



## SUNSHINE COAST REGIONAL DISTRICT

### Question and Answers #3

Request for Proposal No. 2437022

Well Improvements at Chaster Well

**Date: October 8, 2024**

**Item No.1**

**Question:** Can you please confirm the following:

- Your well diameter is 12"
- You require 2 Probe tubes in the pitless unit.
- You require 8 "(200mm) flanged discharge and 4" (100mm ) drop pipe.
- You require stickup of 200mm (8") - The normal stick up is 300mm (12")

**Answer:**

- The Well diameter is 12-inch casing with an inner 10 inch and an 8 inch partial casing. See attached Section B of the 1975 drawing.
  - 2 Probe tubes are required in the pitless unit.
  - An 8 "(200mm) flanged discharge and 4" (100mm ) drop pipe is required.
  - Contactor to verify stickup height during construction prior to fabricating Pitless adapter and Constructor must submit a shop drawing to the Regional District for review.
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# CHASTER ROAD WELL PUMPING STATION

## CONSTRUCTION NOTES

1. Excavate for the concrete base slab to 4-inches below underside of base slab and fill with 3/4-inch minus crushed gravel and compact.
2. Concrete for the base slab shall be 3,000 psi Redi Mix concrete with 3/4-inch aggregate. The upper surface of the slab shall be screeded level.
3. All manhole sections shall be set in grout as for normal manhole construction, except for the precast concrete lid which should be placed without grout to enable removal if required. The manhole frame shall be grouted into the precast concrete lid.
4. Prior to installation of the pump the walls of the well casing above the water table shall be flushed down with a chlorine solution.

After installation of the pump and piping the well pump and piping shall be disinfected with a 50 ppm chlorine-water solution. 500 U.S. gallons of solution is to be prepared and added to the well via the air vent hole in the surface plate. If HTH with 70% available chlorine is used, 6 oz. in 500 U.S. gallons will give a concentration of 50 ppm. The pump column and piping shall be filled with the chlorine solution through the 1/2" gate valve adjacent to the air release valve. The chlorine solution shall be left in the well and piping for at least two hours before being pumped to waste.

After the well has been disinfected and the solution pumped to waste the local health officer should be advised that the well is ready for a bacteriological test.

5. All malleable iron fittings are to be joined, unless otherwise indicated on the drawings, with close coupled nipples.
6. Full instructions for the uncrating, filling and installation of the pump are given in the "Installation Instructions" provided by the supplier.

After the motor has been filled with water, the leads shall be checked with a megger. They shall be checked again when the pump first enters the water, and then after each length of discharge pipe has been lowered into the well.

The pump and column shall be installed with a crane or lifting device capable of easily handling in excess of 4,000 lbs. and 20 ft. lengths of pipe column. Two sets of pipe clamps should be obtained from the pump supplier and used to ensure no possibility of dropping the pump down the well. The copper pipe for the water-level indicator shall be strapped to the column at 10 foot intervals together with the electrical drop cable and low water probe cables (for ties, see electrical specs.)

The copper pipe is to be joined with soldered joints, care being taken to ensure the joints are perfectly air-tight. The copper pipe shall pass through the tankfitting in the surface plate and tightened to ensure a watertight seal.

Before joining each new section of pipe column clean the inside of the coupling and apply a coat of epoxy paint supplied with the pump and column. Measure the overall length of pump and column as it is installed.

