

## **ITEM 02202.99 M - RELOCATE B-52 AIRPLANE**

### **DESCRIPTION**

This work shall consist of relocating a B-52 airplane from its present location to a new location shown on the plans. The work shall include construction of new supports, demolition of existing supports, movement of the plane to its new location, and placement onto its new supports. Relocation of a missile display and several stone plaque monuments shall also be performed. The work also includes relocation of existing lighting and electrical power to the plane and all other incidental work shown on the plans.

### **MATERIALS**

The specific components shown on the plans and needed to perform the relocation of the airplane shall meet the requirements of the following sections of the Standard Specifications.

Section 203 – Excavation and Embankment

Section 207 – Geotextile

Section 300 – Bases and Subbases

Section 555 – Structural Concrete

Section 556 – Reinforcing Steel for Concrete Structure

Section 564 – Structural Steel

Section 586 – Miscellaneous Structural Reconstruction

Section 608 – Sidewalks, Driveways, Bicycle Paths, Brick Paving, Grouted Stone Block Paving,  
and Precast Concrete Paving

Section 610 – Turf and Wildflower Establishment

Section 670 – Highway Lighting System

Section 613 – Topsoil

Section 719 – Metal Coatings

Section 723-60 – Anchor Bolts

### **CONSTRUCTION DETAILS**

Plan and Schedule. The Contractor shall submit a plan and schedule for the relocation of the airplane. Any proposed changes to the plans shall be submitted to the Engineer for approval.

Site Preparation. The Contractor shall prepare new location of plane, performing all necessary clearing and grubbing and grading. Contractor shall install foundations per the plans and details. Contractor will be responsible for field verifying the location of foundation to match landing gear locations. Temporary tow path shall be installed per the plans. Temporary tow path may consist of timber planking, steel plating, crane mats, or other temporary support method as approved by the Engineer. Guide lines shall be painted on the tow path at the wheel locations.

Contractor shall remove and store existing brick pavers and wood edging for resetting once plane has been relocated. Existing trees not directly impacted by the move shall be protected from damage.

Plane Preparation. The Contractor shall disconnect all electrical services to the plane and site lighting and power. The following maintenance service to the plane shall be performed by a certified airplane mechanic prior to any movement of the plane. The Contractor shall provide proof of certification of the mechanic(s) to the Engineer.

A. Wing Landing Gear

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- Tires shall be inspected and replaced as required.
- Inspect and grease wheel bearings and assure free rotation.
- Support wheel and remove pipe stand. Top portion of stand to be sand blasted, galvanized and painted to match new pipe stand base.
- Lower wheel to full extension and remove temporary supports.
- Confirm landing gear is locked in "down" position.

### **B. Main Landing Gear**

- Chock all wheels to avoid rolling of plane.
- Remove existing pipe stand and discard.
- Jack wheel at jack point indicated on landing gear so that wheel is 1 to 2 inches clear of the ground.
- Inspect tires and replace/repair as required.
- Inspect and add tire fill material as required to assure wheel will roll and support plane during move operation. At the Contractor's option, tire fill material may be removed and tire inflated with air. Fill material shall be replaced upon completion of move.
- Grease wheel bearings and assure free rotation.
- Confirm landing gear is locked in "down" position.
- Lower jack, chock wheel and repeat preparation work for all landing gear locations.

### **Relocation of Plane**

- . Attach cable to each of the rear landing gear assemblies at the "tow point" indicated. A shackle or fixture is required.
- . Each of the two cables should be attached to independent hoist or other towing apparatus. The speed at each pull point can be increased or decreased to "steer" and assure the plane is pulled back in a straight line.
- . Place a stop block or wheel chock on the new foundation to assure the plane doesn't roll past the desired new location.
- . Pull the plane to the new location at a rate of not more than 5 feet per minute.
- . After the plane is in the new position chock all wheels and detach cables and shackles.
- . If the plane is not pulled straight back the locations for the new jack stand anchors could interfere with the foundation reinforcing. The plane should be located per plan A50 cm.
- . If the plane is relocated out of tolerance, jack the landing gear, place steel plate under wheels, pull or push the plate to desired location, jack landing gear & remove plate. Do not push the tires laterally on the foundation as this may damage the tires or landing gear.
- . After plane is located on the new foundation within tolerance, install all pipe supports with drill in anchors. Install locking bolts in pipes and at main gear. Reattach wing pipe support to wing wheels with wing wheels elevated similar to pre-move condition.

**Relocation of Brick Paver Sidewalks.** Contractor shall relocate the existing brick paver sidewalk with wood edging to the new airplane location in accordance with Item 08608.1008. Sidewalk configuration shall replicate pre-move shape and size. Contractor shall reset existing pavers at new location. Existing pavers damaged or destroyed by the Contractor's operation shall be replaced at the Contractor's expense. The cost of any additional pavers and wood edging necessary to complete this work shall be paid for under Item 608.12. New brick pavers shall match the color and shape of the existing pavers. Place 100 mm of shredded hardwood chips under airplane within area defined by brick paver sidewalk.

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### **Relocation of Lighting and Electrical Service**

1. Demolition of the existing lighting shall include the power and photo control circuits.
2. The existing fixtures shall be saved and retrofitted with a lamp and ballast in accordance with drawings and manufacturers instructions.
3. Demolition of the power for the lighting shall include removal of the conductors back to the source. The raceway shall be abandoned below grade and removed above grade.
4. Demolition of the power for the B52 shall include removal of the conductors back to the source. The raceway shall be abandoned below grade and removed above grade.
5. Contractor to include disposal of refuse in accordance with local, state, and federal requirements.
6. New stanchions shall be located and fabricated.
7. New raceway and conductors shall be installed for the lighting circuits.
8. New raceway and conductors shall be installed for the B52 power circuits
9. Verification of the fixture aiming and the photo controls shall be finalized after placement of the B52

### **Relocation of Missile**

- . Use crane or other appropriate equipment. Provide canvas sling or protection from steel sling to assure no damage to paint occurs.
- . Detach anchor nuts after crane has supported the structure.
- . Move the "missile" taking care not to drag the supports on the ground.
- . Place the structure on the new foundations. Drill and install anchors. Assure the anchorage is secure prior to releasing the slings.

### **Relocation of Stone Monuments**

- . Use front end loader crane, or fork lift. Provide wood blocking or other protection to assure the stones and plaques are not scratched or damaged.
- . Place monuments on compacted fill. Level the stones at the new locations and backfill with granular material to assure stones can not be overturned.

**Demolition/Restoration.** Following relocation of the airplane, the Contractor shall remove the existing concrete foundations and the temporary concrete slab. Other existing amenities no longer needed, including lighting fixtures and conduit shall be removed. The area shall be regraded, topsoiled and seeded as shown on the plans or as ordered by the Engineer. The Contractor shall place new wood chips in the area underneath the plane and within the area defined by the sidewalk.

## **METHOD OF MEASUREMENT**

Payment for the relocation of the B52 airplane will be made on a lump sum basis.

## **BASIS OF PAYMENT**

The lump sum price bid for relocating the B-52 plane shall include all equipment, materials and labor necessary to relocate the airplane, protect and/or restore site amenities, including monuments, lighting, and electrical service. The cost of excavation, subbase coarse material, structural fill, geotextile bedding, steel reinforcing, Class A concrete, relocating brick pavers, new brick pavers, topsoil and seeding shall be paid for under the appropriate item as shown on the plans.