### Functional Servicing and Stormwater Management Report

Proposed Residential Development 1225 Dundas Street E, Mississauga, Ontario



Prepared for: Dundix Realty Holdings c/o SmartCentres REIT.

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### 1.0 INTRODUCTION

Stantec Consulting Ltd. was retained by Dundix Realty Holdings c/o SmartCentres REIT (the "Client") to provide this Functional Servicing and Stormwater Management Report in support of a proposed residential development in the City of Mississauga, Ontario. The purpose of this report is to provide a servicing opinion regarding the availability of existing municipal infrastructure to support the proposed development on the subject lands.

#### 1.1 SITE LOCATION AND DESCRIPTION

The 1.29 Ha site depicted in the aerial figure below is located at 1225 Dundas Street East in Mississauga, Ontario. The site currently consists of a commercial plaza and associated parking. It is bounded by Dundix Road to the north, a residential property to the east, Dundas Street East to the south, and Arena Road the west.



Figure 1-1: Site Location



### 1.2 SITE PROPOSAL

The site is proposed for conversion to a residential development consisting of 602 apartment and 40 townhouse units with associated amenity and vehicular access areas at grade level. A strip along Dundas Street East will be dedicated to the city as road widening, reducing the site area to 1.24 Ha. Parking will be provided at the underground level which will effectively encompass the entire site footprint below grade. The site concept is depicted below and also provided in **Appendix A**.

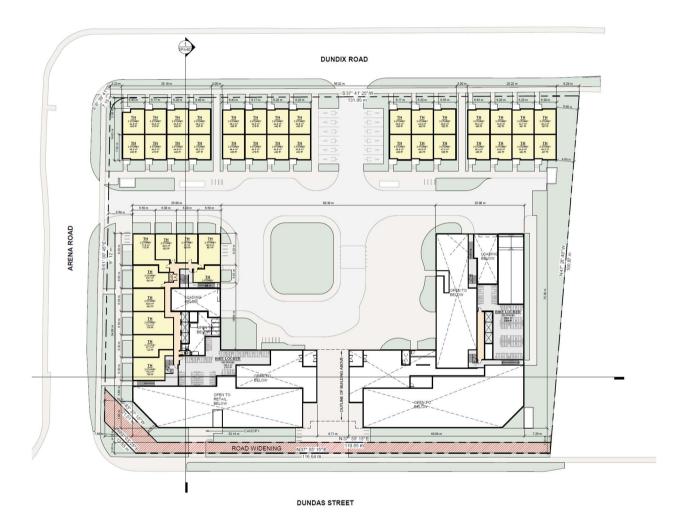


Figure 1-2: Site Concept

Site development statistics are shown on Table 1-1 below and also provided in **Appendix A**.



Table 1-1: Site Development Statistics

Function	Number of Units	Gross Floor Area (m²)*	Equivalent Population**	
Apartments (Unit Size > 750 ft <sup>2</sup> )	45	-	135	
Apartments (Unit Size =< 750 ft²)	557	-	892	
Townhouses	40	-	136	
Commercial	-	626	18	
Office	-	-	-	
Totals	642	-	1,181	

<sup>\*</sup>Gross Floor Area only used in Non-Residential Equivalent Population determination in this report. See site statistics in Appendix A for complete data on Gross Floor Areas.

Residential PPU: Townhouse -3.4, Large Apartment (>750 ft²) -3.0, Small Apartment (=<750 ft²) -1.6

Non-Residential: 1.0 employee per 36 m² GFA

#### 1.3 CRITERIA AND BACKGROUND MATERIAL

The servicing scheme for the site shall be in accordance with guidelines set by the following agencies:

- City of Mississauga
- Region of Peel
- Credit Valley Conservation
- Ontario Provincial Standards
- Ministry of the Environment, Conservation and Parks
- Ministry of Transportation
- Ontario Building Code

The following background reports and materials have been used as reference:

- Region of Peel 2020 Water and Wastewater Master Plan for the Lake-based Systems
- Region of Peel 2020 Development Charges Background Study
- Drainage Area Plans and Plan/Profiles obtained from the city and region
- Draft Hydrogeological Investigation (Project 2202029) by GEI Consultants, June 24, 2022



<sup>\*\*</sup> Equivalent Population based on Region of Peel 2020 Development Charges Background Study:

### 2.0 STORM DRAINAGE AND STORMWATER MANAGEMENT

#### 2.1 STORM DRAINAGE

A 525 mm to 750 mm storm sewer drains east along Dundix Road. A 600 mm storm sewer drains south along Arena Road and heads west on Dundas Street East. A 750 mm to 825 mm storm sewer drains east along Dundas Street East. There is also a 900 mm storm sewer draining west near the southern boundary of the neighboring property to the east through an easement that terminates at the southeastern corner of the subject site. This sewer is received by a 975 mm storm sewer that crosses Dundas Street East heading south. Topographical information and storm drainage plans obtained from the city indicate the existing site drainage is collected by this 975 mm storm sewer crossing Dundas Street East through a 525 mm site storm connection at the southeast corner. This same outlet will be maintained and used for post-development storm drainage out of the site. The site receives no external flows under existing conditions, and this will remain to be the case under proposed.

As the majority of development will rest on an underground parking level, site drainage will mostly be captured by area drains connected to the building mechanical storm system. A storm sewer will be required along the northern periphery to capture drainage collected by front yard area drains for the townhouse units facing Dundix Road.

The municipality has indicated they prefer permanent groundwater dewatering to be discharged into the municipal storm sewer rather than sanitary. Preliminary investigation by the hydrogeological consultant indicates the site groundwater is not suitable for discharge into the city storm sewer system without pretreatment, and therefore pretreatment measures will be required. These measures will be reviewed and established at Site Plan Application in coordination with the mechanical and hydrogeological consultants. Long-term dewatering peak flow rate is estimated by the hydrogeologist to be 14,100 L/day (See excerpt in **Appendix B**) which translates to 0.2 L/s.

A stormwater storage tank located at the basement level will provide quantity control and retention volumes. A preliminary overview of the storm servicing is provided on C-101 – Grading and Servicing Plan in **Appendix A**. A detailed site servicing design will be provided at Site Plan Application which will include final tank location and orifice sizing. Background materials on site drainage obtained from the city are provided in **Appendix E**.

#### 2.2 STORMWATER MANAGEMENT

The site is situated within the Applewood Creek watershed under the jurisdiction of Credit Valley Conservation. The following City of Mississauga and Credit Valley Conservation stormwater management criteria are appliable:



- Quantity Control: The 100-year post-development flow shall be controlled to the 2-year predevelopment level. An adjustment factor of 1.25 is applied to the post-development runoff coefficient.
- Runoff Volume Reduction: The first 5mm of runoff shall be retained on-site and managed by way of infiltration, evapotranspiration, or re-use.
- Quality Control: Long term 80% removal of Total Suspended Solids (TSS) on an average annual basis is to be provided.

### 2.2.1 Quantity Control

Storm events up to and including the 100-year storm will be controlled to the 2-year predevelopment level. As the site is already a developed property, a maximum runoff coefficient of 0.50 was used to determine the 2-year predevelopment level to be used as the target controlled release rate for the site. The total release rate will be set to ensure the sum of controlled stormwater release rate plus long-term groundwater dewatering discharge rate remains within the target release rate. Preliminary calculations indicate approximately 270 m³ of storage will be required for quantity control. The following tables summarize the quantity control parameters for the site. Pre and post-development storm drainage plans and preliminary quantity control calculations are provided in **Appendix B**. A high-level overview of the storm servicing and location of the underground storm tank are provided on C-101 – Grading and Servicing Plan in **Appendix A**. A detailed storm servicing design including orifice sizing and location will be provided at Site Plan Application.

Table 2-1: Pre-development 2-Year Flow Targets

Storm	Drainage Area	Area (Ha)	Runoff Coefficient (C)	Peak Flow (L/s)
2-year	A1-PRE	1.24	0.50	103.1

Table 2-2 – Post-development 100 Year Flows

Drainage Area	Area (Ha)	Adjusted Runoff Coefficient (C)	Target Release Rate (L/s)	Controlled Release rate (L/s)	Groundwater Release Rate (L/s)	Total Release Rate (L/s)	Required Storage (m3)	Provided Storage (m3)
A1-POST	1.24	0.79	103.1	100.0	0.2	100.2	267	267



#### 2.2.2 Water Balance

To address the city's stormwater runoff volume reduction criteria, as a minimum, the first 5mm of runoff is to be retained on-site and managed by way of infiltration, evapotranspiration, or re-use. The total retention volume is determined by multiplying total impervious area by 5mm. Therefore, 0.73ha x 5mm = 37 m $^3$  of runoff needs to be retained on-site. A passive reservoir below the outlet at the base of the stormwater tank at the basement level can be an option for storing this volume.

As the entirety of the site essentially sits on an underground parking level, infiltration is not an available option for processing the retained stormwater. Rainwater re-use by way of pumping this reservoir to various uses around the site (such as irrigation) is recommended for achieving this goal. As landscape and mechanical designs advance on this project, this report will be amended at Site Plan Application to provide details on the available re-use mechanisms.

### 2.2.3 Quality Control

Long-term average removal of 80% of total suspected solids (TSS) is indicated for meeting the city runoff quality control requirements. A CDS PMSU2025-5 stormwater treatment unit (or approved equivalent) upstream of the site storm outlet can provide the required treatment to satisfy this criteria. The supplier unit sizing sheet has been provided in **Appendix B**.

Quality treatment will also be applied to groundwater prior to discharge into the municipal storm sewer. This system will be inside the building and sizing and selection is normally done by the mechanical and hydrogeological consultants. This component of the design will be captured at Site Plan Application in coordination with the wider consultant team.

An overview of the stormwater management measures are provided on C-101 – Grading and Servicing Plan in **Appendix A**. A detailed storm servicing design will be provided at Site Plan Application.

### 3.0 SANITARY SERVICING

A 250 mm sanitary sewer drains east along Dundix Road. A 375 mm sanitary sewer drains south along Arena Road and is received by a 375 mm sanitary sewer on the north side of Dundas Street East that drains East. A 300 mm sanitary sewer on the south side of Dundas Street East also drains east. Records obtained from the city and region indicate the existing site drains into the 375 mm sanitary sewer along Arena Road through a 150 mm site sanitary outlet. This outlet will be capped and abandoned in place, and a new connection will be established into the Arena Road sewer system with a 200 mm sanitary pipe outlet.

Based on the site statistics provided in Table 1-1 in Section 1.2, the estimated site peak sanitary flow will be **15.2 L/s**. A capacity analysis of five sewer runs downstream of the site connection was completed based on existing and proposed conditions to assess impact of the added flow on the system. Calculations indicate the 15% flow increase does not surcharge the five analyzed



downstream sewers. The sanitary drainage area plan and sanitary design sheets have been provided in **Appendix C.** Drainage area and sewershed plans based on which surrounding drainage patterns were determined and upstream areas and populations were extrapolated are provided in **Appendix E.** An overview of the sanitary servicing is provided on C-101 – Grading and Servicing Plan in **Appendix A.** A detailed servicing design will be provided at Site Plan Application.

### 4.0 WATER SERVICING

A 250 mm watermain is available along both Dundix Road and Arena Road. Both roads also accommodate within their right-of-way a 2100 mm feedermain to which connection is not permitted by the region. A 300 mm watermain is available along Dundas Street East. Plans obtained from the city and region indicate the existing site connects into the 250 mm watermain along Arena Road with a 200 mm water connection for fire and domestic. This connection will be capped and abandoned in place. Due to the proposed function of the development as high density residential, the site is required by the region to connect into a minimum municipal watermain size of 300 mm. A new 250 mm connection will be established into the Dundas Street East 300 mm watermain and split near the property line into fire and domestic as per region standard 1-8-3.

Based on the site statistics provided in Table 1-1 in Section 1.2, the estimated site Total Peak Flow + Fire Demand will be **194.4 L/s**. A hydrant flow test conducted on a nearby hydrant serviced by the 300 mm watermain on Dundas Street East on June 15, 2022, indicates a flow of **6413 USGPM (404.6 L/s)** is available at 20 psi, which demonstrates the available municipal water infrastructure has the capacity to support the development.

The water demand calculation sheet and hydrant flow test report have been provided in **Appendix D**. An overview of the water servicing is provided on C-101 – Grading and Servicing Plan in **Appendix A**. A detailed servicing design will be provided at Site Plan Application.

### 5.0 GRADING

The natural topography of the site is in a southerly direction at a vertical relief of approximately 1.2 m. A retaining wall is utilized along the northern boundary of the existing site to interface with Dundix Rd while maintaining a relatively flat site. Under post-development conditions, the grading scheme ensures maintenance of existing drainage patterns and containment of drainage within the property boundary. Steps along the southern face of the townhouse blocks and stepped finished floor elevations allow for creation of suitable grading and accessibility conditions throughout the site as well as safe overland flow exit onto Dundas Street East through the street level corridor between the apartment buildings. A retaining wall will not be required to accommodate the proposed development plan. An overview of the site grading is provided on C-101 – Grading and Servicing Plan in **Appendix A**. A detailed grading design will be provided at Site Plan Application.

