

Special Specification 6076

Communication Cabinet



1. DESCRIPTION

Remove and relocate existing Communication Cabinets at sites shown on plans and as specified within this specification.

2. REMOVE EXISTING COMMUNICATION CABINET

2.1 **Materials.** Remove the following equipment at each Communication Cabinet field site as shown on the plans (includes but is not limited to):

- Communication Cabinet (CC) including all internal components.
- Cabling from power source to cabinet.
- Cabling and connectors from telecommunications source to cabinet.
- Communication Cabinet Foundation. Remove to 2 ft. below existing grade and backfill and repair with material to match existing area surrounding removed foundation or as approved by the Engineer.

2.2 **Construction.** Prior to removal of the Communication Cabinet, disconnect and isolate any existing electrical power supply.

Perform removal in strict conformance with the requirements herein stated and the lines, grades, details and dimensions shown on the plans. Completion of the work will present a neat, workmanlike, and finished appearance. Maintain safe construction practices during removal.

Any portion of the Communication Cabinet, including components, damaged or lost will be replaced by the Contractor at no cost to the Department.

All materials not designated for reuse or retention by the State will become the property of the Contractor and be removed from the project site at the Contractor's expense. Deliver Items to be retained by the State to DalTrans.

Store all Communication Cabinets and associated equipment removed on this project in a secure place as approved by the Engineer until time for relocation to location shown on plans. The Contractor is fully responsible for the equipment until released by the Engineer.

3. RELOCATE EXISTING COMMUNICATION CABINET

3.1 The following are the minimum requirements to relocate existing Communication Cabinets and field equipment as shown on the plans.

3.1.1 **Materials.** Relocate the following equipment at each Communication Cabinet field site shown on the plans (includes but is not limited to):

- Communication Cabinet (CC) with all internal components.
- Contractor is responsible for reconfiguring the Local Control Unit and for all provisioning and addressing changes required in the cabinet and at DalTrans.
- Construct new Communication Cabinet Foundation for relocated Communication Cabinet as shown in plans and as specified in this specification.
- Make the relocated Communication Cabinet fully operational and integrated with the DalTrans system.

- If plans show radar detectors to be connected to relocated Communication Cabinet instead of surveillance loop detectors, remove existing digital loop vehicle detection units and deliver to DalTrans to make space for radar detector cards.

- 3.1.2 **Construction.** Perform the relocation in strict conformance with the requirements herein stated and the lines, grades, details and dimensions shown on the plans. Completion of the work will present a neat, workmanlike, and finished appearance. Maintain safe construction practices during relocation. Any portion of Communication Cabinet assembly damaged or lost will be replaced by the Contractor at his expense.
- 3.1.3 Make all arrangements for connection to the power supply and telecommunications source including any permits required for the work to be done under the Contract. Furnish and install any required materials not provided by the power or telephone company in accordance with the plans. Provide wire for the power connection at least the minimum size indicated on the plans and insulated for 600 volts. Meet the requirements of the National Electrical Code (NEC).

4. TESTING

- 4.1 **Pre-Test.** Conduct performance testing prior to removal of the equipment. Test all functional operations of the equipment in the presence of representatives of the Contractor and the Department. Ensure that both representatives sign the test report indicating that the equipment has passed or failed each function. Once removed, the equipment becomes the responsibility of the Contractor until accepted by the State. Compare test data prior to removal and test data after installation. The performance test results after relocation must be equal to or better than the test results prior to removal. Repair or replace those components within the system which failed after relocation but which passed prior to removal.

- 4.2 **Post Test.** Testing of the TMS system is for the purpose of relieving the Contractor of maintenance of the system.

The Contractor will be relieved of the responsibility for maintenance of the system in accordance with Item 7, "Legal Relations and Responsibilities", after a successful test period. The Contractor will not be required to pay for electrical energy consumed by the system.

After all TMS equipment has been installed, conduct approved continuity, stand alone, and TMS equipment system tests. Furnish test data forms containing the sequence of tests including all of the data taken as well as quantitative results for all tests. Submit the test data forms for the Engineer at least 30 days prior to the day the tests are to begin. Obtain Engineer's approval of test procedures prior to submission of equipment for tests. Send at least 1 copy of the data forms to the Engineer.

Conduct an approved stand-alone test of the equipment installation at the field site(s). At a minimum, exercise all stand-alone (non-network) functional operations of the field equipment with all of the equipment installed per the plans as directed by the Engineer. Complete the approved data forms with test results and turn over to the Engineer for review and either acceptance or rejection of equipment. Give at least 30 working days' notice prior to all tests to permit the Engineer or his representative to observe each test.

The Department will conduct approved TMS equipment system tests on the field equipment with the central equipment. The tests will, as a minimum, exercise all remote control functions and display the return status codes from the controller.

If any unit fails to pass a test, prepare a report and deliver it to the Engineer. Describe in the report the nature of the failure and the corrective action needed. If the failure is the result of improper installation or damage during reinstallation, reinstall or replace the unit and repeat the test unit the unit passes successfully, at no additional cost to the Department or extension of the contract period.

5. MEASUREMENT

- 5.1 Remove Existing Communication Cabinet (CC) will be measured as each Communication Cabinet with all internal components removed in accordance with this specification and as shown on the plans.
- 5.2 Relocate Existing Communication Cabinet (CC) will be measured as each Communication Cabinet with all internal components relocated, tested and made fully operational in accordance with this specification and as shown on the plans.
- 5.3 Communication Cabinet Foundation will be measured as each foundation installed as shown on plans.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement", will be paid for at the unit price bid for "Remove Existing Communication Cabinet", "Relocate Existing Communication Cabinet", and "Communication Cabinet Foundation". This price is full compensation for removing and relocating as shown on the plans; for testing, delivery and storage of components designated for retention or reuse; and for all manipulations, materials, labor, tools, equipment, and incidentals.