

2022-02-03

**REQUEST FOR QUOTATION  
REPLACEMENT OF TRANSFORMERS FOR  
VAULTS #1, #2, #28 & #29  
RFQ 08 (2022-01)**

The Toronto Zoo invites you to submit a quotation to provide labour, tools, materials and equipment necessary to install four (4) pad mounted transformers, supplied by the Toronto Zoo. The contractor is responsible for all pricing and other arrangements with all sub contractors as required. All work is to be completed in accordance with the specifications and drawings in the Request for Quotation (RFQ).

Work shall commence as soon as possible once the project is awarded and a Purchase Order has been issued. All work shall be completed by **Friday, 2022-04-01**.

The Quotation package includes Instructions, Terms & Conditions, Requirements, Drawings, and Forms. Quoted prices shall remain in effect for a period of ninety (90) days from the Quotation due date.

Site Meeting: A site meeting has not been scheduled for this RFQ. If you would like to review the site, please contact Kyle Rekker, [krekker@torontozoo.ca](mailto:krekker@torontozoo.ca)

Due Date: Your quotation must be completed, and received by the Supervisor, Purchasing & Supply, Toronto Zoo, Administrative-Support Centre, 361A Old Finch Ave., Toronto, Ontario, M1B 5K7 by:

**Friday, 2022-02-18, 1200 hours (noon, local time)**

The Board of Management of the Toronto Zoo reserves the right to reject any or all quotes or to accept any quote, should it deem such an action to be in its interests.

Yours truly,

Alia Lee  
Director, Finance & Technology

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**1.0 INSTRUCTIONS**

- 1.1** Ensure that you have received all **seventeen (17)** pages plus Equipment Specifications & Shop Drawings, Equipment Reports, Single Line Diagram and vault locations for the RFQ package.
- 1.2** Your quotation must be completed, and received by the Supervisor, Purchasing & Supply, by:

**Friday, 2022-02-18, 1200 hours (noon, local time)**

Submission – Temporary process - In view of the current situation with COVID 19 and to limit personal interaction, on a temporary basis submissions for this Request for Proposal can be submitted electronically by email in a PDF file, prior to the submission deadline to the following email address

[bids@torontozoo.ca](mailto:bids@torontozoo.ca)

and note the following:

- a. Subject of the file to be: RFQ# - Title of RFQ – Vendor name.
- b. Amendments to a Proposal may be submitted via the same methods, at any time prior to the Closing Time.
- c. It is the Supplier's sole responsibility to ensure its Bid is received by the Submission Deadline in accordance with the requirements of this RFP. The receipt of Bids can be delayed due to a number of factors including "internet traffic", file transfer size and transmission speed. The Supplier should allow sufficient time to download, complete and upload, as applicable, the submission forms comprising its Bid and any attachments.

A Bid will only be considered to be submitted once it has been received by the Toronto Zoo. The time of such receipt is reflected by the time received stamped by the Toronto Zoo's email application

- 1.3** Quotations must not be submitted by facsimile, email or any other electronic format.
- 1.4** All Prices submitted shall be quoted in Canadian currency, Show itemized cost of HST if applicable.
- 1.5** Toronto Zoo reserves the right to award in whole or in part on the basis of the bids received, Lump Sum Price or Breakdown Price.
- 1.6** Use the attached submission label, when you submit your response in a sealed envelope or package and deliver to the Toronto Zoo.
- 1.7** Quotation prices shall remain in effect for a period of ninety (90) days from the Quotation due date.
- 1.8** Include product information, samples, and pictures, as necessary.

**RFQ 08 (2022-01) – REPLACEMENT OF TRANSFORMERS  
VAULTS #1, #2, #28 & #29**

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- 1.9** Provide references of at least three (3) clients for whom your company has performed similar work. References must include photos of three (3) different installations, client company name, contact name, address and e-mail address.
- 1.10** If applicable, suggested alternative products are acceptable, however all such products must be quoted separately and should not replace the Toronto Zoo requested product, work or service.
- 1.11** It is the responsibility of the Bidder to understand all aspects of the RFQ and to obtain clarification if necessary before submitting their quotation.
- 1.12** For any questions concerning this RFQ, please contact:

Peter Vasilopoulos, Supervisor,  
Purchasing & Supply, Tel: 416-392-5916, Fax: 416-392-6711,  
E-mail: [pvasilopoulos@torontozoo.ca](mailto:pvasilopoulos@torontozoo.ca)

## 2.0 TERMS AND CONDITIONS

- 2.1 Definitions:** Wherever used in the Request for Quotation the word “**Board**” means the Board of Management of the Toronto Zoo and the word “**Vendor**” or “**Contractor**” means the person or persons or Corporation to whom the purchase order is issued.
- 2.2 Vendor Assurance:** Unless otherwise stated, the goods, material, articles, equipment, work or services, specified or called for in or under this Quotation, shall be delivered or completely performed, as the case may be, by the Vendor as soon as possible and in any event within the period set out herein as the guaranteed period of delivery or completion.
- 2.3 Country of Origin:** Wherever possible, the goods, services, materials, articles or equipment, specified or called for in or under this Quotation, shall be of Canadian origin and manufacture.
- 2.4 Delivery:** The prices stated in this Quotation cover the services, material, articles or equipment referred to herein, being delivered F.O.B. destination, freight, express, duty and all other charges prepaid, unless otherwise indicated herein. A detailed delivery ticket or piece tally, showing the exact quantity of goods, material, articles or equipment shall accompany each delivery. A receiver’s receipt shall not bind the Board to accept the goods, material, articles or equipment covered thereby, or the particulars of the delivery ticket or piece tally therefore. The Vendor shall not be entitled to any interest upon any bill due to delay in its approval by the CEO of the Toronto Zoo or his designate.
- 2.5 Invoicing:** Unless otherwise indicated herein, the prices stated are payable in Canadian Funds at the head office of the Board. Any Harmonized Sales Tax (HST) applicable shall be shown as a separate item. The Vendor’s HST/Business registration number must be indicated on the invoice.

The Vendor shall clearly show any special charges such as packaging and freight, where applicable, as separate items on the invoice.

Payments to non-resident Vendors may be subject to withholding taxes under the Income Tax Act (Canada). Unless a non-resident Vendor provides the Board with a letter from Revenue Canada, Taxation waiving the withholding requirements, the Board will withhold the taxes it determines are required under the Income Tax Act (Canada).

- 2.6 Notice of Delivery:** The Vendor shall notify the Purchasing Agent of the Board at the address given for the mailing of invoices, in writing as soon as possible of the details of the shipment of the goods, materials, articles or equipment.
- 2.7 Right to Cancel:** The Board shall have the right to cancel at any time this Quotation or any contract or any part of any contract resulting from this Quotation in respect of the goods, material, articles, equipment, work or services set out in this Quotation or any such contract or part of such contract, not delivered or performed at the time of such cancellation, and the Board will not be responsible to make any payments in respect of any such goods, materials, articles, equipment, work or services and shall not incur any liability whatsoever in respect thereto.

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In the event that the Vendor fails or neglects by any act or omission to comply with any of the conditions set out herein, this Quotation or any contract resulting from this Quotation may be unconditionally cancelled by the Board without notice to the Vendor.

- 2.8 Official Agreement:** No verbal arrangement or agreement, relating to the goods, material, articles, equipment, work or services, specified or called for under this Quotation, will be considered binding, and every notice advice or other communication pertaining thereto, must be in writing and signed by a duly authorized person.
- 2.9 Worker's Rights:** The Vendor shall comply with the conditions of the Board relating to Worker's Rights, a copy of which is available on application to the Manager, Fair Wage and Labour Trades Office, City of Toronto, 18<sup>th</sup> Floor, West Tower, City Hall, Toronto, Ontario, M5H 2N2 or by phone at 416-392-7300.
- 2.10 Insurance:** The Contractor shall, at his/her own expense obtain and, until the work is fully complete maintain, broad-scope insurance coverages, hereof, satisfactory to the Chief Executive Officer as to form and substance, with the indicated policy form of the Canadian Construction Documents Committee (CCDC), its equivalent or better subject to such modifications therein to cover unusual aspects of the work, working conditions or other circumstances as may be specified elsewhere in the Contract.
- 2.10.1 The Contractor shall effect, maintain and keep in force, at its sole cost and expense and satisfactory to the Chief Executive Officer as to form and substance the insurance described below:
- 2.10.2 All risks property insurance on property of every description and kind owned by the contractor or for which the Contractor is responsible while on the premises of the Board in an amount not less than full replacement value. The policy shall be endorsed to provide a waiver of subrogation against the Board for any loss or damage to insured property, however caused.
- 2.10.3 Commercial general liability insurance, including owners' and contractors' protective, products, completed operations, personal injury, employer's liability, contractual liability, occurrence basis property damage, liability arising from the sale of serving of alcoholic beverages and provisions for cross liability and severability of interests with a limit of not less than Two Million Dollars (\$2,000,000.00) per occurrence. The policy shall be endorsed to name the Board as an additional insured with respect to the operations of the Contractor under this agreement.
- 2.10.4 Standard automobile liability insurance for all owned vehicles with limits of not less than Two Million Dollars (\$2,000,000.00) per occurrence.
- 2.10.4.1 All policies of insurance required to be taken out by the Contractor shall be placed with insurers licensed to conduct business in the Province of Ontario and shall be subject to the approval of the Chief Executive Officer, acting reasonably.
- 2.10.4.2 The Contractor shall deliver to the Board evidence of the insurance required prior to the commencement of the agreement, in form and detail satisfactory to the Chief Executive Officer acting reasonably.

2.10.4.3 The provisions of this section 2.11 shall no way limit the requirements and obligations imposed on the Contractor elsewhere in the Contract, nor relieve the Contractor from compliance therewith and fulfillment thereof.

2.10.4.4 The parties agree that insurance policies may be subject to deductible amounts, which deductible amounts shall be borne by the Contractor.

2.10.4.5 The provisions of this article shall in no way limit the requirements and obligations imposed on the Contractor elsewhere in the Contract, nor relieve the Contractor from compliance therewith and fulfillment thereof.

**2.11 Indemnity:** The Vendor shall at all times well and truly save, defend, keep harmless and fully indemnify the Board, the City of Toronto, Toronto Region and Conservation Authority and their servants, employees, officers or agents, hereinafter called the "Indemnities", from and against all actions, suits, claims, demands, losses, costs, charges, damages, and expenses, brought or made against or incurred by the Indemnities, its or their servants, officers, employees, agents or invitees in any way relating, directly or indirectly, to goods, material, articles or equipment supplied or to be supplied, or to the supplying of goods or services, pursuant to this Quotation, or any other claim, action, suit, demand, loss, cost, charge, damage or expense relating to copyright, trademark or patent with regard directly or indirectly with any such goods, services, material, articles or equipment or the supply or performance thereof.

