



Stantec Consulting Ltd.
100-300 Hagey Boulevard, Waterloo ON N2L 0A4

May 29, 2017
File: 160960595

Attention: Mr. Sean Fairfield, Director Project Planning and Permitting

Algonquin Power Co.
354 Davis Road
Suite 100
Oakville, ON L6J 2X1

Dear Mr. Fairfield,

**Reference: Amherst Island Wind Energy Project
Revised - Switching Station Stormwater Management (SWM) Brief**

In response to the Government of Ontario's recent promotion of renewable energy development, Algonquin Power Co. (Algonquin), on behalf of Windlectric Inc., is proposing to construct and operate the Amherst Island Wind Energy Project located in Loyalist Township, Ontario.

This technical memorandum ("Brief") focuses on the proposed switching station located on the grounds of the former Invista Polyethylene plant at 5275 Bath Road (Highway 33) in Millhaven, Ontario. The switching station will be located in the northwest corner of the former industrial site and is bounded by grassed area to the north, and existing access roads, rail lines, and paved area to the south, east, and west (Figure 1, attached).

Under existing conditions, the switching station site occupies a section of hard packed/disturbed ground on the former factory site and drains overland as sheet flow in a southwest direction. Flow from the site leaves from an existing swale south of the switching station that flows west towards an unnamed watercourse. From here, flow is conveyed south to Lake Ontario via a culvert under Highway 33 approximately 550 m from the switching station. The site is not located within a Cataraqui Region Conservation Authority (CRCA) regulated area.

The switching station (0.2 ha) is proposed to include a small electrical building (46 m²), overhead and underground wiring, a well-drained, coarse granular area underlying the electrical infrastructure, and an access road (Drawing C-102, attached). The majority of the ground within the fenced area is proposed to be surfaced with 150 mm diameter washed crushed stone underlain by a structural base (300 mm depth) composed of 100 mm granular 'A' and 200 mm granular 'B' material. The proposed access road covers approximately 0.3 ha and is constructed at grade with 100 mm of granular 'A' atop 200 mm granular 'B' material. A second access road (0.03 ha) is proposed external to the switching station yard for use by Hydro One Networks Inc. (HONI), providing maintenance access to the connections between the switching station and

Design with community in mind



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HONI infrastructure. All work must comply with the Certificate of Property Use (CPU) (CPU# 6676-9CWHB7), including Soil and Groundwater Management Plan and Health and Safety plan, for the parcel.

The proposed grading design maintains drainage to the existing receiving systems via overland, sheet drainage to the southwest, mimicking existing conditions.

Switching Station Grounding Grid

In association with Switching Station construction, a subsurface grounding grid is proposed to be installed beneath the substation and landscaped area to the south. The copper cable grounding grid will be installed 600 mm below the ground surface (Drawings C102 and C102B). Installation will be completed by site stripping or trenching. Site stripping involves the removal of 600 mm of soil from the entire area of the proposed grounding grid. Trenching, to be used in the existing landscaped area south of the substation, will involve the excavation of a 500 mm wide, 600 mm deep, trench, only at locations where proposed grounding grid infrastructure is to be installed. For both methods, excavated soil will be stockpiled and disposed of as described in subsequent sections of this brief. Following excavation of soil, the grounding grid will be installed and the disturbed area will be backfilled per the Soil and Groundwater Management Plan and rehabilitated with topsoil and seeding.

Water Quality Control

Switching Station

Under proposed conditions, the switching station site will be covered by washed crushed stone and the electrical building. The crushed stone areas will not be subject to vehicular traffic and, therefore, will be less susceptible to compaction and sediment buildup / wash-off cycles. Runoff from this portion of the sites is considered "clean" and does not require additional water quality control. Most of the access roads for the switching station are already constructed as part of the former industrial operations. Access roads that are to be constructed are proposed to be at the switching station pad grade. Site access is gated and will be restricted to routine inspection and maintenance operations, minimizing opportunity for sediment buildup and wash-off. Impacts to water quality are considered to be negligible, with associated control proposed to be provided through the use swales and downstream vegetated conveyance systems.



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Water quality benefits are achieved as a result of the runoff / vegetation interaction which slows the velocity of runoff, as compared to a piped system, thereby promoting sedimentation of particulate matter. The vegetation also provides nutrient uptake benefits to help reduce biological pollutants such as nitrogen and phosphorous. Given the general maintenance of drainage patterns and capacity of the existing adjacent lands to provide passive treatment that may be required to serve access roads, a formal stormwater management system to provide additional water quality control is not proposed.

Switching Station Grounding Grid

No impacts to water quality are expected as a result of grounding grid construction, as all proposed infrastructure is subsurface.

Water Quantity Control

Switching Station

As previously described, the switching station site is proposed to be covered in primarily clean, crushed stone surfaces, representing a very minor, if any increase in flows relative to the existing cover configuration (compacted bare earth). As shown on Figure 1 and summarized in Table 1 below, the site comprises a negligible portion of the watershed to its respective discharge watercourse.

Switching Station Grounding Grid

As previously discussed, no impacts to water quantity are expected as a result of grounding grid construction, as all proposed infrastructure is subsurface.

Table 1: Substation Site Watershed Coverage

Substation	Watershed	Watershed Size (ha)	Switching Station Watershed Size (ha)	Site Area (ha)	% Switching Station Watershed Coverage
Mainland Switching Station	Highway 33 Culvert	411	28	0.2	0.7



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Any potential increase in runoff as a result of substation construction, and increase in impervious coverage, will be attenuated and filtered through downstream vegetated conveyance systems. The gravel surface characteristic of the site will provide infiltration opportunities for runoff which will also help mitigate any increases in offsite surface water flows. A formal stormwater management system to provide additional water quantity control is not proposed.

Disposal of Excavated Soils

Permanent Disposal Location

Excavation of site soils is required to construct the Switching Station yard. Excavated soils will be stockpiled on the Invista property per the *Soil/Groundwater Management Program and Health and Safety Plan – North Parcel* (Stantec 2016) as shown on Figures 2 and 3, attached. The stockpile will be stabilized with vegetation and surrounded by a vegetated topsoil berm (per the Soil Management Program). The stockpile may be covered with a 150-300 mm layer of topsoil to promote vegetation growth, if required.

Switching Station – Short Term Temporary Stockpiling– 1-4 Weeks

As the proposed excavated soil stockpiling location is unavailable for use from April 1 to July 31, to accommodate grassland bird habitat, excavated soils will be temporarily stockpiled on-site. Stockpiling on-site will conform with the *Amherst Island Wind Energy Project – Temporary Stockpiling on Native Vegetated Ground Surface Erosion and Sediment Control Brief* dated March 23, 2017 and be limited to within the silt fence limits on the *Switching Station Grading and Sediment and Erosion Control Plan* (Drawing C102, attached).

Switching Station – Long Term Temporary Stockpiling – 2-3 Months

As short duration stockpiling on-site may potentially interfere with ongoing construction activities, a long duration temporary stockpiling location to the south of the Switching Station has been identified on Figures 2 and 4, attached. Temporary stockpiles will be stabilized with vegetation and/or rolled erosion control product and surrounded with a double layer of silt fence. When the bird habitat window has elapsed, temporarily stockpiled material will be removed to the ultimate disposal location and the disturbed area will be rehabilitated.



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Off-site Disposal

Should the contractor elect off-site disposal, soil samples will be submitted to an analytical laboratory for off-site waste disposal chemical testing analysis in accordance with O. Reg. 347. and disposed of at an appropriate off-site waste disposal facility.

During Construction SWM Considerations

The various construction activities required to develop the substation sites include topsoil stripping, grading activities involving cutting or filling, infrastructure installation, and general construction traffic. These activities will result in the disturbance of at-surface soils and exposure of the underlying earth to potential erosion and sediment transport to offsite locations. An evaluation of the erosion potential for the sites yields a general conclusion of 'low', owing primarily to the 'low' erodibility of in-situ clay soils and gentle slopes.

The provision of erosion control will be achieved primarily through limiting the duration of exposure of disturbed sub-soils inherent in the construction process. Construction of access roads and substation yards, for example, include the stripping of topsoil and placement of granular material in very short order, providing little opportunity for sub-soils to be disturbed and entrained in storm runoff. In addition to limiting the potential for erosion through construction practices alone, a suite of erosion and sediment control (ESC) measures will be implemented prior to any grading or servicing works commencing including, but not necessarily limited to, the following items:

- In the event of inclement weather or unfavourable terrain for construction, construction best practices, such temporary rig-mats may be used to prevent disruption of surface soils and vegetative cover by construction vehicles and equipment. As these measures are within the constructible areas of the project, it is not anticipated that offsite flows will increase from proposed conditions.
- Erect silt fence before grading begins on the downstream sides of the area to be graded to protect the downstream lands from potential sediment transport caused by entrainment in overland flows
- Direct runoff via swales and erosion control berms (where necessary) to sediment control measures to ensure that no untreated runoff is discharged from the site



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- Install temporary rock check dams, straw bale barriers and/or filter cloth barriers in swales where appropriate to help attenuate flows, reduce erosive velocities, and encourage sediment deposition
- Immediately stabilize all disturbed areas not subject to construction activities within 30 days, according to OPSS 804
- Following completion of construction and installation activities, and removal of temporary construction works and completion of site restoration, all erosion and sediment control measures and accumulated sediment are to be removed

In order to ensure the effectiveness of the various erosion and sediment control measures, a routine monitoring program should be implemented which includes the inspection of the erosion and sediment controls after each significant rainfall event (≥ 10 mm) or weekly, whichever is more frequent, and immediate repair of any deficiencies. This program will consist of the following activities:

- Visual inspection of the ESC measures to ensure discharged flows are generally free of sediment and turbidity
- Inspection of vegetation protection and silt fencing to ensure that they are maintained in good repair
- Removal of construction debris that may accumulate
- Implementation of remedial measures including erosion stabilization, repair of damaged fencing and any other remediation, where required (to conform with ESC Guidelines for Urban construction, in consultation with the inspector)

Rehabilitation of Disturbed Areas

Areas that are disturbed as a result of switching station and ground grid construction will be rehabilitated with topsoil and seed per Figure 5, attached.

During Construction Water Quality Control

Given the general maintenance of existing drainage patterns and capacity of the existing adjacent grassland lands on the property to provide passive treatment that may be required to serve the access road, a formal stormwater management system to provide additional water quality control is not proposed.



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Operational SWM Considerations

The filtration provided by the passive, vegetated systems will provide water quality treatment benefits, such as the removal of sediment and other debris, and, by association, will require periodic inspections and maintenance to ensure on-going functionality. Vegetated conveyance systems represent a familiar, passive, and simple type of SWM practice, with operational and maintenance requirements to match. Generally speaking, the treatment benefits of vegetated filtration systems are the result of the contact between the flows being conveyed and the vegetation. Given this, inspection, operational, and maintenance activities can be generally limited to:

- Routine observations as to the presence of retained trash/debris that could be conveyed downstream and/or affect the conveyance capacity of the system and removal of same as needed
- For the first year following construction, a seasonal walking inspection (spring / summer) will be completed to identify areas of bare soil and/or the formation of erosive gullies (annually thereafter). Remediative efforts would typically involve re-grading the area and/or re-vegetating with sod or appropriate seed mix, with fertilizer and water applied as necessary to ensure germination and stabilization
- Concurrent with the walking inspections, a visual assessment of any areas of isolated ponding or sediment build-up should be identified. Minor areas of ponding can be resolved with re-grading / re-stabilization, if the magnitude of associated nuisance warrants such action. From a SWM perspective, there are no functional concerns associated with ponding and, therefore, remediation is not strictly required. Excessive sedimentation is an issue requiring attention if it remains in a non-vegetated condition and is, therefore, prone to re-suspension and transport downstream, if it creates an isolated ponding area as described above, or if it occurs to an extent that it impacts on the conveyance capacity of the swale. If any such condition occurs, the sediment should be removed, in compliance with the CPU, and the area re-stabilized

Vegetation management in drainage swales is not a strict requirement in that excess growth will serve to improve water quality treatment benefits. If the density of vegetation reaches a level



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where conveyance capacity is impacted, a vegetation cutting operation should be undertaken. A minimum vegetation height of 0.15 m (6") should be maintained

Conclusion

Based on the information in this report, it is concluded that the lack of change in impervious coverage associated with the proposed substation and grounding grid is sufficiently limited as to not impact on the pre-development hydrologic characteristics of the area during construction, or operation of the facility. The construction of the switching station should result in negligible change/impact on the quality and quantity of surface water runoff.

While a site assessment yields a "low" erosion potential classification, a number of factors limit the potential for impact on the receiving systems. Specifically, the relatively small area proposed to be disturbed, the short-term nature of the disturbance prior to stabilization whether through granular placement or re-vegetation, and the existing land use of the surrounding area as grassland. These factors all combine to create a condition where a "standard" approach to erosion and sediment control will suffice to minimize potential for off-site impacts, combined with a monitoring and maintenance program during and following the proposed works to ensure that measures continues to function as designed.



