

CONSTRUCTION TRAFFIC PLANNING



Issues and Concerns

- Will the ferry be tied up by construction equipment and workers?
- Will road closures prevent access to areas of the island?
- Will component delivery trucks be waiting on the road, either block it or create idling noise outside homes?
- Will delivery or construction traffic block the road and delay travel to the ferry or generally around the island?

Plans, Resolutions and Solutions

- Construction of the island dock may require transporting equipment and workers using the ferry (discussions with Township would be required).
- Any temporary road closures will be communicated well in advance to minimize impact on daily users.
- A staging area will be used to park any shipments awaiting delivery to each wind turbine so loads will not be parked along the roadway.
- Deliveries will go straight from the staging area to the turbine location.
- Road construction work will be carried out in the same manner as Township road works.
- All road upgrades will be performed to minimize road closures.
- During construction, a weekly roads update will be communicated using notices placed in mailboxes, posted in public places and available on the Project website.
- Advance warning on the routes (portable road signs) will be placed around affected areas.
- Construction management will be available throughout construction to address concerns.



IMPACTS TO THE ROADS



Issues and Concerns

- Will roads be permanently damaged by the frequent and heavy construction loads and will the Township will be on the hook for the repairs?
- Will the roads will be a mess during construction?
- Will there be an impact on roadside ditches, culverts and drainage?

Plans, Resolutions and Solutions

- Assessment of the present road conditions and planned upgrades to enable safe transport of turbine components are ongoing.
- The road plans will be reviewed and approved by the Township and will form part of the Roads Use Agreement.
- An independent engineer will be hired by the Township at Windlectric's expense to ensure that the roads plan and Road Use Agreement are followed.
- The roads will be repaired during and after construction.
- The roads will be left in 'the same or better' condition in accordance with the Road Use Agreement.
- Steps will be taken to minimize construction mud and stone on the public roads and prompt cleaning will be performed.
- On site construction manager will be available during construction.



HEALTH AND SAFETY



Issues and Concerns

- What will the impact be to delivery of emergency services, such as fire and ambulance response?
- Concern about the noise and dust created by trucks and equipment.

Plans, Resolutions and Solutions

- Plans will be developed, in consultation with the Township, to ensure emergency response services have adequate access at all times between all properties, the fire hall and the ferry dock through preferred and (occasionally) alternative routes.
- Emergency Response mock runs will be completed during early stages of construction to review effectiveness of the Construction Emergency Response Plan.
- Prudent industry practice will be followed to minimize potential effects arising from the construction activities, e.g. noise and dust.
- No movement of large components or materials during regular school bus activity (pick up and drop off of students).
- Strict adherence to speed limits will be required.



PRESERVATION OF IMPORTANT AREAS



Issues and Concerns

- Will there be any possible impact on the school, church, and stone fences?

Plans, Resolutions and Solutions

- Special attention has been and will continue to be given to important areas on the Island. Construction activities will avoid such areas wherever possible and/or ensure measures are followed to avoid any potential detrimental effects.
- Construction activities will not disturb the stone walls:
 - The stone fences will be assessed periodically by a qualified individual.
 - Construction activities will cease immediately if vibrations are found to be resulting in damage until the wall can be adequately reinforced or supported.
 - The stone wall will be evaluated following construction activities to ensure that no damage has occurred and any damage to the wall should be repaired immediately following construction activities.
- Implement buffer zones, monitoring of vibration near identified areas and periodic inspection of identified areas to avoid and mitigate detrimental effects mandatory requirements of the project's renewable energy approval.



PRESERVATION OF THE NATURAL ENVIRONMENT



Issues and Concerns

- How will the road upgrades impact trees, wetlands, and grasses within the road allowance?

Plans, Resolutions and Solutions

- Construction activities will be completed within the requirements of the Ministry of Environment Renewable Energy Approval and Township Bylaws.
- Care is to be taken to ensure that all protected areas are unaffected by the construction activities.
- Tree trimming and removal, if required within road allowances, will be performed in accordance with the Loyalist Township's Tree Bylaw and supervised by a professional arborist.



