

PROJECT:

KANATA AVENUE AND MARITIME WAY CITY OF OTTAWA, ONTARIO

LIB KANATA

PROJECT NO: 600401

DATE: 2023-06-14



160, boulevard de l'Hôpital, Gatineau (Québec) J8T 8J1 T 819 303 2700 info@equipelaurence.ca | equipelaurence.ca

# GENERAL SPECIFICATIONS

All work shall conform with Ontario building code, latest edition as well as local regulation

Contractor to verify all dimensions and report any discrepancies to the engineer immediately to eet desien confirmation before anneeding with construction

Refer to the City of Ottawa for regulations and standards (supersedes provincial standards).

Refer to Ontario Provincial Standards for Roads and Public Works - Volume 3 for details

Ontario previncial standards for roads and public works must also be respected

Work to be performed in accordance with the Occupational Health and Safety Act and Regulations for Construction Projects.

All materials shall meet all current applicable standards set by the American Water Works Standards Institute ('ANSI') safety criteria standards, American Society for Testing and Materials (ASTM), NSF/14, NSF/60 and NSF/61

The Contractor will get approval for all materials selection from the Civil Engineer prior to

BUILDING OWNER:

CONSULTING CIVIL ENGINEER: ÉQUIPE LAURENCE INC.

## 2.0 GENERAL INFORMATIONS

# 2.1 UNDERGROUND SERVICES

The plans show certain underground installations for the sole purpose to highlight the existence of cables, pipelines and underground structures. In the sectors where work must be performed, the contractor is responsible to verify himself with the comprehen authorities the existence and actual location of all cables, pipelines and existing underground structures that may affect the works.

Before beginning excavations, the contractor must thus contact the Ontario One Call (www.cont.cell.com), the municipal authorities and all other stake holders in order to identify on the field all existing underground structures whether they are shown on the plans or not.

He is responsible for damages to cables, pipelines and underground structures. No cost variation resulting from underground structures not shown or pooly located on the plans can be claimed against the building aware. Following the review of the plans and specifications, the contractor must notify the engineer of any error, omission or discrepancy noted by him before starting work.

# 2.2 EXISTING WATERMAIN AND SEWER CONDUITS

The bestude of the westernain and sewer pipes is approximate. The contractor must work, each violation to position and extent the pipes by the genes of motivations assemblenes. Should discrepancies be observed, they must be provided to the engineer without delay in order that the required modifications are made to the construction plants. The contractive will have to contracts with the contracts with the contractive will know to contract with the contracts with the contracts with the contract with the building weeks of a soft takes place when the delay district the building weeks of subtractions on the relevant untertaints and take place when the building weeks and take place whom the building weeks and take place when the building weeks and the place that the place of the place that the place of the place that the place t

# 2.3 PROTECTION AGAINST EROSION

As per "Frosion and sediment control guideline for urbain construction"
In all areas of the building site where there is a risk of ension, the ground must be stabilized.
Runoff water must be intercepted and routed to stabilized areas and this, throughout the construction period. The contractor must use the recognized methods to prevent the transport of sediments.

- Mud mat
   Sedimentation pand
   Filtering berm and sediment trap
- Straw hale filter

Any intervention on the building site which may cause the transfer of sediments must be simultaneously accompanied by sediment capture measures.

# 2.4 DRAINING OF THE EXCAVATIONS

The contractor shall take all necessary precautions to prevent the genetration of surface waters and to evacuate surface, undergound or sever waters. Waste waters must be directed towards a combined sever or a saintry sever and the surface and underground waters towards a storm sever, a combined sever or a dirtch. In all cases, the diversion site must be submitted for approxima-

The contractor must assume all required numning and cleaning costs

At all times, the movement of machinery and metal tracked vehicles is prohibited on paved surfaces unless physicial sheets with a 20mm normal thickness or rubber with a 12.5mm thickness are used in order to evoid damaging pavement. All repairs or complete replacements of pavement is the contractor's responsibility, who will have to pay all the

# 2.6 CLEANING OF SITE

At the end of the construction works and as often as requested by the project superintendent, the contractor must clean and eliminate all construction generated debris and restore all construction affected areas. The cleaning of the construction site is included in the global market unit prices.

# 3.0 SITE GRADING

Low-lying areas may be filled by utilising soil out from higher ares and by importing suitable fill materials.