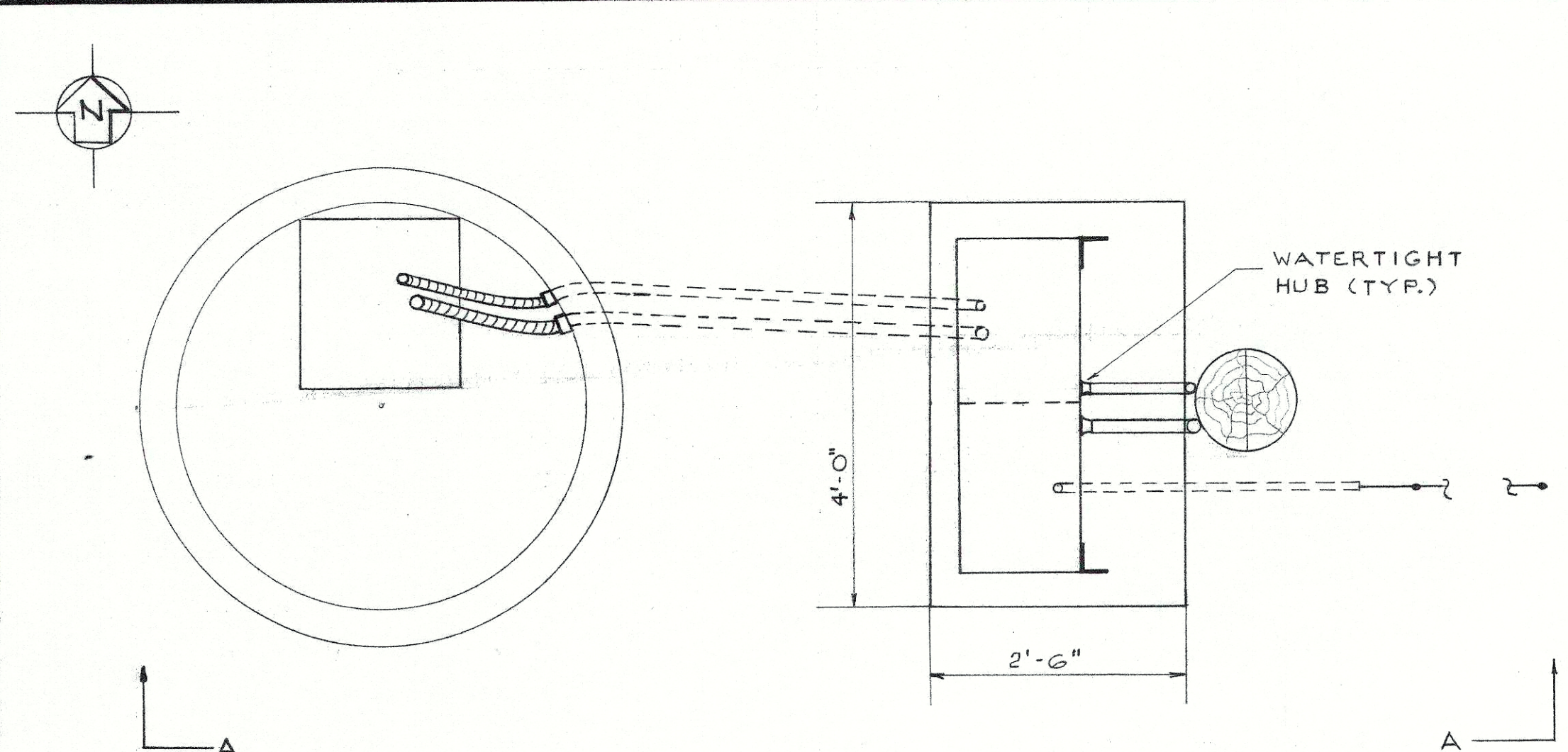
Before lowering the surface plate onto the anchor bolts install approximately 1-inch of metal shims just inside each of the four anchor bolts. Adjust the shims to ensure all are taking an equal share of the weight.

Before starting of the pump the column should be filled with water and all air expelled.

