractor shall survey graded areas and establish that elevations are correct and within acceptable tolerances for paving and finish grading.

E. Verification of Work: Contractor shall periodically verify layout and completed conditions of the Work by same means.

**END OF SECTION**