The approved supposed may be raised to design subgrade lavel with approved compactable on-sist so during the subgrade lavel with supposed compactable on-sist so during the subgrade lavel with supposed to expect subgrade lavel with supposed to the subgrade lavel with subgrade lavel subgrade

## 4.0 CONCRETE WORKS

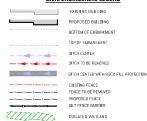
All weather exposed concrete shall have 5 to 8% air entrainment or as otherwise specified in Tables 2 and 4 of CSA A23.1.

Concrete sidewalk as per OPSD 310.010. Foundation consist of 150 mm minimum of granular W material. Sidewalk concrete thickness shall be 200 mm.

Concrete barrier curb as per OPSD 600.110, Foundation consist of 150 mm minimum of granular  $\mathcal W$  material.



# CIVIL ENGINEERING LEGEND







PROPOSED FIRE HYDRANT

PROPOSED WATER PIPE

PROPOSED WATER SERVICE VALVE EXISTING WATER PIPE

EXISTING WATER PIPE TO BE REMOVED

EXISTING SANITARY SEWER AND MANHOLE

PROPOSED SANÍTARY SEWER AND MANHOLE

SANITARY SEWER AND MANHOLE TO BE REMOVED EXISTING STORM SEWER PIPE AND MANHOLE

STORM SEWER AND MANHOLE TO BE REMOVED

EXISTING STORM SEWER MANHOLE

PROPOSED TEMPORARY MUD MAT

PROPOSED GRANITE STONES EXISTING ASPHALT SURFACE TO BE REMOVED.

EXISTING SURFACE TO BE REMOVED

PROPOSED ELEVATION OF CONCRETE CURE

PROPOSED ELEVATION OF CONCRETE SLAB

PROPOSED TOP ELEVATION OF GRASS DRODDSED TOD ELEVATION DE SIDEWALK PROPOSED TOP ELEVATION OF RETAINING WALL PRODUSED BOTTOM ELEVATION DE PETAINING WALL

EXISTING SANITARY SEWER MANHOLE LIGHTNING UNIT

EXISTING CATCH BASIN OR MANHOLE-CATCH BASIN

PROPOSED CATCH BASIN OR MANHOLE-CATCH BASIN

PROPOSED DRINKING WATER SERVICE CONNECTION





















# LIST OF PLANS

TECHNICAL AND GENERAL SPECIFICATIONS. LOCATION SITE GRADING AND DRAINAGE PLAN PHASE 1 SITE GRADING AND DRAINAGE PLAN PHASE 1 AND 2 STANDARD SECTIONS AND DETAILS STANDARD SECTIONS AND DETAILS II FIRE HYDRANT COVERAGE MAP



MANAGER (A), DEVELOPMENT REVIEW WEST PLANNING, REAL ESTATE & ECONOMIC DEVELOPMEN DEPARTMENT, CITY OF OTTAWA

REV	DESCRIPTION	BY	BATE
Α	FOR SITE PLAN APPLICATION	A.L.	2021-09-1
В	FOR SITE PLAN APPLICATION REVISION 1	A.L.	2021-09-2
С	FOR SITE PLAN APPLICATION REVISION 2	A.L.	2021-10-0
D	FOR SITE PLAN APPLICATION REVISION 3	A.L.	2022-03-2
Е	FOR SITE PLAN APPLICATION REVISION 4	A.L.	2022-07-0
F	FOR SITE PLAN APPLICATION REVISION 5	A.L.	2022-07-1
G	FOR SITE PLAN APPLICATION REVISION 6	A.L.	2022-09-1
н	FOR SITE PLAN APPLICATION REVISION 7	B.B.	2023-02-0
1	FOR SITE PLAN APPLICATION REVISION 8	B.B.	2023-03-0
J	FOR SITE PLAN APPLICATION REVISION 9	B.B.	2023-03-1
1	FOR ADDENDUM CO1	B.B.	2023-05-0
2	FOR SITE PLAN APPLICATION RÉVISION 10	B.B.	2023-06-1



