

January 10, 2025

SBM-23-2071

Planning and Development Division  
Norfolk County  
185 Robinson Street, Suite 200  
Simcoe, ON, N3Y 5L6

Attn: Fabian Serra – Planner

**Re: Response Letter for SPA Submission Comments  
Proposed Warehouse  
33 Park Road, Simcoe, ON**

This response letter has been prepared by Strik, Baldinelli, Moniz Ltd. (SBM) to address the requirements of the Site Plan Approval Comments, received December 5, 2024, for the proposed development located at 33 Park Road in the County of Norfolk (County). This response letter shall be read in conjunction with the Site Plan and Engineering Documents prepared by SBM.

### Planning

1. Completion and acceptance of Scoped EIS Required. As a condition of approval, the Site Plan is required to demonstrate:
  - a) An engineer's stamp;
  - b) A statement of Dark Sky compliant lighting;
  - c) Loading spaces dimensions and turning radii demonstrating sufficient access around the site, parking areas, and storage areas;
  - d) Snow storage calculations;
  - e) Compliance with all Zoning provisions (see comments 3 and 4, below), or where the applicant seeks to request relief from the Zoning Provisions, demonstration of approval of a Minor Variance application.

*Response by SBM: Acknowledged. The EIS was provided to the County on December 10, 2024. See revised Site Plan for items: a, c, & d, along with the Snow Storage Calculation document. Refer to Electrical Photometric Plan for item b. Refer to response below for item e.*

2. The proposed parking and loading areas are deficient in the following provisions of the Zoning By-law:
  - a) Loading spaces are required to be 3 metres wide by 10 metres long with room to maneuver outside of the parking area (Section 4.7), where no measurements have been demonstrated on the site plan;
  - b) The total number of standard parking spaces required is 5 (Section 4.9), where only 4 are demonstrated on the site plan;
  - c) For two-way travel a parking aisle of 7.3 metres is required (Section 4.1.4(b)), where only 6 metres to the edge of the gravel area is demonstrated on the site plan;

d) For accessible parking spaces, an access aisle of 1.5 metres in width the full length of the parking space is required (Section 43.2(a)), where this is not demonstrated on the site plan.

*Response by SBM: Acknowledged. Please refer to the updated Site Plan by SBM, provided separately. Specifically, regarding item c); the proposed drive aisle North of the parking will facilitate traffic one-way driving eastward as they enter the site. Then exiting vehicles will be required to turn around in the rear gravel lot, yield to any oncoming eastward traffic while exiting the site travelling westward. A yield sign (Ra-2) has been added to the site for vehicles exiting.*

3. Within the Zoning By-law Section height of the building is subject to a 45-degree angular plane measured to the edge of a commercial zoned lot. The applicant is required to demonstrate the angular plane from the proposed building height to the edge of the adjacent commercial property to the southeast of the subject property.

*Response by SBM: Abovementioned Zoning Bylaw is in reference to any Residential, Commercial or Institutional lot. This project's site and the South neighbouring site are zoned General Industrial (MG), therefor this bylaw is not applicable to our property.*

4. As a condition of approval, the applicant is required to update the site plan to demonstrate compliance or demonstrate approval of a Minor Variance application requesting relief of the above deficiencies.

*Response by SBM: See above response.*

5. The subject property is located within a Wellhead Protection Area B (WHPA-B) with an associated vulnerability score of 10 (Norfolk County Official Plan Schedule D-4). The applicant is requested to review notes (attached) from the Risk Management Office outlining relevant concerns for the proposed.

*Response by SBM: Acknowledged.*

6. The applicant will be required to submit a Section 59 form and demonstrate completion of Source Water Protection requirements per the Clean Water Act.

*Response by SBM: Acknowledged.*

7. The applicant is required to obtain Long Point Region Conservation Authority (LPRCA) approval and demonstrate any required permits prior to building permitting.

*Response by SBM: Acknowledged.*

8. The applicant is requested to demonstrate snow storage calculations. In addition, the applicant is requested to discuss snow storage with the LPRCA, to ensure snow storage spaces proposed on the site plan are sufficient in size and location for the purposes of permitting.

*Response by SBM: Acknowledged. Refer to snow storage calculations provided.*

9. The County will require postponements of all charges/mortgages (if any) registered on title. The applicant is recommended to contact their Lender(s) (if any) and/or solicitors as early as possible to avoid any delays in the project.

*Response by SBM: Acknowledged.*

10. Existing Notices/Agreements registered on title to this property have been noted. If these documents still apply, the Property Owner must ensure that they are complied with in their project. The applicant and property owner are recommended to discuss this further with their solicitor.

*Response by SBM: Acknowledged.*

11. The applicant is required to contact Norfolk GIS when construction begins to obtain new civic addressing. See comments below for detail on how to apply.

*Response by SBM: Acknowledged.*

12. The applicant is requested to contact Canada Post if mail delivery is required once the building is constructed.

*Response by SBM: Acknowledged.*

13. The applicant is requested to consider emergency access to any fenced areas of the proposed development.

*Response by SBM: Acknowledged.*

14. The applicant is required to provide fire detection and protection systems per the OBC.

*Response by SBM: Acknowledged. To be addressed as part of the building permit design process.*

15. Should the applicant provide battery storage infrastructures, the applicant is requested to notify Norfolk County Fire Department.

*Response by SBM: Acknowledged.*

16. Service lines managed by Enbridge Gas have been noted in the subject area, which may be affected by the proposed development. The applicant is requested to contact Enbridge as early as possible (minimum one month prior) to carry out an engineering assessment of the proposed work, terminate gas services, or relocate the line. The applicant should note that any service relocated would be at the expense of the property owner.

*Response by SBM: Acknowledged.*

17. The applicant is requested to call Ontario One to identify natural gas pipeline locations prior to any activity on the site.

*Response by SBM: Acknowledged.*

18. The applicant is responsible for consultation with the Ministry of Environment, Conservation and Parks (MECP) regarding the proposed development and negative impacts to species at risk, under the Endangered Species Act, 2007 (O. Reg. 242/08 & O. Reg. 830/21).

*Response by SBM: Acknowledged. This has been addressed as part of the EIS previously provided to the County.*

## **Development Engineering**

### General:

1. Securities will be required in the form of a schedule. Any works completed within the Municipal Right-of-Way (R.O.W.) is to be shown as 100% security. Any works completed within private property are to be shown as 10% security.

*Response by SBM: Acknowledged. Please refer to the security estimate, provided separately.*

2. Sanitary and Water modelling will be required. This is to be completed by Norfolk County's third-party consultant. The cost to complete the modelling and any recommendations from reports are to be implemented into the design at the applicant's expense. The following information will be required to receive a quote and complete the modelling.

1. General Plan of Services
2. Functional Servicing Report;
  - a. Total Wastewater Design Flows shown in Sanitary Design Sheets;
  - b. Total Domestic Water and Fire Flows as per Norfolk County Design Criteria Section 10.1.1

The Functional Servicing Report must include water /sanitary servicing and fire flow calculations. Fire Flow calculations are to be completed in accordance with "Water Supply for Public Fire Protection 2020" by Fire Underwriters Survey. Once the quote has been received, approval from the applicant will be required before proceeding.

*Response by SBM: Acknowledged. The owner has authorized the County's third-party consultant to undertake the modelling. Fire fighting calculations have been included in the updated design brief, provided separately.*

### Sediment and Erosion Control Plan (Dwg. C2):

3. No comments at this time.

*Response by SBM: Acknowledged*

### Servicing Plan (SP2):

4. Per Norfolk County Design Criteria section 6.7.04, the minimum diameter for a driveway culvert is to be 400mm.

*Response by SBM: Acknowledged. Please refer to the updated Engineering Drawings, provided separately.*

5. Please revise to indicate the monitoring manhole installed at the property line. Note: If the manhole is installed at the property line, a clean out is not required on this service since the distance from property line to building is approximately 26.5m (87ft) - clean outs are required every 30.48m (100 ft).

*Response by SBM: Acknowledged. Please refer to the updated Engineering Drawings by SBM, provided separately.*

6. The 150mm sanitary sewer lateral shall be connected to County sanitary infrastructure per Norfolk County Design Criteria Section 9.7.00.

*Response by SBM: Acknowledged. Please refer to the updated Engineering Drawings by SBM, provided separately.*

7. Pipe Crossing & Vertical Clearances:

- From this chart on Drawing C3, CR1 will only be 0.12m clearance from invert of sanitary sewer pipe to the obvert of the existing 300mm ductile iron watermain.
- The plan indicates an encasing a watertight carrier pipe extending 3m min. both sides of the crossing measured perpendicular to the water main to provide protection from contamination.
- Please review F-6-1 Procedures to Govern Separation of Sewers and Watermains:

Section Crossings (5): Under normal conditions, watermains shall cross above sewers with sufficient vertical separation to allow for proper bedding and structural support of the watermain and sewer main.

When it is not possible for the watermain to cross above the sewer, the watermain passing under a sewer shall be protected by providing:

- a. A vertical separation of at least 0.5 metres between the invert of the sewer and the crown of the watermain.
- b. Adequate structural support for the sewers to prevent excessive deflection of joints and settling.
- c. That the length of water pipe shall be centred at the point of crossing so that the joints will be equidistant and as far as possible from the sewer.

Please revise the sanitary service to adhere to these criteria. Guidelines can be found at: <https://www.ontario.ca/page/f-6-1-procedures-govern-separation-sewers-and-watermains>

*Response by SBM: Acknowledged.*

- *Due to the depth of the existing sanitary sewer in the ROW, it is not possible for the new sanitary PDC to pass under the watermain. It is feasible for the PDC to pass overtop the watermain. The design has been revised to increase the vertical crossing clearance to 0.5m minimum.*
- *We note that <https://www.ontario.ca/page/watermain-design-criteria-future-alterations-authorized-under-drinking-water-works-permit> "Watermain Design Criteria for Future Alterations Authorized Under a Drinking Water Works Permit" contains clause 15.4 which states "Alternatively, when adequate vertical separation cannot be achieved with crossings of watermain and sewer, either the watermain or the sewer line should be encased in a watertight carrier pipe which extends 3 m (10 ft) on both sides of the crossing, measured perpendicular to the watermain."*

8. DCVA are not acceptable in this instance. A lead-free Reduced Pressure Flow Assembly (RPZ) is required after the water meter. A schematic of the water meter installation is required in your next submission for ES for approval.

*Response by SBM: Acknowledged. A schematic of the water meter installation is included on sheet C5 for information only. The interior plumbing design will be determined by the plumbing/mechanical designer, as this falls outside of the civil engineering scope.*

9. Please show details for the proposed restoration of all servicing trenches within the ROW per Norfolk County Design Criteria Section 6.4.01, including material thickness.

*Response by SBM: Acknowledged. Please refer to the updated Engineering Drawings by SBM, provided separately. The restoration is listed on the plan on sheet C2 as well as in the surface works notes on sheet C1.*

10. Please add a note to the drawings "No work on water services can take place without supervision of a licensed Norfolk County Water Operator on-site"

*Response by SBM: Acknowledged. Please refer to the updated Engineering Drawings sheets C2-C4 by SBM, provided separately.*

#### Grading Plan (SP3):

11. Please provide additional overland flow arrows in uncontrolled areas.

*Response by SBM: Acknowledged. Please refer to the updated Engineering Drawings by SBM, provided separately.*

12. Provide a specification and detail for parking lot (surface material, granular structure etc).

*Response by SBM: Acknowledged. Please refer to the updated Engineering Drawings by SBM, provided separately. The surface composition is specified in the surface works notes on sheet C1.*

13. Please indicate the ponding level elevation for the 100-year storm and illustrate the extent of the surface storage.

*Response by SBM: Acknowledged. Please refer to the updated Engineering Drawings by SBM, provided separately.*

14. The site plan lacks sufficient lane width for safe delivery truck maneuvering at the rear of the property. Furthermore, angled parking results in limited turning radii forcing customers/employees to reverse into a negative turn near a highly sloped area (31.0%) creating safety hazards. It is recommended to revise the design to provide adequate lane widths, turning radii, and/or reconfigure parking to ensure safe truck access and maneuverability on the parking area.

*Response by SBM: Adequate truck maneuverability has been demonstrated by completing a truck turning analysis as shown on the Site Plan. The analysis was performed using a 10m long, single unit two axle truck. The proposed drive aisle North of the parking will facilitate traffic one-way driving eastward as*

they enter the site. Then exiting vehicles will be required to turn around in the rear gravel lot, yield to any oncoming eastward traffic while exiting the site travelling westward. A yield sign (Ra-2) has been added to the site for exiting vehicles.

15. Per Norfolk County Design Criteria 16.5.02 and Zoning By-Law 4.1.4 b), isle widths for two-way traffic shall be designed to be 7.3m.

*Response by SBM: See above response.*

Functional Servicing Report (Prepared by SBM, 5/9/2024):

1. Please include total domestic water and fire flows as per Norfolk County Design Criteria Section 10.1.1. The Functional Servicing Report must include water /sanitary servicing and fire flow calculations. Fire Flow calculations are to be completed in accordance with "Water Supply for Public Fire Protection 2020" by Fire Underwriters Survey.

*Response by SBM: Acknowledged, please refer to the updated Functional Servicing Report by SBM, provided separately.*

2. Per Section 7.8.04 of Norfolk County Design Criteria, the pre-development runoff coefficient for industrial zoned areas is .8. Please revise section 3.3 and calculations to reflect this.

*Response by SBM: Acknowledged. We understand the runoff coefficient of C=0.8 is used for municipal storm sewer design. In this case, the lands are undeveloped and discharge to a naturalized area, so best practice would be to ensure that post-development flows are less than pre-development flows. A pre-development runoff coefficient of C=0.20 has been used which we believe to be reasonable and appropriate.*

3. In section 3.3, a 900mm storm sewer in the Park Rd. ROW is mentioned. Please confirm if there is any proposed connection to this storm system, and that the proposed legal and adequate SWM outlet is to the LPRCA Lands to the East.

*Response by SBM: Acknowledged. No connection to the existing 900mm storm sewer in the Park Road ROW is proposed, as existing elevations onsite would not be suitable for a gravity connection. An adequate outlet to the LPRCA Lands is provided, as detailed in the Engineering Drawings and updated Functional Servicing Report by SBM, provided separately. We confirm the Patterson Creek is the site's legal and adequate outlet.*

Traffic Impact Brief (By SBM, 4/27/2024):

4. No comments at this time.

*Response by SBM: Acknowledged.*

**Zoning**

1. LPRCA approval required before submitting building permits.

*Response by SBM: Acknowledged.*

2. Outdoor storage is prohibited in the front yard.

*Response by SBM: Acknowledged.*

3. Verify proposed parking space depth. Parking space depth needs to be shown on site plan. Minimum 5.6 meters for 45 degree parking as per 4.1.3 b).

*Response by SBM: Please refer to the updated Site Plan by SBM, provided separately.*

4. The proposed barrier free parking space does not meet the provision for barrier free access aisle. An unobstructed 1.5 meter wide aisle is required extending the full length of the parking space as per 4.3.2.

*Response by SBM: Please refer to the updated Site Plan by SBM, provided separately.*

5. This property is located within a wellhead protection area. As per 3.35, the County's Risk Management Official shall review the proposal in accordance with the Clean Water Act 2006.

*Response by SBM: Acknowledged.*

## **GIS**

Please contact NorfolkGIS for new civic addresses when building.

You can apply for a new civic address here. If a green sign is required in order to issue you an address (generally anywhere outside of an urban area) you will have to call Norfolk County Customer Service after applying to make payment before the address is issued (519-426-5870 or 226-NORFOLK). If you would like to apply for a new Civic Address because you are planning to build on a vacant parcel of land, this is dealt with as part of the building permit process. The building inspector can provide you with a copy of a Civic Address Request Form or it can be downloaded below. On the form there are several areas that need to be filled out with information, and a sketch showing the lot layout of the property for which the Civic Address is being requested. A sample sketch will be included with the form.

*Response by SBM: Acknowledged.*

## **Agreement Administrator Comments**

A condition of your site plan approval will be to enter into a development agreement with the County. The agreement will be registered on title at the owner's expense. The County will also collect and hold onto performance securities for the infrastructure and landscaping works until the end of the maintenance period. The owner will also be required to secure and keep in force commercial general liability insurance coverage, prior to and during the duration of construction until after a successful site inspection and release of the performance securities. Contact the undersigned when you are ready to start your agreement or if you have any questions. The attached information sheet will assist you with a complete submission.

*Response by SBM: Acknowledged.*

## **Building**

Comments to be provided at time of Building Permit application.

Conditions provided. They are as follows:



Conditions:

1. The Owner shall agree to make application for a Building Permit, and obtain the necessary Building Permits prior to commencing construction.
2. AND FURTHER THAT all applicable law approvals as required by the Ontario Building Code and supporting documentation from approval agencies re submitted with a building permit application. [OBC Division A 1.4.1.3] Specifically: Long Point Regional Conservation Authority (LPRCA) construction permit

*Response by SBM: Acknowledged by SBM.*

### **Hydro One**

We have reviewed the documents concerning the noted Application and have no comments or concerns at this time. Our preliminary review considers issues affecting Hydro One's 'High Voltage Facilities and Corridor Lands' only.

For proposals affecting 'Low Voltage Distribution Facilities' please consult your local area Distribution Supplier.

To confirm if Hydro One is your local distributor please follow the following link: Stormcentre (hydroone.com). Please select " Search" and locate address in question by entering the address or by zooming in and out of the map

If Hydro One is your local area Distribution Supplier, please contact Customer Service at 1-888-664-9376 or e-mail CustomerCommunications@HydroOne.com to be connected to your Local Operations Centre.

*Response by SBM: Acknowledged.*

### **Canada Post**

Please be advised that Canada Post does not have any comments on this warehouse building being developed. If they require mail delivery, please have them contact our Customer Service department at 1-800-267-1177 to register for mail delivery when building is developed.

*Response by SBM: Acknowledged.*

### **Ministry of Transportation**

The proposed work located at 35 Park Road, Simcoe is not located adjacent to a provincial highway or within MTO's Permit Control Area, and as such, does not require MTO review, approval or permits.

*Response by SBM: Acknowledged.*

### **Paramedic Services**

Please consider emergency access in the event that emergency services are required inside the fenced area when the gate is closed.

*Response by SBM: Acknowledged.*

### **Fire**

Ensure adequate access for fire department apparatus. If battery storage infrastructure is being provided please notify NCFD

*Response by SBM: Acknowledged.*

### **Realty Service**

1. If a Development Agreement is required, then the County will require postponements of all charges/mortgages (if any) registered on title. We recommend that you contact your Lender(s) (if any) and/or your solicitors as early as possible to avoid any delays in your project.
2. Realty Services notes that there are Notices/Agreements registered on title to this property. If these documents still apply, the Property Owner must ensure that they are complied with in their project. Please discuss this further with your solicitor.

*Response by SBM: Acknowledged.*

### **Enbridge Gas**

Thank you for your correspondence regarding the proposed Site Plan Application. Enbridge Gas Inc. (Enbridge Gas), does have service lines running within the area which may or may not be affected by the proposed Site Plan. Should the proposed site plan impact these services, it may be necessary to terminate the gas service and relocate the line according to the new property boundaries. Any service relocation required would be at the cost of the property owner.

If there is any work (i.e. underground infrastructure rebuild or grading changes...) at our easement and on/near any of our existing facilities, please contact us as early as possible (minimum 1 month in advance) so we can exercise engineering assessment of your work to ensure the integrity of our main is maintained and protected.

Confirmation of our natural gas pipeline location should be made through Ontario One. Call 1-800-400-2255 prior to any activity.

*Response by SBM: Acknowledged.*

### **Source Water Protection**

According to the attached mapping, the above noted property is within a Wellhead Protection Area B (WHPA-B) with an associated vulnerability score of 10. Please see the attached Source Protection Review from 2023 detailing our concerns regarding Source Water Protection for this proposal.

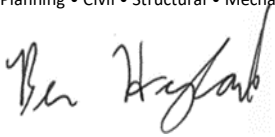
As the proposed development is located in a WHPA-B(10), the attached Section 59 Restricted Land Use (RLU) Screening Form is required to be completed by the applicant for review by the Risk Management Office.

*Response by SBM: Acknowledged.*

Respectfully submitted,

**Strik, Baldinelli, Moniz Ltd.**

Planning • Civil • Structural • Mechanical • Electrical



Ben Hyland, P.Eng., PMP  
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SPA1: 10 May 2024  
SPA2: 10 January 2025

SBM-23-2071

Planning and Development Division  
Norfolk County  
185 Robinson Street, Suite 200  
Simcoe, ON, N3Y 5L6

Attn: Fabian Serra  
Planner

**Re: Functional Servicing Report  
Proposed Warehouse  
33 Park Road, Simcoe, ON**

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## 1. INTRODUCTION

This Functional Servicing Report (Report) has been prepared by Strik, Baldinelli, Moniz Ltd. (SBM) for One Stop Home Staging to address the servicing requirements for the proposed development at 33 Park Rd, Simcoe, Ontario, within Norfolk County. The proposed development consists of one 447.65 m<sup>2</sup> warehouse building and associated paved parking area. Please refer to the proposed Site Plan by SBM, provided separately.

This Report is intended to represent a component of the overall Site Plan Application (SPA) package to be submitted to the County of Norfolk (County) and should be read in conjunction with all other submitted documents. The Site Plan Drawings SP1-SP2, Engineering Drawings C1-C6, and Photometric Drawing EP1, (provided separately) have been prepared to address the County requirements. These documents have been revised to address the 1<sup>st</sup> submission comments received from the County.

The approximately 0.33 ha subject site abuts commercial lands to the north and south, Long Point Region Conservation Area (LPRCA) to the east, and the Park Rd Right-of-Way (ROW) to the west. It is SBM's understanding that the proposed development will consist of the proposed warehouse building plus associated driving lanes, surface parking, and landscaping.

Design requirements have been based on the Corporation of Norfolk County Design Criteria dated February 2019 (CNCDC) and supplemented by the MOE Design Guidelines for Sewage Works and for Drinking Water Systems.

## 2. SANITARY SERVICING

Based on the as-built drawing AI-79486-P4 Rev 3, by Proctor & Redfern Ltd., provided in Appendix A, there is an existing 375 mm sanitary sewer at 0.16% within the Park Rd ROW. It is proposed to connect a 150 mm sanitary service to the existing sanitary sewer to service the proposed storage warehouse. The proposed development has a population of 40 people, based on a total area of 0.33 hectares and an occupancy load of 120 people per hectare as outlined in the CNCDC.

The current per capita flow for industrial developments is 55 m<sup>3</sup>/ha/d, as per section 9.2.02 of the CNCDC. The peaking factor was calculated using the Modified Harmon Formula and was multiplied by the per capita flows for peak sanitary design flow of 0.21 L/s. The design flow was calculated by adding the peak sanitary design flow to the provided infiltration allowance of 0.28 L/ha/s (24,192 L/ha/d) shown in section 9.2.04 of the CNCDC, for a combined sanitary design flow of 0.30 L/s. The calculations provided in Appendix B show that the proposed 150 mm sanitary sewer at a slope of 1.0% has a conveyance capacity of 15.24 L/s, which is sufficient to convey the anticipated sanitary flows.

An OBC fixture count calculation determined that the site has total fixture unit count of 16. Table 7.4.10.8 of the OBC shows the proposed 150mm diameter sanitary pipe running at a slope of 1% can service up to 700 fixtures units. Therefore, the proposed sanitary service (150mm diameter at 1.0% slope) is sufficient for the proposed industrial building. Calculations can be found in Appendix B. It is SBM's understanding that the County will retain a third-party consultant to verify capacities within the existing sanitary infrastructure.

### **3. STORM SERVICING AND STORMWATER MANAGEMENT**

#### **3.1 Pre-Development Conditions**

Based on pre-development conditions obtained from the Topographic Site Plan by Jewitt and Dixon Ltd., dated December 21, 2023 (provided in Appendix A), the existing subject site is comprised of open grassland with a pre-development runoff coefficient (C-value) of 0.20. Two pre-development catchment areas were identified – A101 (302.76 m<sup>2</sup>), which generally discharges overland towards the Park Rd ROW to the west, and A102 (2954.74 m<sup>2</sup>), which generally discharges overland towards the LPRCA to the east.

It is noted that while industrial areas are typically designed with an allowable runoff coefficient of C=0.80 as per the CNCDC, the site is undeveloped and discharges to the naturalized area to the west under existing conditions. The predevelopment flows to the west are associated with the current status of the site (undeveloped, C=0.20) therefore this was used to determine the restricted flow rated required under post-development conditions.

#### **3.2 Post-Development Conditions**

Post-development conditions were obtained from the Site Plan. Under post-development conditions, the entire site will be comprised of the proposed warehouse building (524.33 m<sup>2</sup>, including roof overhang), concrete/asphalt parking or pathways (45.94 m<sup>2</sup>), a gravel drive aisle/storage area (1,389.29 m<sup>2</sup>), and landscaped/open space (1,297.94 m<sup>2</sup>) with a calculated C-value of 0.54.

The Stormwater Management (SWM) calculations provided in Appendix C and the Site Grading Plan (Sheet C4), show that under post-development conditions there are two uncontrolled catchment areas, U201 and U202, and one controlled catchment area shown as A201.

Major storm events above the 100-year event (i.e. 250-year storm) will be safely conveyed overland by the site grading to the south, ultimately discharging towards the Park Rd ROW which matches pre-development conditions. Please refer to the Engineering Drawings, prepared by SBM (provided separately).

#### **3.3 Storm Servicing**

Based on the as-built drawing AI-79486-P4 Rev 3 (provided in Appendix A), there is an existing 36-inch (900 mm) diameter storm sewer at a slope of 0.2% in the Park Rd ROW. As the design of the existing storm sewer did not account for the subject site, it is proposed to install 300 mm diameter private storm sewers to convey post-development flows through an oil and grit separator (OGS) before being released into the proposed riprap

to the east, ultimately draining towards the LPRCA regulated area and existing Patterson Creek watercourse therein.

The SWM quantity controls collecting the 2- to 100-year storm events for the proposed development include catch basin maintenance holes and catch basins, in addition to the EZstorm storage system and proposed inlet control device, as detailed below and within the Engineering Drawings.

### 3.4 *Stormwater Management – Quantity Control*

Rainfall intensity data was obtained from Section 7.8.02 of the CNCDC. As the post-development C-value of 0.54 exceeds the pre-development C-value of 0.20, quantity controls are required to attenuate flows to the pre-development levels. For clarity, post-development calculations have been separated into two sections to show flows to the west and flows to the east.

#### 3.4.1 Flows to the West

Uncontrolled catchment area U201 (198.47 m<sup>2</sup>) consists of grassland within the southwest corner of the subject site and generally matches pre-development overland flow paths. Flows are conveyed overland to the west towards the Park Rd ROW at a calculated post-development flow rate of 0.76 L/s and 2.11 L/s for the 2-year and 100-year storm event respectively, which is less than the allowable pre-development flows to the west (area A101) of 1.45 L/s and 4.15 L/s. As no other flows onsite discharge towards the west, this 0.69 L/s reduction in flow is sufficient and no addition SWM controls are proposed for this portion of the subject site.

#### 3.4.2 Flows to the East

Uncontrolled catchment U202 (878.57 m<sup>2</sup>), consists primarily of grassed area along the site's northern, eastern, and southern perimeter and generally matches pre-development overland flow direction. Flows are generally conveyed overland to the east towards the existing LPRCA area, with a calculated post-development flow rate of 2.32 L/s and 6.33 L/s for the 2- and 100-year storm events respectively. Subtracting this from the total pre-development flows to the east (area A102) of 6.96 L/s and 19.02 L/s results in allowable post-development controlled flow rates of 4.64 L/s and 12.69 L/s for the 2- and 100-year events respectively for Area 201, as shown in Appendix C.

Controlled catchment A201 (2,180.46 m<sup>2</sup>) will be restricted to the 2-year allowable release of 4.64 L/s by an Inlet Control Device (ICD) installed on the outlet of the proposed CBMH2. As shown on SWM calculations outlined in Appendix C, 21.18 m<sup>3</sup> of storage is required under the 2-year storm event and 103.57 m<sup>3</sup> is required under the 100-year storm event. When accounting for the available storage within the proposed structures and the available surface storage, a total of 80.41 m<sup>3</sup> of storage is required. An EZstorm underground storage system with a maximum capacity of 86.55 m<sup>3</sup> is proposed to contain the additional storm flows generated up to the 100-year storm event. The proposed EZstorm system, combined with available onsite storage, exceeds the required underground storage. Refer to Engineering Drawing sheet C6 for details pertaining to EZStorm system.

### 3.5 *Stormwater Management – Quality Control*

As per the SPC comments dated June 7, 2023, an enhanced level of treatment as per 2003 MECP Stormwater Management Planning and Design Manual is required for flows generated from the subject site. Therefore, it is proposed to install a HydroDome HD 4 to provide 80% TSS removal using the ETV Canada Particle Size distribution for controlled areas. It is noted that maintenance of the OGS is the contractor's responsibility during construction and the owner's responsibility thereafter. Please refer to Appendix C and the Engineering Drawing sheets C3 and C5 for all calculations, details, and maintenance information regarding the HydroDome HD 4.

## 4. WATER SERVICING CONSIDERATIONS

### 4.1 General Considerations

As per the As-Built drawing No. AI-79486-P4 by Proctor and Redfern Ltd., dated January 1980, there is an existing 300 mm watermain within the Park Rd ROW. A new 25 mm diameter water service is proposed. Please refer to the Site Servicing Plan, C3, provided separately, for the water servicing layout.

### 4.2 Water Demand

Water distribution system performance criteria and requirements for specific demand conditions were used according to section 8.3 of the MOE Design Guidelines for Drinking-Water Systems (MOE DGDWS). The design parameters outlined below are based on the MOE and Norfolk County guidelines:

- Minimum water pressures to be maintained in the distribution system of:
  - Minimum of 140 kPa (20 psi) at maximum day demand flow plus fire flow,
  - Minimum of 275 kPa (40 psi) at maximum hourly demand flow,
  - Minimum of 275 kPa (40 psi) at average day demand flow,
  - Maximum residual pressure shall not exceed 700 kPa (100 psi),
- Max day peaking factor and max hour peaking factor to be determined by Table 3-3, (CNCDC)
- 72 hr. Maximum water turnover for quality (during average day demand).

The domestic water demand was determined based on the Site Plan. As historical flows are not available, a commercial allowance of 28 m<sup>3</sup>/ha/day as per the MOE DGDWS was used. The total site area is approximately 0.33 ha, average day demand was calculated by multiplying the total site area by 28 m<sup>3</sup>/ha/d, for an average daily demand of 0.11 L/s. Maximum hour and maximum day demands were calculated by multiplying the average day demand by their respective peaking factors of 2.00 and 2.25, as outlined by the CNCDC, for water demands of 0.21 L/s and 0.24 L/s respectively. Based on the above calculations, the proposed 25 mm diameter water service is sufficient to provide domestic demand at a velocity less than 1.5 m/s. Please refer to the Domestic Water Demand Calculations, provided in Appendix D.

### 4.3 Water Supply for Fire Protection

There is an existing fire hydrant located within the Park Rd ROW, approximately 60 m north of the subject site. This is within 90m of the proposed development and can be used for fire protection in the event of a fire. Additionally, the proposed building is considered a Part 9 Building under the Ontario Building Code, and therefore does not require an adequate water supply for fire-fighting.

As requested by the County, SBM has completed fire-fighting calculations, which are provided in Appendix D. Fire-fighting demand was determined as per Water Supply for Public Fire Protection – Fire Underwriter Survey (FUS). As shown in the fire-fighting calculations, the required fire flow rate plus maximum day demand for the proposed wood-frame building with free burning fire hazard contents is 10,060 L/min (2,658 USGPM). Per the hydrant test performed on February 9, 2024, by Northern Sprinkler Design (provided in Appendix D), the static pressure is 75.0 psi (517.1 kPa) with flow pressures of 73.0 psi (503.3 kPa) and 66.0 psi (455.1 kPa) at flow rates of 4,493 L/min and 7,298 L/min respectively. Therefore, at the required flow rate of 10,060 L/min, the residual pressure in the system is calculated to be 58.7 psi (404.7 kPa) which is within the allowable pressure range as defined by the CNCDC. It is SBM's understanding that the County will retain a third-party consultant to verify capacities within the existing infrastructure.

#### 4.4 OBC Fixture Count

An OBC water fixture count was performed to confirm adequate capacity for the proposed water system. A total of 7.95 fixture units was calculated. As per the hydrant flow test provided in Appendix D, the area's static/residual pressure is in the range of 66-75 psi. OBC Div B Table A-7.6.3.2 shows, a 25mm (1") pipe at 46 m in length can serve 30 fixture units with a pressure between 311 and 413 kPa (46 to 60 psi), conservatively using a lower range than the pressure measured in the hydrant flow test. Therefore, the water pressure during the average day and maximum hour demand conditions are expected to be more than the minimum required pressure of 140 kPa (20 psi) and less than the maximum allowable pressure of 700 kPa (100 psi).

### 5. LIMITATIONS

This Report was prepared by SBM for One Stop Home Staging and Norfolk County. Use of this Report by any third party, or any reliance upon its findings, is solely the responsibility of that party. SBM accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions undertaken as a result of this Report. Third party use of this Report, without the express written consent of the Consultant, denies any claims, whether in contract, tort, and/or any other cause of action in law, against the Consultant.

All findings and conclusions presented in this Report are based on site conditions as they appeared in the information presented to SBM and related to in this document. This Report is not intended to be exhaustive in scope, or to imply a risk-free development. It should be recognized that the passage of time may alter the opinions, conclusions, and recommendations provided herein, as well as any changes in the layout of the development. The design was limited to the documents referenced herein and SBM accepts no responsibility for the accuracy of the information provided by others. All designs and recommendations presented in this Study are based on the information available at the time of the review.

This document is deemed to be the intellectual property of SBM in accordance with Canadian copyright law.

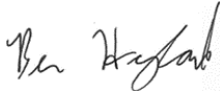
### 6. CLOSURE

We trust this Report meets your satisfaction. Should you have any questions or require further information, please do not hesitate to contact us.

Respectfully submitted,

**Strik, Baldinelli, Moniz Ltd.**

Planning • Civil • Structural • Mechanical • Electrical



Ben Hyland, P. Eng, PMP  
Civil Team Lead, Eng IV,  
Associate I



Lauren Andersen  
Civil Project Coordinator,  
Eng Trn II

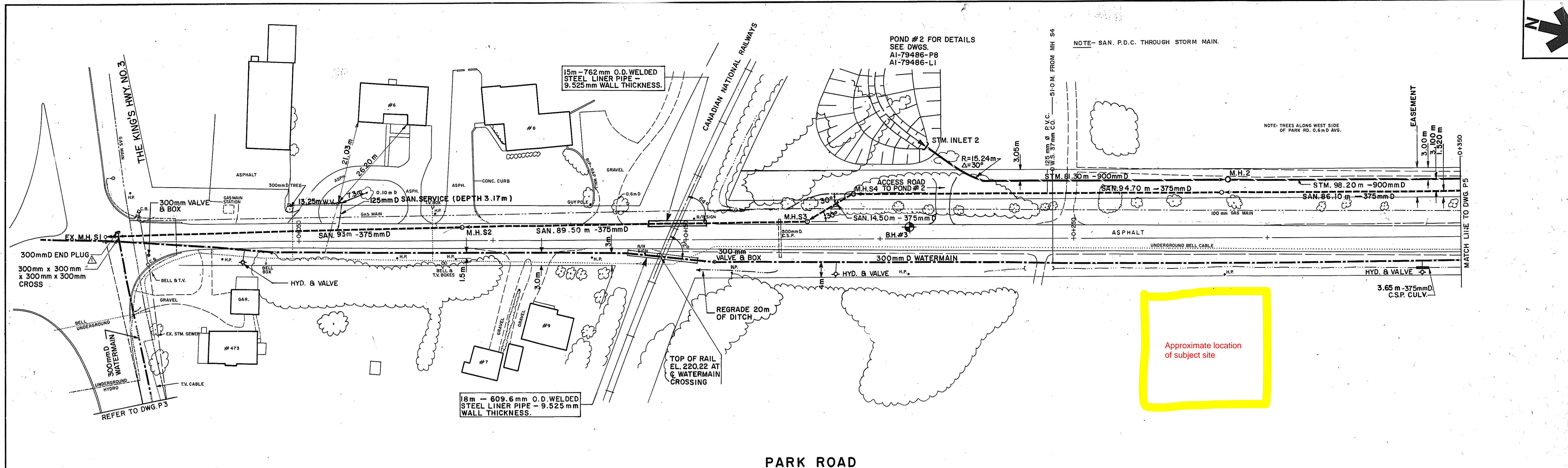
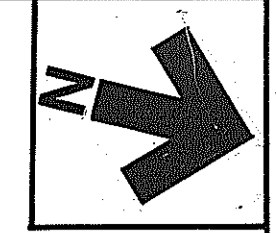


List of Appendices

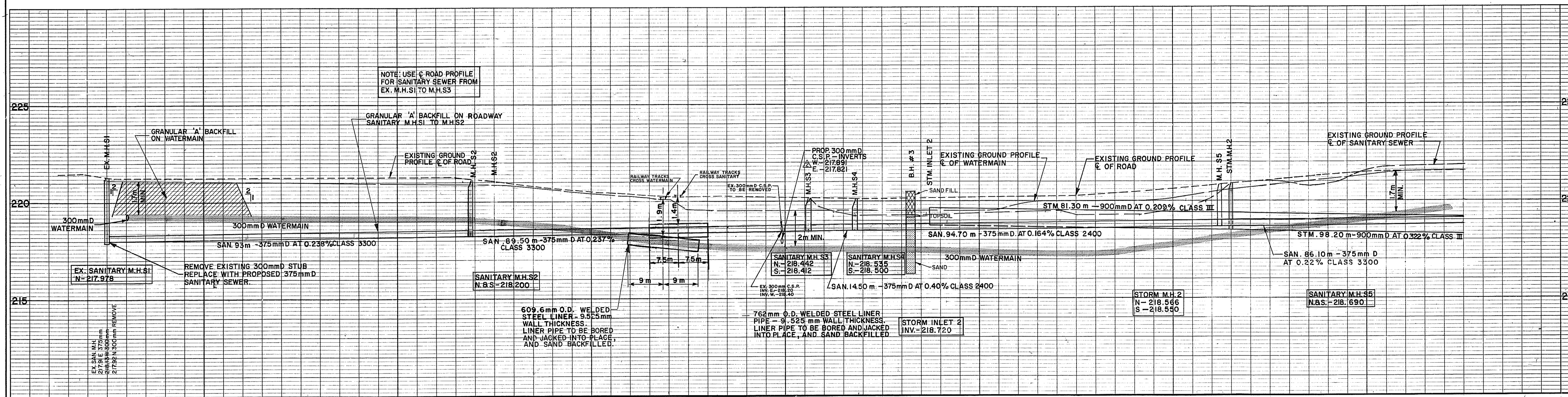
- Appendix A: Regional Municipality of Haldimand – Norfolk Town of Simcoe As-Constructed Drawing No. AI-79486-P4, dated January 1980  
Topographic Site Plan Survey by Jewitt and Dixon Ltd, dated December 21, 2023
- Appendix B: Sanitary Sewer Design Sheet  
OBC Fixture Unit Calculations
- Appendix C: Stormwater Management Calculations  
Hydroworks Hydrodome HD 4 OGS Sizing Summary  
Hydroworks Hydrodome Operations and Maintenance Manual  
EZStorm Product Information  
Tempest Inlet Control Device Product Information
- Appendix D: Domestic Water Demand Calculations  
OBC Fixture Unit Calculations  
Fire-Fighting Calculations  
Northern Sprinkler Design Flow Test Report, dated February 9, 2024

**APPENDIX A**

As-built Drawing AI-79486-P4 Rev 3  
Topographic Site Plan by Jewitt and Dixon Ltd. dated December 21, 2023  
Email Correspondence with City Representative, dated March 13, 2024



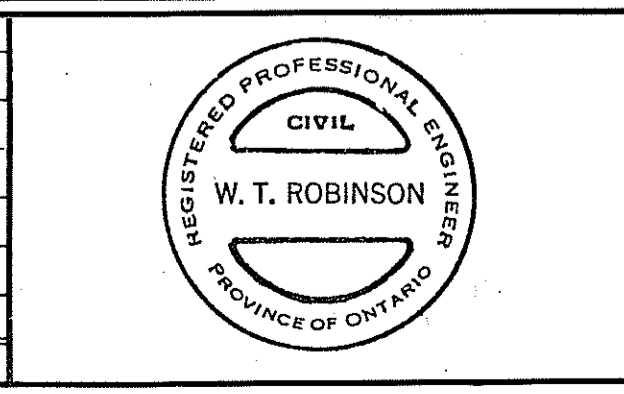
**PARK ROAD**



Ground											Ground
Invert											Invert
Chainage	0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+310	0+350	Chainage	

**Notes:**  
 THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

Approved					
3	AS CONSTRUCTED	AUG. 21/80	E.H.		
2	INVERTS ON PROP 300mm D CULV ON PARK RD. REVERSED. CULV ADDED AT HYD. LEAD. WM. CONNECTED TO CEDAR ST. WM.	JAN. 25/80	H.F.M./L.V.		
1	REVISED SANITARY SEWER ALIGNMENT FROM M.H. S3 TO M.H. S5	JAN. 14/80	H.F.M./L.V.		
No.	Zone	Revision	Date	Initial	



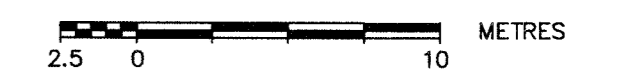
Regional Municipality of Haldimand - Norfolk  
 Town of Simcoe  
 Simcoe Industrial Park  
 Park Road

**Proctor & Redfern Limited**  
 Consulting Engineers  
 St. Catharines

Date: January, 1980  
 Drawing No. **AI-79486-P4** Rev. **3**

TOPOGRAPHIC SITE PLAN  
OF PART OF  
**LOT 3**  
**CONCESSION 14**  
IN THE GEOGRAPHIC  
TOWNSHIP OF WINDHAM  
IN  
**NORFOLK COUNTY**  
PIN 50188-0231(LT)

SCALE: 1 : 200



JEWITT AND DIXON LTD.

