

City of Sault Ste. Marie

**Sault Ste. Marie Solid Waste Environmental
Assessment
Visual Impact Assessment
(Draft)**

Prepared by:

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Project Number:

60117627

Date:

February, 2015

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February 10, 2015

Ms. Catherine Taddo, P. Eng.
Engineering Department
City of Sault Ste. Marie
99 Foster Drive, 5th Floor
Sault Ste. Marie, ON P6A 5N1

Dear Ms. Taddo:

Project No: 60117627

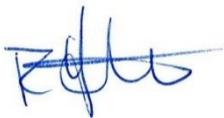
**Regarding: Sault Ste. Marie Solid Waste Environmental Assessment
Visual Impact Assessment**

We are pleased to submit our Visual Impact Assessment Report which has been prepared to support a proposed expansion of the existing municipal landfill located on Fifth Line.

The visual impact assessment investigates the potential and nature of any visual conflict between the proposed operations occurring on site and the surrounding lands.

We look forward to receiving your comments.

Sincerely,
AECOM Canada Ltd.



Rick Talvitie, P. Eng.
Manager, Northern Ontario

RT:nm

Encl.


Distribution List

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Revision Log

Revision #	Revised By	Date	Issue / Revision Description
0	R. Talvitie	February 10, 2015	DRAFT for City staff review

AECOM Signatures



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Report Reviewed By:

 Mike Hubicki, OALA, Senior Landscape
 Architect

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1. Introduction

This document presents the findings of the visual impact assessment as part of the Environmental Assessment (EA) of the proposed expansion of the City of Sault Ste. Marie's landfill located on Fifth Line. The proposed project includes an expansion of the disposal boundaries to the north and west and a moderate increase in the height of the waste. Landfill mining is also proposed within the western portion of the existing disposal footprint to facilitate the construction of a liner and enhance environmental management at the site. The mining process involves excavation of waste within the existing disposal footprint, removing fines and recyclables, transferring the residual waste to a new lined cell and lining the mined area to accommodate future waste disposal. The planned expansion will be accommodated within existing City owned lands.

The existing Municipal Landfill Facility in Sault Ste. Marie is located in the north end of the city and is accessed from Fifth Line west of Highway 17 North. The site occupies an area of land that is approximately 145 ha in size of which roughly 26 ha are presently being used for landfill operations. The site is bordered by various land use types on the south, east and west sides including commercial, tourist commercial, residential and aggregate extractions (refer to the Land Use Impact Assessment). There are however treed buffers between the landfill and the adjacent land uses. The area to the north of the site is undeveloped and forested.

This report documents the existing context in which the landfill facility is situated and the visual impact assessment of the preferred landfill expansion. As the term implies, the undertaking of a visual impact assessment investigates the potential and nature of any visual conflict between the proposed operations occurring on site and the surrounding lands. This is done by looking at the situation in a pre and projected post expansion condition. Once the investigation is complete and the likelihood of visual connections is identified, alternative measures aimed at mitigating the views are suggested.

1.1 Description of the Preferred Alternative Landfill Expansion

The municipal landfill facility occupies a site that is approximately 145 ha in size. The site extends approximately 1600m north from its south boundary along the Fifth Line East ROW. The site width varies from west to east, with an average width of approximately 800m. At a point some 400m north of Fifth Line, the site widens to approximately 1200m for a distance of approximately 400m. It is at this widening that the existing landfill feature is located and where the proposed expansion will also be situated. The present landfill feature is approximately 26 ha in area and attains a maximum elevation of approximately 310m. The proposed expansion will extend north and west from the edges and merge with the side slopes of the existing landform creating a linear feature oriented roughly west-east. The final feature is proposed to cover an additional 18 ha and attain a maximum elevation of 314m. The final feature will be well contained within the site along both the north and south edges however along the west and east edges the buffer distance between the base of landform and the property line narrows to a minimum of 30m in a couple of isolated areas.

The site generally slopes from north to south. The final contours of the landfill are shown in Figure 1 and reflect a rectangular landform with a maximum elevation (top of final cover) of 314.00 m ASL (above sea level). This elevation is a minimum of 14 m and a maximum of 36 m above the surrounding existing grades and represents a 4 metre height increase above the existing landform. The contours reflect maximum side slopes of 4H to 1V, and a minimum slope of 5% (side slopes required by Ontario Regulation 232/98).

The proposed expansion of the landfill footprint will also impact existing site infrastructure including administration and maintenance buildings, weigh scales, scale house, public drop-off and internal roads. The site expansion is proposed to be completed in approximately eight phases and the redevelopment of the site infrastructure is not required until phase 3, approximately 10 years into the expansion. Figure 1 reflects the redeveloped site

infrastructure. With the exception of the proposed new entrance, existing treed buffers along Fifth Line will be maintained in conjunction with the redevelopment of the site infrastructure.

1.2 Visual Impact Study Team

The Visual Impact Assessment study team consisted of AECOM staff. The actual individuals and their specific roles are provided as follows:

- **Alan Becking – Landscape Architect** –detailed visual impact assessment of site on surrounding area. Prepared graphics, illustrations, and detailed impact assessment report.
- **Mike Hubicki – Landscape Architect** - peer review of the visual impact assessment document.
- **Nancy Maahs – Field Liaison** –collection of field data including photographic inventory of existing views both internal and external of the site.

2. Study Area

For the purposes of this report all directions noted will be based on 'Discussion North' as illustrated in Figure 1.

The specific On-Site, Site-Vicinity, and Regional study areas for the Preferred Alternative Landfill Expansion at the Sault Ste. Marie municipal landfill are listed below and shown on Plate 1 in Appendix A.

On-Site - the lands required for the Preferred Expanded Landfill footprint;