**2.12 Liability for Acts of Vendor Employees, Contractors or Agents:** The Vendor acknowledges responsibility and accepts liability for the acts of any of its employees, contractors and agents while on Toronto Zoo property. The Toronto Zoo reserves the right to request background checks for any individual providing the services requested on behalf of the Vendor.

**2.13 Guaranty of Quotation:** All goods, material, articles, equipment, work or services, specified or called for in or under this Quotation, shall be supplied or performed at the price or process and on the basis set forth or referred to in and in accordance with the Offer and this Quotation. The basis on which this Quotation is given shall include any specifications, plans, price schedules, samples, addenda or other details pertaining thereto, or provided in connection therewith.

**2.14 Right of Notice:** Any notice that the Board may be required or desire to give to the Vendor shall for all purposes to be deemed to have been sufficiently and properly given and afforded by registered mail addressed to the Vendor at the address shown for the Vendor on this form and shall therefore be presumed to have been received by the Vendor on the third day following such registration.

**2.15 Formal Contract:** The Vendor may be required and shall, if requested by the solicitor for the Board so to do, to execute and enter into a formal contract that is satisfactory to the solicitor for the Board, in order to document the contract resulting from this Quotation and to embody indemnity and related provisions that in the opinion of such solicitor are required to protect the Board.

**2.16 Charity Status:** The Toronto Zoo is a registered charitable organization (registration #BN 119216398RR0001) and accordingly may be eligible for preferred pricing which should be reflected in the Quotation as submitted.

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**2.17 Performance Evaluation:** The Contractor's performance will be evaluated by the Chief Executive Officer and/or Chief Executive Officer's Representative during the Contract and at the end of the Contract. In the event that the Contractor's performance is considered unsatisfactory by the Chief Executive Officer and/or Chief Executive Officer's Representative, the Contractor and/or its affiliates may become ineligible from bidding on future contracts issued by the Board.



### **3.0 PROJECT REQUIREMENTS**

The scope of work includes provision of labour, tools, materials and equipment necessary to install four (4) pad mounted transformers, supplied by the Toronto Zoo, as outlined in the drawings and specifications.

The work shall commence once the project has been awarded and a Purchase Order issued.

#### **3.1 SCOPE OF WORK**

3.1.1 All work to be completed in accordance with applicable codes, ie. Building Code, Electrical Code etc.

3.1.2 Work to be completed during normal operating hours.

3.1.3 Confirm fuse sizing of switchgear in administration building is adequately sized to accommodate the potential load addition. (most recent switchgear test report included in documents).

3.1.4 Method of removing, and landing, equipment shall be the responsibility of the contractor.

3.1.5 Remove existing transformers from vaults.

3.1.5.1 Isolation to be provided by Toronto Zoo staff. Confirmation and grounding to be completed by the contractor.

3.1.5.2 Transformers are not listed for containing PCB. The oil of each transformer is to be tested for PCB as per environmental regulations before removal off site. Testing, removal and disposal shall be the responsibility of the contractor.

3.1.6 Install and secure four (4) new pre-cast concrete transformer pads, supplied by Toronto Zoo, on top of existing vaults. Steel lid to be removed by contractor and disposed of by Toronto Zoo.

3.1.7 Install four (4) new pad mount transformers, supplied by Toronto Zoo.

3.1.8 Re-use existing primary cables at pad mount transformer locations.

3.1.9 Provide primary cable extension and new terminations as required.

3.1.10 Extend and terminate the existing transformer secondary cables to the new pad mount transformer as required. All cables are copper, unless otherwise stated. Wire sizes to be confirmed by contractor. All existing transformers are single phase units.

3.1.10.1 Vault #1 contains a set of #2 awg.

3.1.10.2 Vault #2 contains a set of 500 kcmil.

3.1.10.3 Vault #28 contains a set of #6 awg, #2 awg & #2 awg (AL).

3.1.10.4 Vault #29 contains a set of 4/0 awg.

3.1.11 Provide and install three (3) bollards at each vault location.

3.1.11.1 Utility locates will be completed by Toronto Zoo.

3.1.12 Supply and install grounding bonds to new transformer and bollards as necessary.

3.1.13 Supply and install checker-plate covers to be mounted, and grounded, over any voids on the newly installed vault lid.

3.1.14 Perform installation and commissioning tests, inclusive of:

3.1.14.1 Transformer turns ratio.

3.1.14.2 Insulation resistance of transformer windings.

3.1.14.3 Ground resistance.

3.1.14.4 Gas analysis, prior to energization, to provide reference reading for future testing.

3.1.15 All work must be carefully coordinated with the Zoo to ensure the safety of visitors, staff and the animals.

3.1.16 Provide ESA permit and inspection.

## **3.2 CONTRACTOR RESPONSIBILITIES**

3.2.1 Regular meetings/communication with the Toronto Zoo Project Team to review project status and to discuss issues that may arise during the project.

3.2.2 Provide samples, mock ups, etc. as required to the Project Team.

3.2.3 Provide product information and SDS sheets to the Project Team prior to start of the work where applicable.

3.2.4 Protect adjacent areas not included in the project. Any damage caused will be the responsibility of the contractor to rectify at no additional cost to the Zoo.

3.2.5 Clean the work area and remove all debris from site on a daily basis and make good any damage caused as a result of the work.

3.2.6 Secure the work site and provide construction signs and barriers to prevent injury to Zoo personnel and the public who will require access to the surrounding space during the work. All temporary barriers shall be free standing/ self-supporting and interlocking to prevent unauthorized access.

3.2.7 Upon award of contract, Contractor is to finish all work, including clean up and demobilization by the completion date specified.

3.2.8 Submit close out documents as requested. Including any warranties and “As built” drawings.

3.2.9 Any work must be carefully coordinated with the Zoo to ensure the safety of visitors, staff and the animals. All work is to be scheduled with consideration to ongoing events and functions and may be subject to limitations as a result.

3.2.10 The contractor shall supply the Zoo with copies of relevant certificates and licences, as required, for all workers prior to commencement of work.

3.2.11 All measurements to be site verified.

3.2.12 Contractor is to check in and out at Security when entering or exiting Zoo property as per the schedule agreed upon between contractor and Zoo designate.

### **3.3 SAFETY SPECIFICATIONS**

3.3.1 It is the responsibility of the Contractor to protect the site as required during construction.

3.3.2 Ensure that awareness of public safety is considered and protect visitors in the vicinity during the construction period.

3.3.3 All necessary personal protective equipment must be worn at all times and SDS sheets must be available on site as required.

3.3.4 The contractor is to abide by applicable Toronto Zoo Health & Safety Policies, the Ontario Health and Safety Acts, the Ontario Building Code and all other applicable codes including the Fire Codes

3.3.4.1 SAFE-002 Health & Safety Hazard Reporting

3.3.4.2 SAFE-017 Contractors Safety

3.3.4.3 SAFE-018 Vehicles on Site

3.3.4.4 SAFE-007 Working in Confined Space

3.3.4.5 SAFE-025 Hot Work

3.3.4.6 SAFE-013 Equipment Lockout/Tag-out

3.3.5 The contractor is to abide by the Toronto Zoo's Commitment to the City of Toronto's Corporate Smog Alert Response Plan.

3.3.6 It is the responsibility of the Contractor to ensure that the work site is properly protected at all times. All work sites must be marked and hoarded adequately with construction signs posted to secure and isolate the work site from the public or other personnel that have access to the area.

### **3.4 OTHER INFORMATION**

The successful bidder must demonstrate the ability to complete the work to standards acceptable to the Zoo and prove past performance in the completion of similar types of work for other clients by providing relevant examples of work and references. The successful bidder must also demonstrate and guarantee that they can produce the work in the allotted time.

**4.0 SUBMISSION FORMS:**

I/We, hereby, submit the Quotation and will comply with all terms, conditions, specifications and drawings (when provided) as set out within the Board’s Quotation.

I/We, hereby, have received, allowed for and included as part of our submission all issued Addendum numbered \_\_\_\_\_.

This form must be completed, properly signed and received on or before the date and time specified or your Quotation will not be considered. Quotation prices shall remain in effect for a period of ninety (90) days from the Quotation due date.

The Board of Management of the Toronto Zoo reserves the right to reject any or all Quotations or to accept any Quotation, should it deem such action to be in its interests.

By signing and submitting this FORM, you are agreeing to the release of your quotation information, as deemed necessary by the Board, in order to conduct business associated with this quotation or project.

<b>COMPANY INFORMATION</b>	
Company Name:	
Name of authorized Signing Officer	Title:
Signature of authorized Signing Officer:	Date:
I have the authority to bind the corporation	
Contact Name:	Title:
Address:	
Telephone #:	Fax #:
Email:	Web Site:
HST #:	

DESCRIPTION – REPLACEMENT OF TRANSFORMERS FOR VAULTS #1, #2, #28 & #29	Price complete, excluding HST
Provide all labour, tools, materials and equipment necessary to install four (4) pad mounted transformers, supplied by the Toronto Zoo, as specified in the quotation documents, drawings and specifications.	\$
<b>HST</b>	\$
<b>Total</b>	\$

**4.1 QUOTATION PRICING - LUMP SUM PRICE EACH SCOPE ACCORDINGLY**

COMMITMENT TO DELIVER	YES / NO
Please confirm that you are able to complete the work described herein by <b>Friday, 2022-04-01</b> .	

DISCOUNT	Discount and/or Other	Days
Discount allowed for prompt payment and period within which invoice must be paid to qualify.	%	
<b>Charity Status:</b> The Toronto Zoo is a registered charitable organization (registration #BN 119216398RR0001) and accordingly may be eligible for preferred pricing which should be reflected in the Quotation as submitted.		

<b>Name of Firm:</b>	
<b>Signature of Signing Officer(s)</b>	

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**SUBMISSION LABEL (N/A)**

This address label should be printed and affixed to the front of your sealed tender, quotation and proposal envelope/package submission. Toronto Zoo will not be held responsible for envelopes and packages that are not properly labelled or submitted to an address other than the one listed on this label.