**METRIC NOTE:**

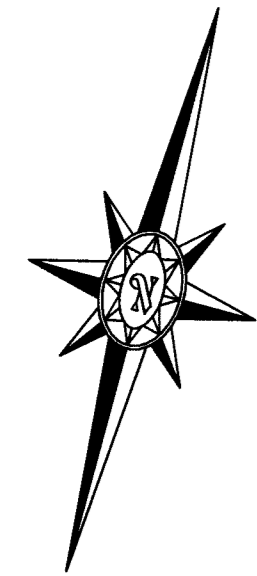
DISTANCES AND COORDINATES ARE METRIC AND CAN BE CONVERTED TO IMPERIAL BY DIVIDING BY 0.3048

**UTILITY NOTE:**

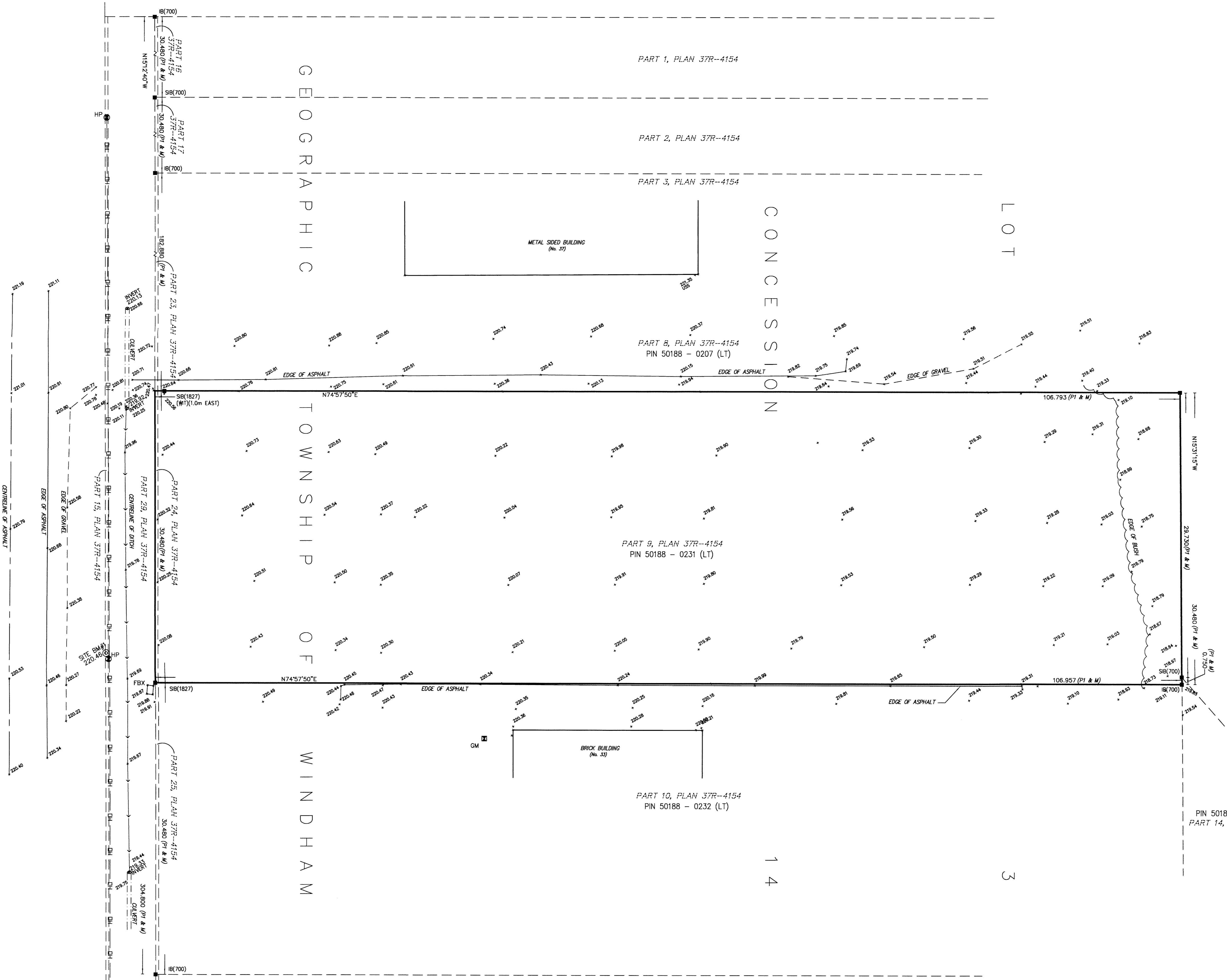
UNDERGROUND SERVICES HAVE NOT BEEN LOCATED  
THE VARIOUS UTILITY LOCATIONS SHOWN ON THIS PLAN ARE BASED ON PHYSICAL LOCATES OF ABOVE GROUND SERVICES.  
PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITY A VERIFICATION LOCATE OF UNDERGROUND SERVICES IS BOTH RECOMMENDED AND ADVISED.

**SITE B.M.#1**

SPIKE IN FACE OF WOOD HYDRO POLE  
ELEV = 220.46  
(GEODETIC)



PARK ROAD  
(20.117m WIDE - REGISTERED PLAN 670)  
(AS WIDENED BY PLAN 37R-4154)  
PIN 50188 - 0212 (LT)



PIN 50188 - 0180 (LT)  
PART 1, PLAN 37R-3971

PIN 50188 - 0232 (LT)  
PART 14, PLAN 37R-4154

(1) - ELEVATIONS ARE REFERRED TO CANADIAN GEODETIC DATUM, NAD83 (CSRS) HTV2.0 (2010)  
(2) - THIS SKETCH WAS COMPLETED FROM FIELD WORK COMPLETED ON THE 12TH DAY OF DECEMBER, 2023

LEGEND		JEWITT AND DIXON LTD.		SHOWN (700)	
2.5cm X 2.5cm X 1.2m STANDARD IRON BARS	SHOWN	—	—	—	—
1.6cm X 1.6cm X 0.6m IRON BARS	SHOWN	—	—	—	—
1.6cm ROUND X 0.6m IRON BARS	SHOWN	—	—	—	—
LOT LINES	SHOWN	—	—	—	—
DEED LINES	SHOWN	—	—	—	—
FENCE LINES	SHOWN	—	—	—	—
CENTRE LINES	SHOWN	—	—	—	—
ROAD LINES	SHOWN	—	—	—	—
FOUND IRON BARS	SHOWN	—	—	—	—
PLANTED IRON BARS	SHOWN	—	—	—	—
WITNESS MONUMENT	SHOWN	—	—	—	—
ORIGIN UNKNOWN	SHOWN	—	—	—	—
PLAN 37R-4154	SHOWN	—	—	—	—
GAS METER	SHOWN	—	—	—	—
HYDRO POLE	SHOWN	—	—	—	—
FIBRE BOX	SHOWN	—	—	—	—
BENCHMARK	SHOWN	—	—	—	—

**CAUTION**  
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PLAN	- J.L.M.
CHECK	- K.H.
CLIENT	- ONE STOP HOME STAGING
<b>23-3947-TOPO</b>	

DATED: DECEMBER 21, 2023



**APPENDIX B**

Sanitary Sewer Design Sheet  
OBC Fixture Unit Calculations



**LONDON LOCATION**  
 1599 Adelaide St. N., Unit 301  
 London, ON N5X 4E8  
 P: 519-471-6667

**KITCHENER LOCATION**  
 132 Queen St. S. Unit 4  
 Kitchener, ON N2G 1V9  
 P: 519-725-8093

www.sbmltd.ca

sbm@sbmltd.ca

### Sanitary Service Design Sheet

**Residential Occupancy:**

Residential (Single Family/Semi-Detached)  
 Commercial = 100 people/hectare  
 Industrial = 120 people/hectare

**\*\*Design Parameters:**

Daily Flow = 55 m3/ha/d  
 Sewage Infiltration = 24192 L/ha/d  
 = 0.28 L/ha/sec  
 Harmon Formula (Peaking Factor) =  $(1 + 14/(4+P^{0.5}))$   
 Modified Harmon Formula Factor = 0.8

Date: December 20, 2024

Job Number: SBM-23-2071

Client: One Stop Home Staging

Project: Proposed Storage Warehouse

Location: 33 Park Rd, Simcoe, ON

Designed By: LA

Reviewed By: BH

Location			Area		Population					Sewage Flows				Sewer design				
Area No.	From MH	To MH	Delta Hectare	Total Hectare	No. of Bedrooms	People Per Unit	People Per Hectare	Delta Pop.	Total Pop.	Harmon Peaking Factor	Infil (L/S)	Sewage (L/S)	Total (L/S)	n	Pipe Slope (%)	Dia. mm	Capacity (L/S)	Velocity (m/s)
Proposed Storage Warehouse	S5	Proposed Warehouse	0.33	0.33			120	40	40	3.47	0.09	0.21	0.30	0.013	1.00%	150	15.24	0.86

Refer to the Site Plan prepared by SBM, dated April 30, 2024

Design Parameters obtained from Section 9 of Norfolk County Design Criteria dated February 2019

## SANITARY SERVICE SIZING CALCULATIONS

DATE: May 9, 2024  
JOB NO.: SBM-23-2071

Client: Shawna Sherk  
Project: One Stop Home Storage Warehouse  
Location: 33 Park Road, Simcoe Ontario

### Sanitary Load Calculation

Existing Building

Fixture Type	Number of Fixture Type	Fixture Units Each (FU)	Total Fixture Units (FU)
Bathroom Group	1	6	6
Lavatory	1	3	3
Domestic Sink	1	3	3
Water Closet	1	4	4
<b>TOTAL (FU):</b>			<b>16</b>

**TOTAL EXISTING AND PROPOSED (FU): 16**

Sanitary Drain: As per OBC Table 7.4.10.8, a 150mm (6") diameter service at minimum 1.0% slope can serve up to 700 Fixture Units. A 150mm diameter service at a 1% slope is proposed. Refer to Engineering Drawing C3, provided separately.

## **APPENDIX C**

Stormwater Management Calculations  
Hydroworks HydroDome HD 4 OGS Sizing Summary  
Hydroworks HydroDome Operations & Maintenance Manual  
EZStorm Product Information  
Tempest Inlet Control Device Product Information



**Stormwater Management Calculations**

DATE:	December 20, 2024
JOB No.:	SBM-23-2071
Client:	One Stop Home Staging
Project:	Proposed Storage Warehouse
Location:	33 Park Rd., Simcoe, ON

**NORFOLK COUNTY- CHICAGO RAINFALL DISTRIBUTION PARAMETERS\***

Return Period (years)	A,B,C Parameters		
	A	B	C
2	529.711	4.501	0.745
5	583.017	3.007	0.703
10	670.324	3.007	0.698
25	721.533	2.253	0.679
50	766.038	1.898	0.668
100	801.041	1.501	0.657

\* Intensity  $i = A / (t + B)^C$  (mm/hr)  
\* Refer to the Town of Norfolk Design Criteria, Section 7.8.02 Rainfall Intensity

**PRE-DEVELOPMENT AREA (A101)**

	Area (m <sup>2</sup> )	C	A°C
Total Area:	302.76		
Building Area:	0.00	0.95	0
Concrete/Asphalt:	0.00	0.95	0
Gravel:	0.00	0.70	0
Landscaped/Open:	302.76	0.20	60.552
Totals:	302.76		60.552
$C_{eq} = \sum(A \cdot C) / \sum(A) =$			<b>0.20</b>

\*Based on the Norfolk County Pre-Consultation Meeting Notes dated June 7, 2023

**Watershed Length =	11.21	m	
**Watershed Slope =	2.85	%	
**Watershed Area =	302.76	m <sup>2</sup>	
Time of Concentration = $t_c = 3.26(1.1-c)L^{0.5} / Sw^{0.33}$		min	*as per Section 7.8.06 of Norfolk County Design Criteria
=	6.95	min	

**Pre-Development Area (Total) : 2 Year Allowable Flows**

Time to concentration $t_c =$	6.95	min
Intensity, $i (@ t_c) =$	86.14	mm/hr
Pre-Development Flow, $Q_p = 2.78 \cdot Ca \cdot C^* \cdot A =$	1.45	L/s

**Pre-Development Area (Total) : 25 Year Allowable Flows**

Time to concentration $t_c =$	6.95	min
Intensity, $i (@ t_c) =$	159.87	mm/hr
Pre-Development Flow, $Q_p = 2.78 \cdot Ca \cdot C^* \cdot A =$	2.96	L/s

**Pre-Development Area (Total) : 100 Year Allowable Flows**

Time to concentration $t_c =$	6.95	min
Intensity, $i (@ t_c) =$	197.11	mm/hr
Pre-Development Flow, $Q_p = 2.78 \cdot Ca \cdot C^* \cdot A =$	4.15	L/s

**COMBINED POST-DEVELOPMENT AREA (A201+U201+U202)**

	Area (m <sup>2</sup> )	C	A°C
Total Area:	3257.50		
Building Area:	524.33	0.95	498.1135
Concrete/Asphalt:	45.94	0.95	43.643
Gravel:	1389.29	0.7	972.503
Landscaped/Open:	1297.94	0.2	259.588
Totals:	3257.5		1773.8475
$C_{eq} = \sum(A \cdot C) / \sum(A) =$			<b>0.54</b>

**PRE-DEVELOPMENT AREA (A102)**

	Area (m <sup>2</sup> )	C	A°C
Total Area:	2954.74		
Building Area:	0.00	0.95	0
Concrete/Asphalt:	0.00	0.95	0
Gravel:	0.00	0.70	0
Landscaped/Open:	2954.74	0.20	590.948
Totals:	2954.74		590.948
$C_{eq} = \sum(A \cdot C) / \sum(A) =$			<b>0.20</b>

**Watershed Length =	95.58	m	
**Watershed Slope =	1.49	%	
**Watershed Area =	2954.74	m <sup>2</sup>	
Time of Concentration = $t_c = 3.26(1.1-c)L^{0.5} / Sw^{0.33}$		min	*as per Section 7.8.06 of Norfolk County Design Criteria
=	25.17	min	

**Pre-Development Area (Total) : 2 Year Allowable Flows**

Time to concentration $t_c =$	25.17	min
Intensity, $i (@ t_c) =$	42.38	mm/hr
Pre-Development Flow, $Q_p = 2.78 \cdot Ca \cdot C^* \cdot A =$	6.96	L/s

**Pre-Development Area (Total) : 25 Year Allowable Flows**

Time to concentration $t_c =$	25.17	min
Intensity, $i (@ t_c) =$	76.17	mm/hr
Pre-Development Flow, $Q_p = 2.78 \cdot Ca \cdot C^* \cdot A =$	13.76	L/s

**Pre-Development Area (Total) : 100 Year Allowable Flows**

Time to concentration $t_c =$	25.17	min
Intensity, $i (@ t_c) =$	92.63	mm/hr
Pre-Development Flow, $Q_p = 2.78 \cdot Ca \cdot C^* \cdot A =$	19.02	L/s

**POST-DEVELOPMENT CONTROLLED AREAS**

**POST-DEVELOPMENT CONTROLLED AREA (A201)**

	Area (m <sup>2</sup> )	C	A°C
Total Area:	2180.46		
Building Area:	524.33	0.95	498.1135
Concrete/Asphalt:	45.94	0.95	43.643
Gravel:	1389.29	0.7	972.503
Landscaped/Open:	220.90	0.2	44.18
Totals:	2180.46		1558.4395
$C_{eq} = \sum(A \cdot C) / \sum(A) =$			<b>0.71</b>

**POST-DEVELOPMENT UNCONTROLLED AREAS**

**POST-DEVELOPMENT AREA U201 (UNCONTROLLED)**

	Area (m <sup>2</sup> )	C	A°C
Total Area:	198.47		
Building Area:	0.00	0.95	0
Concrete/Asphalt:	0.00	0.95	0
Gravel:	0.00	0.70	0
Landscaped/Open:	198.47	0.20	39.694
Totals:	198.47		39.694
$C_{eq} = \sum(A \cdot C) / \sum(A) =$			<b>0.20</b>

**Watershed Length =	22	m	
**Watershed Slope =	2.00	%	
**Watershed Area =	198.47	m <sup>2</sup>	
Time of Concentration = $t_c = 3.26(1.1-c)L^{0.5} / Sw^{0.33}$		min	*as per Section 7.8.06 of Norfolk County Design Criteria
=	10.95	min	

**2 Year Post-Development Uncontrolled Flows**

Time to concentration $t_c =$	10.95	min
Intensity, $i (@ t_c) =$	68.91	mm/hr
Post-Development Flow, $Q_p = 2.78 \cdot Ca \cdot C^* \cdot A =$	0.76	L/s

**25 Year Post-Development Uncontrolled Flows**

Time to concentration $t_c =$	10.95	min
Intensity, $i (@ t_c) =$	125.13	mm/hr
Post-Development Flow, $Q_p = 2.78 \cdot Ca \cdot C^* \cdot A =$	1.52	L/s

**100 Year Post-Development Uncontrolled Flows**

Time to concentration $t_c =$	10.95	min
Intensity, $i (@ t_c) =$	152.81	mm/hr
Post-Development Flow, $Q_p = 2.78 \cdot Ca \cdot C^* \cdot A =$	2.11	L/s

**POST-DEVELOPMENT AREA U202 (UNCONTROLLED)**

	Area (m <sup>2</sup> )	C	A°C
Total Area:	878.57		
Building Area:	0.00	0.95	0
Concrete/Asphalt:	0.00	0.95	0
Gravel:	0.00	0.70	0
Landscaped/Open:	878.57	0.20	175.714
Totals:	878.57		175.714
$C_{eq} = \sum(A \cdot C) / \sum(A) =$			<b>0.20</b>

**Watershed Length =	81	m	
**Watershed Slope =	2.01	%	
**Watershed Area =	878.57	m <sup>2</sup>	
Time of Concentration = $t_c = 3.26(1.1-c)L^{0.5} / Sw^{0.33}$		min	
=	20.94	min	

**2 Year Post-Development Uncontrolled Flows**

Time to concentration $t_c =$	20.94	min
Intensity, $i (@ t_c) =$	47.52	mm/hr
Post-Development Flow, $Q_p = 1.00 \cdot Ca \cdot C^* \cdot A =$	2.32	L/s

**25 Year Post-Development Uncontrolled Flows**

Time to concentration $t_c =$	20.94	min
Intensity, $i (@ t_c) =$	85.33	mm/hr
Post-Development Flow, $Q_p = 1.10 \cdot Ca \cdot C^* \cdot A =$	4.59	L/s

**100 Year Post-Development Uncontrolled Flows**

Time to concentration $t_c =$	20.94	min
Intensity, $i (@ t_c) =$	103.74	mm/hr
Post-Development Flow, $Q_p = 1.20 \cdot Ca \cdot C^* \cdot A =$	6.33	L/s

**FLOW TO THE WEST (PARK ROAD ROW)**

RETURN PERIOD OF STORM	PRE DEVELOPMENT FLOWS (A101) (L/S)	POST DEVELOPMENT UNCONTROLLED FLOWS (U201) (L/S)	ALLOWABLE POST-DEVELOPMENT CONTROLLED FLOWS (L/S)
2-YEAR	1.45	0.76	0.69
25-YEAR	2.96	1.52	1.44
100-YEAR	4.15	2.11	2.04

As flows to the west are reduced under post development conditions, and no other onsite flows discharge towards the west, no associated SWM controls are proposed.

**FLOW TO THE EAST (LONG POINT REGION CONSERVATION AREA)**

RETURN PERIOD OF STORM	PRE DEVELOPMENT FLOWS (A102) (L/S)	POST DEVELOPMENT UNCONTROLLED FLOWS (U202) (L/S)	ALLOWABLE POST-DEVELOPMENT CONTROLLED FLOWS (L/S)
2-YEAR	6.96	2.32	4.64
25-YEAR	13.76	4.59	9.18
100-YEAR	19.02	6.33	12.69

**CALCULATIONS FOR STORAGE A202**

**FLOW RESTRICTOR CALCULATIONS**

Orifice diameter is based on Bernoulli's equation,  $Q=C_d \cdot A \cdot (2gH)^{0.5}$   
 Rearranging,  $A=Q/[C_d \cdot (2gH)^{0.5}]$ , where:  
 Restricted Flow Rate,  $Q = 4.64$  L/s  
 Orifice Coefficient,  $C_d = 0.60$   
 Gravitational Acceleration,  $g = 9.81$  m/s<sup>2</sup>  
 Top of Flooding = 220.30 m  
 Orifice Invert = 219.00 m  
 Hydraulic Head on Orifice,  $H = 1.300$  m  
 Required Cross-Sectional Area,  $A = 0.00150$  m<sup>2</sup>  
 Required Diameter,  $d = ((4 \cdot A) / \pi)^{0.5} = 0.044$  m  
 Therefore, Orifice Flow Restrictor = 44 mm  
 Minimum orifice diameter = 76 mm

Since the calculated orifice diameter is less than the minimum diameter of 76mm, a proprietary flow restriction device is required.

**RAINFALL DATA**

**STORAGE CALCULATIONS**

Rainfall Data - Norfolk County Rainfall Intensity Duration

2 Yr Stm Event		Inflow, $Q_i$ $2.78 \cdot Ca \cdot C \cdot I \cdot A$	Volume In $Q_i \cdot t \cdot 60 / 1000$ (m <sup>3</sup> )	Orifice Restrictor Outflow, $Q_o$ (L/s)	Surface Outflow $Q_o$ (L/s)	Total Release, $Q_o$ (L/s)	Volume Out $Q_o \cdot t \cdot 60 / 1000$ (m <sup>3</sup> )	Difference/ Storage (m <sup>3</sup> )
Duration (min.)	Intensity "I" (mm/hr)							
12.5	64.17	27.80	20.85	4.64	0.00	4.64	3.48	17.37
15	57.94	25.10	22.59	4.64	0.00	4.64	4.18	18.41
30	37.88	16.41	29.54	4.64	0.00	4.64	8.35	21.18
60	23.76	10.30	37.06	4.64	0.00	4.64	16.71	20.36
120	14.56	6.31	45.42	4.64	0.00	4.64	33.41	12.00
180	10.86	4.71	50.82	4.64	0.00	4.64	50.12	0.70
Max. Storage Volume (m <sup>3</sup> ) =								21.18

25 Yr Stm Event		Inflow, $Q_i$ $2.78 \cdot Ca \cdot C \cdot I \cdot A$	Volume In $Q_i \cdot t \cdot 60 / 1000$ (m <sup>3</sup> )	Orifice Restrictor Outflow, $Q_o$ (L/s)	Surface Outflow $Q_o$ (L/s)	Total Release, $Q_o$ (L/s)	Volume Out $Q_o \cdot t \cdot 60 / 1000$ (m <sup>3</sup> )	Difference/ Storage (m <sup>3</sup> )
Duration (min.)	Intensity "I" (mm/hr)							
12.5	116.03	55.30	41.47	4.64	0.00	4.64	3.48	37.99
15	104.33	49.72	44.75	4.64	0.00	4.64	4.18	40.57
30	68.22	32.51	58.52	4.64	0.00	4.64	8.35	50.17
60	43.65	20.80	74.89	4.64	0.00	4.64	16.71	58.19
120	27.61	13.16	94.73	4.64	0.00	4.64	33.41	61.31
180	21.05	10.03	108.35	4.64	0.00	4.64	50.12	58.23
Max. Storage Volume (m <sup>3</sup> ) =								61.31

100 Yr Stm Event		Inflow, $Q_i$ $2.78 \cdot Ca \cdot C \cdot I \cdot A$	Volume In $Q_i \cdot t \cdot 60 / 1000$ (m <sup>3</sup> )	Orifice Restrictor Outflow, $Q_o$ (L/s)	Surface Outflow $Q_o$ (L/s)	Total Release, $Q_o$ (L/s)	Volume Out $Q_o \cdot t \cdot 60 / 1000$ (m <sup>3</sup> )	Difference/ Storage (m <sup>3</sup> )
Duration (min.)	Intensity "I" (mm/hr)							
12.5	141.46	76.61	57.46	4.64	0.00	4.64	3.48	53.98
15	126.98	68.77	61.89	4.64	0.00	4.64	4.18	57.72
30	83.03	44.97	80.94	4.64	0.00	4.64	8.35	72.59
60	53.50	28.97	104.31	4.64	0.00	4.64	16.71	87.60
120	34.20	18.52	133.37	4.64	0.00	4.64	33.41	99.96
180	26.28	14.23	153.69	4.64	0.00	4.64	50.12	103.57
Max. Storage Volume (m <sup>3</sup> ) =								103.57

**Available Underground Storage**

Structure	Area (m <sup>2</sup> )	Max Depth (m)	Volume (m <sup>3</sup> )
CBMH2 (1200mm)	1.13	1.30	1.47
CBMH3 (1200mm)	1.13	1.03	1.16
CB4 (600mmx600mm)	0.36	0.68	0.24

Pipe	Pipe Diameter (mm)	Length (m)	Volume (m <sup>3</sup> )
CBMH2-CBMH3	300	44.4	3.14
CBMH3-CBMH4	300	33.1	2.34

Stormwater Storage	Volume (m <sup>3</sup> )
EZSTORM	86.55
<b>Underground Storage Available (m<sup>3</sup>) = 94.91</b>	

Surface storage drawdown time at 4.64L/s release rate:  
 2 year: 4564.7 seconds (76.1 minutes, 1.27 hours)  
 100 year: 13211.8 seconds (220.2 minutes, 3.67 hours)

**Available Surface Storage**

Location	Area (m <sup>2</sup> )	Max Depth (m)	Volume (m <sup>3</sup> )
CB4	144.40	0.20	14.80

Volume obtained from Civil3D

<b>Surface Storage Available (m<sup>3</sup>) = 14.80</b>	
--	--

<b>Storage Available (m<sup>3</sup>) = 109.71</b>	
<b>Required 2 Year Storage (m<sup>3</sup>) = 21.18</b>	
<b>Required 25 Year Storage (m<sup>3</sup>) = 61.31</b>	
<b>Required 100 Year Storage (m<sup>3</sup>) = 103.57</b>	



## **Hydroworks Sizing Summary**

### **One Stop Home Storage**

**33 Park Road-Simcoe**

**04-30-2024**

### **Recommended Size: HydroStorm HS 4**

**A HydroStorm HS 4 is recommended to provide 80 % annual TSS removal based on a drainage area of .2059 (ha) with an imperviousness of 71 % and Hamilton RBG, Ontario rainfall for the 20 um to 2000 um particle size distribution.**

**The recommended HydroStorm HS 4 treats 97 % of the annual runoff and provides 89 % annual TSS removal for the Hamilton RBG rainfall records and 20 um to 2000 um particle size distribution.**

**The HydroStorm has a headloss coefficient (K) of 1.04. Since a peak flow was not specified, headloss was calculated using the full pipe flow of .07 (m<sup>3</sup>/s) for the given 300 (mm) pipe diameter at .5% slope. The headloss was calculated to be 50 (mm) based on a flow depth of 300 (mm) (full pipe flow).**

**This summary report provides the main parameters that were used for sizing. These parameters are shown on the summary tables and graphs provided in this report.**

**If you have any questions regarding this sizing summary please do not hesitate to contact Hydroworks at 888-290-7900 or email us at [support@hydroworks.com](mailto:support@hydroworks.com).**

The sizing program is for sizing purposes only and does not address any site specific parameters such as hydraulic gradeline, tailwater submergence, groundwater, soils bearing capacity, etc. Headloss calculations are not a hydraulic gradeline calculation since this requires a starting water level and an analysis of the entire system downstream of the HydroStorm .

## TSS Removal Sizing Summary

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

General | Dimensions | Rainfall | Site | TSS PSD | TSS Loading | Quantity Storage | By-Pass | Custom | CAD | Video | Other

Site Parameters  
 Area (ha)   
 Imperviousness (%)

Units  
 U.S.  
 Metric

Rainfall Station  
 Hamilton RBG Ontario  
 2004 To 2013 Rainfall Timestep = 15 min.

Project Title  
 One Stop Home Storage  
 33 Park Road-Simcoe

ETV Lab Testing Results  Post Treatment Recharge

Outlet Pipe  
 Diam. (mm)  Peak Design Flow (m3/s)   
 Slope (%)

**HydroStorm Annual Sizing Results**

Model #	Qlow (m3/s)	Qtot (m3/s)	Flow Capture (%)	TSS Removal (%)
Unavailable	.021	.068	96 %	84 %
HS 4	.035	.068	97 %	89 %
HS 5	.043	.068	98 %	93 %
HS 6	.051	.068	98 %	95 %
Unavailable	.067	.068	98 %	96 %
HS 8	.068	.068	99 %	97 %
HS 10	.068	.068	99 %	98 %
HS 12	.068	.068	99 %	99 %

**Particle Size Distribution**

Size (um)	%	SG
20	20	2.65
60	20	2.65
150	20	2.65
400	20	2.65
2000	20	2.65

**Note: Results vary significantly based on particle size distribution**

## TSS Particle Size Distribution

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

General | Dimensions | Rainfall | Site | TSS PSD | TSS Loading | Quantity Storage | By-Pass | Custom | CAD | Video | Other

**TSS Particle Size Distribution**

Size (um)	%	SG
▶ 20	20	2.65
60	20	2.65
150	20	2.65
400	20	2.65
2000	20	2.65
*		

**Notes:**

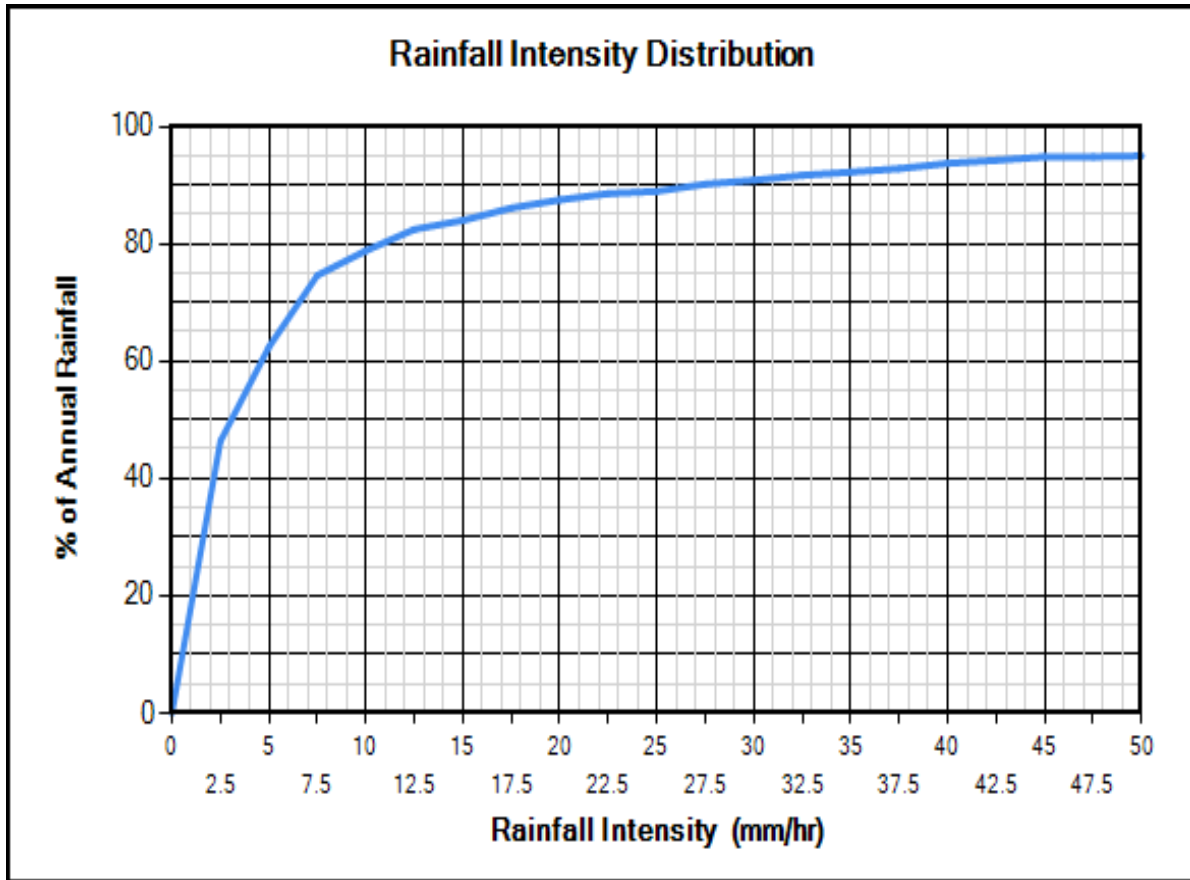
- To change data just click a cell and type in the new value(s)
- To add a row just go to the bottom of the table and start typing.
- To delete a row, select the row by clicking on the first pointer column, then press delete
- To sort the table click on one of the column headings

**TSS Distributions**

ETV Canada / NJDEP  
 Standard HDS Design  
 Alden Laboratory  
 OK110  
 Toronto  
 Ontario Fine  
 Calgary Forebay  
 Kitchener  
 User Defined

**You must select a particle size distribution for TSS to simulate TSS removal**

Water Temp (C)



### Site Physical Characteristics

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

General | Dimensions | Rainfall | Site | TSS PSD | TSS Loading | Quantity Storage | By-Pass | Custom | CAD | Video | Other

**Catchment Parameters**

Width (m)     Imperv. Mannings n     Maintenance Frequency (months)

   Perv Mannings n

Slope (%)     Imp. Depress. Storage (mm)     Perv. Depress. Storage (mm)

**Daily Evaporation (mm/day)**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	2.54	2.54	3.8100...	3.8100...	3.8100...	2.54	2.54	0	0

**Infiltration**

Max. Infiltration Rate (mm/hr)

Min. Infiltration Rate (mm/hr)

Infiltration Decay Rate (1/s)

Infiltration Regen. Rate (1/s)

**Catch Basins**

# of Catch basins    

**Controlled Roof Runoff**

Roof Runoff (m3/s)

## Dimensions And Capacities

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

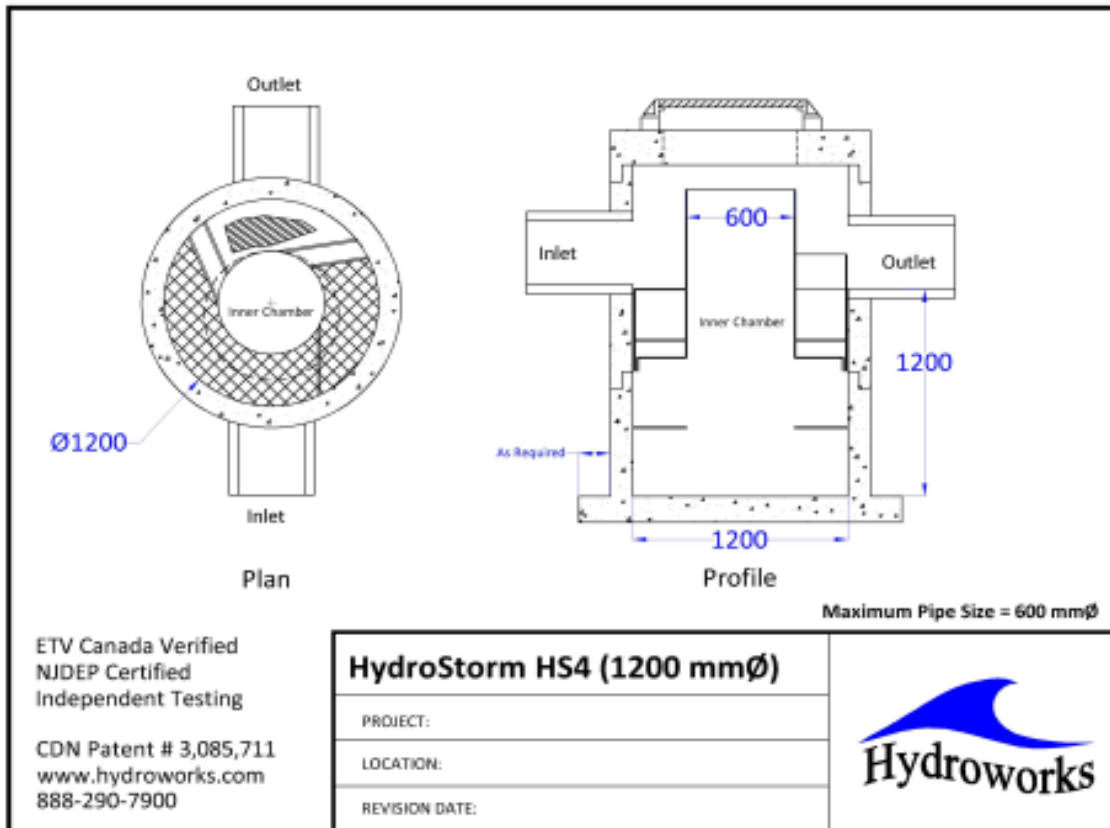
File Product Units CAD Video Help

General Dimensions Rainfall Site TSS PSD TSS Loading Quantity Storage By-Pass Custom CAD Video Other

Dimensions and Capacities					
Model	Diam. (m)	Depth (m)	Float. Vol. (L)	Sediment Vol. (m3)	Total Vol. (m3)
Unavailable	0.91	1.07	185	0.4	0.7
<b>HS 4</b>	<b>1.22</b>	<b>1.22</b>	<b>381</b>	<b>0.9</b>	<b>1.4</b>
HS 5	1.52	1.52	641	1.8	2.8
HS 6	1.83	1.83	1040	3.2	4.8
HS 7	2.13	1.98	1575	4.6	7.1
HS 8	2.44	2.13	2354	6.3	9.9
HS 10	3.05	2.74	4326	13.1	20
HS 12	3.66	3.35	7164	23.7	35.2

Depth = Depth from outlet invert to inside bottom of tank

## Generic HS 4 CAD Drawing



## TSS Buildup And Washoff

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

General | Dimensions | Rainfall | Site | TSS PSD | TSS Loading | Quantity Storage | By-Pass | Custom | CAD | Video | Other

**TSS Buildup**

Power Linear

Exponential

**Street Sweeping**

Efficiency (%)

Start Month

Stop Month

Frequency (days)

Available Fraction

**Soil Erosion**

Add Erosion to TSS

Reset to Default Values

**TSS Washoff**

Power-Exponential

Rating Curve (no upper limit)

**TSS Buildup Parameters**

Limit (kg/ha)

Coeff (kg/ha)

Exponent

**TSS Washoff Parameters**

Coefficient

Exponent

**TSS Buildup**

Based on Area

Based on Curb Length

## Upstream Quantity Storage

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

General | Dimensions | Rainfall | Site | TSS PSD | TSS Loading | Quantity Storage | By-Pass | Custom | CAD | Video | Other

**Quantity Control Storage**

	Storage (m3)	Discharge (m3/s)
▶	0	0
*		

**Notes:**

1. To change data just click a cell and type in the new value (s)
2. To add a row just go to the bottom of the table and start typing.
3. To delete a row, select the row by clicking on the first pointer column, then press delete
4. To sort the table click on one of the column headings

Clear

## Other Parameters

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

General Dimensions Rainfall Site TSS PSD TSS Loading Quantity Storage By-Pass Custom CAD Video Other

Scaling Law

- Peclet Scaling based on diameter x depth
- Peclet Scaling based on surface area (diameter x diameter)

TSS Removal Extrapolation

- Extrapolate TSS Removal for flows lower than tested
- No TSS Removal extrapolation for flows lower than tested
- No TSS Removal extrapolation for lower flows or inter-event periods

Lab Testing

- Use NJDEP Lab Testing Results
- Use ETV Canada Lab Testing Results

Oil / Sediment Storage

- Oil Spill Storage in Pretreatment Area
- Sediment Storage in Pretreatment Area
- 50% Oil Spill / 50% Sediment Storage in Pretreatment Area

TSS Removal Results

- Required TSS Removal
- Choose Model #

TSS Removal Required

TSS Removal (%)  Enter required TSS Removal (%)

## Flagged Issues

None

**Hydroworks Sizing Program - Version 5.8**

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**1-800-290-7900**

**www.hydroworks.com**





Hydroworks® HydroDome

## Operations & Maintenance Manual

Version 1.0

Please call Hydroworks at 888-290-7900 or email us at [support@hydroworks.com](mailto:support@hydroworks.com) if you have any questions regarding the Inspection Checklist. Please email a copy of the completed checklist to Hydroworks at [support@hydroworks.com](mailto:support@hydroworks.com) for our records.

## **Introduction**

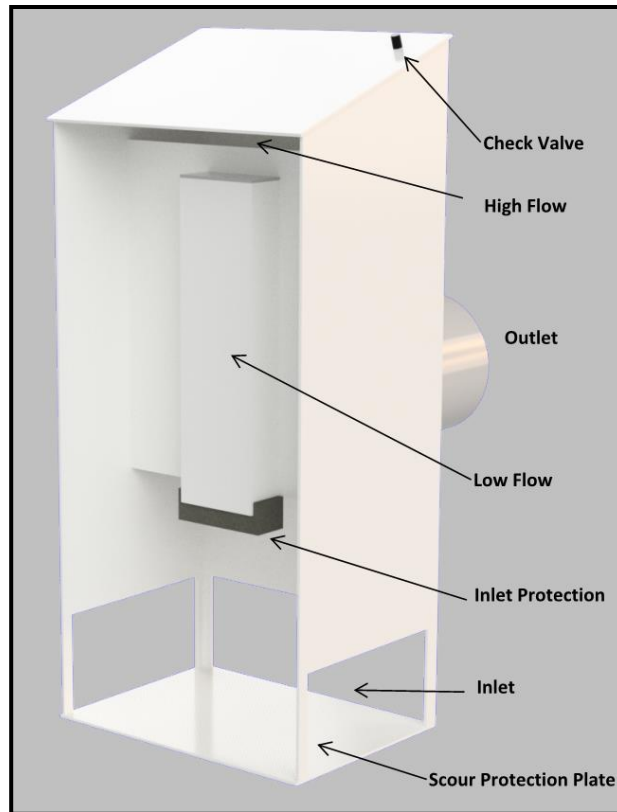
The HydroDome (Figure 1) is a state-of-the-art hydrodynamic separator. HydroDome can be used for water quality and quantity flow control if desired.