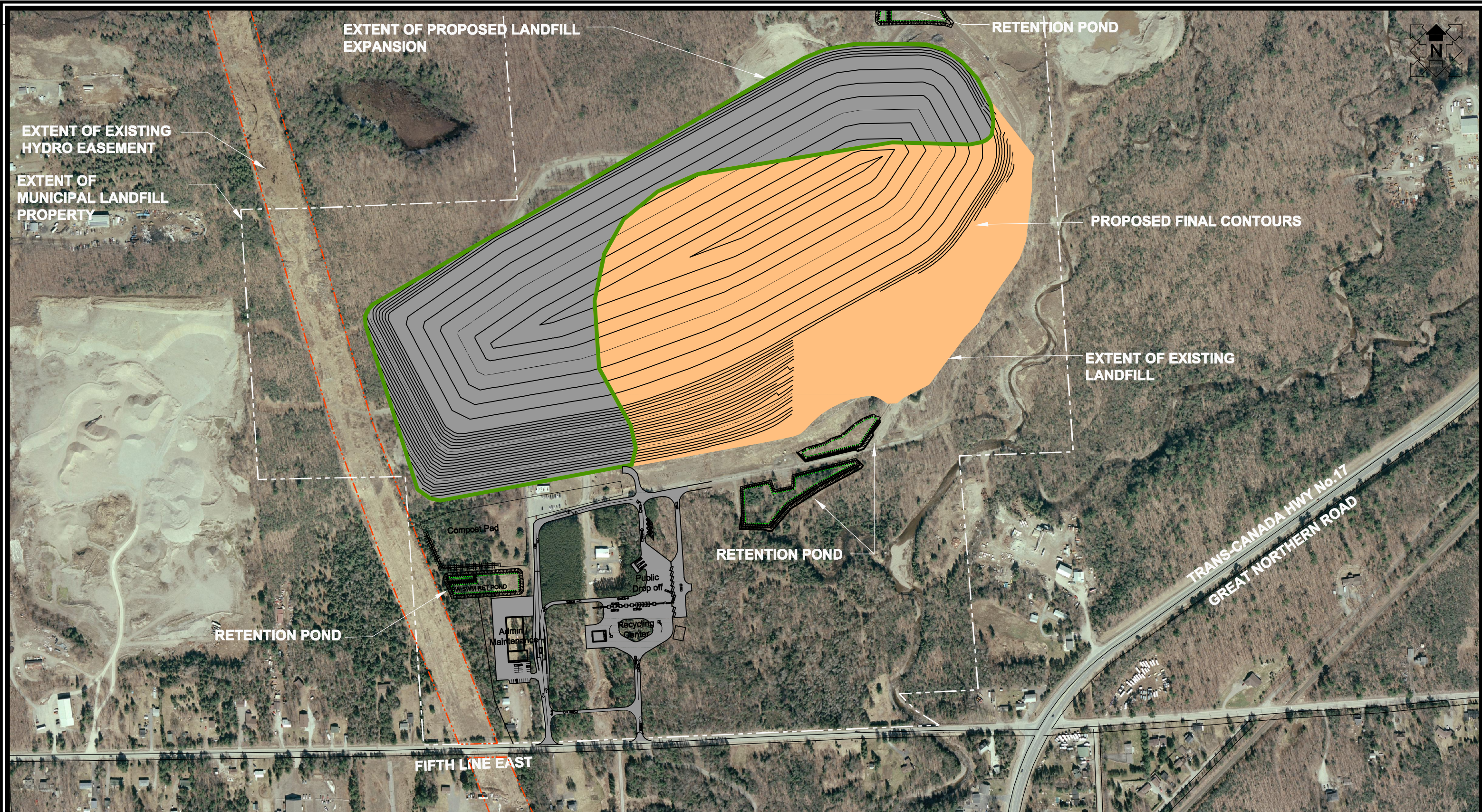
Site-Vicinity - the lands in the vicinity of the Preferred Alternative Landfill Expansion, extending about 500 metres in all directions from the edge of the preferred landfill expansion; and,

Regional - the lands within approximately 1.5 kilometres of the Preferred Alternative Landfill Expansion.

3. Methodology

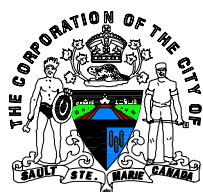
The assessment of visual impacts associated with the Preferred Alternative Landfill Expansion was undertaken through a series of steps including; a desktop review of the site and surrounding area using the Google Maps® and Google Streetview® software program, existing topographic information, and an on-site collection of photographs taken from key locations on site and neighbouring lands around the site determined during the desktop review. The nature of uses on these neighbouring lands was also confirmed in order to evaluate the level of significance of any views or vistas identified to help determine the mitigating approach to be taken, if any, for eliminating or lessening the impact of the view on adjacent entities.

A review was undertaken of the existing topography of the site and the neighbouring lands within the study area. This review coupled with the topographic information provided for the Preferred Alternative Landfill Expansion allowed for the creation of a series of sections that would graphically exhibit the vertical and horizontal positioning of the proposed landform relative to the surrounding existing conditions and to show the extent of natural screening that exists around the site.



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LEGEND:

- EXISTING LANDFILL FEATURE
- EXTENT OF PREFERRED LANDFILL EXPANSION

**FACILITY EXPANSION
PREFERRED ALTERNATIVE
LAYOUT**

Project 60117627
Jan 2015

Figure 1

4. Detailed Description of the Environment Potentially Affected

Given the nature and make-up of the area in general, we have identified a maximum distance of 1.5 kilometres from the site as being potentially impacted by the expansion of the landfill feature. This distance from the source can be divided into 3 different categories namely On-site, Site-vicinity, and Regional as described in Section 2.

The present landfill feature is located on the east side of the site and is surrounded by existing vegetation and hilly topography. Given its' location relative to screening elements, the existing landform is well concealed from view from all off-site viewpoints whether they are immediately adjacent or distant. Refer to Appendix A for existing views into and out of the site.

The proposed expansion extends within an area that is already well screened from the surrounding areas, thus minimizing the amount of disturbance to the existing environment and requiring the least amount of mitigating measures to eliminate or lessen its visual impact. The following are descriptions of the visual conditions on site, within the site-vicinity (immediately adjacent areas), and at the regional scale (distances up to 1.5 km away) with respect to the Preferred Alternative Landfill Expansion.

4.1 On-Site

The preferred site is located on a relatively hilly parcel of land that sits within the extents of City-owned land. The area proposed for expansion consists of; land that is already open and disturbed as part of the existing operation, and stands of existing woodlot. The landfill expansion requires the removal of approximately 6.5 ha of trees from the interior of the site (refer to Appendix C – Plate 3). In relative terms, this amount of removal is small in comparison to the surrounding expanse of forest cover and the amount of trees that will remain on the site.

4.2 Site-Vicinity

In general, the existing surrounding vegetation and topographic features block any views to the site and present landfill form from all immediately adjacent viewpoints. At present, there is only one opportunity to view the interior of the site from the adjacent surrounding areas. This view is isolated and limited occurring at the entrance to the landfill facility along Fifth Line East (refer to Appendix B).

The preferred expansion does require the removal of vegetation close to the existing Hydro Easement that runs along the west end of the site. The closeness of the expansion and site redevelopment to the easement edge will reduce the effectiveness of screening that existing trees in this area now provide, creating partially obscured views of the expanded landfill feature from viewpoints located immediately south (refer to Appendix C – Plate 3).

Measures will be taken to both compensate for tree loss and mitigate the potential visual access that may occur along the west end of the site. This will be discussed in section 5.2 – Mitigation and/or Compensation Measures.

4.3 Regional

The effectiveness of the screening is dependent on a few factors including: the surrounding topography; the presence, density and make-up of vegetation surrounding the site; and the distance of the viewer from the site.

The surrounding region generally falls away to the south from a ridge of hills that is located immediately north of the landfill site. The topography creates an effective visual block of the site from surrounding areas to the northwest, north, and northeast.

Distant views of the site are well screened due in large part to the expansive existing vegetation growth that covers much of the area. The coniferous – deciduous tree ratio of the existing vegetative cover varies at different locations around the site. The cover is predominantly deciduous to the north, west, and east but changes to predominantly coniferous in areas south of the site. The width of these vegetative buffers is significant in all directions.