EXISTING ROAD CLASSIFICATION



Roads	Current Conditions	Proposed Upgrade
<p>Class 1 Examples are Stella 40 Foot Rd. north of 3rd Concession Rd. and Front Rd from Stella 40 Foot Rd. to the bridge, approximately 1-km west of Marshall 40 Foot Rd.</p>	<ul style="list-style-type: none"> •Includes asphalt/asphalt-gravel roads with widths of approximately 4 m to 5 m or greater •Exhibit adequate drainage •Certain areas contain small potholes and 'alligator' cracking 	<ul style="list-style-type: none"> •Granular A fill material will be deposited prior to the construction to fill in cracks and create an additional wearing surface. In these instances, a geo-textile separator layer will be placed on top of the asphalt material. •Hatch's opinion is that, according to the current condition, the road can handle the loads required for the transportation once it is upgraded as indicated. •Maintenance will be required during the construction period to retain this condition.
<p>Class 2 An example is Front Rd, 1 km west of Marshall 40 Ft. Rd. to 300 m west of Marshall 40 Foot Rd.</p>	<ul style="list-style-type: none"> •Semi-compacted gravel roads with widths of approximately 4 m to 5 m or greater •Exhibit adequate drainage •Certain areas contain some potholes and cracks 	<ul style="list-style-type: none"> •Prior to construction, a layer of compacted Granular A material is proposed to be laid and compacted, as well as poor drainage areas corrected (infill and/or culverts). •Additionally, in some cases, Granular B material may be necessary for a filtering sub-grade base. •Hatch's opinion is that, according to its current condition, the road can handle the loads required for the transportation once it is upgraded as indicated. •Maintenance will be required during the construction period to retain this condition.
<p>Class 3 Example: Front Rd. east of Marshall 40 Foot Rd. and 3rd Concession Rd.</p>	<ul style="list-style-type: none"> •Loose gravel road with road widths of approximately 4 m to 5 m or greater •Varying drainage characteristics, ranging from poor to adequate. •Potholes and cracks more frequent than Class 1 or Class 2 roads 	<ul style="list-style-type: none"> •Typically, these roads will require widening. If that is the case, the area will either be part of the right-of-way, or belong to participating owners. •Deposit of both Granular B (as a base sub-grade) and Granular A materials, to act as the wearing surface. •Additionally, Granular A material may be required in select locations for resurfacing of the road to upgrade the compaction of the existing gravel and improve drainage performance. •Hatch's opinion is that, according to its current condition, the road can handle the loads required for the transportation once it is upgraded as indicated. •Maintenance will be required during the construction period to retain this condition.
<p>Class 4 Example: Lower 40 Foot Rd. and South Shore Rd.</p>	<ul style="list-style-type: none"> •Loose gravel road with road widths less than 4 m to 5 m. • Varying drainage characteristics ranging from poor to adequate. In some cases, shoulders of the road appear to be higher than the edge of the road, causing water accumulation (pooling) •Potholes and cracks more frequent than Class 1 or Class 2 roads 	<ul style="list-style-type: none"> •This classification of road will require stripping of the organic topsoil in the shoulder areas for general widening of the roads and construction of a strong Granular B sub-grade. •Granular A material will be used for resurfacing and to improve the drainage properties of the road. •Hatch's opinion is that, according to its current condition, the road can handle the loads required for the transportation once it is upgraded as indicated. •Maintenance will be required during the construction period to retain this condition.
<p>Class 5 Example: Unmaintained roads (i.e. Dump Road)</p>	<ul style="list-style-type: none"> •Constructed using sand and mud material with road widths less than approximately 4 m to 5 m •Very poor to poor drainage properties. In some cases, shoulders of the road appear to be higher than the edge of the road, causing water accumulation (pooling) •Abundant potholes were present on the road. 	<ul style="list-style-type: none"> •This classification of road will require stripping of the organic topsoil in the shoulder areas for general widening of the roads and construction of a strong Granular B sub-grade. •Granular A material will be used for resurfacing and to improve the drainage properties of the road. •Hatch's opinion is that, according to its current condition, the road can handle the loads required for the transportation once it is upgraded as indicated. •Maintenance will be required during the construction period to retain this condition.