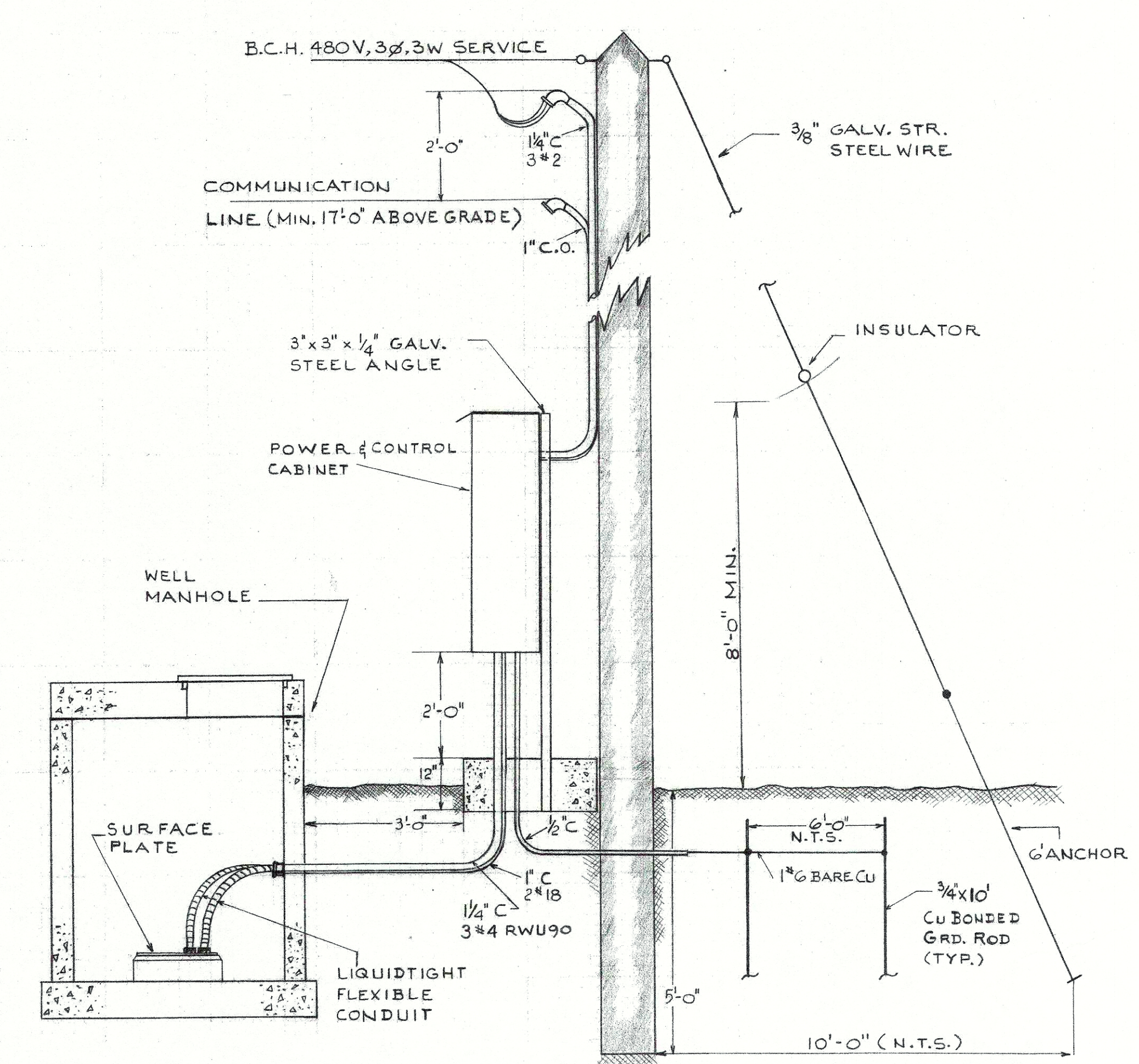






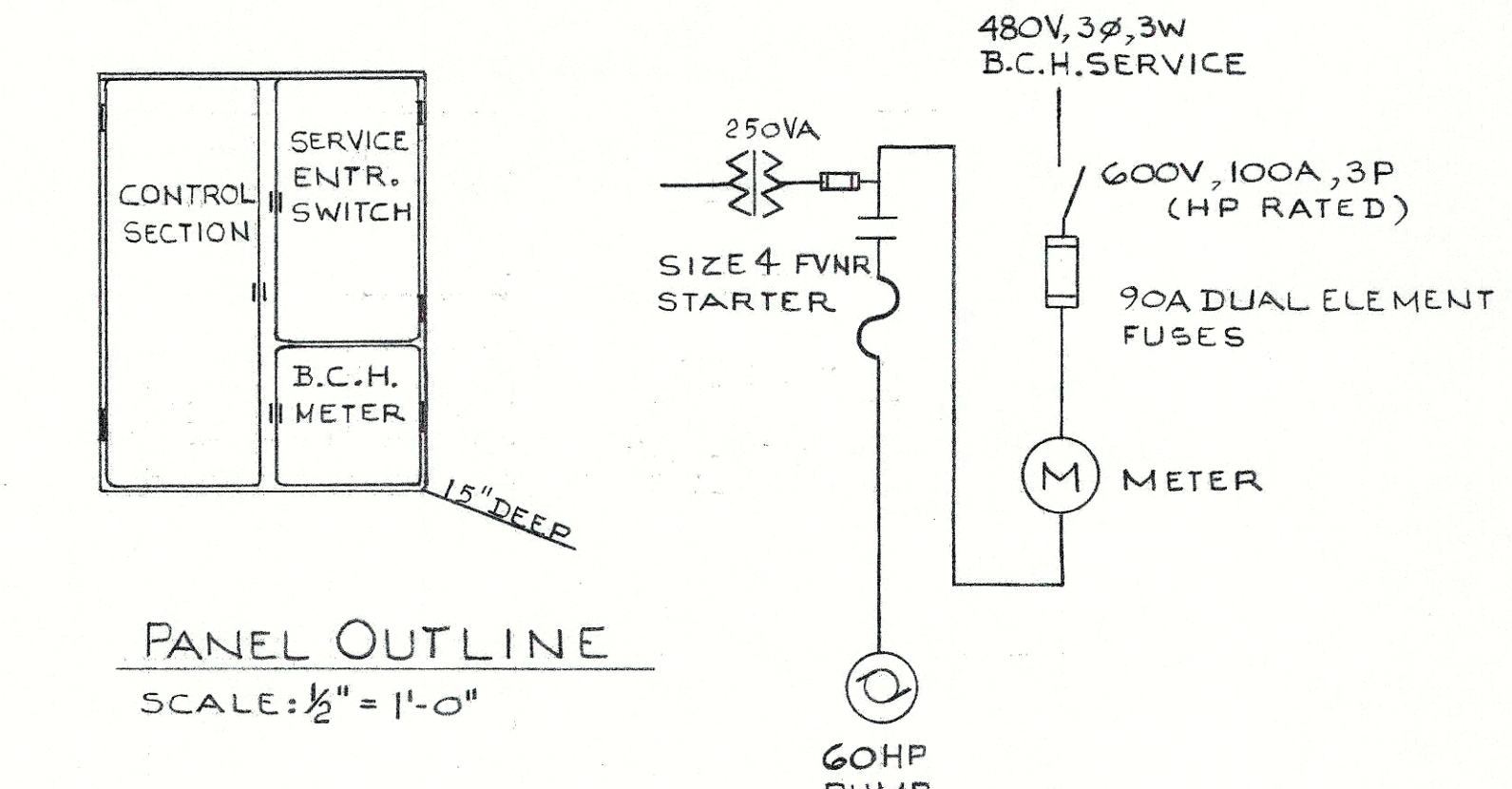


PLAN  