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Vendor Name \_\_\_\_\_

**RFQ 08 (2022-01) – REPLACEMENT OF TRANSFORMERS FOR VAULTS #1, #2, #28 & #29**  
**Due Date: Friday, 2022-02-18, 1200 hours (noon, local time)**

**TO BE RETURNED TO**

**TORONTO ZOO  
C/O SUPERVISOR, PURCHASING & SUPPLY  
ADMINISTRATIVE SUPPORT CENTRE  
361A OLD FINCH AVE.  
TORONTO, ONTARIO  
M1B 5K7**

**NOTICE OF NO BID**

**INSTRUCTIONS:**

It is important to the Toronto Zoo to receive a reply from all invited bidders. If you are unable, or do not wish to submit a bid, please complete the following portions of this form. State your reason for not bidding by checking the applicable box(es) or by explaining briefly in the space provided. It is not necessary to return any other Request for Proposal/Quotation/Tender documents or forms. Please just return this completed form by fax or by mail prior to the official closing date. **Purchasing and Supply Fax Number: (416) 392-6711.**

<b>A Proposal/Quotation/Tender is not submitted for the following reason(s):</b>	
<input type="checkbox"/> Project/quantity too large.	<input type="checkbox"/> Project/quantity too small.
<input type="checkbox"/> We do not offer services or commodities to these requirements	<input type="checkbox"/> Cannot meet delivery or completion requirement
<input type="checkbox"/> We do not offer this service or commodity.	<input type="checkbox"/> Agreements with other company do not permit us to sell directly.
<input type="checkbox"/> Cannot handle due to present commitments.	<input type="checkbox"/> Licensing restrictions
<input type="checkbox"/> Unable to bid competitively.	<input type="checkbox"/> We do not wish to bid on this service or commodity in the future.
<input type="checkbox"/> Insufficient information to prepare quote/proposal/tender	<input type="checkbox"/> Specifications are not sufficiently defined
<input type="checkbox"/> We are unable to meet bonding or insurance requirements.	

Other reasons or additional comments (please explain):

Company Name:	
Address	
Contact Person:	
Signature of Company Representative:	
Date:	
Phone Number:	
Email address	
Fax Number:	

**APPENDIX A – LIST OF SUB-CONTRACTOR**

The Bidder proposes to sublet the following portions of the Work to the persons, firms or corporations indicated. The Bidder (Contractor) is responsible for all pricing with all subcontractors.

The Bidder submits that in proposing the under mentioned subcontractors, the Bidder has consulted each and have ascertained to our completed satisfaction that those names are fully acquainted with the extent and nature of the work and that they will execute their work with the requirements of the contract documents.

Work or services to be provided	Name and address of sub-contractor or person	Telephone

<b>Name of Bidder:</b>	
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**APPENDIX B - COVID-19 Proof of Vaccination Requirements**

All business visitors, contractors, sub-contractors, service providers, consultants, deliverers and vendors, any of whom may require access to our Zoo property, must be fully vaccinated with a COVID-19 vaccine. This requirement shall be in addition to any other division-specific policies regarding COVID-19 vaccination or under regulations, legislation or guidelines applicable to them.

I acknowledge and confirm that I shall comply with the above direction, including providing proof of vaccine status as required by the Toronto Zoo.

\_\_\_\_\_  
Name:

Title:

I have authority to bind the Business Partner.



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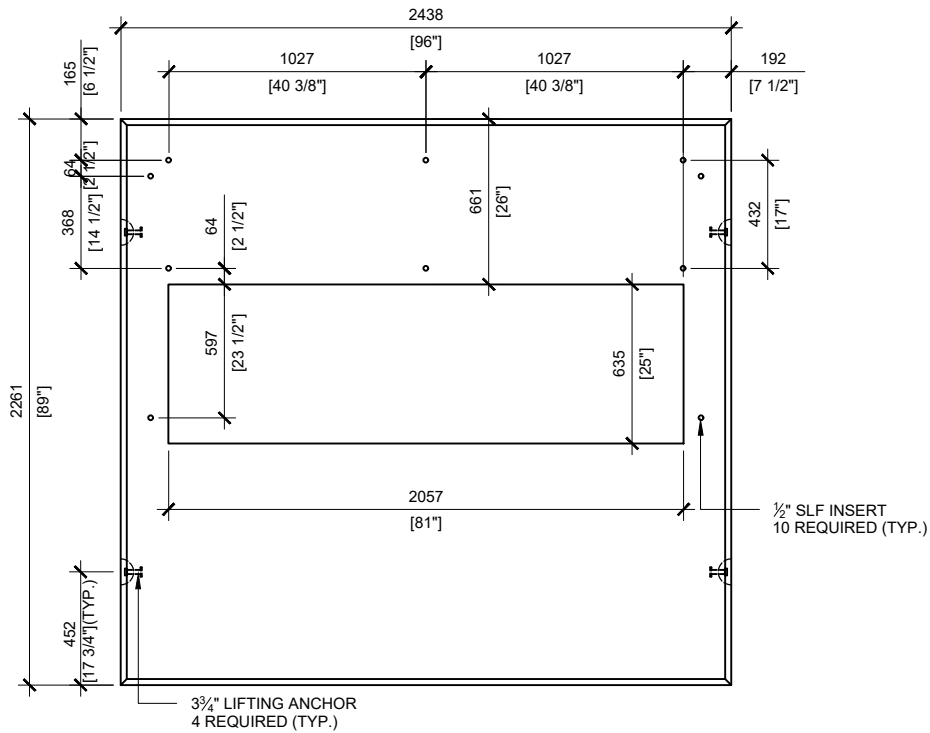
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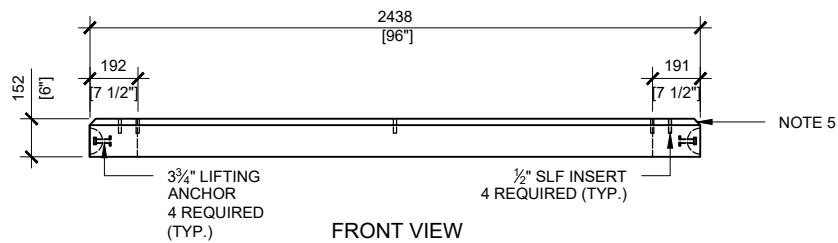
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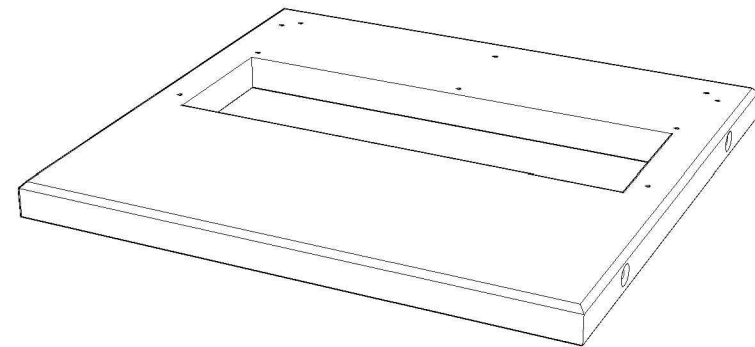
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TOP VIEW  
SCALE:1/30

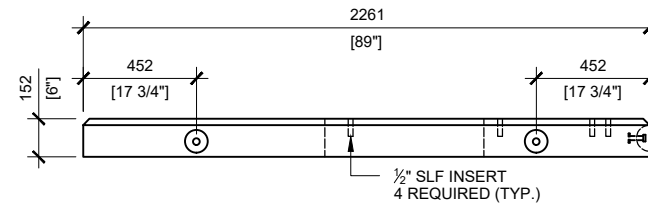


FRONT VIEW  
SCALE:1/30



**GENERAL NOTES:**

1. DELIVERY IS MADE BY CRANE-EQUIPPED TRUCKS
2. EXCAVATION MUST BE READY, SAFE AND ACCESSIBLE FOR UNLOADING FROM THE REAR OF THE TRUCK.
3. MIN OVERHEAD CLEARANCE OF 18FT (5.5 METRES) IS REQUIRED
4. ALL UNITS MUST BE HANDLED WITH PROPER LIFTING EQUIPMENT (I.E. SPREADER BAR)
5. TOP EDGES TO HAVE CHAMFER



RIGHT VIEW  
SCALE:1/30



MANUFACTURED:  
BROOKLIN, ON  
1-800-655-3430

CONCRETE: 35MPa / 5,000PSI  
AIR ENTRAINMENT: 5-8%  
REINFORCEMENT : STEEL TO CSA  
CAN A23.1 / A23.3, G30.18  
Fy=400MPa

WEIGHT:  
BCP 400TGWHO -3,400lbs / 1,540kg

DRAWN BY:  
N.CHAN

DATE:  
MAY/2020

**BCP400T6GWHO**

PRECAST TOP FOR TRANSFORMER FOUNDATION

# SWITCHGEAR TEST REPORT

## INFORMATION

Designation: Paddock Feeder West Paddock Feeder East		Voltage Rating: 27600 V	Cell No: 2 of 4
Substation: North Service Building		Current Rating: 600 A	Catalog #: --
Manufacturer: --		Load Break: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Serial #: --
		Type: Alduti	Door Interlock #: PE12012 PE12021

## CELL INSPECTION

General Condition: Good	Door Interlocks: Good	Hardware: Good	Grounding: Good
Insulators/Barriers: Good	Cell Heaters: N/A	Bus Work: Good	Warning Signs: Good
Bus Size: 2½" x ¼"	Bus Insulation: Good	Paint Condition: Good	Window: Good

## SWITCH INSPECTION

N/A

Manufacturer: S&C	Voltage Rating: 27.6 kV	Operating Mech.: Good
Make: --	BIL Rating: 150 kV	Barriers: Good
Catalog #: 34563R4-T5	Arcing Contacts: Good	Lubrication: Good
Current Rating: 600 A	Potential Indicators: Good	Key Interlock #: --

## LIGHTNING ARRESTERS

N/A

Manufacturer: Ohio Brass	Catalog #: --	kV/MCOV: 24	kA: 10
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## FUSES

N/A

Manufacturer: S&C	kV Rating: 38 kV	Fuse Alignment: Good
Model: SM-5	TCC Curve: 153-4	Muffler: Good
Fuse Catalog #: 134025R1	Fuse Size: 15E A	Blown Fuse Ind.: N/A
Holder Catalog #: 86644R1	Holder Size: 200E A	Release Mech: Good

## METERING

N/A

PT Mfr:	PT Cat #:	PT Serial #:	PT Ratio:
Fuse Mfr:	Fuse Cat #:	Fuse Voltage: kV	Fuse Current: A
CT Mfr:	CT Cat #:	CT Serial #:	CT Ratio:

## CONDUCTORS

Manufacturer	Voltage	Size	Type	Metal	Termination
Pirelli	28 kV	4/0	TR-XLPE	CU <input checked="" type="checkbox"/> AL <input type="checkbox"/>	3M Cold Shrink

## ELECTRICAL TESTS

### Contact Resistance @ 10 A DC

Device	Phase A	Phase B	Phase C
Switch	-- μΩ	68 μΩ	63 μΩ
Fuse	-- μΩ	5 400 μΩ	5 500 μΩ

### Insulation Resistance @ 5000 V DC (Corrected to 20°C)

Test Temp: -- °C

Phase	Arresters	Cable In	Cable Out	Bus
A – B+C+G	-- MΩ	-- MΩ	-- MΩ	-- MΩ
B – A+C+G	-- MΩ	-- MΩ	-- MΩ	-- MΩ
C – A+B+G	-- MΩ	-- MΩ	-- MΩ	-- MΩ

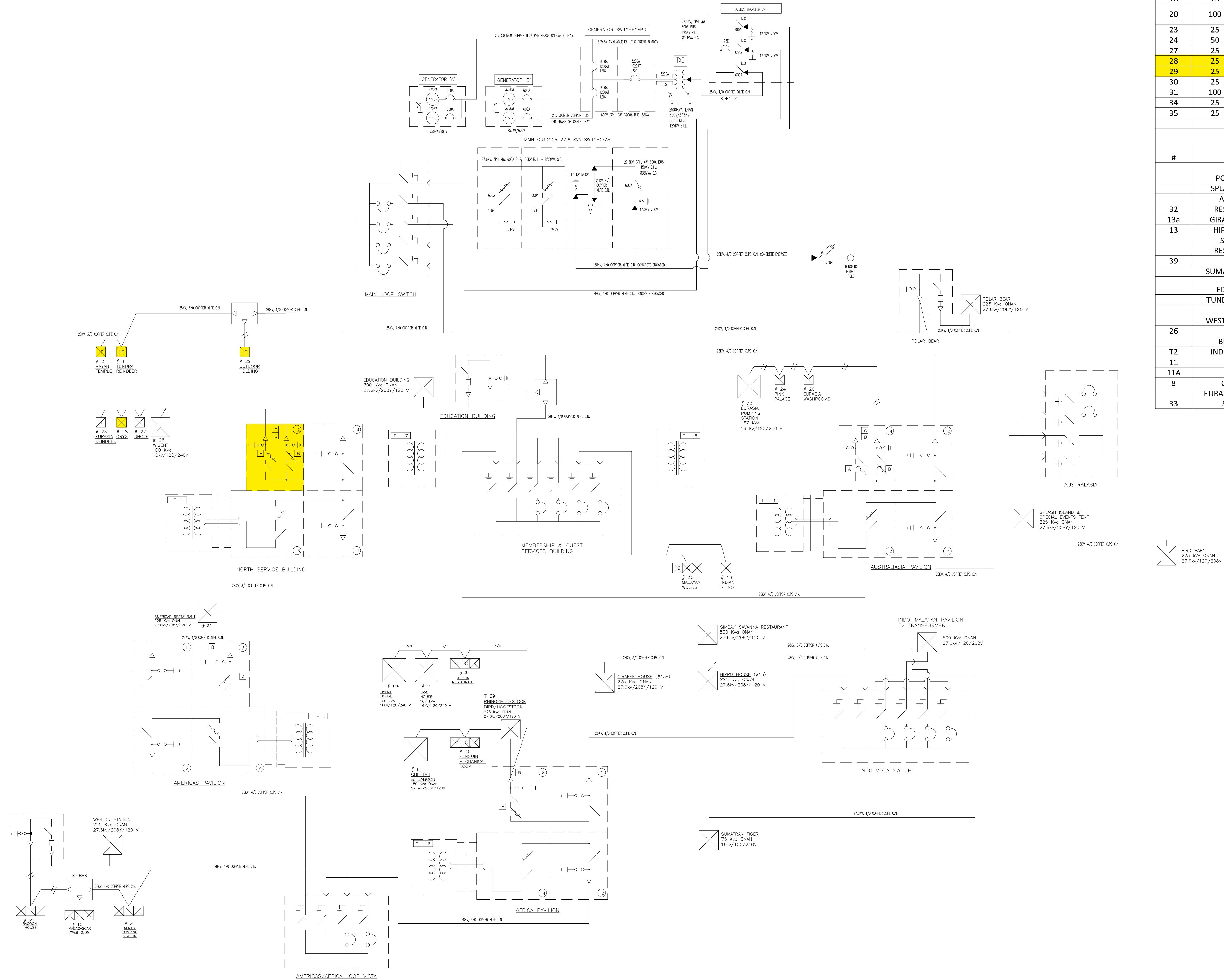
## COMMENTS

2 loads

Equipment left in satisfactory condition: YES  NO  Spare Fuses: YES  Quantity: \_\_ NO  N/A  Inspected By: PDC

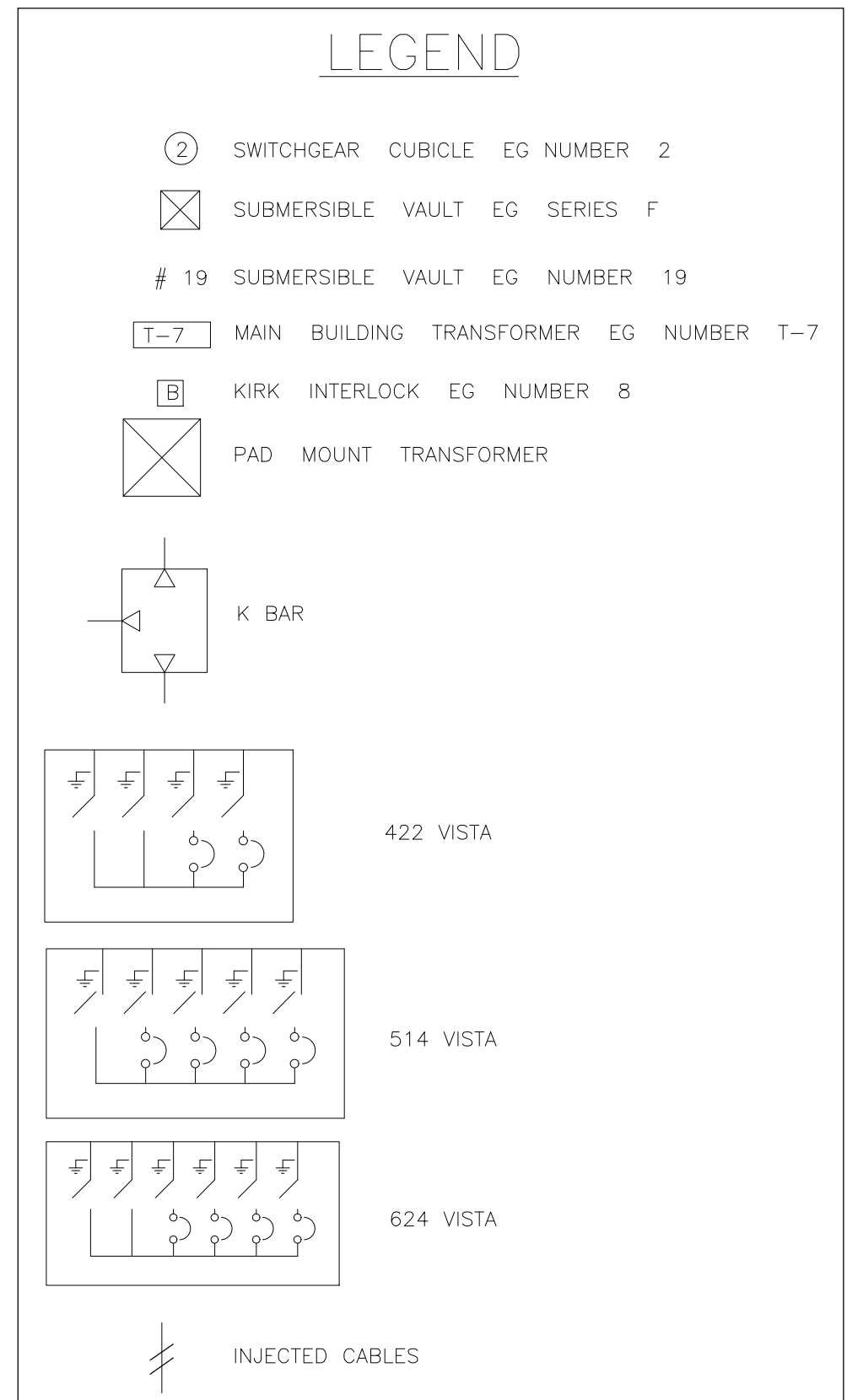
# TORONTO ZOO

SINGLE LINE DIAGRAM  
HIGH VOLTAGE ELECTRICAL DISTRIBUTION  
REVISED 2018-09-18



SUBMERSIBLES					
VAULT	SIZE	PHASES		FED FROM	AFFECTED BUILDINGS
		1	3		
1	25	X		OPS COMPLEX PADDOCK WEST	TUNDRA REINDEER
2	100	X		OPS COMPLEX PADDOCK WEST	MAYAN TEMPLE
10	25		X	AFRICA PADDOCK FEEDER	PENGUIN MECHANICAL ROOM
12	50		X	AMERICAS/AFRICA LOOP VISTA	MADAGASCAR WASHROOMS
18	75	X		MEMBERSHIP VISTA WAY 5	INDIAN RHINO
20	100	X		AUSTRALASIA	EURASIA KEEPER ROOM, WASHROOM, RETAIL STORE, VIEWING BUILDING & MANDARIN EXPRESS
23	25	X		OPS COMPLEX PADDOCK EAST	EURASIAN REINDEER
24	50	X		AUSTRALASIA	PINK PALACE CAMEL HOUSE
27	25	X		OPS COMPLEX PADDOCK EAST	DHOLE
28	25	X		OPS COMPLEX PADDOCK EAST	ORYX
29	25	X		OPS COMPLEX PADDOCK WEST	OUTDOOR HOLDING
30	25		X	MEMBERSHIP VISTA WAY 5	MALAYAN WOODS
31	100		X	AFRICA PADDOCK FEEDER	AFRICA RESTAURANT
34	25		X	AMERICAS/AFRICA LOOP VISTA	AFRICA PUMPING STATION, WATUSI
35	25		X	AMERICAS/AFRICA LOOP VISTA	KATA (RACCOUR HOUSE)