As the viewer moves away from the site, more elements located in the middle-ground and in the foreground provide increased visual screening. On a regional level, there is a very effective visual screen that surrounds the existing landfill feature and should function well in obscuring the extent of the landfill expansion.

Considering that the existing vegetative cover accounts for a significant amount of screening and that the majority of the existing cover is located on lands surrounding the site, there is a potential for reduced future screening if existing tree cover is lost. This must be considered in the future if the rural nature of the area changes.

5. Visual Impact Net Effects

As a result of this assessment we have determined that the expansion of this landfill feature will have no significant adverse impact on the visual make-up of the existing landscape. The existing topography and vegetation that covers the area is quite effective in screening the interior of the landfill site from external viewpoints.

5.1 Potential Effects on Visual Impact

In general, the introduction of the Landfill Expansion will have no impact on the visual environment from distant viewpoints. The height of the landfill expansion will attain an elevation that is higher than the surrounding lands to the south, east and west, however the landform will not be visible from a distance due to the fact that the land continues to drop in elevation as one moves away from the site, and that the existing vegetation cover is so dense and expansive across the area.

Within the Site-Vicinity and Regional Study areas, views of the landfill expansion will vary from fully obscured to moderately visible.

Distant Views (Regional)

- Distant views in general from all directions around the site will not be adversely impacted by the introduction of the preferred landfill expansion due to the presence of existing vegetation and topographic features.
- Distant views from the south have the potential of observing a minimal amount of the top of the preferred expansion. However given the distance of the observer from the landfill site and the presence of existing topographic features located immediately north of the site it is highly doubtful that the feature will be distinguishable or stand out from the surrounding landscape.

Close-Up Views (Site-Vicinity)

- Close-up views from the northwest to the northeast will be unaffected by the introduction of the preferred landfill expansion due to the presence of existing significant growths of vegetation and topography immediately adjacent to the site. These features effectively isolate the landfill site from areas to the north. The extensive vegetative cover, although largely composed of deciduous trees, creates a dense visual barrier that is effective year-round.
- The land falls away to the south, making the existing vegetative cover more effective at screening close-up views of the landfill from the west, south, and east.

- At the site-vicinity level that there is a potential for moderately obscured views of the expansion landfill mound. The footprint and elements of the site infrastructure redevelopment extend to a point on the west that comes close to the existing hydro easement that runs north-south through the area. This creates an isolated glimpse of the expanded landfill feature from Fifth Line East and on existing residential property that borders the southwest edge of the site. The landfill feature will not be totally visible as there will still be a remnant vegetative screen along the property line. If left untreated, it is possible that the upper 10 to 15 metres of the landfill could be visible when completed.

5.2 Mitigation and/or Compensation Measures

Our assessment indicates that the preferred expansion at completion will not interfere, obscure, or compete with any nearby man-made or natural landmarks, nor will it significantly alter the existing vistas present within the study area. The visual impact of the preferred landfill expansion is dependent on how it is perceived by the public from surrounding viewpoints. Different approaches can be taken to lessen the impact of the preferred expansion. These include measures (vegetative buffers on berms) that will obscure the feature from the surrounding areas, and measures such as a native grass/wildflower vegetative cap mixture that will improve the aesthetic quality of the landfill feature itself.

Possible Mitigating Measures

- Vegetative buffers consist of native coniferous and deciduous tree species that are densely and naturally planted to create a visual barrier that is both effective and natural in appearance. These buffers will be used, at times in conjunction with earth berms depending on distance from the viewer and the height of the feature to be obscured.
- Introduce a mixture of native grasses and wildflowers as the landform vegetative cap to minimize the visual contrast of the landfill feature with surrounding areas.

With the expansion of the landfill form requiring the removal of approximately 6.5 ha (refer to Appendix C, Plate 3) of existing woodlot it is necessary to incorporate into the final design new plant material that will offset the loss. The total of new plant material can be accounted for by adding the areas occupied by the mitigating measures and areas that are designated for reforestation. Reforestation areas are plots of native trees and shrubs of varying sizes including seedlings, whips, and young nursery stock.

For locations of various mitigating and compensation measures, refer to Appendix C, Plate 4a.

5.3 Net Effects

Table 1. Potential Effects, Proposed Mitigation and Compensation Measures, and Resulting Net Effects

ID Number	Potential Effect	Mitigation/ Compensation	Net Effect
1.	► preferred expansion is visible from small sections of Fifth Line East at the Hydro Easement crossover and existing residential property located adjacent to the southwest edge of the site	► Introduce vegetation treatments at strategic locations between the west side of the preferred landfill site and Fifth Line East to screen sporadic views from the road right-of-way. ► Introduce native grass /wildflower mixture as vegetative cap on top of completed landform.	► Views of the landform from public viewpoints southwest of the preferred expanded landfill form will be obscured.
2.	► Removal of 6.5 hectares of existing woodlot	► Planting program to introduce: screening around the perimeter of the	► The planting approach for the site will use native species and

		site and reforestation plots, incorporating similar species at a quantity that will compensate for the loss of existing vegetation.	natural planting arrangements along the perimeter of the site in-keeping with the existing woodlots. The result will be a natural visual barrier around the site that will add to the on-site screening capabilities of the views from surrounding areas.
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6. Monitoring and Commitments for the Undertaking

To ensure that the mitigation measures identified in Section 5 are implemented as envisioned, a strategy and schedule is to be developed for monitoring environmental effects. With these mitigation or compensation measures and monitoring requirements in mind, commitments have also been proposed for ensuring that they are carried out as part of the construction, operation, and maintenance of the landfill.

6.1 Monitoring Strategy and Schedule

A monitoring strategy and schedule will be developed based on the Visual Impact Assessment of the Preferred Alternative Landfill Expansion to ensure that (1) predicted net negative effects are not exceeded, (2) unexpected negative effects are addressed, and (3) the proposed mitigation and compensation measures are achieved.

6.1.1 Environmental Effects Monitoring

A monitoring program for all landscape treatments will include an on-going review of the installation during construction, followed by an on-going program that includes the review and maintenance of the plant material to ensure proper establishment of the desired native vegetation, the control of non-native invasive species, and that corrective actions are conducted in a timely manner.

Table 2. Proposed Monitoring Requirements

ID Number/Potential Effect	Proposed Monitoring Requirement	Associated Licences, Permits or Authorizations
Perimeter Earthworks and Planting	► Oversee earthwork construction and planting of perimeter landscape screen areas to ensure design is adhered to. Sign-off for work completed will be required.	NA
Maintenance of Landscape Perimeter	► On-going review of condition of perimeter planting. Maintain and replace plant material as required.	NA
Landscape Treatment of Landfill Feature	► Oversee installation of landscape features as required during the course of the landfill operation to ensure that design master plan is adhered to. Sign-off for work completed will be required.	NA
Maintenance of Landfill Landscape Treatment	► On-going review of landfill landscape and surface treatment to ensure that plant material is establishing and that non-native materials are being controlled.	NA

6.1.2 Development of an Environmental Management Plan

An Environmental Management Plan (EMP) or Plans will be prepared following approval of the undertaking by the Minister of the Environment and prior to construction. The EMP will include a description of the proposed mitigation measures, commitments, and monitoring.