Hydrodynamic separators remove solids, debris and lighter than water (oil, trash, floating debris) pollutants from stormwater. Hydrodynamic separators and other water quality measures are mandated by regulatory agencies (Town/City, State, Federal Government) to protect storm water quality from pollution generated by urban development (traffic, people) as part of new development permitting requirements.

As storm water treatment structures fill up with pollutants they become less and less effective in removing new pollution. Therefore, it is important that storm water treatment structures be maintained on a regular basis to ensure that they are operating at optimum performance. The HydroDome is no different in this regard and this manual has been assembled to provide the owner/operator with the necessary information to inspect and coordinate maintenance of their HydroDome.



**Figure 1. Hydroworks HydroDome**



**Figure 2 HydroDome Internal Components**

### **Inspection**

### **Procedure**

### **Floatables**

A visual inspection can be conducted for floatables by removing the cover/grate and looking down into the separator.

### **TSS/Sediment**

Inspection for TSS build-up can be conducted using a Sludge Judge®, Core Pro®, AccuSludge® or equivalent sampling device that allows the measurement of the depth of TSS/sediment in the unit. These devices typically have a ball valve at the bottom of the tube that allows water and TSS to flow into the tube when lowering the tube into the unit. Once the unit touches the bottom of the device, it is quickly pulled upward such that the water and TSS in the tube forces the ball valve closed allowing the user to see a full core of water/TSS in the unit. Several readings (2 or 3) should be made at different locations of the structure to ensure that an accurate TSS depth measurement is recorded.

## Operation

The water level during periods without rain should be near the outlet invert of the structure. If the water level remains near the top of the HydroDome this may suggest that there is an obstruction downstream of the HydroDome or that the inlet protection at the HydroDome may need to be cleaned.

## **Frequency**

### Construction Period

The HydroDome separator should be inspected every four weeks and after every large storm (over 0.5" (12.5 mm) of rain) during the construction period.

### Post-Construction Period

The Hydroworks HydroDome separator should be inspected during the first year of operation for normal stabilized sites (grassed or paved areas). If the unit is subject to oil spills or runoff from unstabilized areas (storage piles, exposed soils), the HydroDome separator should be inspected more frequently (4 times per year). The initial annual inspection will indicate the required frequency of inspection and maintenance if the unit was maintained after the construction period.

## **Reporting**

Reports should be prepared as part of each inspection and include the following information:

1. Date of inspection
2. GPS coordinates of Hydroworks unit
3. Time since last rainfall
4. Date of last inspection
5. Installation deficiencies (missing parts, incorrect installation of parts)
6. Structural deficiencies (concrete cracks, broken parts)
7. Operational deficiencies (leaks, elevated water level)
8. Presence of oil sheen or depth of oil layer
9. Estimate of depth/volume of floatables (trash, leaves) captured
10. Sediment depth measured
11. Recommendations for any repairs and/or maintenance for the unit
12. Estimation of time before maintenance is required if not required at time of inspection

A sample inspection checklist is provided at the end of this manual.



## **Maintenance**

### **Procedure**

The Hydroworks HydroDome unit is typically maintained using a vacuum truck. There are numerous companies that can maintain the HydroDome separator. Maintenance with a vacuum truck involves removing all of the water and sediment together. The water is then separated from the sediment on the truck or at the disposal facility.

The area around the HydroDome provides clear access to the bottom of the structure (Figure 3). This is the area where a vacuum hose would be lowered to clean the unit.

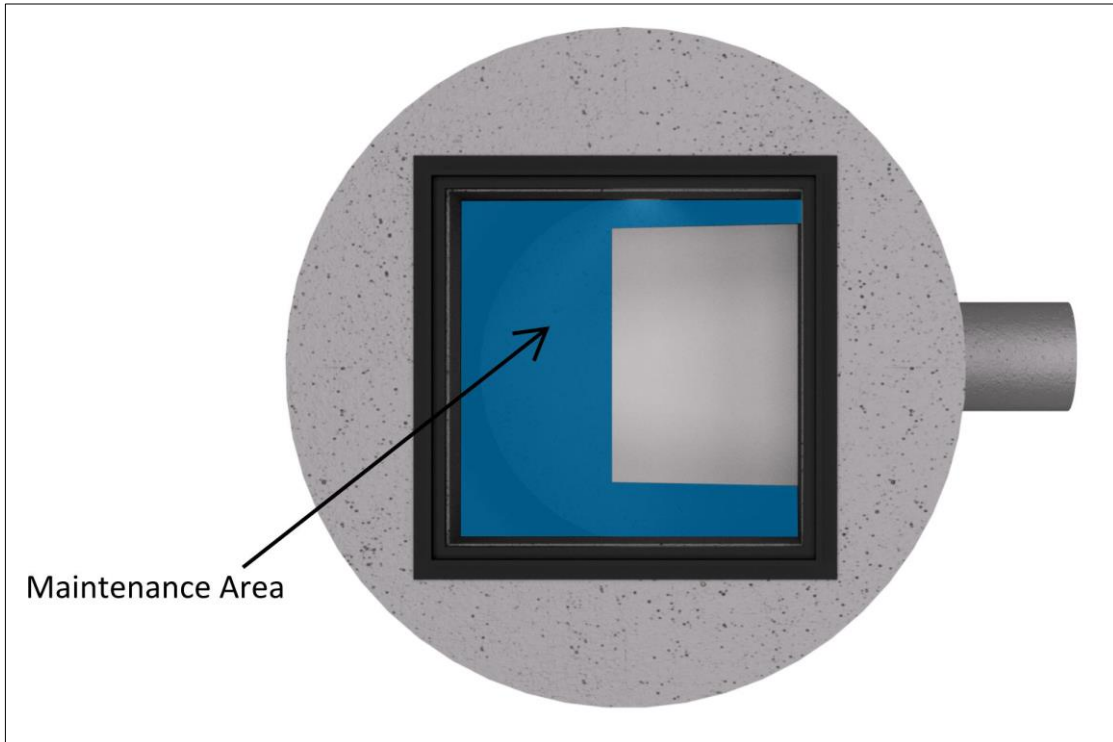
In instances where a vacuum truck is not available other maintenance methods (i.e. clamshell bucket) can be used, but they will be less effective. If a clamshell bucket is used the water must be decanted prior to cleaning since the sediment is under water and typically fine in nature.

The local municipality should be consulted for the allowable disposal options for both water and sediments prior to any maintenance operation. Once the water is decanted the sediment can be removed with the clamshell bucket.

Maintenance of a Hydroworks HydroDome unit will typically take 1 to 2 hours depending on size of unit and using a vacuum truck. Cleaning may take longer for other cleaning methods (i.e. clamshell bucket).

Inlet protection (Figure 2) in the form of a coarse foam screen is located at the inlet to the siphon opening in the HydroDome to ensure the opening does not become clogged. Although it is not anticipated that the inlet protection will have to be replaced on a regular basis since the inlet protection is protected by the submerged entrance to the HydroDome and is backflushed by the siphon after each storm, the inlet protection should be checked each time the HydroDome is inspected or maintained. The inlet protection is removable and should be rinsed with water to ensure any debris caught on the protection is discarded. Unless damaged, the inlet protection can be reinstalled. A replacement piece can be bought through Hydroworks and/or retail stores. Hydroworks can provide information on the inlet protection and where it can be bought. A sign that the inlet protection needs cleaning/replacement would be a water level near the crown of the outlet pipe in the structure during periods with no flow (i.e. unit does not drain down to the pipe invert).





**Figure 3. HydroDome Maintenance Access**

## **Frequency**

### Construction Period

A HydroDome separator can fill with construction sediment quickly during the construction period. The HydroDome must be maintained during the construction period when the depth of TSS/sediment reaches 24" (600 mm). It must also be maintained during the construction period if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the area of the separator

The HydroDome separator should be maintained at the end of the construction period, prior to operation for the post-construction period.

### Post-Construction Period

The maintenance for sediment accumulation is required if the depth of sediment is 1 ft or greater in separators with standard water (sump) depths (Table 1).

There will be designs with increased sediment storage based on specifications or site-specific criteria. Please contact Hydroworks at 888-290-7900 to inquire whether your HydroDome was designed with extra sump depth to extend the frequency of maintenance.



The HydroDome separator must also be maintained if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 75% of the water surface of the separator.

**Table 1 Standard Dimensions for Hydroworks HydroDome Models**

<b>Model</b>	<b>Diameter ft (mm)</b>	<b>Maintenance Sediment Depth in (mm)</b>
HD 3	3 (900)	12 (300)
HD 4	4 (1200)	12 (300)
HD 5	5 (1500)	12 (300)
HD 6	6 (1800)	12 (300)
HD 7	7 (2100)	12 (300)
HD 8	8 (2400)	12 (300)
HD 10	10 (3000)	12 (300)
HD 12	12 (3600)	12 (300)



# HYDRODOME INSPECTION SHEET

**Date**  
**Date of Last Inspection** \_\_\_\_\_

**Site**  
**City** \_\_\_\_\_  
**State** \_\_\_\_\_  
**Owner** \_\_\_\_\_

**GPS Coordinates** \_\_\_\_\_

**Date of last rainfall** \_\_\_\_\_

<b>Site Characteristics</b>	<b>Yes</b>	<b>No</b>
Soil erosion evident	<input type="checkbox"/>	<input type="checkbox"/>
Exposed material storage on site	<input type="checkbox"/>	<input type="checkbox"/>
Large exposure to leaf litter (lots of trees)	<input type="checkbox"/>	<input type="checkbox"/>
High traffic (vehicle) area	<input type="checkbox"/>	<input type="checkbox"/>

<b>HydroDome</b>	<b>Yes</b>	<b>No</b>
Obstructions in the inlet	<input type="checkbox"/> *	<input type="checkbox"/>
Damage to HydroDome (cracked, broken, loose pieces)	<input type="checkbox"/> **	<input type="checkbox"/>
Improperly installed outlet pipe	<input type="checkbox"/> ***	<input type="checkbox"/>
Internal component damage (cracked, broken, loose pieces)	<input type="checkbox"/> **	<input type="checkbox"/>
Floating debris in the separator (oil, leaves, trash)	<input type="checkbox"/>	<input type="checkbox"/>
Large debris visible in the separator	<input type="checkbox"/> *	<input type="checkbox"/>
Concrete cracks/deficiencies	<input type="checkbox"/> ***	<input type="checkbox"/>
Exposed rebar	<input type="checkbox"/> **	<input type="checkbox"/>
Raised water level (water level close to top of HydroDome)	<input type="checkbox"/> ***	<input type="checkbox"/>
Water seepage (water level not at outlet pipe invert)	<input type="checkbox"/> ***	<input type="checkbox"/>
Water level depth below outlet pipe invert _____"		

<b>Routine Measurements</b>			
Floating debris depth	<input type="checkbox"/> < 0.5" (13mm)	<input type="checkbox"/> >0.5" 13mm)	<input type="checkbox"/> *
Floating debris coverage	<input type="checkbox"/> < 75% of surface area	<input type="checkbox"/> > 75% surface area	<input type="checkbox"/> *
Sludge depth	<input type="checkbox"/> < 12" (300mm)	<input type="checkbox"/> > 12" (300mm)	<input type="checkbox"/> *

- \* Maintenance required
- \*\* Repairs required
- \*\*\* Further investigation is required

Note: Inspections should not be made within 24 hours of a storm to allow the water to drain from the structure to assess a raised water level or water level seepage









## Hydroworks® HydroDome

### One Year Limited Warranty

Hydroworks, LLC warrants, to the purchaser and subsequent owner(s) during the warranty period subject to the terms and conditions hereof, the Hydroworks HydroDome to be free from defects in material and workmanship under normal use and service, when properly installed, used, inspected and maintained in accordance with Hydroworks written instructions, for the period of the warranty. The standard warranty period is 1 year.

The warranty period begins once the separator has been manufactured and is available for delivery. Any components determined to be defective, either by failure or by inspection, in material and workmanship will be repaired, replaced or remanufactured at Hydroworks' option provided, however, that by doing so Hydroworks, LLC will not be obligated to replace an entire insert or concrete section, or the complete unit. This warranty does not cover shipping charges, damages, labor, any costs incurred to obtain access to the unit, any costs to repair/replace any surface treatment/cover after repair/replacement, or other charges that may occur due to product failure, repair or replacement.

This warranty does not apply to any material that has been disassembled or modified without prior approval of Hydroworks, LLC, that has been subjected to misuse, misapplication, neglect, alteration, accident or act of God, or that has not been installed, inspected, operated or maintained in accordance with Hydroworks, LLC instructions and is in lieu of all other warranties expressed or implied. Hydroworks, LLC does not authorize any representative or other person to expand or otherwise modify this limited warranty.

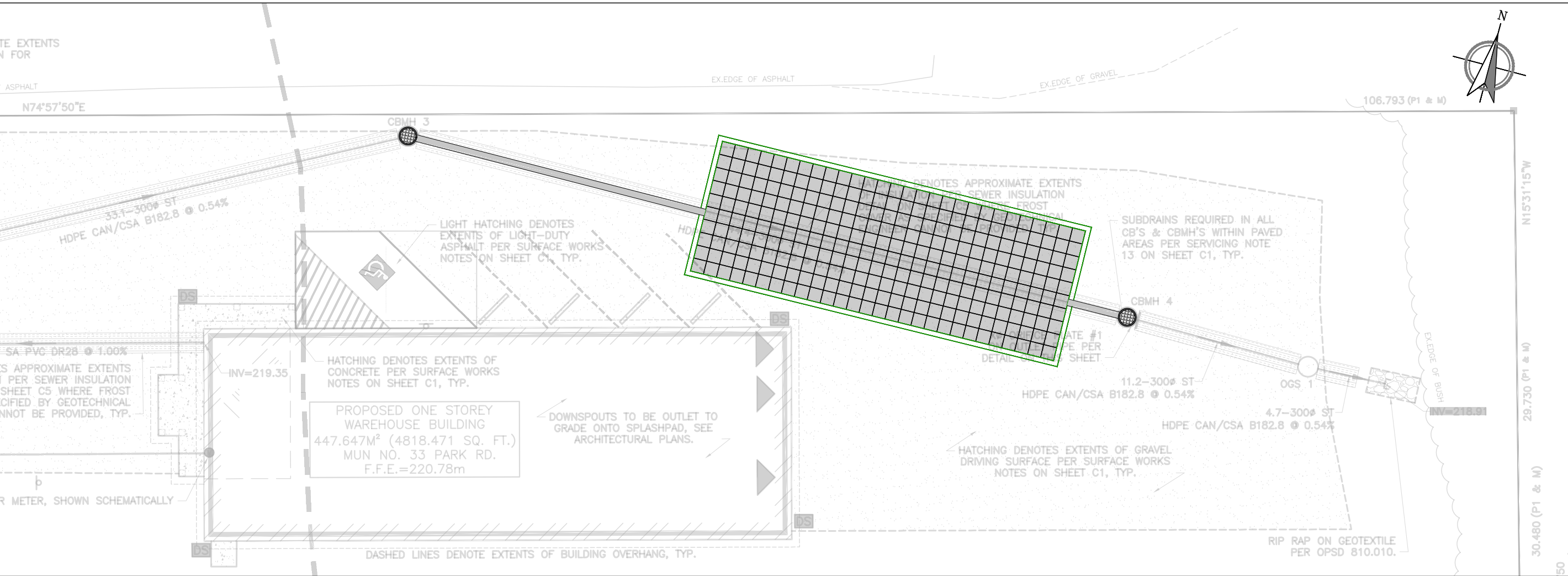
The owner shall provide Hydroworks, LLC with written notice of any alleged defect in material or workmanship including a detailed description of the alleged defect upon discovery of the defect. Hydroworks, LLC should be contacted at 136 Central Ave., Clark, NJ 07066 or any other address as supplied by Hydroworks, LLC. (888-290-7900).

This limited warranty is exclusive. There are no other warranties, express or implied, or merchantability or fitness for a particular purpose and none shall be created whether under the uniform commercial code, custom or usage in the industry or the course of dealings between the parties. Hydroworks, LLC will replace any goods that are defective under this warranty as the sole and exclusive remedy for breach of this warranty.

Subject to the foregoing, all conditions, warranties, terms, undertakings or liabilities (including liability as to negligence), expressed or implied, and howsoever arising, as to the condition, suitability, fitness, safety, or title to the Hydroworks HydroDome are hereby negated and excluded and Hydroworks, LLC gives and makes no such representation, warranty or undertaking except as expressly set forth herein. Under no circumstances shall Hydroworks, LLC be liable to the Purchaser or to any third party for product liability claims; claims arising from the design, shipment, or installation of the HydroDome, or the cost of other goods or services related to the purchase and installation of the HydroDome. For this Limited Warranty to apply, the HydroDome must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Hydroworks' written installation instructions.

Hydroworks, LLC expressly disclaims liability for special, consequential or incidental damages (even if it has been advised of the possibility of the same) or breach of expressed or implied warranty. Hydroworks, LLC shall not be liable for penalties or liquidated damages, including loss of production and profits; labor and materials; overhead costs; or other loss or expense incurred by the purchaser or any third party. Specifically excluded from limited warranty coverage are damages to the HydroDome arising from ordinary wear and tear; alteration, accident, misuse, abuse or neglect; improper maintenance, failure of the product due to improper installation of the concrete sections or improper sizing; or any other event not caused by Hydroworks, LLC. This limited warranty represents Hydroworks' sole liability to the purchaser for claims related to the HydroDome, whether the claim is based upon contract, tort, or other legal basis.

# ONE STOP HOME STAGING, BRENTFORD, ON EZSTORM SYSTEM



Project No: 240416-05

CONTACTS			
SITE CONTACT	PARTH PUSHKARNA	647 278-7339	ppushkarna@brunet.cc
TECHNICAL SUPPORT	NEXTSTORM	450 322-6260	info@nextstorm.ca
SALES REPRESENTATIVE	PARTH PUSHKARNA	647 278-7339	ppushkarna@brunet.cc

1
OVERLAY  
01
SCALE 1:250

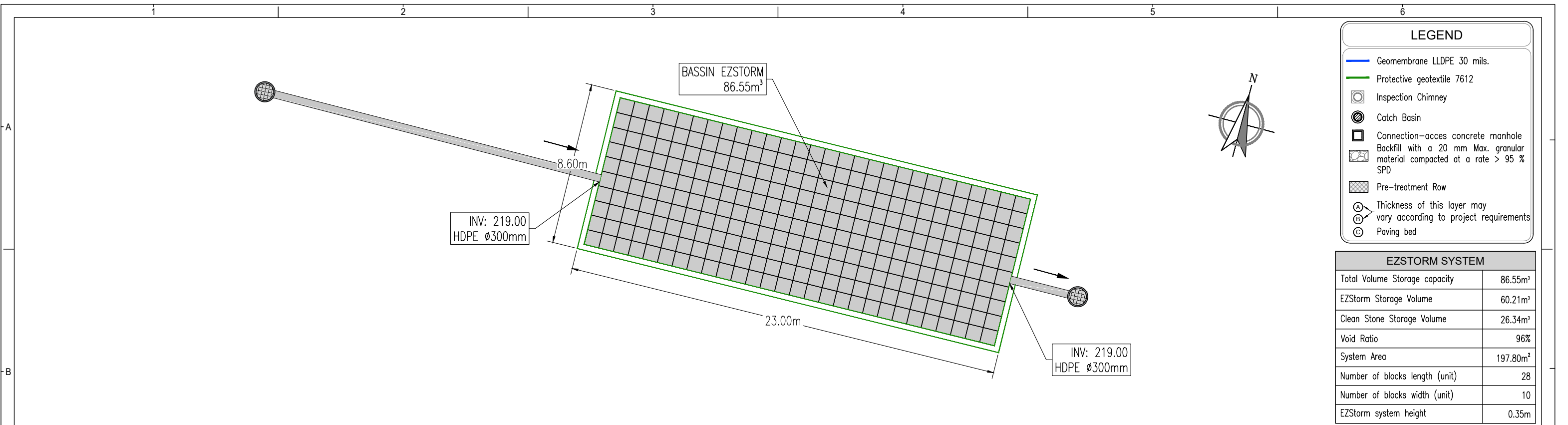
**NOTE :**

- THESE DRAWINGS MAY CONTAIN COMPONENTS, INCLUDING BUT NOT LIMITED TO, MANHOLES, CATCH BASINS, STORM PIPES, FITTINGS, MANIFOLDS, CASTINGS OR OTHER NECESSARY APPURTENANCES THAT MAY NOT BE SUPPLIED BY NEXTSTORM. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR SUPPLIER TO CONFIRM THE MATERIAL PROVIDED BEFORE INSTALLATION.
- THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE EZSTORM SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE CONTRACTOR OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE NEXTSTORM PRODUCTS ARE DESIGNED IN ACCORDANCE WITH NEXTSTORMS MINIMUM REQUIREMENTS. NEXTSTORM DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

DRAWING INDEX	SHEET N°
TITLE	
COVER SHEET AND SYSTEM OVERLAY	.....1 of 6
SYSTEM LAYOUT - PLAN AND PROFILE	.....2 of 6
VOLUME CALCULATION SHEET	.....3 of 6
STANDARD BACKFILL REQUIREMENTS	.....4 of 6
LIST OF MATERIALS	.....5 of 6
ACCESSORIES	.....6 of 6



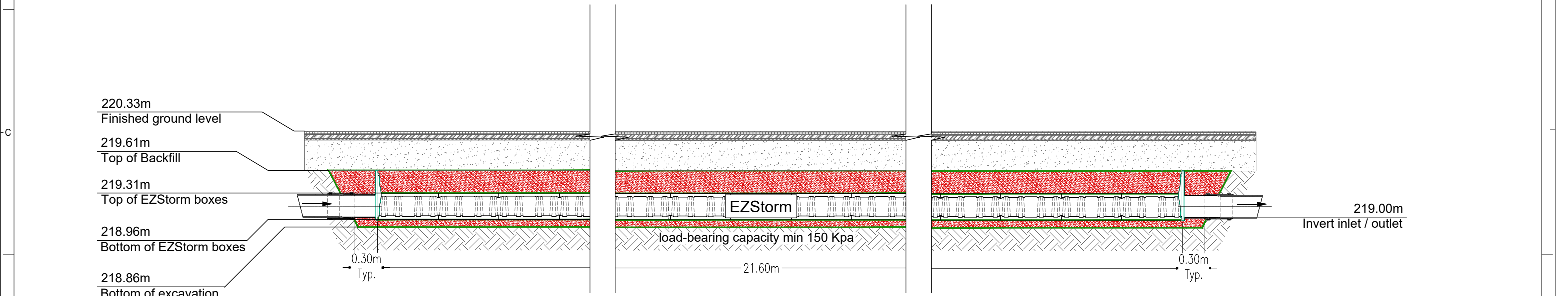
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Toll free : 1 877 565-6260  
www.nextstorm.ca



LEGEND	
	Geomembrane LLDPE 30 mils.
	Protective geotextile 7612
	Inspection Chimney
	Catch Basin
	Connection-acces concrete manhole
	Backfill with a 20 mm Max. granular material compacted at a rate > 95 % SPD
	Pre-treatment Row
	Thickness of this layer may vary according to project requirements
	Paving bed

EZSTORM SYSTEM	
Total Volume Storage capacity	86.55m³
EZStorm Storage Volume	60.21m³
Clean Stone Storage Volume	26.34m³
Void Ratio	96%
System Area	197.80m²
Number of blocks length (unit)	28
Number of blocks width (unit)	10
EZStorm system height	0.35m

1  
02 1/2 LAYER - PLAN VIEW  
SCALE 1:200



2  
02 SECTION A  
SCALE 1:50

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PROJECT:  
**ONE STOP HOME STAGING,  
BRENTFORD, ON**

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SYSTEM LAYOUT-PLAN AND SECTION

EZStorm System-86.55m³

N°.	REVISION	DATE	BY
A	ISSUED FOR APPROVAL	30/04/2024	S.M.
B	ISSUED FOR APPROVAL	01/05/2024	S.M.

PROJECT N°: <b>240416-05</b>	DATE: <b>30/04/2024</b>
DRAWN BY: <b>S.M.</b>	CHECKED BY: <b>S.K.</b>
SCALE: <b>N.T.S.</b>	SHEET N°: <b>2/6</b>

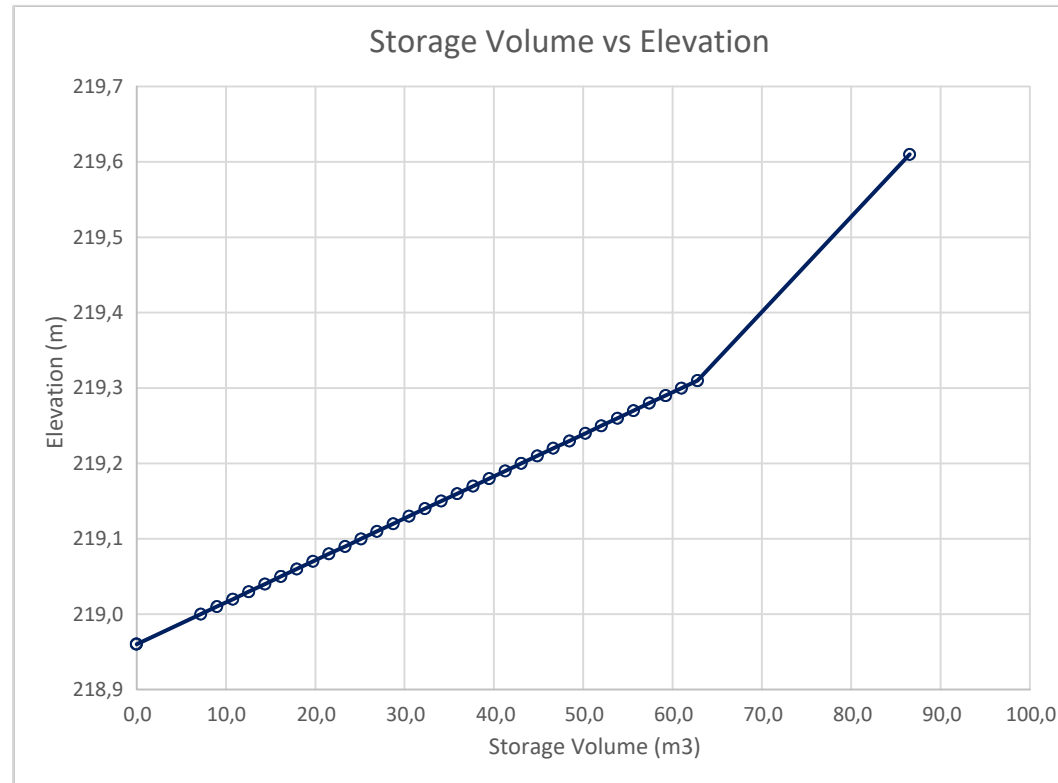
PROJECT INFORMATION			
Project Name	ONE STOP HOME STAGING, BRANTFORD, ON		
Project Number	240416-05	Date	1/05/2024

SYSTEM CHARACTERISTICS			
Model	EZStorm		
	Number of Boxes (unit)	Dimension / Box (m)	Dimensions EZStorm (m)
Height	0,53	0,66	0,35
Length	28,00	0,80	22,40
Width	10,00	0,80	8,00

EZStorm Area (m2)	179,2
EZStorm Area + Clear Stone (m2)	197,8
Volume EZStorm (m3)	86,6
Invert (m)	219,00
Top (m)	220,33

Storage Volumes EZStorm (m3)	60,2	Storage in Stone (m3)	26,3
Storage Void Ratio	96%	Storage Void Ratio	40%

System's Height (m)	Storage Volume (m3)	Elevation (m)	Notes
0,65	86,55	219,610	Top Clear Stone
0,35	62,82	219,310	Top of Chambers
0,34	61,02	219,300	
0,33	59,23	219,290	
0,32	57,43	219,280	
0,31	55,64	219,270	
0,30	53,84	219,260	
0,29	52,05	219,250	
0,28	50,25	219,240	
0,27	48,46	219,230	
0,26	46,66	219,220	
0,25	44,87	219,210	
0,24	43,07	219,200	
0,23	41,28	219,190	
0,22	39,48	219,180	
0,21	37,69	219,170	
0,20	35,89	219,160	
0,19	34,10	219,150	
0,18	32,30	219,140	
0,17	30,51	219,130	
0,16	28,72	219,120	
0,15	26,92	219,110	
0,14	25,13	219,100	
0,13	23,33	219,090	
0,12	21,54	219,080	
0,11	19,74	219,070	
0,10	17,95	219,060	
0,09	16,15	219,050	
0,08	14,36	219,040	
0,07	12,56	219,030	
0,06	10,77	219,020	
0,05	8,97	219,010	
0,04	7,18	219,000	Invert
0,00	0,00	218,960	Bottom of chambers



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PROJECT:

**ONE STOP HOME STAGING,  
BRENTFORD, ON**

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VOLUME CALCULATION SHEET

EZStorm System-86.55m<sup>3</sup>

N°.	REVISION	DATE	BY
A	ISSUED FOR APPROVAL	30/04/2024	S.M.
B	ISSUED FOR APPROVAL	01/05/2024	S.M.

PROJECT N°: **240416-05** DATE: **30/04/2024**

DRAWN BY: **S.M.** CHECKED BY: **S.K.**

SCALE: **N.T.S.** SHEET N°: **3/6**

Recommended backfill materials					
	Layer layout	Description		Density requirements	
		Circulation Load 20T / axle	Traffic free	Circulation Load 20T / axle	Traffic free
A	Backfill located above layer B	Roadway structure	Topsoil backfill with a grain size of 32 mm	According to roadway structure specifications	No compaction necessary
B	Top Embankment: Embankment located directly above the EZStorm Chambers and below Layer A	Backfill with a 20 mm Max. granular material compacted at a rate > 95 % SPD (3/4 (20mm) granular material, clean stone or sand)		The first layer of backfill must be carried out with a loader or a mini crawler excavator. To use mini excavators of 15 tonnes maximum (chain, 4 wheels, twin tyres), a 300 mm layer of compacted backfill must be spread over the retention basin (watch out for the formation of ruts). Avoid steering maneuvers at this stage of construction	
C	Lateral backfill: Located between the side faces of the EZStorms and the limits of the excavated volume	Frost-resistant granular earthwork material with a maximum grain diameter of 20 mm per 300 mm layer and compacted at a rate > 96% MP		This layer of backfill must be carried out with a loader or a mini crawler excavator. Spread the backfill in even and compact layers of 300 mm maximum.	
D	Laying bed: located under the EZStorm blocks, between the foundation floor and the base of the blocks.	Subgrade granular material 100 mm Min. 3/4 (20mm) granular material, clean stone or sand to 96% MP		Use a plate compactor or roller to get a flat surface	

**GENERAL NOTES**

- Coordinate with manufacturer's representative/distributor for pre-construction meeting and site inspection during installation.
- Engineering drawings supersede all provided documentation. Refer to site engineers for additional instructions.
- Coordinate EZStorm installation with other site activities
- All dimensions are in meters unless noted otherwise
- The sub-grade and side backfill to be compacted to 96% SPD or as directed by the qualified engineer.
- Confirm geotechnical soil evaluation by a qualified engineer to determine suitability of structural installation
- Confirm for buried underground utilities including gas, electrical, pipelines or conduits
- When installed in conformance to the installation guidelines, EZStorm can handle standard CL-625 truck loading. For non-standard loads contact manufacturer's representative/distributor
- Protect the installation against damage with construction tape, fencing or other means until the construction is complete.
- Ensure that construction follows applicable federal, provincial, municipal and local laws, ordinances, regulations and safety requirements.
- Vehicular loading is prohibited until backfilled as per manufacturer's installation guidelines. The use of equipment over EZStorm chambers is limited:
  - No equipment is allowed on bare chambers.
  - No rubber-tired loader, dump truck, or excavators are allowed until proper fill depths are reached in accordance with the construction guide.
  - Weight limits for construction equipment can be found in the construction guide.
  - Full 900 mm (36") of stabilized cover materials over the chambers is required for dump truck travel or dumping.
  - Please contact with factory representative for further clarification for PVC liner

**NOTES FOR BIDDING AND INSTALLATION**

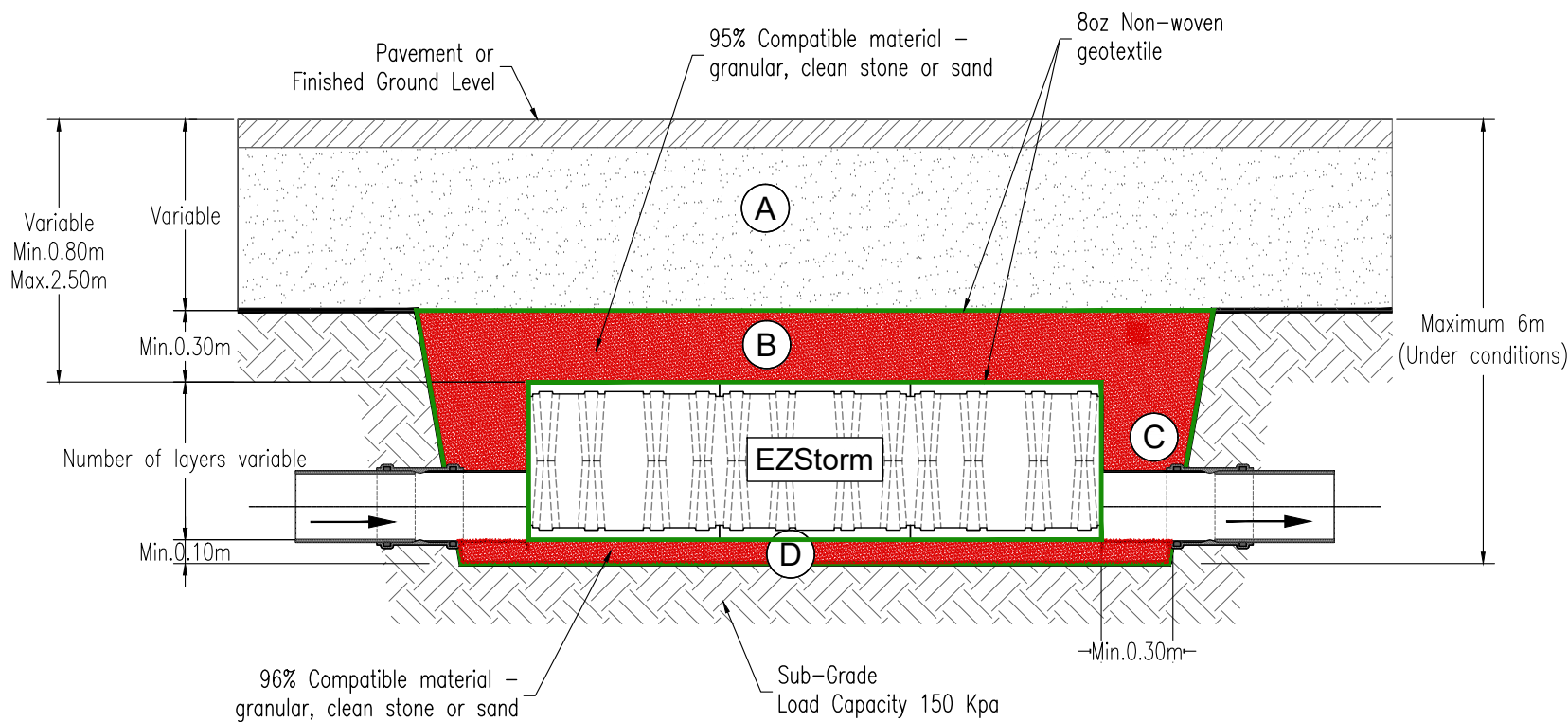
- Contractors are expected to comprehend and use the most current installation instructions prior to beginning a system installation. For the most current instructions, contact NEXTSTORM at 1 877 565-6260 or visit [www.nextstorm.ca](http://www.nextstorm.ca).
- Contact NEXTSTORM at least two weeks prior to system installation to arrange for a pre-construction meeting.
- Use EZStorm installation instructions as a guideline only for minimum/maximum requirements. Actual design may vary. Refer to approved construction drawings for job-specific details. Engineering drawings supersede all provided documentation.
- The foundation stone shall be leveled and compacted prior to chamber installation.
- Any discrepancies with the system sub-grade soil's bearing capacity must be reported to the geotechnical engineer.
- Contractor to refer to EZStorm installation instructions concerning vehicular traffic. Responsibility for preventing vehicles that exceed requirements specified from traveling across or parking over the chamber system lies solely with the contractor throughout the entire site construction process. The placement of warning tape, temporary fencing, and/or appropriately located signs is highly recommended.
- Traffic of installation equipment or other vehicular traffic over top of the EZStorm stormwater system is strictly restricted and prohibited until satisfactory cover and compaction is achieved according to manufacturer's installation instructions.
- Erosion and sediment-control measures must meet local codes and the design engineer's specifications throughout the entire site construction process.
- EZStorm systems must be designed and installed in accordance with NEXTSTORM's minimum requirements. Failure to do so will void the limited warranty.

**CHECK - REQUIRED MATERIALS AND EQUIPMENT**

- All EZStorm chambers and accessories as specified in the engineer's plans including non-woven geotextile, connectors, inspection chimneys, sidewalls, adapters, riser and liner, where applicable.
- Reciprocating saw or router
- Transit or laser level measuring device
- Compaction equipment with maximum gross vehicle weight of 12,000 lbs (5,440 kgs).
- Acceptable fill material as shown in installation instructions.
- Quantities for geosynthetic are approximate and may vary based on overlap, wastage.
- Check EZStorm chambers for damage prior to installation. Do not use damaged chambers, contact your supplier immediately to report damage or packing-list discrepancies.

**GENERAL REMARKS BACKFILL MATERIAL:**

- The descriptions given in the table as well as in the figure refer only to the grain size. The aggregates used must be clean, crushed and angular.
- The contractor must verify all dimensions on site, ensure that they are consistent with other disciplines and, if necessary, inform the site engineer of the presence of inconsistencies.
- The ground must have a minimum bearing capacity of 150 KPA.
- The information mentioned above as well as on the cut must be checked on site by a qualified person.



**1**  
**04** SECTION VIEW TYP.  
SCALE 1:30

**NOTES**

- The site design engineer is responsible for assessing the bearing resistance (allowable bearing capacity) of the subgrade soils and the depth of foundation stone with consideration for the range of expected soil moisture conditions.
- Perimeter stone must be extended horizontally to the excavation wall for both vertical and sloped excavation walls.
- H-20 rated loading at a minimum cover of 800mm on top of the ezstorm system.



PROJECT:  
**ONE STOP HOME STAGING,  
BRENTFORD, ON**

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TYPICAL EZSTORM CROSS SECTION AND GENERAL NOTES

**EZStorm System**

N°.	REVISION	DATE	BY
A	ISSUED FOR APPROVAL	30/04/2024	S.M.
B	ISSUED FOR APPROVAL	01/05/2024	S.M.

