

NOTES

1. STORMWATER MANAGEMENT NOTES

ROOF DRAIN DETAILS

MODEL TYPE: WATTS MODEL "ADJUSTABLE ACCUTROL WEIR" (MODEL No. RD-100A-ADJ). (WEIR OPENING EXPOSED IS : CLOSED AS SPECIFIED) TO PERMIT A RELEASE FLOW RATE OF 5.0 US GAL/MIN. OR 0.316 L/s UNDER A HEAD OF UP TO 150mm.

NUMBER OF CONTROL DEVICES: 1 CONTROLLED ROOF DRAIN PER DESIGNATED ROOF AREA FOR SWM ATTENUATION

FLOW PER ROOF DRAIN: 5.0 U.S. GAL/MIN. OR 0.316 L/s.

TOTAL FLOW FROM FLAT ROOFTOP OF BUILDING AT MAXIMUM HEAD OF 150mm PER DRAIN AT THE (2) PROPOSED DRAINS = 0.632 L/s

DEPTH AND VOLUME:

ROOF DRAIN ID & DRAINAGE AREA (ha)	NUMBER OF ROOF DRAINS	WATTS ROOF DRAIN MODEL ID (WEIR OPENING)	CONTROLLED FLOW PER DRAIN (L/s)			APPROXIMATE PONDING DEPTH ABOVE DRAINS (m)			STORAGE VOLUME REQUIRED (m ³)			MAX. STORAGE AVAILABLE (m ³)
			2 YR	5 YR	100 YR	2 YR	5 YR	100 YR	2 YR	5 YR	100 YR	
RD-1 (0.01 ha)	1	RD-100-A-ADJ (CLOSED)	0.316	0.316	0.316	0.1	0.12	0.15	1.29	1.97	4.66	5.04
RD-2 (0.01 ha)	1	RD-100-A-ADJ (CLOSED)	0.316	0.316	0.316	0.1	0.12	0.15	1.20	1.84	4.38	4.79
TOTAL ROOF (0.02 ha)	2		0.632	0.632	0.632	-	-	-	2.49	3.81	9.04	9.83

SCUPPER LOCATION: AS SHOWN ON THIS DRAWING

2 YEAR ELEVATION: 100mm ABOVE THE ROOF DRAIN FOR ROOF AREA #1 AND #2

5 YEAR ELEVATION: 120mm ABOVE THE ROOF DRAIN FOR ROOF AREA #1 AND #2

100 YEAR ELEVATION: 150mm ABOVE THE ROOF DRAIN FOR ROOF AREA #1 AND #2

- EACH ROOF DRAIN SHALL BE SIZED FOR A RELEASE RATE OF 5.0 U.S. GAL/MIN. OR 0.316 L/s. THE OWNER'S MECHANICAL ENGINEER SHALL SPECIFY THE REQUIRED ROOF DRAIN TYPE AND MODEL No. AND PROVIDE THE NECESSARY INFORMATION TO THE CITY OF OTTAWA FOR THEIR RECORDS TO ENSURE PROPER RELEASE RATE FOR STORMWATER MANAGEMENT COMPLIANCE.

- ROOF PITCH IS ASSUMED TO HAVE 1.8% (MIN.) SLOPE.

- ROOF SCUPPERS ARE RECOMMENDED TO BE INSTALLED 0mm ABOVE EDGE OF ROOFTOP ELEVATION FOR EMERGENCY OVERFLOW PURPOSES AT ROOF AREA #1 AND #2 AT PERIMETER OF BUILDING.

- SEE STORM DRAINAGE REPORT No. R-818-113 DATED APRIL 2019 FOR DETAILS ALSO.

2. PROPOSED ROOF DRAINS AND SCUPPER LOCATIONS SHOWN ON THIS PLAN SHALL BE REVIEWED BY THE OWNER AND OWNER'S BUILDING DESIGNER FOR APPROVAL.