LIB KANATA KANATA AVENUE AND MARITIME WAY CITY OF OTTAWA, ONTARIO



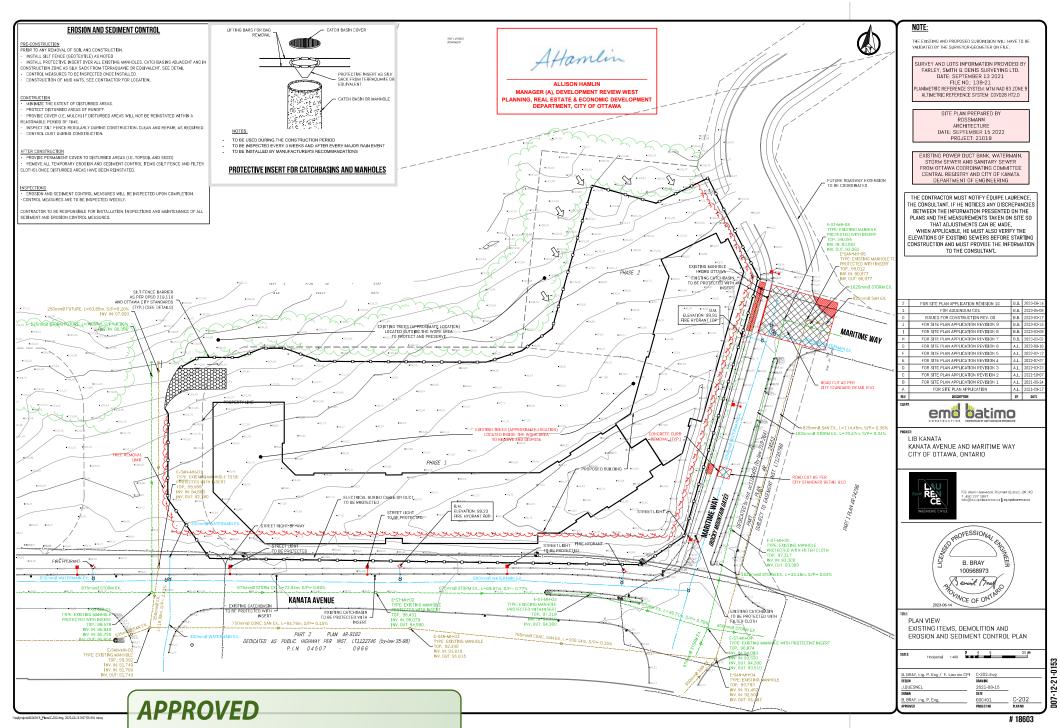
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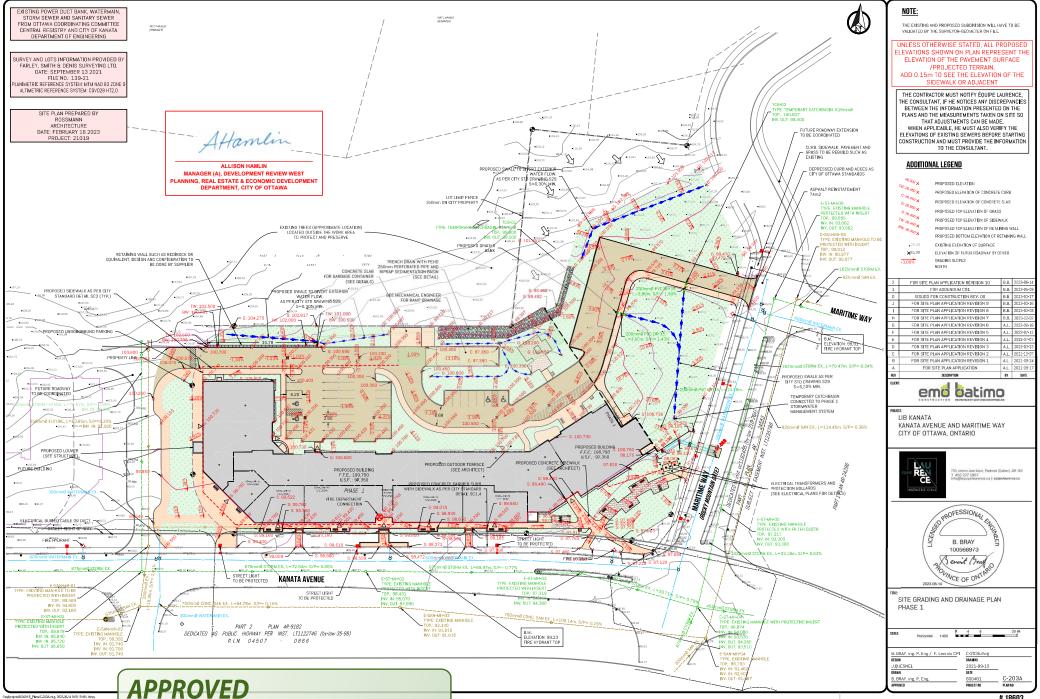