PROJECT N°: **240416-05** DATE: **30/04/2024**

DRAWN BY: **S.M.** CHECKED BY: **S.K.**

SCALE: **N.T.S.** SHEET N°: **4/6**

List of materials			
ARTICLE CODE	DESCRIPTION	DIMENSIONS	Qty
EZ-SHD	EZStorm - half block 2 units/block (units)	800 x 800 x 350 mm	280
FL-EZSHD	EZSTORM Sidewall grid (units)	800 x 800 x 660 mm	0
FL-EZSHD 1/2	EZSTORM Sidewall grid for half block (units)	800 x 800 x 330 mm	74
PR-EZSHD	EZSTORM HD Cover plate	800 x 800 mm	
CONNECTEUR EZS-1	EZSTROM Single layer-connector (units)	-	0
CONNECTEUR EZS-2	EZSTROM Multi layer-connector (units)	-	0
R-P	EZSTORM Pre-treatment row (units)	0.8m / unit	0
<b>EZSTORM adapters</b>			
FC-300mm-PVC	EZSTORM Adapter 300 mm PVC (units)	800 x 800 x 660 mm	0
FC-375mm-PVC	EZSTORM Adapter 375 mm PVC (units)	801 x 800 x 660 mm	0
FC-450mm-PVC	EZSTORM Adapter 450 mm PVC (units)	802 x 800 x 660 mm	2
FC-450mm-TBA	EZSTORM Adapter 450 mm PCP (units)	802 x 800 x 660 mm	0
FC-525mm-PVC	EZSTORM Adapter 525 mm PVC (units)	803 x 800 x 660 mm	0
FC-600mm-PEHD	EZSTORM Adapter 600 mm HDPE (units)	804 x 800 x 660 mm	0
<b>Inspection Chimney</b>			
EZSTORM-ACCES	EZSTORM Inspection block half-elements with opening (units)	800 x 800 x 350 mm	0
PP-EZSTORM	EZSTORM Inspection block half-elements with positioning plate (units)	800 x 800 x 350 mm	0
REHAUSSE-PEHD-600	EZSTORM Extension Pipe - Chimney (units)	Ø 600mm - 1.5 m /unit	0
Dalle-répartition	EZSTORM Support concrete ring (units)	DE x DI : Ø1200 x Ø750 mm	0
OPSD401.01ST	Cast iron frame and cover (unit)	Ø750 mm, Ø29-1/2 type Standard	0
OPSD401.01ST	Catch bassin Frame and grates (units)	Ø750 mm, Ø29-1/2 type Standard	0
<b>Rectangular concrete inspection manhole</b>			
R1212	Rectangulare concrete inspection manhole 1200mm x 1200mm	RR 1200mm x 1200 mm	0
<b>Geotextile</b>			
EZ-226	EZSTORM non-woven protection geotextile	6m x 1m / Roll	2
Étanchéisation	LLDPE Liner with 2 geotextiles for protection	Impermeable System	-



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PROJECT:

ONE STOP HOME STAGING,  
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LIST OF MATERIALS

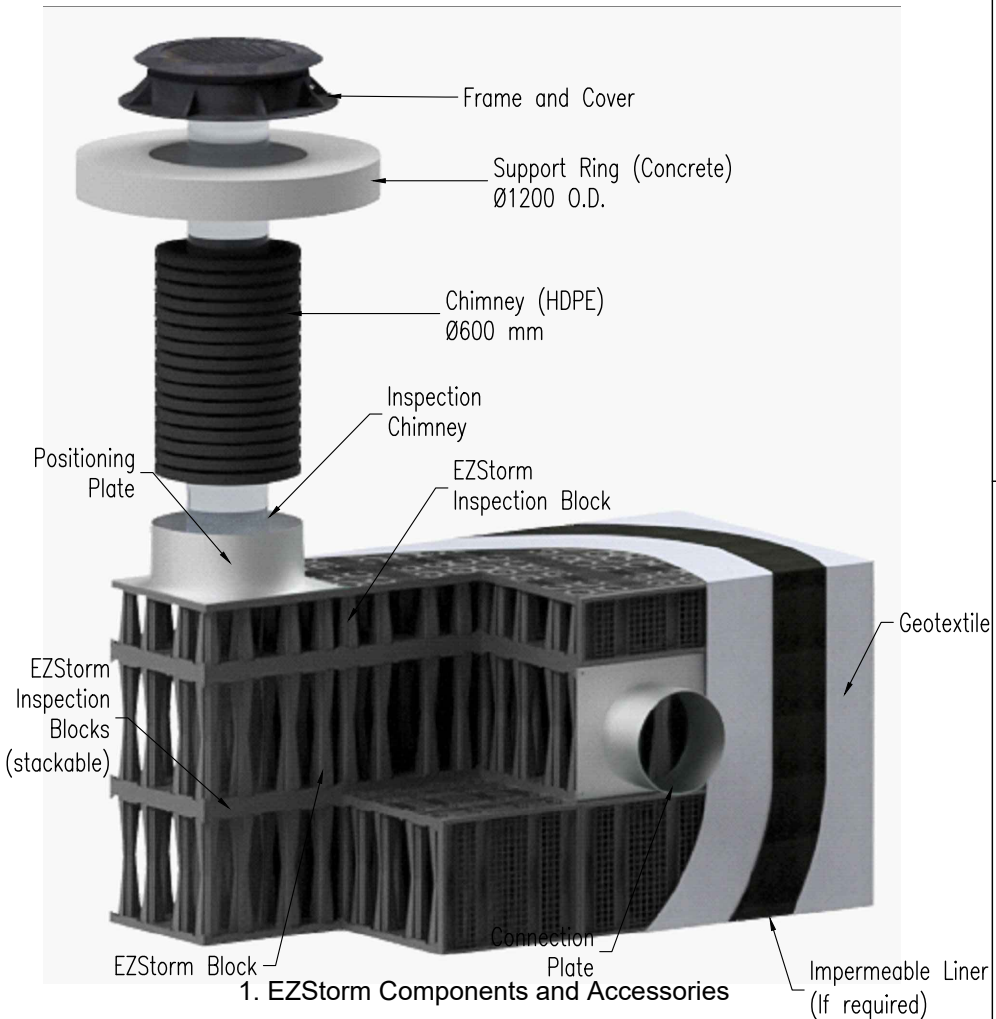
EZStorm System

N°.	REVISION	DATE	BY
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B	ISSUED FOR APPROVAL	01/05/2024	S.M.

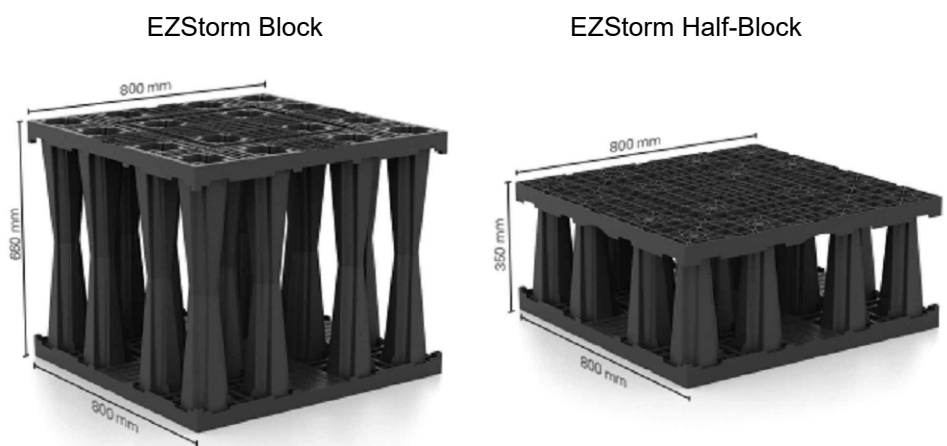
PROJECT N°: 240416-05 DATE: 30/04/2024

DRAWN BY: S.M. CHECKED BY: S.K.

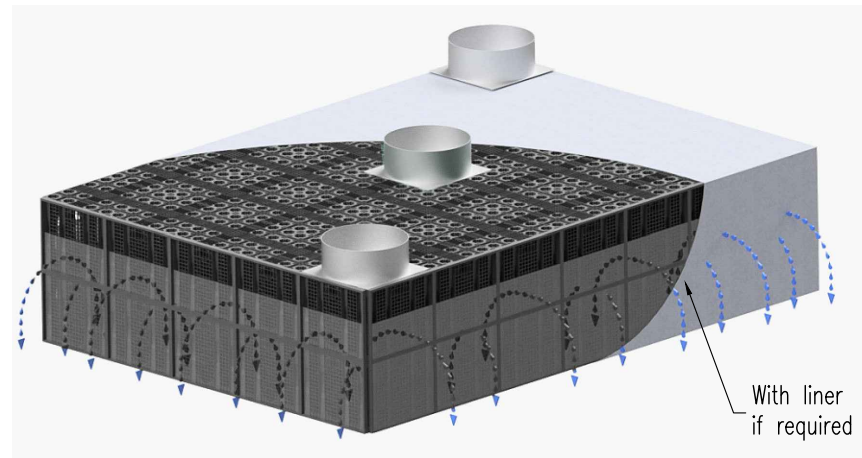
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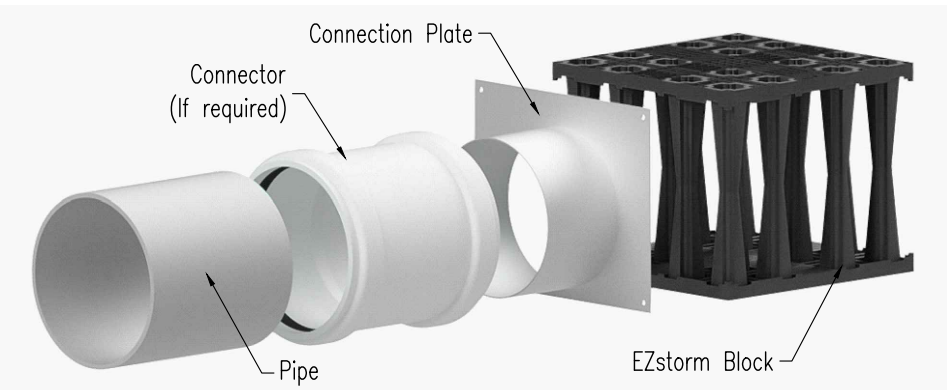
1. EZStorm Components and Accessories



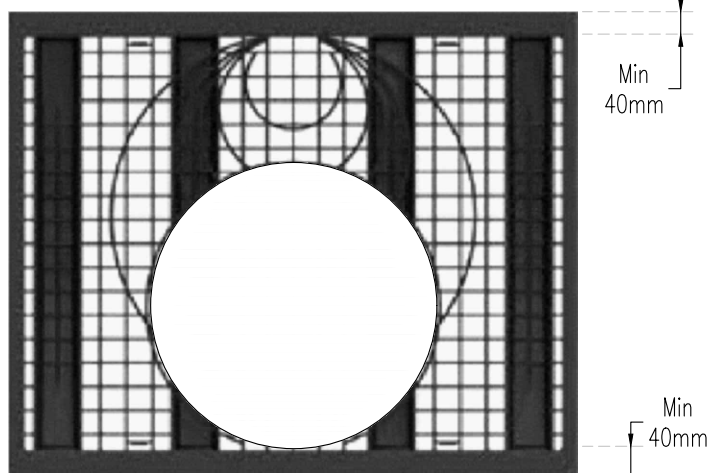
2. EZStorm Block Standard Dimensions



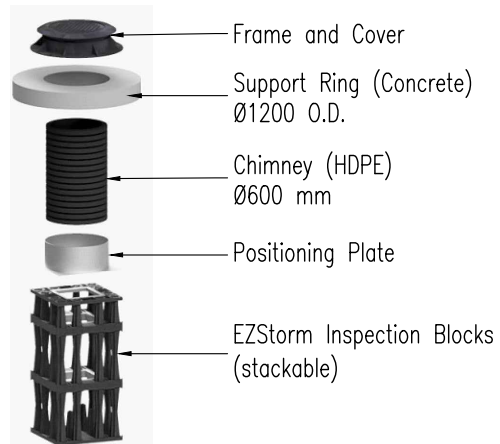
3. Infiltration Basin Typical 3D Section View.



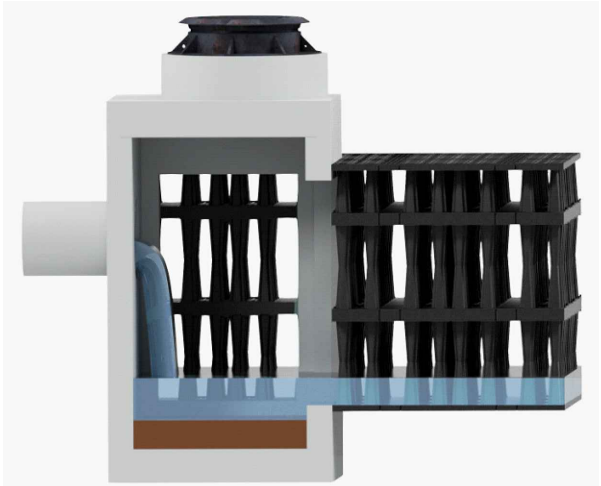
4. Connection Accessories Configuration



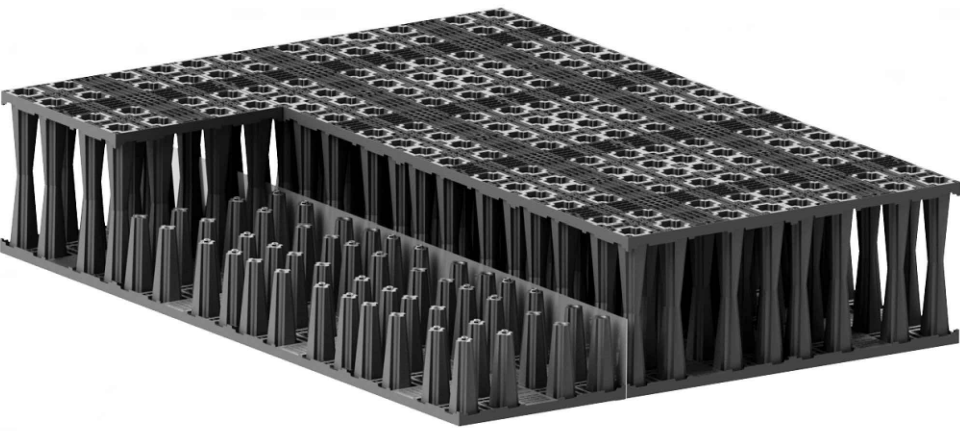
5. Sidewall Grid with Connection Opening



6. EZStorm Block and Inspection Chimney



7. Concrete Manhole for Access and Connection (If required)



8. Pretreatment Row (If required)



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PROJECT:  
**ONE STOP HOME STAGING,  
BRENTFORD, ON**

ISSUED FOR APPROVAL NOT FOR PRODUCTION

ACCESSORIES- not included in all projects

**EZStorm System**

N°.	REVISION	DATE	BY
A	ISSUED FOR APPROVAL	30/04/2024	S.M.
B	ISSUED FOR APPROVAL	01/05/2024	S.M.

PROJECT N°: <b>240416-05</b>	DATE: <b>30/04/2024</b>
DRAWN BY: <b>S.M.</b>	CHECKED BY: <b>S.K.</b>
SCALE: <b>N.T.S.</b>	SHEET N°: <b>6/6</b>



# TEMPEST Product Submittal Package R1



**Date: May 1, 2024**

**Customer: SBM**

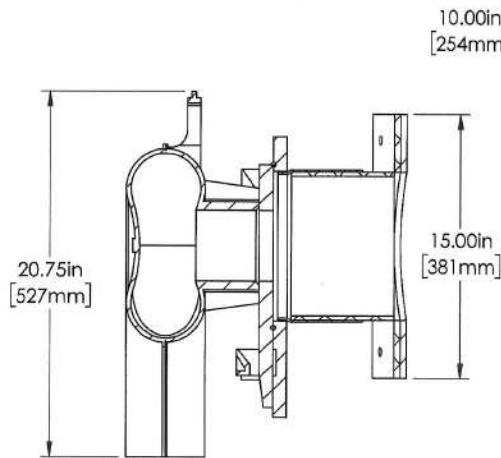
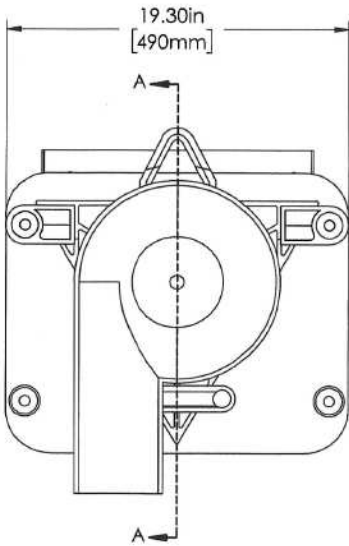
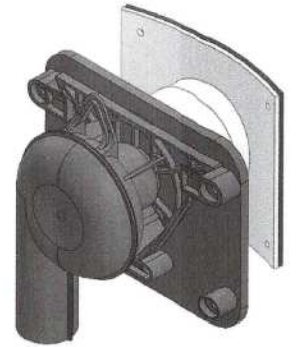
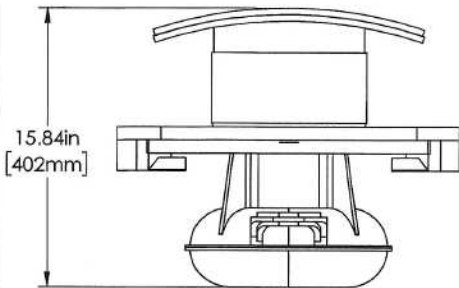
**Contact: Michael Gethiga**

**Location: Simcoe**

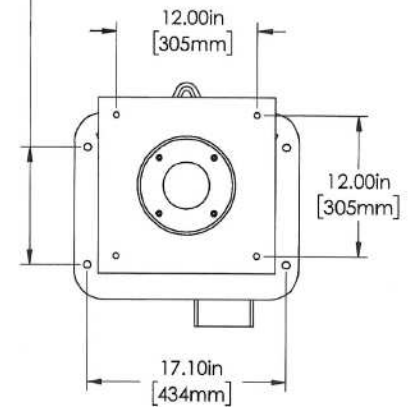
**Project Name: 33 Park Rd**



# Tempest LMF ICD Rd Shop Drawing



SECTION A-A  
SCALE 1 : 8



0	FOR REVIEW	DATE	REVISION	CHK

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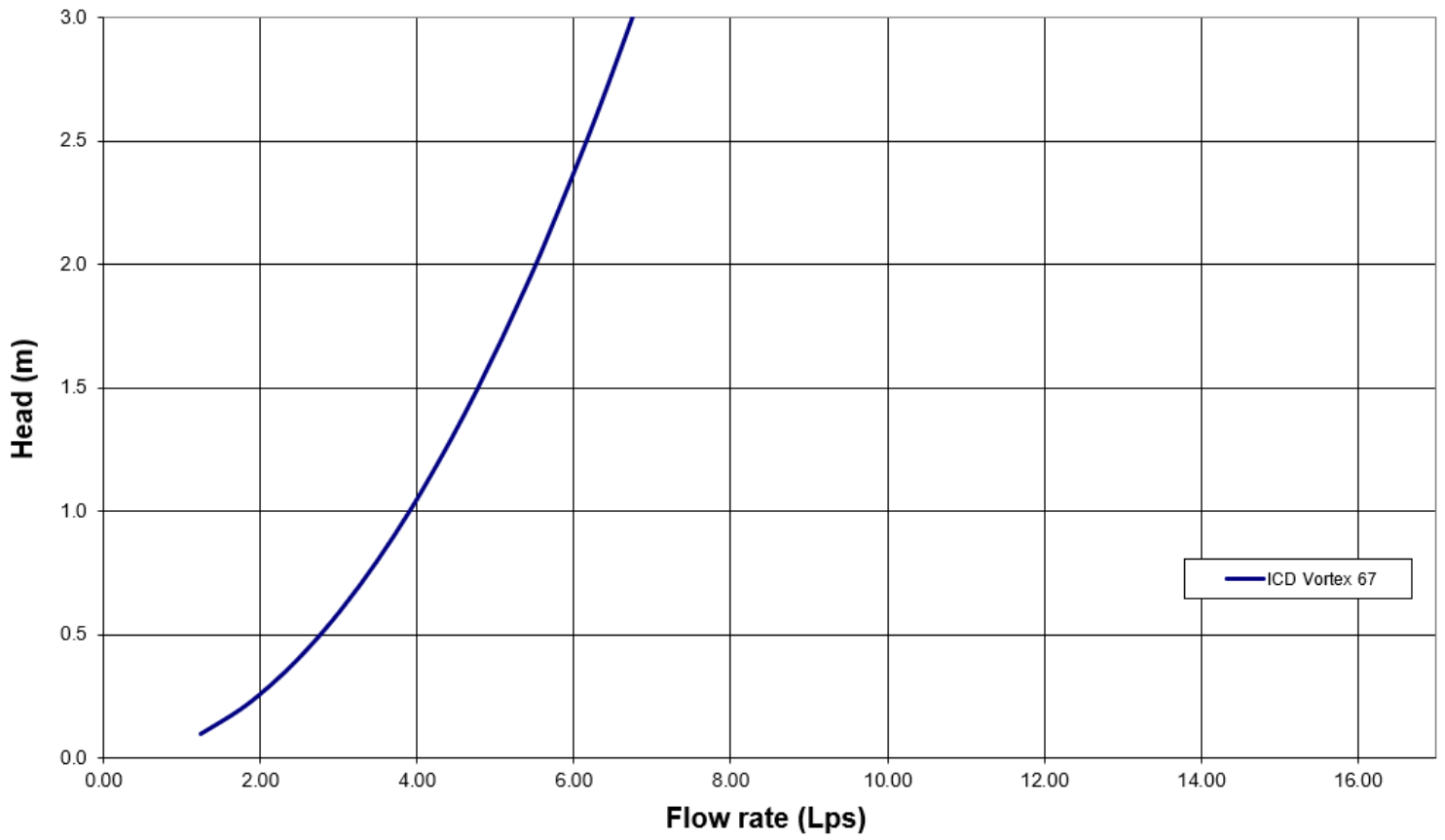
PH: (905) 670-7676    FAX: (905) 6705295

LMF ROUND CB ASSEMBLY				
CUSTOMER				
DATE	DRAWN BY	CHECKED BY	SCALE	DWG. NO.
4/16/2024	J.B.		NTS	N/A



### Tempest LMF ICD Flow Curve

**Flow: 4.52 L/s**  
**Head: 1.37 m**  
**CBMH4**



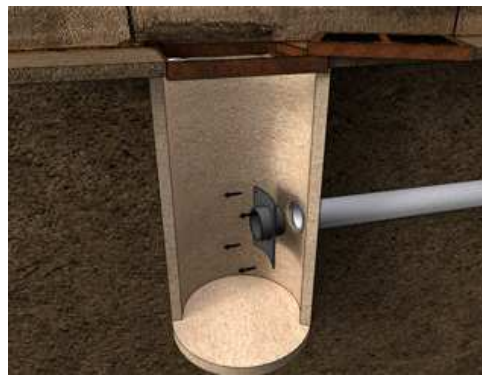
## **Square CB Installation Notes:**

1. Materials and tooling verification:
  - Tooling: impact drill, 3/8'' concrete bit, torque wrench for 9/16'' nut, hand hammer, level, and marker.
  - Material: (4) concrete anchor 3/8x3-1/2, (4) washers, (4) nuts
2. Use the mounting wall plate to locate and mark the hole (4) pattern on the catch basin wall. You should use a level to ensure that the plate is at the horizontal.
3. Use an impact drill with a 3/8'' concrete bit to make the four holes at a minimum of 1-1/2'' depth up to 2-1/2''. Clean the concrete dust from the holes.
4. Install the anchors (4) in the holes by using a hammer. Put the nuts on the top of the anchors to protect the threads when you will hit the anchors with the hammer. Remove the nuts on the ends of the anchors
5. Install the wall mounting plate on the anchors and screw the nut in place with a maximum torque of 40 N.m (30 lbf-ft). There should be no gap between the wall mounting plate and the catch basin wall.
6. From ground above using a reach bar, lower the device by hooking the end of the reach bar to the handle of the LMF device. Align the triangular plate portion into the mounting wall plate. Push down the device to be sure it has centered in to the wall mounting plate and has created a seal.



**Round CB Installation Notes:** (Refer to square install notes above for steps 1 , 3, & 4)

2. Use spigot catch basin wall plate to locate and mark the hole (4) pattern on the catch basin wall. You should use a level to ensure that the plate is at the horizontal.
5. Install the CB spigot wall plate on the anchors and screw the 4 nuts in place with a maximum torque of 40 N.m (30 lb-ft). There should be no gap between the CB spigot wall plate and the catch basin wall.
6. Apply solvent cement on the hub of the universal mounting plate and the spigot of the spigot CB wall plate. Slide the hub over the spigot. Make sure the universal mounting plate is at the horizontal and its hub is completely inserted onto the spigot. Normally, the corners of the universal mounting plate hub adapter should touch the catch basin wall.
7. From ground above using a reach bar, lower the ICD device by hooking the end of the reach bar to the handle of the ICD device. Align the triangular plate portion into the mounting wall plate. Push down the device to be sure it has centered into the mounting plate and has created a seal.



**CAUTION/WARNING/DISCLAIM:**

- Verify that the inlet(s) pipe(s) is not protruding into the catch basin. If it is, cut it back so that the inlet pipe is flush with the catch basin wall.
- Any required cement in the installation must be approved for PVC.
- The solvent cement should not be used below 0°C (32°F) or in a high humidity environment. Please refer to the IPEX solvent cement guide to confirm required curing times or attend the IPEX [Online Solvent Cement Training Course](#).
- Call your IPEX representative for more information or if you have any questions about our products.

## **IPEX TEMPEST Inlet Control Devices Technical Specification**

### **General**

Inlet control devices (ICD's) are designed to provide flow control at a specified rate for a given water head level and also provide odour and floatable control where specified. All ICD's will be IPEX Tempest or approved equal.

All devices shall be removable from a universal mounting plate. An operator from street level using only a T-bar with a hook will be able to retrieve the device while leaving the universal mounting plate secured to the catch basin wall face. The removal of the TEMPEST devices listed above must not require any unbolting or special manipulation or any special tools.

High Flow (HF) Sump devices will consist of a removable threaded cap which can be accessible from street level with out entry into the catchbasin (CB). The removal of the threaded cap shall not require any special tools other than the operator's hand.

ICD's must have no moving parts.

### **Materials**

ICD's are to be manufactured from Polyvinyl Chloride (PVC) or Polyurethane material, designed to be durable enough to withstand multiple freeze-thaw cycles and exposure to harsh elements.

The inner ring seal will be manufactured using a Buna or Nitrile material with hardness between Duro 50 and Duro 70.

The wall seal is to be comprised of a 3/8" thick Neoprene Closed Cell Sponge gasket which is attached to the back of the wall plate.

All hardware will be made from 304 stainless steel.

### **Dimensioning**

The Low Medium Flow (LMF), High Flow (HF) and the High Flow (HF) Sump shall allow for a minimum outlet pipe diameter of 200mm with a 600mm deep Catch Basin sump.

### **Installation**

Contractor shall be responsible for securing, supporting and connecting the ICD's to the existing influent pipe and catchbasin/manhole structure as specified and designed by the Engineer.



**APPENDIX D**

Domestic Water Demand, Volume and Turnover Calculations  
OBC Fixture Unit Calculations  
Fire-Fighting Calculations  
Northern Sprinkler Design Flow Test Report, dated February 9, 2024

## DOMESTIC WATER DEMAND, VELOCITY, AND TURNOVER CALCULATION

DATE: 

May 1, 2024
-------------

  
JOB NO.: 

SBM-23-2071
-------------

Client: 

One Stop Home Storage
-----------------------

  
Project: 

Proposed Storage Warehouse
----------------------------

  
Location: 

33 Park Road, Simcoe, ON
--------------------------

### DEMAND CALCULATION

Avg. Day Demand = 28000 L/ha/d (Commerical)  
Avg. Day Demand = 0.3241 L/ha/s  
Max. Day Peaking Factor = 2.25 (Commerical)  
Max. Hour Peaking Factor = 2 (Commerical)

Design parameters taken from Section 10 of the NCDC and Section 3.4.3 of the MOE DGDWS.

	Area (ha)	Avg. Day (L/s)	Max. Hour (L/s)	Max. Day (L/s)
Proposed Warehouse	0.33	0.11	0.21	0.24

### VELOCITY CALCULATION

Diameter (mm)	Demand (L/s)	Velocity (m/s)
25	0.21	0.436

### VOLUME CALCULATION

Diameter (mm)	Length from Municipal Watermain to Building (m)	Volume (Litres)
25	37.60	18.46

### TURNOVER CALCULATIONS

	Avg. Day (L/s)	Volume (L)	Hours	Days
Total	0.11	18.46	0.048	0.00

Maximum allowable turnover of 3 days (72 hours) under average flow conditions.



## WATER SERVICE SIZING CALCULATIONS

DATE: May 9, 2024  
JOB NO.: SBM-23-2071

Client: One Stop Home Staging  
Project: Proposed Storage Warehouse  
Location: 33 Park Rd, Simcoe, ON

### Water Load Calculation

Existing Building

Fixture Type	Number of Fixture Type	Fixture Units Each (FU)	Total Fixture Units (FU)
Bathroom Group	1	3.6	3.6
Lavatory	1	0.7	0.7
Domestic Sink	1	1.4	1.4
Sink, service or mop basin	1	2.25	2.25
<b>TOTAL (FU):</b>			<b>7.95</b>

**TOTAL EXISTING AND PROPOSED (FU): 7.95**

Fixture count obtained from Site Plan Drawings by SBM, dated April 30, 2024.

**Water Service:** As per OBC Div. B Table A-7.6.3.1.(2), a 25mm (1") diameter service can serve up to 30 Fixture Units at a length of 46m for a pressure of 311 to 413 kPa (46 to 60 psi). A 25mm diameter service is proposed. Refer to Engineering Drawing C3, provided separately.

**Water Supply for Public Fire Protection (Fire Underwriters Survey)**

	For data entry
	Calculated, not for data entry

DATE:	December 20, 2024
JOB NO.:	SBM-23-2071

Client:	One Stop Home Staging
Project:	Proposed Storage Warehouse
Location:	33 Park Rd, Simcoe, ON

$$F = 220 \times C \times \sqrt{A}$$

Type of Construction:	Wood-Frame	1.5
Fire Hazard of Contents:	Free Burning	1.2
Total Floor Area, m <sup>2</sup> :		448.00
Sprinklered:	No	1.0
Separation, Side 1:	20.1 to 30m	10%
Separation, Side 2:	>45m	0%
Separation, Side 3:	10.1 to 20m	15%
Separation, Side 4:	>45m	0%
Sum of Separation Coefficients (Shall Not Exceed 75%: )		25%

F, L/min (Shall not exceed 45,000 L/min or be less than 2,000 L/min) **10041**

Maximum day domestic demand (as per separate calculation sheet)	0.24	L/sec
	14.40	L/min

Required Supply Fire Flow + Maximum Day Demand, L/min = **10060** (rounded up)

Incorporate Hazen-Williams and Bernoulli's Principles:  $P_{residual} = P_{static} - (Q_{required}/Q_{test})^{1.85} \times (P_{static} - P_{test})$

Provided Supply Flow Rate @	75.00	*psi (517.11 kPa) =	0.00	L/min (0 USGPM)
	73.00	*psi (503.32 kPa) =	4493.00	L/min (1187 USGPM)
	66.00	*psi (455.05 kPa) =	7298.00	L/min (1928 USGPM)
Residual pressure at hydrant =	58.70	*psi (404.74 kPa) =	10060.00	L/min (2658 USGPM)

\*Refer to the Provided Hydrant Flow Tests



PROJECT INFORMATION			
Project Name:	33 Park Road Flow Test	Design Project #:	2024-NSD-012
Site Address:	33 Park Road Simcoe ON	Const. Project #:	NA
City Contact:	Terry Hall x1504	Phone #:	519-426-5870
Flow Tester:	<b>Rob Smith</b>	Phone #:	<b>226-376-3053</b>
Technical Contact:	<b>Andy Coghlin</b>	Phone #:	<b>519-476-0761</b>

## SITE INFORMATION

### SITE MAP



Note: If the main is a dead end, the flowing hydrant shall be closest to the dead end

ITEMS TO LABEL ON MAP	HYDRANTS USED	MAIN SIZE
<input checked="" type="checkbox"/> Static / Residual & Flow Hydrants	<input checked="" type="checkbox"/> City Hydrant(s)	City: 300mm ductile
<input type="checkbox"/> Flow Direction (if the main is dead end)	<input type="checkbox"/> Site Hydrant(s)	Site:

### SITE NOTES



### TEST INFORMATION

Minimum Required Flow:	NA	Min Ports:	2
Personnel Present:	Robert Smith	Test Date:	2024-02-09
City / External Company:	Norfolk County	Test Time:	10:30am

### TEST EQUIPMENT

<input type="checkbox"/> Hose Monsters with built in Pitot	Hose length used:
<input type="checkbox"/> Hand held pitot gauge	<input checked="" type="checkbox"/> Pollard diffuser elbow with built in Pitot
<input type="checkbox"/> Other:	

### TEST RESULTS

Number of Ports	Outlet Size (IN)	Discharge Coefficient	Pitot Reading (PSI)		Total Flow (GPM)	Static / Residual Pressure (PSI)
0 Ports						75
1 Port	2.5	0.9	50		1,187	73
2 Ports	2.5	0.9	33	33	1,928	66
3 Ports	2.5	0.9			0	
4 Ports	2.5	0.9			0	
0 Ports	<b>STATIC RE-CHECK</b>					75

### TEST NOTES

--

### HYDRAULIC ADJUSTMENTS (FOR OFFICE USE ONLY)

#### ADJUSTMENTS FOR HYDRAULIC GRADE LINE (HGL)

Reservoir HGL (m):		Site Elevation (m):	
Theoretical Static Head (PSI):	0	PSI to subtract from test pressures:	0

#### OTHER HYDRAULIC ADJUSTMENTS

Other adjustment as required by the City / AHJ:	
---	--

**Clean Water Act - S.59: Restricted Land Use**  
Screening Form

<b>FOR OFFICE USE ONLY (TO BE COMPLETED BY NORFOLK COUNTY)</b>	
Date Received:	Received By:

The information on this form will help Norfolk County determine if a development or building application is subject to any Part IV policies under the Long Point Region Source Protection Plan. These policies include Prohibitions and the requirement for a Risk Management Plan. A Risk Management Plan must be agreed to or established by the Risk Management Official prior to Development or Building Approvals.

**PROPERTY INFORMATION**

33 Park Rd, Simcoe Ont N3Y 4J9  
Street Address

40302502318  
Property Roll Number

**CONTACT INFORMATION**

Shawna Sherk One stop home staging Inc.  
Name of Applicant, including Company Name (if applicable) and primary contact person

848 Norfolk St. S. Simcoe Ont | N3Y 4K1  
Mailing Address Postal Code

519 410 0098 | onestophomestaging@outlook.com  
Tel. Fax. Email

**TYPE OF APPLICATION (CHECK ALL THAT APPLY)**

- |  |  |
|--|--|
| <input type="checkbox"/> Building Permit         | <input type="checkbox"/> Minor Variance                |
| <input type="checkbox"/> Consent/Severance       | <input checked="" type="checkbox"/> Site Plan Approval |
| <input type="checkbox"/> Zoning By-Law Amendment | <input type="checkbox"/> Condominium                   |
| <input type="checkbox"/> Subdivision             | <input type="checkbox"/> Official Plan Amendment       |

**SOURCE PROTECTION VULNERABLE AREA**

Mapping is available on-line at [www.norfolkcounty.ca/visiting/norfolk-maps/online-interactive-maps/](http://www.norfolkcounty.ca/visiting/norfolk-maps/online-interactive-maps/)

**SELECT ONE:**

- Delhi-Courtland
- Simcoe
- Waterford
- Tillsonburg

**SELECT ALL THAT APPLY:**

- |  |  |
|--|--|
| <input type="checkbox"/> WHPA-A (10)       | <input type="checkbox"/> IPZ-1 (9)     |
| <input checked="" type="checkbox"/> WHPA-B | <input type="checkbox"/> ICA (NITRATE) |
| <input type="checkbox"/> WHPA-C            |  |

**Clean Water Act - S.59: Restricted Land Use**  
Screening Form

**CURRENT AND PROPOSED PROPERTY USE**

Are there any active or inactive wells on the property?  Yes  No

Is the proposed use of the property solely Residential?  Yes  No  
*If yes, respondent can continue to the Signature of Applicant section.*

Does the proposed use of the property include commercial, industrial, or agricultural uses?  Yes  No  
*If yes, respondent must complete the rest of this screening form.*

Will new Transport Pathways be constructed?  Yes  No  
*For examples of Transport Pathways, please reference Appendix B for listed activities. If any of the listed activities are applicable, complete Notice Template under Section 27 (3) and (4) of O.Reg 287/7 under the Clean Water Act, 2006.*

Are any sewage works alterations are being proposed ?  Yes  No

Describe the current land use at the property

Vacant

Describe the proposed land use at the property. Attach a Site Plan or sketch of the property.

Construction of a storage warehouse to be used for furniture, with associate parking lot and site grading/development.

**Clean Water Act - S.59: Restricted Land Use**

Screening Form

**PROPOSED ACTIVITIES ON THE PROPERTY**

Please check all activities that may be associated with the proposed land use.

**Fuel Handling and Storage**

- Liquid Fuel Storage (gasoline, diesel, etc.) *Indicate maximum quantity* \_\_\_\_\_
- Fuel Oil Storage, including home heating oil (or waste oil if used as a fuel)
- Location  Entirely Above Grade, or  Below Grade (any portion of tank below ground level)  
*Indicate maximum quantity* \_\_\_\_\_

**Chemical Handling and Storage: Organic Solvents or Dense Non-Aqueous Phase Liquids (DNAPL)**

Please check any liquid products that will be used, stored, or sold in ANY quantity.

- Paints and other coatings (stains, enamels, lacquers, rust paint, etc.)
- Solvent-based degreasers or metal parts washing liquids
- Automotive aerosol products
- Dry cleaning chemicals
- Furniture strippers
- Liquid adhesives (solvent cement, craft adhesive, industrial adhesives, etc.)
- Organic or chlorinated solvents (see Appendix A)
- Vinyl chloride monomer
- Other (please list) \_\_\_\_\_

**Waste Disposal**

- Any lands or buildings where waste is deposited, disposed of, handled, stored, transferred, treated, or processed.

**Snow Storage and Road Salt Application, Handling, and Storage**

- Road salt applied to parking areas, driveways, or walkways
- Road salt stored indoors
- Road salt stored outdoors
- Road salt stored in quantities greater than 5 tonnes
- Snow storage area with a maximum footprint larger than 0.01 hectares (10m x 10m)

**Nutrients and Pesticides**

- Application of Agricultural Source Material (ASM) to Land (e.g. manure)
- Application of Non-agricultural Source Material (NASM) to Land (e.g. unprocessed plant material)
- Storage of ASM or NASM
- Use of land as livestock grazing, pasturing, outdoor confinement area, or farm-animal yard
- Storage of Commercial Fertilizer *Indicate type and maximum quantity* \_\_\_\_\_
- Storage of Pesticides *Indicate type and maximum quantity* \_\_\_\_\_

**Clean Water Act - S.59: Restricted Land Use**  
Screening Form

SLSK  
**SIGNATURE OF APPLICANT**

Please sign below to certify that the information provided above is accurate and complete to the best of your knowledge. Understand that incomplete or inaccurate information may result in future involvement of the Risk Management Official to ensure compliance with applicable Provincial legislation.

Shawna Sherk SLSK  
Printed Name and Signature of Applicant

Jan 10, 2025  
Date

**Please submit this form to the Norfolk County Development and Cultural Services Department. For further information, call Heather Dzurko, Risk Management Official, at 705-559-2818.**

**FOR OFFICE USE ONLY (TO BE COMPLETED BY THE RISK MANAGEMENT OFFICIAL)**

**ACTION REQUIRED**

- Application can proceed as written. S.59 Notice is not required under Policy NC-CW-1.3:
  - Residential Use
  - Significant Drinking Water Threat is not proposed
- Application can proceed as written. S.59(2)(a) Notice to be issued by RMO
- Risk Management Plan to be negotiated before current application can be processed by the County
- Risk Management Plan to be negotiated at future stage (specify)
  - Building Permit
  - Consent/Severance
  - Zone Change
  - Subdivision
  - Minor Variance
  - Site Plan Approval
  - Condominium
  - Official Plan Amendment
- Activity is Prohibited. Application cannot proceed as written

\_\_\_\_\_  
Heather Dzurko, Risk Management Official

\_\_\_\_\_  
Date

- RMO has informed the Development Services Department of required action
- RMO has informed applicant of required action

Application number:		Notice number (if different):	
Date Received:		Reviewed by:	



**Clean Water Act - S.59: Restricted Land Use**

Screening Form

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**APPENDIX A**

Agricultural Source Material

- 1 Manure produced by farm animals, including associated bedding materials.
- 2 Runoff from farm-animal yards and manure storages.
- 3 Washwaters from agricultural operations that have not been mixed with human body waste.
- 4 Organic materials produced by intermediate operations that process materials described in paragraph 1, 2 or 3.
- 5 Anaerobic digestion output, if,
  - i. the anaerobic digestion materials were treated in a mixed anaerobic digestion facility,
  - ii. at least 50 per cent, by volume, of the total amount of anaerobic digestion materials were on-farm anaerobic digestion materials, and
  - iii. the anaerobic digestion materials did not contain sewage biosolids or human body waste.
- 6 Regulated compost as defined in subsection 1 (1) of Ontario Regulation 106/09 (Disposal of Dead Farm Animals) made under the Act.

Non-Agricultural Source Material

Category 1: e.g. Leaf and yard waste that has not been composted.

Category 2: e.g. organic waste matter that contains no meat or fish, food processing at a bakery.

Category 3: e.g. pulp and paper biosolids, paunch manure and sewage biosolids.

Organic Solvents

- 1 Carbon tetrachloride - production and consumption are controlled. It was commonly used as component for domestic cleaning fluids and degreaser in industry. It may also be found in solvents and dry cleaning agents.
- 2 Chloroform – May be found in pesticides, solvents and cleaning agents.
- 3 Dichloromethane – May be found in paint strippers and degreasers.
- 4 Pentachlorophenol – May be found in pesticides and disinfectants.

Dense Non-Aqueous Phase Liquids (DNAPL)

Common uses include, but are not limited to:

- 1 Acetone
- 2 Paint Thinner
- 3 Turpentine
- 4 Dry cleaning solvents
- 5 Cleaners, degreasers and lubricants for engine parts, tires, brakes, etc.
- 6 Paint and furniture strippers
- 7 Wood finish, stains and coatings
- 8 Adhesives and sealants

APPENDIX B

Lake Erie Region Transport Pathway Notice Template



This template is being provided to satisfy transport pathways reporting requirements in accordance with Section 27 (3) and (4) of O. Reg. 287/07 made under the Clean Water Act, 2006.

To Be Completed by Applicant:

Name of Applicant: Shawna Sherk Phone Number: 519 410 0098
Email Address: onestophomestaging@outlook.com Date of Application:
Location of proposed activity (please provide description if activity not restricted to a single address):
33 Park Rd, Simcoe

Please check the activities below that apply to this application:

- Construction of water wells or monitoring wells
Construction of oil and gas wells
Excavation of pits and quarries
Construction of man-made ponds
Re-grading associated with new development
Construction of foundation envelopes
Construction of geothermal wells/earth energy systems
Construction of linear sewage collection systems and linear utility corridors

Please describe the proposed activity. If applicable, include pertinent details such as maps/cross-sections/figures; depth of excavation; distance to municipal wells, ponds; contaminated or potentially contaminated site(s), etc. (use additional sheets of paper if needed)

Development of site to construct a new storage warehouse (containing furniture) including associated parking area. Refer to drawings which show the anticipate site works.

