

PART 1 - GENERAL

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| <u>1.1 REFERENCES</u> | .1 | Canada Green Building Council (CaGBC)
.1 LEED Canada-NC-2009, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations. |
| | .2 | CSA International
.1 CAN/CSA-C22.2 No.47, Air-Cooled Transformers (Dry Type).
.2 CSA C9, Dry-Type Transformers. |
| | .3 | National Electrical Manufacturers Association (NEMA) |
| <u>1.2 ACTION AND INFORMATIONAL SUBMITTALS</u> | .1 | Submit in accordance with Section 01 33 00 - Submittal Procedures. |
| | .2 | Product Data:
.1 Submit manufacturer's instructions, printed product literature and data sheets for dry type transformers and include product characteristics, performance criteria, physical size, finish and limitations. |
| | .3 | Sustainable Design Submittals:
.1 LEED Canada submittals: in accordance with Section 01 35 21 - LEED Requirements.
.2 Construction Waste Management:
.1 Submit project Waste Management Plan highlighting recycling and salvage requirements.
.2 Submit calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating that 75% of construction wastes were recycled or salvaged. |
| <u>1.3 CLOSEOUT SUBMITTALS</u> | .1 | Submit in accordance with Section 01 78 00 - Closeout Submittals. |
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1.3 CLOSEOUT
SUBMITTALS
(Cont'd)

- .2 Operation and Maintenance Data: submit operation and maintenance data for dry type transformers for incorporation into manual.

1.4 DELIVERY,
STORAGE AND
HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
.1 Store materials accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
.2 Store and protect from nicks, scratches, and blemishes.
.3 Replace defective or damaged materials with new.
- .4 Develop Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 35 21 - LEED Requirements.
- .5 Packaging Waste Management: remove for reuse or return of pallets, crates, padding, banding, and packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.

PART 2 - PRODUCTS

2.1 DESIGN <u>DESCRIPTION</u>	.1 Design. .1 Type: ANN. .2 Single and 3 phase, kVA and voltage as noted, 60 Hz. .3 Voltage taps: standard. .4 Basic Impulse Level (BIL): standard. .5 Hipot: standard. .6 Average sound level: standard. .7 Impedance at 17 degrees C: standard. .8 Enclosure: NEMA, removable metal front panel. .9 Mounting: floor or wall. .10 Finish: in accordance with Section 26 05 00 - Common Work Results for Electrical. .11 Copper windings. .12 Voltage Regulation to be 4% or better.
2.2 EQUIPMENT <u>IDENTIFICATION</u>	.1 Provide equipment identification in accordance with Section 26 05 00 - Common Work Results for Electrical. .2 Label size: 7. .3 Nameplate wording: indicate transformer number, kVA and voltage.

PART 3 - EXECUTION

3.1 <u>INSTALLATION</u>	.1 Mount dry type transformers up to 75 kVA as indicated. .2 Mount dry type transformers above 75 kVA on floor. .3 Ensure adequate clearance around transformer for ventilation. .4 Install transformers in level upright position.
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3.1 INSTALLATION
(Cont'd)

- .5 Remove shipping supports only after transformer is installed and just before putting into service.
- .6 Loosen isolation pad bolts until no compression is visible.
- .7 Make primary and secondary connections in accordance with wiring diagram. Use flexible conduits.
- .8 Energize transformers after installation is complete.
- .9 Make conduit entry into bottom 1/3 of transformer enclosure.

3.2 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.3 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by dry type transformers installation.