SCALE: 3/4" = 1'-0"



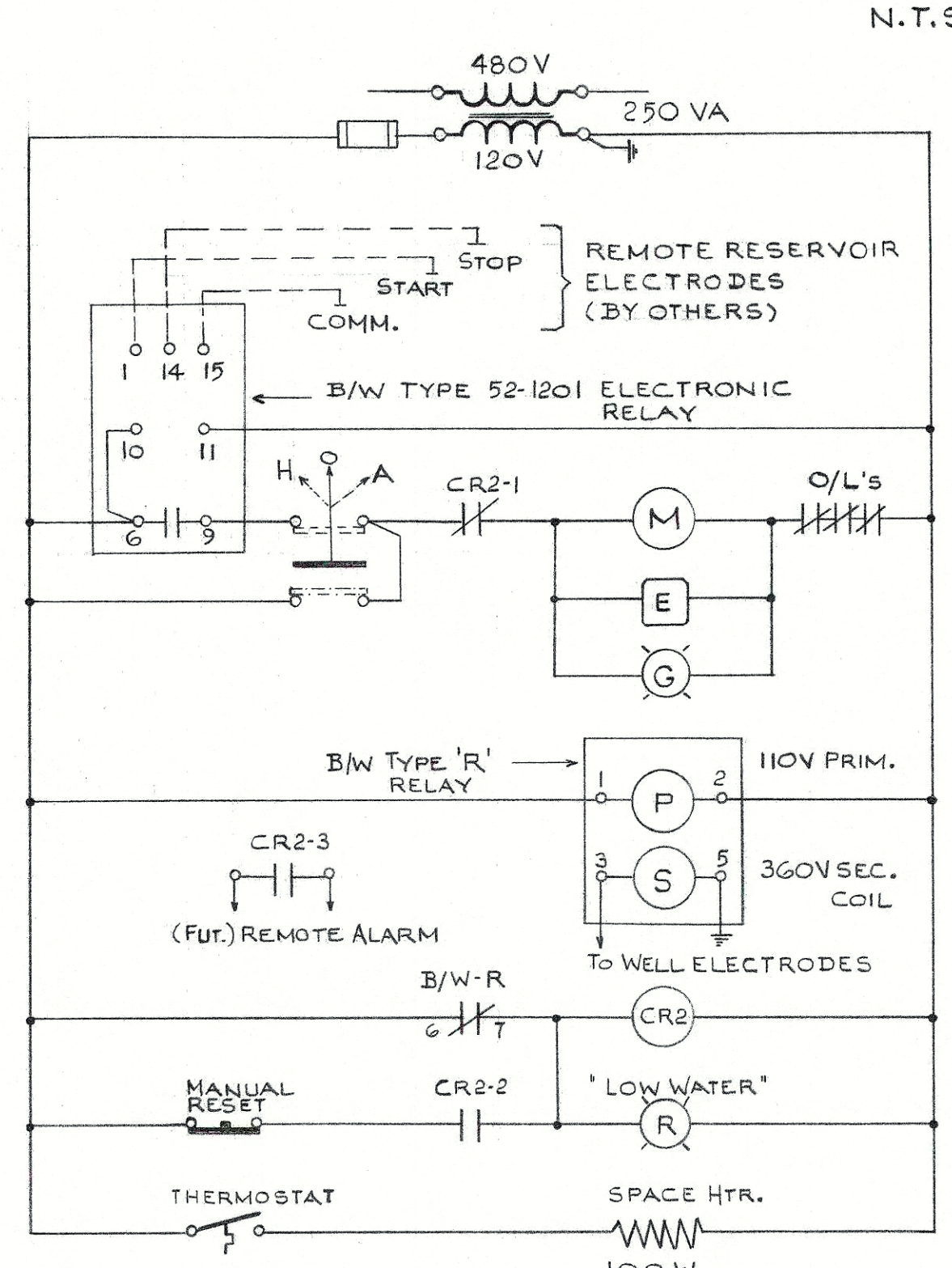
SECTION 'A-A'  
SCALE: 1/2" = 1'-0"