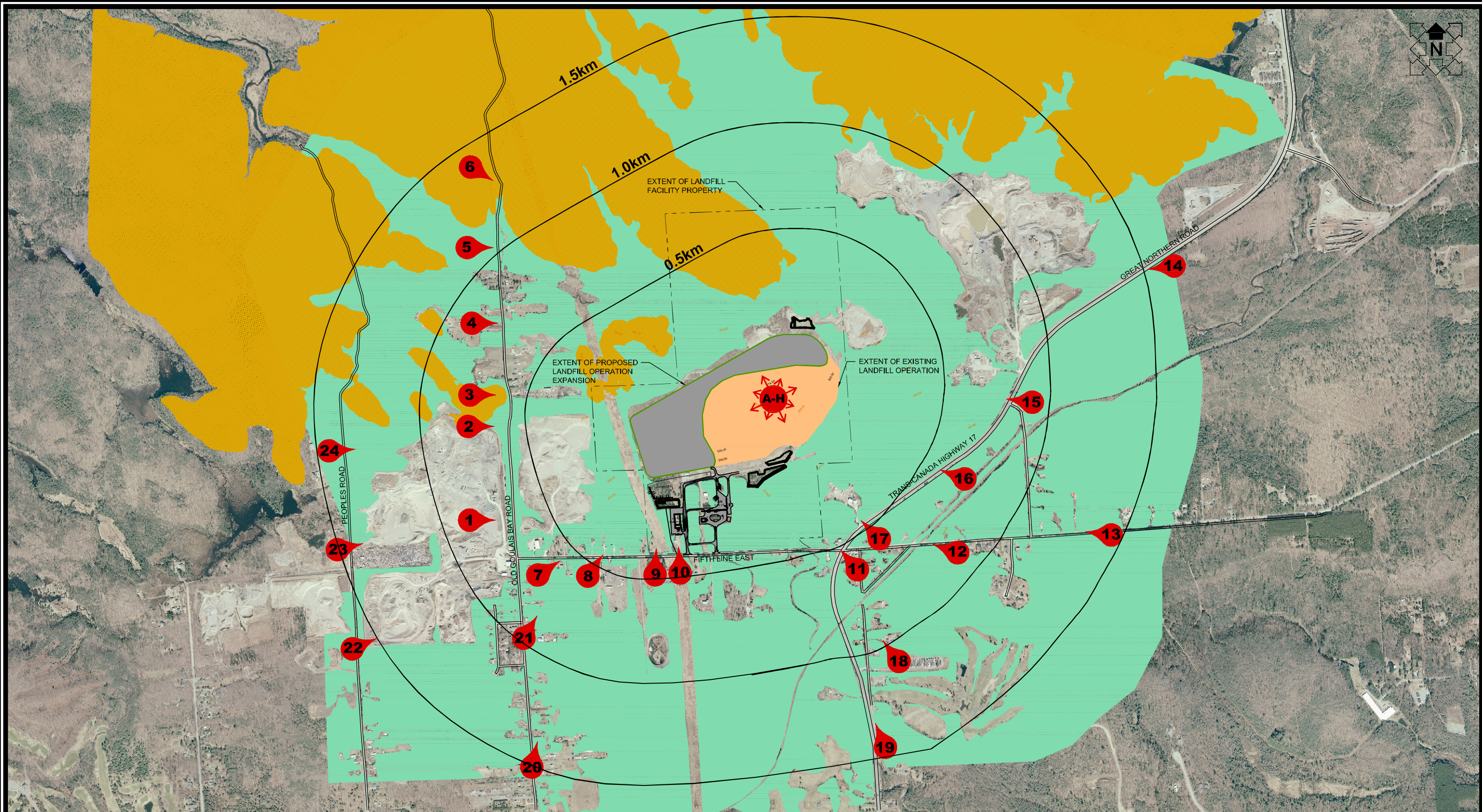
6.2 Commitments

The following commitments have been proposed for ensuring that the identified mitigation or compensation measures and monitoring requirements are carried out as part of the construction, operation, and maintenance of the undertaking:

- a) The City commits to have a landscape development master plan for the treatment of the site perimeter, including screening measures prepared. This landscaping will be installed in stages to suit development plans.
- b) The City commits to have a landscape development master plan prepared detailing the surface treatment for the preferred expansion to be instituted in a manner that is in-keeping with its staged creation.
- c) The City commits to maintaining both perimeter and landfill landscape features through installation, establishment, and an on-going monitoring and corrective action program.
- d) The City commits to using similar species of vegetation at a quantity that will compensate for the loss of existing vegetation required to accommodate the preferred landfill expansion.
- e) The City commits to taking all measures required to protect existing vegetation that is to remain on the site during construction and operation.

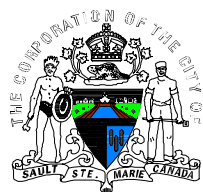
Appendix A

- Plate 1 – Photograph Location Key Plan
- Existing Views Inventory



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LEGEND:



PHOTOGRAPH LOCATION KEY - EXTERNAL VIEW



PHOTOGRAPH LOCATION KEY - INTERNAL VIEW



EXTENT OF TOPOGRAPHY ABOVE PROPOSED
ELEVATION OF EXPANSION (314.00)



EXTENT OF EXISTING VEGETATIVE COVER IN PROXIMITY TO SITE

**LANDFILL FACILITY
EXPANSION PHOTOGRAPH
LOCATION KEY PLAN**

Project 60117627
October 2013

Plate 1



Photo 1

View east from Old Goulais Bay Road just north of Fifth Line East. Existing vegetation is effective at screening not only the landfill site but also an existing open pit immediately east of the road.



Photo 4

View southeast from Old Goulais Bay Road approx. 1100m north of Fifth Line East. Existing vegetation, which is comprised mostly of coniferous trees, is very effective at screening areas beyond.



Photo 2

View east from Old Goulais Bay Road approx. 600m north of Fifth Line East. Existing vegetation is dense and effective at screening views to the east.



Photo 5

View southeast from Old Goulais Bay Road at the Canon Creek crossing approx. 1460m north of Fifth Line East. Existing vegetation, which is comprised mostly of coniferous trees, is very effective at screening areas beyond.



Photo 3

View east from Old Goulais Bay Road approx. 760m north of Fifth Line East at the south end of existing residential area. Existing vegetation is dense and effective at screening views to the east.



Photo 6

View southeast from Old Goulais Bay Road approx. 1800m north of Fifth Line East. Dense existing vegetation is very effective at screening views to the east.