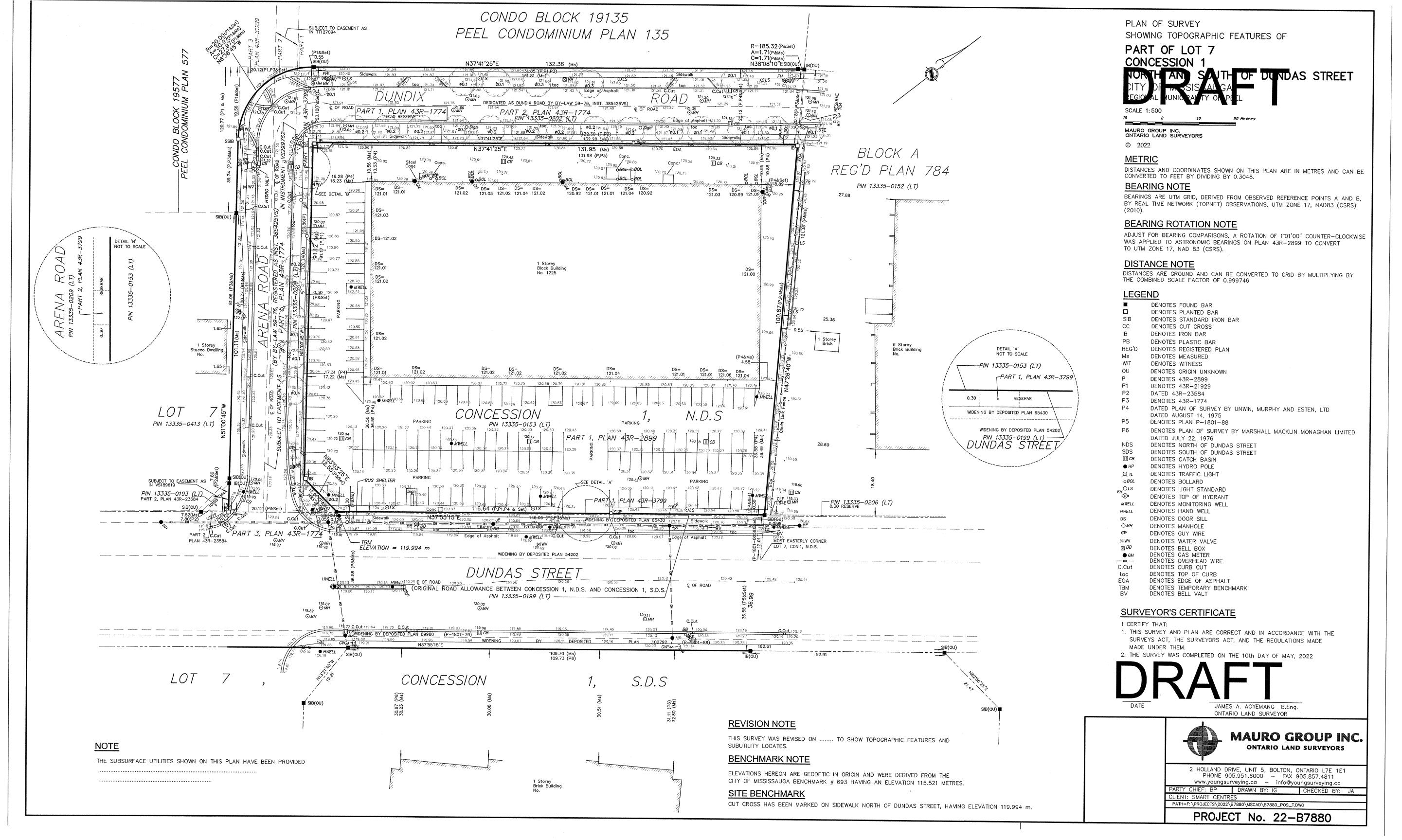


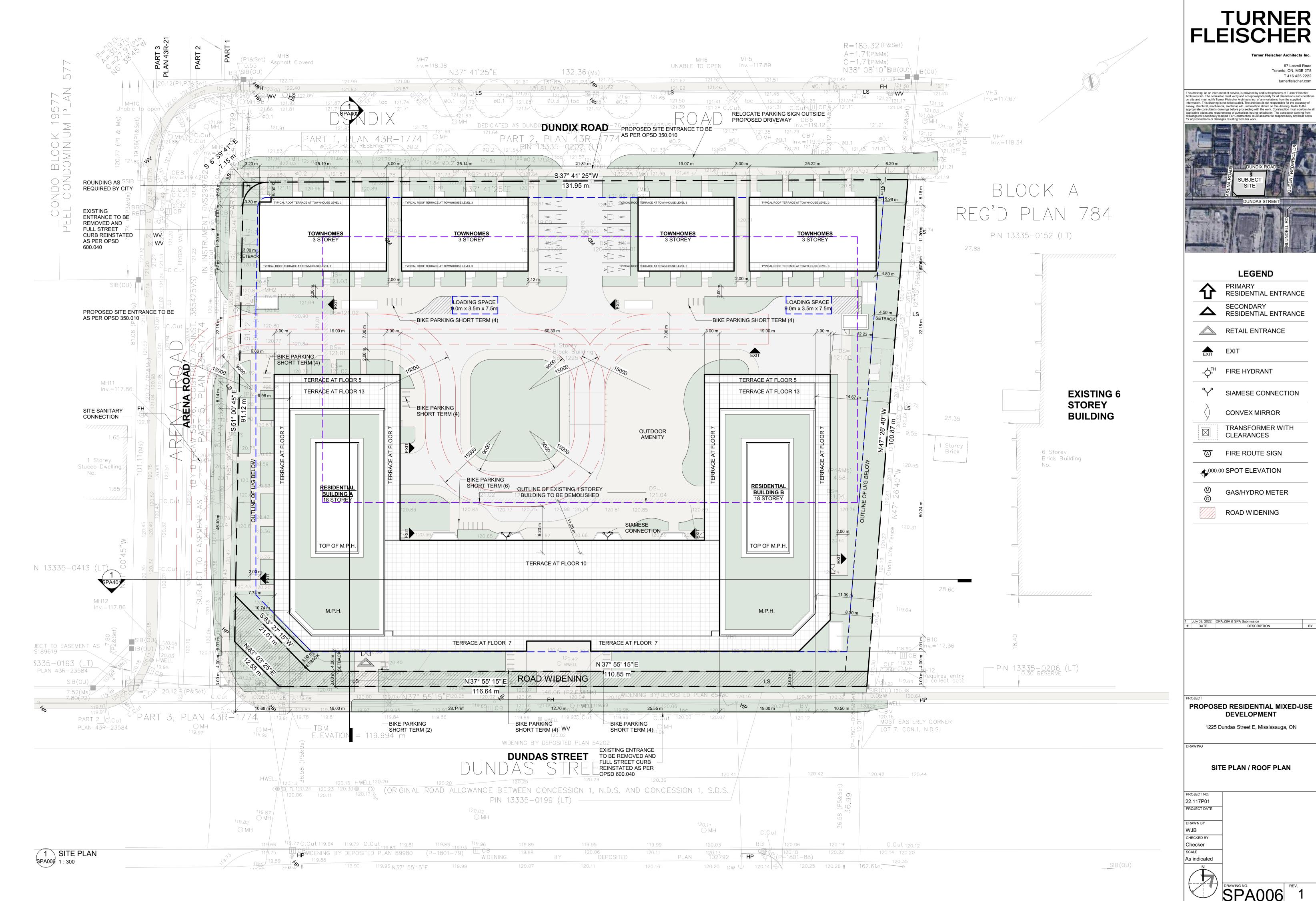
#### FUNCTIONAL SERVICING AND STORMWATER MANAGEMENT REPORT

Appendix A SITE PROPOSAL AND ENGINEERING PLANS

## Appendix A SITE PROPOSAL AND ENGINEERING PLANS

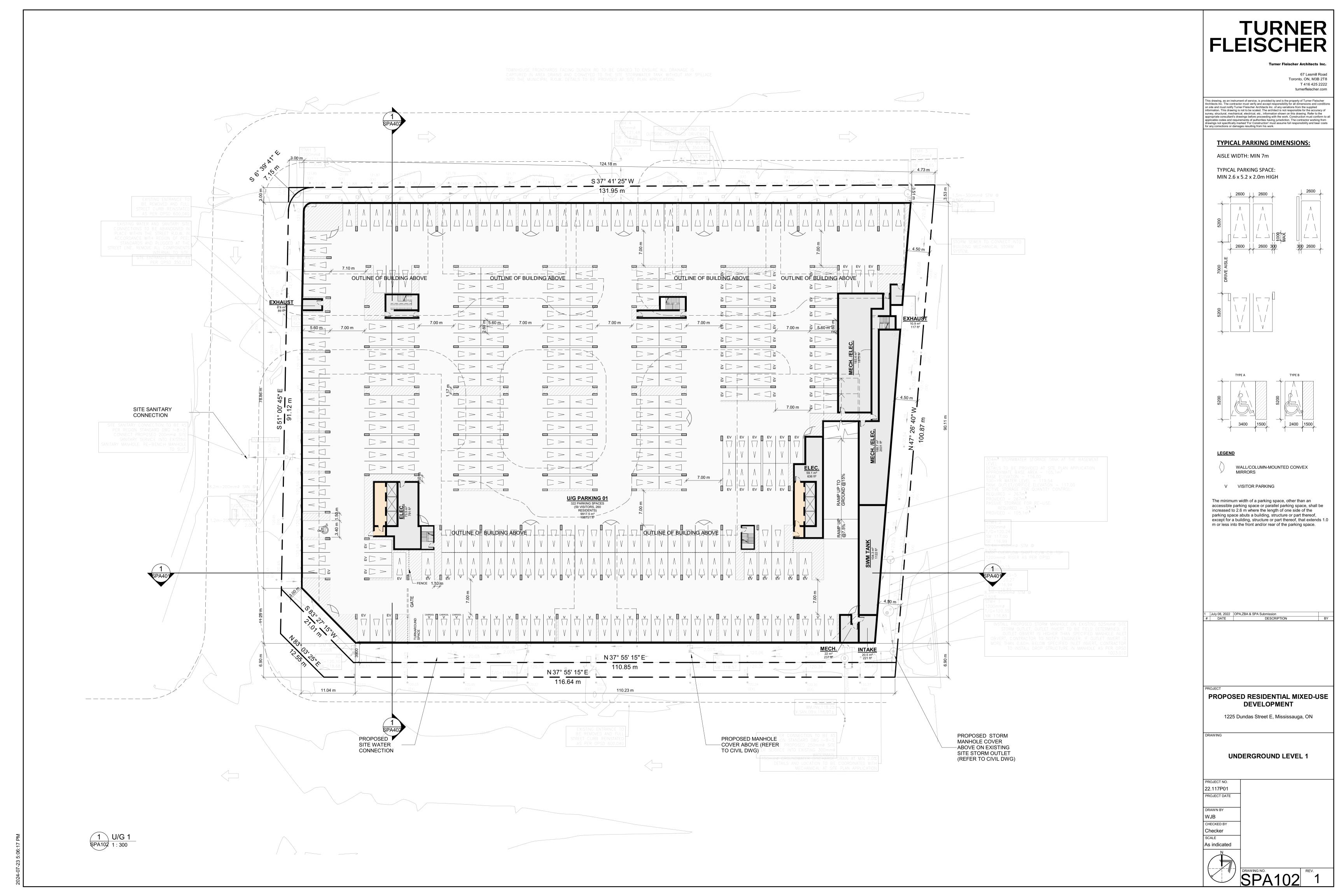


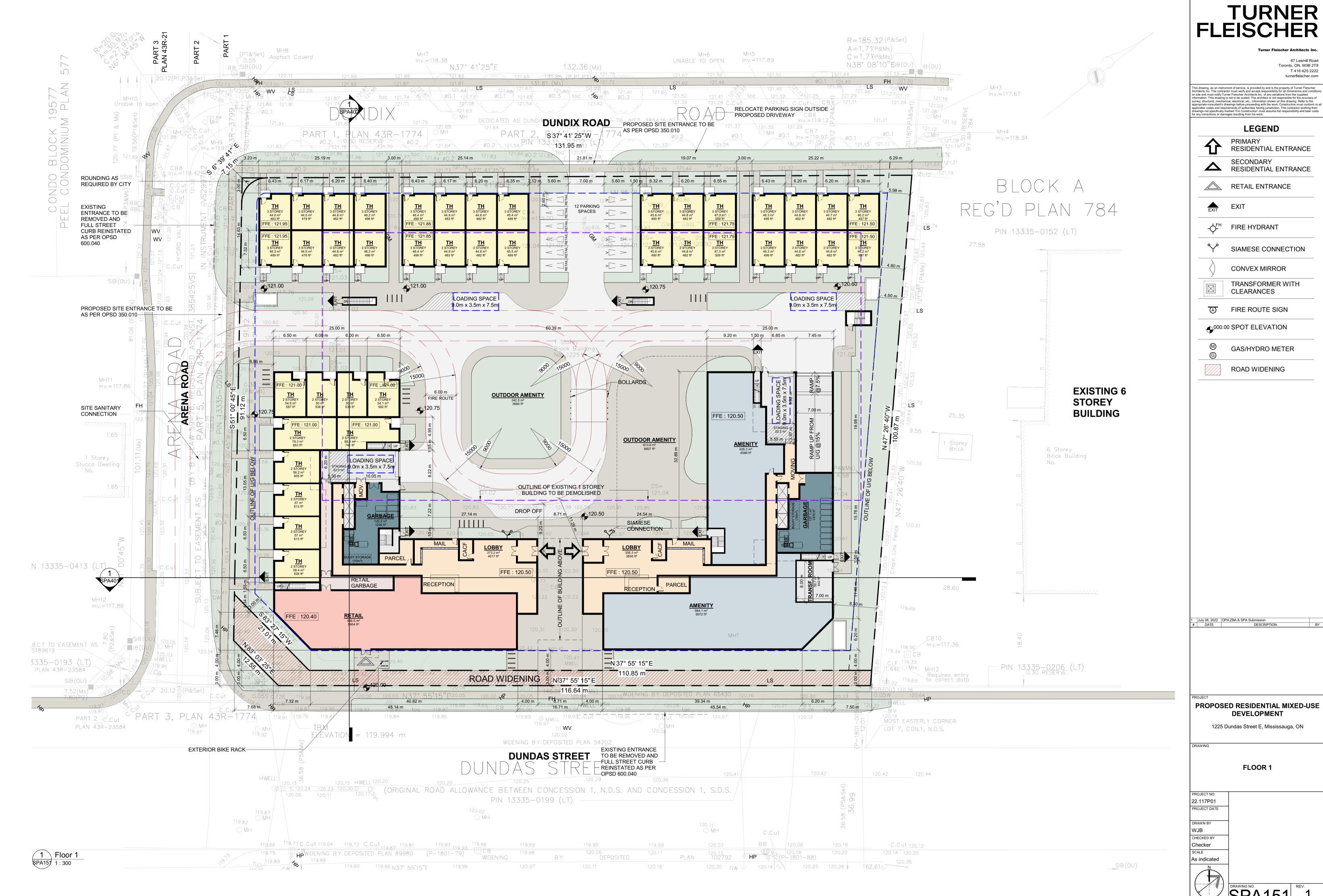




**FLEISCHER** 







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67 Lesmill Road Toronto, ON, M3B 2T8 T 416 425 2222

### **PROJECT SUMMARY**

MISSISSAUGA, ONTARIO			
LAND USE	m²	ft²	%
BUILDING COVERAGE	5,162.3	55,567	41.6%
LANDSCAPING	5,149.7	55,431	41.5%
DRIVEWAY (VEHICULAR HARDSCAPE)	2,107.9	22,689	17.0%
TOTAL SITE AREA	12,419.9	133,687	100%
AREA OF BOW (BOAD WIDENING)	1517	1 201	3 7%

### DROIECT INFORMATION

PROJECT INFORMATION		
	REQUIRED	PROVIDED
BUILDING HEIGHT		59.30m (18 STOREYS)
BUILDING SETBACKS		
NORTH SETBACK		8.3M(BUILDING) 4.8M (TOWNHOME)
SOUTH SETBACK		6.8M (BUILDING) 3.1M (TOWNHOME)
EAST SETBACK		4M (BUILDING)
WEST SETBACK		3.0M (TOWNHOME)
LOADING SPACE	2	4 (2 townhouse loading space)

### GROSS FLOOR AREA SUMMARY

BLDG	USE	GF	FSI		
			m²	ft²	
BLDG	RETAIL		626.0	6,738	0.05
BUILDIN	SUBTOTAL NON-RESIDENTIAL	626.0	6,738	0.05	
G 1					
+BUILDIN	RESIDENTIAL	642 UNITS	46,816.6	503,930	3.77
G 2	SUBTOTAL RESIDENTIAL		46,816.6	503,930	3.77
	TOTAL		47,442.6	510,668	3.82

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**DEFINITION** *Mississauga Zoning By-Law NO. 0225-2007* 

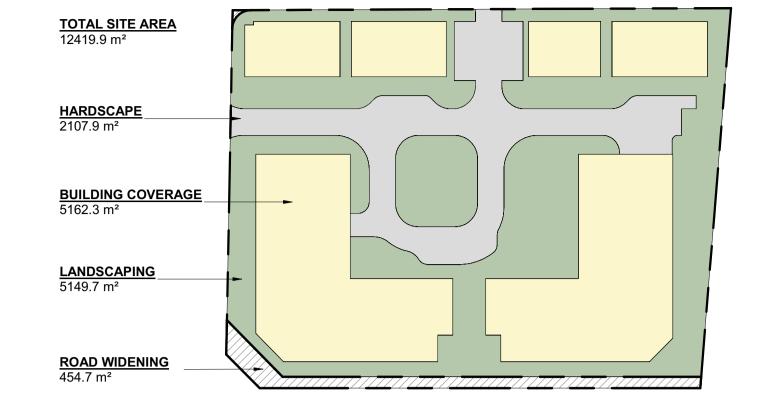
### **GROSS FLOOR AREA**

(GFA) - APARTMENT DWELLING ZONE MEANS THE SUM OF THE AREAS OF EACH **STOREY** OF A **BUILDING** ABOVE OR BELOW **ESTABLISHED GRADE**, MEASURED FROM THE EXTERIOR OF OUTSIDE WALLS OF THE BUILDING INCLUDING FLOOR AREA OCCUPIED BY INTERIOR WALLS BUT EXCLUDING ANY PART OF THE BUILDING USED FOR MECHANICAL FLOOR AREA, STAIRWELLS, ELEVATORS, MOTOR VEHICLE PARKING, BICYCLE PARKING, STORAGE LOCKERS, BELOW-GRADE STORAGE, ANY ENCLOSED AREA USED FOR THE COLLECTION OR STORAGE OF DISPOSABLE OR RECYCLABLE WASTE GENERATED WITHIN THE BUILDING, COMMON FACILITIES FOR THE USE OF THE RESIDENTS OF THE **BUILDING**, A DAY CARE AND **AMENITY AREA**.