- LEGEND
- (CR) CONTROL RELAY
  - (E) ELAPSED TIME METER
  - (M) MOTOR STARTER COIL
  - (G) GREEN PILOT LIGHT
  - C.O. CONDUIT ONLY



PANEL OUTLINE  
SCALE: 1/2" = 1'-0"

SINGLE LINE DIAGRAM  
N.T.S.



PUMP CONTROL SCHEMATIC  
N.T.S.

**GENERAL**

All material supplied under this contract shall be new, and carry CSA seal of approval.

All work shall be installed strictly in accordance with the Canadian Electrical Code, current edition, including all amendments and any local bylaws or rules regulating the installation of electrical equipment.

The electrical work shall include:

1. Supply and installation of a service pole.
2. 480V, three phase, 3 wire power service.
3. Supply and installation of a power and control cabinet.
4. Grounding system as indicated on the drawing.
5. Underground conduits for power and well electrodes.

**PERMITS AND INSPECTION**

The Contractor shall obtain and pay for all permits required for the execution and inspection of his work and pay all charges incidental to such permits.

**SERVICE CONNECTION CHARGES**

Power Company and Telephone Company service connection charges will be paid by the Corporation.

**SERVICE**

- (a) The service shall be for 480V, three phase, 3 wire.
- (b) Install power and communication conduits to the power pole weatherheads as shown on the drawing.
- (c) The service pole shall be 25-foot, Western Red Cedar, Lodgepole Pine or Douglas Fir, CESA Class 6, fully penta-treated.

**POWER AND CONTROL CABINET**

The power and control cabinet shall be outdoor galvanized steel (CEMA 3) #12 gauge, with drip shield. Left section to have inner door for mounting of pilot devices and reset button. Outer door with locking facility.

Right section with two doors, each with padlock facility.

One common mounting plate to accept the 200A service entrance switch (enclosed type) and a meter socket in the lower portion.

Supply and install engraved laminated plastic nameplates on the inner door to indicate the functions of each device.

Supply a terminal strip for remote connections.

Motor starter shall be Size 4, FVNR c/w ambient compensated quick-trip overload relays.

**CONDUIT**

Conduit shall be galvanized rigid steel. Where buried, conduit shall have two coats of bitumastic paint, Barretts or equal. Flexible conduit shall be liquidtight with watertight fittings.

**WELL ELECTRODES**

Well electrodes shall be B/W Type E-1S shielded and shall be complete with #18 Type SW suspension wire. The electrodes shall be strapped to the well column at 6-feet above check valve (approximately 307 feet below the surface plate). The suspension wire shall be continuous without splices from each electrode to the control panel terminals and shall be strapped to the column with T & B heavy-duty TY-RAP lashing ties Cat.No. TY-5409 at 10-foot intervals.

**PUMP MOTOR CONDUCTORS**

Pump motor power conductors, supplied with pump and pre-spliced at motor, shall be continuous without additional splices from motor to control panel terminals and shall be strapped to the well column with the electrode suspension wires. The 1/4" copper pipe sensing line specified on Sheet 1 shall be included in the strapping and all arranged to provide positive support from the well column.

REVISIONS	ISSUE	DATE	DRN	CHD	APP'D	DESCRIPTION	ISSUE	DATE	DRN	CHD	APP'D	DESCRIPTION	DESIGNED	G.T. TALLING	DRAWN	R.D.	CHECKED	DAYTON & KNIGHT LTD. CONSULTING ENGINEERS	SUNSHINE COAST REGIONAL DISTRICT CHASTER ROAD WELL PUMPING STATION ELECTRICAL DETAIL	SCALE: AS SHOWN DRAWING No. 28.41.2 SHEET 2 OF 2 ISSUE A