PAD MOUNT TRANSFORMERS					
#	NAME	SIZE (kva)	PHASES	FED FROM	AFFECTED BUILDINGS
	POLAR BEAR	225, 3Ø		OPS - AUSTRALASIA LOOP FEEDER	POLAR BEAR HOLDING, RETAIL STORE, BEAVERTAILS, TUNDRA AIR RIDE
	SPLASH ISLAND	225, 3Ø		AUSTRALASIA VISTA WAY 3	SPLASH ISLAND, KIDS ZOO, SPECIAL EVENTS TENT
32	RESTAURANT	225, 3Ø		AMERICAS PAVILION	AMERICAS RESTAURANT, POLAR BEAR MECHANICAL ROOM, POLAR PATIO
13a	GIRAFFE HOUSE	225, 3Ø		INDO VISTA WAY 6	GIRAFFE HOUSE
13	HIPPO HOUSE	225, 3Ø		INDO VISTA WAY 6	HIPPO HOUSE, GAUR 2
	SAVANNA RESTAURANT	500, 3Ø		INDO VISTA WAY 5	SAVANNA RESTAURANT, RHINO POOL MECH. ROOM, BUSH CAMP, SAVANNA PICNIC SITE, OLD BABOON AREA PANEL
39	T39	225, 3Ø		AFRICA PADDOCK FEEDER	RHINO / HOOFSTOCK, BIRD / HOOFSTOCK
	SUMATRAN TIGER	75, 1Ø		INDO VISTA WAY 3	SUMATRAN TIGER
	EDUCATION	300, 3Ø		AUSTRALASIA - MEMBERSHIP LOOP FEEDER	EDUCATION BUILDING
	TUNDRA AIR RIDE	75, 3Ø		POLAR BEAR	STEP UP TRANSFORMER AT TUNDRA AIR RIDE
	WESTON STATION	225, 3Ø		GIRAFFE VISTA WAY 3	PUMPING STATION, GRIZZLY BEAR, DUCK HOUSE, WESTON STATION WASHROOMS
26	WISENT	100, 1Ø		OPS COMPLEX	BARBARY APES, WISENT
	BIRD BARN	225, 3Ø		SPLASH ISLAND	RED PANDA, BIRD BARN, AMUR TIGER
T2	INDO PAVILION	500, 3Ø		INDO VISTA 4	INDO PAVILION
11	LIONS	167, 1Ø		AFRICA PADDOCK FEEDER	LIONS, WILDBEEST
11A	HYENA	100, 1Ø		AFRICA PADDOCK FEEDER	HYENA, SAVANNA RETAIL, PORCUPINE
8	CHEETAH	150, 3Ø		AFRICA PADDOCK FEEDER	CHEETAH
33	EURASIA PUMPING STATION	167, 1Ø		AUSTRALASIA	EURASIA PUMP STATION, SNOW LEOPARD

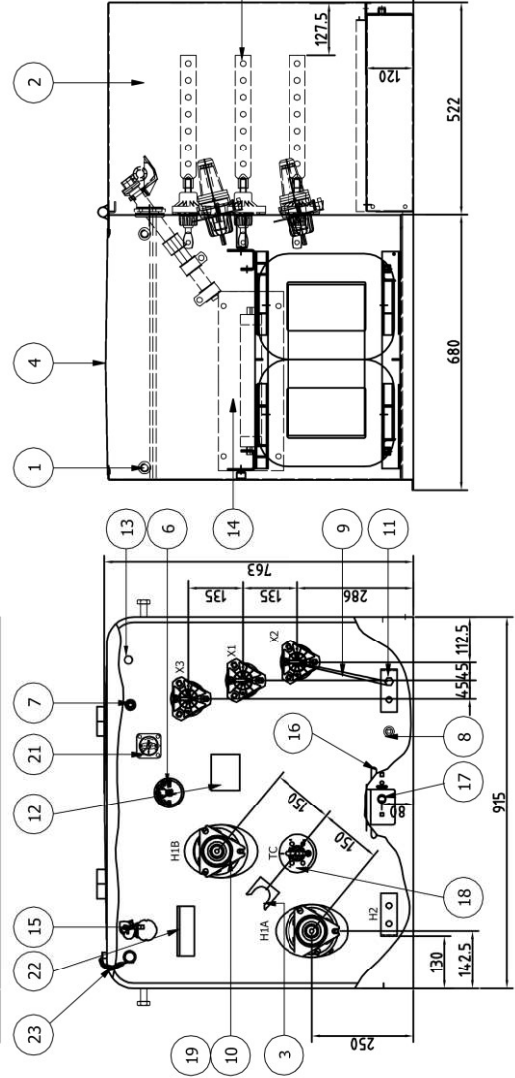
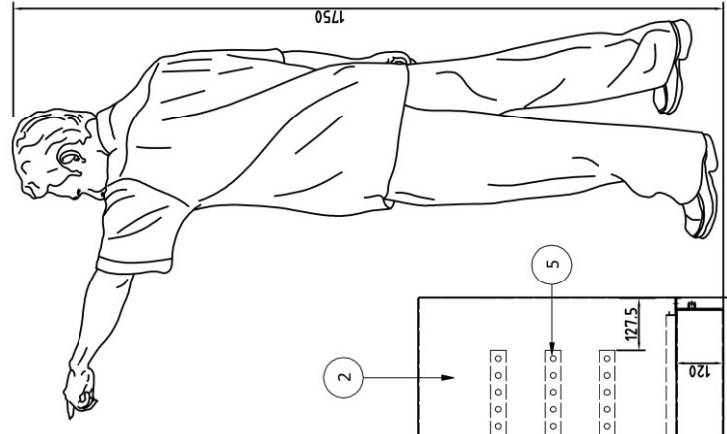
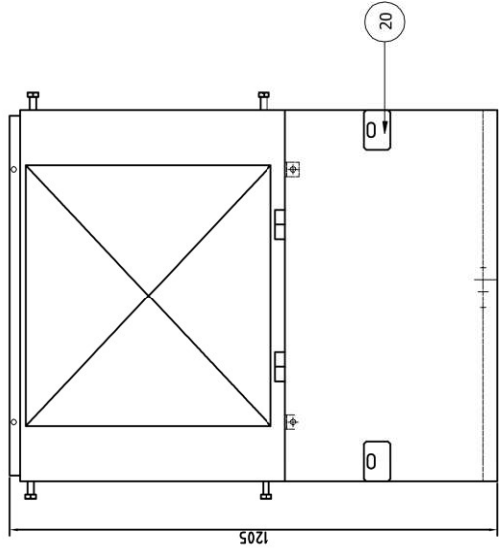
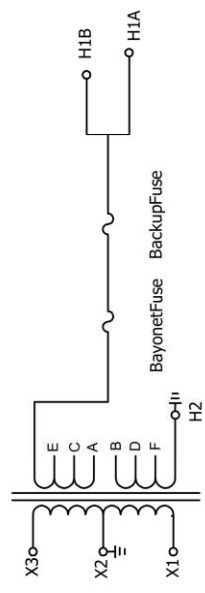




DWG. NO. 1LD.710.20991T

ITEM	WEIGHT
TANK & ACCESSORIES	190Kg
TOTAL OIL WEIGHT	255L
TOTAL WEIGHT	750Kg

Diagram for connect



PARTS LIST		
ITEM	DESCRIPTION	QTY
1	BOLT FOR LIFTING	4
2	HINGED DOOR	1
3	PARKING STAND BRACKET	1
4	FLIP TOP COVER	1
5	LV BUSHING (7 HOLE)	3
6	THERMOMETER	1
7	FILL PLUG	1
8	DRAIN VALVE	1
9	GROUND STRAP COPPER	1
10	HV BUSHING WELL	2
11	GROUNDING SPADE TERMINAL	2
12	NAME PLATE	1
13	PRESSURE RELIEF VALVE	1
14	ELSP FUSE	1
15	BAYONET FUSE	1
16	GROUNDING BRACKET	1
17	PENTAHEAD BOLT ARRANGEMENT	1
18	TAP CHANGER	1
19	INSERT WITH DUST CAP (25KV)	2
20	CLAMP	2
21	OIL LEVEL GAUGE	1
22	DRIP TRAY	1
23	EQUIPOTENTIAL DEVICE	1

TYPE ZGD-H-100/16/0.24(0.12)  
 DWG. NAME General Assembly Drawing  
 FIRST ANGLE PROJECTION SCALE 1

DRAWN	CHECKED	APPROVED
X.F.Ding	S.F.Zhou	A.H.Tong
		B.Dong

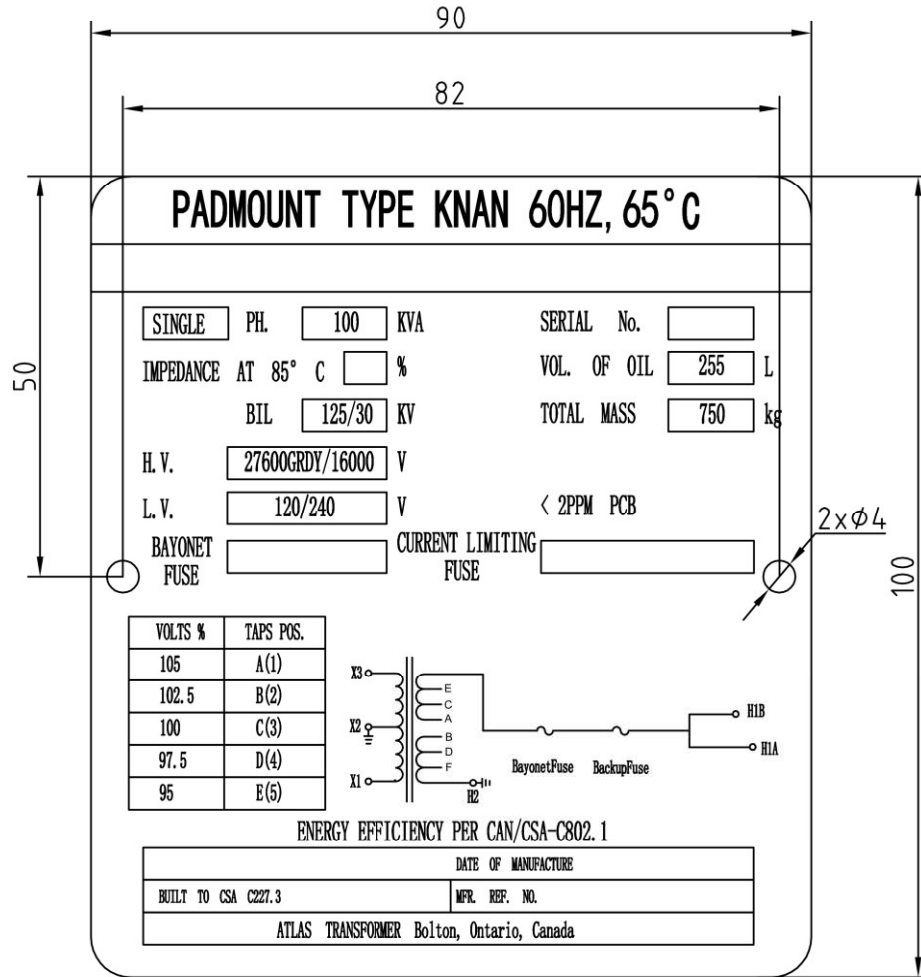
1LD.710.20991T  
 ATLAS TRANSFORMER  
 Bolton, Ontario, Canada

CHANGE

REV. NO.