- I. MEANS, WITH REFERENCE TO THE HEIGHT OF A BUILDING, STRUCTURE OR PART THEREOF, EXCEPT A DETACHED, SEMI-DETACHED, DUPLEX OR TRIPLEX, THE VERTICAL DISTANCE BETWEEN THE ESTABLISHED GRADE AND: (0174-2017)
- II. THE HIGHEST POINT OF THE ROOF SURFACE OF A FLAT ROOF; OR
- III. THE MEAN HEIGHT LEVEL BETWEEN THE EAVES AND RIDGE OF A SLOPED ROOF. IV. THE MEAN HEIGHT LEVEL BETWEEN THE EAVES AND HIGHEST POINT OF THE FLAT ROOF WHERE THERE IS A FLAT ROOF ON TOP OF A SLOPED ROOF; OR
- V. THE HIGHEST POINT OF A STRUCTURE WITHOUT A ROOF.

### **TOTAL FLOOR AREA SUMMARY**

FLOORS		TFA
	m²	ft²
U/G 1	10,825.4	116,525
FLOOR 1 to FLOOR 18	51,577.5	555,180
TOTAL	62,402.9	671,705



SPA002 1:1000

### GROSS FLOOR AREA BREAKDOWN

GRUSS FL	OOR AREA BREAKDOWN						· ·		<u> </u>							
	FLOOR	# OF UNITS		RESIDE			TOTAL RES	SIDENTIAL		RET	AIL		TOTAL I	RETAIL	TOTAL (TFA - EXC	
		511115	SALE	ABLE	NON-SAI	LEABLE			RET	AIL	RETAIL S	ERVICE			(1177 270	20010110)
			m²	ft²	m²	ft²	m²	ft²	m²	ft²	m²	ft²	m²	ft²	m²	ft²
	U/G 1				61.5	662	61.5	662							61.5	662
	Floor 1	10	585.3	6,300	774.3	8,335	1,359.6	14,635	548.5	5,904	77.5	834	626.0	6,738	1,985.6	21,373
	MEZZANINE		596.9	6,425	112.7	1,213	709.6	7,639							709.6	7,639
	Floor 2	45	3,133.8	33,732	472.2	5,083	3,606.1	38,815							3,606.1	38,815
	Floor 3	48	3,308.1	35,608	454.1	4,888	3,762.2	40,496							3,762.2	40,496
	Floor 4	48	3,308.1	35,608	454.1	4,888	3,762.2	40,496							3,762.2	40,496
	Floor 5	48	3,226.7	34,732	456.7	4,915	3,683.3	39,647							3,683.3	39,647
	Floor 6	48	3,226.7	34,732	456.7	4,915	3,683.3	39,647							3,683.3	39,647
BLDG	Floor 7	45	2,514.6	27,067	398.3	4,288	2,912.9	31,354							2,912.9	31,354
BUILDIN G 1	Floor 8	45	2,514.6	27,067	398.3	4,288	2,912.9	31,354							2,912.9	31,354
	Floor 9	45	2,514.6	27,067	398.3	4,288	2,912.9	31,354							2,912.9	31,354
	Floor 10	22	1,165.0	12,540	135.5	1,459	1,300.5	13,999							1,300.5	13,999
	Floor 11	29	1,554.4	16,732	129.4	1,393	1,683.8	18,124							1,683.8	18,124
	Floor 12	29	1,554.4	16,732	129.4	1,393	1,683.8	18,124							1,683.8	18,124
	Floor 13	25	1,383.3	14,889	114.2	1,229	1,497.5	16,119							1,497.5	16,119
	Floor 14	25	1,383.3	14,889	114.2	1,229	1,497.5	16,119							1,497.5	16,119
	Floor 15	25	1,383.3	14,889	114.2	1,229	1,497.5	16,119							1,497.5	16,119
	Floor 16	25	1,383.3	14,889	114.2	1,229	1,497.5	16,119							1,497.5	16,119
	Floor 17	25	1,383.3	14,889	114.2	1,229	1,497.5	16,119							1,497.5	16,119
	Floor 18	25	1,383.3	14,889	114.2	1,229	1,497.5	16,119							1,497.5	16,119
	TOTAL	612	37,502.714	403,676.023	5,516.740	59,381.718	43,019.453	463,057.741	548.539	5,904.425	77.481	833.994	626.019	6,738.419	43,645.473	469,796.161
	TOTAL (ROUNDED)	612	37,502.7	403,676	5,516.7	59,382	43,019.5	463,058	548.5	5,904	77.5	834	626.0	6,738	43,645.5	469,796

AMENITY AREA BREAKDOWN										
OUTDOOR	AMENITY	INDOOR AMENITY								
m²	ft²	m²	ft²							
050.0	10.000	000.4	40.00							
956.3	10,293	990.4	10,66							
1,258.4	13,545	398.7	4,29							
2,214.657	23,838.378	1,389.123	14,952.39							
2,214.7	23,838	1,389.1	14,9							

### TOTAL FLOOR AREA BREAKDOWN

AREA EXC	CLUSIONS	TOTAL FLOOR AREA				
AREA EXC	DEUSIONS	TOTALTEGORAREA				
		GFA+INDOOR AMENITY+EXCL.				
m²	ft²	m²	ft²			
10,763.9	115,861	10,825.4	116,523			
764.6	8,230	3,740.6	40,264			
562.9	6,059	1,272.6	13,698			
89.7	965	3,695.7	39,781			
90.4	973	3,852.6	41,469			
90.4	973	3,852.6	41,469			
89.7	965	3,773.0	40,612			
89.7	965	3,773.0	40,612			
90.1	970	3,003.0	32,324			
90.1	970	3,003.0	32,324			
90.1	970	3,003.0	32,324			
84.3	907	1,783.6	19,198			
84.5	909	1,768.3	19,034			
84.5	909	1,768.3	19,034			
84.5	909	1,581.9	17,028			
84.5	909	1,581.9	17,028			
84.5	909	1,581.9	17,028			
84.5	909	1,581.9	17,028			
84.5	909	1,581.9	17,028			
84.5	909	1,581.9	17,028			
13,571.626	146,083.833	58,606.222	630,832.393			
13,571.6	146,084	58,606.2	630,832			

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### GROSS FLOOR AREA BREAKDOWN

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		FLOOR	# OF UNITS	RESIDI	ENTIAL	TOTAI (TFA - EXC	
			UNITS	SALE	ABLE	(IFA - EXC	LUSIONS)
	BLDG			m²	ft²	m²	ft²
	BUILDIN	Floor 1	30	1,364.3	14,686	1,364.3	14,686
	G 2	MEZZANINE		1,363.6	14,678	1,363.6	14,678
		Floor 2		1,069.2	11,509	1,069.2	11,509
		TOTAL	30	3,797.160	40,872.312	3,797.160	40,872.312
ı		TOTAL (ROUNDED)	30	3,797.2	40,872	3,797.2	40,872

### AMENITY AREA BREAKDOWN

OUTDOOR	RAMENITY	INDOOR	AMENITY
m²	ft²	m²	ft²

Last Updated: Tuesday, 23 July 2024 12:50:00 PM

### AMENITY AREAS REQUIRED & PROVIDED

AMENITY AREAS	TYPE REQUIRED				F	ROVIDED	
		RATIO	m²	ft²	RATIO	m²	ft²
BLDG BUILDING 1	INDOOR AMENITY				2.16 m²/UNIT	1,389.1	14,952
BUILDING 1 +BUILDING 2	OUTDOOR AMENITY				3.44 m²/UNIT	2,214.7	23,838
	TOTAL AMENITY	5.60 m²/UNIT	3,595.2	38,698	5.61 m²/UNIT	3,603.8	38,791

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### **AMENITY AREAS - REQUIRED**

* AS PER CITY OF MIS	* AS PER CITY OF MISSISSAUGA BY-LAW NUMBER 0225-2007 THE MINIMUM REQUIRED AMENITY IS EQUAL TO THE GREATER OF 5.6M2 PER DWELLING UNIT OR 10% OF THE NET SITE AREA. OF THIS, A MINIMUM OF 50% IS REQUIRED TO BE CONTIGUOUS							
AREA AND IR)	TYPE				MINIMUM 50% CON	TIGUOUS AREA		
Y AF		RATIO	m2	ft2	m2	ft2		
ADOO OUTD	REQUIRED	@ 5.6 m2 / UNIT	3,595	38,699	1,798	19,349		
AME OL	PROVIDED	5.61 m²/UNIT	3,603.8	38,791				
	CONTIGUOUS AREA		1,947	20,954				

## **VEHICULAR PARKING - REQUIRED**

\*\*Vehicular parking required as per CGH Transportation Inc.report

	USE	RATIO (MIN.)	UNITS/AREA	SPACES (MIN.)
TH	VISITOR	0.10 / UNIT	30	3
10	RESIDENT	0.75 / UNIT	30	23
10 CTOREY	VISITOR	0.10 / UNIT	612	62
18 STOREY BUILDING	RESIDENT	0.75 / UNIT	612	459
BOILDING				
	TO'	TAL RESIDENTIAL REQUIRED		547
	RETAIL	1.0/100 sq. m	626.0	6

### **VEHICULAR PARKING - PROVIDED**

	ETHOOLAN TANKING TROVIDED						
	FLOOR		USE	TOTAL			
		RESIDENTIAL	VISITOR	RETAIL	TOTAL		
	FLOOR 1		6	6	12		
	U/G LEVEL 1	260	59		319		
	TOTAL PROVIDED 260 65 6 331						
RATIO 0.40 / UNIT 0.52 / UNIT							
0% OF RESI	DENTIAL SPACES FOR A TOTAL OF	F 52 TO BE EV RE	FADY SPACES				

\* 20% OF RESIDENTIAL SPACES FOR A TOTAL OF 52 TO BE EV READY SPACES \* 10% OF VISITOR/RETAIL SPACES FOR TOTAL OF 7 TO BE EV READY SPACES

### **BIKE PARKING - REQUIRED**

	USE	RATIO (MIN.)	UNITS/AREA	SPACES (MIN.)
V	/ISITOR	0.05 / UNIT	642	32
R	RESIDENT	0.60 / UNIT	642	385
1 [		TOTAL RESIDENTIAL REQU	IRED	417

### **BIKE PARKING - PROVIDED**

ATTENDED IN CONTRACT CONTRACT CONTRACT							
FLOOR		RESIDENTIAL			RETAIL		TOTAL
	LONG TERM	SHORT TERM	SUBTOTAL	LONG TERM	SHORT TERM	SUBTOTAL	TOTAL
MEZZANINE	392		392				392
FLOOR 1 INTERIOR							
FLOOR 1 EXTERIOR		32	32				32
TOTAL PROVIDED	392	32	424				424

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T 416 425 2222

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July 08, 2022 OPA,ZBA & SPA Submission

# DATE DESCRIPTION

PROPOSED RESIDENTIAL MIXED-USE **DEVELOPMENT** 

1225 Dundas Street E, Mississauga, ON

**STATISTICS** 

PROJECT NO. 22.117P01 PROJECT DATE CHECKED BY

As indicated

### UNIT MIX

UNIT MIX										
BLDG	FLOOR				SALEABLE				AVG. UN	
		1B	1B+D	2B	2B+D	3B	TH	TOTAL	m²	ft²
	Floor 1						10	10	118.2	1,273
	Floor 2	2	19	16	5	3		45	69.6	750
	Floor 3		21	20	4	3		48	68.9	742
	Floor 4		21	20	4	3		48	68.9	742
	Floor 5		21	24	2	1		48	67.2	724
	Floor 6		21	24	2	1		48	67.2	724
	Floor 7	6	32	4	1	2		45	55.9	601
	Floor 8	6	32	4	1	2		45	55.9	601
	Floor 9	6	32	4	1	2		45	55.9	601
	Floor 10	6	12	4				22	53.0	570
	Floor 11	9	14	5	1			29	53.6	577
BLDG	Floor 12	9	14	5	1			29	53.6	577
BUILDIN	Floor 13	6	13	5	1			25	55.3	596
G 1	Floor 14	6	13	5	1			25	55.3	596
	Floor 15	6	13	5	1			25	55.3	596
	Floor 16	6	13	5	1			25	55.3	596
	Floor 17	6	13	5	1			25	55.3	596
	Floor 18	6	13	5	1			25	55.3	596
	SUBTOTAL	80	317	160	28	17	10	612		
	TOTAL UNITS	3	97	1	88	17	10	612		
	UNIT MIX	13.1%	51.8%	26.1%	4.6%	2.8%	1.6%	100.0%		
	UNIT MIX TOTAL	64	- .9%	30	.7%	2.8%	1.6%	100.0%	04.0	000
	AVG UNIT SIZE (m²)	42.8	55.3	72.0	85.1	86.6	118.2	61.3	61.3	660
	AVG UNIT SIZE (ft²)	460	595	775	916	932	1,273	660		
	AVG UNIT SIZE TOTAL (m²)	52	2.8	7	3.9	86.6	118.2	61.3		
	AVG UNIT SIZE TOTAL (ft²)	5	68	7	96	932	1,273	660		