Any information you provide to us is collected, used and disclosed in accordance with the Ontario Municipal Freedom of Information and Protection of Privacy Act.

For Office Use Only:

Upon completion, please submit the following information to Lake Erie Region Source Protection Staff.

Municipality:
Submitted By:
Email Address:
Date Submitted:

Please list the approvals the applicant requires to engage in the proposed activity:

Please check if applicable:

- Yes, the proposed activity may create or modify a transport pathway that changes the vulnerability of a raw water supply of a drinking water system

If applicable, please provide the change in vulnerability that may result from the proposed activity:

Intrinsic vulnerability rating prior to activity: ; potential new intrinsic vulnerability rating

**ZONING DATA CHART**

GROSS SITE AREA: 3544.647 m <sup>2</sup>		ASPHALT AREA: 42,576 m <sup>2</sup>	
BUILDING AREA: 401.149 m <sup>2</sup>		GRAVEL AREA: 1425.295 m <sup>2</sup>	
		LANDSCAPED AREA: 1680.435 m <sup>2</sup>	
ITEM	GENERAL INDUSTRIAL ZONE (MG)	REQUIRED	PROVIDED
1	PERMITTED USES	SEE PERMITTED USE NOTE ON SHEET SP1	SEE PERMITTED USE NOTE ON SHEET SP1
2	LOT FRONTAGE (m MIN)	30	30.73
3	LOT DEPTH (m MIN)	-	113.74
4	FRONT YARD SETBACK (m MIN)	6	30.3
5	EXTERIOR YARD SETBACK (m MIN)	6	-
6	REAR YARD SETBACK (m MIN)	9	53.12
7	INTERIOR SIDE YARD SETBACK (m MIN)	3 (20 ABUTTING A RESIDENTIAL ZONE)	5.6
8	LANDSCAPED OPEN SPACE (%) MINIMUM	-	
9	LOT COVERAGE (%) MAX	-	14.61
10	HEIGHT MAXIMUM (m)	*SEE NOTE	6.1
11	BIKE SPACE REQUIREMENTS	SEE PARKING REQUIREMENTS NOTE	SEE PARKING REQUIREMENTS NOTE
12	VEHICLE PARKING	SEE PARKING REQUIREMENTS NOTE	SEE PARKING REQUIREMENTS NOTE

\*BUILDING HEIGHT SUBJECT TO A 45 DEGREE ANGULAR PLANE MEASURED FROM THE EDGE OF ANY RESIDENTIAL, COMMERCIAL OR INSTITUTIONAL ZONED LOTS. (NEIGHBORING SITE ZONED FOR GENERAL INDUSTRIAL (MG) THUS ZONING HEIGHT REQUIREMENT DOES NOT APPLY)

**PERMITTED USES**

- GENERAL INDUSTRIAL ZONE (MG):
- AMBULANCE SERVICE
  - ANIMAL HOSPITAL
  - AUCTION CENTRE
  - BUS TERMINAL
  - CALL CENTRE
  - CANNABIS PRODUCTION AND PROCESSING
  - CONSTRUCTION SHOP
  - CONTRACTOR'S YARD
  - CREMATORIUM
  - FIRE HALL
  - FOOD PROCESSING, EXCLUDING ABATTOIR
  - GENERAL MATERIAL MANUFACTURING
  - GRAPHICS AND DESIGN
  - INDUSTRIAL SUPPLY
  - MATERIAL PROCESSING, EXCLUDING ASPHALT PLANT, CEMENT WORKS AND CONCRETE
  - BATCHING
  - MERCHANDISE SERVICE SHOP
  - OFFICE, INDUSTRIAL, ACCESSORY TO A PERMITTED USE
  - PERSONAL AND HEALTH SERVICES FOR EMPLOYEES, ACCESSORY TO AN INDUSTRY ON THE SAME LOT
  - RESEARCH AND DEVELOPMENT FACILITY
  - RETAIL SALES ACCESSORY TO AN INDUSTRY ON THE SAME LOT
  - STORAGE
  - TAXI TERMINAL
  - TELECOMMUNICATIONS AND DATA PROCESSING
  - TRADE SCHOOL
  - TRANSPORTATION
  - VEHICLE SERVICES AND REPAIR, INCLUDING AUTOMOBILE BODY SHOP AND INDUSTRIAL
  - GARAGE
  - WHOLESALE OUTLET

**PARKING REQUIREMENTS**

MINIMUM PARKING SPACE DIMENSIONS 3mX5.8m, TYPE A 3.4mX5.8m, TYPE B 2.4mX5.8m

OFFICE, INDUSTRIAL	1/30m <sup>2</sup>	46.524m <sup>2</sup>	= 2 SPACES
STORAGE (WAREHOUSE)	1/180m <sup>2</sup>	401.123m <sup>2</sup>	= 3 SPACES
TOTAL PROVIDED PARKING			= 5 SPACES
B/F PARKING REQUIRED:	1 PER 25 OF TOTAL PARKING REQ.		= 1 SPACES
PROVIDED			= 1 TYPE 'A'

**SNOW STORAGE REQUIREMENTS**

TOTAL SNOW STORAGE AREA	= 238.766m <sup>2</sup>
TOTAL ASPHALT & GRAVEL AREA (PARKING AREA)	= 1467.870m <sup>2</sup>
SNOW STORAGE PERCENTAGE OF PARKING AREA	= 16.3%



**KEY PLAN**  
N.T.S.

**LEGAL INFORMATION**

PART OF  
40302502318  
IN THE  
CITY OF SIMCOE  
COUNTY OF NORFOLK

**WASTE REMOVAL**

GARBAGE TO BE STORED INTERNALLY/ON SITE AND PLACED CURB SIDE THE EVENING BEFORE MUNICIPAL PICK-UP.

**BUILDING CLASS.**

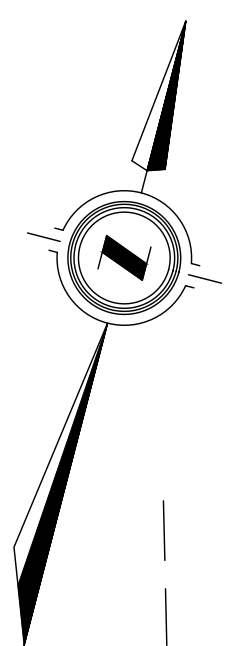
INDUSTRIAL - GROUP F2 OCCUPANCY, PART 9 OF THE ONTARIO BUILDING CODE

**CANADA POST**

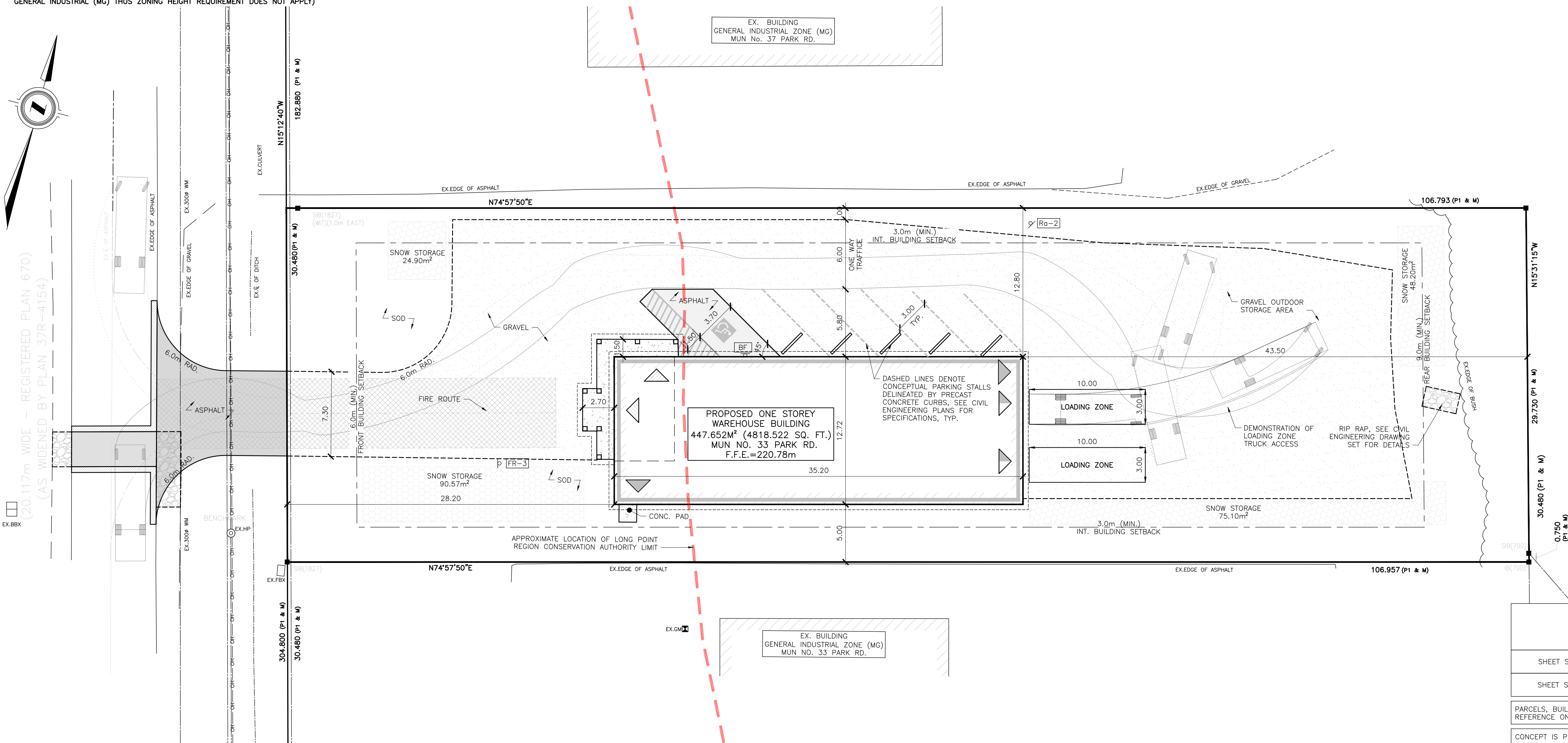
THIS DEVELOPMENT WILL RECEIVE MAIL TO A NEAR-BY SUPERBOX AS LOCATED BY CANADA POST.

**LEGEND:**

- PROPOSED SNOW STORAGE
- PRINCIPAL BARRIER FREE ENTRANCE & FIRE FIGHTER ACCESS ENTRANCE
- BUILDING ENTRANCE
- OVERHEAD DOOR
- PROPOSED LIGHT-DUTY ASPHALT
- PROPOSED CONCRETE
- EXISTING BUILDING
- PROPOSED BUILDING
- LIMITS OF SUBJECT PROPERTY
- DECIDUOUS/CONIFEROUS TREE
- PROPOSED FIRE ROUTE (6.0m WIDE, 12.0m RADIUS)
- PROPOSED SIGN, TYPE OF SIGN



EX.BBX  
(20.117m WIDE - REGISTERED PLAN 670)  
(AS WIDENED BY PLAN 37R-4154)



**LIST OF DRAWINGS**

SHEET SP1	SITE PLAN, ZONING CHART & LEGEND
SHEET SP2	SITE PLAN DETAILS
PARCELS, BUILDINGS AND EXISTING INFORMATION ARE APPROXIMATE AND FOR REFERENCE ONLY.	
CONCEPT IS PRELIMINARY AND HAS NOT BEEN REVIEWED BY THE CITY.	
THE PLAN IS COMPILED AND SHOULD NOT BE CONSIDERED A PLAN OF SURVEY.	

AS CONSTRUCTED SERVICES	COMPLETION	No.	REVISIONS	D/M/Y	BY	CONSULTANT
DESIGN	BGC	01	ISSUED FOR SPC	01/12/23	BGC	
DRAWN	BGC	02	ISSUED FOR SPA	10/05/24	BGC	
CHECKED	RP	03	ISSUED FOR SPA 2	10/01/25	BGC	
APPROVED	RP					
DATE				10/01/2025		
CAD	24-2071					

**STRIK BALDINELLI MONIZ**  
 sbm  
 PLANNING - CIVIL - STRUCTURAL - MECHANICAL - ELECTRICAL  
 1599 Adelaide St. N, Unit 301, London, Ontario, N5X 4E8  
 Tel: (519) 471-6667 Fax: (519) 471-0034  
 Email: sbm@sbmltd.ca

ENGINEER'S STAMP  
 LICENSED PROFESSIONAL ENGINEER  
 B. R. HYLAND  
 100223591  
 Jan 10, 2025  
 SBM-23-2071  
 PROVINCE OF ONTARIO

ENGINEER'S STAMP  
 SEALED FOR GENERAL CONFORMANCE WITH THE OBC AND MUNICIPAL SITE PLAN CONTROLS AND ZONING BY-LAWS

CLIENT  
**ONE STOP HOME STAGING**  
 18-111 SHERWOOD DRIVE  
 BRANTFORD, ON  
 N3T 1N8  
 P: 514.410.0098  
 E: onestophomestaging@outlook.com

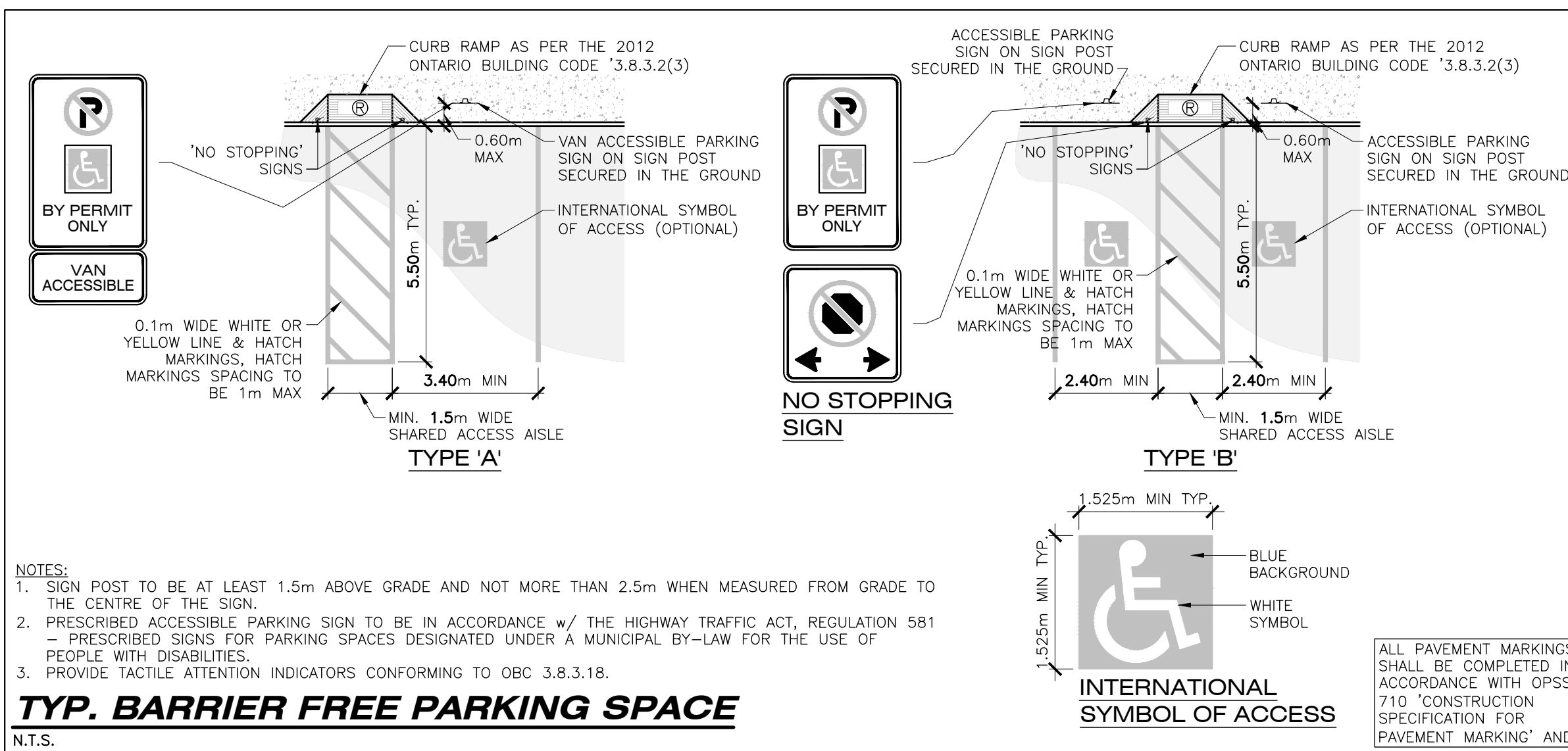
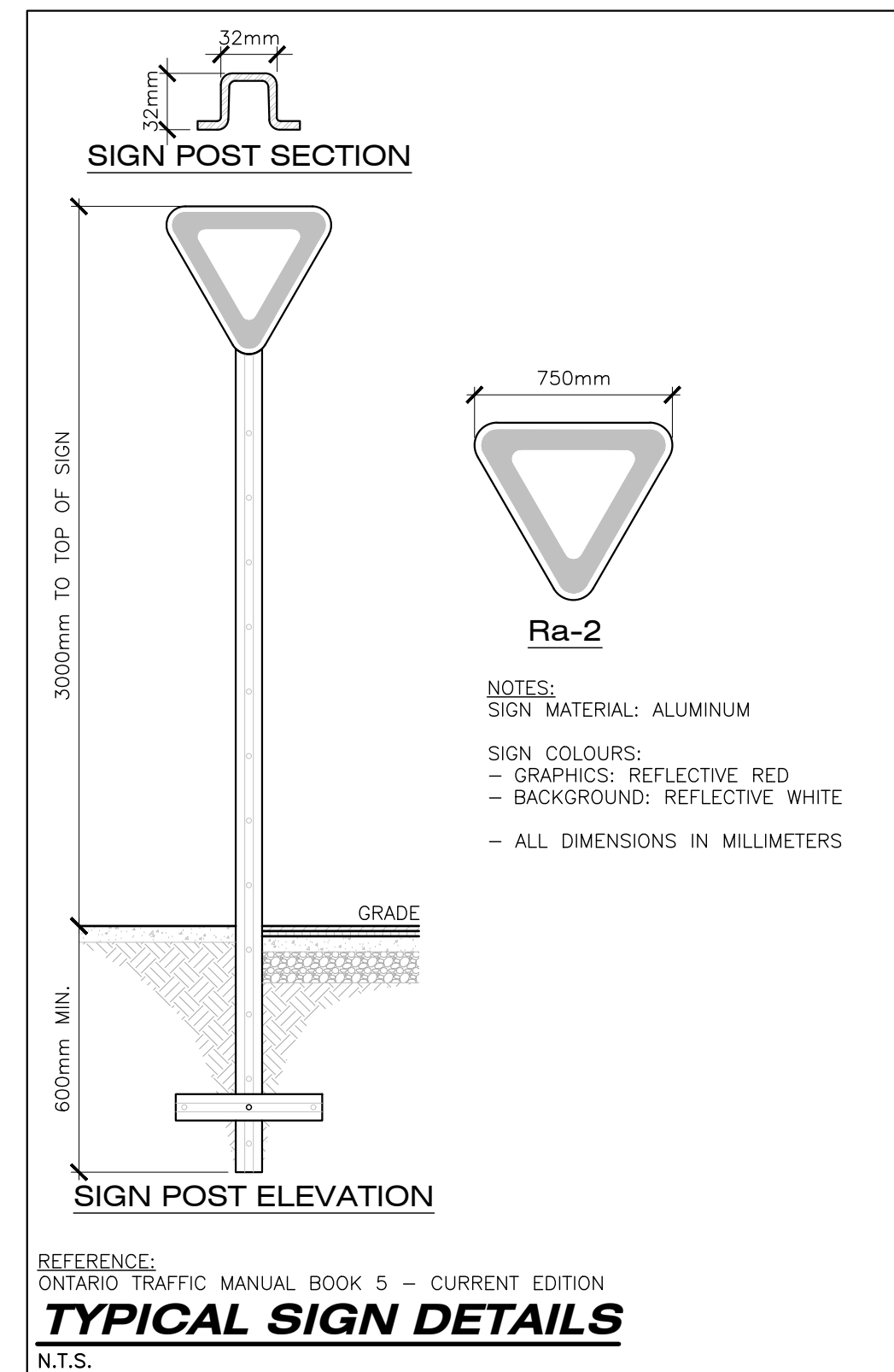
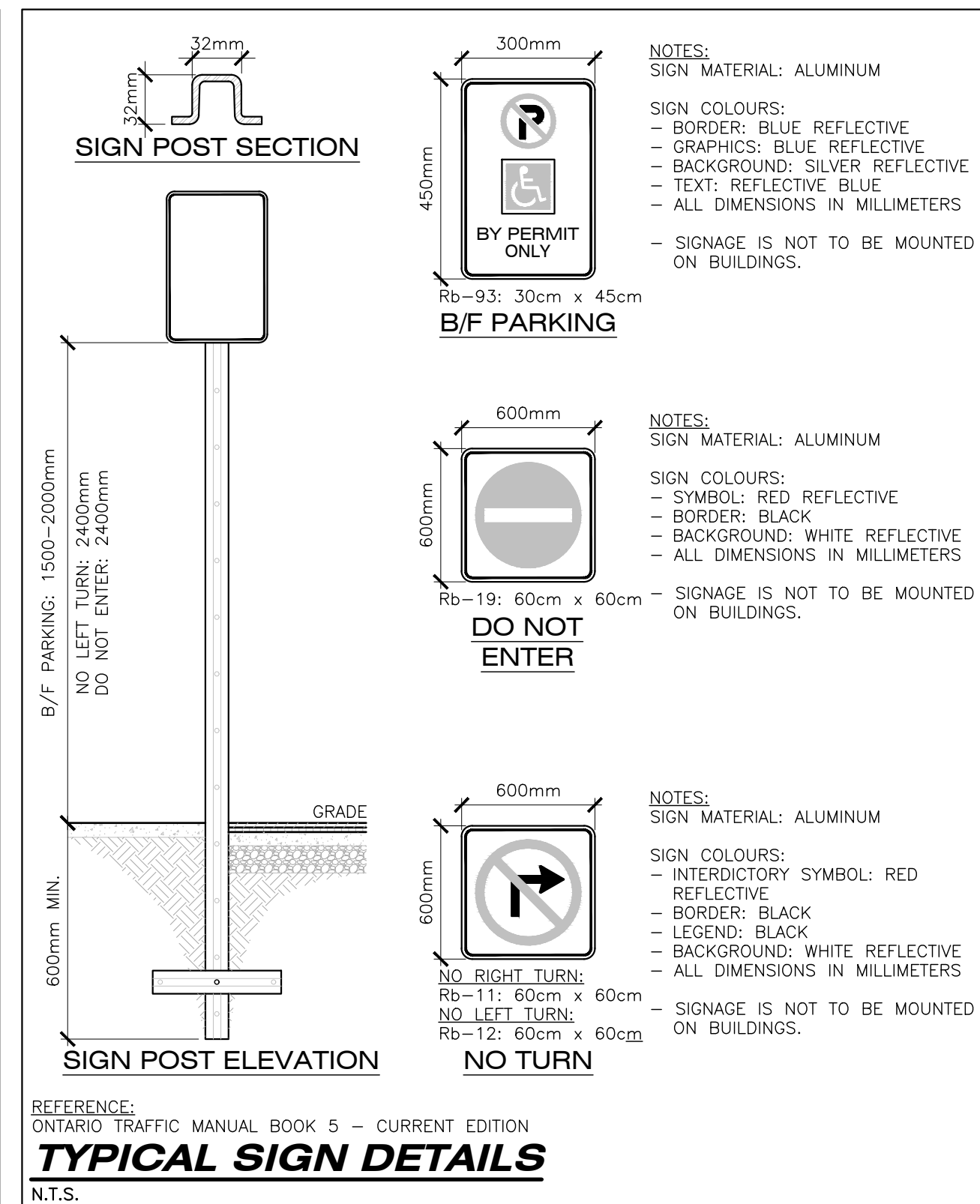
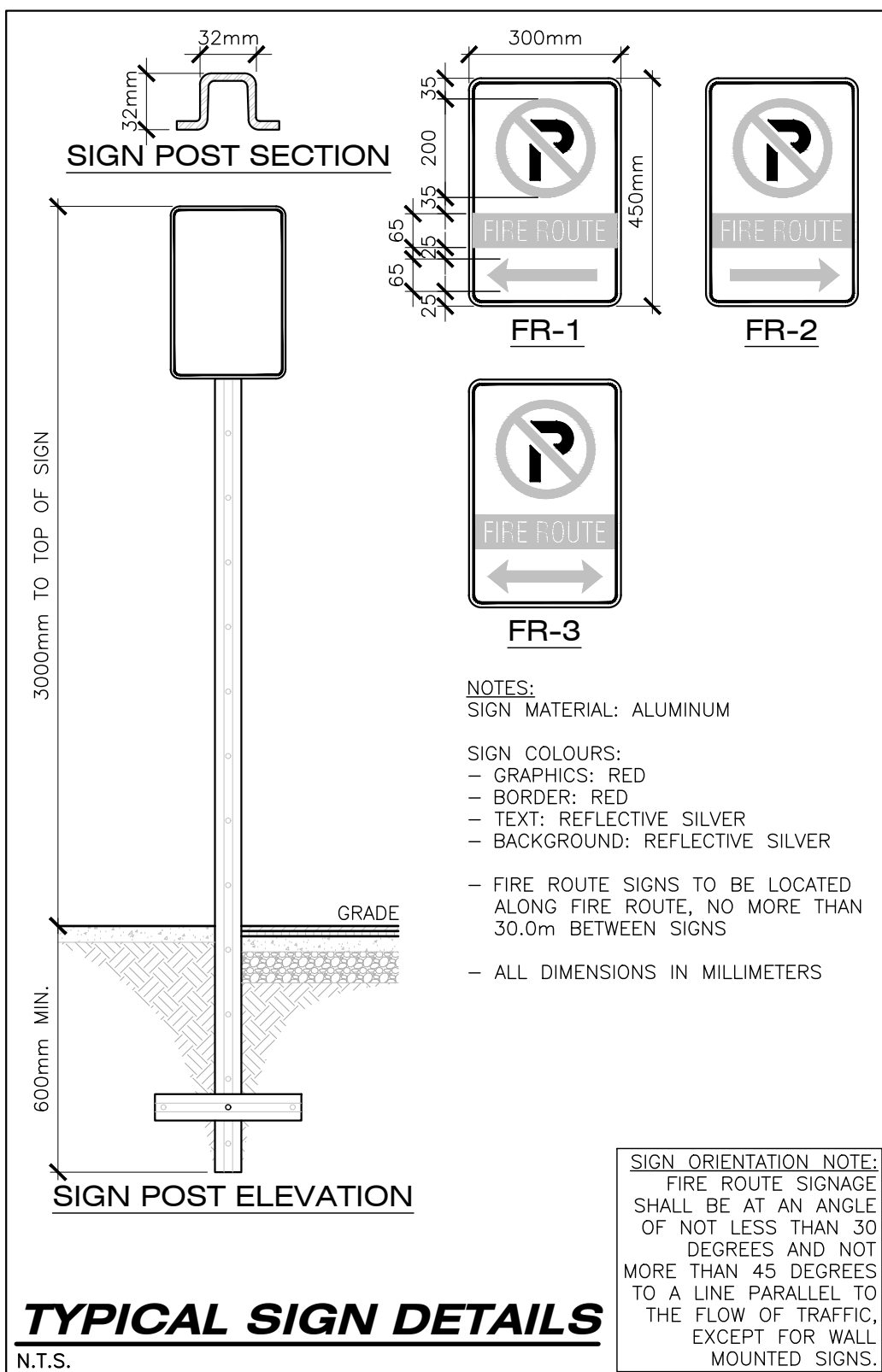
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TITLE  
**SITE PLAN & ZONING CHART**  
**PROPOSED WAREHOUSE**  
 33 PARK RD.  
 SIMCOE, ON.

PROJECT No.  
**SBM-23-2071**

SHEET No.  
**SP1**

PLAN FILE No.  
 -



AS CONSTRUCTED SERVICES	COMPLETION	No.	REVISIONS	D/M/Y	BY	CONSULTANT
DESIGN	BGC	01	ISSUED FOR SPC	24/11/23	BGC	
DRAWN	BGC	02	ISSUED FOR SPA	10/05/24	BGC	
CHECKED	RP	03	ISSUED FOR SPA 2	10/01/25	BGC	
APPROVED	RP					
DATE	10/01/2025					
CAD	24-2071					

**STRIK BALDINELLI MONIZ**  
 sbm  
 PLANNING - CIVIL - STRUCTURAL - MECHANICAL - ELECTRICAL  
 1599 Adelaide St. N, Unit 301, London, Ontario, N5X 4E8  
 Tel: (519) 471-6667 Fax: (519) 471-0034  
 Email: sbm@sbmltd.ca

ENGINEER'S STAMP  
 LICENSED PROFESSIONAL ENGINEER  
 B. R. HYLAND  
 100223591  
 Jan 10, 2025  
 SBM-23-2071  
 PROVINCE OF ONTARIO

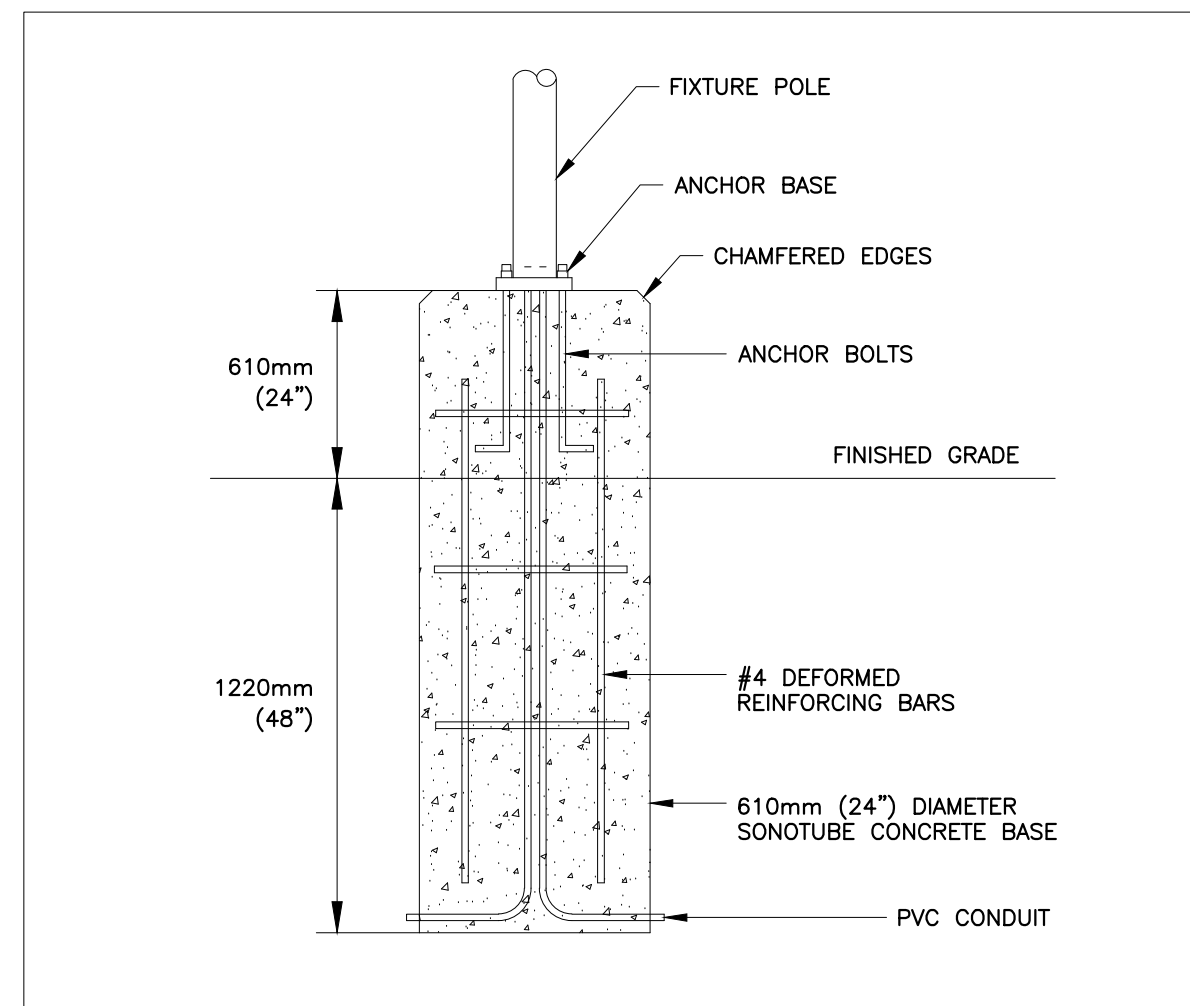
ENGINEER'S STAMP  
 SEALED FOR GENERAL CONFORMANCE WITH THE OBC AND MUNICIPAL SITE PLAN CONTROLS AND ZONING BY-LAWS

CLIENT  
**ONE STOP HOME STAGING**  
 18-111 SHERWOOD DRIVE  
 BRANTFORD, ON  
 N3T 1N8  
 P: 514.410.0098  
 E: onestophomestaging@outlook.com

SCALE  
 N/A

TITLE  
**LEGEND & DETAILS**  
**PROPOSED WAREHOUSE**  
 33 PARK RD.  
 SIMCOE, ON.

PROJECT No.  
**SBM-23-2071**  
 SHEET No.  
**SP2**  
 PLAN FILE No.  
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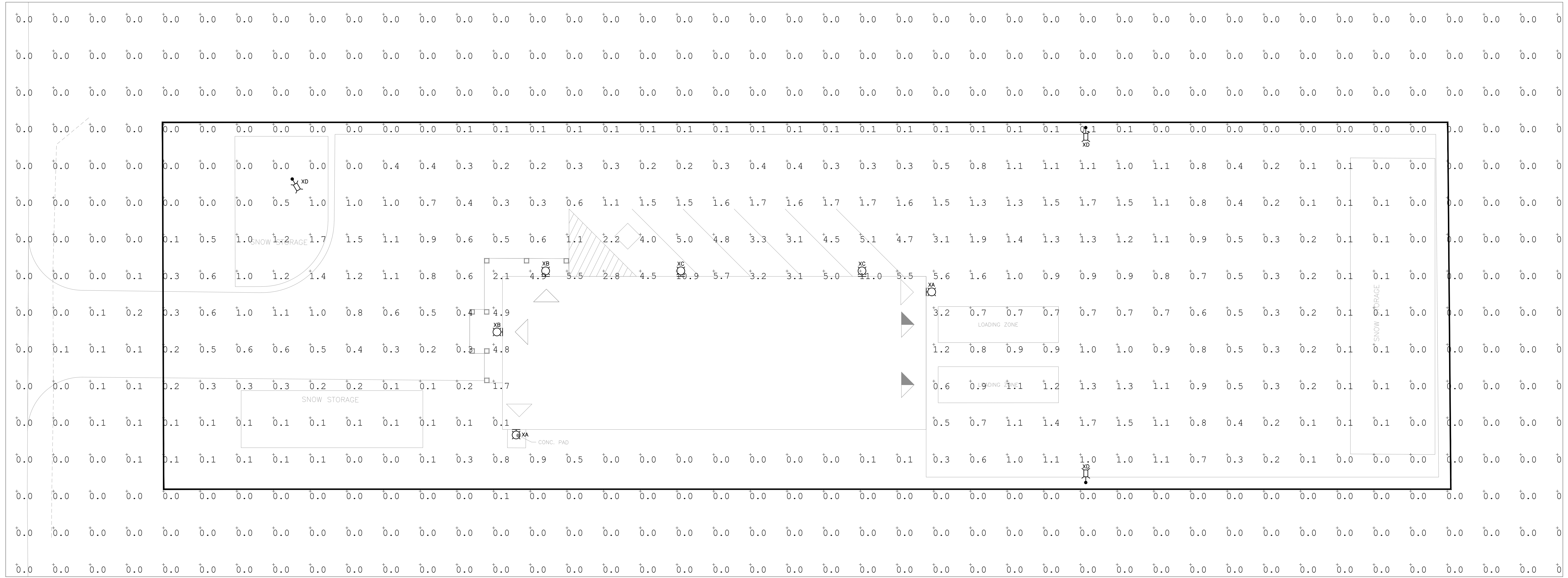
**A LIGHTING STANDARD BASE DETAIL - LANDSCAPED AREA**  
N.T.S.

LIGHTING STATISTICS					
DESCRIPTION	AVG	MAX	MIN	AVG/MIN	MAX/MIN
PARKING AREA	5.06	11.0	2.2	2.30	5.00
DRIVE LANE	0.88	4.7	0.2	4.40	23.50
LOADING AREA	1.08	3.2	0.6	1.80	5.33

NOTES:  
 A. ALL LIGHT LEVELS IN FOOTCANDLES (fc).  
 B. THIS DRAWING IS FOR FIXTURE LOCATIONS AND PHOTOMETRIC LAYOUT OF SITE LIGHTING ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.  
 C. CONFIRM ALL FIXTURE FINISHES WITH OWNER REPRESENTATIVE PRIOR TO ORDERING.  
 D. IF ALTERNATE FIXTURES ARE SUBMITTED FOR APPROVAL, LIGHTING SUPPLIER MUST ALSO SUBMIT SITE PHOTOMETRIC AS PART OF SHOP DRAWING PACKAGE.  
 E. CONFIRM ALL FIXTURE VOLTAGES WITH BUILDING ENGINEER PRIOR TO ORDERING.  
 F. ALL SPECIFIED FIXTURES HAVE ZERO UPLIGHT.

**PROJECT MEETS DARK SKY COMPLIANCE REQUIREMENTS. REFER TO FIXTURE SCHEDULE FOR FIXTURE DETAILS.**

IMAGE	SYMBOL	DESCRIPTION	LAMPS
	XA	WALL MOUNTED LED LITHONIA LIGHTING CAT# WDGE2 LED P0 30K 80CRI T15 MOUNTED ABOVE DOOR	7W, 120V LED, 3000K 666LM LLF=0.85
	XB	WALL MOUNTED LED LITHONIA LIGHTING CAT# WDGE2 LED P1 30K 80CRI T15 MOUNTED ABOVE DOOR	12W, 120V LED, 3000K 1157LM LLF=0.85
	XC	D-SERIES WALL MOUNTED LED LITHONIA LIGHTING CAT# DSXW2 LED 20C 1000 30K T3M MVOLT MOUNTED AT 9'0" A.F.G.	73W, 120V LED, 3000K 7172LM LLF=0.85
	XD	D-SERIES WALL MOUNTED LED LITHONIA LIGHTING CAT# DSX1 LED P1 30K 80CRI BLC3 MOUNTED AT 9'0" A.F.G.	73W, 120V LED, 3000K 7172LM LLF=0.85

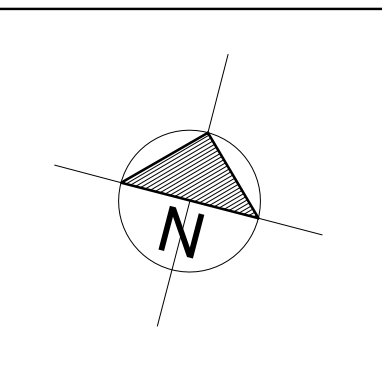


**GENERAL NOTES**  
 1. IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ALL ERRORS AND/OR OMISSIONS TO STRIK BALDINELLI MONIZ LTD.  
 2. ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT BUILDING CODE REGULATIONS AND BYLAWS HAVING JURISDICTION.  
 3. THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNTIL IT HAS BEEN SIGNED BY STRIK BALDINELLI MONIZ LTD. AND A BUILDING PERMIT HAS BEEN ISSUED.  
 4. CONSTRUCTION TO BE ACCORDING TO BEST COMMON PRACTICE.  
 5. DO NOT SCALE DRAWINGS, WHEN REQUIRED REQUEST WRITTEN VERIFICATION OF DIMENSIONS WITH STRIK BALDINELLI MONIZ LTD.

6. ALL DRAWINGS & SPECIFICATIONS ARE THE PROPERTY OF STRIK BALDINELLI MONIZ LTD. & MUST BE RETURNED UPON COMPLETION OF THIS PROJECT.  
 7. THIS DRAWING & ALL DETAILS ARE FOR THIS PROJECT ONLY AND SHOULD NOT BE USED FOR ANY OTHER WORK.  
 8. CONTRACTOR IS FULLY RESPONSIBLE FOR MATTERS AFFECTING CONSTRUCTION.  
 9. ANY MATERIAL ALTERNATIONS CARRIED OUT DURING CONSTRUCTION BY THE CONTRACTOR OR ASSOCIATED SUB-CONTRACTOR SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO INSTALL FAILURE TO DO SO RESULTS IN FULL CONTRACTOR RESPONSIBILITY FOR SYSTEMS EFFECTED.

