All information in such report constitutes "technical data".

The "technical data" shall be limited to facts, measurements, field observations, boring logs, soil type and similar data. "Technical data" shall not include opinions regarding suitability of material, dewatering methodologies, soil stability, slope stabilization methods and other opinions or professional judgments.

2. The following drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) are known to Owner:

   a. NONE

3. The reports identified above are not part of the Contract Documents, but the "technical data" contained therein upon which Contractor may rely, as expressly identified and established above, are incorporated in the Contract Documents by reference and may be reflected in the Drawings. Contractor is not entitled to rely upon any other information and data known to or identified by Owner or Engineer.

4. Copies of reports identified above are included as an attachment to Section 01 15 00.

SC 4.05 *Reference Points*

Pursuant to Paragraph 4.05.A, surveys exist for the Project and are reflected on the Drawings.

SC-4.06 *Hazardous Environmental Conditions at Site*

A. Pursuant to Paragraph 4.06.A,

1. the following reports regarding Hazardous Environmental Conditions at the Site are known to Owner:

   a. Report dated August 2014 prepared by Enviro-Safe Engineering of Brockton, MA., entitled "Asbestos & Lead Inspection Report for 178 Stackpole Street, Lowell, MA", consisting of 16 pages.

   All information in such report constitutes "technical data".

   The "technical data" shall be limited to facts, measurements, field observations, and similar data. "Technical data" shall not include opinions regarding means and methods, and other opinions or professional judgments.

2. The following drawings regarding Hazardous Environmental Conditions at the Site are known to Owner:

   a. NONE

3. The reports identified above are not part of the Contract Documents, but the "technical data" contained therein upon which Contractor may rely, as expressly identified and established above, are incorporated in the Contract Documents by reference. Contractor is not entitled to rely upon any other information and data known to or identified by Owner or Engineer.

4. Copies of reports identified above are included as an attachment to Section 01 15 00.

Insert the following at the beginning of Paragraph 4.06.D.

Except for removal and disposal of contaminated soils and water encountered during normal excavation and dewatering activities within Contractor's scope of Work and specified in Section 26 10 00,

Insert the following at the beginning of Paragraph 4.06.E.

Except for removal and disposal of contaminated soils and water encountered during normal excavation and dewatering activities within Contractor's scope of Work and specified in Section 26 10 00,

SC-5.04 *Contractor's Insurance*

Pursuant to subparagraph 5.04.C.5, also provide Owner's Protective Liability in the amount of $3,000,000 (per occurrence for bodily injury & property damage combined single limit)

SC-5.06 *Property Insurance*

Insert the following at the end of Paragraph 5.06.A.2.

The policy will not require coverage for flood damage at the Raw Water Pump Station, 1194 Pawtucket Blvd, Lowell, MA 01854, as it is located within the FEMA Flood Zone Hazard Area AE.

SC-6.02 ***Labor; Working Hours***

Pursuant to Paragraph 6.02.B, regular working hours for this Project are 7:00 a.m. to 3:00 p.m., Monday through Friday, or as scheduled and authorized by Owner during .

Add the following new subparagraph immediately after Paragraph 6.02.B.

1. No construction will be allowed outside of regular working hours without written authorization from the Owner. The Owner will provide personnel to assist Contractor at no cost to the Contractor: a) only during regular work hours; b) during a scheduled shutdown; or c) when written authorization has been obtained from Owner approving performance of construction outside of regular working hours or on Saturday, Sunday and holidays, provided that the need is for a scheduled shutdown or due to delays beyond the control of Contractor (as set forth in Paragraph 12.03 of the General Conditions and Supplementary Conditions, if any.

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G. Shaft Sleeves: To be shouldered on shaft near impeller and covers full length of shaft from impeller hub to motor end bracket. Seals by compression between shaft sleeve and impeller hub, also between sleeve and shoulder on shaft, protecting shaft from contact with liquid.

H. Stuffing Box: The stuffing box shall be cast integral with the pump casing. The stuffing box shall contain a mechanical seal, as specified below. Adequate space shall be available for access to the seal area for maintenance and adjustment.

I. Mechanical Seal

1. All mechanical seal components shall be split in half except for seal faces. Seal faces shall be solid (un-split) for initial installation at rotating equipment manufacturers only.

2. Materials of Construction: The mechanical seals shall be of the following material types, or approved equal

a.	Gland and rotary holder:	316 stainless steel
b.	Springs:	Elgiloy
c.	The rotary face:	solid silicon carbide or alumina creamic
d.	The stationary seal face:	solid silicon carbide or carbon
e.	Elastomers:	Fluoroelastomer, EPR or Aflas

3. The seal shall be installed outside of the sealing chamber/stuffing box. Repair/replacement of the seal shall be accomplished without any rotating equipment disassembly.

4. The seal shall be of stationary, hydraulically balanced, o-ring design to reduce heat generation, face wear and minimize horsepower consumption. The design will seal both positive pressure and vacuum.

5. The seal shall be mechanically loaded with multiple springs. The springs will be isolated from the pumped product to eliminate corrosion or clogging problems.

6. Two flush ports with standard 3/8” NPT tapped connections shall be provided in the gland.

7. The rotary holder shall have a drive pin to ensure positive drive of rotating parts.

8. The seal shall be capable of sealing up to 28 inches of vacuum to 400 PSIG, dependent upon size and materials.

9. Provide one spare parts kit for each mechanical seal.

J. Adapter: Maintains rigid assembly between motor and casing. Machined lock between adapter and motor end bracket keeps adapter & casing in permanent alignment with motor and extended motor shaft.

K. Motor: The motor shall be horizontal and designed, manufactured, and tested in accordance with the latest applicable NEMA (specifically NEMA Standard No. MG-1), UL (specifically UL1004-8), ANSI, IEE, and ASTM standards, and shall have the following characteristics:

1. Enclosure: TEFC
2. Number of Phases: Three (3)
3. Cycles: 60 Hz
4. Voltage: 480 Volt
5. Speed: 3,600 RPM (Pump #1), 1,800 RPM (Pump #2, #3)
6. Service Factor: 1.15 (minimum)
   a. The service factor is reserved for variations in voltage and frequency.
7. Motor Size: 40 HP (Pump #1), 150 HP (Pumps #2, #3)
   a. Each motor shall have a sufficient horsepower rating to operate the pump at any point on the pump's head-capacity curve without overloading the nameplate horsepower rating of the motor, regardless of service factor.
8. Premium Efficiency Inverter Duty Rated
9. Provide resistive temperature devices (RTDs) for thermal protection of motor and upper and lower bearings. The RTDs shall be interlocked to the pump circuit within the drive cabinet in order to shut down the pump upon high motor temperature or high bearing temperature.
10. Shaft grounding brushes.
11. Provide vibration sensors equal to Robert Shaw Model 376A with dry contacts to wire to VFD or SCADA system.

L. Pump/Motor Vibration Isolation Pads: The pump/motor assembly shall be mounted to a fabricated steel base built specifically for the pump/motor to be mounted. Each mounting or attachment point shall be complete with a vibration isolation pad. The pad will be in two (2) parts, a 1/4" base layer followed by a 5/8" upper layer and be a nominal 2" x 2" square size for pump/motor combinations weighing up to 1500 pounds.