Last Updated: Tuesday, 23 July 2024 12:50:18 PM

### **UNIT MIX**

BLDG	FLOOR	SALEA	BLE	AVG. UN	IIT SIZE
		TH	TOTAL	m²	ft²
	Floor 1	30	30	126.6	1,362
	SUBTOTAL	30	30		
	TOTAL UNITS	30	30		
BLDG BUILDIN	UNIT MIX	100.0%	100.0%		
G 2	UNIT MIX TOTAL	100.0%	100.0%	126.6	1 262
	AVG UNIT SIZE (m²)	126.6	126.6	120.0	1,362
	AVG UNIT SIZE (ft²)	1,362	1,362		
	AVG UNIT SIZE TOTAL (m²)	126.6	126.6		
	AVG UNIT SIZE TOTAL (ft²)	1,362	1,362		

Last Updated: Tuesday, 23 July 2024 12:50:36 PM

### UNIT MIX

BLDG	FLOOR				SALEABLE				AVG. UN	IIT SIZE
		1B	1B+D	2B	2B+D	3B	TH	TOTAL	m²	ft²
	Floor 1						40	40	124.5	1,340
	Floor 2	2	19	16	5	3		45	69.6	750
	Floor 3		21	20	4	3		48	68.9	742
	Floor 4		21	20	4	3		48	68.9	742
	Floor 5		21	24	2	1		48	67.2	724
	Floor 6		21	24	2	1		48	67.2	724
	Floor 7	6	32	4	1	2		45	55.9	601
	Floor 8	6	32	4	1	2		45	55.9	601
	Floor 9	6	32	4	1	2		45	55.9	601
	Floor 10	6	12	4				22	53.0	570
	Floor 11	9	14	5	1			29	53.6	577
BLDG BUILDIN	Floor 12	9	14	5	1			29	53.6	577
G 1	Floor 13	6	13	5	1			25	55.3	596
+BUILDIN G 2	Floor 14	6	13	5	1			25	55.3	596
	Floor 15	6	13	5	1			25	55.3	596
	Floor 16	6	13	5	1			25	55.3	596
	Floor 17	6	13	5	1			25	55.3	596
	Floor 18	6	13	5	1			25	55.3	596
	SUBTOTAL	80	317	160	28	17	40	642		
	TOTAL UNITS	39	97	1	88	17	40	642		
	UNIT MIX	12.5%	49.4%	24.9%	4.4%	2.6%	6.2%	100.0%		
	UNIT MIX TOTAL	61.	.8%	29	.3%	2.6%	6.2%	100.0%	64.3	692
	AVG UNIT SIZE (m²)	42.8	55.3	72.0	85.1	86.6	124.5	64.3	04.5	092
	AVG UNIT SIZE (ft²)	460	595	775	916	932	1,340	692		
	AVG UNIT SIZE TOTAL (m²)	52	2.8	73	3.9	86.6	124.5	64.3		
	AVG UNIT SIZE TOTAL (ft²)	50	68	7	96	932	1,340	692		

Last Updated: Tuesday, 23 July 2024 16:24:28 PM

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# DATE DESCRIPTION

PROPOSED RESIDENTIAL MIXED-USE
DEVELOPMENT

1225 Dundas Street E, Mississauga, ON

DRAWING

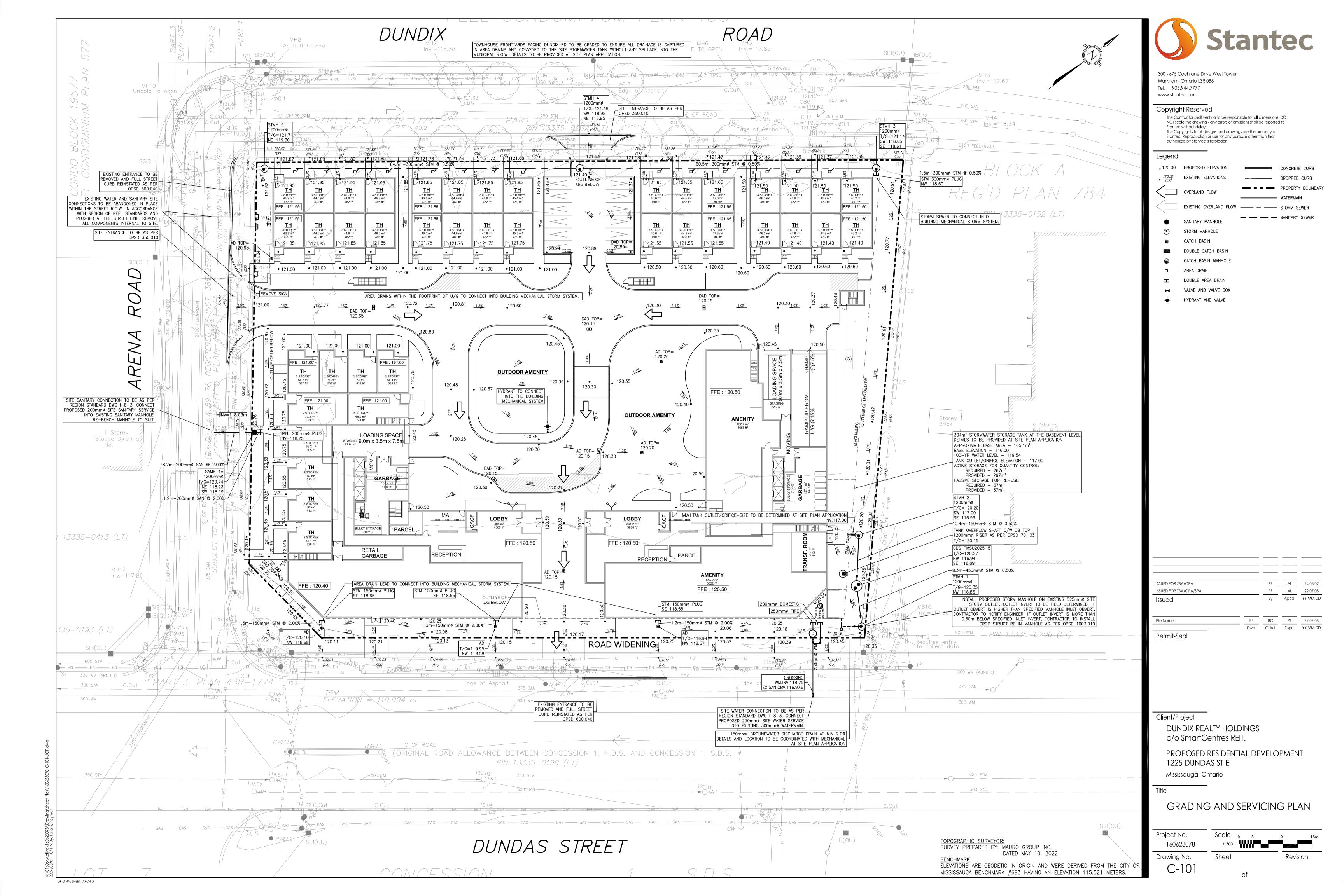
STATISTICS

PROJECT NO.
22.117P01
PROJECT DATE

DRAWN BY
MLE

NMC
SCALE
1:1

SPA003 REV.

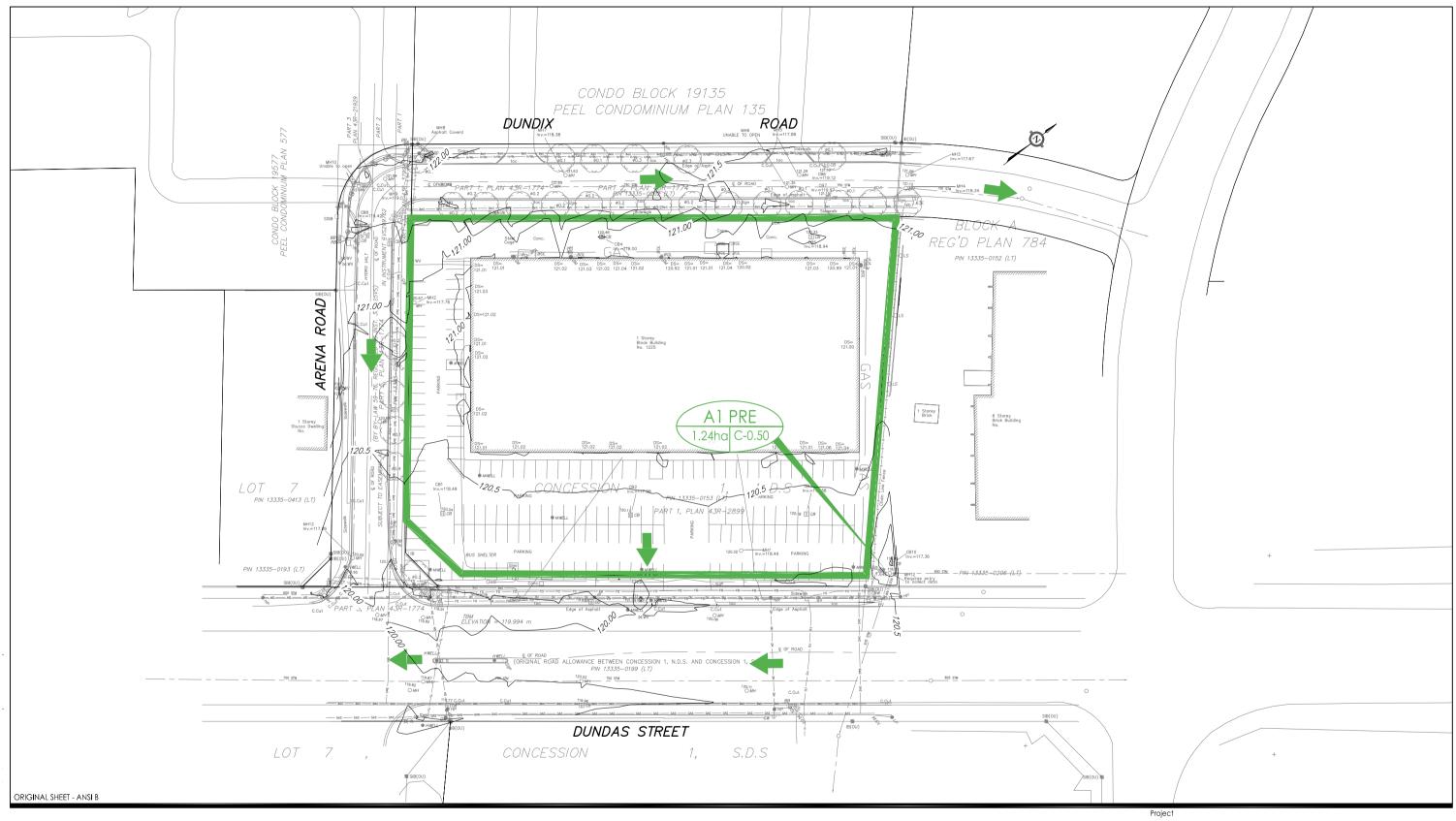


### FUNCTIONAL SERVICING AND STORMWATER MANAGEMENT REPORT

Appendix B STORM

### Appendix B STORM





Notes

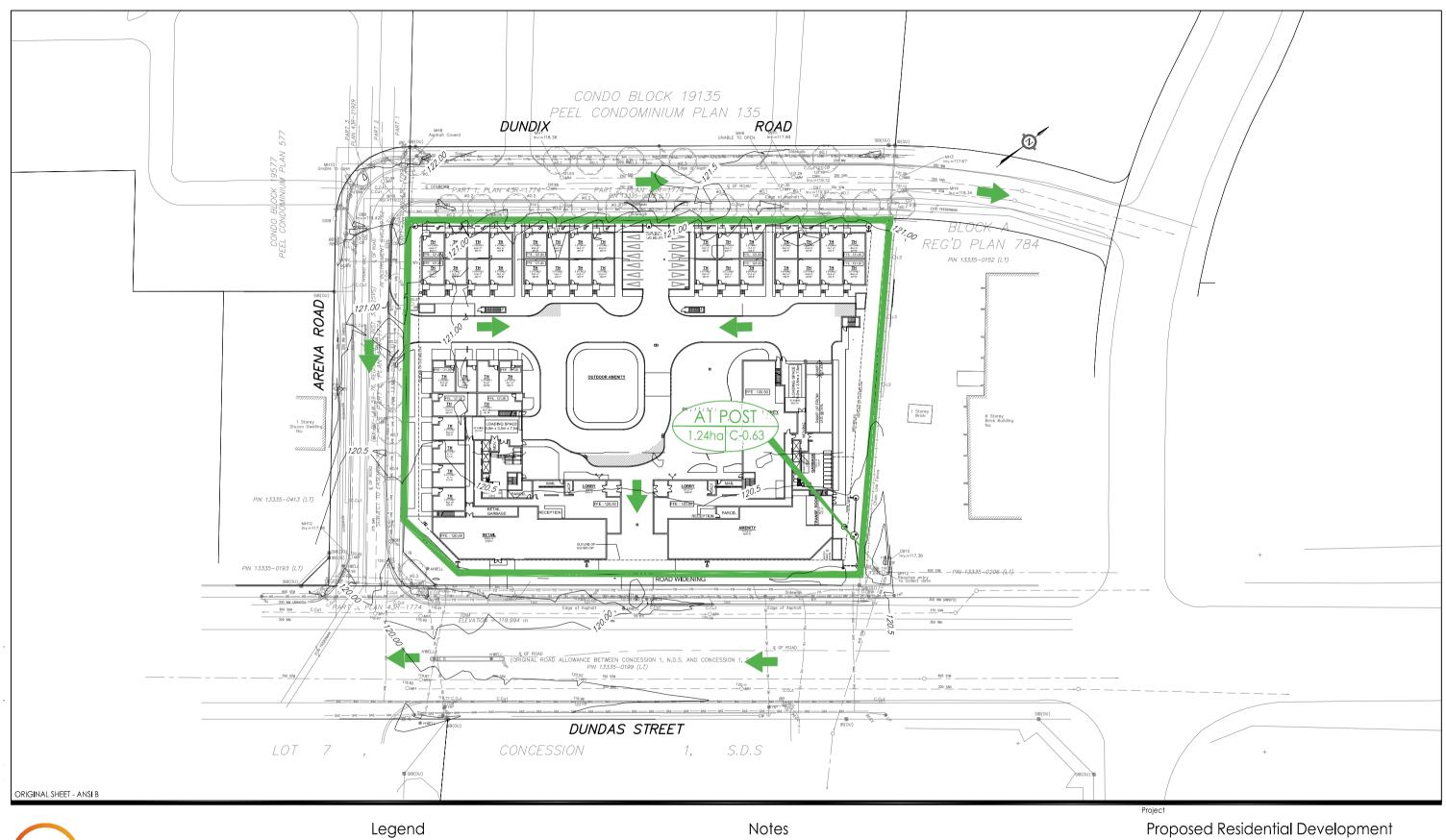


Legend

Proposed Residential Development 1225 Dundas St E

Figure No.

PRE-DEVELOPMENT STORM DRAINAGE PLAN





Notes

Proposed Residential Development 1225 Dundas St E

Figure No. 2.2

POST-DEVELOPMENT STORM DRAINAGE PLAN

floor slab and/or near the foundation and the groundwater would passively drain into these sub drains and discharge directly to sumps. Due to the nature of overburden material, the groundwater will flow through the natural gradient that exists on the site and passively flow into the foundation sub-drains and will not be actively pumped.