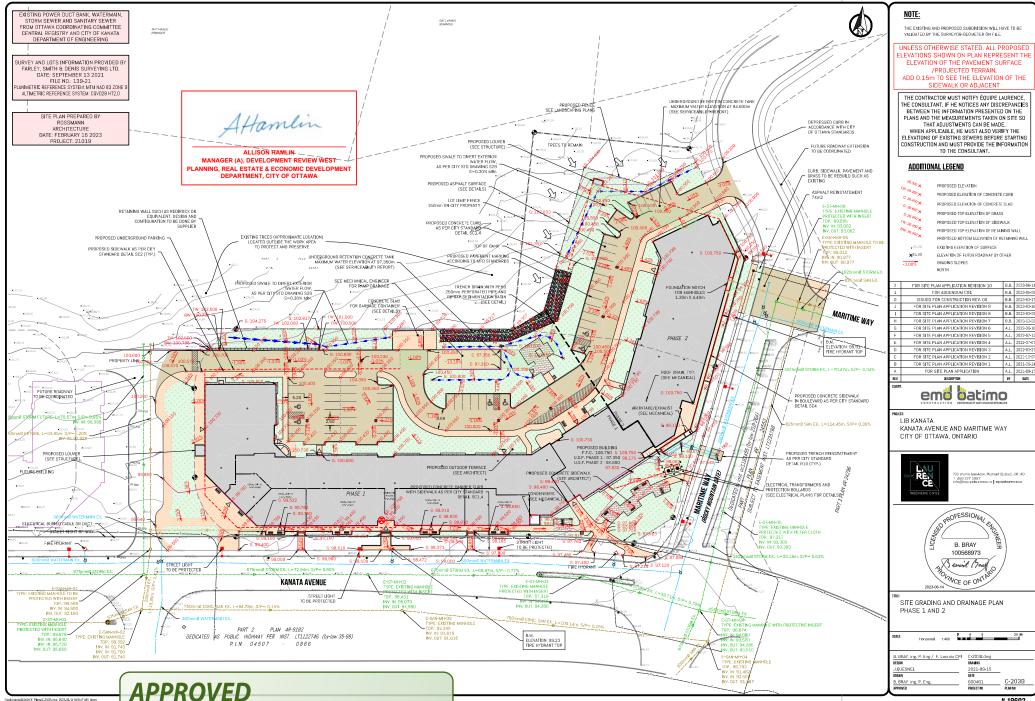
TECHNICAL AND GENERAL SPECIFICATIONS, LEGEND AND NOTES LOCATION

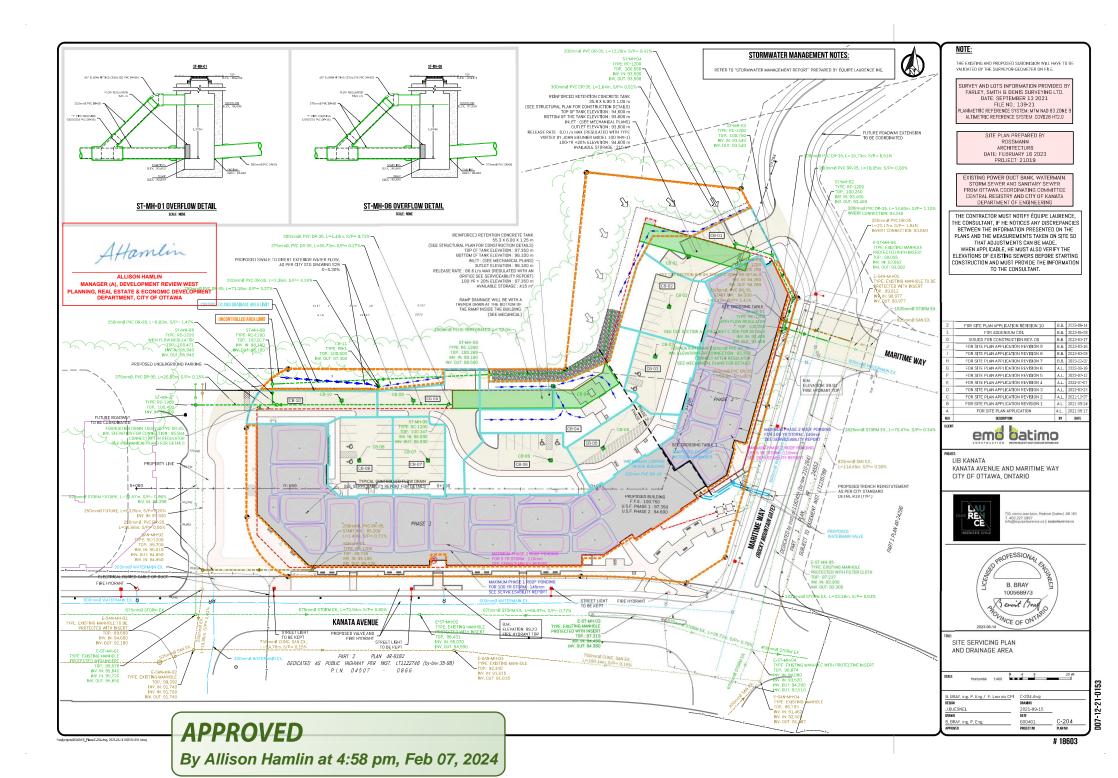
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SION	DRAWNE			
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**APPROVED** 









# WATERMAIN PIPE ANALYSIS

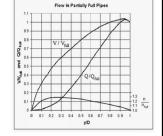
Location	Station Number (m)	Size (mm)	Туре	obvert (m)	Ground Elevation (m)	soil cover (m)	type of fitting
1	0	200	PVC DR-18	96.200	100.750	4.550	angle
2	2.25	200	PVC DR-18	95.773	98.173	2.4	angle
3	5.12	200	PVC DR-18	95.700	98.100	2.4	angle
4	13.84	200	PVC DR-18	95.570	97.970	2.4	Metering chamber
5	25.93	200	PVC DR-18	95.152	97.552	2.4	Valves

# SANITARY PIPE ANALYSIS

Upstream Location	Downstream Location	Diameter (d)	Туре	Upstream invert	Downstrea m Invert	Length (m)	Slope (%)	Capacity (Qf) (L/s)	Velocity full (Vf) (m/s)	Flowrate (Q) (L/s)	Q/Qf	y/D	Velocity (m/s)
Building - Phase 1	SAN-MH-01	250	PVC DR-35	95.200	95.190	1.00	1.00	59.47	1.21	5.85	0.10	0.30	0.73
