

Amendment Notice: Propane Tank Design and Sizing

This bulletin applies to and amends the following document:

- GO Design Requirements Manual (DRM), GO-DRM-STD-2017 Revision 4, dated September 2021

This Bulletin updates existing DRM (Sept. 2021) Table 37: Other – Exterior Spaces and section 5.4.5.13 Special Requirements.

The revised standard requires designers to follow the Environmental Emergencies (E2) Regulations and guidance and to make every effort to ensure the configuration of propane storage tanks is below the threshold storage volumes.

The introduction of this additional requirement in the DRM ensures that Metrolinx’s reporting requirements under the E2 regulations are reduced.

Amendments to the DRM are provided in the following attachment:

- Revisions to GO DRM Sept. 2021 – Propane Tank Design and Sizing

On MyLinx, the Bulletin is located on the [Go Manual](#) page.

The Bulletin is also available for external users to download via the Metrolinx public download site (http://www.gosite.ca/engineering_public/).

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Table 37: Other – Exterior Spaces

Other–Exterior Spaces	
Space	Design Requirements
Transformer	Exterior Location
Generator	Refer to Technical Requirements, Backup Power Systems
Patio	Exterior Ground Level Location
Gatehouse	Exterior Location
Brake Test Area	Exterior Location (included in circulation driveways)
Compressed Gas Storage Area	1 for propane, 1 for oxygen-gated, fenced with roof. (also refer to 5.4.5.13.9, 5.4.5.13.10 and 5.4.5.13.101 for additional design requirements for propane storage)
Compressor Room	Scroll Compressor with dryer
Garbage/Recycling Storage Area	Exterior Location, visually hidden
Bulk Fuel Storage	<ul style="list-style-type: none"> • Exterior, In ground Location for 2 X 50,000 litres • Card lock system with remote access shall be provided. • SS Fittings • Double fuel pump hoses: • (1) ¾" nozzle for light trucks • (1) 1" nozzle for buses shall be provided
Service Fluids tanks	Service fluid tanks shall be guarded with additional containment near shop. Automatic Tank gauges monitoring system shall be provided with remote access.
Powered Gas Tools Storage Shed	-
Service Vehicles Parking	For Operations, Fleet and Transit Safety
Bus Storage Parking	<ul style="list-style-type: none"> • Exterior, 12 buses in a single area near fleet shop • 115V 15Amp circuits for block heaters and battery chargers
Staff Parking	<ul style="list-style-type: none"> • Exterior, parking spots with gated personnel entrance to the secure facilities compound +16 parking spots for GO Transit

5.4.5.13.7 Thermostat controlled electric pipe heating cables shall be used on all pipes above frost line in unheated areas, where the temperature may fall below freezing;

[5.4.5.13.8](#) Minimum burial depth of piping shall be 1650 mm or to municipal requirement.

[5.4.5.13.9](#) The propane storage tank design shall consider storage volume limits noted within the current Federal Environmental Emergencies Regulation and its Technical Guidance under the Canadian Environmental Protection Act (CEPA) requirements to ensure systems are designed in such a way as to avoid Environmental Emergencies (E2) Plan development and implementation requirements, wherever possible.

[5.4.5.13.10](#) Where the propane storage tank exceeds the specified threshold volume, as stated within the regulation, and designs to avoid E2 Plan requirements cannot be attained, the designers shall provide the rationale for why the design cannot meet the isolation requirement. The propane storage tank design shall follow the Federal Environmental Emergencies Regulation and its Technical Guidance under the Canadian Environmental Protection Act, 1999 (CEPA) requirements to mitigate risks and therefore to avoid the implementation of an Environmental Emergencies (E2) Plan where applicable. Where the propane storage tank exceeds the specified threshold volume, as stated within the regulation, and designs to avoid E2 Plan requirements cannot be attained, the designers shall provide the rationale for why the design cannot meet the isolation requirement. -Where the propane storage tank volume or system design exceeds the specified threshold volume and an E2 Plan is required, the designers shall develop the E2 Plan in consultation with the owners and provide a finalized E2 Plan report at project handover. The designer shall also provide a training session regarding the E2 Plan requirements, as well as facilitate and document the initial on-site emergency exercise with the owners, as required by the regulations.

[5.4.5.13.11](#) Propane Storage Tank location shall consider the extent of Hazardous Area Classification and propane spill distances. Hazardous Area Classification shall be done according to Ontario Electrical Safety Code, API RP 500 (American Petroleum Institute, Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Division 1 and Division 2) and a dedicated drawing, stamped by a Professional Engineer, with Area Classification, shall be part of design submittals.

5.4.5-13.8