Based on the Copper-Jacob equation, the ROI is approximately 85 m, calculation details are provided in Appendix F.

### 5.2.3 Long-Term Perimeter Drain Flow Rate Estimate

The Dupuit-Forcheimer equation for radial flow from an unconfined aquifer for a fully penetrating excavation was used to obtain a flow rate estimate, and is expressed as follows:

$$Q_{w} = \frac{\pi K(H^{2} - h^{2})}{In(\frac{R_{0}}{r_{e}})}$$

Based on the assumptions provided in this report (outlined in Section 5.1 and 5.2), the results of the long-term discharge volume estimate are summarized below and detailed calculations are provided in Appendix F:

Location	Long-Term Peak Flow Rate (L/day)	Notes
Flow into sub-drain after initial dewatering stages	14,100	Long term sub-drain flow value rounded based on Dupuit-Forcheimer's equation.  A Safety factor of 2 was used.

The maximum flow rate estimates represent short term events and are not indicative of long-term continuous contributions to the drainage system. Intermittent cycling of sump pumps and seasonal fluctuation in groundwater regimes should be considered for pump specifications. Given that the predicted dewatering volume does not exceed the 50,000 L/day limit, a PTTW is not required.

It should be noted that the dewatering estimates provided in this report are based on the proposed building information available at this time.

If the groundwater encountered during long-term dewatering is discharged to the City of Mississauga and/or Region of Peel Sanitary and Combined sewer, no treatment will likely be required; however, discharge directed to the City of Mississauga and/or Region of Peel Storm Sewers will likely require treatment.

In the event that the long-term foundation drainage is not allowed to discharge into the City's sewer system, the proposed building may be designed and supported by "tanked" water-proofed continuous raft foundation without permanent dewatering (i.e., avoiding permanent perimeter and under-floor drainage system).

Project Name - 1225 Dundas St E Project Number - 160623078

Date - Jul-24



#### COMPOSITE RUNOFF COEFFICIENT CALCULATION SHEET

Surface Type	Runoff Coefficient (C)
Roof	0.90
Pavement	0.90
Landscape	0.25
Green Roof	0.50

Drainage Area	Roof (Ha)	Pavement (Ha)	Landscape (Ha)	Green Roof (Ha)	Total (Ha)	Composite C
A1 POST	0.52	0.21	0.51	0.00	1.24	0.63

Note: Areas obtained from Site Statistics in Appendix A

Project Name - 1225 Dundas St E

Project Number - 160623078

Date - Jul-24



#### PRE-DEVELOPMENT FLOWS

Drainage Area	Area (Ha)	Runoff Coefficient (C)	Time of Concentration (Tc) (min)
A1 PRE	1.24	0.50	15

Storm Event	a	b	С	I (mm/hr)	Target Flow (L/s)
Two Year	610	4.6	0.78	59.9	103.1
Five Year	820	4.6	0.78	80.5	138.7
Hundred Year	1450	4.9	0.78	140.7	242.3

Project Name - **1225 Dundas St E** Project Number - 160623078

Date - Jul-24



Unadjusted C- 0.63

TARGET RELEASE RATE -		L/s
RELEASE RATE -	100.2	L/s

A1 POST

100 YEAR FLOWS

Area (Ha) - 1.24 C - 0.79

<=====Adjustment factor of 1.25 applied

Uncontrolled Groundwater Discharge

Area (Ha) - N/A
C - N/A
Control Type - Uncontrolled
Tc (min) - N/A

Max. Release Rate (L/s) - 0.2

Control Type - Underground Storage Tc (min) - 15

Available Active Storage (m<sup>3</sup>) - 267 Release Rate (L/s) - 100 Required Storage (m3) - 267 Tank Base Area (m²)- 105.1 Active Stortage Base Elevation (m)- 117.00

Headwater elevation in the tank (m)- 119.54

Time (Min)	I (mm/hr)	Runoff Volume (m³)	Released Volume (m <sup>3</sup> )	Stored Volume (m³)	Time Min)	I (mm/hr)	Release Rate (L/s)
15	140.7	343	90	253	N/A	N/A	N/A
20	118.1	384	120	264	N/A	N/A	N/A
25	102.4	417	150	267	N/A	N/A	N/A
30	90.8	443	180	263	N/A	N/A	N/A
35	81.8	466	210	256	N/A	N/A	N/A
40	74.6	486	240	246	N/A	N/A	N/A
45	68.7	503	270	233	N/A	N/A	N/A
50	63.8	519	300	219	N/A	N/A	N/A
55	59.6	533	330	203	N/A	N/A	N/A
60	56.0	546	360	186	N/A	N/A	N/A
65	52.8	559	390	169	N/A	N/A	N/A
70	50.0	570	420	150	N/A	N/A	N/A
75	47.6	581	450	131	N/A	N/A	N/A
80	45.4	591	480	111	N/A	N/A	N/A
85	43.4	600	510	90	N/A	N/A	N/A
90	41.6	609	540	69	N/A	N/A	N/A
95	40.0	618	570	48	N/A	N/A	N/A
100	38.5	626	600	26	N/A	N/A	N/A
105	37.1	634	630	4	N/A	N/A	N/A
110	35.8	642	660	0	N/A	N/A	N/A
115	34.7	649	690	0	N/A	N/A	N/A
120	33.6	656	720	0	N/A	N/A	N/A
125	32.6	662	750	0	N/A	N/A	N/A
130	31.6	669	780	0	N/A	N/A	N/A
135	30.7	675	810	0	N/A	N/A	N/A
140	29.9	681	840	0	N/A	N/A	N/A
145	29.1	687	870	0	N/A	N/A	N/A
150	28.4	693	900	0	N/A	N/A	N/A
155	27.7	699	930	0	N/A	N/A	N/A
160	27.0	704	960	0	N/A	N/A	N/A
165	26.4	709	990	0	N/A	N/A	N/A
170	25.8	714	1020	0	N/A	N/A	N/A



# CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION BASED ON THE RATIONAL RAINFALL METHOD BASED ON A FINE PARTICLE SIZE DISTRIBUTION



Project Name: 1225 Dundas St E Engineer: Stantec

**Location:** Mississauga, ON **Contact:** P. Fatahi, CET

**OGS #**: 1 **Report Date**: 14-Jun-22

Area1.32haRainfall Station #204Impervious95%Particle Size DistributionFINE

CDS Model 2025 CDS Treatment Capacity 45 l/s

Rainfall Intensity <sup>1</sup> (mm/hr)	<u>Percent</u> <u>Rainfall</u> Volume <sup>1</sup>	Cumulative Rainfall Volume	Total Flowrate (I/s)	<u>Treated</u> Flowrate (I/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
0.5	9.4%	9.4%	1.6	1.6	3.5	97.9	9.2
1.0	11.0%	20.4%	3.2	3.2	7.0	96.9	10.6
1.5	10.1%	30.5%	4.7	4.7	10.4	95.9	9.7
2.0	9.6%	40.1%	6.3	6.3	13.9	94.9	9.1
2.5	7.9%	48.0%	7.9	7.9	17.4	93.9	7.5
3.0	6.4%	54.4%	9.5	9.5	20.9	92.9	5.9
3.5	4.4%	58.8%	11.0	11.0	24.4	91.9	4.0
4.0	4.2%	63.0%	12.6	12.6	27.9	90.9	3.8
4.5	3.7%	66.7%	14.2	14.2	31.3	89.9	3.3
5.0	3.3%	70.0%	15.8	15.8	34.8	88.9	2.9
6.0	5.6%	75.6%	18.9	18.9	41.8	86.9	4.8
7.0	4.0%	79.6%	22.1	22.1	48.8	84.9	3.4
8.0	3.5%	83.1%	25.2	25.2	55.7	82.9	2.9
9.0	2.2%	85.3%	28.4	28.4	62.7	80.9	1.8
10.0	1.7%	87.0%	31.6	31.6	69.6	78.9	1.3
15.0	6.3%	93.3%	47.3	45.3	100.0	67.2	4.2
20.0	2.3%	95.6%	63.1	45.3	100.0	50.4	1.1
25.0	1.8%	97.3%	78.9	45.3	100.0	40.3	0.7
30.0	0.8%	98.2%	94.7	45.3	100.0	33.6	0.3
35.0	0.9%	99.0%	110.5	45.3	100.0	28.8	0.2
40.0	0.3%	99.3%	126.2	45.3	100.0	25.2	0.1
45.0	0.5%	99.8%	142.0	45.3	100.0	22.4	0.1
50.0	0.2%	100.0%	157.8	45.3	100.0	20.2	0.0
							87.2

Removal Efficiency Adjustment<sup>2</sup> =

ey = 80.7% ed = 96.7%

6.5%

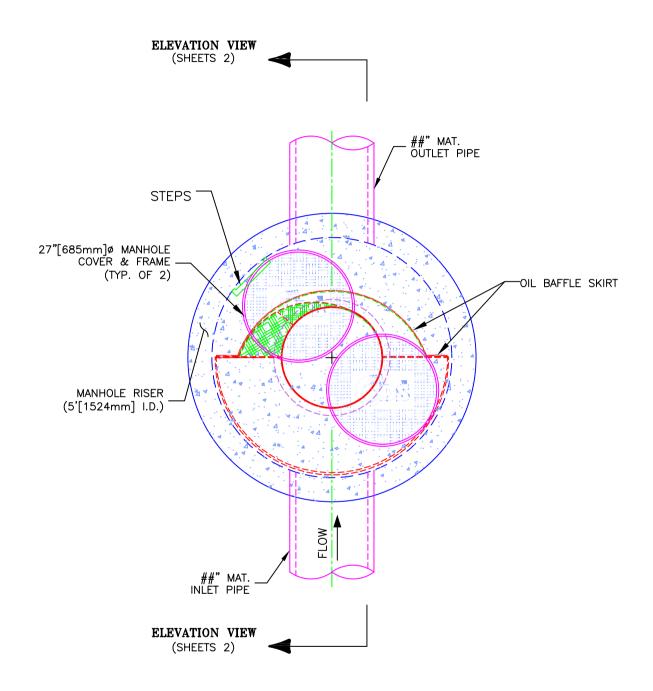
Predicted Net Annual Load Removal Efficiency = Predicted % Annual Rainfall Treated =

1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)

- 2 Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.
- 3 CDS Efficiency based on testing conducted at the University of Central Florida
- 4 CDS design flowrate and scaling based on standard manufacturer model & product specifications



### PLAN VIEW



# CDS MODEL PMSU20\_25m, 1.6 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT



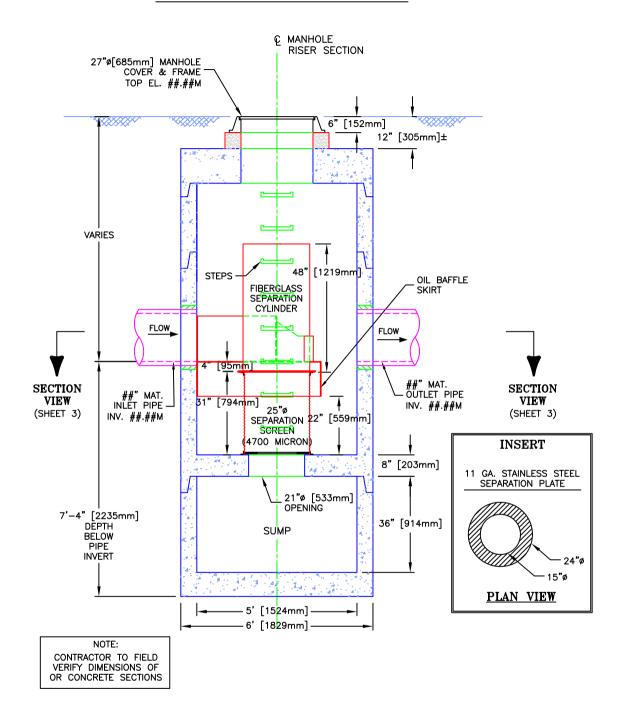
PROJECT NAME CITY, PROVINCE

JOB#	XX-##-###	SCALE 1" = 2'
DATE	##/##/##	SHEET
DRAWN	INITIALS	1
APPROV.		1

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 905-0577 CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955



### **ELEVATION VIEW**



# CDS MODEL PMSU20\_25m, 1.6 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT



PROJECT NAME

JOB#	××-##-###	SCALE 1" = 3'
DATE	##/##/##	SHEET
DRAWN	INITIALS	9
APPROV.		$\sim$

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577 CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955

### FUNCTIONAL SERVICING AND STORMWATER MANAGEMENT REPORT

Appendix C SANITARY

## Appendix C SANITARY



Project Name - 1225 Dundas St E

Project Number - 160623078 Date - July-24



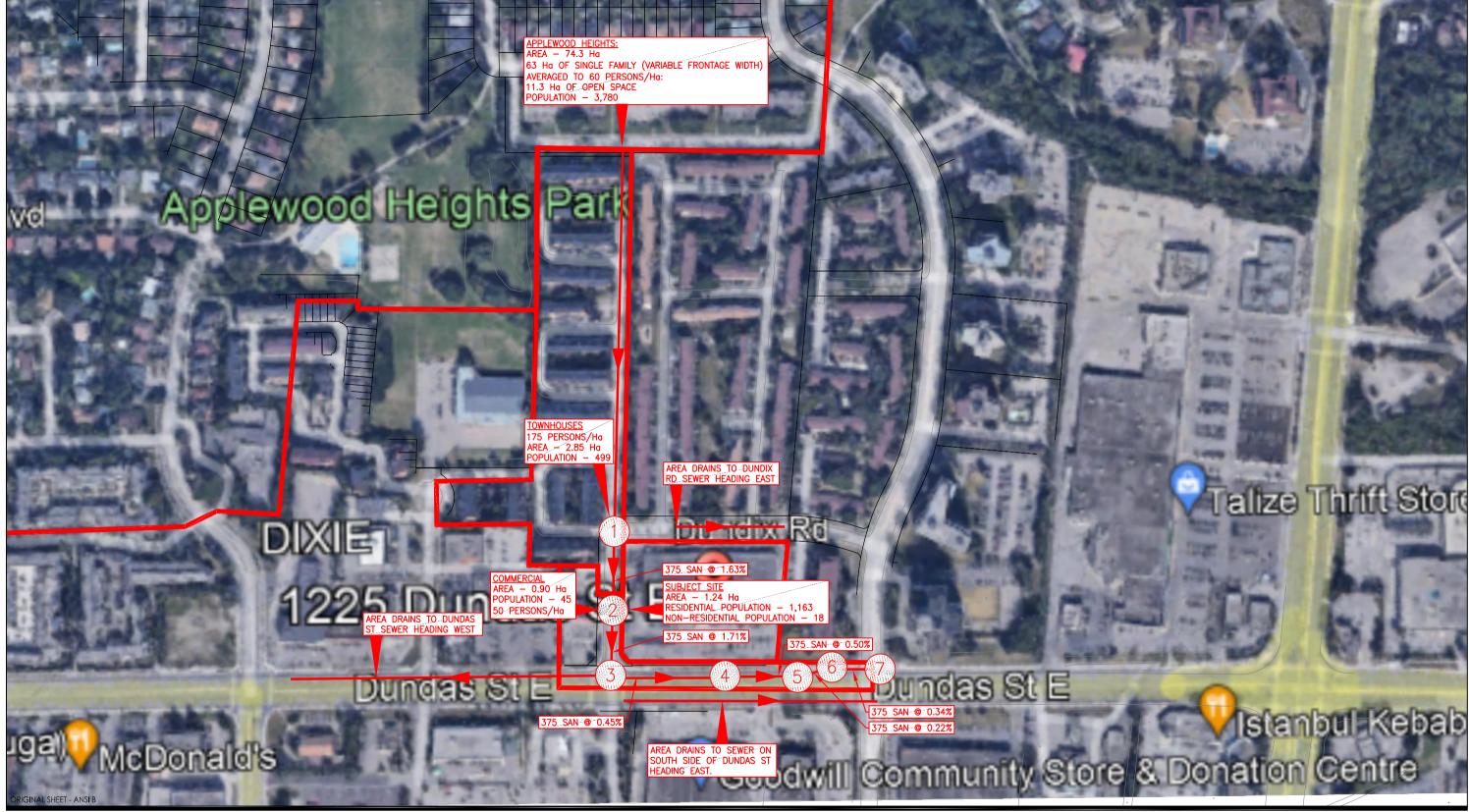
	PEAK SANITARY FLO	WS CALCULATION SHEET		
Criteria Used:	Region of Peel 2020 Developm	nent Charges Background S	itudy	
Function	Population	Units	Flow	Units
Residential - Townhouse	3.4	PPU	290	L/Capita/Day
Residential - Large Apartment (>750 ft <sup>2</sup> )	3.0	PPU	290	L/Capita/Day
Residential - Small Apartment (=<750 ft <sup>2</sup> )	1.6	PPU	290	L/Capita/Day
Non-Residential	1.0	Per 36 m <sup>2</sup> of GFA	270	L/Capita/Day
Extraneous	-	-	0.26	L/s/Ha