SAN-MH-01	SAN-MH-02	250	PVC DR-35	95.130	95.010	35.90	0.33	34.38	0.70	5.85	0.17	0.35	0.46
Building - Phase 2	SAN-MH-03	250	PVC DR-35	94.300	94.290	1.00	1.00	59.47	1.21	3.99	0.07	0.22	0.61
SAN-MH-03	E-SAN-MH-05	200	PVC DR-35	94.290	93.850	21.90	2.01	46.49	1.48	3.99	0.09	0.18	0.65

# STORMWATER PIPE ANALYSIS

Upstream Location	Downstream Location	Diameter (d)	Туре	Upstream invert	Downstream Invert	Length (m)	Slope (%)	Capacity (Qf) (L/s)	Flowrate (Q) (L/s)	Q/Qf
Building Phase 1	ST-MH-05	375	PVC	96.100	96.090	1.1	0.91	167.17	66.6	0.40
ST-MH-05	ST-MH-DB	375	PVC	96.090	95.935	59.13	0.26	89.77	66.6	0.74
ST-MH-06	ST-MH-07	375	PVC	95.935	95.900	18.35	0.19	76.57	66.6	0.87
Building Phase 2	ST-MH-D4	300	PVC	93.600	93.590	1	1.00	96.70	6	0.06
ST-MH-04	ST-MH-03	300	PVC	93.590	93.540	11.7	0.43	63.22	6	0.09
ST-MH-03	ST-MH-02	300	PVC	93.540	93.460	14.58	0.55	71.63	6	0.08
ST-MH-02	ST-MH-01	300	PVC	93.460	93.400	11.08	0.54	71.16	6	0.08
ST-MH-01	E-ST-MH-06	300	PVC	93.400	93.243	15.72	1.00	96.70	6	0.06