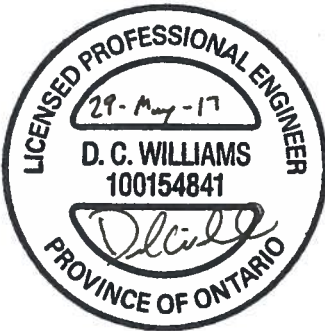
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We trust that this meets your needs at this time. Should you have any questions or comments please do not hesitate to contact the undersigned at your convenience.

Regards,

STANTEC CONSULTING LTD.



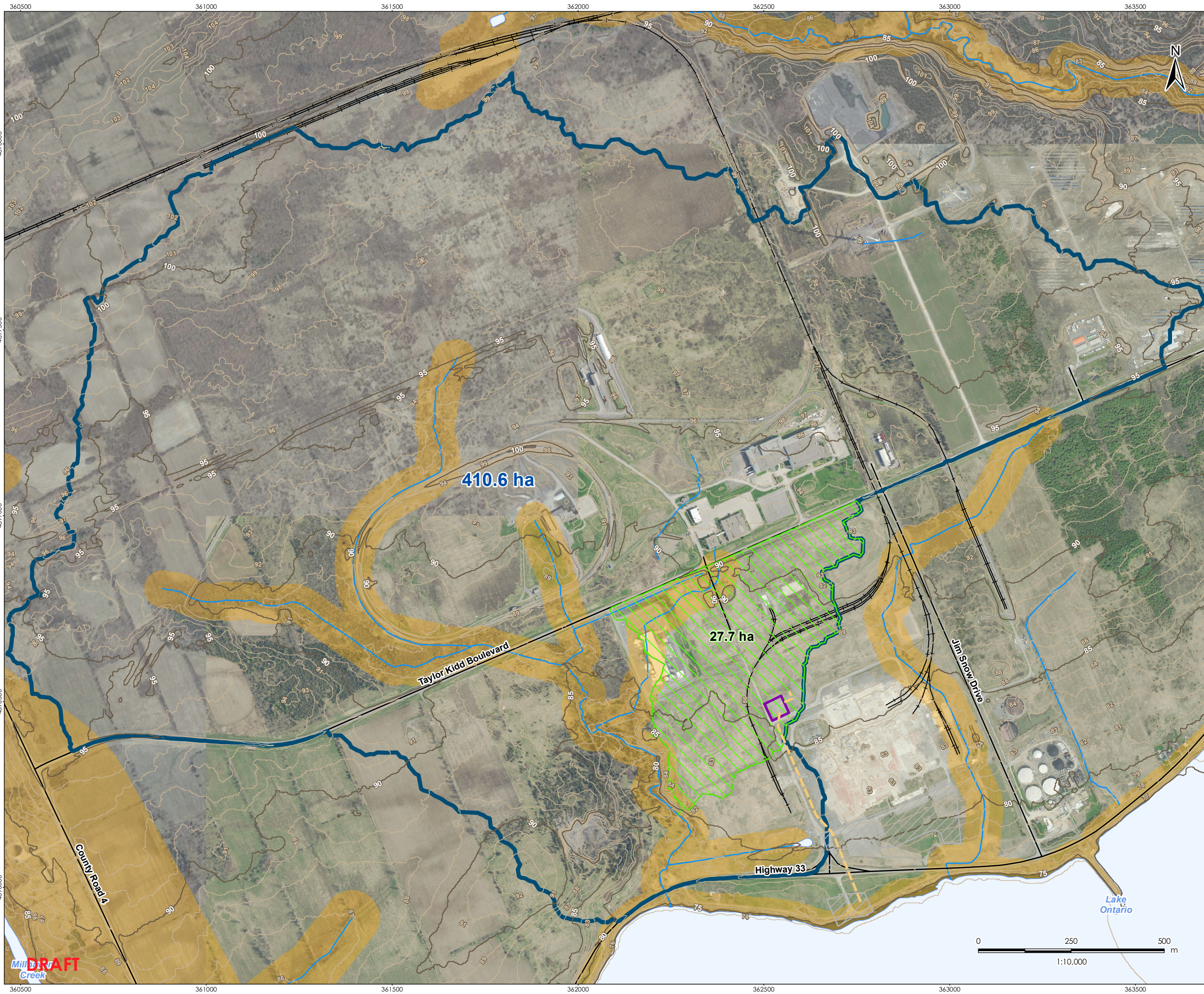
David Williams, P. Eng.
Water Resources Engineer
Phone: (519) 585-7320
Fax: (519) 579-6733
David.Williams@stantec.com

Attachment: Figure 1 – Switching Station Drainage Assessment
Figure 2 – Location Plan
Figure 3 – Switching Station Disposal Area
Figure 4 – Switching Station Temporary Stockpile Area
Figure 5 – Restoration Notes
Drawing C102 – Switching Station Grading and Sediment and Erosion Control Plan
Drawing C102B – Remote Grounding Grid
Drawing C303 – Site Detail Sheet
Drawing E304 – 115kv Switching Station Grounding Plan View and Section

c. Mr. Riley Griffin, Algonquin Power Co.
Ms. Kerrie Skillen and Mr. Rob Rowland, Stantec Consulting Ltd.

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ATTACHMENTS



- Legend**
- Mainland Transmission Line
 - Central Staging Area
 - Switching Station
 - Switching Station Drainage Catchment Area
 - Highway 33 Culvert Subwatershed
- Existing Features**
- Road
 - Railway
 - Ground Surface Contour (5 metre intervals - metres AMSL)
 - Ground Surface Contour (1 metre intervals - metres AMSL)
 - Watercourse
 - Regulation Limit (CRCA)

- Notes**
1. Coordinate System: NAD 1983 UTM Zone 18N
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017; © Cataraqui Region Conservation Authority, 2017.
 3. Orthoimagery © Cataraqui Region Conservation Authority, 2017. Imagery taken in 2014.

Client/Project
 Windlectric Inc.
 Amherst Island Wind Energy Project

Figure No.
1
 Title

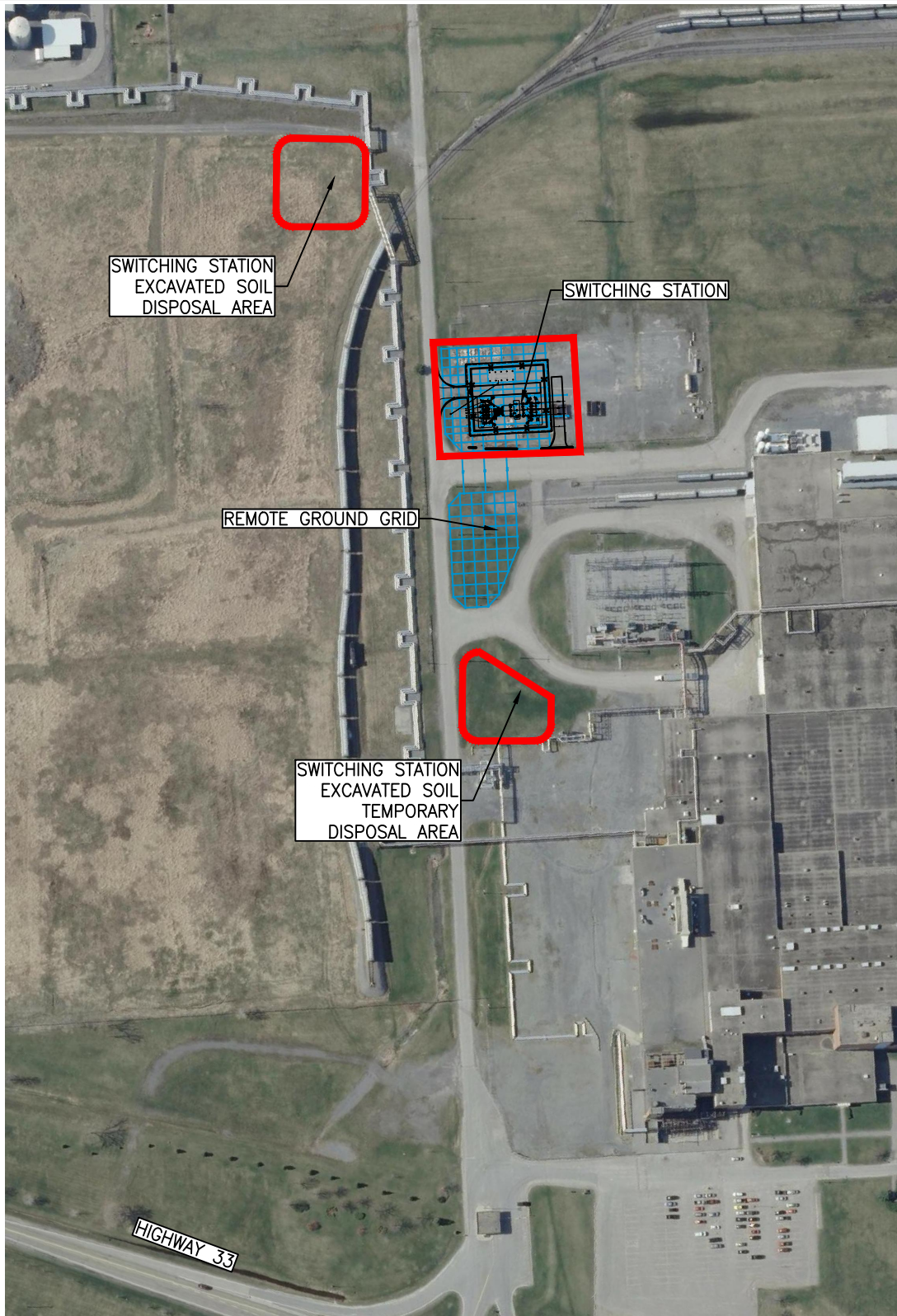
**Switching Station
 Drainage Assessment**

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 Revised: 2017-03-21 By: p.worsell
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DRAFT
 Mill Creek

March 2017
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2017/05/29 3:35 PM By: Santos, Dan



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May 2017
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Client/Project

WINDLECTRIC INC.
AMHERST ISLAND WIND
ENERGY PROJECT

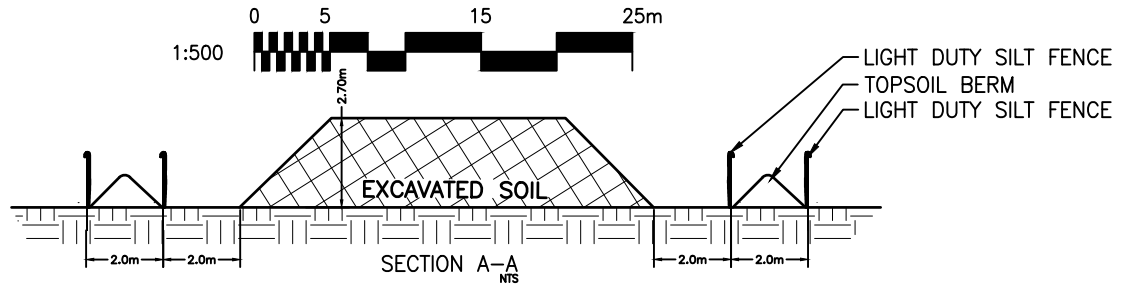
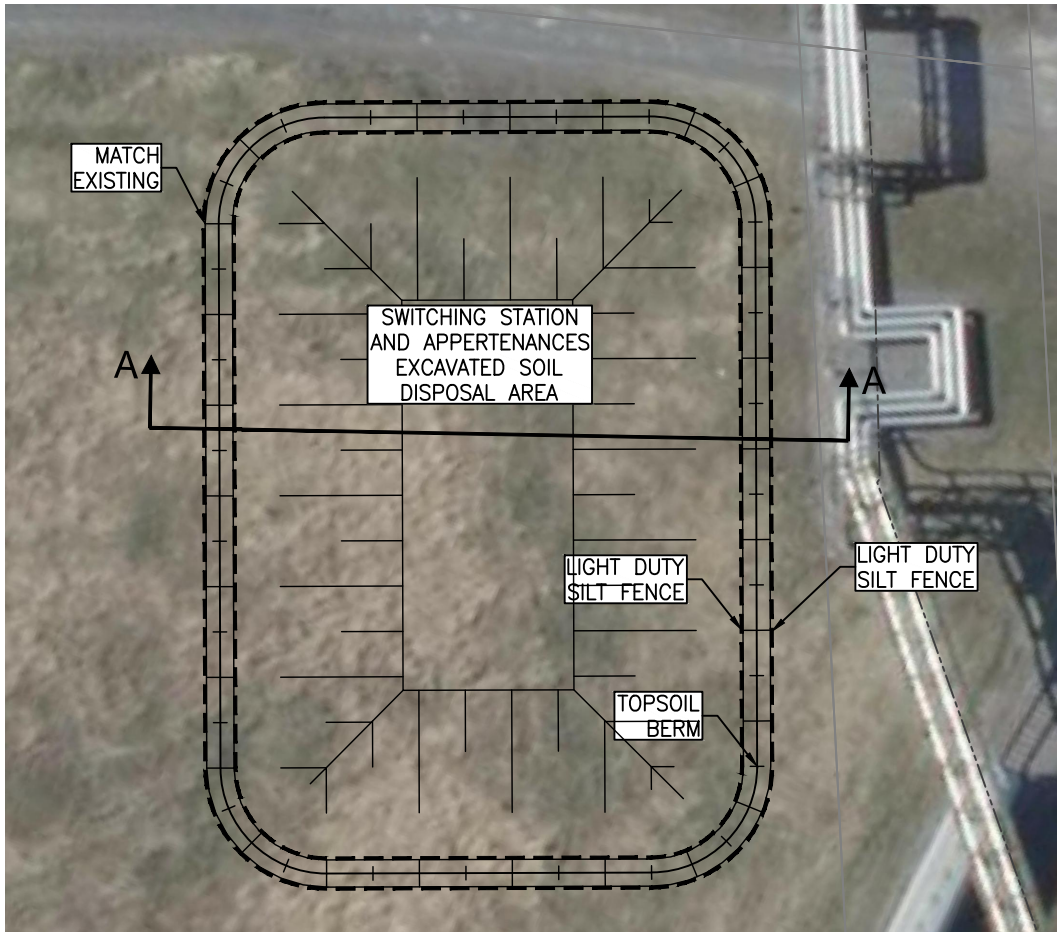
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LOCATION PLAN

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Notes

1. REFER TO DRAWINGS C303 FOR EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS.
2. DISPOSAL AREA AND BERM TO BE STABILIZED WITH OSC SEED MIX 8215. REFER TO FIGURE 4 FOR RECLAMATION NOTES.