3. THE OWNER'S BUILDING DESIGNER AND STRUCTURAL ENGINEER SHALL ENSURE THAT THE ADDITIONAL STORMWATER STORAGE VOLUME FROM STORMWATER MANAGEMENT MEASURES ARE ACCOUNTED FOR IN THE STRUCTURAL DESIGN OF AND WATERPROOFING OF ROOF AREA #1 AND #2 AND ANY OF THE SUPPORTING STRUCTURES THAT MAY BE AFFECTED BY THE STORED WATER.

4. ROOF DRAIN #1 AND #2 INCLUSIVE SHALL OUTLET INTO THE DESIGNATED 125mm PVC STORMWATER PIPE AS SHOWN ON THE PROPOSED GRADING AND SERVICING PLAN (DWG No. 818-113, G-1).

5. FOR GRADING AND SERVICING DETAILS OF THIS SITE, REFER TO DWG. No. 818-113, G-1.

WATTS®

Adjustable Accutrol Weir

Tag: _____

Adjustable Flow Control for Roof Drains

ADJUSTABLE ACCUTROL (for Large Sump Roof Drains only)

For more flexibility in controlling flow with heads deeper than 2", Watts Drainage offers the Adjustable Accutrol. The Adjustable Accutrol Weir is designed with a single parabolic opening that can be covered to restrict flow above 2" of head to less than 5 gpm per inch, up to 6" of head. To adjust the flow rate for depths over 2" of head, set the slot in the adjustable upper cone according to the flow rate required. Refer to Table 1 below. Note: Flow rates are directly proportional to the amount of weir opening that is exposed.

EXAMPLE:

For example, if the adjustable upper cone is set to cover 1/2 of the weir opening, flow rates above 2" of head will be restricted to 2-1/2 gpm per inch of head.

Therefore, at 3" of head, the flow rate through the Accutrol Weir that has 1/2 the slot exposed will be: [5 gpm (per inch of head) × 2 inches of head] × 2-1/2 gpm (for the third inch of head) = 12-1/2 gpm.