Photo 7

View northeast from Fifth Line Road just east of Old Goulais Bay Road. Existing Vegetation is very effective at screening anything north of the road and adjacent properties



Photo 10

View north from Fifth Line Road immediately west of the entrance to the facility. Most of the vegetation along the back of the property will be removed to accommodate the landfill expansion leaving visual access from the road and from the existing house which the City owns.



Photo 8

View northeast from Fifth Line Road approx. 440m east of Old Goulais Bay Road. Existing vegetation north of the road is very effective at screening views from both the road and neighbouring residential lots.



Photo 11

View northwest from Fifth Line Road at the intersection with Great Northern Road. Existing vegetation is effective at screening the facility to the northwest.



Photo 9

View northeast from the Hydro easement crossing at Fifth Line East. Existing vegetation in the easement is very low with the exception of sporadic tree growth at the road edge. There is existing vegetation along the east side of the easement next to the proposed landfill expansion however its effectiveness at screening could be reduced giving a localized glimpse of the landfill feature



Photo 12

View northwest from Fifth Line East approx. 360m east of the intersection with Great Northern Road. Existing vegetation growing along the north side of the road effectively screens views to the northwest.



Photo 13

View northwest from Fifth Line East approx. 1150m east of the intersection with Great Northern Road. Existing vegetation growing along the north side of the road effectively screens side views to the northwest.



Photo 16

View west from Great Northern Road approx. 600m northeast of the intersection with Fifth Line East. Extensive existing vegetation growth along the west side of the highway creates an effective visual barrier.



Photo 14

View southwest from Great Northern Road approx. 1950m northeast of the intersection with Fifth Line East. Extensive existing vegetation along the west side of the highway creates an effective visual barrier.



Photo 17

View west from Great Northern Road approx. 140m north of the intersection with Fifth Line East. Existing vegetation to the west effectively screens all views beyond.



Photo 15

View southwest from Great Northern Road at the intersection with Schultz Side Road. Extensive existing vegetation growth along the west side of the highway creates an effective visual barrier.



Photo 18

View northwest from the existing trailer home park immediately north of the Root River Golf Club. Existing vegetation along the north side of the park effectively screens views to the northwest.



Photo 19

View northwest from Great Northern Road approx. 1020m southeast of the intersection with Fifth Line East. The combination of distance from the landfill and the presence of dense vegetation effectively obscures any views.



Photo 22

View northeast from Peoples Road approx. 350m south of the intersection with Fifth Line West. The existing open pit allows for distant views to the northeast however with the presence of significant vegetation growth beyond the pit, the landfill site is effectively obscured from view.



Photo 20

View northeast from Old Goulais Bay Road approx. 1030m south of the intersection with Fifth Line East. The combination of distance from the landfill and the presence of dense vegetation effectively obscures any views.



Photo 23

View east from Peoples Road approx. 115m north of the intersection with Fifth Line West. The existing pit allows for distant views to the east however with the presence of significant vegetation growth beyond the pit, the landfill site is effectively obscured from view.



Photo 21

View northeast from Old Goulais Bay Road Approx. 290m south of the intersection with Fifth Line East. The combination of distance from the landfill and the presence of dense vegetation effectively obscures any views.



Photo 24

View east from Peoples Road approx.570m north of the intersection with Fifth Line West. Existing dense vegetation provides an effective visual screen of views to the east.



Photo A

View north from top of existing landfill feature to hilly terrain immediately north of site. Distant views are obscured beyond by the hills and the dense vegetation.



Photo D

View southeast from top of the existing landfill feature. There is minimal visual access to the existing industrial operation that is located adjacent to the landfill property. The extent of visual access involves the elevated view of a vertical concrete building but does not appear to include any ground level views



Photo B

View northeast from top of the existing landfill feature. There is no visual access to any neighbouring land uses (residential, commercial, industrial, etc.) or any transportation corridors because existing dense vegetative cover.



Photo E

View south from top of the existing landfill feature. There is no visual access to any neighbouring land uses (residential, commercial, industrial, etc.) or any transportation corridors because of existing dense vegetative cover. There are distant views to the downtown area however the distance makes the view very obscure.



Photo C

View east from top of the existing landfill feature. There is no visual access to any neighbouring land uses (residential, commercial, industrial, etc.) or any transportation corridors because existing dense vegetative cover.



Photo F

View southwest from top of the existing landfill feature. There is no visual access to any neighbouring land uses (residential, commercial, industrial, etc.) or any transportation corridors because of existing dense vegetative cover. There are distant views to the downtown area however the distance makes the view very obscure.



View west from top of the existing landfill feature. There is no visual access to any neighbouring land uses (residential, commercial, industrial, etc.) or any transportation corridors because existing dense vegetative cover. The only item visible is a hydro pole from the adjacent easement.