ALL CONSTRUCTION ACTIVITIES ARE TO ADHERE TO THE SOIL/GROUNDWATER MANAGEMENT PROGRAM AND HEALTH & SAFETY PLAN, PREPARED BY STANTEC CONSULTING LTD. THESE PLANS ARE TO BE USED AS A REFERENCE TO FINAL CONSTRUCTION REQUIREMENTS, HOWEVER THE SOIL/GROUNDWATER MANAGEMENT PROGRAM AND HEALTH & SAFETY PLAN IS TO BE REVIEWED PRIOR TO BREAKING GROUND AND TO BE USED AS A REFERENCE FOR CONSTRUCTION ACTIVITIES AND PHASING.

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April 2017
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Client/Project

WINDLECTRIC INC.
 AMHERST ISLAND WIND
 ENERGY PROJECT

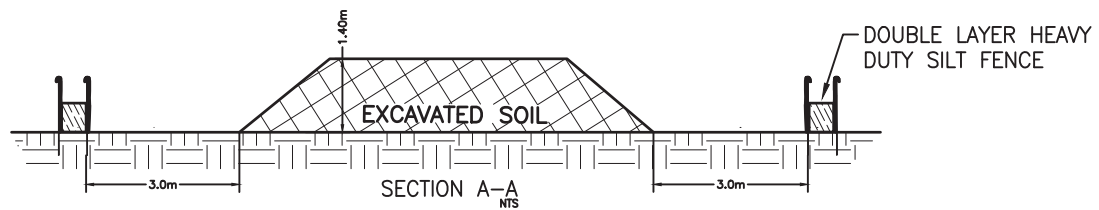
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SWITCHING STATION
 DISPOSAL AREA

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Notes

1. REFER TO DRAWINGS C303 FOR EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS.
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April 2017
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Client/Project

WINDLECTRIC INC.
AMHERST ISLAND WIND
ENERGY PROJECT

Figure No.

4

Title

SWITCHING STATION
TEMPORARY STOCKPILE AREA

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Seeding Notes

1. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY SEED MIX THAT HAS NOT BEEN INSPECTED AND APPROVED. DO NOT MAKE SUBSTITUTIONS OF MATERIALS, PRODUCTS OR QUANTITIES WITHOUT THE PRIOR WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT.
2. ALL DISTURBED AREAS UNDER STOCKPILE TO BE SCARIFIED PRIOR TO SEEDING.
3. NATIVE TOPSOIL SHALL BE PLACED A MINIMUM DEPTH OF 25mm AND SEEDED WITH OSC NATIVE PRAIRIE LOW GROW GRASS MIX (#8125). SEEDING SHALL BE APPLIED BY HYDROSEEDING.
4. ALL SEEDED AREAS SHALL BE MATTED ON TOP WITH AN EROSION CONTROL BLANKET. EROSION CONTROL BLANKET SHALL BE TERRAFIX DOUBLE NET SC200B OR APPROVED EQUIVALENT WHICH IS FULLY BIODEGRADABLE WITH A JUTE OR COIR NETTING. NO PLASTIC NETTING SHALL BE PERMITTED ON MATTING.
5. CONTRACTOR SHALL REPAIR AND RESEED DEAD OR BARE SPOTS PRIOR TO SUBSTANTIAL COMPLETION.
6. SEEDING SHALL BE WATERED AS REQUIRED TO ESTABLISH WEED-FREE, HEALTHY SEED MIX. ADDITIONAL WATERING MAY BE REQUIRED IF SEED IS INSTALLED DURING EXTREME HEAT, DROUGHT, OR OTHER UNDESIRABLE CONDITIONS.
7. CONTROL INVASIVE WEED GROWTH DURING TWO (2) YEAR MAINTENANCE PERIOD. NATIVE SPECIES THAT HAVE GERMINATED SHALL BE RETAINED (I.E. GOLDENRODS, ASTERS, AND ETC.) REFER TO OMAFRA'S NOXIOUS WEEDS IN ONTARIO FOR A LIST OF SPECIES TO BE REMOVED.
HTTP://WWW.OMAFRA.GOV.ON.CA/ENGLISH/CROPS/FACTS/NOXIOUS_WEEDS.HTM
8. SEEDED AREAS SHALL BE UNIFORM, FREE OF RUTS EROSION AND/OR BARE AND DEAD SPOTS, FREE OF WEEDS, AND HAVE MINIMUM 80% COVER OF GERMINATED PERENNIAL SEED FOR FINAL ACCEPTANCE.
9. IF REQUIRED, CONTRACTOR IS RESPONSIBLE FOR MOWING OF ALL SEEDED AREAS DURING THE TWO (2) YEAR MAINTENANCE PERIOD.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO SITE AND SHALL RESTORE IT TO ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER PRIOR TO THE END OF THE WARRANTY PERIOD.

Topsoil Finishing and Grading Notes

Topsoil Loading and Hauling

1. CONTRACTOR SHALL IMPORT TOPSOIL IN QUANTITIES REQUIRED FOR USE IN THE CONTRACT. ALL ROOTS, ROCKS AND DEBRIS OVER 50 MM IN DIAMETER MUST BE REMOVED PRIOR TO SPREADING.
2. CLEAN UP ALL CONTAMINATION OF EXISTING PAVED AREAS BOTH INTERNAL AND EXTERNAL TO SITE ON A DAILY BASIS.

Topsoil Spreading and Fine Grading

1. HAVE SUB-GRADE APPROVED BY CONTRACT ADMINISTRATOR PRIOR TO COMMENCING TOPSOIL PLACEMENT.
2. SCARIFY SUB-GRADE SURFACE TO A MINIMUM DEPTH OF 75 MM TO FACILITATE BONDING. DO NOT SPREAD TOPSOIL WHEN IT IS FROZEN OR WET.
3. REMOVE AND DISPOSE OF ALL STONES, STICKS, SUB-SOIL, LUMPS OR OTHER DEBRIS IN EXCESS OF 50 MM DIAMETER AND ALL SURFACE LITTER AND LIVE WEEDS.
4. SPREAD TOPSOIL TO A MINIMUM DEPTH OF 25 MM UNDER SEEDED AREAS OR AS REQUIRED TO BRING THE SOFT LANDSCAPING AREAS UP TO GRADE AS SHOWN ON THE GRADING PLANS.
5. MANUALLY SPREAD TOPSOIL AROUND EXISTING TREES AND SHRUBS.
6. FINE GRADE TOPSOIL TO ELIMINATE ROUGH AND LOW AREAS TO ENSURE POSITIVE SURFACE DRAINAGE, BLEND SMOOTHLY WITH ADJACENT FINISHED GRADE ELEVATIONS AND CONFORM TO THE SPECIFIED LEVELS AND PROFILES.
7. GRADE SWALES AND DITCHES EVENLY TO ENSURE POSITIVE RUNOFF TO DRAINAGE INLETS, WITHOUT PONDING AND WITH SMOOTHLY ROUNDED, UNIFORM SIDE SLOPES.
8. DISPOSE OF SURPLUS MATERIALS AND DEBRIS OFF THE SITE AND CLEAN UP SOIL CONTAMINATION FROM ALL PAVED SURFACES.

Hydraulic Seeding Notes

Delivery and Storage

1. DELIVER AND STORE SEED IN ORIGINAL CONTAINERS SHOWING:
 - a. ANALYSIS OF SEED MIXTURE
 - b. PERCENTAGE OF PURE SEED

- c. YEAR OF PRODUCTION
- d. NET MASS
- e. DATE WHEN TAGGED AND LOCATION
- f. PERCENTAGE GERMINATION
- g. NAME AND ADDRESS OF DISTRIBUTOR

Materials

1. **SEED:** CERTIFIED CANADA NO. 1 GRADE TO GOVERNMENT OF CANADA, SEEDS REGULATIONS AND HAVING MINIMUM GERMINATION OF 75% AND MINIMUM PURITY OF 97%.
2. **WATER:** POTABLE, FREE OF IMPURITIES THAT WOULD INHIBIT GERMINATION.
3. **TACKIFIER:** TO BE WATER DILATABLE, LIQUID DISPERSION.

Seed Mixture

OSC SEED MIX #8125
NATIVE PRAIRIE LOW GROW GRASS MIXTURE

LATIN NAME	COMMON NAME	%
POA PAIUSTRIS	FOWL BLUEGRASS	25%
ELYMUS CANADENSIS	CANADA WILD RYE	30%
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUE STEM	15%
SPOROBOLUS CRYPTANDRUS	SAND DROPSEED	30%

APPLICATION:

SOW AT 22-25 KG/HA (21-23 LBS/ACRE)

AVAILABLE FROM:

ONTARIO SEED COMPANY (OSC)
330 PHILLIP STREET, BOX 7
WATERLOO ON N2J 3Z6
PHONE: 1-800-465-4849

Fertilizer

1. COMPLETE SYNTHETIC, SLOW RELEASE WITH 35% NITROGEN IN WATER-SOLUBLE FORM AND IN ACCORDANCE WITH RECOMMENDATIONS OF SOIL TEST REPORT.
2. ALL FERTILIZER SHALL BE CLEARLY MARKED WITH THE NAME OF MANUFACTURER, CONTENTS, WEIGHT AND ANALYSIS. FERTILIZER SHALL BE STORED IN A WEATHERPROOF STORAGE PLACE AND IN SUCH A MANNER THAT IT WILL STAY DRY AND ITS EFFECTIVENESS WILL NOT BE IMPAIRED.

Straw Mulch

1. STRAW MULCH SHALL BE OAT OR WHEAT STRAW. IT SHALL BE IN BALES, BE DRY AND FREE OF WEED AND OTHER FOREIGN MATERIALS.

Hydraulic Mulch

1. HYDRAULIC MULCH SHALL TO BE IN ACCORDANCE WITH OPSS 804.

Erosion Control

1. TERRAFIX DOUBLE NET EROSION CONTROL BLANKET SC-200B OR APPROVED EQUIVALENT (FULLY BIODEGRADABLE). NO PLASTIC NETTING SHALL BE PERMITTED. TO BE INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS ON SLOPES GREATER THAN 3:1 OR GREATER AND TO A WIDTH OF 2.0M ALONG SWALE CENTRELINES WHERE THE SWALE EXCEEDS 1.5%. IF STAKES ARE REQUIRED USE ONLY FULLY BIODEGRADABLE MATERIAL WITH A HOOK TO ANCHOR MATTING.

Workmanship

1. KEEP SITE WELL DRAINED.
2. CLEAN UP IMMEDIATELY SOIL OR DEBRIS SPILLED ONTO PAVEMENT, DISPOSE OF DELETERIOUS MATERIALS.

Preparation of Surfaces

1. GRADE SOIL, ELIMINATING UNEVEN AREAS AND LOW SPOTS, ENSURING POSITIVE DRAINAGE. SPREAD TOPSOIL TO A MINIMUM DEPTH OF 150 MM AFTER SETTLEMENT AND 80% COMPACTION.
2. REMOVE DEBRIS, ROOTS, BRANCHES, STONES IN EXCESS OF 50 MM DIAMETER AND OTHER DELETERIOUS MATERIALS FROM THE EXISTING GRADE. REMOVE SOIL CONTAMINATED WITH CALCIUM CHLORIDE, TOXIC MATERIALS AND PETROLEUM PRODUCTS. REMOVE DEBRIS WHICH PROTRUDES MORE

THAN 25 MM ABOVE SURFACE. DISPOSE OF REMOVED MATERIAL OFF SITE.