**NOTE:**

- 1. ALL DIMENSIONS ARE IN MILLIMETERS
- 2. MATERIAL: STAINLESS STEEL
- 3. THICKNESS : 1mm
- 4. LETTER COLOR: BLACK



CHANGE	TYPE ZGD-H-100/16/0.24(0.12)		DWG. NAME Nameplate			
	FIRST ANGLE PROJECTION	SCALE 1/5	DRAWN	CHECKED	CHECKED	APPROVED
	 <b>ATLAS TRANSFORMER</b> Bolton, Ontario, Canada		X.F.Ding	S.F.Zhou	A.H.Tong	B.Dong
			8LD.860.20991T			



# ATLAS TRANSFORMER



10-77 Pillsworth Road, Bolton, Ontario, Canada L7E 4G4 Phone: 905-795-0141

www.atlastransformer.com

Transformer, Single Phase, Pad Mount, 100 kVA 27600/16000 :120/240V(Efficiency value: 98.94%)

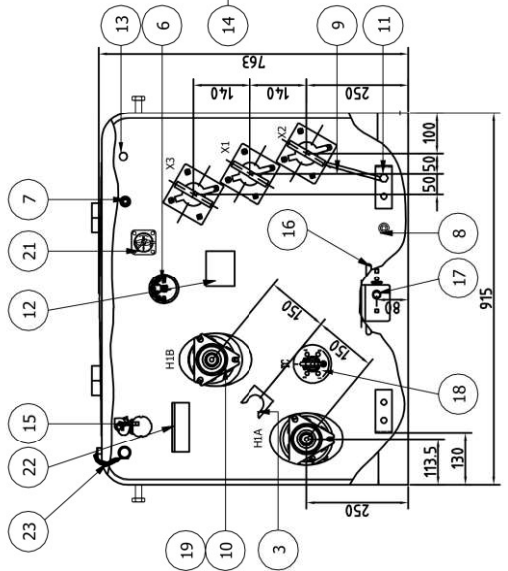
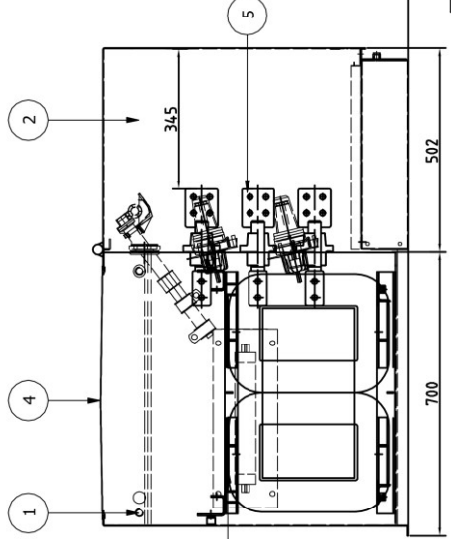
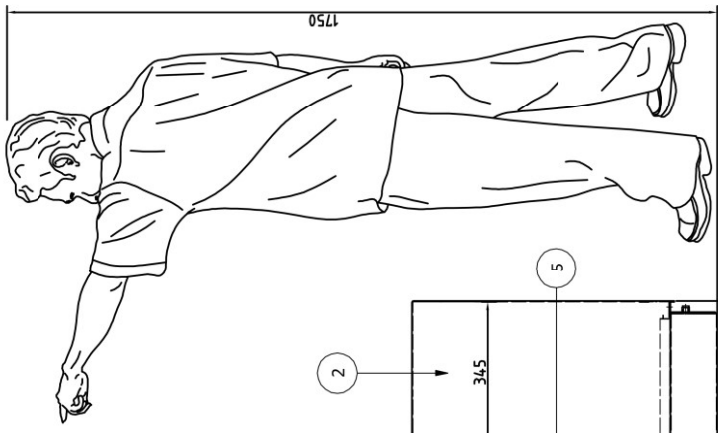
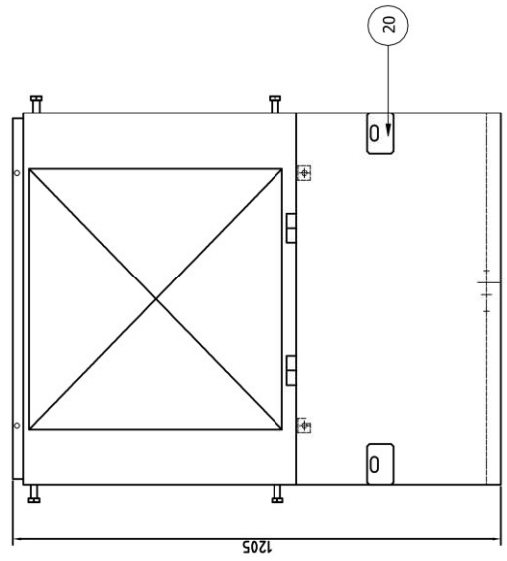
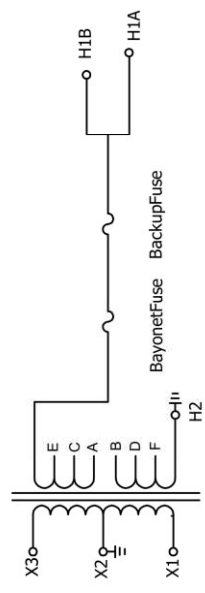
ITEM	DATA	UNIT	Offered
1	<b>Supplier</b>	....	ATLAS TRANSFORMER
2	<b>Model</b>	....	ZGD-H-100/16/0.24(0.12)
3	<b>Standard manufacturing and testing</b>	....	CAN/CSA C227.3 & CAN/CSA 802.1
4	<b>Features</b>		
4.1	Type		loop feed pad mount
4.2	Installation		Outdoor
4.3	Altitude above sea level/Ambient temperature	m/	1000/50
4.4	Altitude		≤1500m
4.5	Rated Power	kVA	100
4.6	HV	V	27600/16000
4.7	LV	V	120/240
4.8	Rated Frequency	Hz	60
4.9	Cooling System		KNAN
5	Core material		Silicon Steel Core
5.1	Refrigerant		FR3 vegetable oil
5.2	Working-Temperature	°C	-50°C to +40°C
5.3	The temperature rise -Top oil	°C	65
5.4	The temperature rise -Winding	°C	65
5.5	Hot spot	°C	80
6.1	<b>Losses</b>		
6.1.1	No load losses at 105% rated voltage	W	280
6.1.2	Load loss at rated voltage at 85°C	W	1010
7.5	Winding material		Copper
7.7	<b>High voltage electrical characteristics of transformers and assembled load break terminals</b>		
7.7.1	Insulation class	kV	28
7.7.2	BIL	kV	125
7.7.3	Radio influence voltage (RIV) at 1 MHz, at 10% above rated voltage, $\mu\text{v}$		100
7.7.4	Radio influence voltage (RIV) at 1 MHz, at 10% above rated voltage, dB above 1 $\mu\text{v}$		40
7.8	<b>Low voltage</b>		
7.8.1	Insulation class	kV	1.2
7.8.2	BIL	kV	30
7.8.3	Audible sound level	db	51
7.9	<b>Short-circuit capability</b>		
7.9.1	withstand capability per unit of base current (symmetrical)		35
7.9.2	Duration in cycles		60
8	<b>Impedance</b>	%	2.50%
8.0.1	Impedance tolerance		±7.5%
8.1	<b>Tank</b>		
8.1.1	Colors		Munsell Green
8.2	<b>Total Dimentions for reference</b>		
8.2.1	Height	mm	910

8.2.2	Depth	mm	1200
8.2.3	Width	mm	965
<b>8.3</b>	<b>Weight</b>		
8.3.1	Oil	kg	230
8.3.2	Total	kg	714
<b>8.4</b>	<b>Accessories including:</b>		
8.4.1	Mild steel tank		1
8.4.2	Core&Coil Assemble		1
8.4.3	Bayonet fuse		1
8.4.4	Drip shield Assembly		1
8.4.5	Fuse Holder		1
8.4.6	Backup fuse		1
8.4.7	Fuse assembly		1
8.5.0	Pressure relief valve		1
8.5.1	Oil level guage		1
8.5.2	Oil-in flug		1
8.5.3	Nameplate		1
8.5.4	HV bushing well and insert		2
8.5.5	No-load tap changer		1
8.5.6	Grounding spade terminal		2
8.5.7	Oil-out plug		1
8.5.8	Bolt for earth		1
8.5.9	Copper strip		1
8.5.10	LV bushing		3
8.5.11	Bolt for lifting		4
8.5.12	Cover		1
<b>9</b>	<b>Warranty:</b>	Years	2

DWG. NO. 1LD.710.20992T

ITEM	WEIGHT
TANK & ACCESSORIES	190Kg
TOTAL OIL WEIGHT	305L
TOTAL WEIGHT	950Kg

Diagram for connect



PARTS LIST		
ITEM	DESCRIPTION	QTY
1	BOLT FOR LIFTING	4
2	HINGED DOOR	1
3	PARKING STAND BRACKET	1
4	FLIP TOP COVER	1
5	LV BUSHING (4 HOLE)	3
6	THERMOMETER	1
7	FILL PLUG	1
8	DRAIN VALVE	1
9	GROUND STRAP COPPER	1
10	HV BUSHING WELL	2
11	GROUNDING SPADE TERMINAL	2
12	NAME PLATE	1
13	PRESSURE RELIEF VALVE	1
14	ELSP FUSE	1
15	BAYONET FUSE	1
16	GROUNDING BRACKET	1
17	PENTAHEAD BOLT ARRANGEMENT	1
18	TAP CHANGER	1
19	INSERT WITH DUST CAP (25KV)	2
20	CLAMP	2
21	OIL LEVEL GAUGE	1
22	DRIP TRAY	1
23	EQUIPOTENTIAL DEVICE	1