Site Area	1.24	Ha

	Average D	ry Weather Flow		
Function	Number of Units	GFA (m <sup>2</sup> )	Population	Flow (L/s)
Townhouse	40	-	136	0.46
Residential - Large Apartment (>750 ft²)	45	-	135	0.45
Residential - Small Apartment (=<750 ft <sup>2</sup> )	557	-	892	2.99
Non-Residential	-	626	18	0.06
			Total	3.96

Harmon Peaking Factor 3.75

Total Site	14.86
Extraneous	0.32
Total Peak Flow (L/s)	15.2





Legend

Notes

Project

Proposed Residential Development 1225 Dundas St E

Figure No.

\_\_\_

SANITARY DRAINAGE AREA PLAN

Project Name - 1225 Dundas St E Project Number - 160623078 Date - Jun-22

Stantec
Stalltec

Date -	Juli-22											
SAI	NITARY CALCULA	ATION SHEET - EXISTIN	G CONDITIO	ONS								
Criteria Used: Region of Peel 2020 Development Charges Background Study												
Function	Population	Units	Flow	Units	Peaking Factor							
Residential - Townhouse	3.4	PPU	290	L/Capita/Day	Harmon Peaking Factor							
Residential - Large Apartment (>750 ft <sup>2</sup> )	3.0	PPU	290	L/Capita/Day	Harmon Peaking Factor							
Residential - Small Apartment (=<750 ft <sup>2</sup> )	1.6	PPU	290	L/Capita/Day	Harmon Peaking Factor							
Non-Residential	1.0	Per 36 m <sup>2</sup> of GFA	270	L/Capita/Day	Harmon Peaking Factor							
Extraneous	-	-	0.26	L/s/Ha	-							

Location				Site Area (Ha)		Resident	Residential Population*		ential Population*	Peaking Factor	Average Flow	Peak Flow	Infiltration	Total Peak Flow	Pipe Diameter	Pipe Slope	Velocity	Capacity	% Capacity Used
Block	Area Tag	From	То	Local Area	Cumulative Area	Local Population	Cumulative Population	Local Population	Cumulative Population	reaking ractor	(L/s)	(L/s)	(L/s)	(L/s)	(mm)	(%)	(m/s)	(L/s)	70 Capacity Oseu
Applewood Heights + Townhouses northwest of site + Subject Site	-	Node 1	Node 2	78.47	78.47	4279	4279	66	66	3.30	14.6	48.1	20.4	68.5	375	1.63	2.03	223.8	31%
Commercial west of Arena Rd + North half of Dundas St E	-	Node 2	Node 3	0.90	79.37	0	4279	45	111	3.30	14.7	48.5	20.6	69.1	375	1.71	2.08	229.3	30%
Dundas St E	-	Node 3	Node 4	0.00	79.37	0	4279	0	111	3.30	14.7	48.5	20.6	69.1	375	0.45	1.06	117.6	59%
Dundas St E	-	Node 4	Node 5	0.00	79.37	0	4279	0	111	3.30	14.7	48.5	20.6	69.1	375	0.50	1.12	124.0	56%
Dundas St E	-	Node 5	Node 6	0.00	79.37	0	4279	0	111	3.30	14.7	48.5	20.6	69.1	375	0.22	0.74	82.2	84%
Dundas St E	-	Node 6	Node 7	0.00	79.37	0	4279	0	111	3.30	14.7	48.5	20.6	69.1	375	0.34	0.93	102.2	68%

<sup>\*</sup> See Figure 3.1 in this appendix for criteria used for external populations. Existing population for subject site = 1.32 Ha x 50 persons/Ha as per region standards = 66

Project Name - Project Number - Date -	160623078	St E	Stantec								
SANITARY CALCULATION SHEET - PROPOSED CONDITIONS											
Criteria Used: Region of Peel 2020 Development Charges Background Study											
Function	Population	Units	Flow	Units	Peaking Factor						
Residential - Townhouse	3.4	PPU	290	L/Capita/Day	Harmon Peaking Factor						
Residential - Large Apartment (>750 ft <sup>2</sup> )	3.0	PPU	290	L/Capita/Day	Harmon Peaking Factor						
Residential - Small Apartment (=<750 ft <sup>2</sup> )	1.6	PPU	290	L/Capita/Day	Harmon Peaking Factor						
Non-Residential	1.0	Per 36 m <sup>2</sup> of GFA	270	L/Capita/Day	Harmon Peaking Factor						
Extraneous	-	-	0.26	L/s/Ha	-						

Lo	Location			Site Area (Ha)		Residential Population*		Non-Residen	tial Population*	Peaking Factor	Average Flow	Peak Flow	Infiltration	Foundation Discharge (L/s)		Total Peak Flow	Pipe Diameter	Pipe Slope	Velocity	Capacity	% Canacity Used
Block	Area Tag	From	То	Local Area	Cumulative Area	Local Population	<b>Cumulative Population</b>	Local Population C	umulative Population	r caking ractor	(L/s)	(L/s)	(L/s)	Local	Cumulative	(L/s)	(mm)	(%)	(m/s)	(L/s)	70 Capacity Oseu
Applewood Heights + Townhouses		No do d	N. d. a	77.45	77.45	4279	4279			2.24	14.4	47.5	20.1	0.0	0.0	67.6	375	1.62	2.02	222.0	30%
northwest of site	-	Node 1	Node 2	77.15	77.15	4279	4279	0	U	3.31	14.4	47.5	20.1	0.0	0.0	67.6	3/5	1.63	2.03	223.8	30%
Subject Site + Commercial west of Arena		No. do 2	N. d. a	2.14	79.29	1162	F442	63	62	2.24	40.5	50.3	20.6	0.0	0.0	70.0	375	4.74	2.00	229.3	250/
Rd + North half of Dundas St E	-	Node 2	Node 3	2.14	79.29	1163	5442	63	63	3.21	18.5	59.2	20.6	0.0	0.0	/9.8	3/5	1.71	2.08	229.3	35%
Dundas St E	-	Node 3	Node 4	0.00	79.29	0	5442	0	63	3.21	18.5	59.2	20.6	0.0	0.0	79.8	375	0.45	1.06	117.6	68%
Dundas St E	-	Node 4	Node 5	0.00	79.29	0	5442	0	63	3.21	18.5	59.2	20.6	0.0	0.0	79.8	375	0.50	1.12	124.0	64%
Dundas St E	-	Node 5	Node 6	0.00	79.29	0	5442	0	63	3.21	18.5	59.2	20.6	0.0	0.0	79.8	375	0.22	0.74	82.2	97%
Dundas St E	-	Node 6	Node 7	0.00	79.29	0	5442	0	63	3.21	18.5	59.2	20.6	0.0	0.0	79.8	375	0.34	0.93	102.2	78%

<sup>\*</sup> See Figure 3.1 in this appendix for criteria used for external populations. See Table 1-1: Site Development Statistics in Section 1.2 of the report for criteria used for determining population for subject site

### FUNCTIONAL SERVICING AND STORMWATER MANAGEMENT REPORT

Appendix D WATER

### Appendix D WATER



Project Name - 1225 Dundas St E Project Number - 160623078 Date - Jul-24



		DOIVIESTIC WA	TER DEIVIAND CALCULATION										
	CRITERIA SUMMARY												
Criteria Used: Region of Peel 2020 Development Charges Background Study													
Function	Population	Units	Flow	Units	Max Day Factor	Peak Hour Factor							
Residential - Townhouse	3.4	PPU	270	L/Capita/Day	1.8	3.0							
Residential - Large Apartment (>750 ft <sup>2</sup> )	3.0	PPU	270	L/Capita/Day	1.8	3.0							
Residential - Small Apartment (=<750 ft <sup>2</sup> )	1.6	PPU	270	L/Capita/Day	1.8	3.0							
Non-Residential	1.0	Per 36 m <sup>2</sup> of GFA	250	L/Capita/Day	1.4	3.0							

Function	Number of Units	GFA (m2)	Population	Average Day (L/d)	Max Day (L/d)	Peak Hour (L/hr)	Peak Domestic Flow (L/s)
Townhouse	40	-	136	36720.0	66096.0	4590.0	1.3
Residential - Large Apartment (>750 ft <sup>2</sup> )	45	-	135	36450.0	65610.0	4556.3	1.3
Residential - Small Apartment (=<750 ft <sup>2</sup> )	557	-	892	240840.0	433512.0	30105.0	8.4
Non-Residential	-	626	18	4500.0	6300.0	562.5	0.2
						Total	11.1

#### FIRE FLOW DEMAND CALCULATION

Assumptions:

Type of Construction- Fire Resistive Protection Rating- One Hour Rating
Occupancy Type- Limited Combustible Sprinkler Protection- NFPA 13

E- Distance to closest structure on the east side (m) S- Distance to closest structure on the south side (m) W- Distance to closest structure on the south side (m)
N- Distance to closest structure on the north side (m)

Location	С	Largest Floor Area (m²)	Above Floor Area (m²)	Below Floor Area (m²)	F1 (L/min)	Occupancy Factor	F2 (L/min)
Site	0.6	5162	5162	5162	11615	-15%	9873
Sprinkler Protection Factor	F2 (L/min)	E	S	W	N	Exposure Factor	F (L/min)
-30%	6911	3	44	28	24	50%	11000

F (L/s)	F (USGPM)
183.3	2906

Peak Domestic Flow + Fire Demand (L/s) 194.4 521 Piercey Road, Unit 6 Bolton, ON, L7E 5B5



T: 905.951.1877 F: 905.951.1878

E: office@vtfireprotection.com

#### HYDRANT FLOW TEST REPORT

#### **SITE INFORMATION**

Test Location: Dundas St. East / Blundell, Mississauga

June 15, 2022 Date of Test:

Time of Test: 11:00 am

Flow Hydrant ID: 1225 Dundas St. East

Res. Hydrant ID: 1214 Dundas St. East (@ Arena Rd.) Underground W/M Size: 12" (300 mm)

Pipe Material: **PVC** 

Flow Hyd. Co-Efficient:

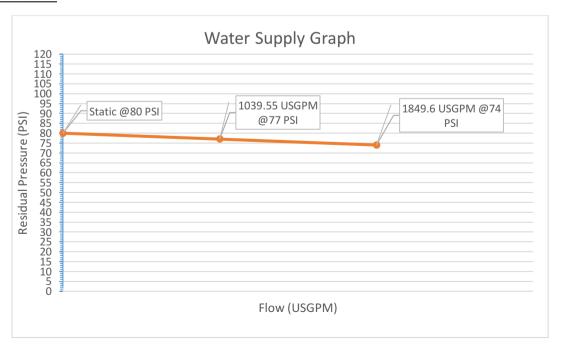
0.85

Static Reading: 80 PSI

#### FIELD DATA

Test	Outlet Size	Pitot Reading	Flow Adjustment	Total Flow	Residual	Field Notes
No.	(inches)	(PSI)	(USGPM)	(USGPM)	(PSI)	(if applicable)
1	1 – 1¾"	-	-	-	-	-
2	1 – 2½"	43	1,223	1,039.55	77	-
3	2 – 2½"	34, 34	2,176	1,849.60	74	-
4	-	-	-	-	-	-