3. SCARIFY THE APPROVED DRY, UN-FROZEN FINISHED GRADE TO A MINIMUM DEPTH OF 25 MM. CROSS CULTIVATE THOSE AREAS WHERE EQUIPMENT USED FOR HAULING AND SPREADING HAS COMPACTED SOIL.
4. FINE GRADE FREE OF LUMPS AND HOLLOWES AND FREE OF DELETERIOUS AND REFUSE MATERIAL. PROVIDE A FINISHED TOPSOIL SURFACE THAT IS SMOOTH AND FIRM AGAINST FOOTPRINTS, WITH A FINE, LOOSE TEXTURE. OBTAIN CONSULTANT'S APPROVAL OF PREPARED SURFACE PRIOR TO SEEDING.
5. DISPOSE OF EXCAVATED MATERIAL ON SITE AS DIRECTED BY THE CONTRACT ADMINISTRATOR, SO AS NOT TO CONTAMINATE ANY TOPSOIL OR IMPORTED SOIL STOCKPILES USED FOR HAULING AND SPREADING.

Seeding and Straw Mulching

1. CALIBRATE THE BLOWER TO ENSURE THE MULCH AND SEEDING UNIFORMLY COVERS THE WORK AREA AT THE SPECIFIED DEPTHS.
2. PROTECT SEEDED AREAS AGAINST DAMAGE. REMOVE THIS PROTECTION AFTER SEEDED AREAS HAVE BEEN ACCEPTED BY CONSULTANT.
3. SEEDING AND MULCHING SHALL BE APPLIED AS PER OPSS 570.

Maintenance

1. KEEP SOIL MOIST DURING GERMINATION PERIOD AND ADEQUATELY WATER SEEDED AREAS UNTIL ACCEPTED BY CONSULTANT. APPLY WATER TO ENSURE MOISTURE PENETRATION OF 100MM. CONTROL WATERING TO PREVENT EROSION.
2. MAINTAIN SEEDED AREAS FREE OF PESTS AND DISEASE. CONTROL WEEDS BY MECHANICAL MEANS.
3. FERTILIZE SEEDED AREAS ONE MONTH AFTER SEEDING. SPREAD EVENLY AND WATER THOROUGHLY.

Final Acceptance

1. SEEDED AREAS WILL BE GRANTED FINAL ACCEPTANCE PROVIDED THAT AREAS ARE UNIFORMLY ESTABLISHED WITH SPECIFIED SPECIES AND TURF IS FREE OF RUTTED, ERODED, BARE OR DEAD SPOTS AND FREE OF WEEDS.
2. AREAS SEEDED IN THE FALL WILL BE ACCEPTED IN THE FOLLOWING SPRING, ONE MONTH AFTER THE START OF THE GROWING SEASON PROVIDED ACCEPTANCE CONDITIONS ARE FULFILLED.

Guarantee

1. GUARANTEE ALL SEEDED AREAS FOR TWO YEARS AFTER SUBSTANTIAL COMPLETION.
2. DURING THE GUARANTEE PERIOD RE-SEED ALL AREAS THAT ARE BARE, DEAD, DISEASED OR HAVE OTHERWISE FAILED TO ESTABLISH.

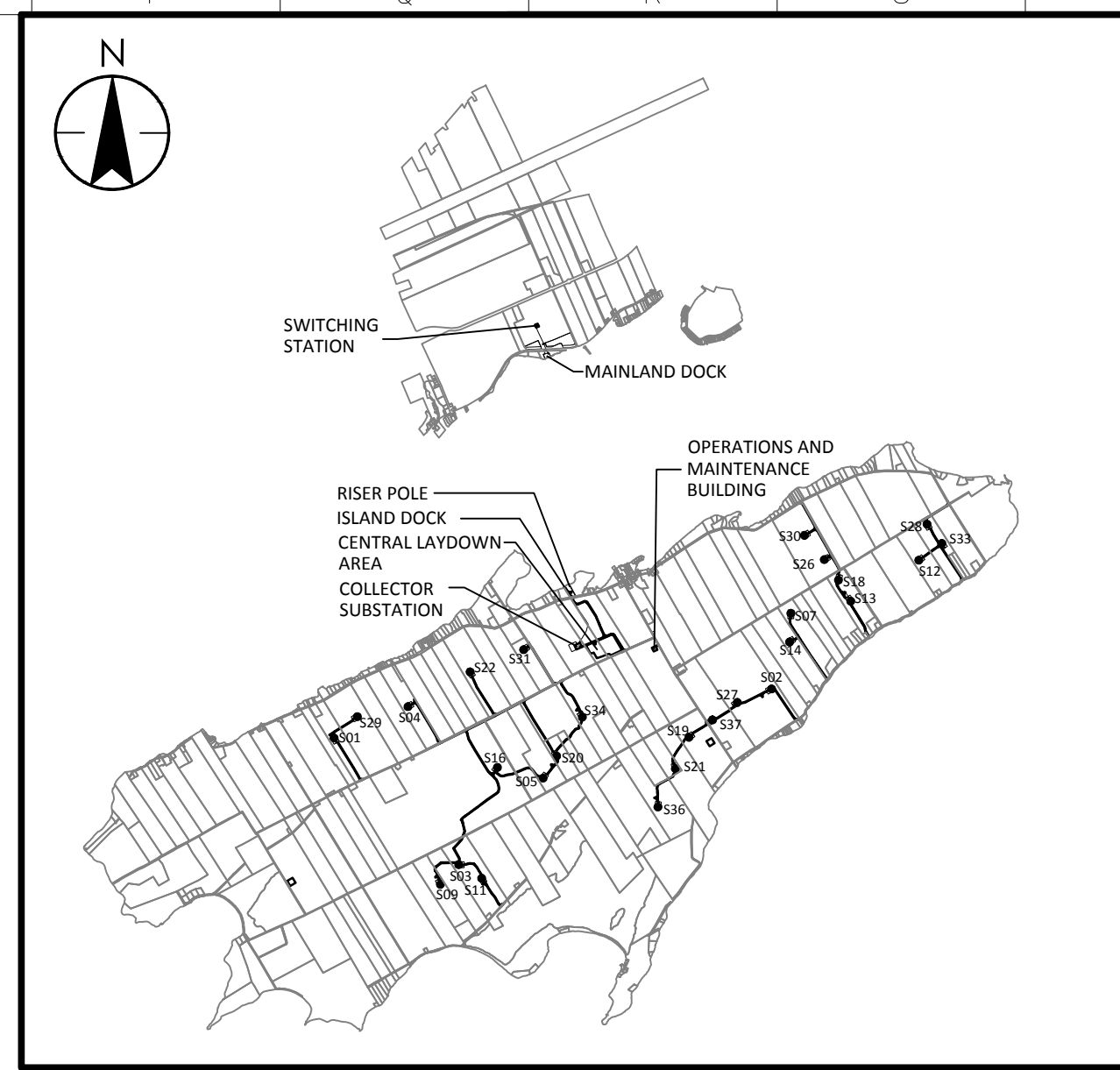


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Notes

- TOPOGRAPHIC SURVEY COMPLETED BY McINTOSH PERRY CONSULTING ENGINEERS DATED 2015 (UTM ZONE 18 NAD83 (GRS) 1987.0). GEOTECHNICAL INFORMATION PROVIDED BY STANTEC MEMO, DATED JUNE 2015.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS IN THIS SET PREPARED BY STANTEC CONSULTING LTD.
- THE CONTRACTOR MUST CHECK AND VERIFY DIMENSIONS, OBTAIN ALL UTILITY LOCATES AND OBTAIN ALL REQUIRED PERMITS/LICENSES AND VERIFY ELEVATIONS OF EXISTING SERVICES BEFORE PROCEEDING WITH ANY WORK.
- ALL CONSTRUCTION WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS (LATEST EDITION).
- THE CONTRACTOR IS TO BE RESPONSIBLE FOR ALL DRAINAGE AND MEASURES TO CONTROL WATER. THE SITE IS TO BE FINE GRADED/LEVELED LEAVING THE SITE IN A NEAT APPEARANCE SUCH THAT POSITIVE DRAINAGE IS ACHIEVED.
- CONTRACTOR MUST COMPLY WITH HWSTA CPU REQUIREMENTS.
- ALL DISTURBED AREAS WITHIN THE PROPOSED WORKS ARE TO BE RE-VEGETATED USING NATIVE TOPSOIL AND SEED AS PER REA. MIX AND APPLICATION RATE/METHOD TO BE APPROVED PRIOR TO IMPLEMENTATION.
- CLEARING AND GRUBBING AND REMOVALS TO BE COMPLETED IN ACCORDANCE WITH OPSS 201. TEMPORARY EROSION CONTROL TO BE COMPLETED IN ACCORDANCE WITH OPSS 577.
- GRADING TO BE COMPLETED IN ACCORDANCE WITH OPSS 206.
- GRANULAR MATERIAL TO BE USED IN ACCORDANCE WITH OPSS 1010.
- ALL CULVERTS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSS 421 AND AS PER OPSS 802.010.



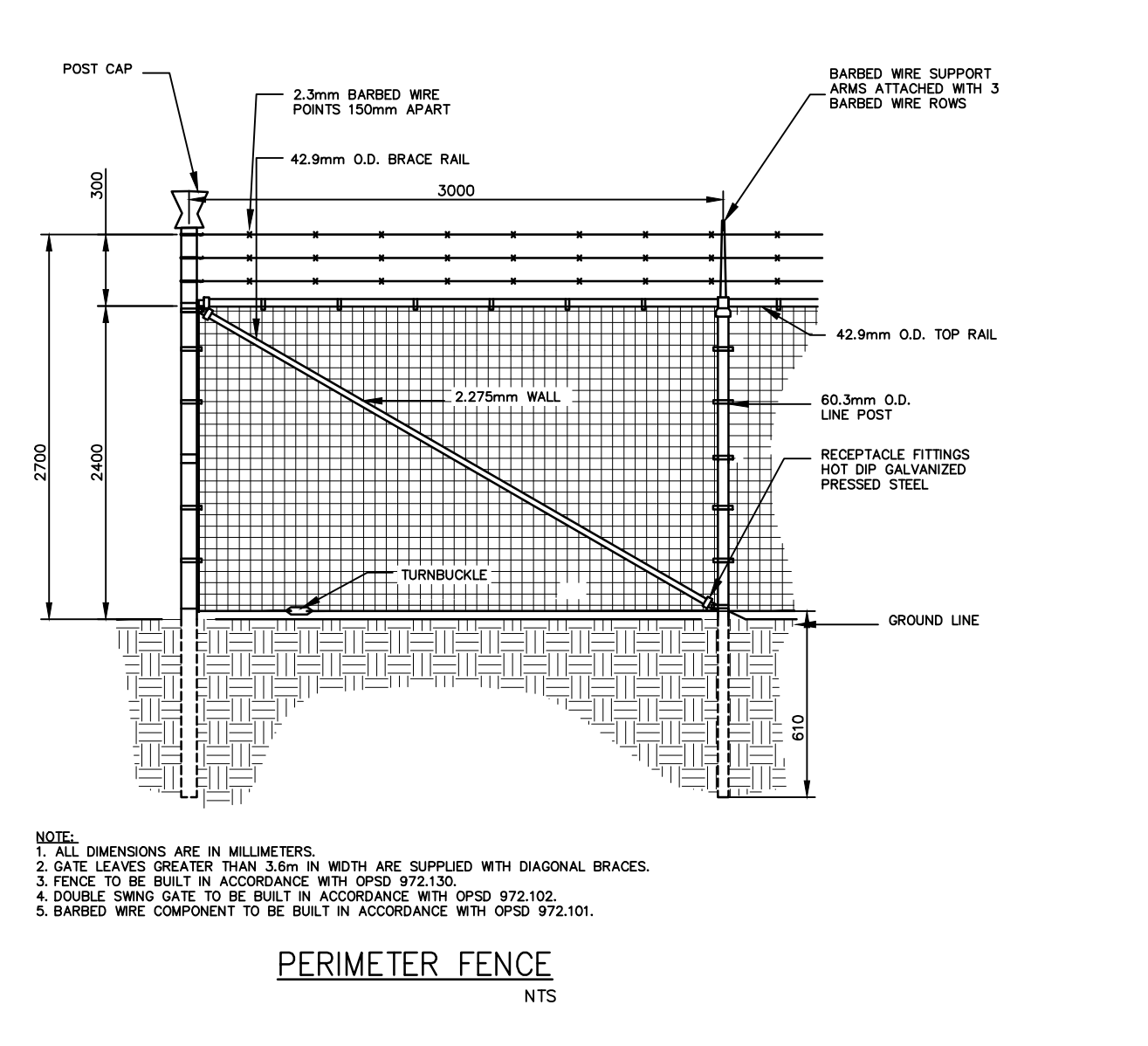
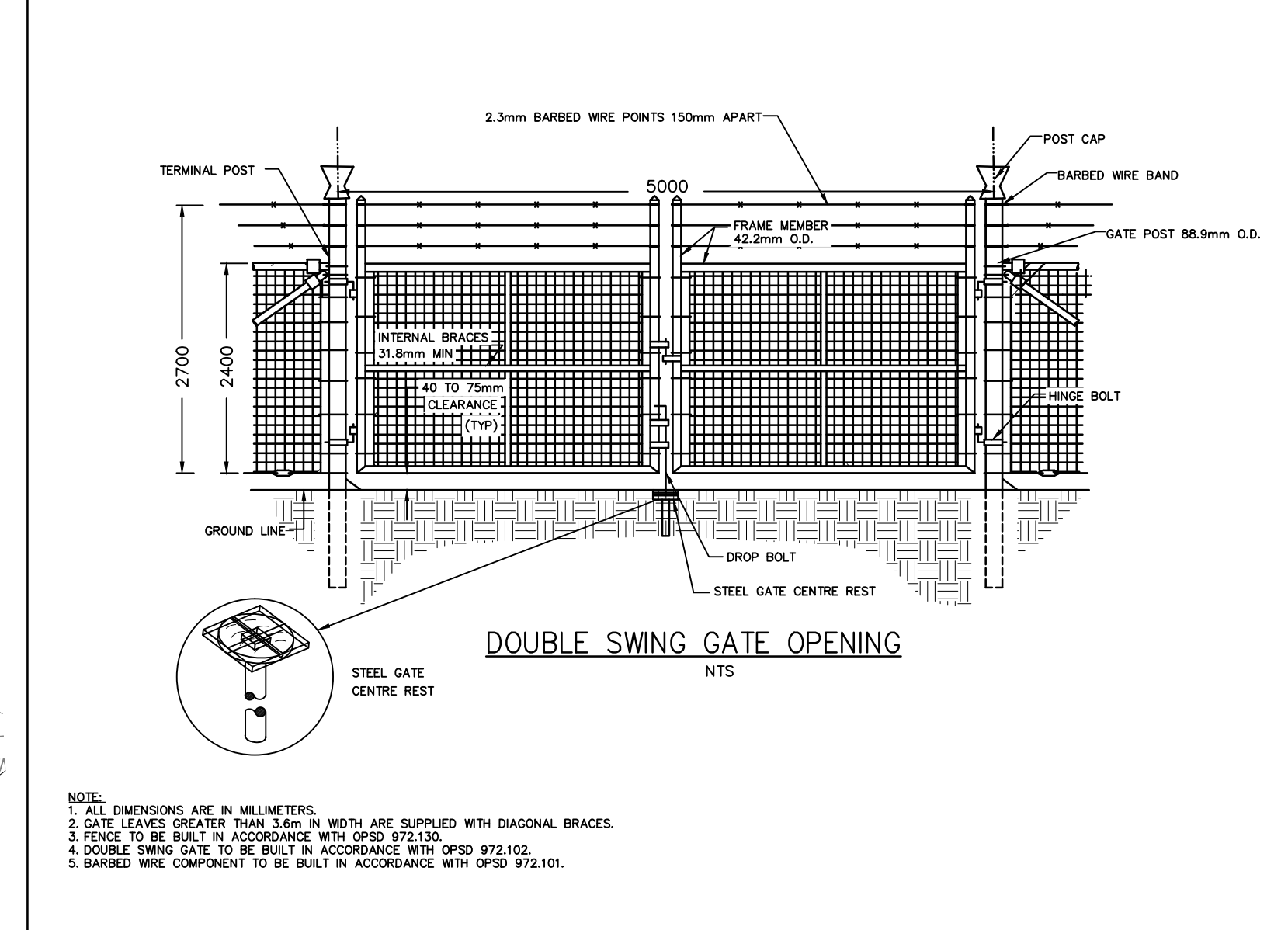
KEY PLAN