TYPE ZGD-H-167/16/0.24(0.12)  
 DWG. NAME General Assembly Drawing

DRAWN	CHECKED	APPROVED	FIRST ANGLE PROJECTION	SCALE
X.F.Ding	S.F.Zhou	A.H.Tong		1

REV. NO. B.Dong

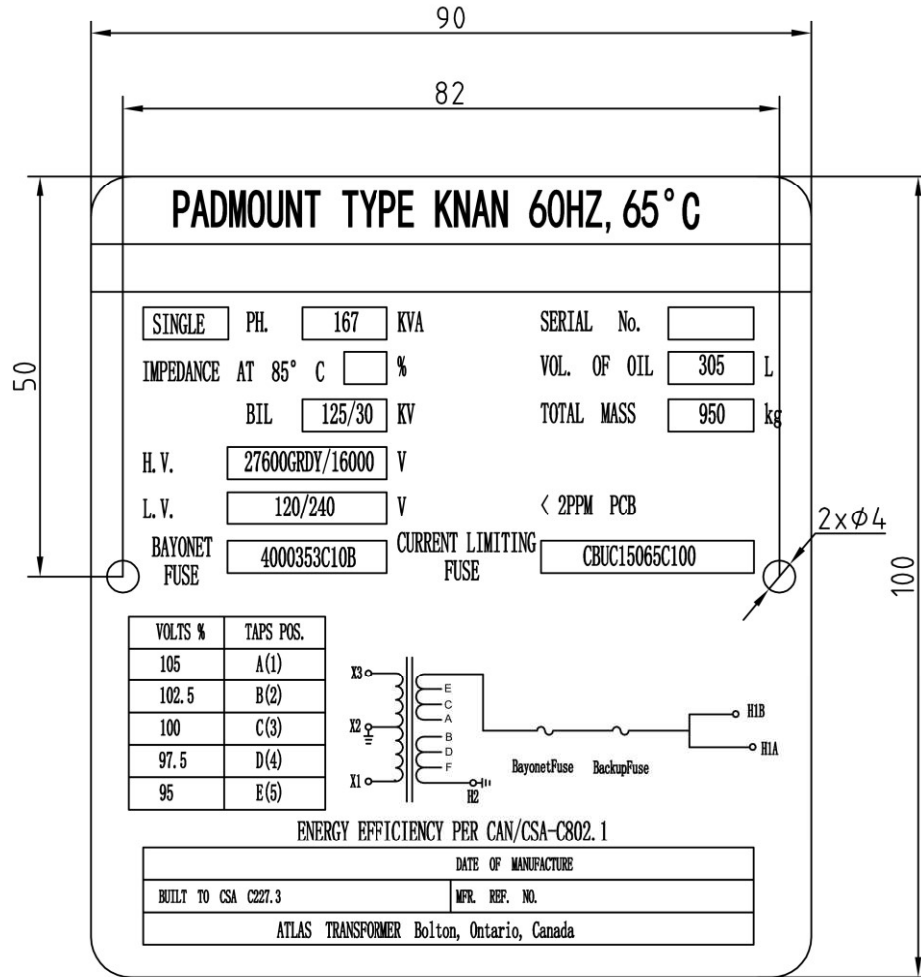
1LD.710.20992T

CHANGE

**ATLAS** **ATLAS TRANSFORMER**  
 Bolton, Ontario, Canada

**NOTE:**

1. ALL DIMENSIONS ARE IN MILLIMETERS
2. MATERIAL: STAINLESS STEEL
3. THICKNESS : 1mm
4. LETTER COLOR: BLACK



CHANGE	TYPE		DWG. NAME			
	ZGD-H-167/16/0.24(0.12)		Nameplate			
	FIRST ANGLE PROJECTION	SCALE	DRAWN	CHECKED	CHECKED	APPROVED
		1/5	X.F.Ding	S.F.Zhou	A.H.Tong	B.Dong
<b>ATLAS TRANSFORMER</b> Bolton, Ontario, Canada		8LD.860.20992T			REV. NO.	



# ATLAS TRANSFORMER



10-77 Pillsworth Road, Bolton, Ontario, Canada L7E 4G4 Phone: 905-795-0141

www.atlastransformer.com

Transformer, Single Phase, Pad Mount, 167 kVA 27600/16000 :120/240V(Efficiency value: 99.05%)

ITEM	DATA	UNIT	Offered
1	<b>Supplier</b>	....	ATLAS TRANSFORMER
2	<b>Model</b>	....	ZGD-H-167/16/0.24(0.12)
3	<b>Standard manufacturing and testing</b>	....	CAN/CSA C227.3 & CAN/CSA 802.1
4	<b>Features</b>		
4.1	Type		loop feed pad mount
4.2	Installation		Outdoor
4.3	Altitude above sea level/Ambient temperature	m/	1000/50
4.4	Altitude		≤1500m
4.5	Rated Power	kVA	167
4.6	HV	V	27600/16000
4.7	LV	V	120/240
4.8	Rated Frequency	Hz	60
4.9	Cooling System		KNAN
5	Core material		Silicon Steel Core
5.1	Refrigerant		FR3 vegetable oil
5.2	Working-Temperature	°C	-50°C to +40°C
5.3	The temperature rise -Top oil	°C	65
5.4	The temperature rise -Winding	°C	65
5.5	Hot spot	°C	80
6.1	<b>Losses</b>		
6.1.1	No load losses at 105% rated voltage	W	435
6.1.2	Load loss at rated voltage at 85°C	W	1530
7.5	Winding material		Copper
7.7	<b>High voltage electrical characteristics of transformers and assembled load break terminals</b>		
7.7.1	Insulation class	kV	28
7.7.2	BIL	kV	125
7.7.3	Radio influence voltage (RIV) at 1 MHz, at 10% above rated voltage, $\mu\text{V}$		100
7.7.4	Radio influence voltage (RIV) at 1 MHz, at 10% above rated voltage, dB above 1 $\mu\text{V}$		40
7.8	<b>Low voltage</b>		
7.8.1	Insulation class	kV	1.2
7.8.2	BIL	kV	30
7.8.3	Audible sound level	db	55
7.9	<b>Short-circuit capability</b>		
7.9.1	withstand capability per unit of base current (symmetrical)		25
7.9.2	Duration in cycles		120
8	<b>Impedance</b>	%	2.50%
8.0.1	Impedance tolerance		±7.5%
8.1	<b>Tank</b>		Mild Steel
8.1.1	Colors		Munsell Green
8.2	<b>Total Dimentions for reference</b>		
8.2.1	Height	mm	1000

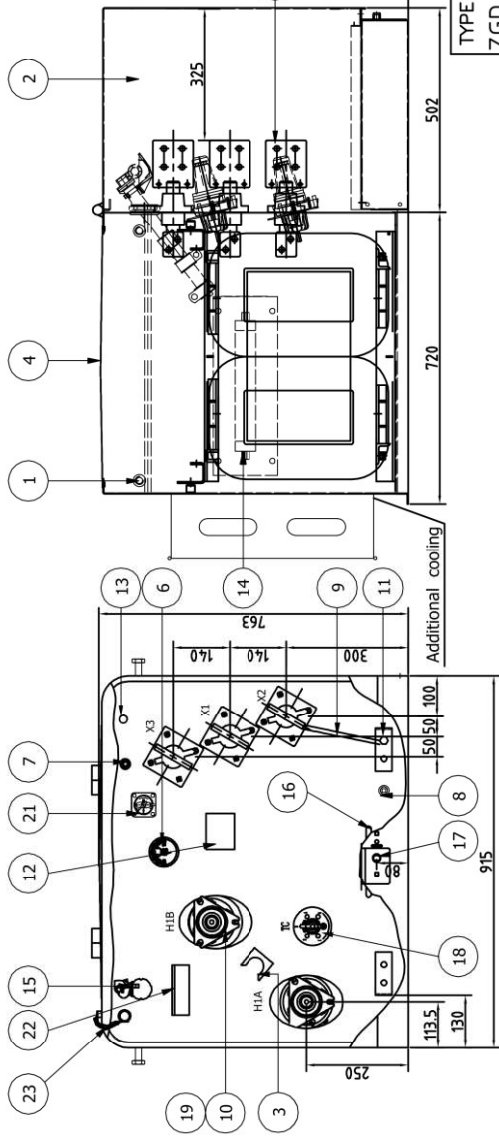
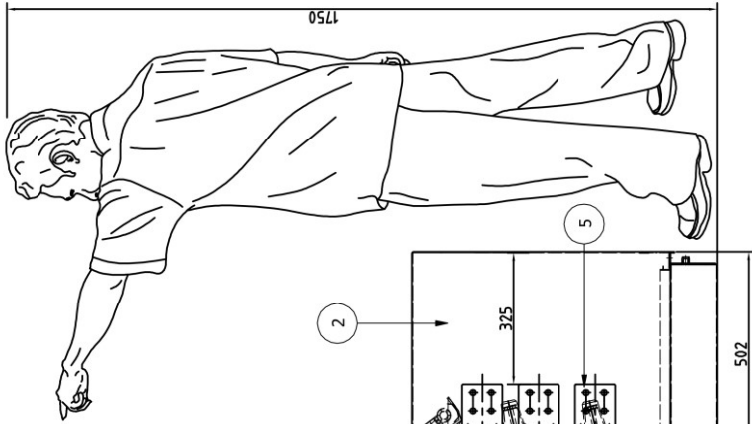
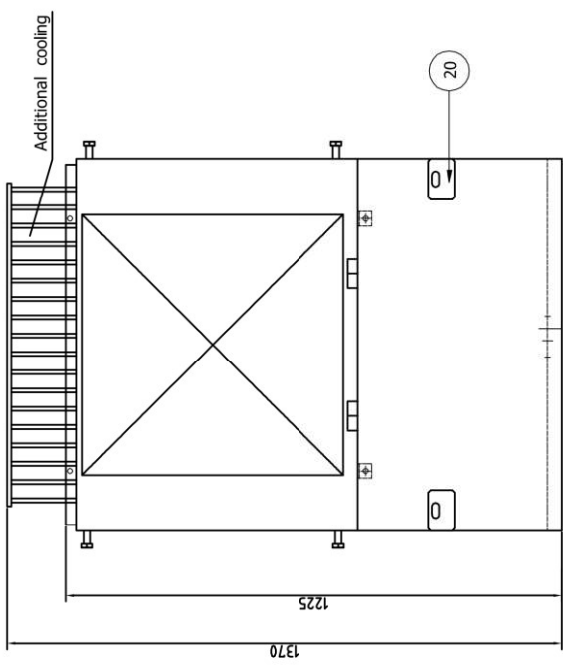
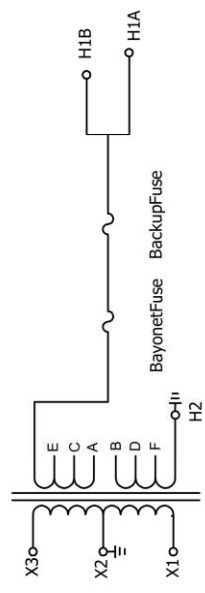
8.2.2	Depth	mm	1200
8.2.3	Width	mm	965
<b>8.3</b>	<b>Weight</b>		
8.3.1	Oil	kg	265
8.3.2	Total	kg	913
<b>8.4</b>	<b>Accessories including:</b>		
8.4.1	Mild steel tank		1
8.4.2	Core&Coil Assemble		1
8.4.3	Bayonet fuse		1
8.4.4	Drip shield Assembly		1
8.4.5	Fuse Holder		1
8.4.6	Backup fuse		1
8.4.7	Fuse assembly		1
8.5.0	Pressure relief valve		1
8.5.1	Oil level guage		1
8.5.2	Oil-in flug		1
8.5.3	Nameplate		1
8.5.4	HV bushing well and insert		2
8.5.5	No-load tap changer		1
8.5.6	Grounding spade terminal		2
8.5.7	Oil-out plug		1
8.5.8	Bolt for earth		1
8.5.9	Copper strip		1
8.5.10	LV bushing		3
8.5.11	Bolt for lifting		4
8.5.12	Cover		1
<b>9</b>	<b>Warranty:</b>	Years	2