CONSULTANT  
**STRIK BALDINELLI MONIZ**  
 sbm  
 PLANNING - CIVIL - STRUCTURAL - MECHANICAL - ELECTRICAL  
 1659 Adelaide St. N. Unit 201, London, Ontario, N6C 4E8  
 Tel: (519) 471-6867 Fax: (519) 471-0034  
 Email: sbm@sbmltd.ca

LICENSED PROFESSIONAL ENGINEER  
 SBM-23-2071  
 Jan. 14'25  
**J. A. GHANI**  
 100193293  
 PROVINCE OF ONTARIO



PROJECT/CLIENT  
**ONE STOP HOME STAGING WAREHOUSE & OFFICE**  
**33 PARK RD, SIMCOE, ON**

DRAWING TITLE  
**SITE PLAN PHOTOMETRIC -ELECTRICAL**

NO.	DATE	ISSUED / REVISIONS
01	MAR 26/24	ISSUED FOR SPA
02	JAN 14/25	RE-ISSUED FOR SPA

NO.	DATE	ISSUED / REVISIONS

PROJ. NO.	SBM-23-2071	DRAWING NO.
SCALE	1:150	<b>E101</b>
DATE	(MARCH 2024)	
DRAWN	KA	
DESIGNED	EB	
CHECKED	JG	
REVISION NO.	02	

**REQUIRED INFORMATION**

Name of Owner Shawna Beth Sherk  
 Property Legal Description Part Lot 3, Concession 14 Windham, Part 9+24 Plan  
 Roll Number 40302502318 37R4154 Norfolk County  
 PIN Number \_\_\_\_\_  
 Type and Number of Units \_\_\_\_\_  
 Single Detached \_\_\_\_\_  
 Semi-Detached \_\_\_\_\_  
 Duplex \_\_\_\_\_  
 Triplex \_\_\_\_\_  
 Four-plex \_\_\_\_\_  
 Street Townhouse \_\_\_\_\_  
 Stacked Townhouse \_\_\_\_\_  
 Apartment \_\_\_\_\_  
 Transfer Easements Block Number and Purpose \_\_\_\_\_  
 Transfer Block Number and Purpose \_\_\_\_\_

- |  |                                      |                                     |                               |
|--|--------------------------------------|-------------------------------------|-------------------------------|
| Geotechnical Report prepared for Lands             | <input type="radio"/> YES            | <input checked="" type="radio"/> NO | <input type="radio"/> UNKNOWN |
| Lands are Within the Source Water Protection Area  | <input checked="" type="radio"/> YES | <input type="radio"/> NO            | <input type="radio"/> UNKNOWN |
| Lands Contain any Contaminated or Impacted Soil    | <input type="radio"/> YES            | <input checked="" type="radio"/> NO | <input type="radio"/> UNKNOWN |
| Lands Contain any Natural Watercourse              | <input type="radio"/> YES            | <input checked="" type="radio"/> NO | <input type="radio"/> UNKNOWN |
| Lands Contain any Wetlands                         | <input type="radio"/> YES            | <input checked="" type="radio"/> NO | <input type="radio"/> UNKNOWN |
| Lands Contain any Archaeological Sites             | <input type="radio"/> YES            | <input checked="" type="radio"/> NO | <input type="radio"/> UNKNOWN |
| Lands Contain an Existing Well and or Septic Field | <input type="radio"/> YES            | <input checked="" type="radio"/> NO | <input type="radio"/> UNKNOWN |
| Species at Risk Branch MECP Screening              | <input type="radio"/> YES            | <input checked="" type="radio"/> NO | <input type="radio"/> UNKNOWN |
| Lands Contain any Endangered Species               | <input type="radio"/> YES            | <input checked="" type="radio"/> NO | <input type="radio"/> UNKNOWN |

**OWNER INFORMATION**

NAME AND CONTACT One Stop' home Staging Inc.  
 ADDRESS WITH POSTAL CODE 848 Norfolk St S. Simcoe Ont. N3Y 4K1  
 PHONE NUMBER 519 410 0098  
 EMAIL onestophomestaging@outlook.com

**AGENT INFORMATION**

NAME AND CONTACT Ben Hyland - Strik, Baldinelli, Moniz Ltd.  
 ADDRESS WITH POSTAL CODE 1599 Adelaide St North, London, ON N5X 4E8  
 PHONE NUMBER 519 471 6667 x 127  
 EMAIL bhyland@sbmltd.ca

**ENGINEER INFORMATION**

NAME AND CONTACT Ben Hyland - Strik, Baldinelli, Moniz Ltd.  
 ADDRESS WITH POSTAL CODE 1599 Adelaide St. N., London, ON N5X 4E8  
 PHONE NUMBER 519 471 6667 x127  
 EMAIL bhyland@sbmltd.ca

**LAWYER INFORMATION**

NAME AND CONTACT Melanie Turner  
 ADDRESS WITH POSTAL CODE 582 Hepner Cres, PO Box 10041, Saugeen Shores, Port Elgin  
Ont, N0H 0A0  
 PHONE NUMBER 226 256 3054 x 105  
 EMAIL mtturner.shankarlaw@gmail.com

**INSURANCE PROVIDER INFORMATION**

NAME AND CONTACT Desjardins Insurance / Etienne Nel  
 ADDRESS WITH POSTAL CODE 268-270 Randall St, Oakville, Ont L6J 1P9  
 PHONE NUMBER 905-257-6556  
 EMAIL etienne.nel@desjardins.com

**FINANCIAL INSTITUTION INFORMATION (IF APPLICABLE)**

NAME AND CONTACT CIBC  
 ADDRESS WITH POSTAL CODE 5 Norfolk St. S. Simcoe Ont  
 PHONE NUMBER 519 426 4630  
 EMAIL \_\_\_\_\_

**MORTGAGEE INFORMATION (IF APPLICABLE)**

NAME AND CONTACT BDC - Kethki Ambekar  
 ADDRESS WITH POSTAL CODE 25 main St. West, Suite 1000 Hamilton, Ont.  
 PHONE NUMBER 905 570 7211 / 416 258 9410 (cell)  
 EMAIL Kethki.ambekar@bdc.ca

**SPECIES AT RISK SCREENING**

The Ontario Endangered Species Act inquiries and Species at Risk screening are now handled by the Ministry of the Environment, Conservation and Parks, specifically the "Species at Risk Branch" and the new e-mail address for handling these inquiries is now SAROntario@ontario.ca.

**TRANSFERS, EASEMENTS AND POSTPONEMENT OF INTEREST**

The owner acknowledges and agrees that, it is their solicitor's responsibility on behalf of the owner for the registration of all transfer(s) of land to the County, free and clear of any charges or encumbrances, and/or transfer(s) of easement in favour of the County and/or utilities at no cost to the County. In addition, the owner further acknowledges and agrees that it is their solicitor's responsibility on behalf of the owner for the registration of postponements of any charges to the County's agreements.

# ONE STOP HOME STAGING - PROPOSED WAREHOUSE

## NORFOLK COUNTY - 33 PARK ROAD, SIMCOE

### SECURITIES AND CONSTRUCTION ESTIMATES

REVISION

2025-01-06 - PRELIMINARY FOR APPROVAL
DATE - COLLECTED AT REGISTRATION
DATE - HELD AFTER ACCEPTANCE

ITEM	DESCRIPTION	UNIT	QTY.	UNIT PRICE	TOTAL COST	Securities	
						10%	100%

### BELOW GROUND

#### SANITARY SEWERS

Sanitary Sewer							
a)	150mm Diameter (on-site)	M	28	\$200	\$5,600	\$560	\$0
b)	150mm Diameter (ROW)	M	28	\$200	\$5,600	\$0	\$5,600
	1200mm Diameter Manholes	EACH	1	\$3,000	\$3,000	\$300	\$0
	125mm Sanitary Services	EACH	0	\$0	\$0	\$0	\$0
	Video Inspection and Report	L.S.	1	\$1,500	\$1,500	\$0	\$1,500
<b>TOTAL SANITARY SEWERS</b>					<b>\$15,700</b>	<b>\$860</b>	<b>\$7,100</b>

#### WATERMAIN

Watermain							
a)	25mm Diameter (on-site)	M	28	\$200	\$5,600	\$560	\$0
b)	25 mm Diameter (ROW)	M	9	\$200	\$1,800	\$0	\$1,800
Watervalves							
a)	25mm Diameter	EACH	1	\$300	\$300	\$0	\$300
<b>TOTAL WATERMAIN</b>					<b>\$7,700</b>	<b>\$560</b>	<b>\$2,100</b>

#### STORM SEWERS

Storm Sewer							
a)	400mm Diameter	M	3	\$250	\$750	\$0	\$750
b)	300mm Diameter	M	70	\$200	\$14,000	\$1,400	\$0
c)	150mm Diameter	M	36	\$175	\$6,300	\$630	\$0
	1200mm Diameter Manholes	EA	2	\$4,000	\$8,000	\$800	\$0
	EZStorm Detention Chamber	M3	87	\$600	\$52,200	\$5,220	\$0
	HydroDome HD4 Oil-Grit Separator	EA	1	\$20,000	\$20,000	\$2,000	\$0
	Video Inspection and Report	L.S.	1	\$1,500	\$1,500	\$150	\$0
<b>TOTAL BELOW STORM SEWER</b>					<b>\$102,750</b>	<b>\$10,200</b>	<b>\$750</b>
					<b>\$126,150</b>	<b>\$11,620</b>	<b>\$9,950</b>

### ABOVE GROUND

#### STORM SEWERS

	Catchbasins	EA	1	\$3,000	\$3,000	\$300	\$0
<b>TOTAL ABOVE STORM SEWER</b>					<b>\$3,000</b>	<b>\$300</b>	<b>\$0</b>

#### ROAD CONSTRUCTION

	Granular 'A' (onsite)	Tonne	528	\$15	\$7,927	\$793	\$0
	Granular 'B' (onsite)	Tonne	1049	\$15	\$15,740	\$1,574	\$0
	Granular 'A' (ROW)	Tonne	150	\$15	\$2,250	\$0	\$2,250
	Granular 'B' (ROW)	Tonne	300	\$15	\$4,500	\$0	\$4,500
	HL8 Base Asphalt (onsite)	Tonne	6	\$90	\$540	\$54	\$0
	HL8 Base Asphalt (ROW)	Tonne	18	\$90	\$1,620	\$0	\$1,620
	Sidewalk	M <sup>2</sup>	29	\$40	\$1,160	\$116	\$0



ITEM	DESCRIPTION	UNIT	QTY.	UNIT PRICE	TOTAL COST	Securities	
						10%	100%
	Tactile (at sidewalk ramps)	L.S.	0	\$400	\$0	\$0	\$0
	Painted Linework on Pavement	L.S.	1	\$1,500	\$1,500	\$150	\$0
	Supply and Install Street Signs	L.S.	3	\$120	\$360	\$36	\$0
<b>TOTAL ROAD CONSTRUCTION</b>					<b>\$35,597</b>	<b>\$2,723</b>	<b>\$8,370</b>

### STREETLIGHTING

	Streetlights (Pole, Mast Arm and Luminaire)	EACH	0	\$0	\$0	\$0	\$0
	Streetlight Disconnect Pedestal	EACH	0	\$0	\$0	\$0	\$0
	Conduit for Streetlight Conductor						
	a) 50mm Conduit	M	0	\$0	\$0	\$0	\$0
	b) 100mm Conduit (Road Crossings)	M	0	\$0	\$0	\$0	\$0
	Streetlighting Conductor	M	0	\$0	\$0	\$0	\$0
<b>TOTAL STREETLIGHTING</b>					<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
					<b>\$38,597</b>	<b>\$3,023</b>	<b>\$8,370</b>

### FINISHING WORKS

	40mm HL3 Asphalt (On-site Top Lift)	Tonne	6	\$100	\$600	\$60	\$0
	40mm HL3 Asphalt (ROW Top Lift)	Tonne	18	\$100	\$1,800	\$0	\$1,800
					<b>\$2,400</b>	<b>\$60</b>	<b>\$1,800</b>

### STORM WATER MANAGEMENT POND

	Rip Rap Outlet	L.S.	1	\$1,000	\$1,000	\$100	\$0
					<b>\$1,000</b>	<b>\$100</b>	<b>\$0</b>

### LANDSCAPING AND ON SITE WORKS

	Trees		0	\$0	\$0	\$0	\$0
	Trails and Walkways (topsoil to a depth of 0.15 metres and sod)		0	\$0	\$0	\$0	\$0
	Park (topsoil to a depth of 0.15 metres and sod)						
	Plants and Materials		0	\$0	\$0	\$0	\$0
	Flagstone		0	\$0	\$0	\$0	\$0
	Fencing		0	\$0	\$0	\$0	\$0
	Lighting		0	\$0	\$0	\$0	\$0
	Garbage Enclosure		0	\$0	\$0	\$0	\$0
	Retaining Wall		0	\$0	\$0	\$0	\$0
	Planters		0	\$0	\$0	\$0	\$0
	Signage		0	\$0	\$0	\$0	\$0
	Parking Lot Demarcation		0	\$0	\$0	\$0	\$0
					<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

### SUMMARY

BELOW GROUND					\$126,150	\$11,620	\$9,950
ABOVE GROUND					\$38,597	\$3,023	\$8,370
FINISHING WORKS					\$2,400	\$60	\$1,800

ITEM	DESCRIPTION	UNIT	QTY.	UNIT PRICE	TOTAL COST	Securities	
						10%	100%
	STORM WATER MANAGEMENT POND				\$1,000	\$100	\$0
	LANDSCAPING AND ON SITE WORKS				\$0	\$0	\$0

**TOTAL SECURITIES REQUIRED AT REGISTRATION**

**\$20,120**

Area (Light Duty): 

43
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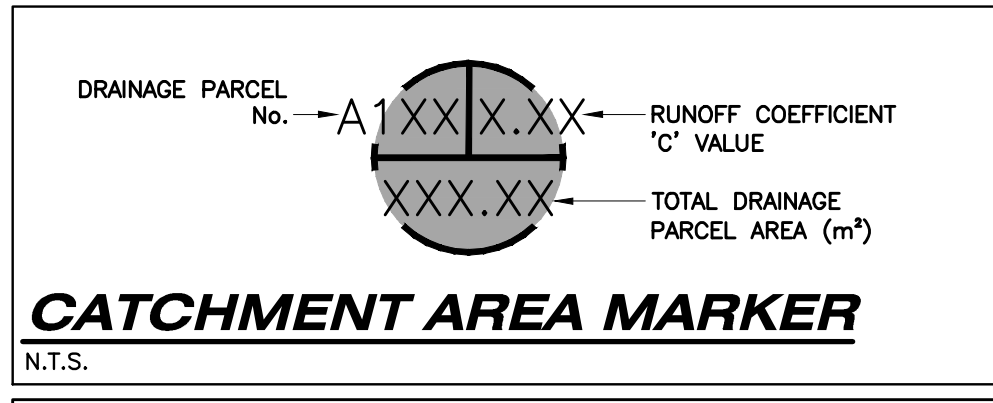
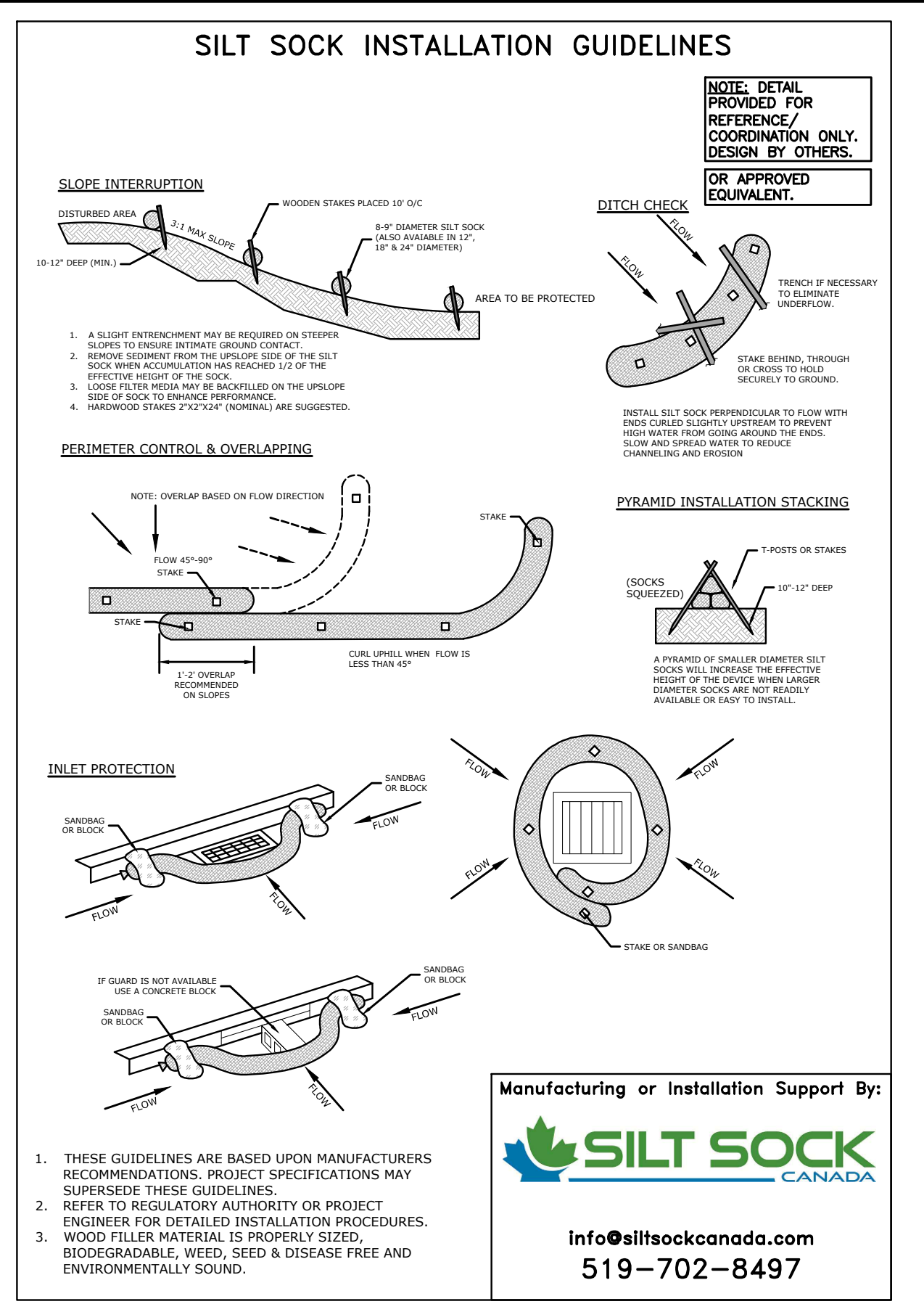
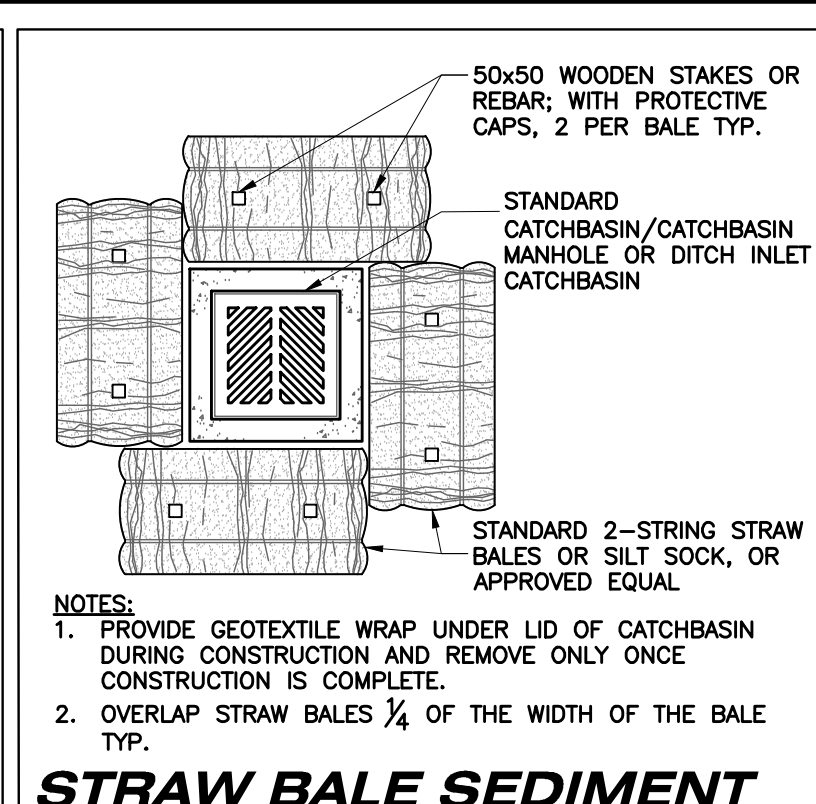
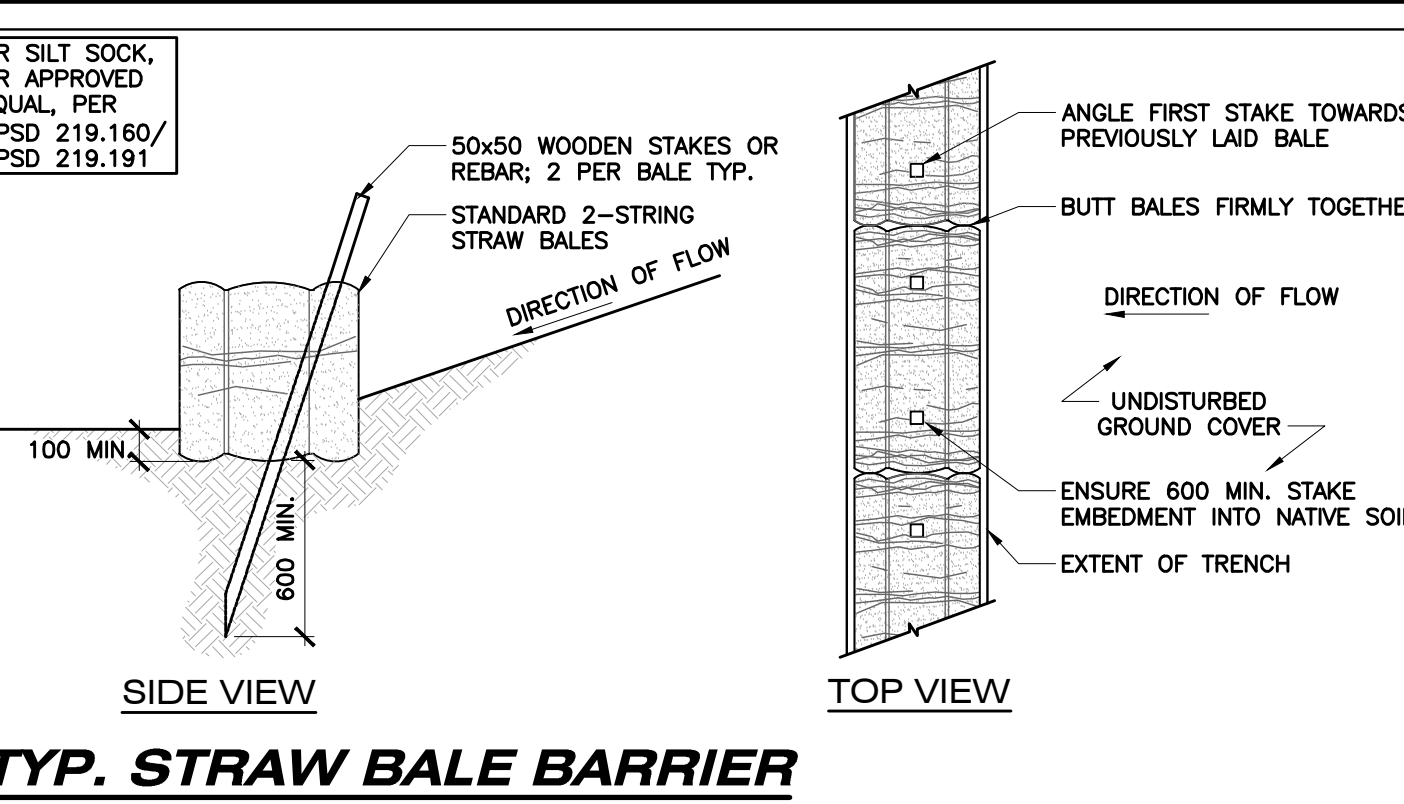
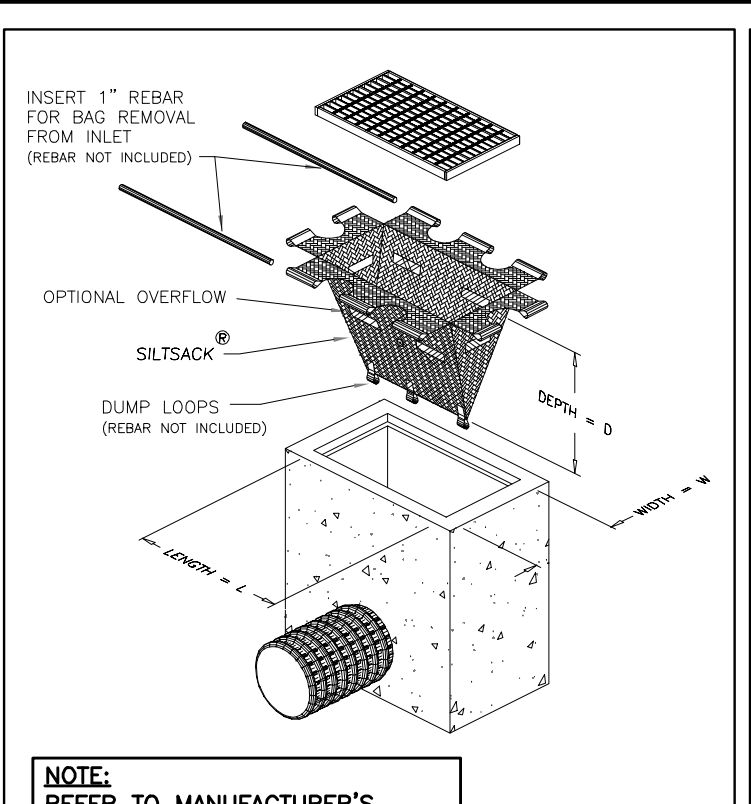
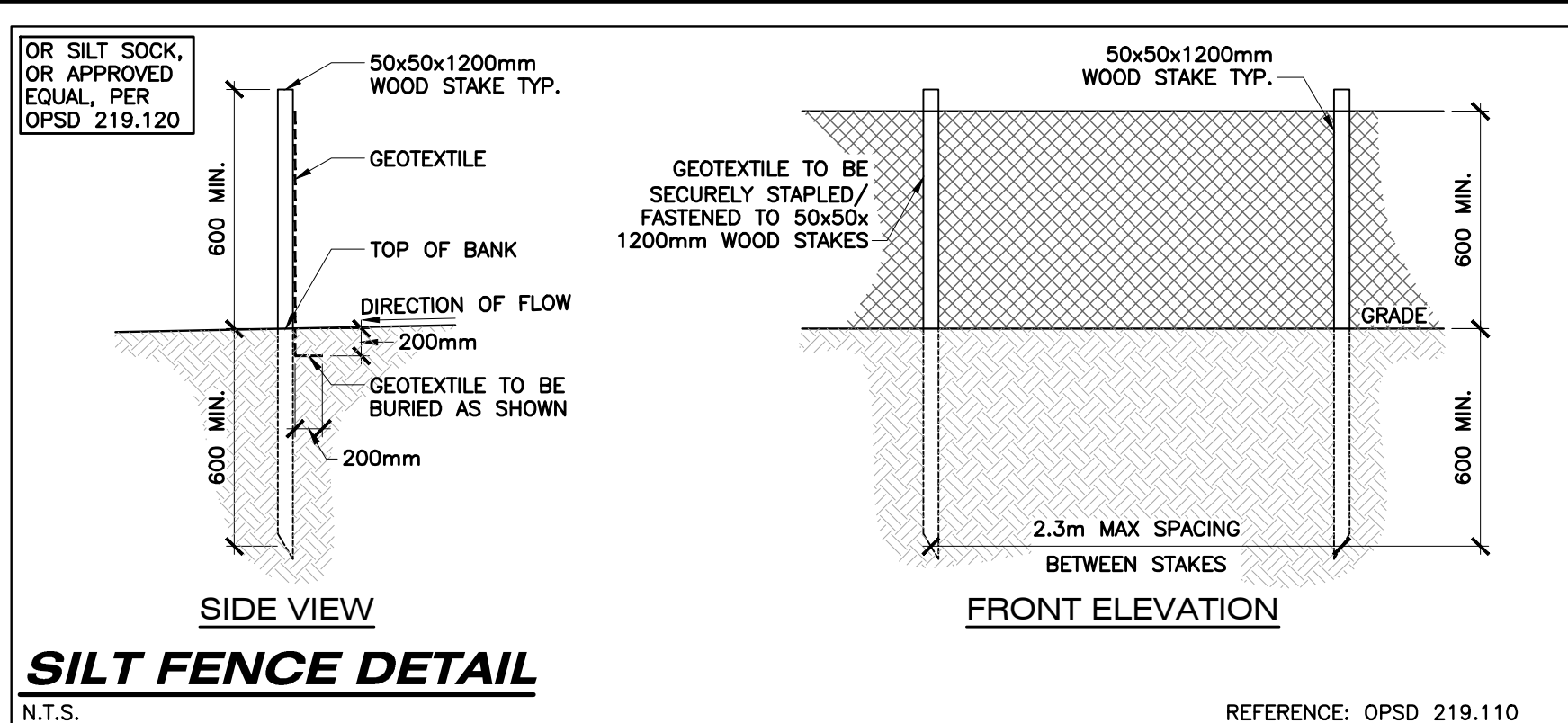
Light Duty	Thickness (mm)	Tonne
HL3	40	4.13
HL8	50	5.16
Gran A	150	15.48
Gran B	225	23.22

		Area (gravel):	1425
gravel	Thickness (mm)	Tonne	
HL3	0	0.00	
HL8	0	0.00	
Gran A	150	513.00	
Gran B	300	1026.00	

		Area (heavy duty in ROW):	98
Heavy Duty	Thickness (mm)	Tonne	
HL3	50	11.76	
HL8	75	17.64	
Gran A	150	35.28	
Gran B	300	70.56	







**SITE PREPARATION NOTE:**  
THIS PLAN HAS BEEN PREPARED TO IDENTIFY REMOVALS, EROSION & SEDIMENT CONTROL MEASURES AND TEMPORARY CONSTRUCTION WORKS FOR THE BENEFIT OF THE OWNER'S CONTRACTOR IN ADVANCE OF SERVICING WORKS. IT IS NOT INTENDED TO IDENTIFY PERMANENT GRADING PATTERNS.

**STORM DRAINAGE NOTE:**  
STORM DRAINAGE MAY TEMPORARILY NEED TO BE CONTROLLED AND PUMPED FROM STORM SEWER SYSTEM. ANY SUCH TEMPORARY MEASURES SHALL BE CONDUCTED AT NO EXTRA COST TO THE CONTRACT AND BE BASED UPON THE OWNER'S CONTRACTOR'S WATER CONTROL PLANS, WHICH MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR/ENGINEER PRIOR TO CONSTRUCTION.

**UTILITIES NOTE:**  
FOR CLARITY, NOT ALL EXISTING UTILITIES MAY BE SHOWN. THE OWNER'S CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL UTILITY LOCATES PRIOR TO CONSTRUCTION.

**SEDIMENT AND EROSION CONTROL MEASURES MAY ONLY BE REMOVED UPON STABILIZATION OF CONTRIBUTING CATCHMENT AREA AND SUBJECT TO APPROVAL OF ENGINEER/NORFOLK COUNTY.**

**UNLESS OTHERWISE NOTED ON THE PLANS, GEOTEXTILE SHALL BE NON-WOVEN TO MEET CLASS 2-OPSS/MUNI 1860.07.02 (I.E. TERRAFIX 27OR, OR APPROVED EQUAL) WITH 300mm MIN. OVERLAPS.**

**OWNER'S CONTRACTOR TO CLEAR AND GRUB SITE PRIOR TO CONSTRUCTION AND DISPOSE OF ALL DEBRIS AND EXCESS FILL/TOPSOIL OFF-SITE AT AN APPROVED FACILITY.**

**SILT FENCE TO BE CONSTRUCTED ON PROPERTY LINE. LINE WORK IS SHOWN AS OFFSET FOR CLARITY.**

**THE OWNER'S CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 AND BOOK 18 FOR ALL WORKS WITHIN THE COUNTY RIGHT-OF-WAY. THE OWNER'S CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE COUNTY/ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH CONSTRUCTION.**

**OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR REGULAR MONITORING & CLEANUP OF TRACKED MUD/DEBRIS ON ADJACENT LANDS & PUBLIC ROADS TO THE SATISFACTION OF THE ENGINEER/NORFOLK COUNTY.**

**DISPOSAL NOTE:**  
ALL ITEMS NOTED AS "TO BE REMOVED" SHALL BE DISCARDED OFF-SITE AT AN APPROVED FACILITY.

**SILT SACKS (OR APPROVED EQUAL) SHALL BE INSTALLED AND MAINTAINED IN EXISTING AND PROPOSED CB'S AND CBM'S FOR DURATION OF PROJECT UNTIL SURFACES ARE PAVED AND BOULEVARDS ARE SODDED.**

**BOULEVARD AREAS AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF SERVICES SHALL BE RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES ON SHEET C1, WHICHEVER IS GREATER, ALL AT NO COST TO THE COUNTY.**

**OFF-SITE WORKS NOTE:**  
ROAD EXCAVATION/OCCUPANCY PERMITS FOR ALL EXTERNAL WORKS ARE REQUIRED.

**THE OWNER'S CONTRACTOR IS TO MANAGE ALL EXCESS SOIL AS PER 0.1 REG 406/19 'ON-SITE AND EXCESS SOIL MANAGEMENT'**

**OWNER'S CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO AVOID MIXING TOPSOIL WITH SUBSOIL, WHERE REQUIRED FOR REUSE ON-SITE.**

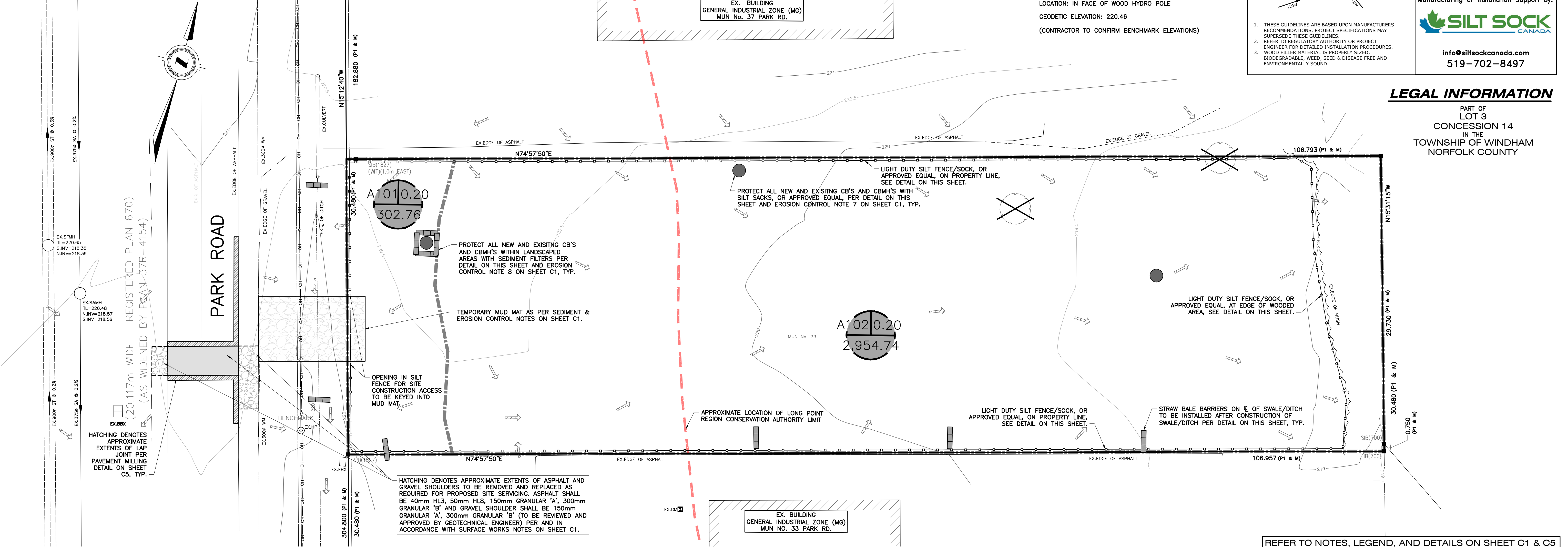
**TOPSOIL STOCKPILE SIZES/LOCATIONS TO BE DETERMINED IN THE FIELD. SILT FENCE SHALL BE CONSTRUCTED AT TOE OF DOWNGRADE EDGES OF TOPSOIL STOCKPILE**

**ALL NATIVE FILL PLACED SHALL MEET THE REQUIREMENTS FOR ENGINEERED FILL, COMPACTED TO 100% SPMDD OR AS OUTLINED IN THE GEOTECHNICAL REPORT.**

**EXISTING SERVICING NOTE:**  
INVERTS OF THE EX. SANITARY & STORM SEWERS @ CONNECTION POINTS SHALL BE CONFIRMED BY THE OWNER'S CONTRACTOR PRIOR TO THE START OF CONSTRUCTION/ORDERING STRUCTURES. THE CONSULTANT IS TO BE INFORMED IF DIFFERENT THAN NOTED.

**RESTORATION NOTE:**  
ALL WORK IN THE ROAD ALLOWANCE SHALL MEET THE MINIMUM SPECIFICATIONS OF NORFOLK COUNTY

**NO WORK ON WATER SERVICES CAN TAKE PLACE WITHOUT SUPERVISION OF A LICENSED NORFOLK COUNTY WATER OPERATOR ON-SITE.**



**LEGAL INFORMATION**

PART OF  
LOT 3  
CONCESSION 14  
IN THE  
TOWNSHIP OF WINDHAM  
NORFOLK COUNTY

AS CONSTRUCTED SERVICES	COMPLETION	No.	REVISIONS	D./M./Y	BY	CONSULTANT
DESIGN	MGA/JSF	1	ISSUED FOR CLIENT REVIEW	17/04/24	JSF	
DRAWING	FR/JSF	2	ISSUED FOR SITE PLAN APPROVAL, SUB. 1	09/05/24	JSF	
CHECKED	SH	3	ISSUED FOR SITE PLAN APPROVAL, SUB. 2	10/01/25	JSF	
APPROVED	SH					
DATE				26/01/2024		
CAD				23-2071		

**sbm STRIK BALDINELLI MONIZ**

PLANNING - CIVIL - STRUCTURAL - MECHANICAL - ELECTRICAL  
1599 Adelaide St. N, Unit 301, London, Ontario, N5X 4E8  
Tel: (519) 471-6667 Fax: (519) 471-0034  
Email: sbm@sbmltd.ca

**ENGINEER'S STAMP**  
LICENSED PROFESSIONAL ENGINEER  
B. R. HYLAND  
100223591  
Jan 10, 2025  
SBM-23-2071  
PROVINCE OF ONTARIO

**C.TECH'S STAMP**

**CLIENT**  
**ONE STOP HOME STAGING**  
18-111 SHERWOOD DRIVE  
BRANTFORD, ON  
N3T 1N8  
P: 514.410.0098  
E: onestophomestaging@outlook.com

**SCALE**  
SCALE - 1:200  
2.0 0 4.0m

**TITLE**  
**EXISTING CONDITIONS, REMOVALS, AND SEDIMENT & EROSION CONTROL PLAN**

**PROJECT No.**  
SBM-23-2071

**SHEET No.**  
C2

**PLAN FILE No.**  
SPPL2024304

**PROPOSED WAREHOUSE**  
33 PARK ROAD  
SIMCOE, ON.

PIPE CROSSINGS & VERTICAL CLEARANCES											
CROSSING No.	SEWER/WATERMAIN ELEVATIONS (*NOT ADJUSTED VALUE)				VERTICAL CLEARANCES (NOT ADJUSTED)	VERTICAL CLEARANCES (ADJUSTED)	*VERTICAL OFFSET				
CR1	150mm	SAN	INV.	219.22	300mm	WM	OBV.	218.72	0.50	0.50	NO
CR2	400mm	STM	INV.	219.78	150mm	SAN	OBV.	219.44	0.34	0.34	N/A
CR3	400mm	STM	INV.	219.75	25mm	WM	OBV.	218.04	1.71	1.71	NO
CR4	150mm	STM	INV.	220.06	25mm	WM	OBV.	218.92	1.14	1.14	NO
CR5	150mm	STM	INV.	220.00	150mm	SAN	OBV.	219.75	0.25	0.25	N/A

STORM SEWER STRUCTURES TABLE					
STRUCTURE I.D.	TOP OF LID	INVERTS	DIAMETER	MATERIAL	
OCS 1 SEE DETAIL ON SHEET C5	220.46	218.94W 218.94E	300#	HDPE CAN/CSA B182.8	
CBMH 2 1200# OPSD 400.020 OPSD 701.010	220.33	219.00W 219.00E	300#	HDPE CAN/CSA B182.8	
CBMH 3 1200# OPSD 400.020 OPSD 701.010	220.27	219.12SW 219.11E	300#	HDPE CAN/CSA B182.8	
CB 4 600X600 OPSD 400.020 OPSD 705.010	220.10	219.30NE	300#	HDPE CAN/CSA B182.8	

SAN SEWER STRUCTURES TABLE					
STRUCTURE I.D.	TOP OF LID	INVERTS	DIAMETER	MATERIAL	
SAMH 1 1200# OPSD 401.010 OPSD 701.010	220.72	219.33E 219.32W	150#	PVC DR28	

**WATERMAIN & SEWER CROSSING NOTE:**  
 1. UNDER PRACTICAL CONDITIONS, WATERMANS SHALL CROSS ABOVE SEWERS WITH SUFFICIENT VERTICAL SEPARATION TO ALLOW FOR PROPER BEDDING AND STRUCTURAL SUPPORT OF THE WATERMAIN AND SEWER. INSULATE WHERE REQUIRED.  
 2. WHEN IT IS NOT POSSIBLE FOR THE WATERMAIN TO CROSS ABOVE THE SEWER, THE WATERMAIN PASSING UNDER A SEWER SHALL BE PROTECTED BY:  
 2.1. PROVIDING A VERTICAL SEPARATION OF AT LEAST 0.5 METRES BETWEEN THE INVERT OF THE SEWER AND THE CROWN OF THE WATERMAIN;  
 2.2. PROVIDING ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING; AND  
 2.3. ENSURING THAT THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.

