Remote Transmit Receive Install

Boise, Idaho

Site demolition including:

a. Perform underground utility locate, coordinate with the RE, FAA, Power Company, Gas Company and after completion of the above hire a professional Subsurface Utility Engineering (SUE) or utility designation/locating company, acceptable to the RE.
b. Prior to demolition, complete new power service including rack, conduit, and conductors
c. Verify electrical power is disconnected to the existing shelter
d. Remove HVAC CFC refrigerant per FAA, state and local regulations (EPA Form 7610-31)
e. Salvage two MARVAIR HVAC equipment and deliver to FAA storage facility.
f. Inspect and remove items from the existing shelter including ballasts, fluorescent tubes
g. Perform Asbestos and lead based paint abatement of RTR shelter. See attached asbestos survey report. Notify the RE of any suspected hazardous material not identified in the report.
h. Demolish the conduit running from the shelter to the towers
i. Cut all underground connections to the shelter (the four (4) fiber conduits to remain)
j. Demolish the existing cinderblock shelter
k. Demolish the existing shelter foundations
l. Demolish all associated conduits, conductors, and J-boxes of shelter associated equipment

Note:

1. The tower obstruction lights shall be maintained during construction. The FAA shall furnish and install temporary obstruction lights.
2. The existing parrott antenna shall be maintained during construction. The FAA shall furnish and install the necessary temporary antenna cable.

3. Foundation site preparation and site grading including:

a. Excavate soils, remove, backfill and compact under the new 24' x 24" shelter to a depth of approximately 4 feet as indicted on the drawing. Excavated subgrade must be inspected by Parsons RE and Geotechnical Engineer upon completion of excavation and before proceeding with next phase. Compaction tests will be performed by Parsons on each lift.
b. Remove any unsuitable soils, and cut to grade. (Reference Drawing BOI-D-RTRB-C004) Backfill disturbed areas to 6" below grade (slab demo and underground grounding, conduits, etc).
c. Compact the sub-grade and install filter fabric (approximately 6" below grade).
d. Backfill with ¾" minus crushed rock material meeting the requirements of Idaho Standards for Public Work Construction Section 802. Fill to be placed and compacted to 95% maximum dry density or 75% relative density. Final grade the site to match existing elevations.
e. Form and pour foundation concrete for the new shelter in accordance with Reference Drawing JoaQuin MFG Corp sheets S0, S1, and S2 including: i. Furnish and Install all reinforcing steel, headed stud embeds, and concrete
ii. All Concrete construction shall be in accordance with ACI Manual of Concrete Practice and ACI 306R, Cold Weather Concreting
iii. Placement shall be inspected by the Parsons Resident Engineer before placement of concrete. And field verified to be within 1/8" of level.
iv. Placement to be free from frost or frozen ground. Subcontractor may need to provide supplemental heat prior to and after placement to assure proper curing in accordance with

ACI 306R.. Concrete Insulating Blankets shall be used along with a Min-Max Thermometer to record concrete temperature. For each day the concrete temperature falls below 45 ° F, and addition 24 hours of cure shall be added.

f. Provide lift ring and cast iron cover on existing communications handhole just south of RTR shelter. New elevation of cover shall be approximately 2" above final grade and slope grade to match existing. Field verify size of opening and height required.
g. Provide crushed rock surface per construction drawings.

