

Div 14 - Conveying Equipment Design Guidelines 2020 06 16 (1)

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Dalhousie University Design Guidelines provide assistance to consultants during the planning, and design phases of the University's expansion and renovations. The Guidelines do not relieve a consultant from any professional responsibility, duty or due diligence to design elegant, functional, efficient and low maintenance facilities.

Facility owners have preferred materials and requirements that make the task of maintaining facilities less costly. Dalhousie understands this is a balance between capital and operating cost. The Guidelines are not intended to be the only acceptable solution. Dalhousie expects consultants to bring modern and innovative ideas, materials and methods to the University. If these Guidelines do not allow these new ideas, then the consultant is to make a request in writing to the Dalhousie Project Manager for an exception to the guidelines. Necessary reasoning and or calculations shall accompany the request. The exception request will be reviewed internally and either rejected or accepted. The consultant will document this rational and/or justification for each exception in the Basis of Design. The University Guidelines may be updated subsequently.

These documents provide design guidelines only, and are not intended for use, in whole or in part, as a specification. Do not copy the guidelines verbatim in specifications or in notes on drawings. Refer questions and comments regarding the content and use of these documents to the Dalhousie University Project Manager. The Guidelines are intended to be read in conjunction with the local codes and regulations, and in no way are to be considered as a code replacement. The codes and regulations represent the minimum acceptable standard. Where the technical design requirements differ from the building codes and other applicable codes and standards, the more stringent of the codes shall be applied.

Maintaining the Standards/Guidelines

The Design Guidelines are created and maintained by Dalhousie's Facilities Management Department. Any enquiries about the Guidelines should be directed to Facilities Management, Director of Projects, Central Services Building. Dalhousie encourages design specialists and other interested parties to provide their input and suggestions based on their experience.

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CONSULTANT COMPLIANCE CHECKLIST

C NC NA

General Requirements

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C NC NA

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(C – Compliant; NC – Non-Compliant; NA – Not Applicable)

Net Increase in Building Electrical Load (in kVA) = _____

The Engineer has verified the existing building systems are adequate for additional capacity noted above

 Consultant Name Consultant Signature Date YYYY MM DD

 Project Manager Name Project Manager Signature Date YYYY MM DD

Note: If the Guidelines or part of cannot be attained or fulfilled (i.e. NC or NA) during the design process, the Consultant should provide reason(s) why such Guidelines are not met. Any modification or alterations to the design guidelines will need to be agreed/accepted by Facilities Management prior to inclusion in the design.

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General Requirements

1. Warranties

- 1.1. Standard 12 month warranty for a project begins at Substantial Performance. Systems and or equipment that is not considered complete at the time of the project's (or trade's) Substantial Performance shall be noted as such on the Substantial Performance Certificate's Punch List. Warranty for this equipment (or system) shall be one year from the date upon which it is removed from the Punch List.
- 1.2. Extended warranties are available for many pieces of equipment and/or products from the manufacturer at no cost. Dalhousie requires suppliers/manufacturers to provide such extended warranties directly to the Owner in the name of Dalhousie University. A list of such warranties will be reviewed with the Owner at time of shop drawing submission.
- 1.3. The designer shall recommend any extended warranties (including labour) and/or service agreements to the Owner. In all cases, these shall be listed as alternative prices to the base project on the bid form.

2. Energy Efficiency

- 2.1. Variable speed drives should be used for all 3 phase motors that would traditionally require a starter. Specification must state that the associated rebate is to be payable to the University.

3. Efficiency Nova Scotia Rebates

- 3.1. Energy efficiency must be considered and equipment specifications must align with those identified by Efficiency Nova Scotia as eligible for Business Energy Rebates.

The specifications identified by Efficiency Nova Scotia are available on their website <https://www.energycyns.ca/business/products/>

The designer shall specify that that the Owner will be applying for all applicable efficiency rebates, through Efficiency NS, in collaboration with the successful proponent. The Owner (Dalhousie) will receive these rebates directly. The successful proponent will not apply or receive any manufacturer's instant rebates for any products provided through the project.

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4. Equipment Isolation

- 4.1. All equipment shall be able to be individually electrically isolated.

5. Placement of Equipment And Equipment Access

- 5.1. As necessary the Designer shall summarize all work necessary to place equipment or systems into existing spaces. Including but not limited to: wall removals, door removals, special cranes, knock down equipment.
- 5.2. The ability to service equipment, including necessary permanent platforms, shall be reviewed with the Project Manager as part of the shop drawing review/approval. Exceptions to the manufacturer's recommended clearance requirements, shall be identified during the shop drawing review/approval stage by the designer.
- 5.3. The internal dimension of all access doors and panels must be a minimum of 12" x 18". Access doors shall be hinged with a positive locking mechanism.
- 5.4. Equipment shall not be placed closer than 3 meters (2 meters from the roof edge plus 1 meter for servicing room) from the edge of any roof. If this is not possible, appropriate engineered barriers shall be provided.
- 5.5. Equipment should be located with consideration of snow accumulation, entry into equipment and removal. As well as protected from University snow removal operations. Where snow accumulation is inevitable, designer is to complete a structural analysis.
- 5.6. Equipment to be placed on the roof must include a detailed drawing of sleepers, penetrations, etc. It is the responsibility of the Designer to ensure the detailed drawing is signed off by a qualified roofing professional and ensure roof warranties are not voided by works carried out.

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14 20 06 Passenger Elevators

- 1.1. Travel speeds should be equal to or exceed the following guidelines:
 - 1.1.1. Up to three floors - 200 feet per minute
 - 1.1.2. Four to seven floors – 300 feet per minute
 - 1.1.3. Greater than seven floors – ask Facilities Management
- 1.2. Inspection will require minimum one-week's notice from Project Manager.
- 1.3. Shall have the ability to “key-off” all floors in the building.
- 1.4. Shall have emergency telephones connected to Security Services.
- 1.5. The controls for the elevator cab and lobbies shall meet accessible standards.
- 1.6. Cab interior design (hung panels, 5WL from handrail down in research buildings, cameras, card access, voice automation, etc....). Contact Facilities Management, Planning Department, Electrical Planner.