N.T.S.

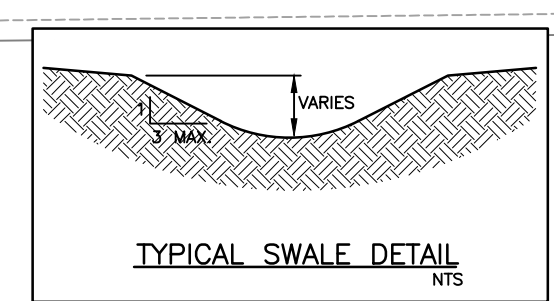
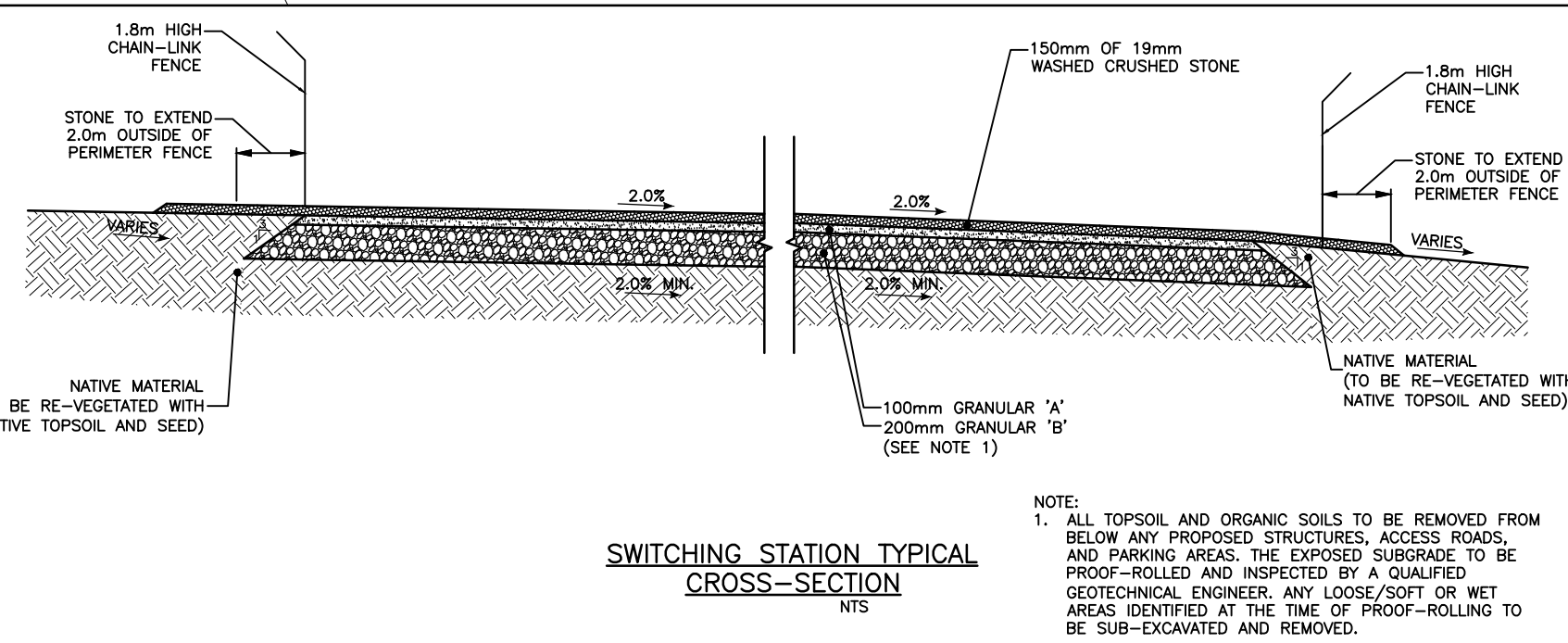
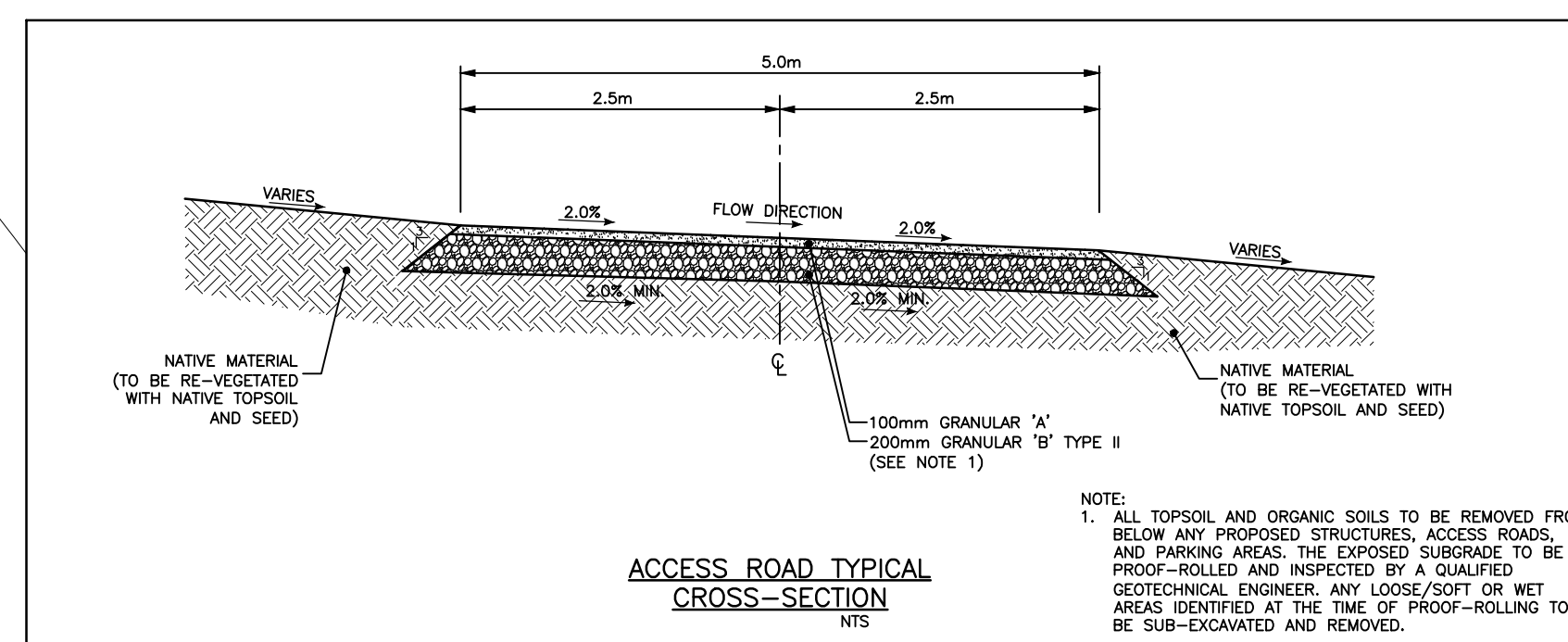
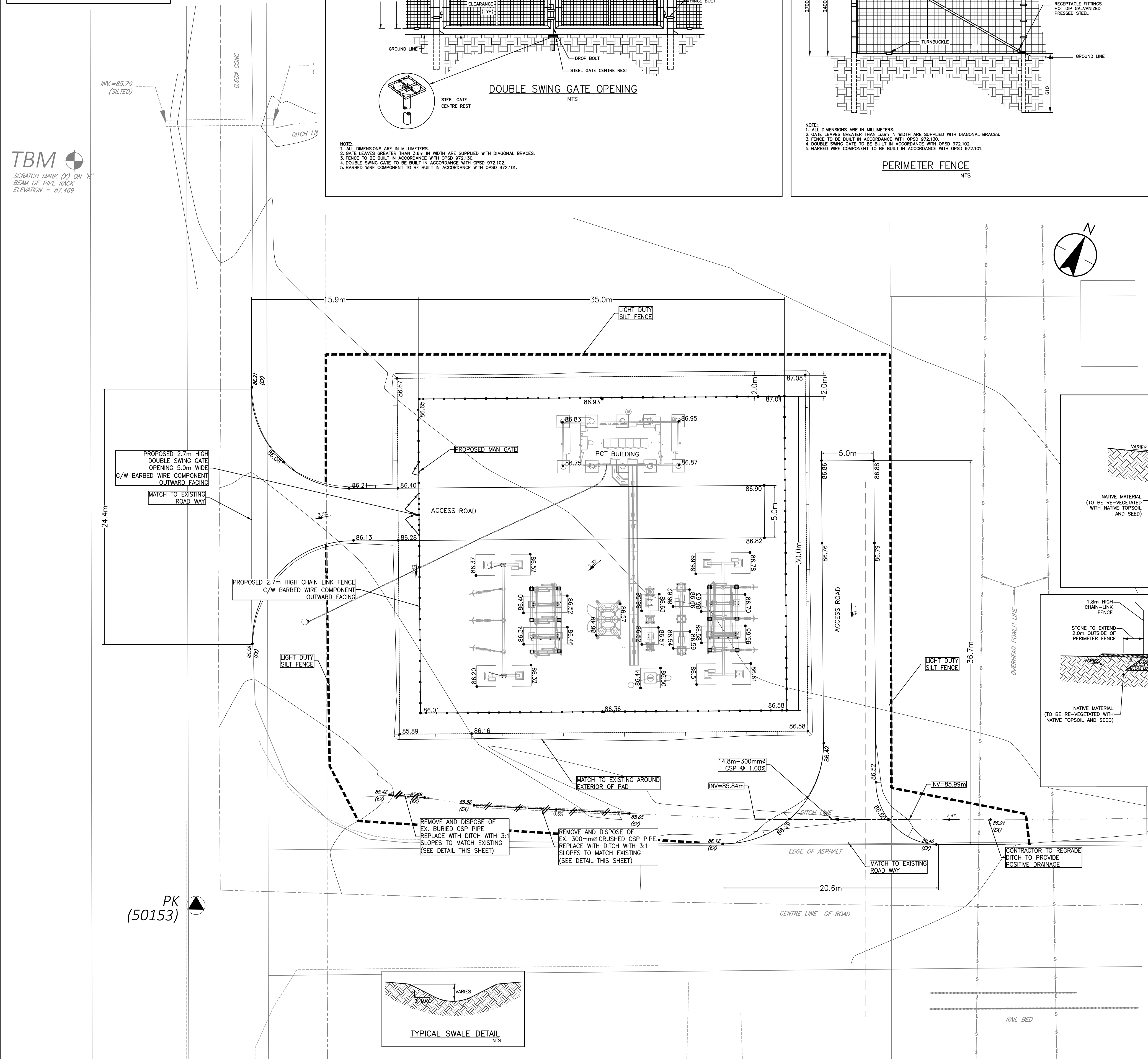
NOTE: REFER TO DRAWING E-300 FOR ELECTRICAL DETAILS