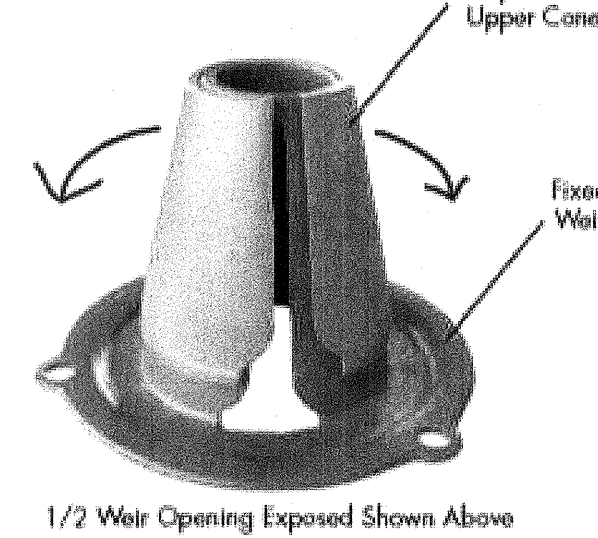
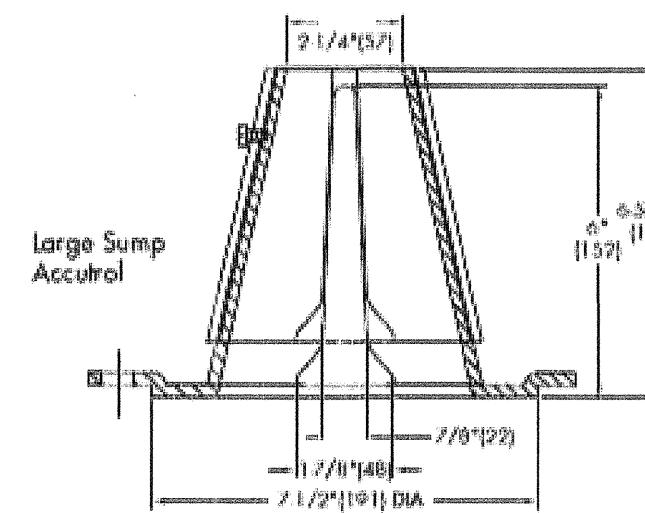
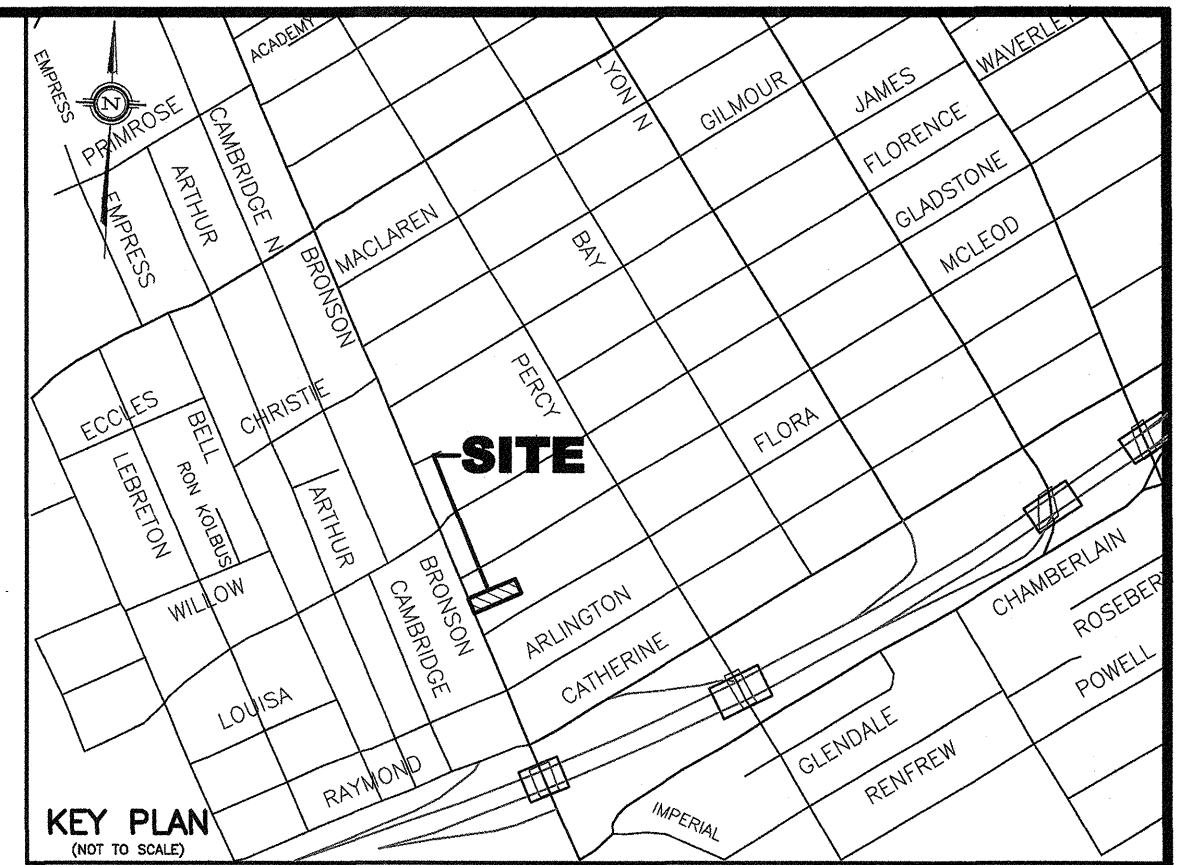


