

## **DIVISION 16 - ELECTRICAL**

### **Section 16460 - Transformers (Low Voltage)**

#### **Introduction**

This section covers transformers with primary voltages to 480 volts and secondary voltages to 120/208.

Locate transformers in an area where they are accessible for inspection on a periodic basis. All transformers are to have both secondary and primary circuit protection.

Final connection to transformers shall be in sealtight or steelflex. Minimum length shall be 3'. Conduit shall be left with an ample vibration loop.

Transformer 30 KVA and larger are to be mounted on ground level with a 4" concrete housekeeping pad.

Transformers may be stacked with proper clearances and prior approval of the UA Electrical Engineer.

#### **Part 1 - General**

- Transformers are to be as manufactured by PowerSmith, or approved equal.
- Contact UA Electrical Engineer for current listing of approved transformers.
- All approved units shall have been in normal production for a period of two years prior to bid date.

#### **Part 2 - Products**

- Provide 4 - 2 ½ % taps on each transformer 10 KVA and above. Two above rated voltage and two below rated voltage.
- Transformers shall be harmonic mitigating type. 3<sup>rd</sup> harmonic removal shall be considered in design. UA will consider other types of equipment to accomplish 3<sup>rd</sup> harmonic removal.
- Noise levels shall be 3 db below NEMA Standards, using the lower level NEMA parameter.
- Products shall be energy conserving type TP-1, or better and shall meet the latest DOE efficiency standards
- All protection shall be external to the transformer.

#### **Part 3 - Execution**

- Ground transformer neutral to building steel or approved grounding electrode system where building steel is not available.
- Bond frame of transformer.
- When transformers are wall mounted they are to be mounted using factory constructed support assemblies or prior approved supports.

#### **End of Section 16460**