ALL CONSTRUCTION ACTIVITIES ARE TO ADHERE TO THE SOIL/GROUNDWATER MANAGEMENT PROGRAM AND HEALTH & SAFETY PLAN, PREPARED BY STANTEC CONSULTING LTD. THESE PLANS ARE TO BE USED AS A REFERENCE TO FINAL CONSTRUCTION REQUIREMENTS, HOWEVER THE SOIL/GROUNDWATER MANAGEMENT PROGRAM AND HEALTH & SAFETY PLAN DATED JANUARY 12, 2017 IS TO BE REVIEWED PRIOR TO BREAKING GROUND AND TO BE USED AS A REFERENCE FOR CONSTRUCTION ACTIVITIES AND PHASING.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING C303 FOR ADDITIONAL DETAILS AND NOTES



- NOTE:
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - GATE LEAVES GREATER THAN 3.0m IN WIDTH ARE SUPPLIED WITH DIAGONAL BRACES.
 - FENCE TO BE BUILT IN ACCORDANCE WITH OPSS 972.130.
 - DOUBLE SWING GATE TO BE BUILT IN ACCORDANCE WITH OPSS 972.102.
 - BARBED WIRE COMPONENT TO BE BUILT IN ACCORDANCE WITH OPSS 972.101.



Legend

PROPOSED	EXISTING

Revision	By	Appd.	Y/M/MD
D. RE-ISSUED FOR PERMIT	DMS	DKS	17.03.29
C. REVISED FENCING	DMS	DKS	17.03.24
B. ISSUED FOR PERMIT	DMS	DKS	17.03.24
A. FOR CLIENT REVIEW	JBM	DKS	17.03.15

File Name:	DS	DKS	DS	16.01.20
133560100-CGP.dwg	Dm	Chkd.	Dgn.	Y/M/MD

Permit Seal

Client/Project

AMHERST ISLAND WIND PROJECT
75MW WIND FARM
Amherst Island, Loyalist Township, Ontario

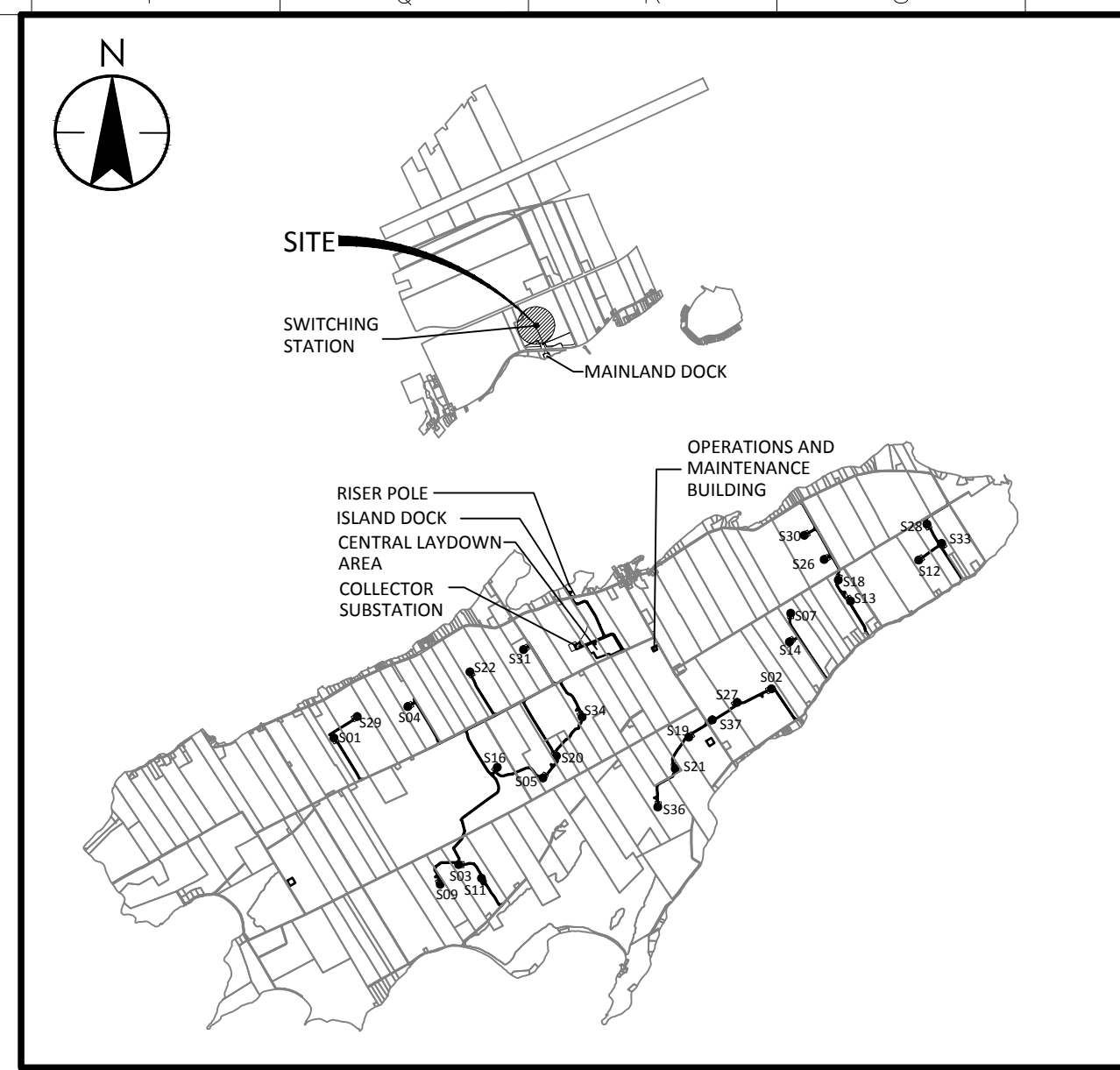
Title
SWITCHING STATION
GRADING AND SEDIMENT AND EROSION
CONTROL PLAN

Project No.	Scale	
133560100	1:200	
Drawing No.	Sheet	Revision
C102		

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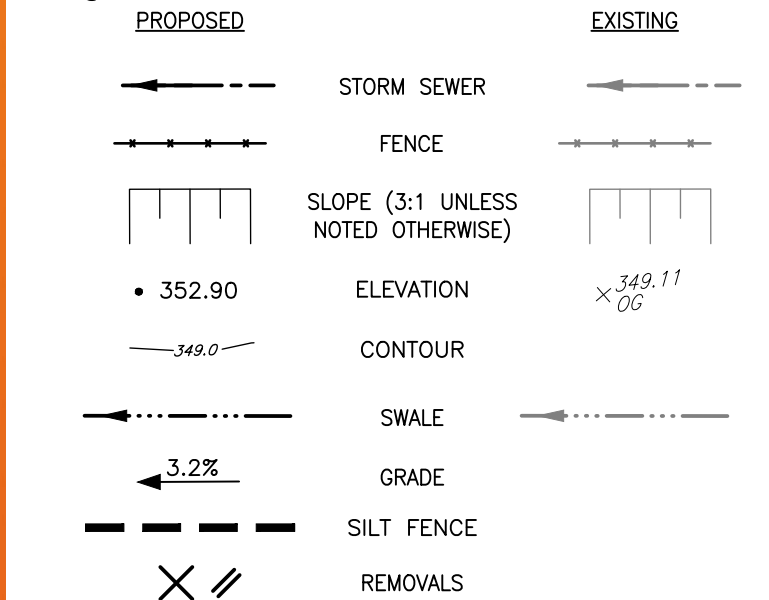
Notes

1. TOPOGRAPHIC SURVEY COMPLETED BY McINTOSH PERRY CONSULTING ENGINEERS DATED 2015 (UTM ZONE 18 NAD83 (CRSR) 1997.0). GEOTECHNICAL INFORMATION PROVIDED BY STANTEC MEMO, DATED JUNE 2015.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS IN THIS SET PREPARED BY STANTEC CONSULTING LTD.
3. THE CONTRACTOR MUST CHECK AND VERIFY DIMENSIONS; OBTAIN ALL UTILITY LOCATES AND OBTAIN ALL REQUIRED PERMITS/LICENSES AND VERIFY ELEVATIONS OF EXISTING SERVICES BEFORE PROCEEDING WITH ANY WORK.
4. ALL CONSTRUCTION WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS (LATEST EDITION).
5. THE CONTRACTOR IS TO BE RESPONSIBLE FOR ALL DRAINAGE AND MEASURES TO CONTROL WATER. THE SITE IS TO BE FINE GRADED/LEVELLED LEAVING THE SITE IN A NEAT APPEARANCE SUCH THAT POSITIVE DRAINAGE IS ACHIEVED.
6. CONTRACTOR MUST COMPLY WITH INVISTA CPU REQUIREMENTS.
7. ALL DISTURBED AREAS WITHIN THE PROPOSED WORKS ARE TO BE RE-VEGETATED USING NATIVE TOPSOIL AND SEED AS PER REA MIX AND APPLICATION RATE/METHOD TO BE APPROVED PRIOR TO IMPLEMENTATION.
8. CLEARING AND GRUBBING AND REMOVALS TO BE COMPLETED IN ACCORDANCE WITH OPSS 201. TEMPORARY EROSION CONTROL TO BE COMPLETED IN ACCORDANCE WITH OPSS S77.
9. GRADING TO BE COMPLETED IN ACCORDANCE WITH OPSS 206.
10. GRANULAR MATERIAL TO BE USED IN ACCORDANCE WITH OPSS 1010.
11. ALL CULVERTS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSS 421 AND AS PER OPSD 802.010.



KEY PLAN
N.T.S

Legend



Revision	By	Appd.	Date
A.	DMS	DKS	17.05.23

File Name	DS	DKS	DS	Date
133560100C-GP.dwg	Dsn.	Chkd.	Dsgn.	16.01.20

Permit-Seal

Client/Project



AMHERST ISLAND WIND PROJECT
75MW WIND FARM
Amherst Island, Loyalist Township, Ontario