#### WATER SUPPLY GRAPH



#### **ADDITIONAL COMMENTS**

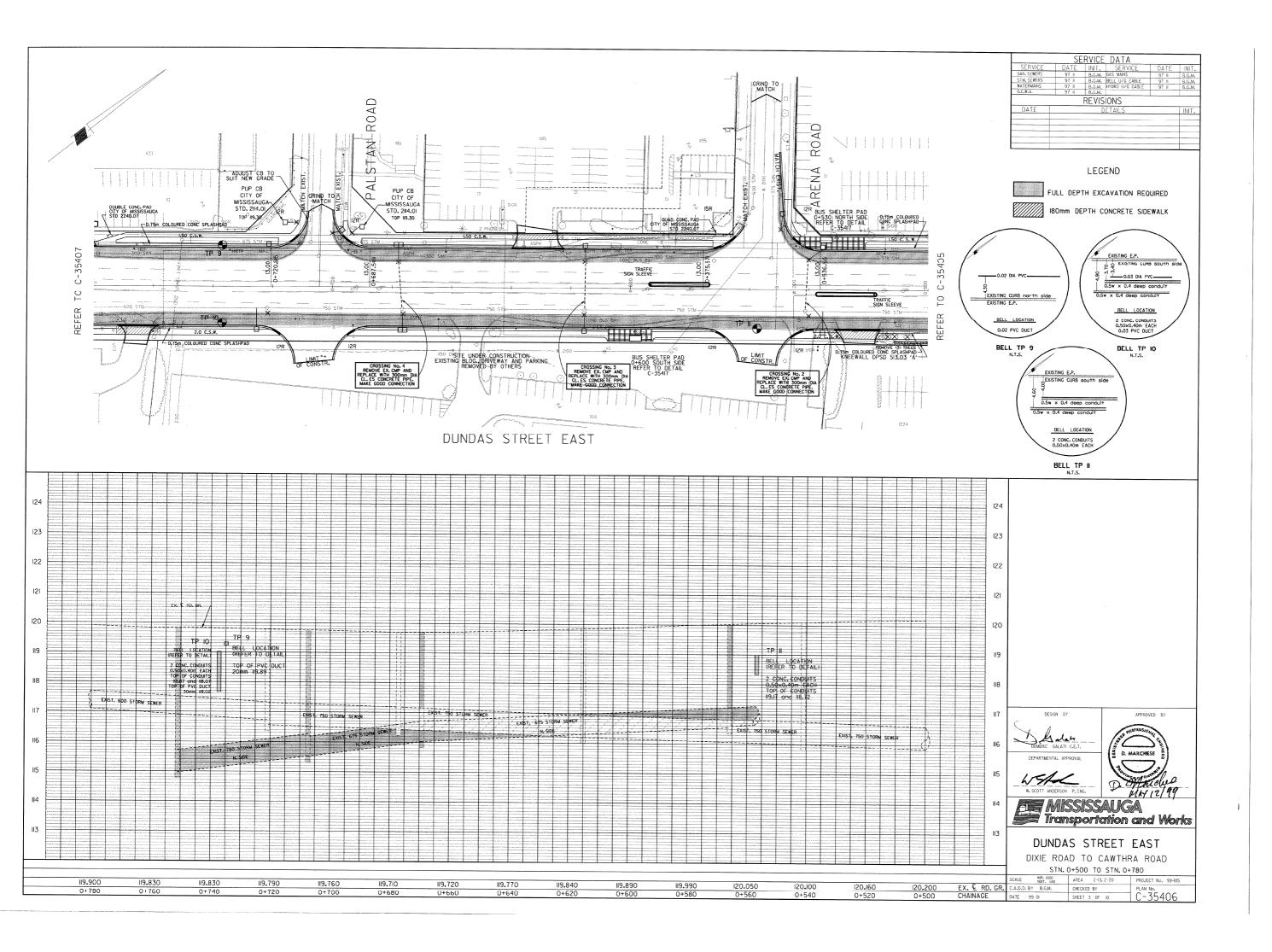
- All readings are true at the time of actual hydrant test.
- 1¾" playpipe was not conducted due to the site condition/unsafe (traffic)