DWG. NO. 1LD.710.20993T

ITEM	WEIGHT
TANK & ACCESSORIES	240Kg
TOTAL OIL WEIGHT	340L
TOTAL WEIGHT	1110Kg

Diagram for connect



PARTS LIST		
ITEM	DESCRIPTION	QTY
1	BOLT FOR LIFTING	4
2	HINGED DOOR	1
3	PARKING STAND BRACKET	1
4	FLIP TOP COVER	1
5	LV BUSHING (4 HOLE)	3
6	THERMOMETER	1
7	FILL PLUG	1
8	DRAIN VALVE	1
9	GROUND STRAP COPPER	1
10	HV BUSHING WELL	2
11	GROUNDING SPADE TERMINAL	2
12	NAME PLATE	1
13	PRESSURE RELIEF VALVE	1
14	ELSP FUSE	1
15	BAYONET FUSE	1
16	GROUNDING BRACKET	1
17	PENTAHEAD BOLT ARRANGEMENT	1
18	TAP CHANGER	1
19	INSERT WITH DUST CAP (25KV)	2
20	CLAMP	2
21	OIL LEVEL GAUGE	1
22	DRIP TRAY	1
23	EQUIPOTENTIAL DEVICE	1

DWG. NAME  
General Assembly Drawing  
TYPE  
ZGD-H-250/16/0.24(0.12)

DRAWN	CHECKED	APPROVED	FIRST ANGLE PROJECTION	SCALE
X.F.Ding	S.F.Zhou	A.H.Tong		1

1LD.710.20993T  
Bl.Dong

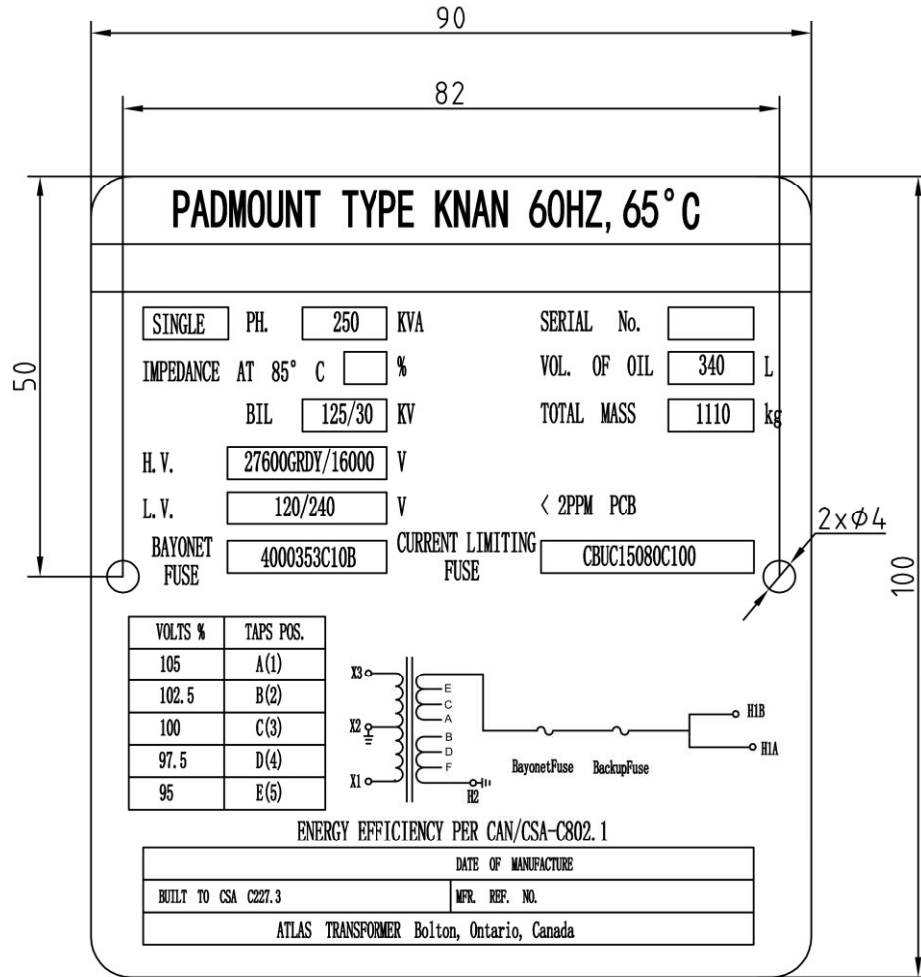
**ATLAS**  
**ATLAS TRANSFORMER**  
Bolton, Ontario, Canada

REV. NO.

CHANGE

**NOTE:**

1. ALL DIMENSIONS ARE IN MILLIMETERS
2. MATERIAL: STAINLESS STEEL
3. THICKNESS : 1mm
4. LETTER COLOR: BLACK



CHANGE	TYPE ZGD-H-250/16/0.24(0.12)		DWG. NAME Nameplate			
	FIRST ANGLE PROJECTION	SCALE 1/5	DRAWN X.F.Ding	CHECKED S.F.Zhou	CHECKED A.H.Tong	APPROVED B.Dong
	<b>ATLAS TRANSFORMER</b> Bolton, Ontario, Canada					REV. NO. 8LD.860.20993T



# ATLAS TRANSFORMER



10-77 Pillsworth Road, Bolton, Ontario, Canada L7E 4G4 Phone: 905-795-0141

www.atlastransformer.com

Transformer, Single Phase, Pad Mount, 250 kVA 27600/16000 :120/240V (Efficiency value: 99.15%)

ITEM	DATA	UNIT	Offered
1	<b>Supplier</b>	....	ATLAS TRANSFORMER
2	<b>Model</b>	....	ZGD-H-250/16/0.24(0.12)
3	<b>Standard manufacturing and testing</b>	....	CAN/CSA C227.3 & CAN/CSA 802.1
4	<b>Features</b>		
4.1	Type		loop feed pad mount
4.2	Installation		Outdoor
4.3	Altitude above sea level/Ambient temperature	m/	1000/50
4.4	Altitude		≤1500m
4.5	Rated Power	kVA	250
4.6	HV	V	27600/16000
4.7	LV	V	120/240
4.8	Rated Frequency	Hz	60
4.9	Cooling System		KNAN
5	Core material		Silicon Steel Core
5.1	Refrigerant		FR3 vegetable oil
5.2	Working-Temperature	°C	-50°C to +40°C
5.3	The temperature rise -Top oil	°C	65
5.4	The temperature rise -Winding	°C	65
5.5	Hot spot	°C	80
6.1	<b>Losses</b>		
6.1.1	No load losses at 105% rated voltage	W	550
6.1.2	Load loss at rated voltage at 85°C	W	2230
7.5	Winding material		Copper
7.7	<b>High voltage electrical characteristics of transformers and assembled load break terminals</b>		
7.7.1	Insulation class	kV	28
7.7.2	BIL	kV	125
7.7.3	Radio influence voltage (RIV) at 1 MHz, at 10% above rated voltage, $\mu\text{v}$		100
7.7.4	Radio influence voltage (RIV) at 1 MHz, at 10% above rated voltage, dB above 1 $\mu\text{v}$		40
7.8	<b>Low voltage</b>		
7.8.1	Insulation class	kV	1.2
7.8.2	BIL	kV	30
7.8.3	Audible sound level	db	55
7.9	<b>Short-circuit capability</b>		
7.9.1	withstand capability per unit of base current (symmetrical)		25
7.9.2	Duration in cycles		120
8	<b>Impedance</b>	%	2.50%
8.0.1	Impedance tolerance		±7.5%
8.1	<b>Tank</b>		
8.1.1	Colors		Munsell Green
8.2	<b>Total Dimentions for reference</b>		
8.2.1	Height	mm	1250

8.2.2	Depth	mm	1300
8.2.3	Width	mm	1430
<b>8.3</b>	<b>Weight</b>		
8.3.1	Oil	kg	325
8.3.2	Total	kg	1106
<b>8.4</b>	<b>Accessories including:</b>		
8.4.1	Mild steel tank		1
8.4.2	Core&Coil Assemble		1
8.4.3	Bayonet fuse		1
8.4.4	Drip shield Assembly		1
8.4.5	Fuse Holder		1
8.4.6	Backup fuse		1
8.4.7	Fuse assembly		1
8.5.0	Pressure relief valve		1
8.5.1	Oil level guage		1
8.5.2	Oil-in flug		1
8.5.3	Nameplate		1
8.5.4	HV bushing well and insert		2
8.5.5	No-load tap changer		1
8.5.6	Grounding spade terminal		2
8.5.7	Oil-out plug		1
8.5.8	Bolt for earth		1
8.5.9	Copper strip		1
8.5.10	LV bushing		3
8.5.11	Bolt for lifting		4
8.5.12	Cover		1
8.5.13	Radiator		1
<b>9</b>	<b>Warranty:</b>	Years	2



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