# STRUCTURE TABLE - STORM SEWER

	STRUCTURE TABLE	STUNIN SEWEN
NAME	DETAILS	ELEVATIONS/INVERT
ST-MH-01	1200mm	INV.IN: 93.400
	FLOWRATE REGULATOR	INV. OUT: 93.400
		SUMP: 92.950
ST-MH-02	1200mm	INV.IN: 93.460
		INV. OUT: 93.460
		SUMP: 93.460
ST-MH-03	1200mm	INV.IN: 93.540
		INV. OUT: 93.540
		SUMP: 93.540
ST-MH-04	1200mm	INV.IN: 93.590
		INV. OUT: 93.590
		SUMP: 93.590
ST-MH-05	1200mm	INV.IN: 96.090
		INV. OUT: 96.090
		SUMP: 96.090
ST-MH-06	1200mm	INV.IN: 95.9400
	FLOWRATE REGULATOR	INV. OUT: 95.940
		SUMP: 95.490
ST-MH-07	1200mm	INV.IN: 95.900
		INV. OUT: 95.900
		SUMP: 95.900
ST-MH-08	1200mm	INV.IN: 96.100
		INV. OUT: 96.100
		SUMP: 96.100
ST-MH-09	1200mm	INV.IN: 99.100
		INV. OUT: 98.500

CB-11 Catch Basin 600mm

# STRUCTURE TABLE - SANITARY SEWER

NAME	DETAILS	ELEVATIONS/INVERTS
SAN-MH-01	1200mm	INV.IN: 95.190
		INV. OUT: 95.130
SAN-MH-02	1200mm	INV.IN: 95.010
		INV.IN: 94.950
		INV. OUT: 94,850
SAN-MH-03	1200mm	INV.IN: 94.280
		INV. DUT: 94.280

# CROSSING TABLE

Pipe	Туре	Invert (m)	Difference (m)	
Stormwater pipe	300mm PVC	93.400	0.50	
Sanitary pipe	250 mm PVC	94.280	0.58	

ALLISON HAMLIN
MANAGER (A), DEVELOPMENT REVIEW WEST



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KANATA AVENUE AND MARITIME WAY CITY OF OTTAWA, ONTARIO





SITE SERVICING PLAN AND DRAINAGE AREA

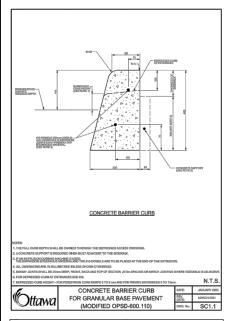
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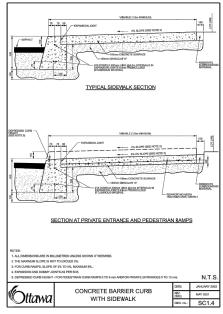
NAME	DETAILS	ELEVATIONS/ INVERTS	AREA (ha)	5-YR COEFICIENT	100-YR COEFICIENT	
CB-01	SEE MECHANICAL	TOP: 100.400	0.0555	0.900	1.000	
CB-02	SEE MECHANICAL	TOP: 100.300	0.0592	0.900	1.000	
CB-03	SEE MECHANICAL	TOP: 100.300	0.0565	0.900	1.000	
CB-04		TOP: 100.200				
	Catch Basin 600mm	INVERT: 96.150	0.0734	0.799	0.893	
		SUMP: 95.850				
CB-05	SEE MECHANICAL	TOP: 100.350	0.0567	0.900	1.000	
CB-06	SEE MECHANICAL	TOP: 100.350	0.0635	0.900	1.000	
CB-07	SEE MECHANICAL	TOP: 100.250	0.0430	0.900	1.000	
CB-08	SEE MECHANICAL	TOP: 100.250	0.0533	0.900	1.000	
		TOP: 100.230				
CB-09	Catch Basin 600mm	INVERT: 96.070	0.0674	0.827	0.922	
		SUMP: 95.760				
		TOP: 100.230				
CB-10	Catch Basin 600mm	INVERT: 96.010	0.0462	0.823	0.918	
		SUMP: 95.710	1			