Photo G

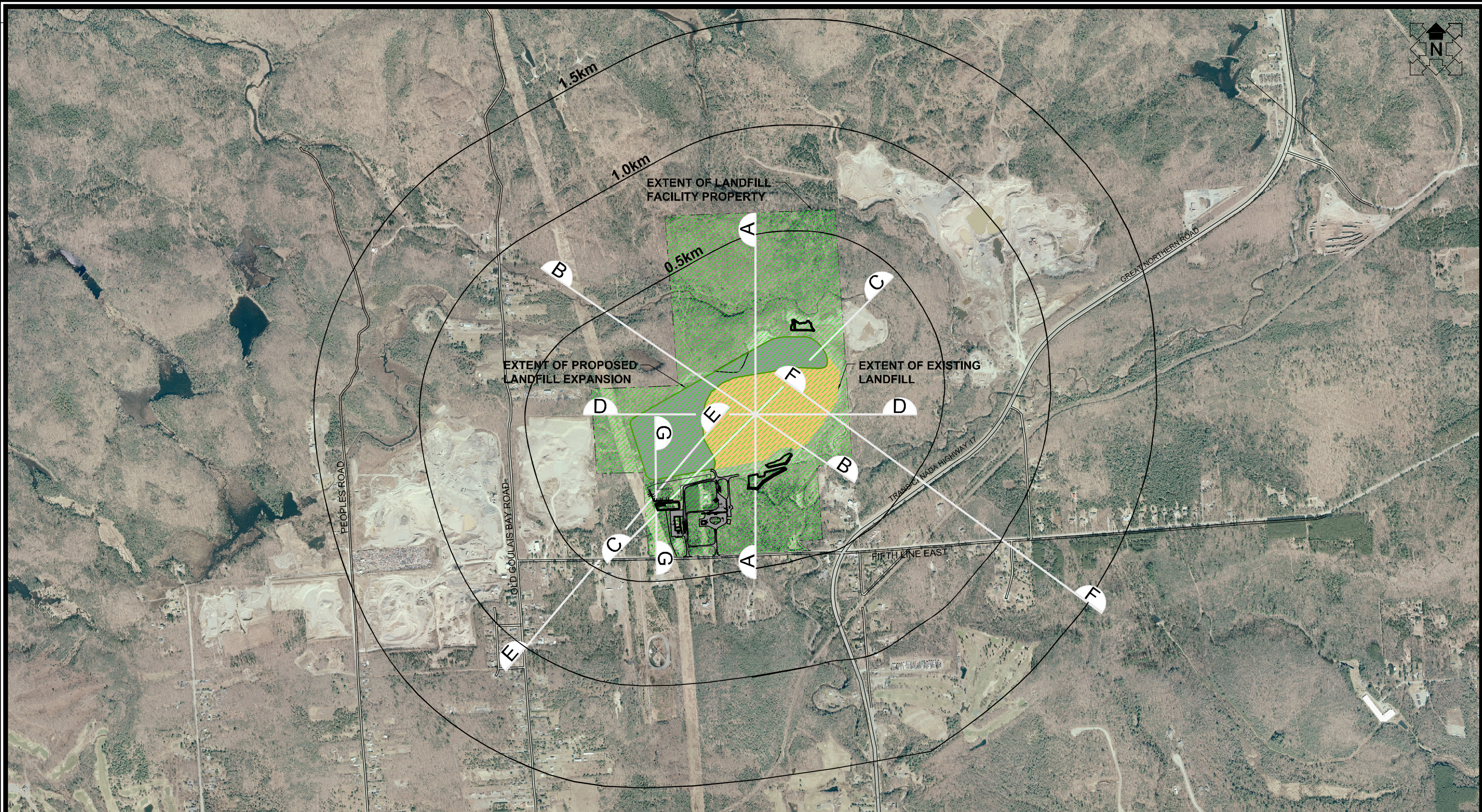


View north from top of existing landfill feature to hilly terrain immediately north of site. Distant views are obscured beyond by the hills and the dense vegetation.

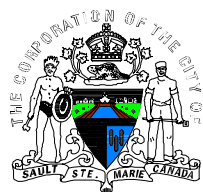
Photo H

Appendix B

- Plate 2 – Sections Location Plan
- Plates 2a to 2d – Sections (A to G)



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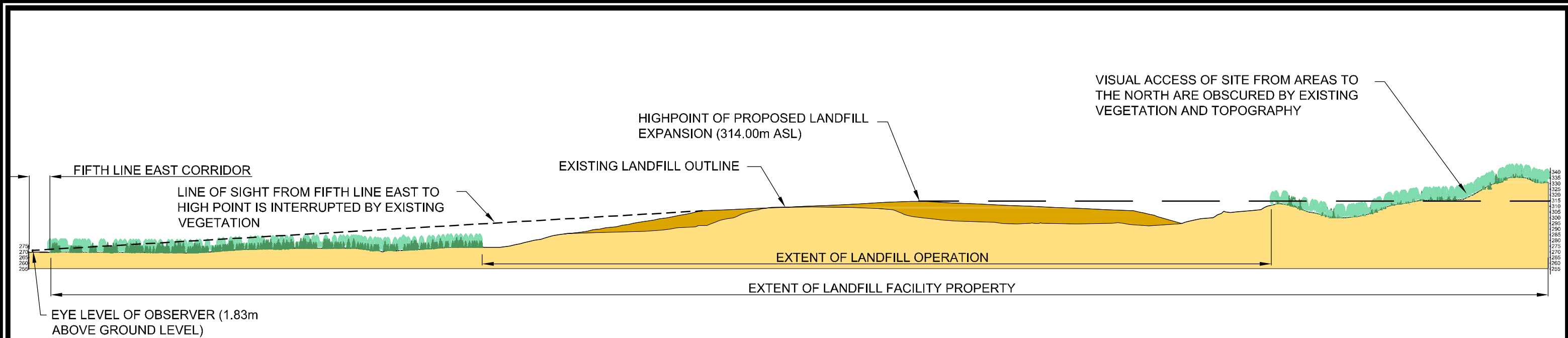


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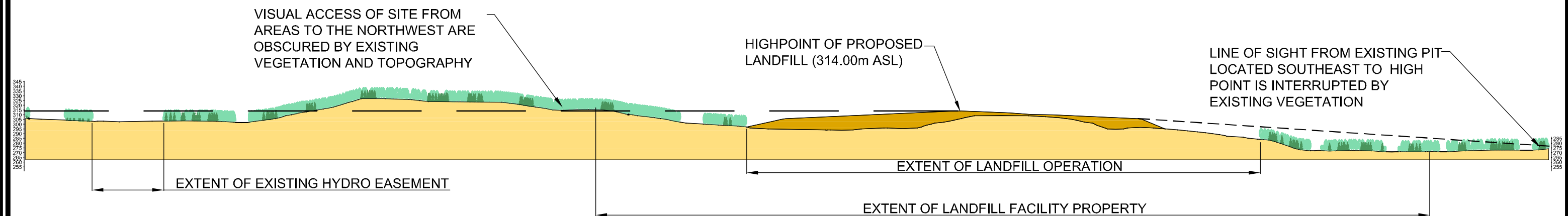
- EXISTING LANDFILL FEATURE
- EXTENT OF PREFERRED LANDFILL EXPANSION
- EXTENT OF LANDFILL FACILITY PROPERTY

LANDFILL FACILITY EXPANSION SECTIONS LOCATION PLAN

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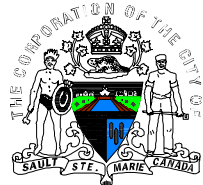
SECTION A-A



SECTION B-B



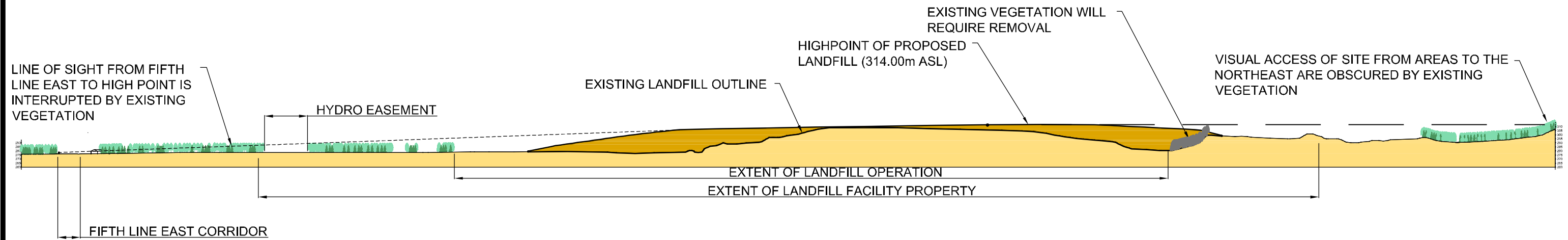
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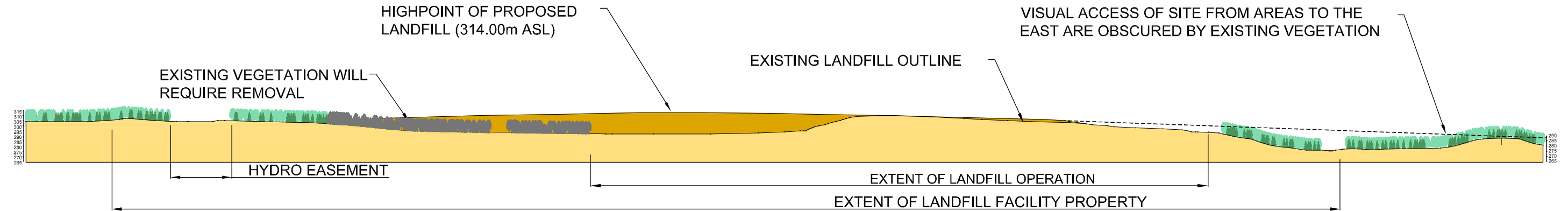
LANDFILL FACILITY EXPANSION
VIEW ANALYSIS
SECTIONS A & B