4. Electrical grounding, and lightning protection at the shelter including:
a. Excavation/Backfill of earth electrode system trench around the shelter and meter rack
b. Install new earth electrode system and bond new EES to existing EES per drawings
c. Exothermic weld two 500 kcmil ground cables (cable is supplied by the shelter manufacturer)
d. Provide ground conductors and conduit to bond support steel, stairway, HVAC equipment, service disconnect EG disconnect, lightning protection and other equipment per construction drawings
e. Install conduit and grounds for the shelter mounted RF/Communication J-Boxes
f. Install access well
g. Perform fall of potential ground test for complete shelter ground system & copy test report to RE

5. Electrical power Work – Towers and Shelter

a. Provide meter rack with associated conduits, conductors, strut, meter base, tap boxes, disconnects, step up transformer, and grounding per construction drawings. Coordinate with Idaho Power for new service to new meter rack to re-feed the site per the Construction Drawings.
b. Provide new conduit and conductors between shelter panel and existing towers to energize new LED dual head obstruction lights for each tower. Provide one dual head LED obstruction light with supports, conduit, and wire on each antenna tower.
c. Install 20 AMP breakers in the RTR power panel, and up-date panel schedule, to feed new obstruction lights (5 each).
d. Coordinate with Utility for new service conduit and conductors between existing utility transformer and shelter. Provide trenching, backfill RGS conduit/service conductors, meter base and conductor terminations per utility requirements to complete electrical service to the new shelter and existing FAA storage buildings.
e. Install bollards around the new electrical rack

6. Electrical Communication Work – Conduits, Grounding, Antenna Cables, RF J-boxes:

a. Install RGS RF conduits/supports between shelter mounted RF J-Boxes and RTR Towers per Construction drawings. RGS conduits shall extend up the tower to the new J-boxes located on the antenna platform levels.
b. Provide grounds/conduits to each shelter mounted RF/comm. J-box as shown
c. Extend and terminate existing underground fiber optic conduits to the south side shelter manufacturer supplied J-Box on the shelter
d. Provide pull ropes in all empty conduits for use by others
e. Provide LMR-600 antenna cables to each existing RTR antenna tower RF JBox mounted on antenna platform level from RF JBoxes on RTR Shelter. Provide number of antenna cables in each conduit as shown on construction drawings leaving a minimum of 6'-0" of spare cable at each end for termination by others. Provide RF-Jbox, supports, and grounding on each antenna tower per Construction Drawings.

7. Bollards

a. Install bollards around the power service rack

8. Other Items

a. Test platform and underground counterpoise; check all lightning down conductors and connections
b. Test the power conductors (tower obstruction lights)
c. Coordinate with the utility company to install meter rack and energize the power panels
d. Tower obstruction lights shall be maintained during construction. The Subcontractor shall coordinate switch over from the temporary FAA battery pack lights to the new lights.
e. The locations of the shelter penetrations shall be field verified. Refer to the shelter manufacturer shop drawings.

9. General Scope Items –

1. Provide temporary power for the demolition and construction work. Subcontractor shall conduct monitoring for operation and fuel levels. Subcontractor shall phase work to control and contain the work areas.
2. Swab all conduits and provide pull string in all existing and new conduits. Provide pull string per Idaho Power requirements in all existing and/or new conduits for Idaho Power cable installation.
3. Ground water levels at the airport have been known to be below five feet of grade level. Provide excavations de-watering per specifications for work under this Contract if necessary.
4. The Subcontractor shall minimize the damage to the construction area, and provide site restoration, as required to return the site to its original condition. Restoration of the disturbed areas maybe required.
6. Subcontractor shall provide containers, toilets as necessary to complete the contract work. A Subcontractor/RE office trailer is not required. Subcontractor shall provide and maintain temporary power, potable water, and temporary toilet.
7. Existing shelter shall be disposed of in accordance with Local, State and Federal regulations. The Subcontractor shall provide transportation, loading, and off loading of the existing HVAC equipment to the FAA designated location near the airport as directed by the RE.

8. The Subcontractor shall provide and plan to hand dig the fiber conduit risers near the existing shelter and other areas as required. The Subcontractor is allowed to use "Pot-holing" methods utilizing commercial vacuum extraction equipment methods to field verify the location and depth and expose the utilities. When a cable or other utility is located, the Subcontractor shall hand-excavate a trench five (5) each side of the exposed cable to verify that another cable is not adjacent to the exposed cable.