

SECTION 01900 – PROJECT SURVEY AND STAKEOUT

PART 1 - GENERAL

1.1 RELATED SECTIONS

- A. The General Provision of the contract, including the General Provisions for Construction Projects (2016), Special Provisions, and General Requirements of the Specifications, apply to the work specified in this section.

1.2 SUMMARY

- A. This item shall consist of all activities necessary to control the Contractor's Work. It shall also include all additional site survey efforts as may be dictated by the RPR during the course of the Work in order to facilitate the development of field directives, change orders, or other items necessary for the successful completion of the project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 COOPERATION BETWEEN CONTRACTORS

- A. The State reserves the right to contract for and perform other or additional work on or near the work covered by this contract.
- B. When separate contracts are let within the limits of any one project, each Contractor shall conduct his/her work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.
- C. Each Contractor involved shall assume all liability, financial or otherwise, in connection with his/her contract and shall protect and save harmless the State from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced by him/her because of the presence and operations of other Contractors working within the limits of the same project.
- D. The Contractor shall arrange his/her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. He/she shall join his/her work with that of the other in an acceptable manner and shall perform it in proper sequence to the of the others.

3.2 CONSTRUCTION LAYOUT AND STAKES

- A. The horizontal and vertical control shall be established in accordance with FAA Specification Section 50, paragraph 50-07, *Construction layout and stakes*.
- B. The Contractor will be required to furnish all lines, grades and measurements from the control points necessary for the proper prosecution of the control of the work contracted for under these Specifications. See FAA Specificaiton Section 50 and Section 02401 Hot Mix Asphalt (HMA) Pavement.
- C. Construction Staking and Layout includes but is not limited to:

1. Clearing and Grubbing perimeter staking
2. Rough Grade slope stakes at 100-foot (30-m) stations
3. Drainage Swales slope stakes and flow line blue tops at 50-foot (15-m) stations

Subgrade blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

1. Runway – minimum five (5) per station
2. Taxiways – minimum three (3) per station
3. Holding apron areas – minimum three (3) per station
4. Roadways – minimum three (3) per station

Base Course blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

1. Runway – minimum five (5) per station
2. Taxiways – minimum three (3) per station
3. Holding apron areas – minimum three (3) per station

Pavement areas:

1. Edge of Pavement hubs and tacks (for stringline by Contractor) at 100-foot (30-m) stations.
2. Between Lifts at 25-foot (7.5-m) stations for the following section locations:
 - a) Runways – each paving lane width
 - b) Taxiways – each paving lane width
 - c) Holding areas – each paving lane width
3. After finish paving operations at 50-foot (15-m) stations:
 - a) All paved areas – Edge of each paving lane prior to next paving lot
4. Shoulder and safety area blue tops at 50-foot (15-m) stations and at all break points with maximum of 50-foot (15-m) offsets.
5. Fence lines at 100-foot (30-m) stations minimum.
6. Electrical and Communications System locations, lines and grades including but not limited to duct runs, connections, fixtures, signs, lights, Visual Approach Slope Indicators (VASIs), Precision Approach Path Indicators (PAPIs), Runway End Identifier Lighting (REIL), Wind Cones, Distance Markers (signs), pull boxes and manholes.
7. Drain lines, cut stakes and alignment on 25-foot (7.5-m) stations, inlet and manholes.
8. Painting and Striping layout (pinned with 1.5 inch PK nails) marked for paint Contractor. (All nails shall be removed after painting).
9. Laser, or other automatic control devices, shall be checked with temporary control point or grade hub at a minimum of once per 400 feet (120 m) per pass (that is, paving lane).

The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor.

Controls and stakes disturbed or suspect of having been disturbed shall be checked and/or reset as directed by the RPR without additional cost to the Owner.

3.3 AUTOMATICALLY CONTROLLED EQUIPMENT

- A. Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

3.4 AUTHORITY AND DUTIES OF INSPECTORS

- A. Inspectors shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.
- B. Inspectors are authorized to notify the Contractor or his or her representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

PART 4 - MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. All work under this section will not be measured for payment.

4.2 BASIS OF PAYMENT

- A. Items covered by this section will be paid by lump sum. The contract price paid shall be for full compensation for furnishing and placing all materials and all labor, equipment, tools, and incidentals necessary for each of the construction phases.

Payment will be made under:

Item No.	Description	Unit
01900.1	Project Survey and Stakeout	Lump Sum

-----END OF SECTION 01900-----