

SECTION 01533 – TEMPORARY BARRICADES AND FACILITIES

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 Specification outlines procedures and regulations to be followed by the Contractor during the course of this work to ensure work site safety and shall consist of providing adequate personnel and trained radio operator/flagmen; and furnishing, installing, and removing (as required), all necessary safety equipment, barricades, detours, and other facilities. This includes haul route sweeping, FOD control, and all other work necessary and required during each phase of the work for the entire contract duration. All work shall be accomplished in conformance with Federal Aviation Administration (FAA) and Hawaii Department of Transportation (HDOT) guidelines and as directed by the RPR. The Contractor shall provide the necessary items for each phase as indicated on the Plans and approved Construction Safety and Phasing Plan (CSPP).

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02620 – Runway and Taxiway Markings, FAA Specification Item P-620.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All materials shall be in conformance with the details provided on the Plans or referenced in other Technical Specifications, in accordance with FAA and HDOT requirements, and to the satisfaction of the RPR. All work and installation of materials shall be performed in full accordance with the latest applicable rules, regulations, requirements, and specifications included in the current editions of the following:
 - 1. Latest version of “Standard Specifications for Road, Bridge and Municipal Construction,” as published by the Hawaii State Department of Transportation
 - 2. US DOT – Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)
 - 3. FAA AC 150/5210-5, Painting, Marking and Lighting of Vehicles Used on an Airport
 - 4. FAA AC 150/5345-55, Lighted Visual Aid to Indicate Temporary Runway Closure
 - 5. FAA AC 150/5370-2, Operational Safety on Airports During Construction

2.2 PORTABLE LIGHTED X’S

- A. Portable lighted X’s shall be provided by the Contractor. The Contractor shall fuel and maintain the lighted X’s for any period when they are needed, as shown on the approved

CSPP. All materials shall be restored to near-new condition and turned over to the Owner at the completion of the project.

2.3 BARRICADES

- A. The Contractor shall install barricades at the entry point of taxiways leading to closed runways or taxiways, as designated on the approved CSPP. The barricades shall be of the low profile type, highly reflective and marked with diagonal alternating orange and white stripes. Red flashing lights shall be mounted on each barricade. Lights shall be solar powered, omnidirectional, capable of being seen at a distance of two miles and flash at a rate of 45-60 flashes per minute. Solar panels in conjunction with sufficient battery backup capacity, shall be provided to power lights during night time hours and extended periods of cloud cover. The barricades shall be spaced no greater than 6 feet apart.
- B. The Contractor shall be responsible for his own security and protection of his property, including mobilization yard for the barricades.
- C. Barricades, in general, shall be neat and in good condition, as required for the taxiway closure purpose.
- D. The Contractor shall coordinate and sequence this work with the RPR to permit the continuing operation of the existing Airport facility. Barricades shall be removed at the end of each work shift concurrent with the re-opening of the runway or taxiway. Contractor shall notify the RPR after all the barricades have been removed at the end of each work shift.
- E. Reflective cones shall be used to demarcate AOA travel routes, locations where vehicles shall yield to aircraft, or other critical locations along the travel route as directed by the RPR.

2.4 TEMPORARY PAINT MARKINGS

- A. Temporary paint markings shall be applied as shown on the approved CSPP and shall meet the requirements for Section 02620, Runway and Taxiway Markings, excluding the incorporation of reflective media.

2.5 CONSTRUCTION AREA ILLUMINATION DURING NIGHTTIME WORK

- A. Contractor shall provide supplemental lighting equipment (light plants) sufficient to adequately illuminate all work areas during periods of limited visibility or at night.
- B. All paving machines, rollers, milling machines, distributor trucks, and other support equipment, except for haul trucks, shall be equipped with artificial illumination to safely illuminate the area immediately surrounding these pieces of equipment.
- C. For all pavement milling, crack repair, placement of tack coat, asphalt paving, rolling, finishing, and temporary and permanent pavement marking activities, portable lighting equipment shall be placed at on both sides of the work activity and at locations and at a spacing that provides the most natural color illumination and contrast with a minimum of shadows. The adequacy of such illumination shall be determined by the RPR.

- D. Contractor shall be required to provide additional supplemental lighting equipment as directed by the RPR. All supplemental lighting equipment shall be positioned and adjusted to aim away from ATCT cabs and active taxiways and runways to prevent blinding effects. Supplemental lighting equipment shall be removed from the construction site when the pavement is reopened to aircraft operations.

PART 3 - EXECUTION

- 3.1 All work shall be in accordance with FAA AC 150/5370-2, Operational Safety on Airports During Construction.
- A. All marking of vehicles and construction equipment shall conform to FAA AC 150/5210-5, Painting, Marking and Lighting of Vehicles Used on an Airport and the Special Provisions.
- 3.2 All temporary items shall be maintained in good working order throughout the duration of their use. Lighted equipment shall be checked daily for proper operation and repaired or replaced immediately if found to be inoperable.

PART 4 - MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT.

- A. The quantity of lighted X's to be paid for shall be measured per each.
- B. Temporary paint markings shall not be measured for and shall be paid under Section 02620, Runway and Taxiway Markings.
- C. All remaining work under this section will not be measured for payment.

4.2 BASIS OF PAYMENT.

- A. Lighted X's shall be paid for by each and shall be for full compensation for furnishing and placing all materials and all labor, equipment, tools, and incidentals necessary for the construction phases.
- B. All remaining 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.
- C. Payment will be made under:

Item No.	Description	Unit
01533.1	Lighted X's	Each
01533.2	Temporary Barricades and Facilities	Lump Sum

-----END OF SECTION 01533-----