Title

REMOTE GROUND GRID
SEDIMENT AND EROSION
CONTROL PLAN

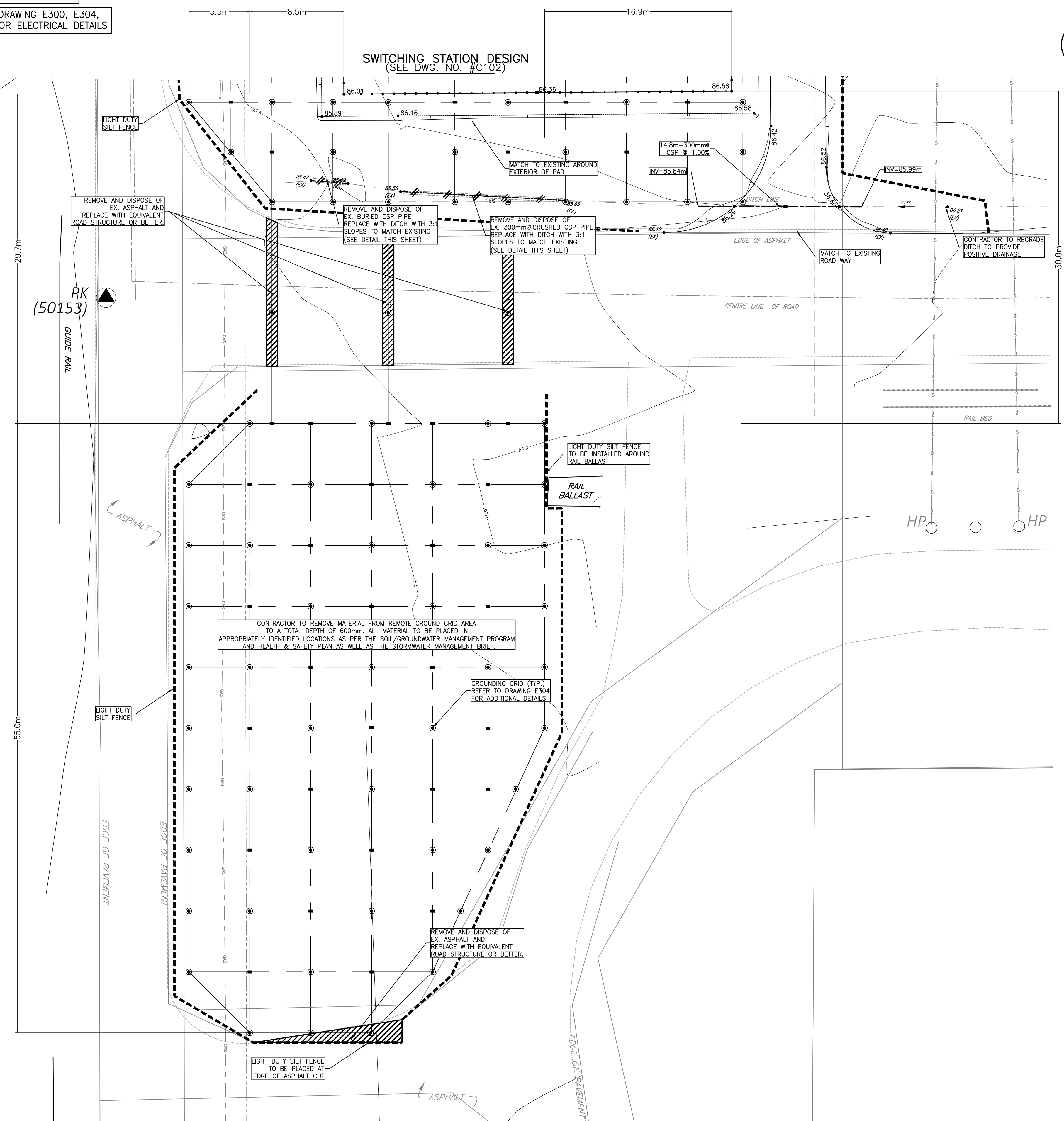
Project No.	Scale
133560100	1:200

Drawing No.	Sheet	Revision
C102B	1 of 1	A

ALL CONSTRUCTION ACTIVITIES ARE TO ADHERE TO THE SOIL/GROUNDWATER MANAGEMENT PROGRAM AND HEALTH & SAFETY PLAN, PREPARED BY STANTEC CONSULTING LTD. THESE PLANS ARE TO BE USED AS A REFERENCE TO FINAL CONSTRUCTION REQUIREMENTS, HOWEVER THE SOIL/GROUNDWATER MANAGEMENT PROGRAM AND HEALTH & SAFETY PLAN IS TO BE REVIEWED PRIOR TO BREAKING GROUND AND TO BE USED AS A REFERENCE FOR CONSTRUCTION ACTIVITIES AND PHASING.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING C303 FOR ADDITIONAL DETAILS AND NOTES

NOTE: REFER TO DRAWING E300, E304, E702 AND E705 FOR ELECTRICAL DETAILS



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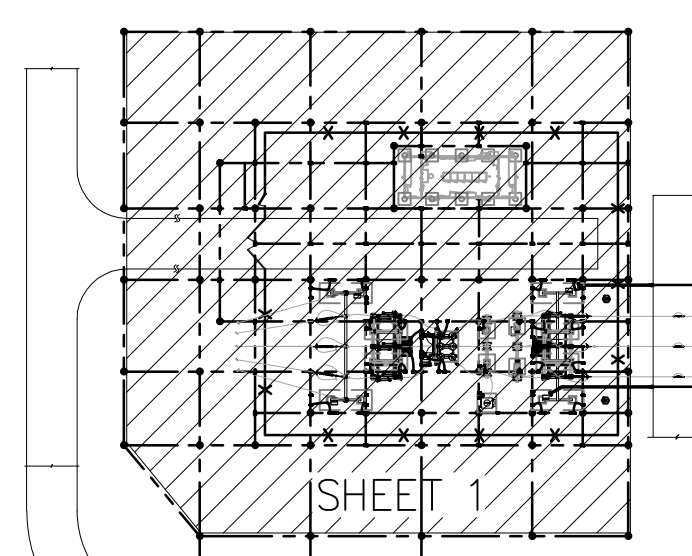
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<input type="checkbox"/> Reviewed - Incorporate comments and resubmit	Project Manager - PHCL	Date (dd-mmm-yyyy)
<input type="checkbox"/> Reviewed - Not accepted	Project Manager - Windelectric	Date (dd-mmm-yyyy)
Owner:		

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Notes

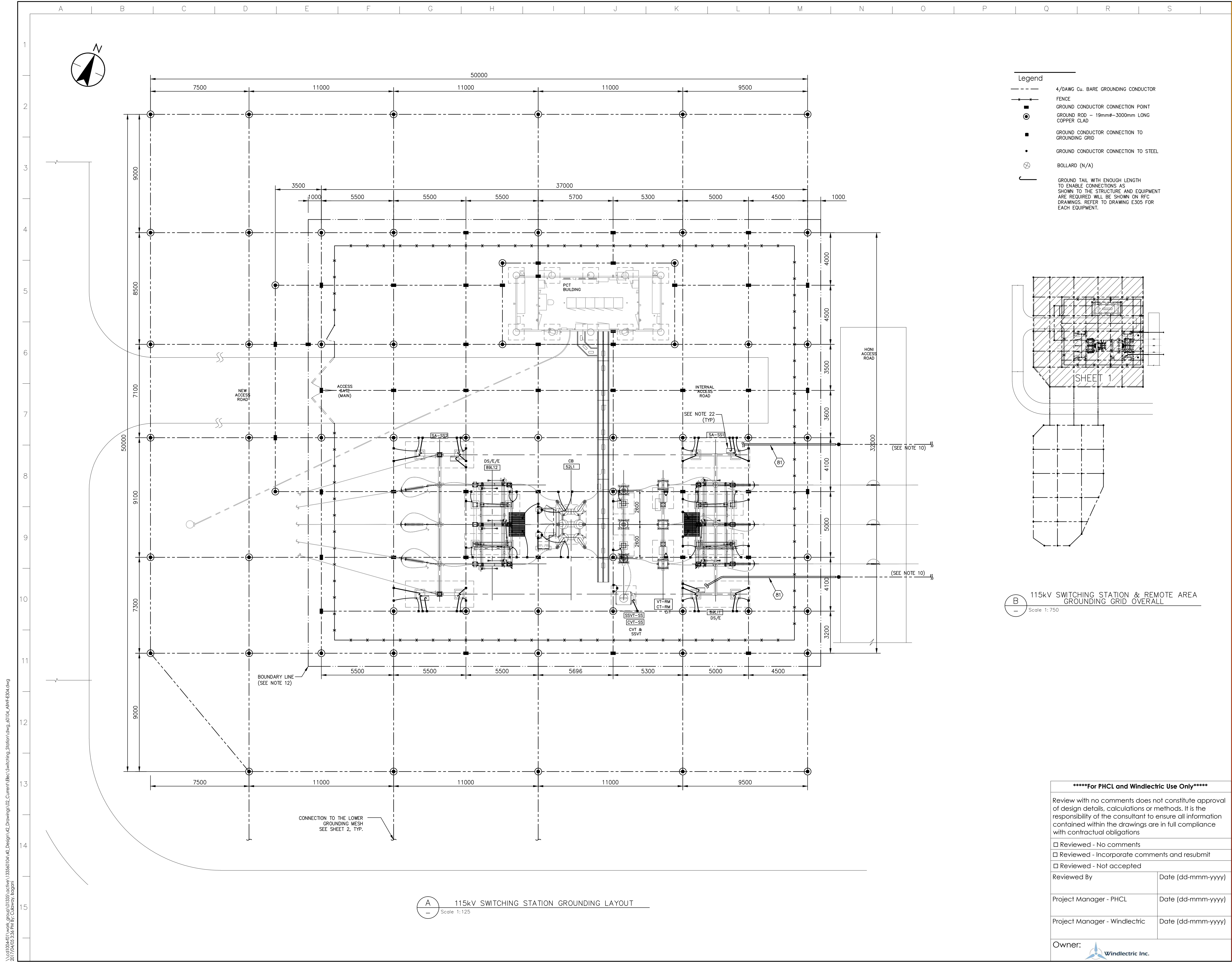
- GROUND GRID DESIGN BASED ON THE AVAILABLE GROUND FAULT CURRENT AND 0.5s CLEARING TIME. GROUND GRID ARRANGEMENT IS BASED ON THE GRID BEING BURIED 600mm IN SOIL BELOW ROUGH STATION GRADE. REFER TO GROUND GRID REVIEW & DESIGN STUDY IN CASE OF CONFLICTS WITH THIS DRAWING AND STUDY/SPECIFICATION, THE INFORMATION ON THIS DRAWING SHALL TAKE PRECEDENCE.
- THE FINISHED GRADE MATERIAL IN THE SUBSTATION YARD IS 150MM (6") THICK 19mm (3/4") WASHED CRUSHED STONE AND IS PLACED ATOP THE SUBGRADE MATERIAL AT ELEVATION SPECIFIED IN THE GRADING AND DRAINAGE DRAWING C111. FINISHED GRADE IN THE PARKING/STORAGE AREA IS 100mm GRANULAR ABOVE A 300mm GRANULAR B SUBBASE. THE GROUND GRID SHALL BE LOCATED AT A DEPTH OF 500mm BELOW ROUGH STATION GRADE INSTALLED IN THE NATIVE SOIL. CONTRACTOR SHALL INSTALL COMPLETE GROUND GRID PRIOR TO THE PLACEMENT OF ANY GRANULAR OR CRUSHED STONE.
- FINISH GRADE MATERIAL SHALL BE SELECTIVELY SCREENED TO PROVIDE A MINIMUM ELECTRICAL RESISTIVITY OF 3,000 OHM-METERS WHEN WET. TO BE USED THROUGHOUT SUBSTATION YARD AREA AND UP TO 2m BEYOND FENCE BOUNDARY AND A MINIMUM 1m BEYOND GROUND CONDUCTORS.
- THE MAIN GROUND GRID TO BE 4/0 AWG SOFT DRAWN COPPER CABLE. ALL CONNECTIONS BETWEEN BURIED GROUND CONDUCTORS AND ABOVE GRADE EQUIPMENT AND STRUCTURES SHALL BE CONSTRUCTED OF 4/0 AWG BARE SOFT DRAWN COPPER CABLE. REFER TO DRAWING E305 FOR ADDITIONAL DETAILS, NOTES AND REQUIREMENTS.
- COPPER CLAD STEEL GROUND RODS MUST BE 19mm x 3m BURIED 500mm BELOW ROUGH STATION GRADE.
- PROVIDE THE COMPRESSION TYPE PROPOSAL FOR OWNER REVIEW. FOR NOW THE ACCEPTABLE UNDERGROUND CONNECTION ARE EXOTHERMIC WELD OR SWAGE 3600G BY DMO POWER.
- SUFFICIENT LENGTH OF GROUND TAIL OF #4/0 AWG BARE COPPER GROUND CABLE TO BE LEFT ABOVE FINISHED GRADE & ATTACHED TO THE GROUND GRID ADJACENT TO THE CIRCUIT BREAKER SUPPORT LEGS AS INDICATED ON DRAWING E305.
- SUFFICIENT LENGTH OF GROUND TAIL OF #4/0 AWG BARE COPPER GROUND CABLE TO BE LEFT ABOVE FINISHED GRADE ADJACENT TO ALL STEEL STRUCTURES OR AT OPPOSITE CORNERS OF CONCRETE FOUNDATIONS & ATTACHED TO THE SUBSTATION GROUND GRID AS INDICATED. SEE DRAWING E305 FOR DETAILS.
- INSTALL 2/0 CABLE JUMPERS AT INTERVAL OF 12m to 15m FOR CONNECTING THE CABLE TRENCH GROUNDING ELECTRODE TO THE GROUNDING GRID.
- AS PER HONI DRAWING 133234-DIS-S1400-0225 REVISION 0 TWO 4/0 COUNTER POSE GROUND COPPER CONDUCTOR SHOULD BE BURIED AT THE SAME DEPTH OF THE GROUND GRID UP TO THE TAPPING STRUCTURE.
- REFER TO DRAWING E305 FOR DETAILS ON CABLE TRENCH GROUNDING.
- INSTALL GROUNDING LOOP AROUND THE SUBSTATION WITH 1m DISTANCE TO THE FENCE. THE GRAVEL SHALL BE EXTENDED 2m OUTSIDE THE FENCE.
- ALL BOLTED CONNECTIONS SHALL BE TREATED WITH ANTI-CORROSION COMPOUND.
- ALL GROUNDING AND CONNECTIONS SHALL BE IN ACCORDANCE WITH THE OESC.
- GROUND LEADS SHALL GENERALLY BE RUN UP OVER FOOTINGS AS INDICATED AND UP STRUCTURES IN A NEAT WORKMANLIKE MANNER.
- ALL GROUND GRID CONDUCTORS MUST BE ROUTED SUCH THAT THEY ACHIEVE A MINIMUM SEPARATION OF 1 METER FROM ALL COMMUNICATION LINES.
- ALL GROUNDING GRID CONNECTIONS NEED TO BE IMPLEMENTED BY A QUALIFIED & CERTIFIED TRADE PERSON.
- NOT USED.
- THE PCT BUILDING SHALL BE CONNECTED TO THE GROUNDING GRID AT LEAST BY TWO 4/0 COPPER CONDUCTORS. POINTS OF CONNECTION SHALL MATCH THE PCT BUILDING SHOP DRAWINGS WHEN AVAILABLE.
- GROUND CONNECTIONS ARE REQUIRED FOR BELL LINES TIE TO GROUND GRID. BELL LINES ARE RUN THROUGH CONDUITS C19 & C20. SEE DWG. E302.
- GROUNDING MAT IS REQUIRED FOR EACH DS MECH. BOX AND GROUNDING SWITCH MECH. BOX. TOTALLY 5 GROUNDING MATS ARE REQUIRED. FOR SIMPLICITY ONLY MATS FOR THE MAIN GROUNDING SWITCHES ARE SHOWN.
- THE STATION GRID SHALL BE CONNECTED TO THE HONI COUNTERPOISE CONDUCTORS AND OVERHEAD SKYWIRES BY MEANS OF "GROUNDING TEST LINK BOXES", AS PER ITEM 82 OF BOM AND DETAILS IN THE DRAWINGS.



