

1.0 **GENERAL**

1.1 **Related UBC Guidelines**

- .1 Division 33, Section 33 10 00 Water Utilities - 2.4; Section 33 51 00 Natural Gas Distribution - 2.4; and Section 33 61 00 Hydronic Energy Distribution - 2.5; Division 27, Section 27 05 08 Description of System – 1.4; Division 25, Section 25 05 00 Building Management Systems (BMS); Division 01, Section 01 92 00 Monitoring Based Commissioning.

1.2 **Coordination Requirements**

- .1 UBCO Energy

1.3 **Description**

- .1 UBCO requirements for Metering.

2.0 **MATERIAL AND DESIGN REQUIREMENTS**

2.1 **General**

- .1 Division 26 contractor shall supply and install primary meter at the project's cost.

2.2 **Electrical Metering**

- .1 Primary and secondary meters shall be provided by BMS vendor. Refer to Section 25 05 00, 4.3 for metering requirements.
- .2 Approved Test Block Manufacturers:
 - .1 ABB type FT-1.
 - .2 Sangamo.
 - .3 Superior #1082F.

2.3 **Metering Transformers**

- .1 Metering transformers shall be provided by the Division 26 contractor.
- .2 Three current transformers (CT's) shall include revenue metering accuracy of 0.3B0.9, ratio XXX/5. Mount CT's on transformer secondary bus.
- .3 All current transducers shall be provided by the electrical trade, and shall be Rogowski Coil type for building secondary metering. Split CTs are acceptable for building primary metering.

2.4 **Mechanical Meters**

- .1 Main building gas and water meters are to be integrated into the building BMS system and Siemens BMS. Pulse outputs from each of these meters are to be brought to a building automation controller for recording purposes.

- .2 The Division 26 contractor shall install all pathways and wiring between the mechanical meters and the BMS controller. Coordinate with Division 20 contractor and UBCO Energy Team.
- .3 District Energy meter shall be network connected directly to the building BMS system. Refer to Section 01 92 00 Monitoring Based Commissioning, Section 25 05 00 – 4.9, and Section 20 00 06 Metering for applicable details.

*****END OF SECTION*****