

## CONSTRUCTION SPECIFICATION

### NV-73. PUMPING PLANT

#### 1. SCOPE

This work shall consist of furnishing, installing and testing the pump, motor, controls, and power connections as per the manufacturer's instructions. Equipment and installation shall be as specified and as shown on the drawings.

#### 2. MATERIALS

The materials used in the manufacturer of the pump shall be compatible. Special material requirements, where applicable, shall be shown on the drawings.

The Contractor shall submit a list of materials, fixtures, and equipment to be used which shall show catalog numbers, diagrams, published pump performance curves, technical ratings, and other pertinent data concerning the project the Contractor intends to use in the installation before ordering any equipment.

The pump shall be within the rated performance of the manufacturer. The performance shall include: suction head, discharge volume and pressure. The drawings shall specify the discharge and pressure rating at the location of the pump station

The power sources may be internal combustion engines, electrical motors or power takeoffs. The shield or guard from the drive units shall be in place and properly secured.

All electrical service, installation and connections shall be in compliance with the National Electrical Code (NEC) and all local codes or regulations for the installation of electrical equipment. All electrical equipment including electrical motors and panels shall be grounded.

#### 3. FOUNDATION

The pump platform or foundation shall be of the materials and to the dimensions shown on the drawings or as per the manufacturer's recommendations. The anchor bolts shall be spaced to securely hold the pumping plant in place without excessive vibration.

#### 4. PIPE CONNECTIONS

The inlet and discharge connections shall be sized for the pump and be installed to minimize losses through bends, valves and transitions. The pumping schematic shall be reviewed by the Technician before installation.

#### 5. INFORMATION TO BE FURNISHED

The Contractor shall furnish the following information:

- a. Clear and concise instructions for the operations, adjustment, lubrication and other maintenance for the equipment.
- b. List all parts for the equipment with catalog numbers and other data necessary for ordering replacement parts.
- c. Special procedures for starting and shutting down the system.
- d. Instructions for preventative maintenance.

Such instructions and parts list shall have been prepared for the specific equipment furnished for this project and shall not refer to other sizes and types or models of similar equipment.

## 6. OPERATIONAL TEST

After installation has been completed, the pump, motor, controls, and valves shall be given a running test of normal start-stop operations under load. The pump and motor shall demonstrate the ability to operate without vibration, overheating, and shall prove without question the general fitness for service. The controls shall be demonstrated to operate and function properly.

Any defects in equipment caused by poor materials or workmanship shall be corrected.

## 7. BASIS OF ACCEPTANCE

The acceptability of the pumping plant shall be determined by inspections to insure compliance with all the provisions of this specification with respect to the design of the motor (or engine), pump, electrical panel, appurtenances, and the minimum installation requirements.