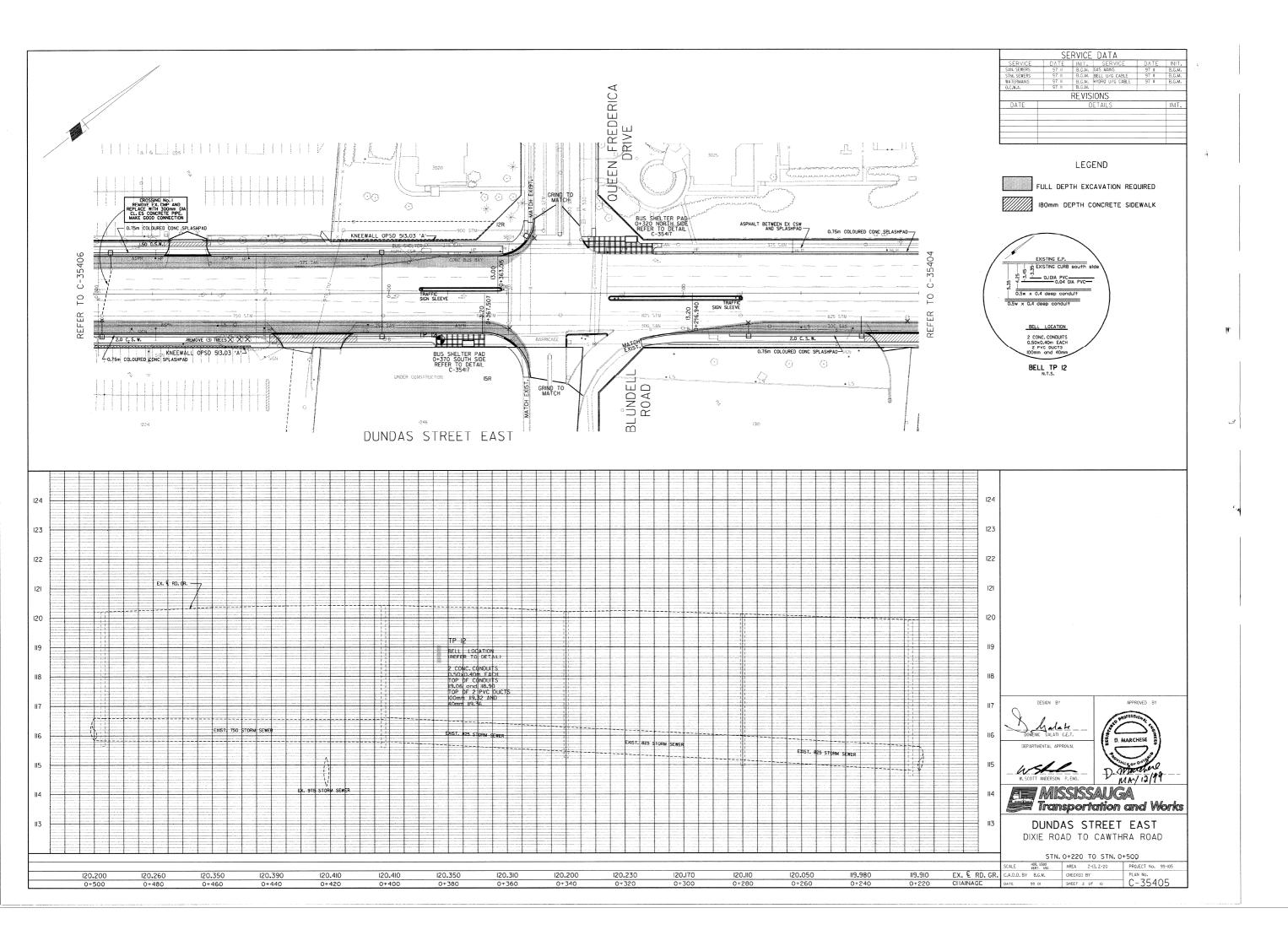
## FUNCTIONAL SERVICING AND STORMWATER MANAGEMENT REPORT

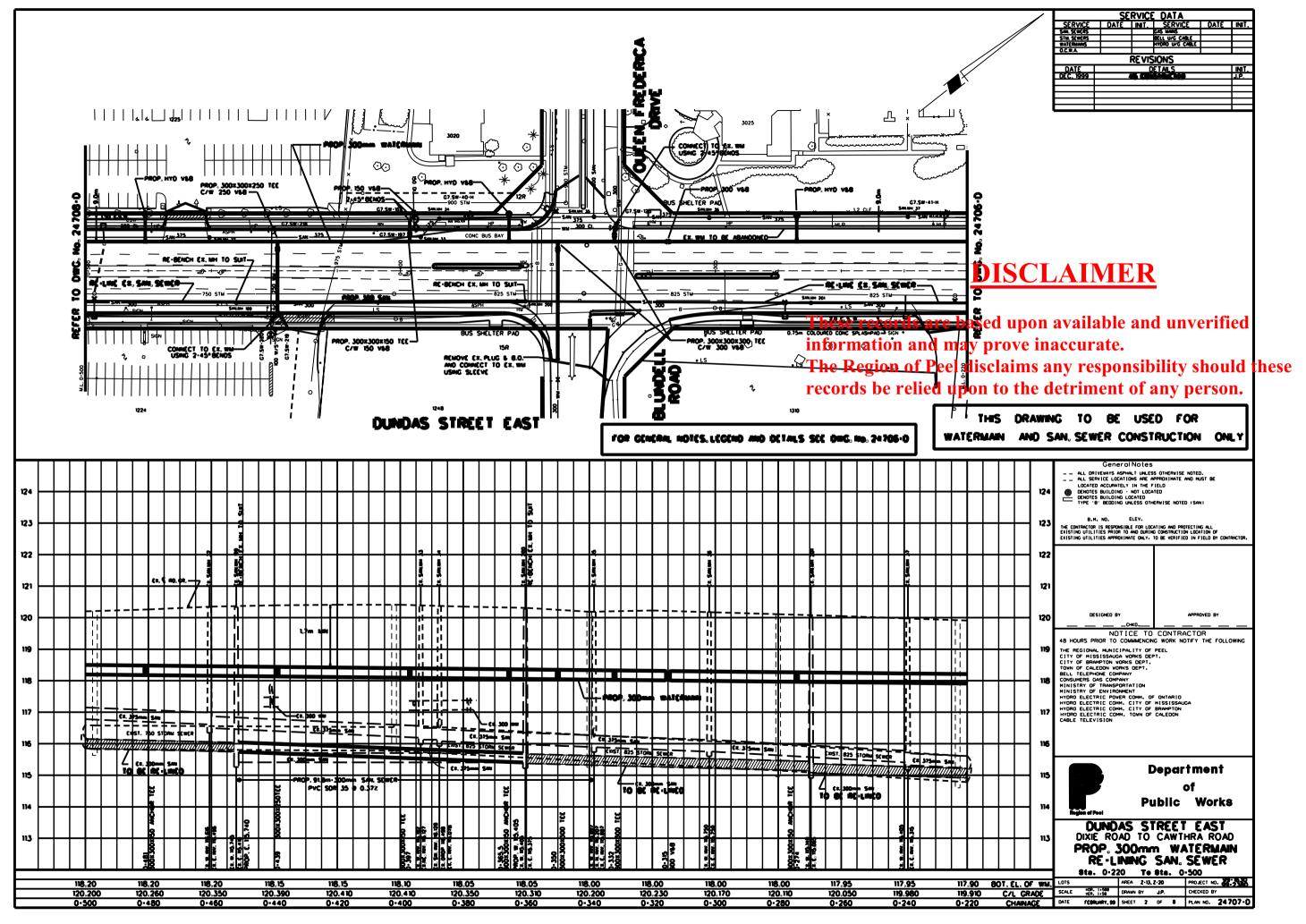
Appendix E BACKGROUND MATERIALS

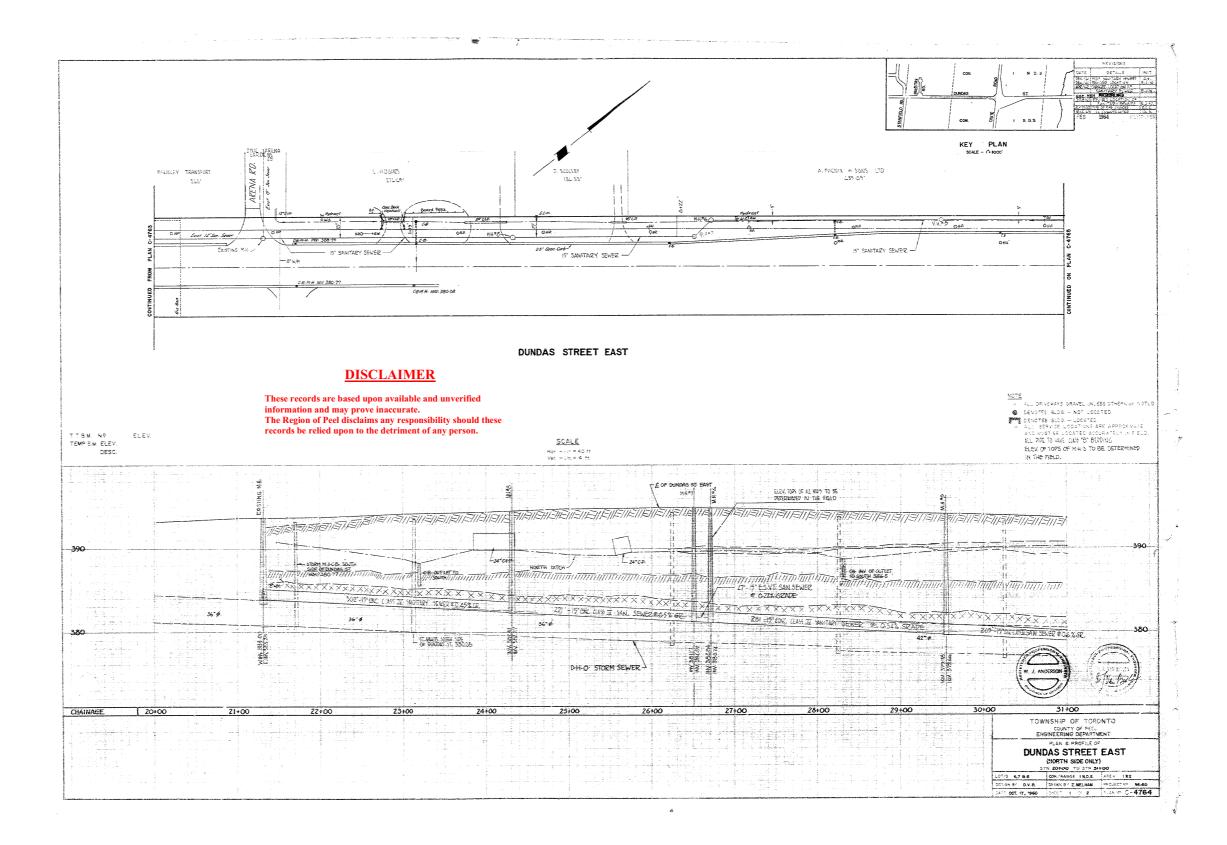
## Appendix E BACKGROUND MATERIALS

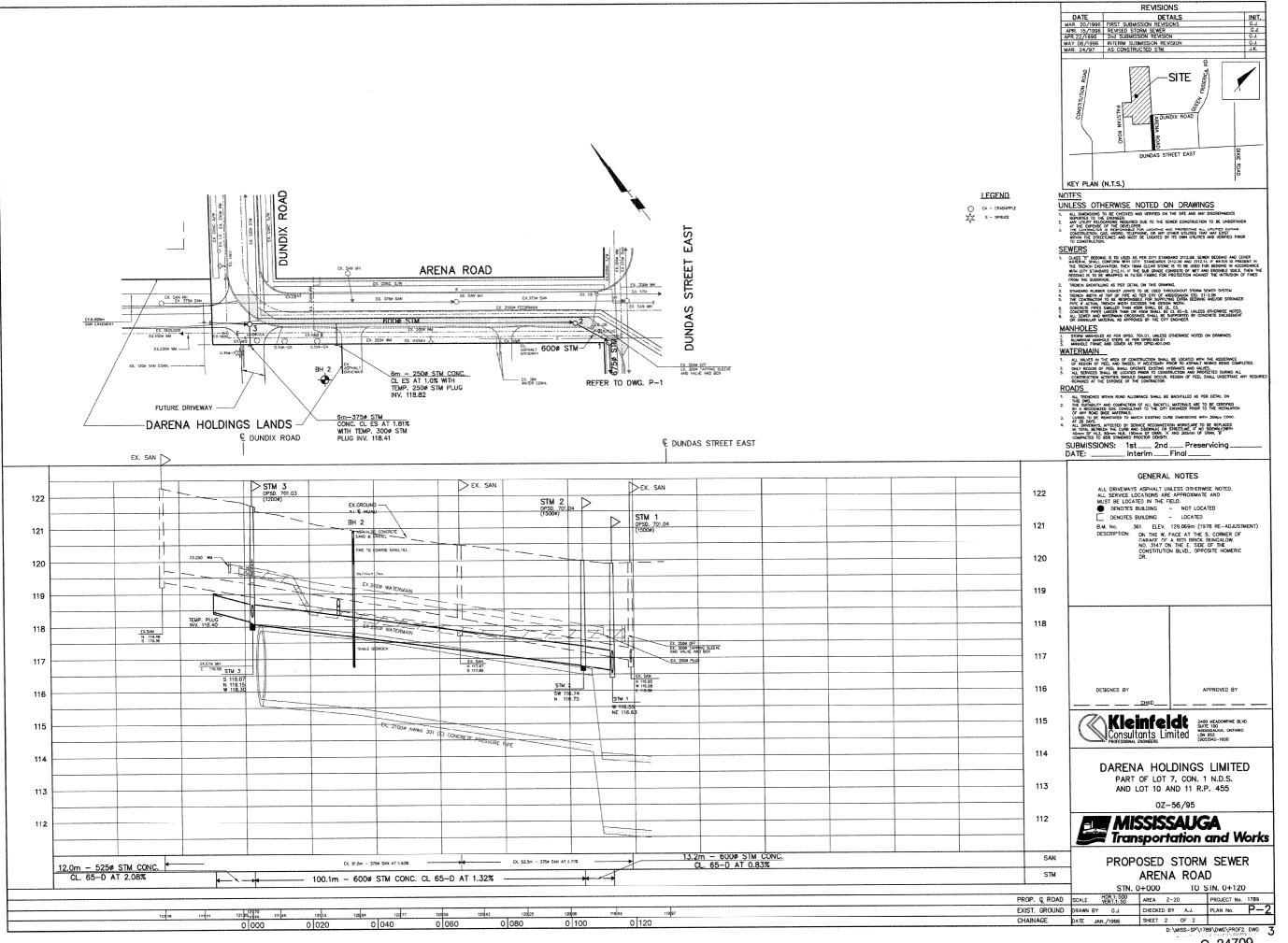


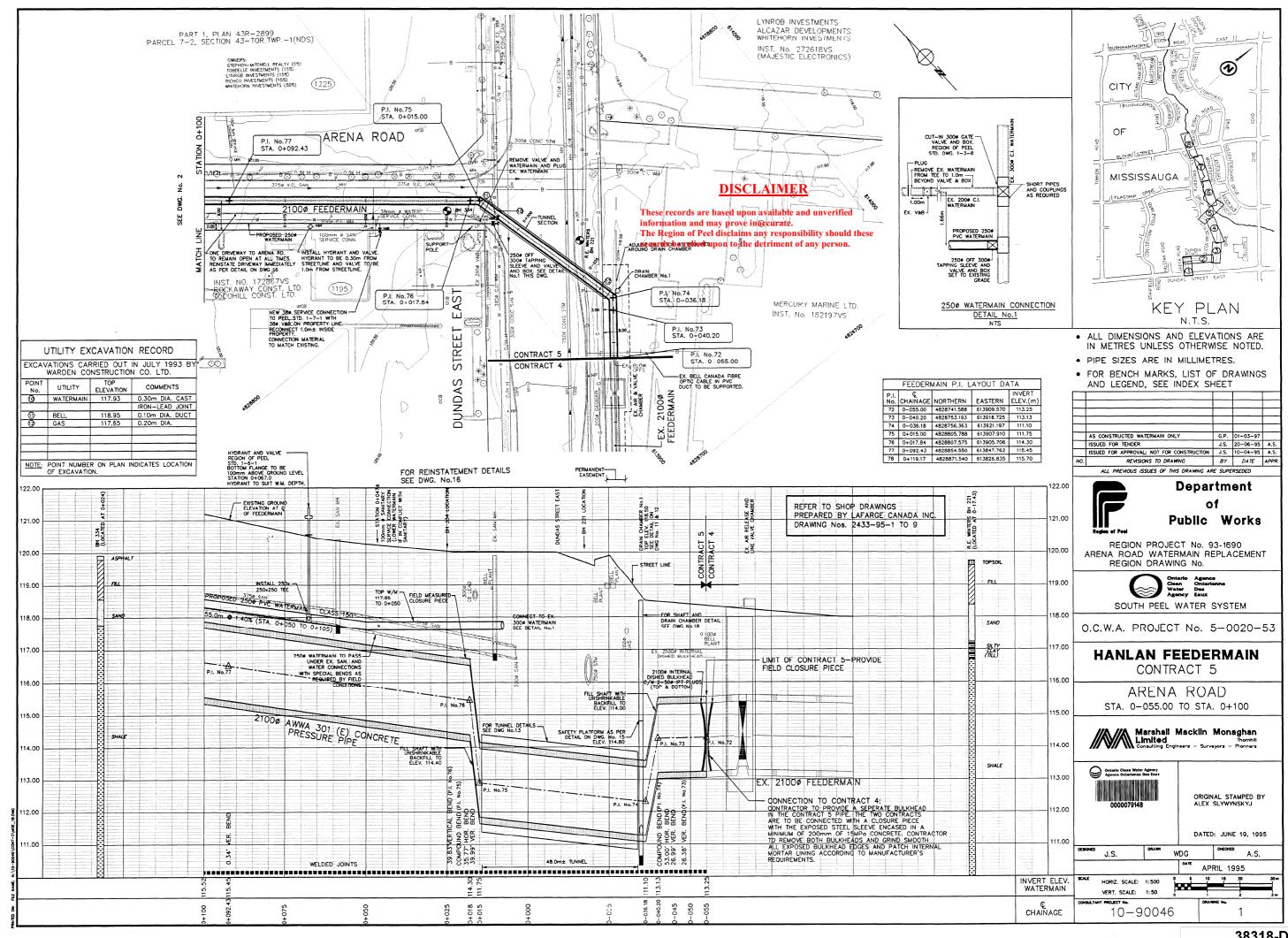


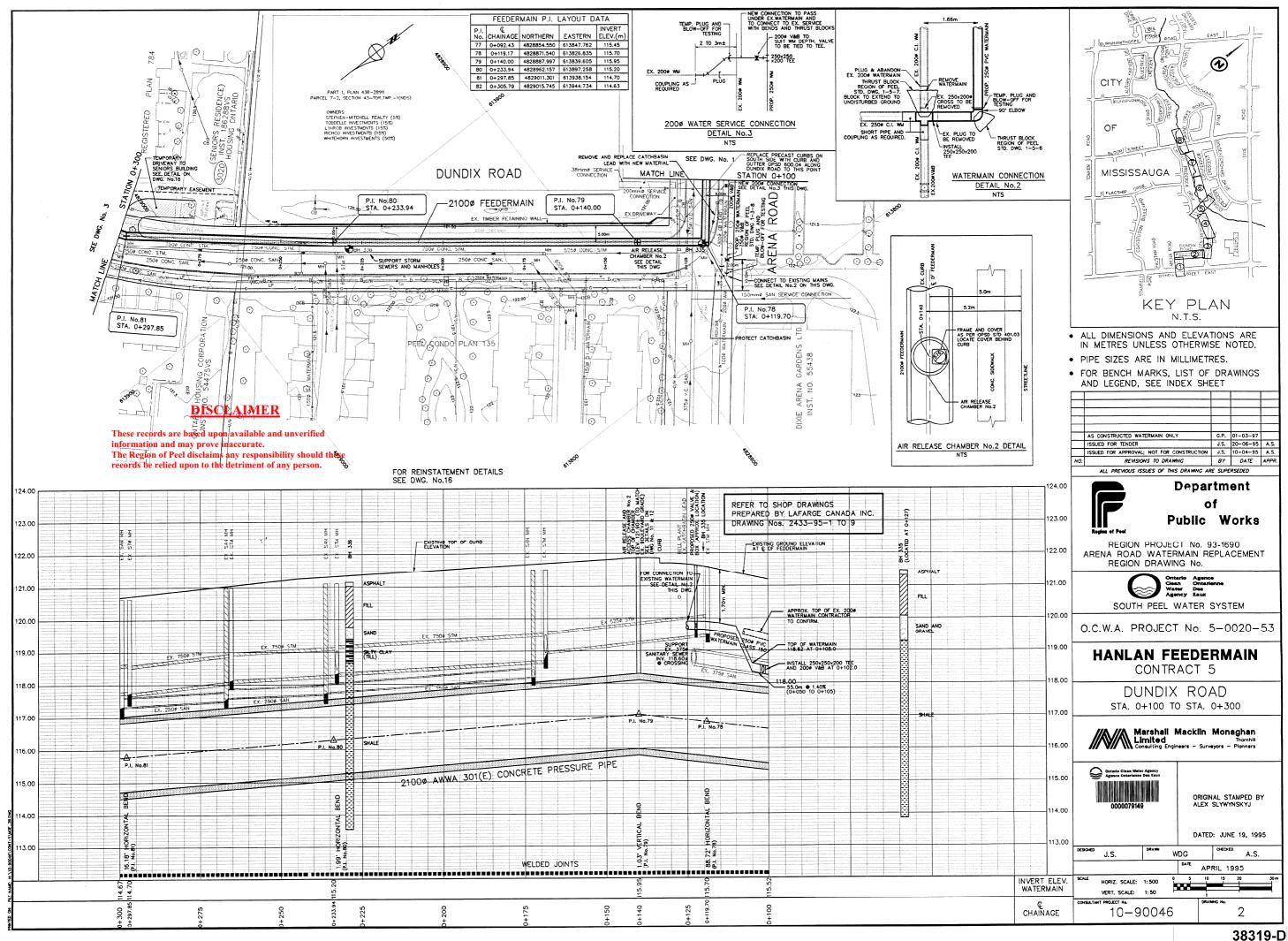


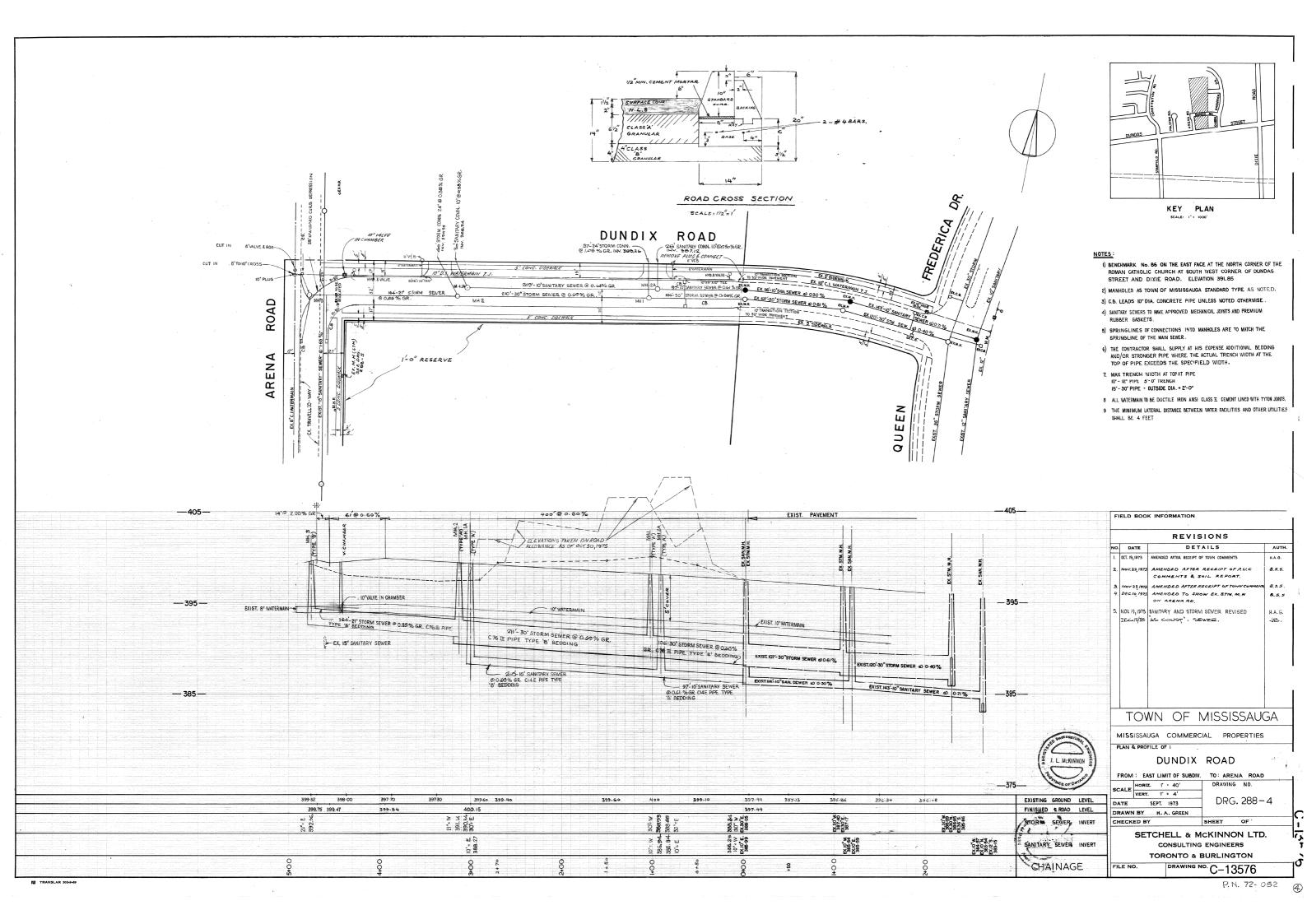


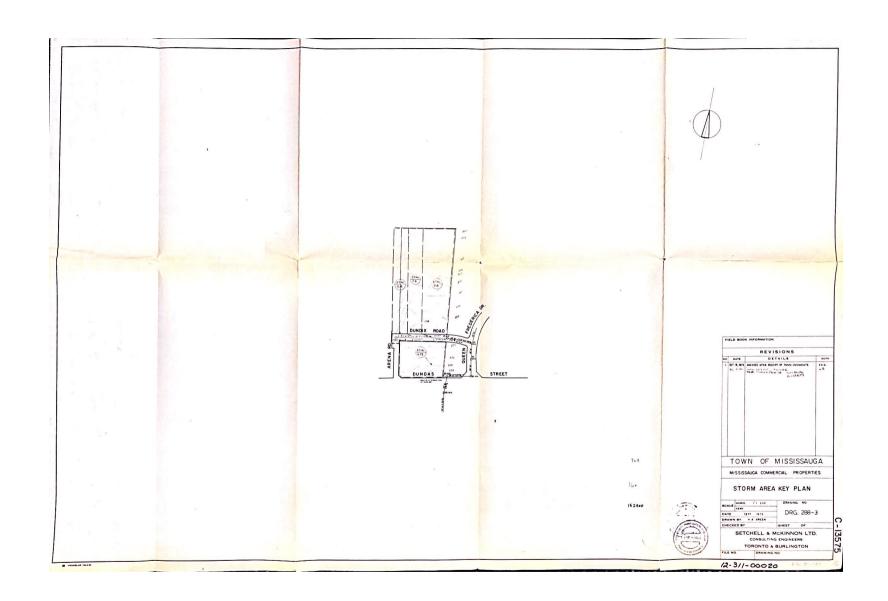












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