REFERENCE: JUNE 2012 MINISTRY OF THE ENVIRONMENT'S 'WATERMAIN DESIGN CRITERIA FOR FUTURE ALTERATION AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT'

**OFF-SITE WORKS NOTE:**  
 ROAD EXCAVATION/OCCUPANCY PERMITS FOR ALL EXTERNAL WORKS ARE REQUIRED.

**EXISTING SERVICING NOTE:**  
 INVERTS OF THE EX. SANITARY & STORM SEWERS @ CONNECTION POINTS SHALL BE CONFIRMED BY THE OWNER'S CONTRACTOR PRIOR TO THE START OF CONSTRUCTION/ORDERING STRUCTURES. THE CONSULTANT IS TO BE INFORMED IF DIFFERENT THAN NOTED.

**RESTORATION NOTE:**  
 ALL WORK IN THE ROAD ALLOWANCE SHALL MEET THE MINIMUM SPECIFICATIONS OF NORFOLK COUNTY

**SERVICE STUBS TO BE CAPPED AT 1.0m O/S FROM BUILDING ENVELOPE FOR CONNECTION ONCE BUILDING SERVICES ARE INSTALLED.**

**OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY CONSTRUCTION MEASURES SUCH AS, BUT NOT LIMITED TO, PIPE COVER AT NO ADDITIONAL CHARGE TO THE CONTRACT.**

**STORM SERVICING NOTE:**  
 NO BUILDING DRAIN (SUMP/WEeping TILE/RAIN WATER LEADER) CONNECTIONS WILL BE PERMITTED INTO THE SANITARY SEWERS AND NO DIRECT GRAVITY CONNECTIONS FROM THE FOUNDATION DRAINS WILL BE PERMITTED TO THE STORM SYSTEM UNLESS THE STORM SYSTEM HAS THE CAPACITY TO PROVIDE FOR SUCH CONNECTIONS TO THE SATISFACTION OF THE COUNTY ENGINEER.

ALL PROP WATER METERS ARE c/w A LEAD-FREE REDUCED PRESSURE FLOW ASSEMBLY (RPZ).

ALL WATERMAIN CONSTRUCTION TO CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE NORFOLK COUNTY ENGINEERING DEPARTMENT, WHERE COVER IS LESS THAN 1.7m (EVEN TEMPORARY CONDITIONS), THE WATERMAIN/SERVICE SHALL BE ADEQUATELY INSULATED OVER THE AFFECTED LENGTH.

THE OWNER'S CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 AND BOOK 18 FOR ALL WORKS WITHIN THE COUNTY RIGHT-OF-WAY. THE OWNER'S CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE COUNTY/ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH CONSTRUCTION.

**STORM DRAINAGE NOTE:**  
 STORM DRAINAGE MAY TEMPORARILY NEED TO BE CONTROLLED AND PUMPED FROM STORM SEWER SYSTEM. ANY SUCH TEMPORARY MEASURES SHALL BE CONDUCTED AT NO EXTRA COST TO THE CONTRACT AND BE BASED UPON THE OWNER'S CONTRACTOR'S WATER CONTROL PLANS, WHICH MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR/ENGINEER PRIOR TO CONSTRUCTION.

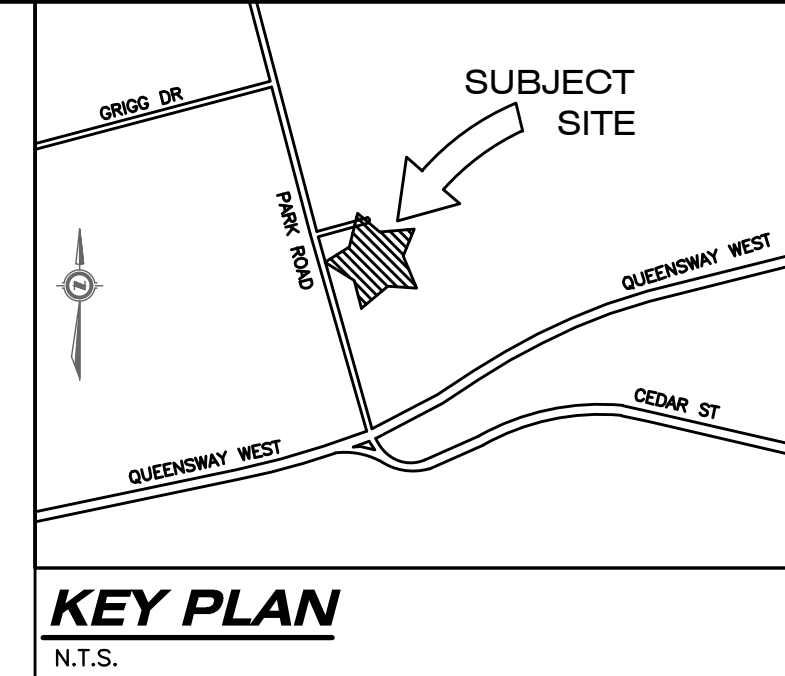
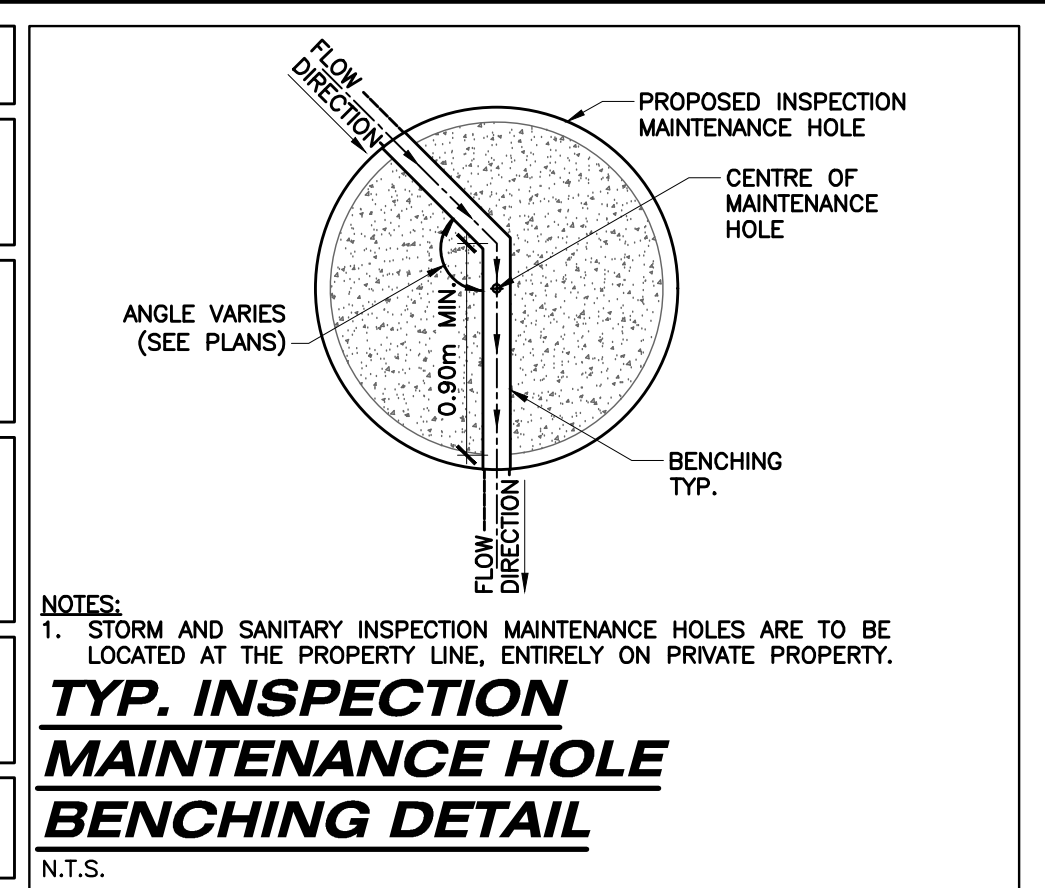
**INSULATION NOTE:**  
 INSULATE SEWERS PER SEWER INSULATION DETAIL ON SHEET C5 (INSULATED PIPES TO BE USED IF INSUFFICIENT DEPTH FOR INSULATION INSTALLATION) + WATER PIPES PER OPSD 1109.030 WHERE MINIMUM COVER CAN NOT BE PROVIDED.

OWNER'S CONTRACTOR SHALL SUPPORT ALL EXISTING UTILITIES AS REQUIRED DURING THE INSTALLATION OF SERVICES TO THE SATISFACTION OF THE UTILITY OWNER AT NO EXTRA COST TO THE CONTRACT.

**BOULEVARD AREAS AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF SERVICES SHALL BE RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES ON SHEET C1, WHICHEVER IS GREATER, ALL AT NO COST TO THE COUNTY.**

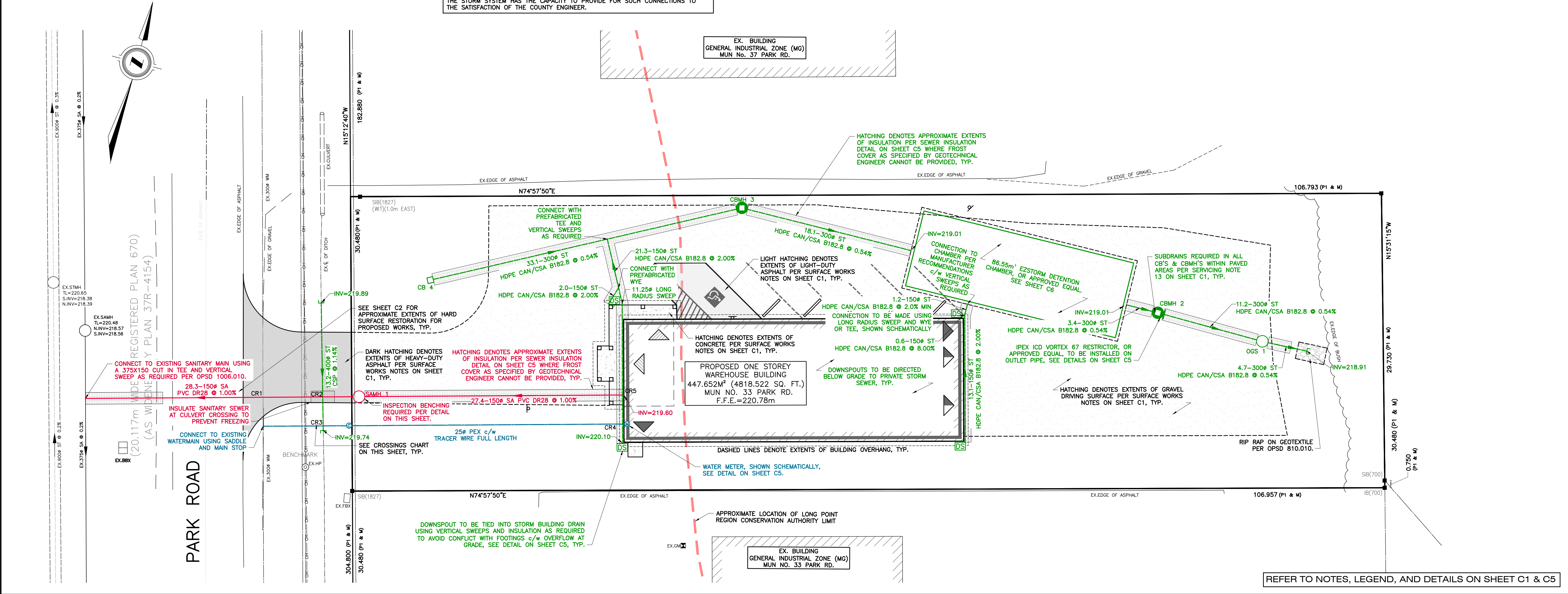
**UTILITIES NOTE:**  
 FOR CLARITY, NOT ALL EXISTING UTILITIES MAY BE SHOWN. THE OWNER'S CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL UTILITY LOCATES PRIOR TO CONSTRUCTION.

NO WORK ON WATER SERVICES CAN TAKE PLACE WITHOUT SUPERVISION OF A LICENSED NORFOLK COUNTY WATER OPERATOR ON-SITE.



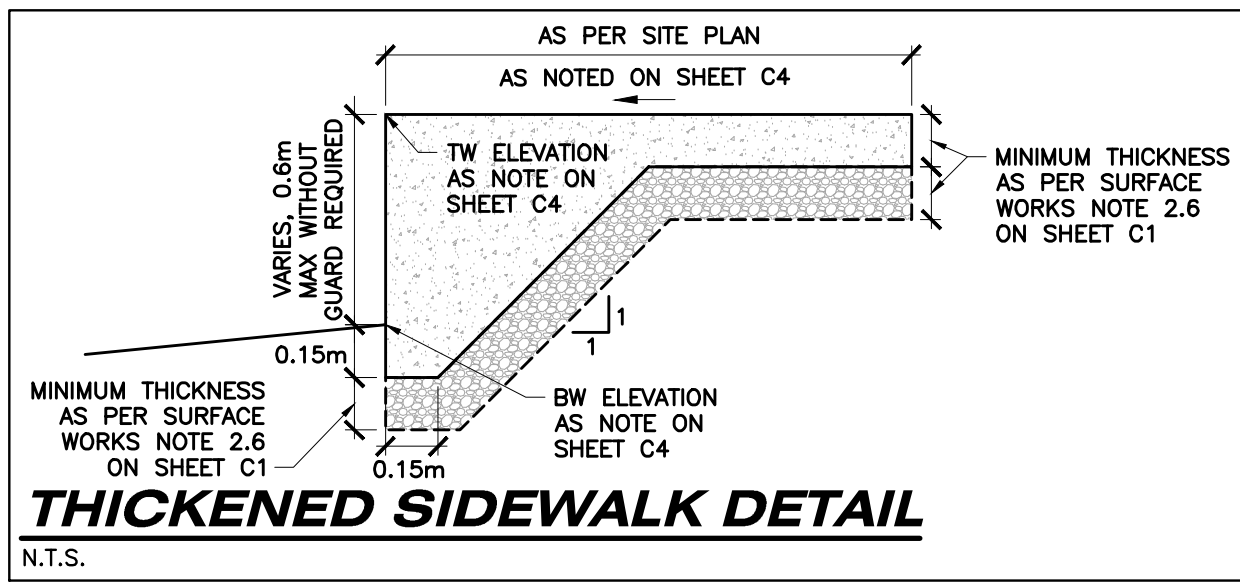
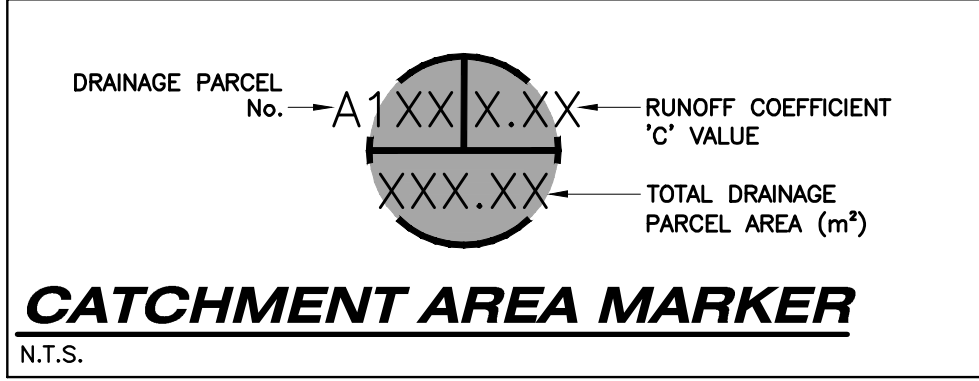
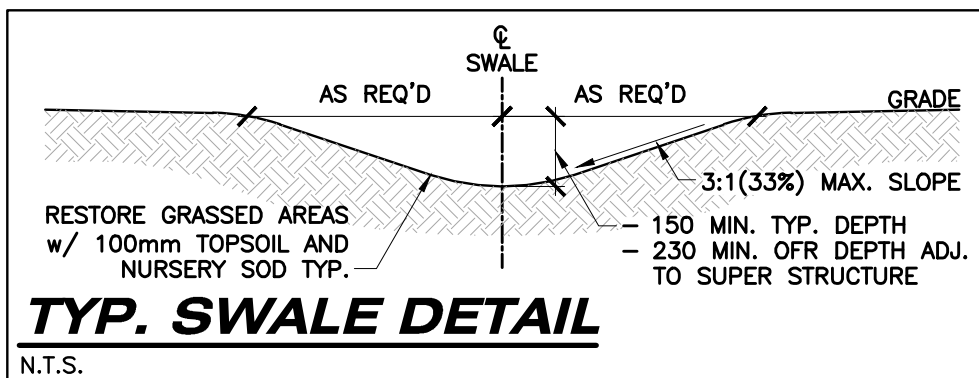
**LEGAL INFORMATION**  
 PART OF  
 LOT 3  
 CONCESSION 14  
 IN THE  
 TOWNSHIP OF WINDHAM  
 NORFOLK COUNTY

**SITE BENCHMARK:**  
 MONUMENT TYPE: SPIKE  
 LOCATION: IN FACE OF WOOD HYDRO POLE  
 GEODETIC ELEVATION: 220.46  
 (CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)



AS CONSTRUCTED SERVICES	COMPLETION	No.	REVISIONS	D/M/Y	BY	CONSULTANT	ENGINEER'S STAMP	C.TECH'S STAMP	CLIENT	SCALE	TITLE	PROJECT No.
DESIGN	MGA/JSF	1	ISSUED FOR CLIENT REVIEW	17/04/24	JSF	 <b>STRIK BALDINELLI MONIZ</b> PLANNING - CIVIL - STRUCTURAL - MECHANICAL - ELECTRICAL 1599 Adelaide St. N, Unit 301, London, Ontario, N5X 4E8 Tel: (519) 471-6667 Fax: (519) 471-0034 Email: sbm@sbmltd.ca			<b>ONE STOP HOME STAGING</b> 18-111 SHERWOOD DRIVE BRANTFORD, ON N3T 1N8 P: 514.410.0098 E: onestophomestaging@outlook.com	SCALE - 1:200 2.0 0 4.0m	<b>SITE SERVICING PLAN</b> PROPOSED WAREHOUSE 33 PARK ROAD SIMCOE, ON.	PROJECT No.
DRAWN	FR/JSF	2	ISSUED FOR SITE PLAN APPROVAL, SUB. 1	09/05/24	JSF							SHEET No.
CHECKED	SH	3	ISSUED FOR SITE PLAN APPROVAL, SUB. 2	10/01/25	JSF							C3
APPROVED	BH											PLAN FILE No.
DATE	01/05/2024											SPPL2024304
CAD	23-2071											





**GRADING NOTES:**

- EXISTING GRADES AND DRAINAGE OF ABUTTING LANDS IS NOT TO BE DISTURBED.
- GROUND ELEVATIONS AT BUILDINGS ABUTTING OVERLAND FLOW ROUTES ARE TO BE 225mm ABOVE OVERLAND FLOW ROUTE ELEVATIONS.
- SUMP PUMP DISCHARGE MUST BE DIRECTED TO THE STORM SEWER VIA THE STORM PDC. NO SANITARY SEWER CONNECTIONS PERMITTED.
- A MINIMUM OF 150mm (6") FROM THE TOP OF FOUNDATION TO THE FINISHED GRADE OUTSIDE THE BUILDING MUST BE PROVIDED, TYPICAL.
- RETAINING WALLS, 1000mm OR GREATER, & GUARD RAILS ON TOP (IF REQUIRED) ARE TO BE DESIGNED BY AND CONSTRUCTED TO THE SPECIFICATIONS OF A REGISTERED PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE ONTARIO BUILDING CODE.
- THE MIN. TOP OF FOUNDATION ELEVATION, UNDERSIDE OF FOOTING ELEVATION, BASEMENT WINDOW SILL ELEVATION, ETC. ARE TO BE CONFIRMED BY THE CONTRACTOR IN CONSULTATION WITH THE BUILDING DESIGNER, BASED ON THE FINISHED FLOOR ELEVATION PROVIDED. CONTACT STRIK, BALDINELLI, MONIZ LTD. (SBM) FOR CLARIFICATION, IF REQUIRED.

FOR GRADING ON ADJACENT LANDS, IF REQUIRED, DEVELOPER SHALL OBTAIN WRITTEN APPROVAL FROM ADJACENT LAND OWNER.

BOULEVARD AREAS AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF SERVICES SHALL BE RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES ON SHEET C1, WHICHEVER IS GREATER, ALL AT NO COST TO THE COUNTY.

ALL CLEARANCES TO ELECTRICAL CONDUCTORS AS SET OUT IN THE CURRENT OBC DIV. B-3.1.19.1 'ELECTRICAL CONDUCTOR CLEARANCES TO BUILDINGS' SHALL BE MAINTAINED

THE OWNER'S CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 AND BOOK 18 FOR ALL WORKS WITHIN THE COUNTY RIGHT-OF-WAY. THE OWNER'S OWNER'S CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE COUNTY/ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH CONSTRUCTION.

NO WORK ON WATER SERVICES CAN TAKE PLACE WITHOUT SUPERVISION OF A LICENSED NORFOLK COUNTY WATER OPERATOR ON-SITE.

NOTE: LANDINGS SERVING STAIRS OR RAMPS SHALL HAVE MAXIMUM SLOPE OF 1:50 OR 2% AS PER O.B.C. 3.4.6.8.

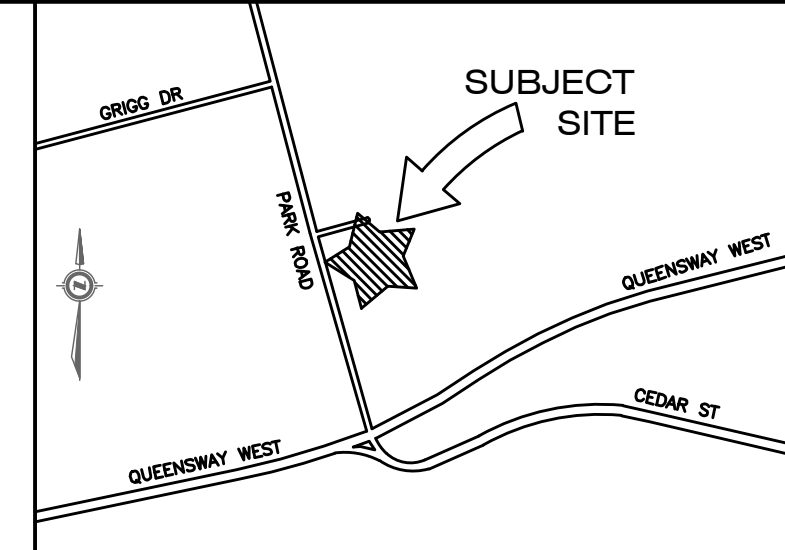
NOTE: STAIR RISERS TO HAVE UNIFORM HEIGHT WITHIN 5mm TOLERANCE AS PER O.B.C. 3.4.6.8.

\*RETAINING WALL AND GUARD/RAILING (IF REQUIRED): CIVIL DESIGN/DRAWINGS SOLELY SPECIFY GRADING REQUIREMENTS FOR RETAINING WALLS. STRUCTURAL/GEOTECHNICAL DESIGN, CONSTRUCTION SUPERVISION, AND CERTIFICATION BY OTHERS.

TACTILE PLATE NOTE: CAST IRON TACTILE PLATES POWDER COATED RED ARE REQUIRED IN THE SIDEWALK RAMPS PER ADDA LEGISLATION, OPSD 310.033, AND OPSD 310.039.

OFF-SITE WORKS NOTE: ROAD EXCAVATION/OCCUPANCY PERMITS FOR ALL EXTERNAL WORKS ARE REQUIRED.

RESTORATION NOTE: ALL WORK IN THE ROAD ALLOWANCE SHALL MEET THE MINIMUM SPECIFICATIONS OF NORFOLK COUNTY.



**LEGAL INFORMATION**

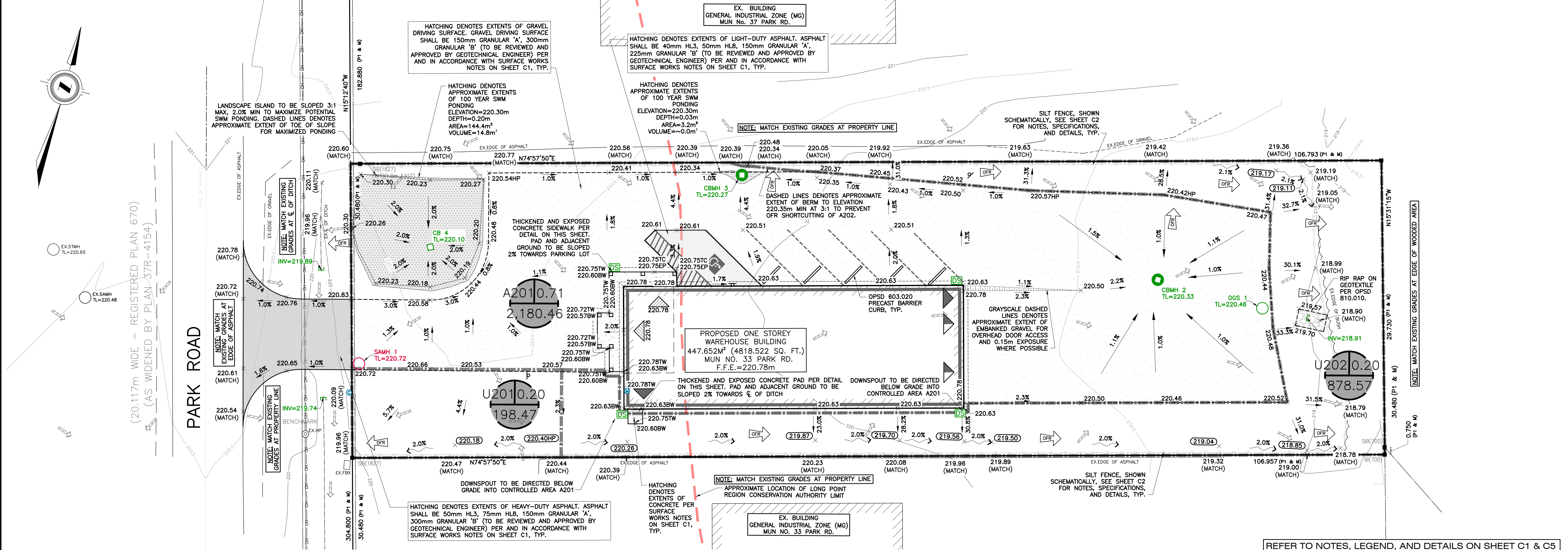
PART OF  
LOT 3  
CONCESSION 14  
IN THE  
TOWNSHIP OF WINDHAM  
NORFOLK COUNTY

**SITE BENCHMARK:**

MONUMENT TYPE: SPIKE  
LOCATION: IN FACE OF WOOD HYDRO POLE  
GEODETIC ELEVATION: 220.46  
(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

**GRADING CERTIFICATE:**

I HEREBY CERTIFY THAT THE PROPOSED GRADING AND APPURTENANT DRAINAGE WORKS COMPLY WITH SOUND ENGINEERING DESIGN AND THAT THE PROPOSED GRADING IS COMPATIBLE WITH EXISTING DRAINAGE PATTERNS ON AND ACROSS THESE LANDS AND THE ADJOINING LANDS OR APPLICABLE COUNTY BY-LAWS.



AS CONSTRUCTED SERVICES	COMPLETION	No.	REVISIONS	D/M/Y	BY	CONSULTANT
DESIGN	MGA/JSF	1	ISSUED FOR CLIENT REVIEW	17/04/24	JSF	STRIK BALDINELLI MONIZ
DRAWN	FR/JSF	2	ISSUED FOR SITE PLAN APPROVAL, SUB. 1	09/05/24	JSF	
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PROVINCE OF ONTARIO