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Plate 2a



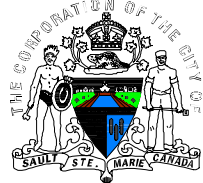
SECTION C-C



SECTION D-D



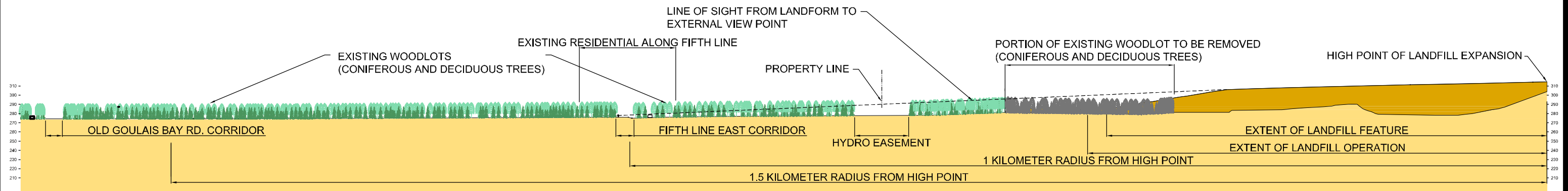
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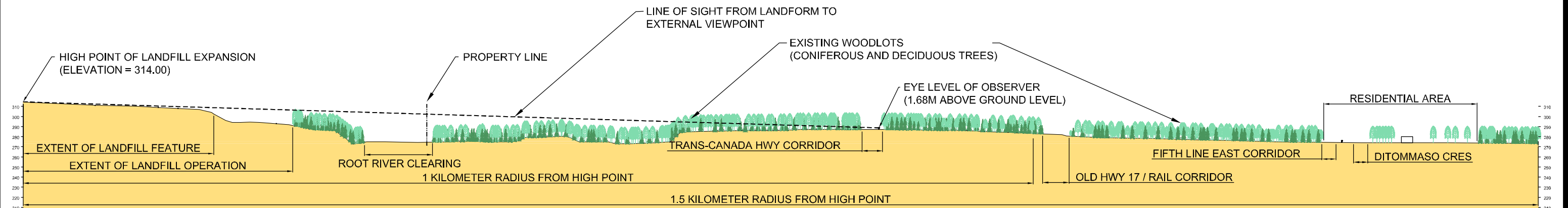
LANDFILL FACILITY EXPANSION
VIEW ANALYSIS
SECTIONS C & D

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Plate 2b



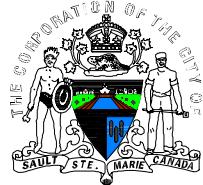
SECTION E-E



SECTION F-F



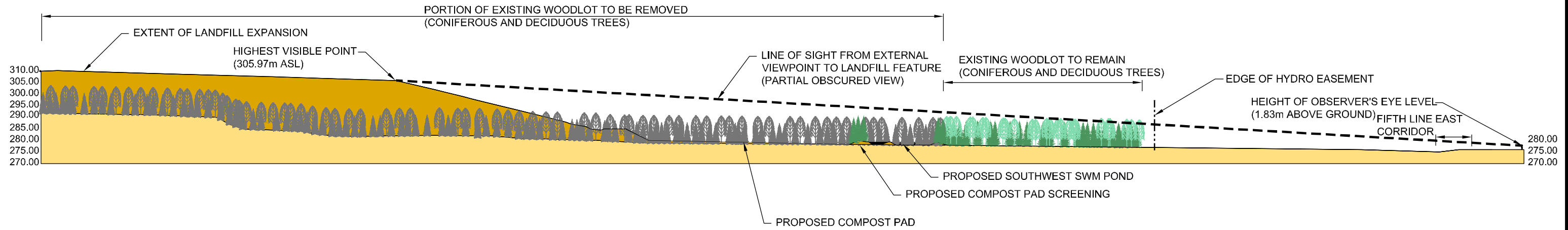
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LANDFILL FACILITY EXPANSION
VIEW ANALYSIS
SECTIONS E & F

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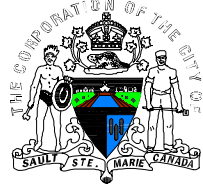
Plate 2c



SECTION G-G



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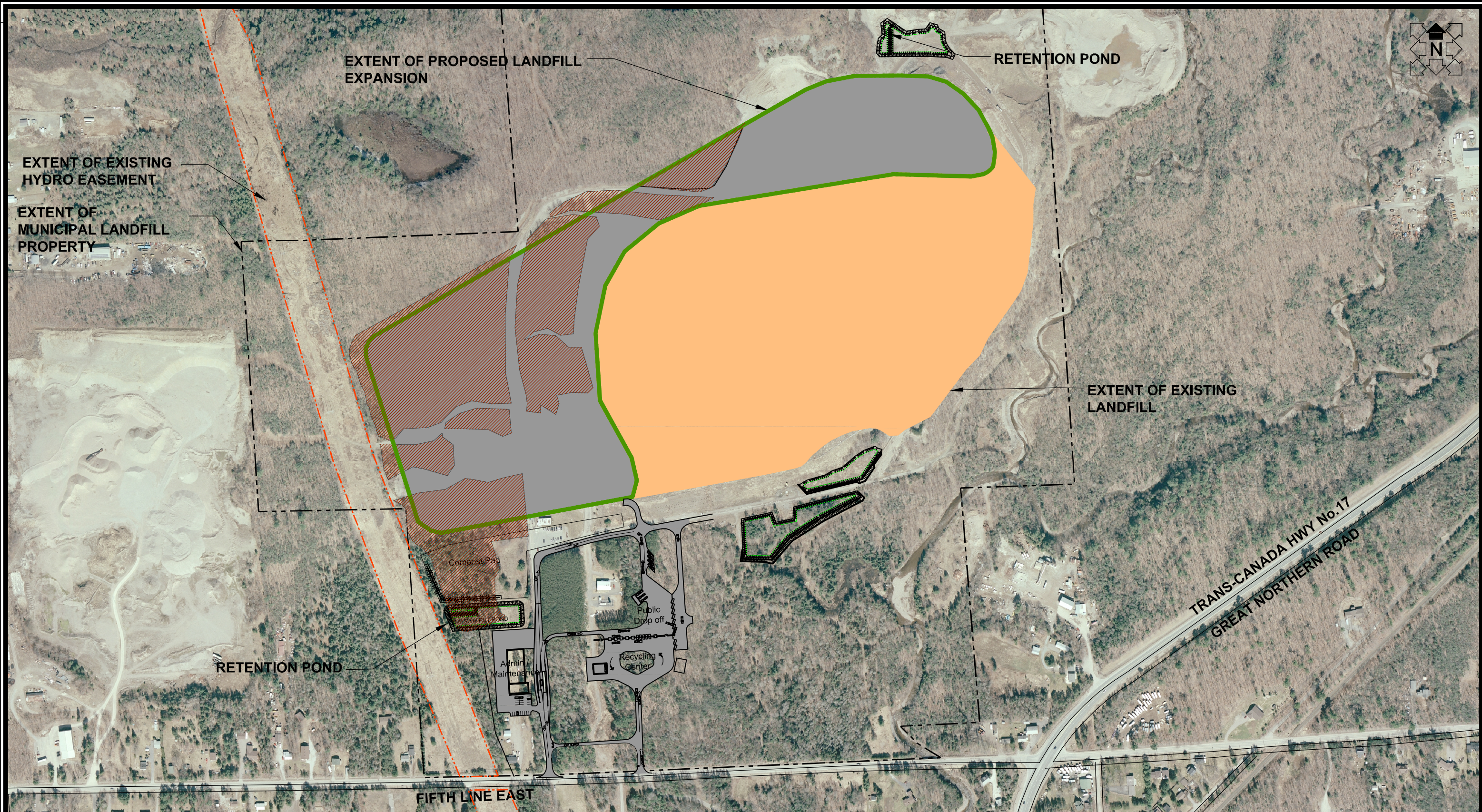
LANDFILL FACILITY EXPANSION
COMPENSATION & MITIGATION
MEASURES SECTION