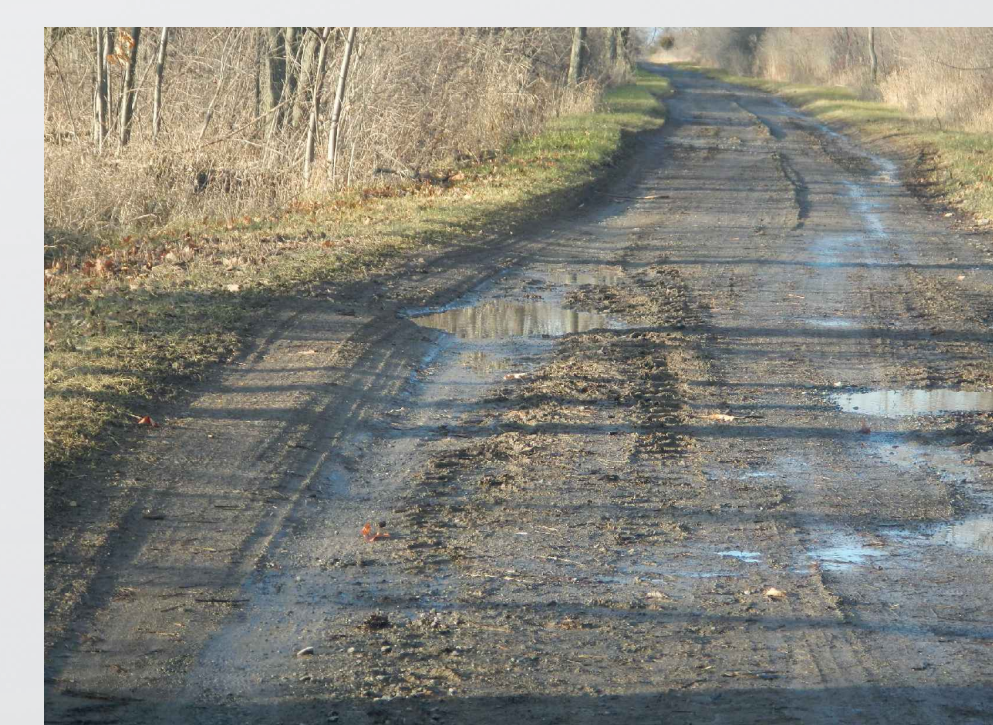
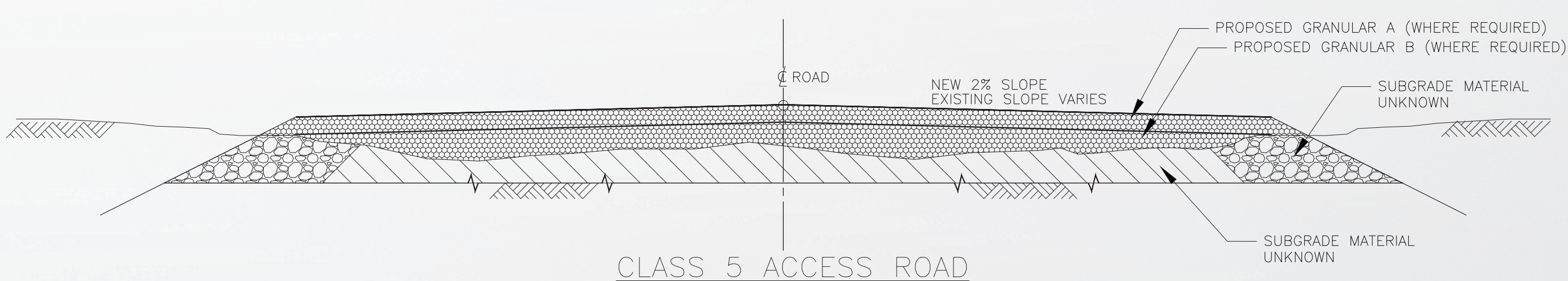
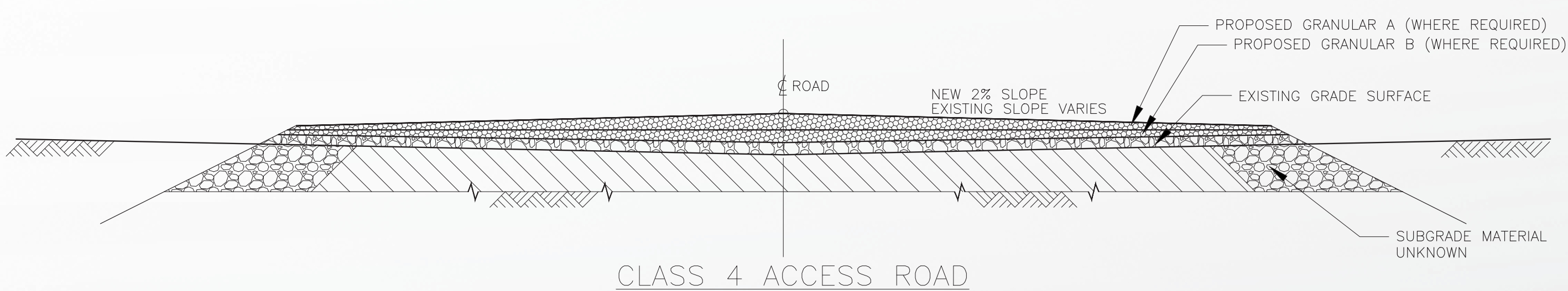
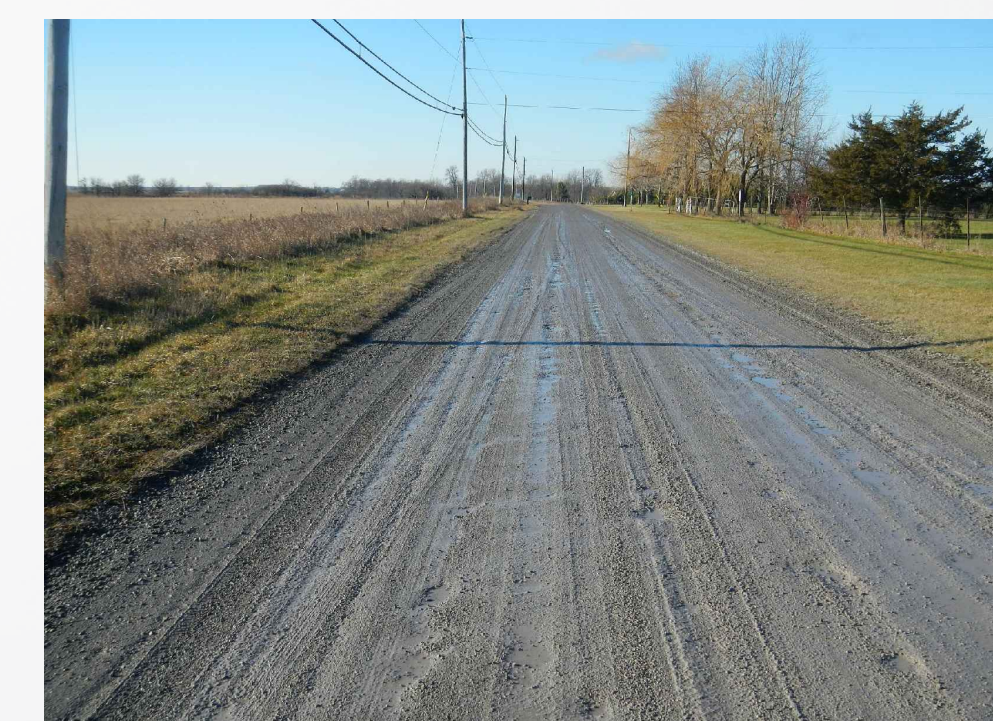
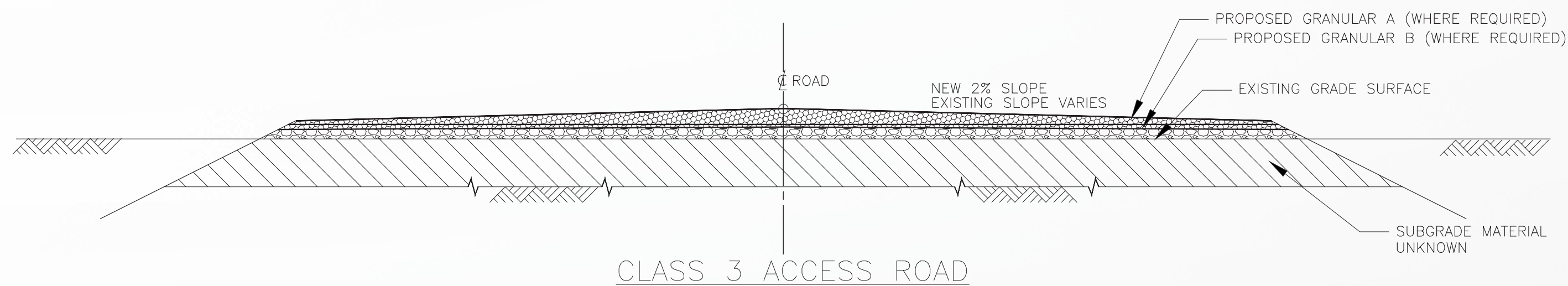
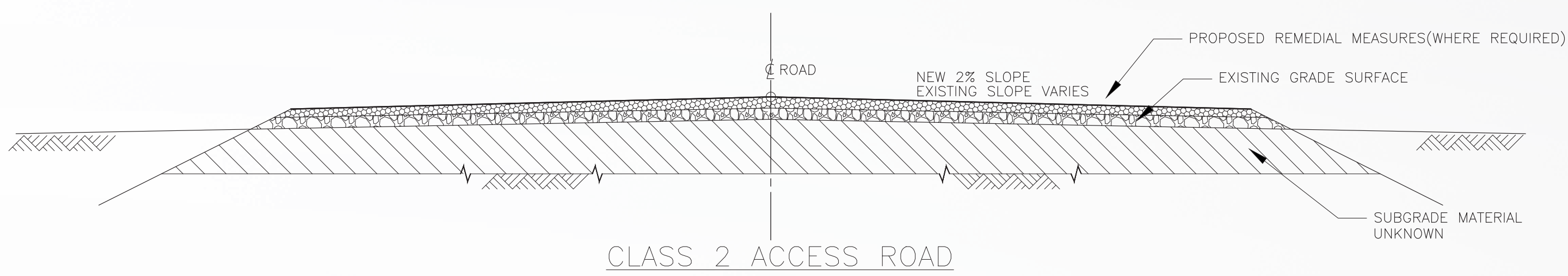
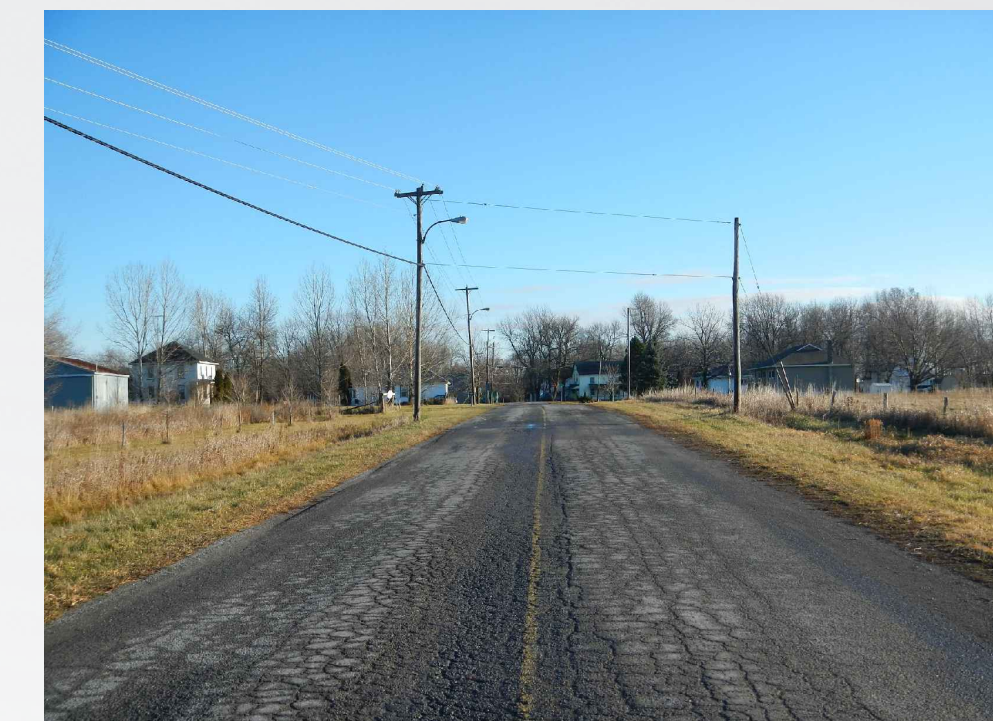
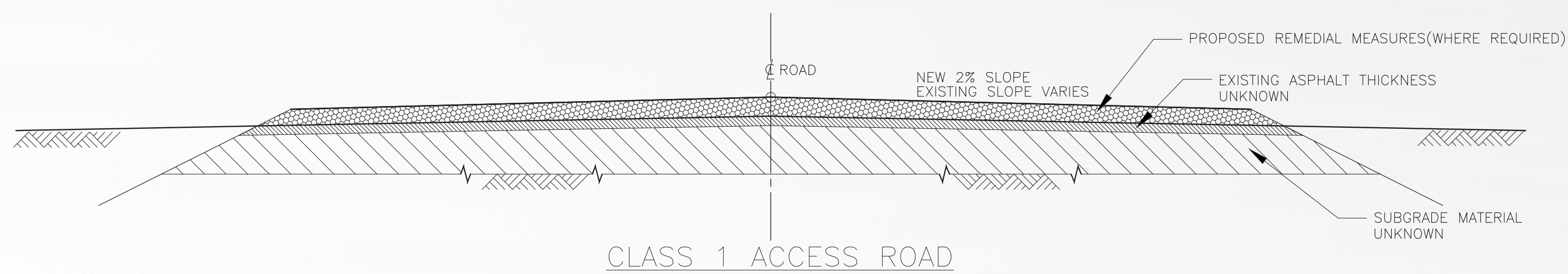
EXISTING ROAD CLASSIFICATION



LEGEND:

	ROAD CLASS 1
	ROAD CLASS 2
	ROAD CLASS 3
	ROAD CLASS 4
	ROAD CLASS 5

EXISTING ROAD CLASSIFICATION



ROAD USE AGREEMENT



Road Use Agreement which would mandate the following with further details to be negotiated with Loyalist Township:

- Island infrastructure must be maintained in the same or better condition after the Amherst Island Wind Project has been constructed.
- The project will provide payment for Loyalist Township to hire an independent engineering consultant to conduct the following:
 - Advise the Township on the infrastructure engineering as it pertains to the project affecting roads, drainage, etc.
 - Review and approve proposed project plans and drawings.
 - Conduct inspections during construction and advise Township.
 - Participate in pre and post construction audits.

Algonquin is working with Township on this agreement. A draft agreement was provided to Township last March (2012) in order to commence to discussions.