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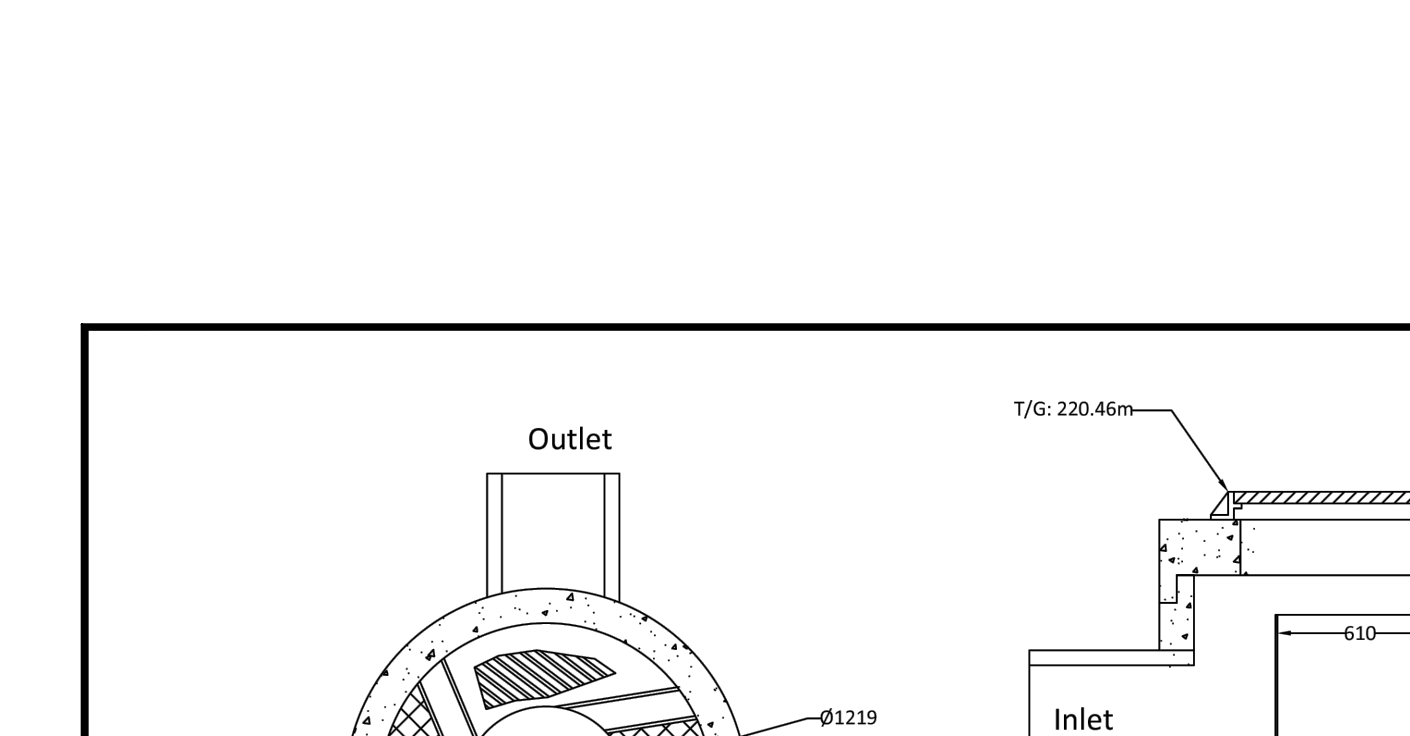
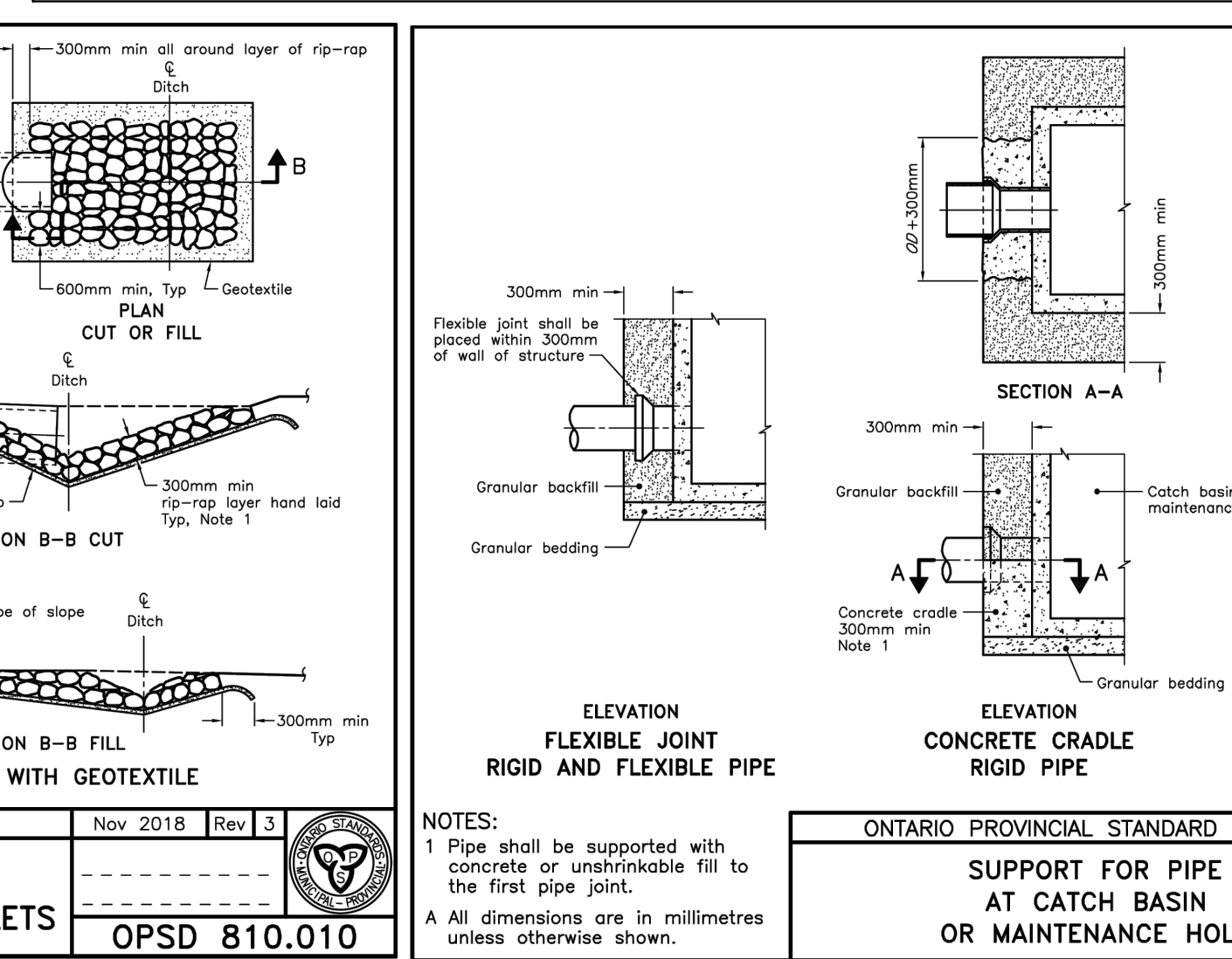
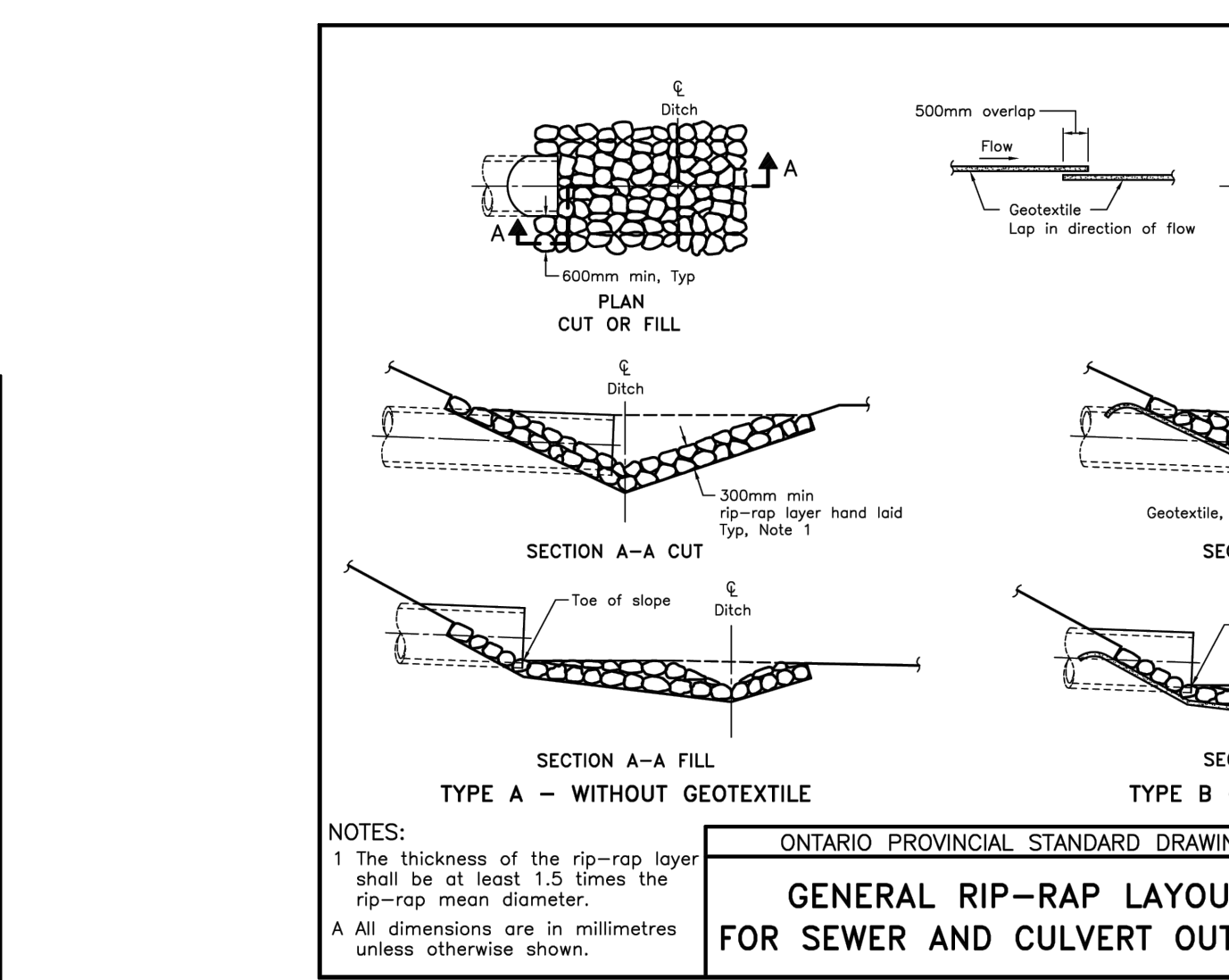
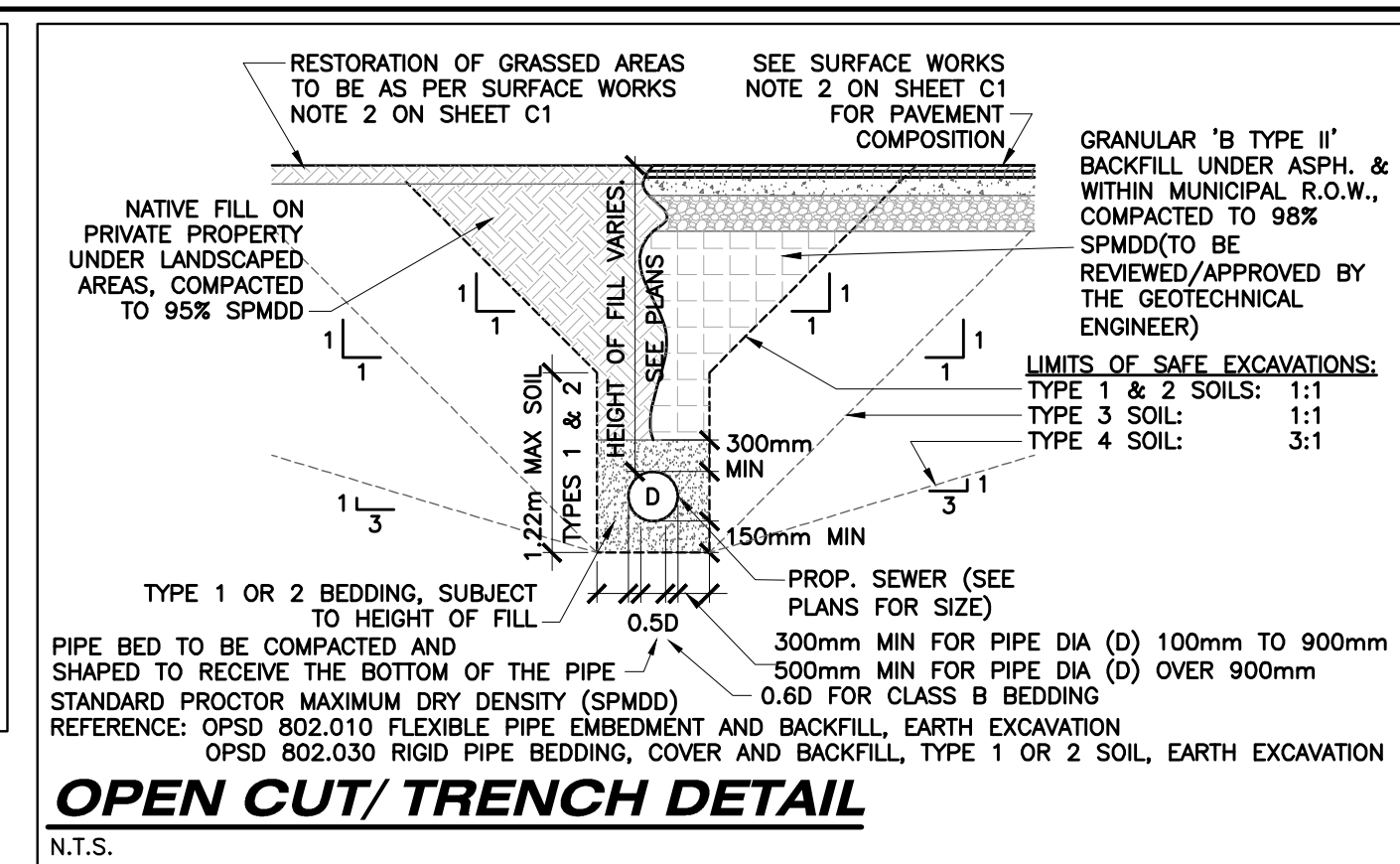
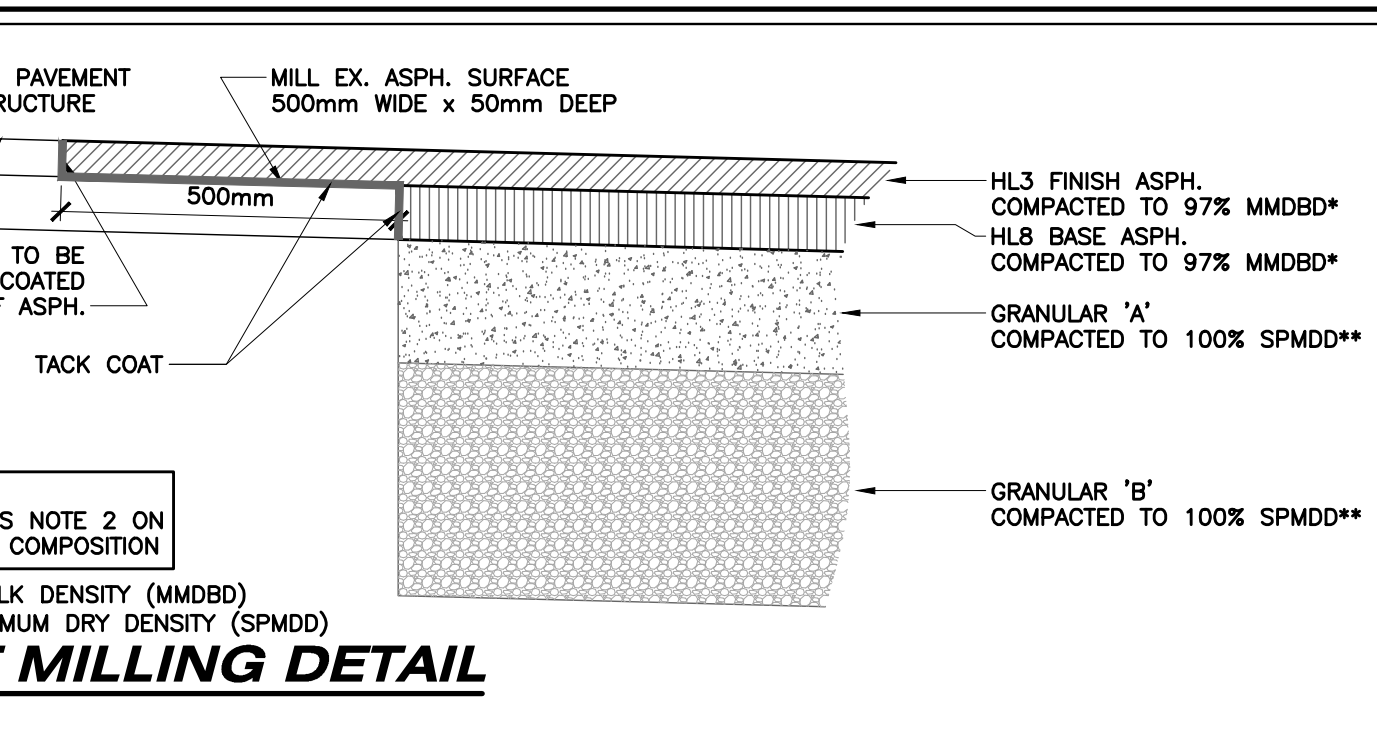
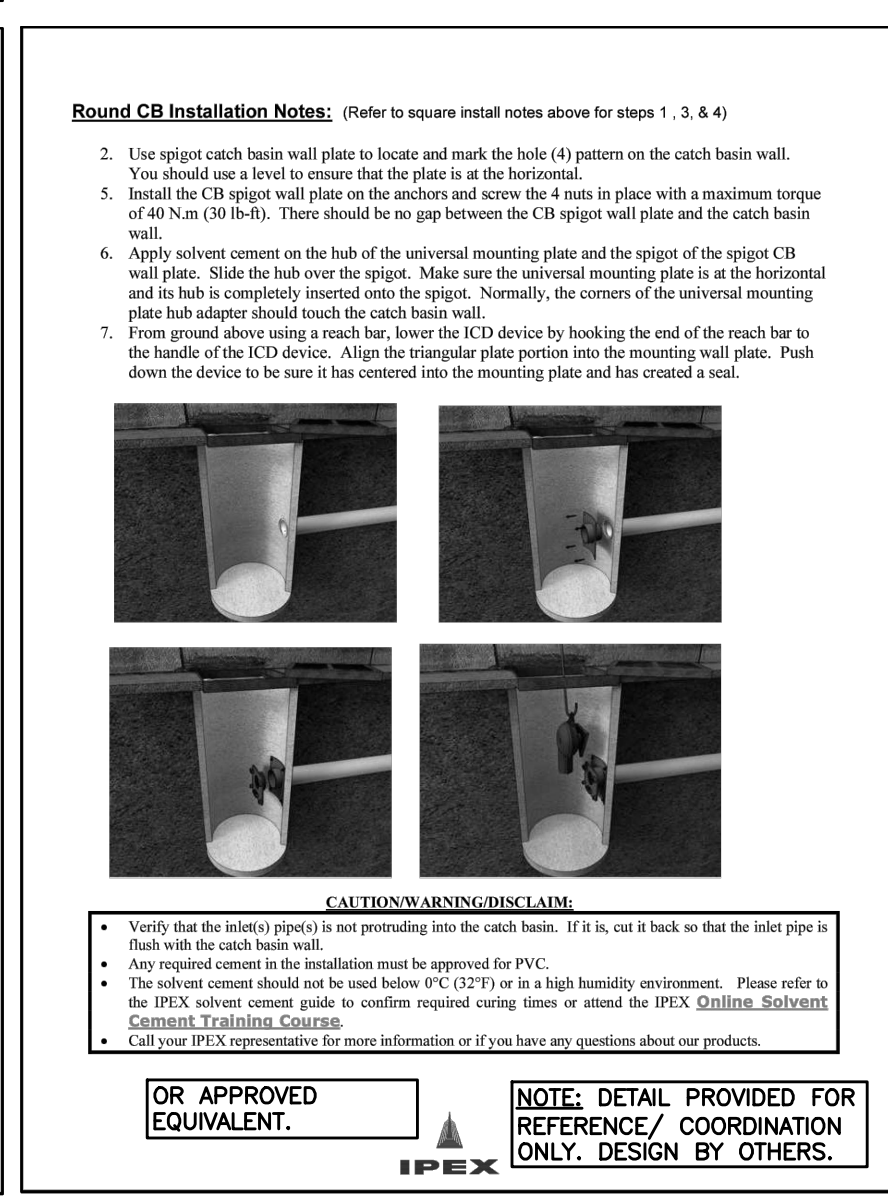
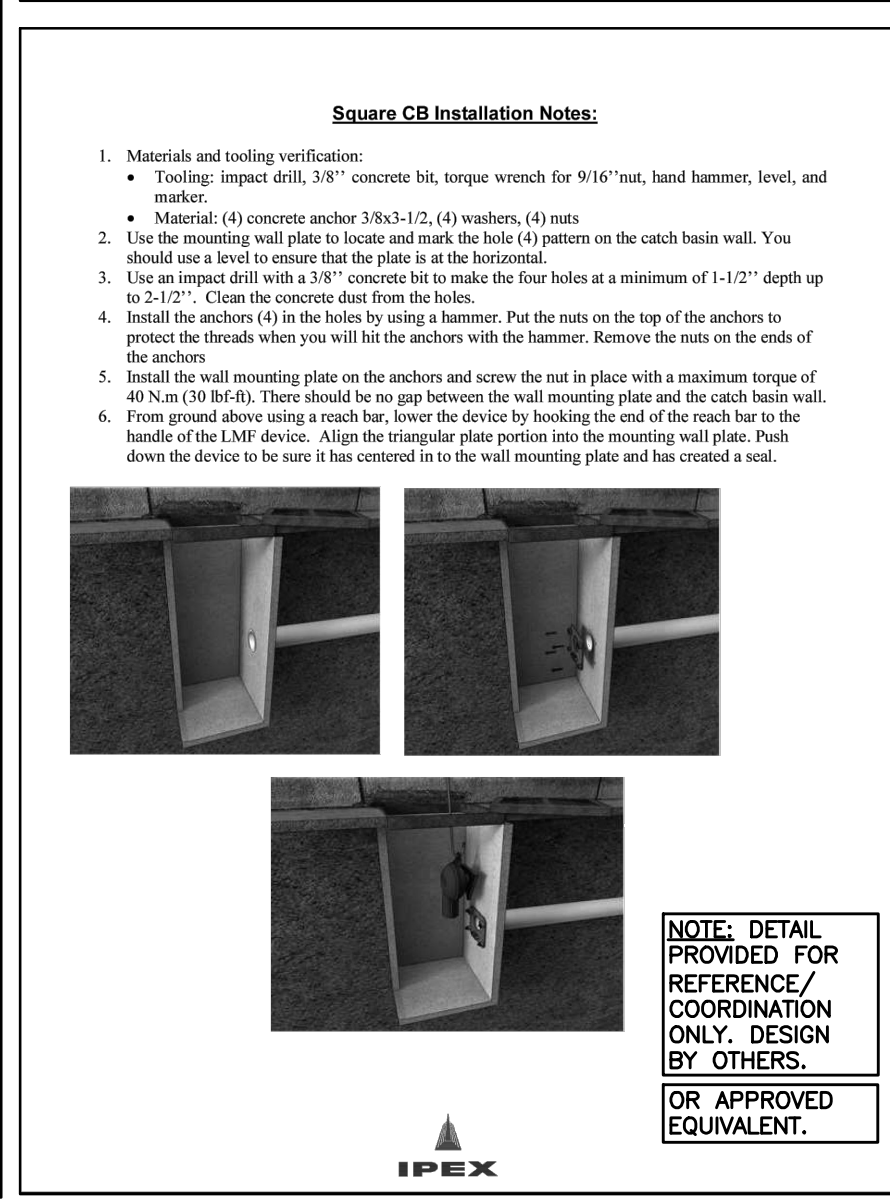
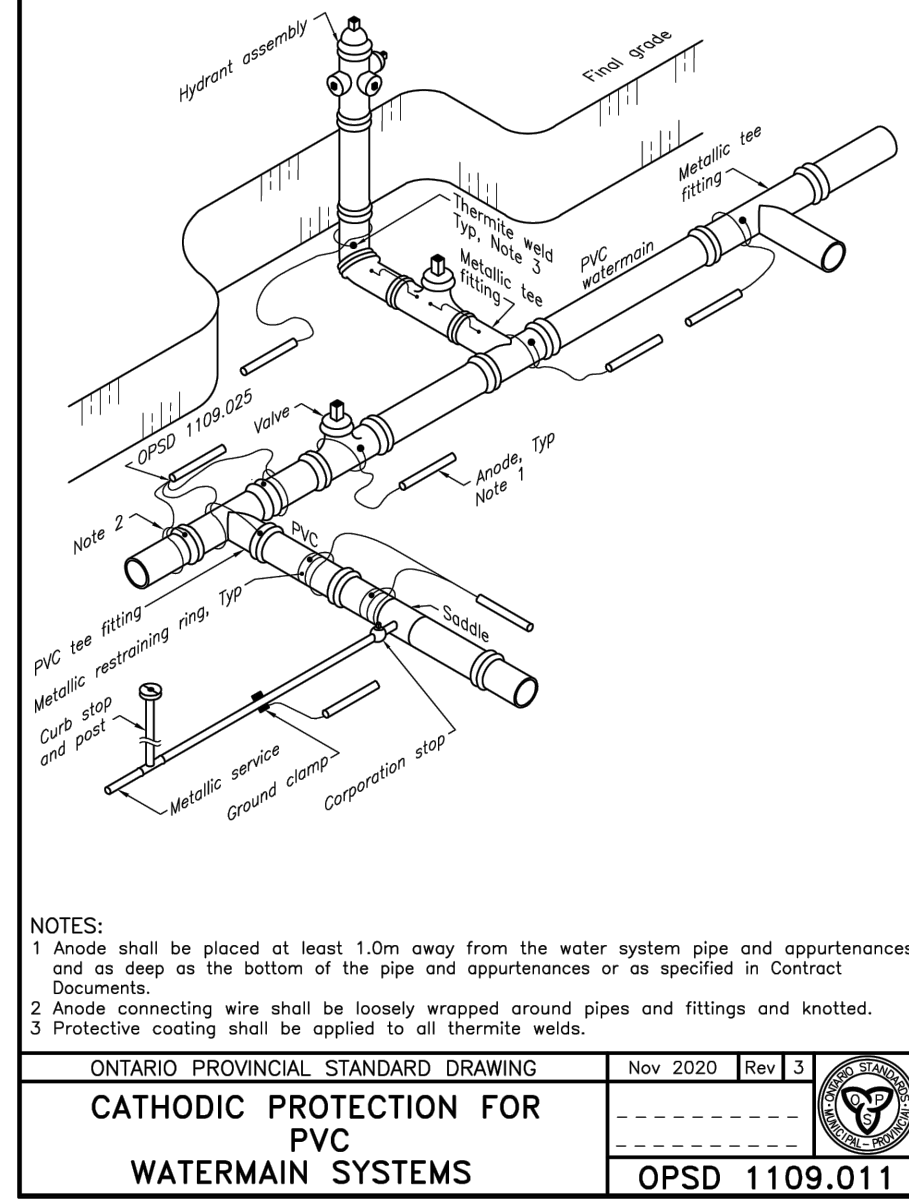
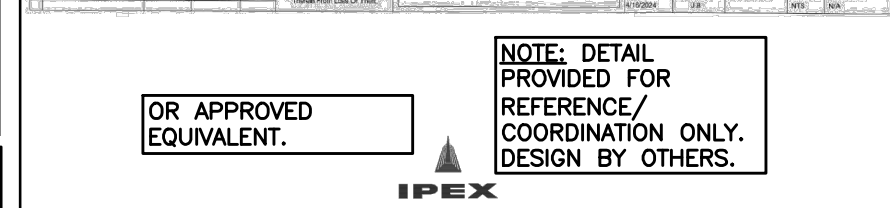
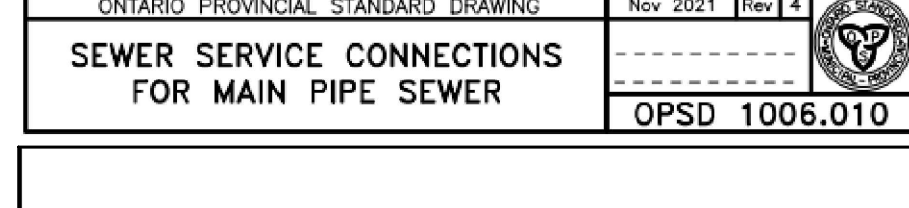
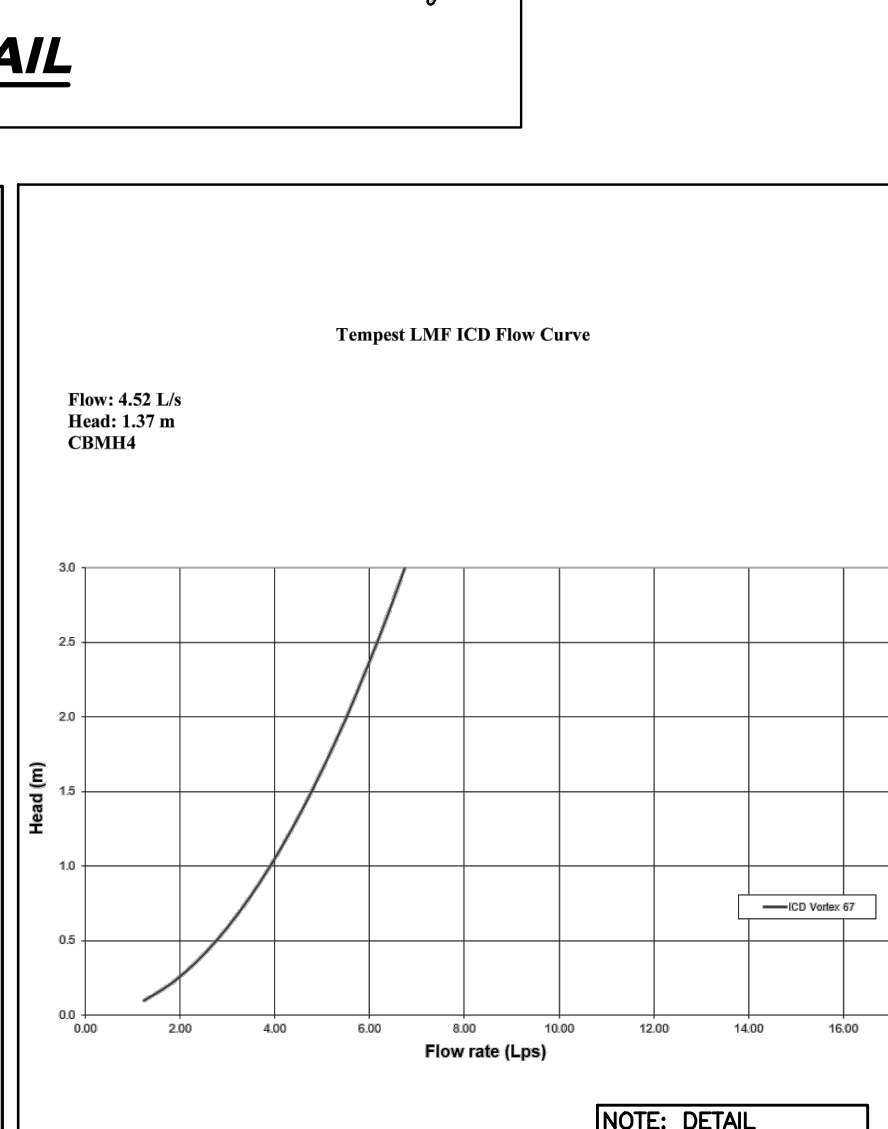
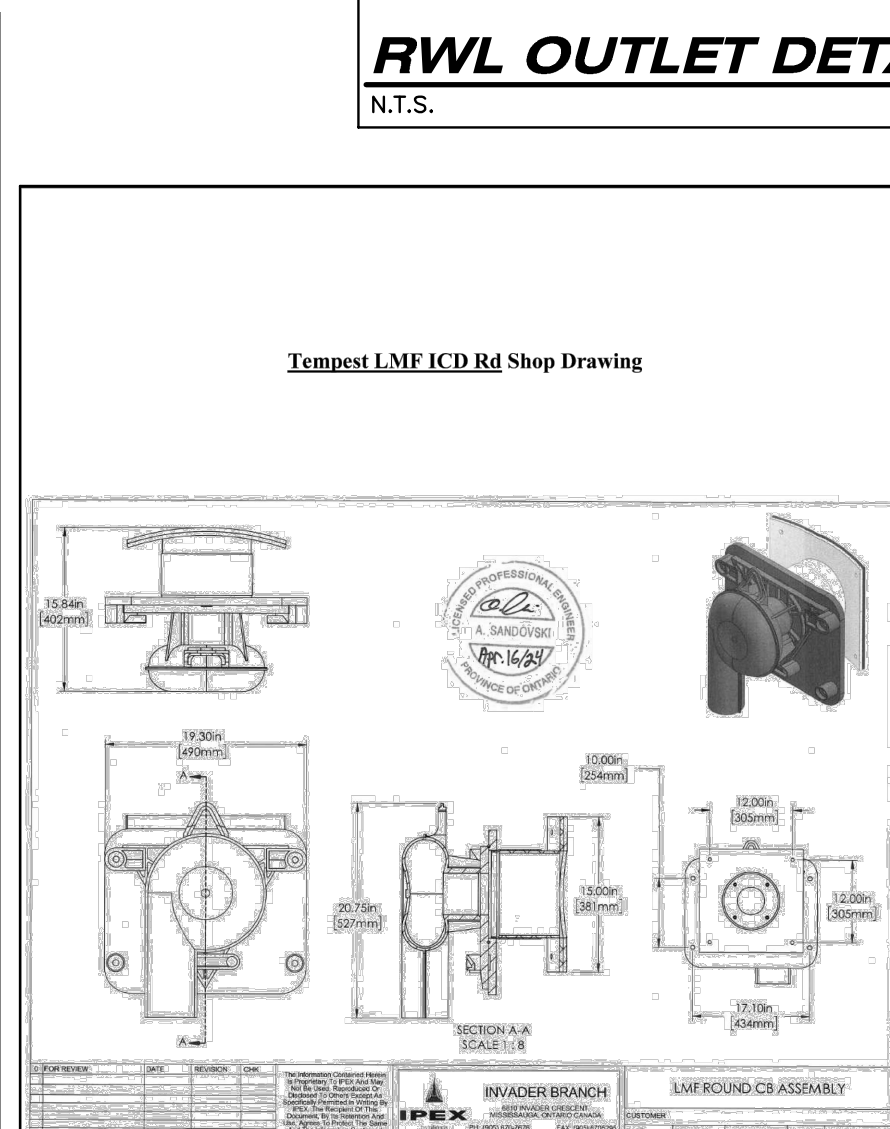
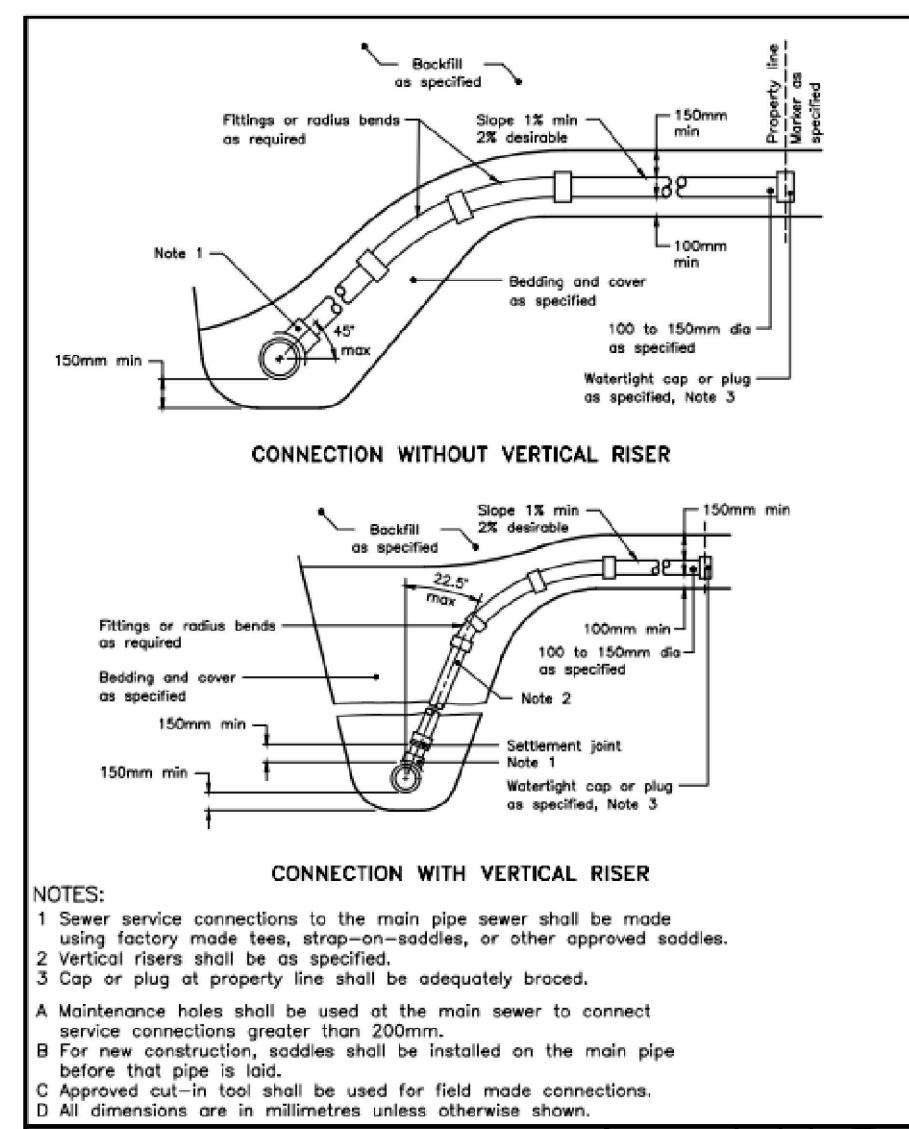
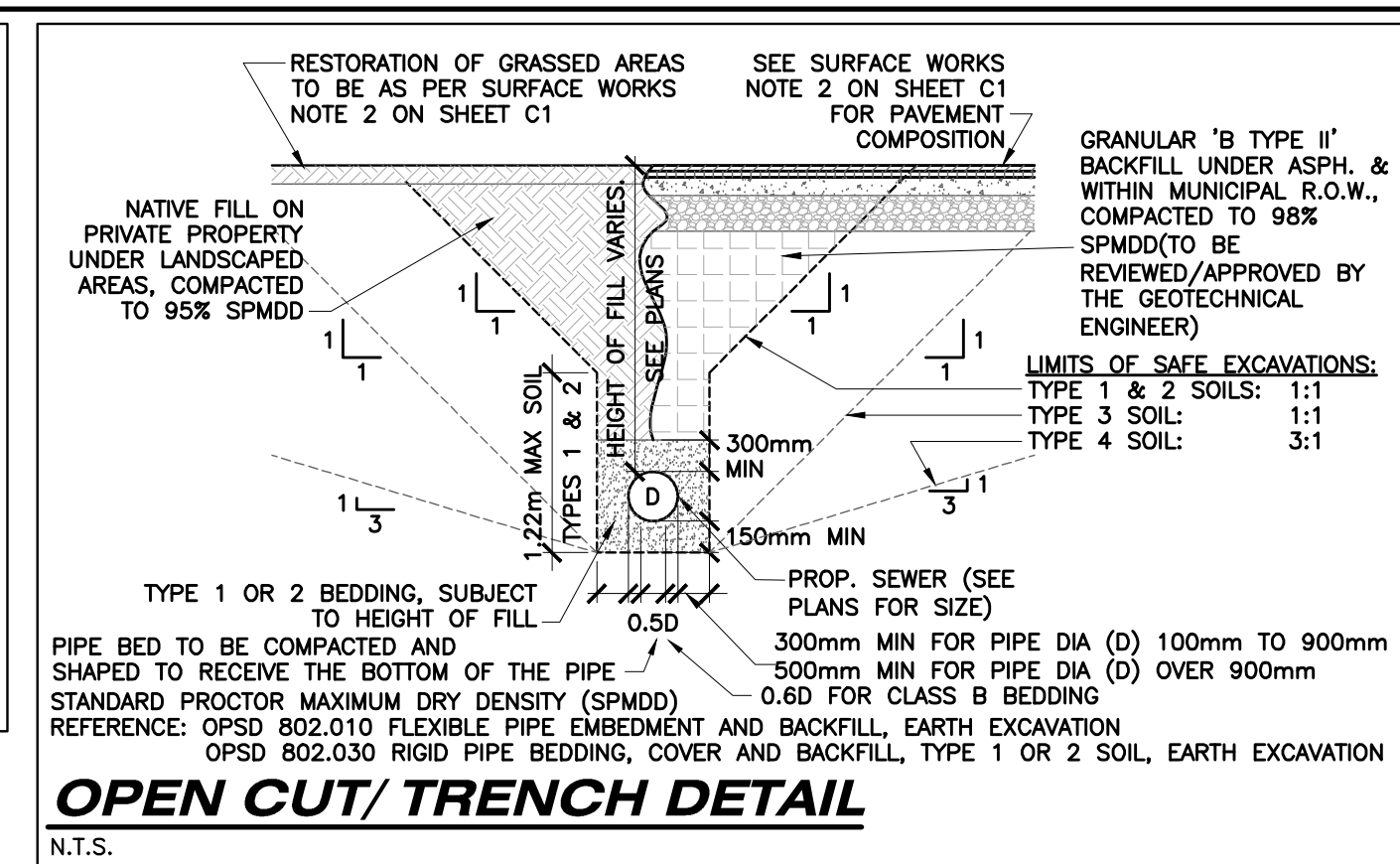
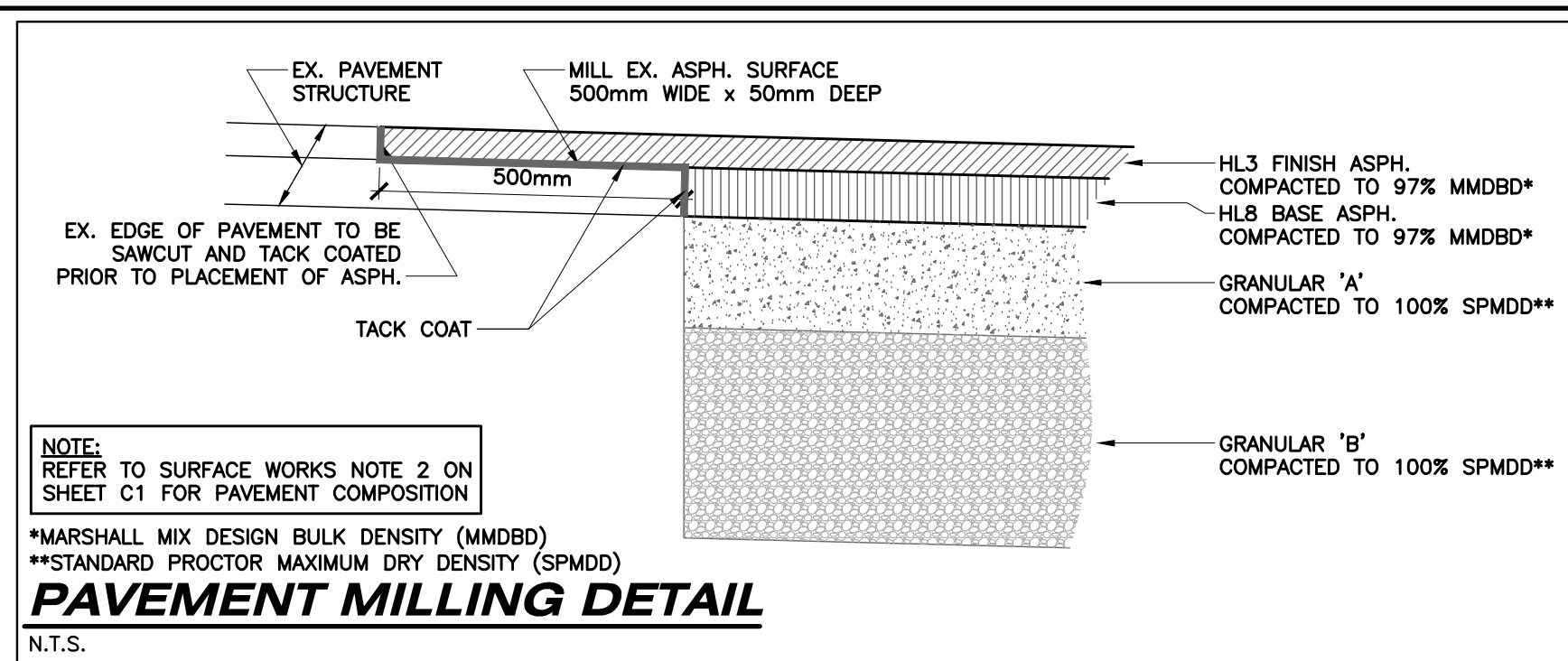
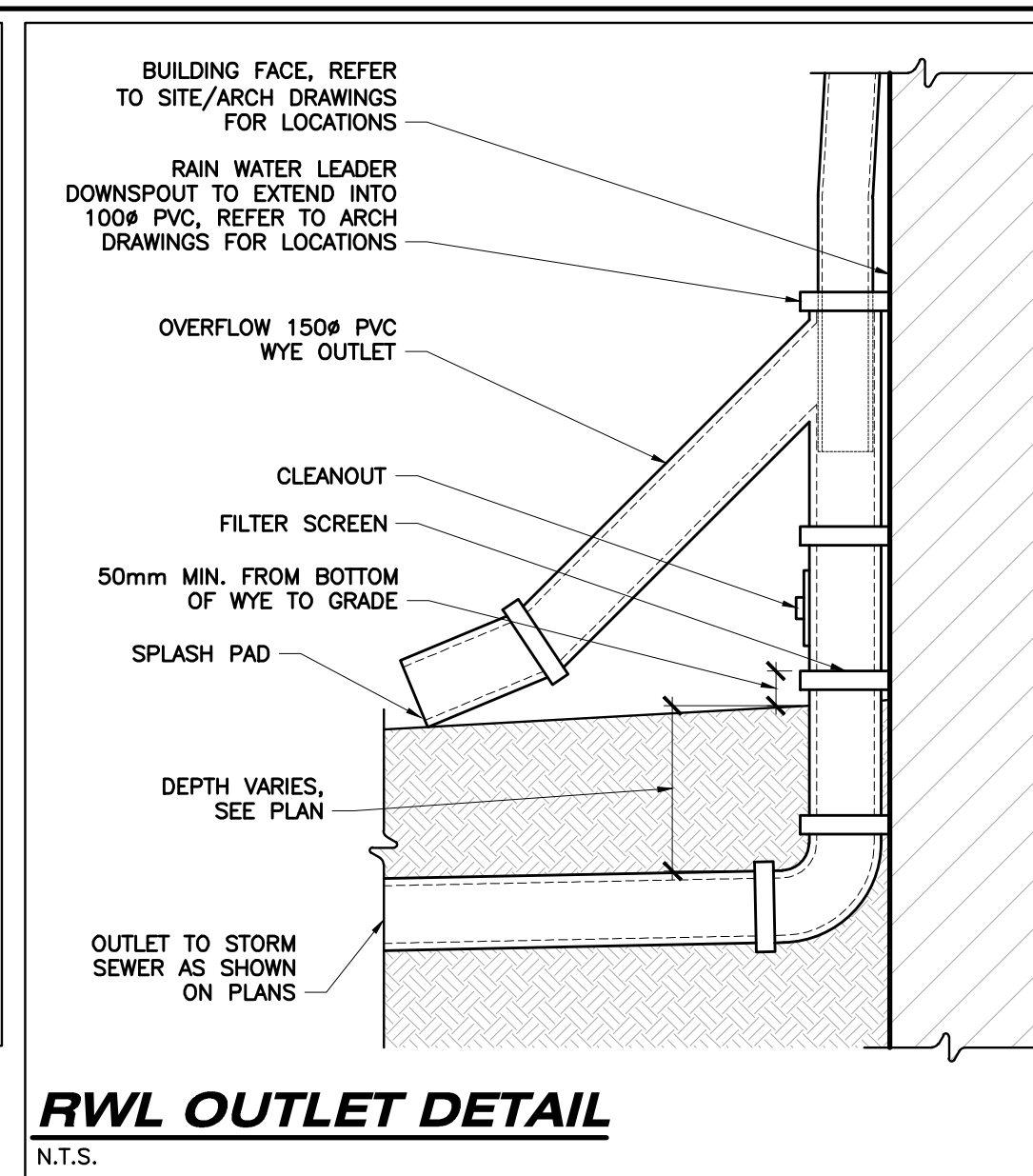
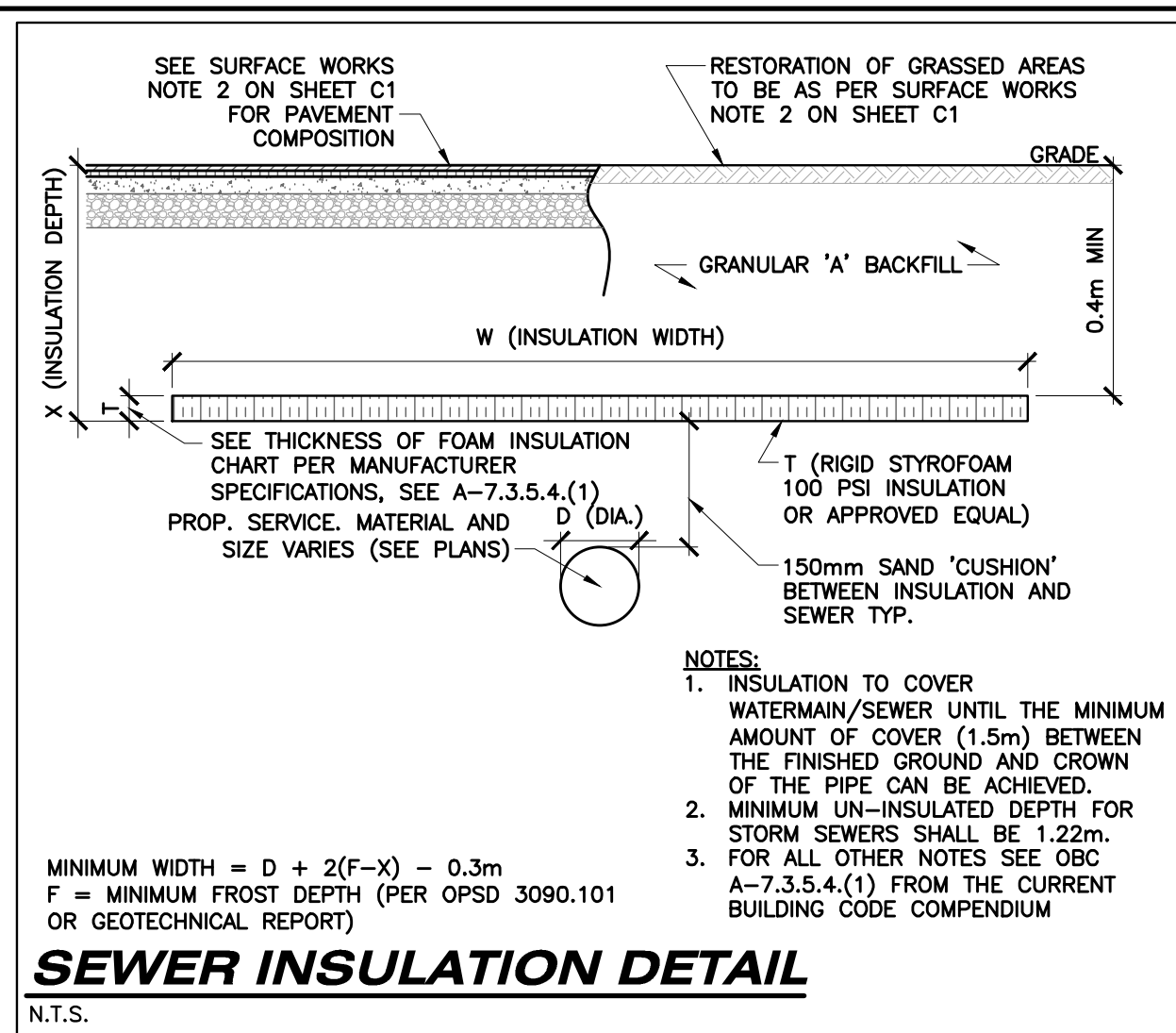
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TITLE  
**SITE GRADING PLAN**  
**PROPOSED WAREHOUSE**  
33 PARK ROAD  
SIMCOE, ON.

PROJECT No.  
**SBM-23-2071**

SHEET No.  
**C4**

PLAN FILE No.  
**SPPL2024304**



AS CONSTRUCTED SERVICES	COMPLETION	No.	REVISIONS	D/M/Y	BY	CONSULTANT
DESIGN	MGA/JSF	1	ISSUED FOR CLIENT REVIEW	17/04/24	JSF	
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**ENGINEER'S STAMP**  
LICENSED PROFESSIONAL ENGINEER  
B. R. HYLAND  
10022591  
Jan 10, 2025  
SBM-23-2071  
PROVINCE OF ONTARIO

**C.TECH'S STAMP**

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**Hydroworks**  
Canadian Infrastructure Products  
www.c-i-p.ca  
519-212-9161  
HydroStorm by Hydroworks, LLC  
Patent Pending  
www.hydroworks.com  
888-290-7900

**PROJECT:** One Stop Home Storage-33 Park Road  
**LOCATION:** Simcoe  
**REVISION DATE:** April 30, 2024

**STANDARD DETAILS**  
PROPOSED WAREHOUSE  
33 PARK ROAD  
SIMCOE, ON.

**PROJECT No.** SBM-23-2071  
**SHEET No.** C5  
**PLAN FILE No.** SPPL2024304



## Snow Storage Calculations

Description	Value	Notes
Total Paved Area (m <sup>2</sup> )	5000	Area of parking lots, driveways, etc.
Snow Storage Factor (the area in m <sup>2</sup> which /m <sup>3</sup> )	30	Typical factor in Ontario is 25-30 m <sup>2</sup> /m <sup>3</sup>
Calculated Snow Storage Volume (m <sup>3</sup> )	166.6666667	Paved Area divided by Snow Storage Factor
Compaction Factor (%)	40	Reduction in volume due to compaction
Compacted Snow Storage Volume (m <sup>3</sup> )	100	Volume after compaction adjustment
Snow Pile Height (m)	2	Assumed height of snow piles
Required Snow Storage Area (m <sup>2</sup> )	50	Compacted Volume divided by Pile Height, assuming vertical side slope
Provided Snow Storage Area (m <sup>2</sup> )	176.4	See site plan by SBM.

Therefore adequate snow storage area has been provided on the site plan, accounting for 1:1 side slopes.