B 115kV SWITCHING STATION & REMOTE AREA GROUNDING GRID OVERALL
Scale 1:750

A 115kV SWITCHING STATION GROUNDING LAYOUT
Scale 1:125

- Legend**
- 4/0AWG Cu. BARE GROUNDING CONDUCTOR
 - FENCE
 - GROUND CONDUCTOR CONNECTION POINT
 - GROUND ROD - 19mm-3000mm LONG COPPER CLAD
 - GROUND CONDUCTOR CONNECTION TO GROUNDING GRID
 - GROUND CONDUCTOR CONNECTION TO STEEL
 - ⊗ BOLLARD (N/A)
 - GROUND TAIL WITH ENOUGH LENGTH TO ENABLE CONNECTIONS AS SHOWN TO THE STRUCTURE AND EQUIPMENT ARE REQUIRED WILL BE SHOWN ON R/C DRAWINGS. REFER TO DRAWING E305 FOR EACH EQUIPMENT.



E	ISSUED FOR TENDER-UPDATED	IC	AB	17.04.05
D	ISSUED FOR PLAN REVIEW	IC	AB	17.03.17
C	ISSUED FOR TENDER	IC	AB	17.03.07
B	ISSUED FOR TENDER REVIEW	IC	AB	16.12.08
A	ISSUED FOR REVIEW	IC	AB	16.10.14
Revision		By	Appd.	YY.MM.DD
File Name: dwg_0104_AJWP-E304		JLTC	MB	AB
		Dwn.	Chkd.	Dgn.
				16.10.14

Permit Seal

NOT FOR CONSTRUCTION

Client/Project

AMHERST ISLAND WIND PROJECT
75MW WIND FARM
Amherst Island, Loyalist Township, Ontario

Title

115kV SWITCHING STATION GROUNDING PLAN VIEW AND SECTION

Project No. 13356104
Scale 1:125
Drawing No. E304
Sheet 1 of 2
Revision E

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 Reviewed - Incorporate comments and resubmit
 Reviewed - Not accepted

Reviewed By _____ Date (dd-mmm-yyyy) _____

Project Manager - PHCL _____ Date (dd-mmm-yyyy) _____

Project Manager - Windlectric _____ Date (dd-mmm-yyyy) _____

Owner:

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Notes

E	ISSUED FOR TENDER-UPDATED	IC	AB	17.04.05
D	ISSUED FOR PLAN REVIEW	IC	AB	17.03.17
C	ISSUED FOR TENDER	TC	AB	17.03.07
B	ISSUED FOR TENDER REVIEW	IC	AB	16.12.08
A	ISSUED FOR REVIEW	TC	AB	16.10.14

Revision	By	Appd.	YY.MM.DD
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File Name:	dwg_60104_AWP-E304	JLTC	MB	AB	16.10.14
		Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit Seal



NOT FOR CONSTRUCTION

Client/Project



AMHERST ISLAND WIND PROJECT
75MW WIND FARM
Amherst Island, Loyalist Township, Ontario

Title

115kV SWITCHING STATION
GROUNDING PLAN VIEW
AND SECTION

Project No.	Scale	0	1250	3750	6250mm
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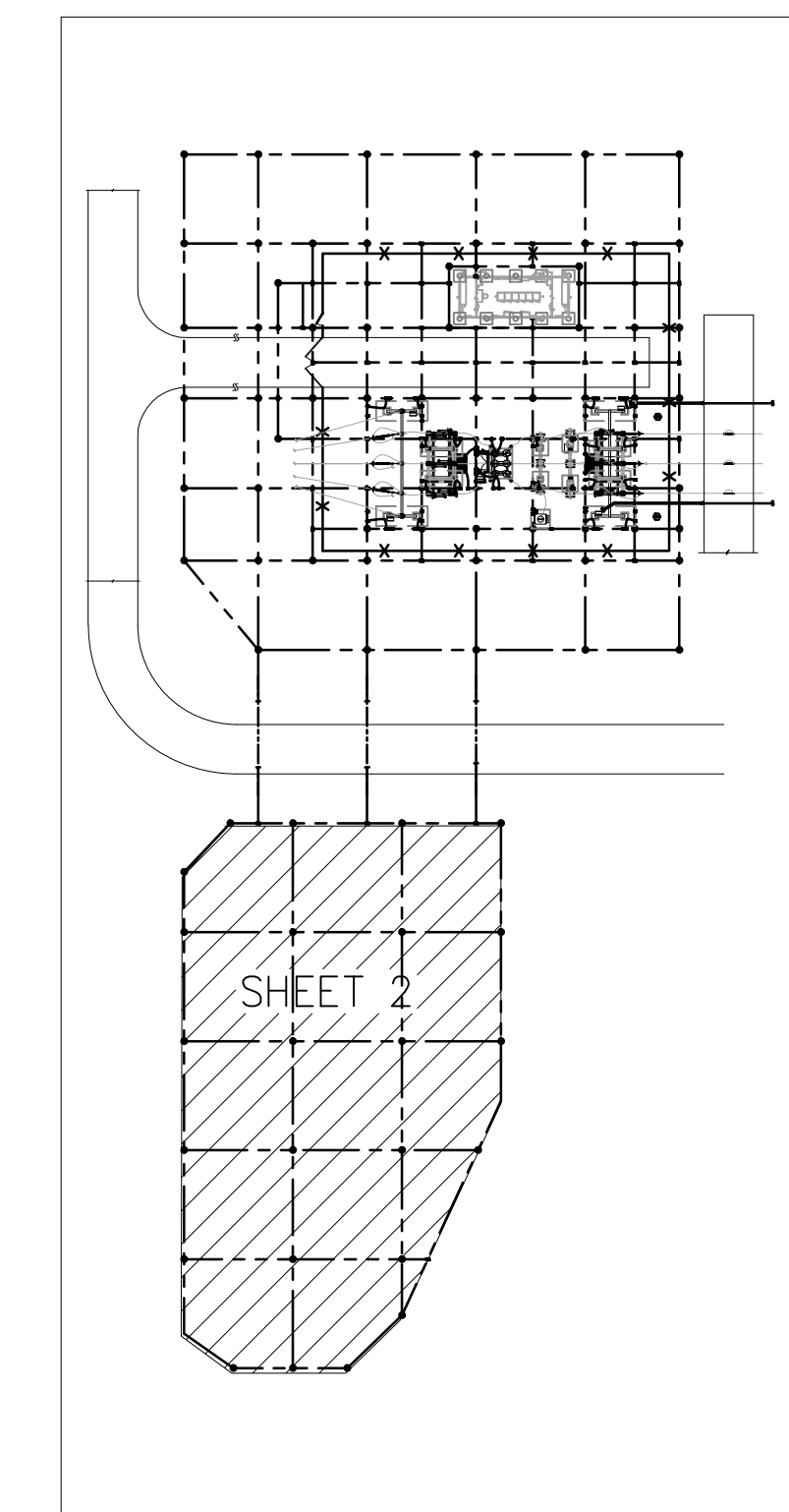
Drawing No.	Sheet	Revision
E304	2 of 2	E

E304

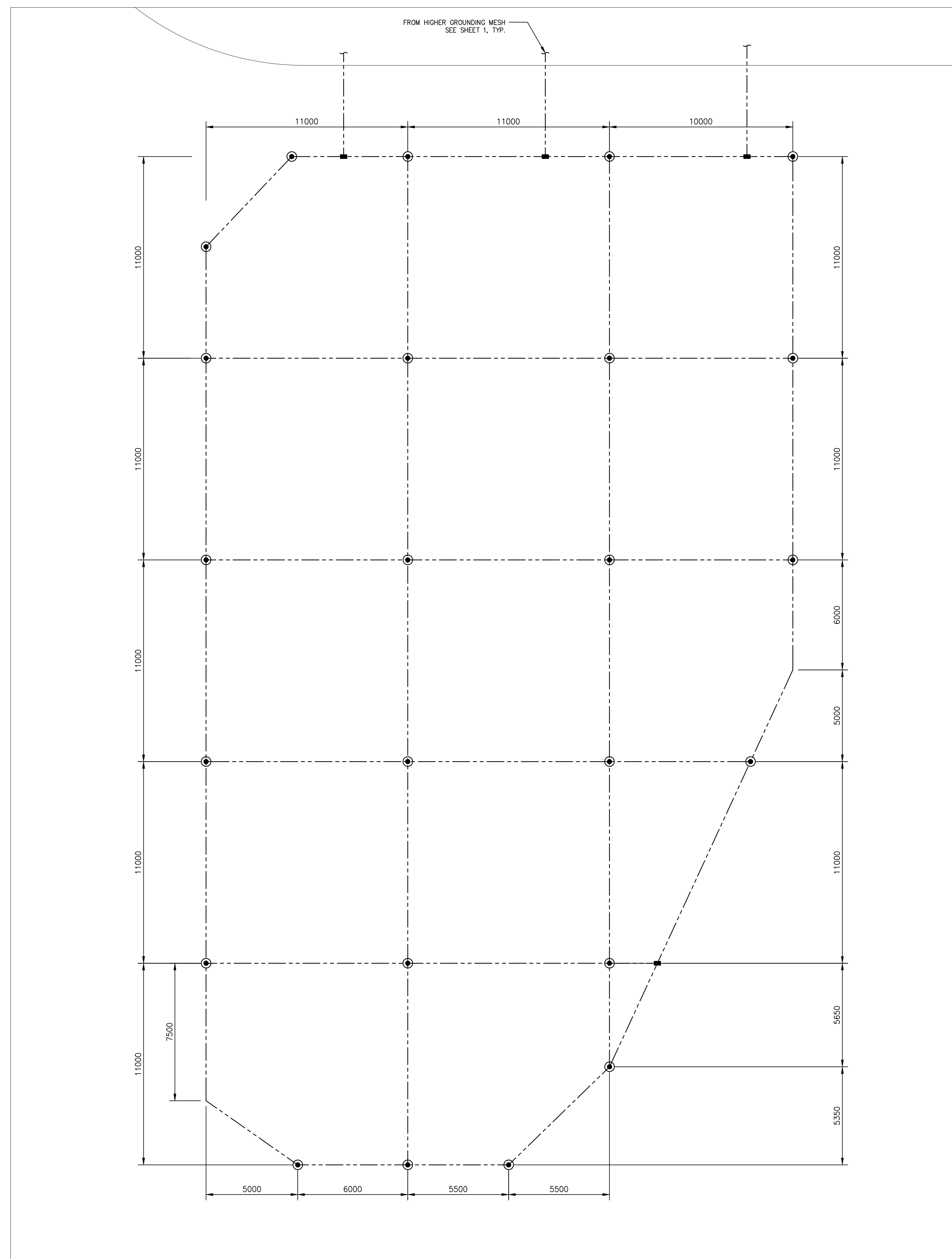
2 of 2

E

- Legend**
- 4/0AWG Cu. BARE GROUNDING CONDUCTOR
 - - - FENCE
 - GROUND CONDUCTOR CONNECTION POINT
 - GROUND ROD - 19mmØ-3000mm LONG COPPER CLAD
 - GROUND CONDUCTOR CONNECTION TO GROUNDING GRID
 - GROUND CONDUCTOR CONNECTION TO STEEL
 - ⊗ BOLLARD (N/A)
 - └ GROUND TAIL WITH ENOUGH LENGTH TO ENABLE CONNECTIONS AS SHOWN TO THE STRUCTURE AND EQUIPMENT ARE REQUIRED WILL BE SHOWN ON RFD DRAWINGS. REFER TO DRAWING E305 FOR EACH EQUIPMENT.



B 115kV SWITCHING STATION & REMOTE AREA GROUNDING GRID OVERALL
Scale 1:750



A 115kV SWITCHING STATION REMOTE AREA GROUNDING LAYOUT
Scale 1:125

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<input type="checkbox"/> Reviewed - Incorporate comments and resubmit	
<input type="checkbox"/> Reviewed - Not accepted	
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Project Manager - PHCL	Date (dd-mmm-yyyy)
Project Manager - Windlectric	Date (dd-mmm-yyyy)

Owner:

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