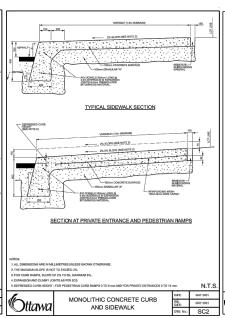
STRUCTURE TABLE - STORM SEWER

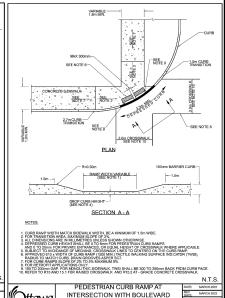
UNCONTROLLED AREA CONTROLLED AREA

**APPROVED** 











	REV	DESCRIPTION	BY	DATE
	A	FOR SITE PLAN APPLICATION	A.L.	2021-09-17
	В	FOR SITE PLAN APPLICATION REVISION 1	A.L.	2021-09-24
	С	FOR SITE PLAN APPLICATION REVISION 2	A.L.	2021-10-07
	D	FOR SITE PLAN APPLICATION REVISION 3	A.L.	2022-03-23
┚	E	FOR SITE PLAN APPLICATION REVISION 4	A.L.	2022-07-07
Н	F	FOR SITE PLAN APPLICATION REVISION 5	A.L.	2022-07-12
4	G	FOR SITE PLAN APPLICATION REVISION 6	A.L.	2022-09-16
4	н	FOR SITE PLAN APPLICATION REVISION 7	B.B.	2023-02-02
١	1	FOR SITE PLAN APPLICATION REVISION 8	B.B.	2023-03-08
1	J	FOR SITE PLAN APPLICATION REVISION 9	B.B.	2023-03-16
١	0	ISSUED FOR CONSTRUCTION REV. 00	B.B.	2023-03-17
1	1	FÖR ADDENDUM COL	B.B.	2023-05-08
1	2	FOR SITE PLAN APPLICATION RÉVISION 10	B.B.	2023-06-14
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LIB KANATA KANATA AVENUE AND MARITIME WAY CITY OF OTTAWA, ONTARIO



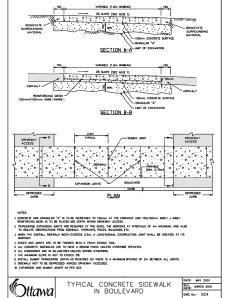
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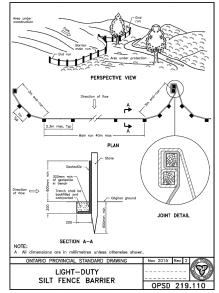
STANDARD SECTIONS AND DETAILS

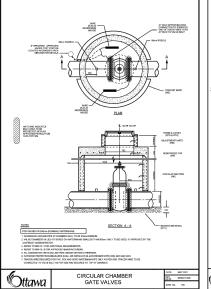
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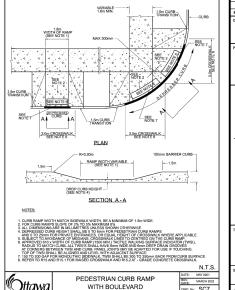
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IN BOULEVARD



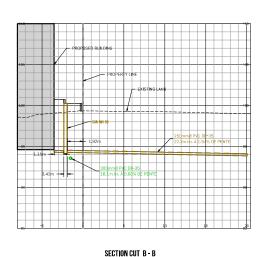


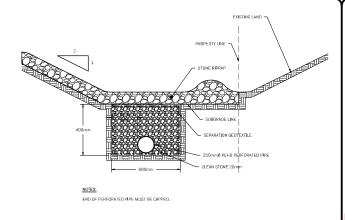


FOR CURB RAMP APPLICATION FOR DEPRESSED CORNER APPLICATION



SECTION CUT A - A





TRENCH DRAIN AND SEDIMENT BARRIER

35 MPa CONCRETE

STATISTICAL STRENGTH TEST ANALYSIS TO CONFIRM THE STRENGTH LEVEL INCLUDING THE EXPECTED 7/28-DAY STRENGTH RATIO (AS PER CSA A23.1 CLAUSE 4.4.6.7)