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Plate 2d

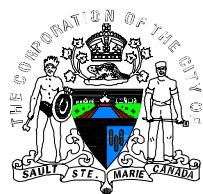
Appendix C

- Plate 3 – Existing Vegetation Removal Plan
- Plate 4a – Mitigation and Compensation Measures Plan



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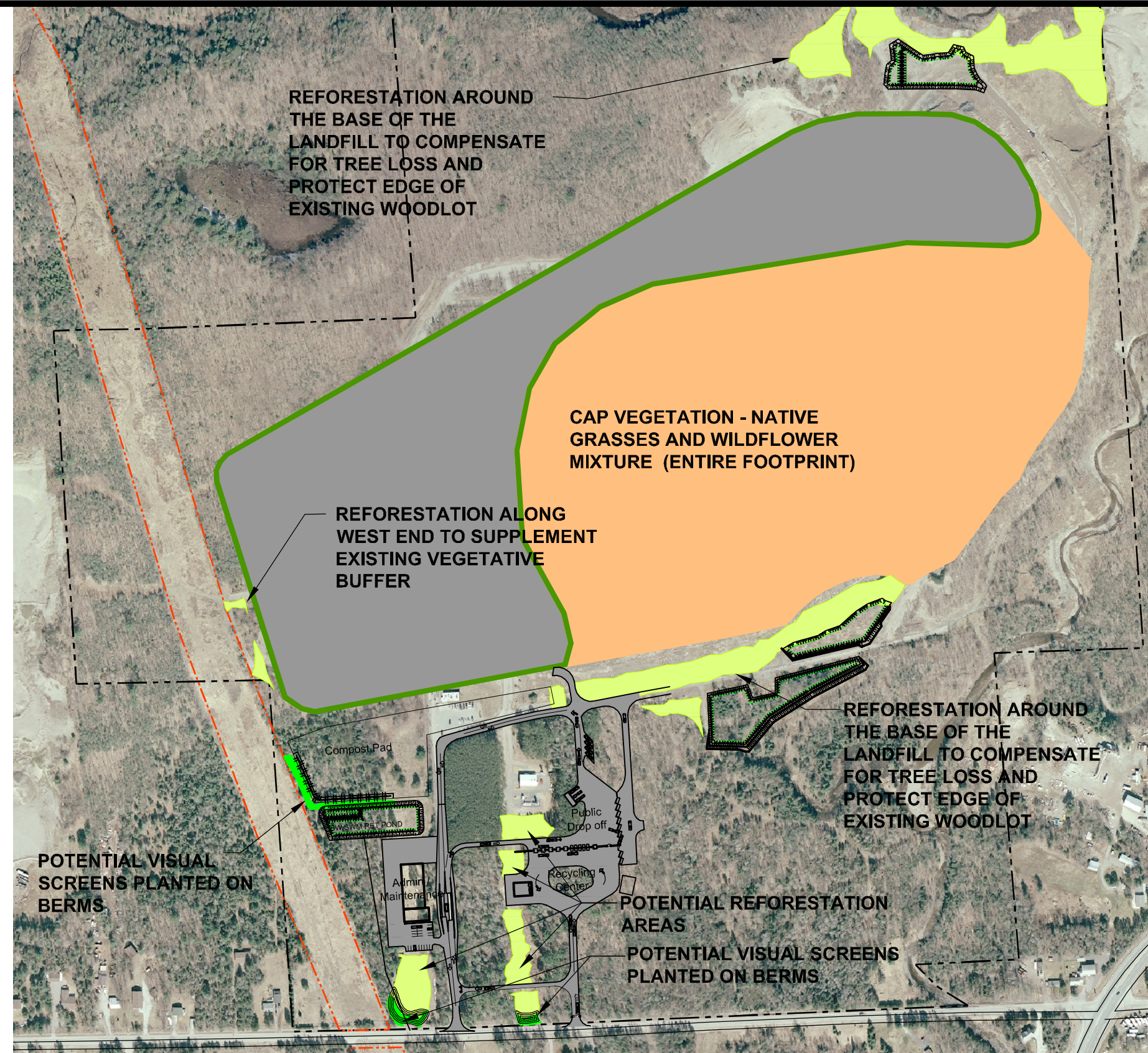
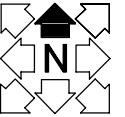
LEGEND:

- EXISTING LANDFILL FEATURE
- EXTENT OF PREFERRED LANDFILL EXPANSION
- EXTENT OF WOODLOT REMOVAL

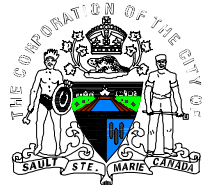
**FACILITY EXPANSION
EXISTING VEGETATION
REMOVAL**

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Plate 3





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LEGEND:

-  EXISTING LANDFILL FEATURE
-  EXTENT OF PREFERRED LANDFILL EXPANSION

-  RESTORATION/REFORESTATION (INSTALLATION POST LANDFILL OPERATIONS)
-  DECIDUOUS AND CONIFEROUS SCREENING BUFFERS

**FACILITY EXPANSION
POTENTIAL COMPENSATION &
MITIGATION MEASURES**

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