MANAGER (A), DEVELOPMENT REVIEW WEST NING, REAL ESTATE & ECONOMIC DEVELOPME DEPARTMENT, CITY OF OTTAWA

CLIENT:	emö batim		
REV	DESCRIPTION	BY	DATE
D	FOR SITE PLAN APPLICATION REVISION 3	A.L.	2022-03-2
Е	FOR SITE PLAN APPLICATION REVISION 4	A.L.	2022-07-0
F	FOR SITE PLAN APPLICATION REVISION 5	A.L.	2022-07-1
G	FOR SITE PLAN APPLICATION REVISION 6	A.L.	2022-09-1
н	FOR SITE PLAN APPLICATION REVISION 7	B.B.	2023-02-0
1	FOR SITE PLAN APPLICATION REVISION 8	B.B.	2023-03-0
J	FOR SITE PLAN APPLICATION REVISION 9	B.B.	2023-03-
0	ISSUED FOR CONSTRUCTION REV. 00	B.B.	2023-03-1
1	FOR ADDENDUM CO1	B.B.	2023-05-1
2	FOR SITE PLAN APPLICATION RÉVISION 10	B.B.	2023-06-1

LIB KANATA KANATA AVENUE AND MARITIME WAY CITY OF OTTAWA, ONTARIO



STANDARD SECTIONS AND DETAILS II

OVINCE OF ON

NO SCALE

(Ottawa) FULL DEPTH KEY OPTION (SEE NOTE 7) - STEP KEY -300mm (MIN.) TYP TREAT ALL CUT FACES WITH TACK COAT BEFORE PLACING ASPHALT USE SEALANT TO SEAL THE JOINT--USE SEALANT TO SEAL JOINT (SEE NOTE B) GRANULAR 'A' - REINSTATE EXISTING (150mm MIN.) -UNDISTURBED GRANULAR TRENCH REINSTATEMENT PAVED SURFACE FINAL BACKFILL - APPROVED NATIVE MATERIAL OR SELECT SUBGRADE IN ACCORDANCE WITH F-2120 EXCAVATED TRENCH COMPACTED IN ACCORDANCE WITH D-029 TABLE 2 LUCIONI DE SINAL TO BE SIN CUIT

LINES SEPCIFIED EL SENHERE. SEPLACE COURSE ASPIRALT SUPERPINE 12 5mm

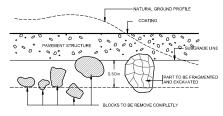
JULIS SES SEPCIFIED EL SENHERE. SEPLACE COURSE ASPIRALT SUPERPINE 12 5mm

AND ESSES SEPCIFIED EL SENHERE. SEPLACE COURSE ASPIRALT SUPERPINE 12 5mm

AND LINES DE SEPCIFIED EL SENHERE. ASPIRAT TANCE SINAL EL LEVEL B POSSES-AFFOR NON-BUS LOCAL ROADS,

AND LINES DE SEPCIFIED EL SENHERE. ASPIRAT TANCE SINAL EL LEVEL B POSSES-AFFOR NON-BUS LOCAL ROADS,

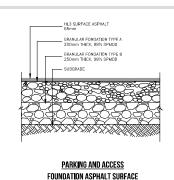
AND LINES DE SEPCIFIED EL SENHERE. ASPIRAT TO SENHERE SERVICIONE SEPCIFIED SEPCIFIE



# NOTES:

- ALL BLOCKS OVER 250mm DIAMETER PRESENT IN THE FIRST 500 mm UNDER INFRASTRUCTURE LINE MUST BE REMOVED, FRAGMENTED AND EXCAVATED TO 500 mm DEPT;
- AFTER REMOVING BLOCS, THE EXCAVATIONS HAVE TO BE RAISED TO DESIGN SUBGRADE LEVELS WITH APPROVED COMPACTABLE ON SITE SOIL.
- LIFTS OF 300mm THICK, COMPACTED AT 95% MSPDD
- AS AN ALTERNATIVE TO SUBEXCAVATION, A WOVEN GEOTEXTILE SEPARATOR, SUCH AS TERRATRACK 24-15, AMOCO 2002, MIRAFI 500XL OR EQUINALENT, MAY BE PLACED OVER SPONGY AREAS PRIOR TO PLACING THE GRANULAR "B" SUB-BASE LAYER.

SUBGRADE PREPARATION DETAIL



(TO BE VERIFIED BY GEOTECHNICAL ENGINEER)

REINFORCED CONCRETE SLAB FOR GARBAGE CONTAINERS

15M @ 200mm C/C 2 WAYS

**APPROVED** 



By Allison Hamlin at 4:58 pm, Feb 07, 2024