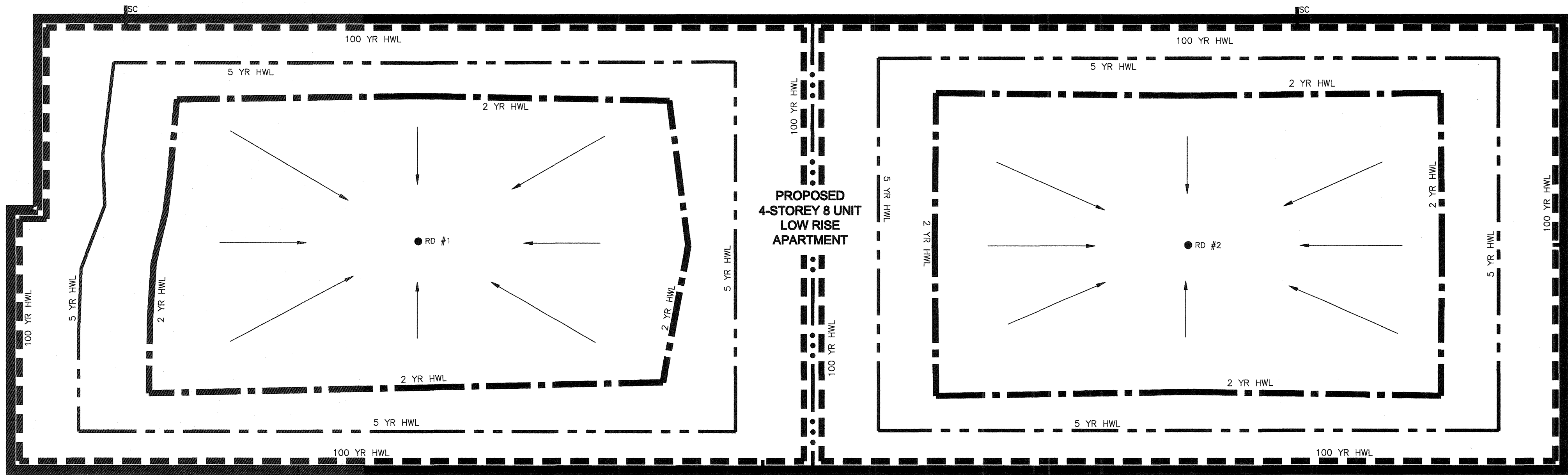
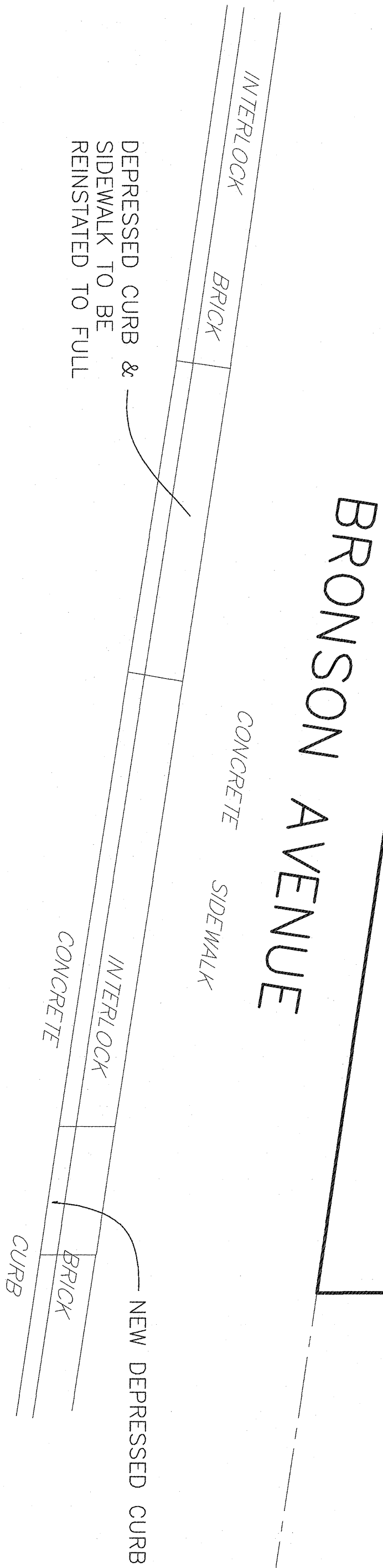
TABLE 1. Adjustable Accutrol Flow Rate Settings

Weir Opening Exposed	Flow Rate (gallons per minute)					
	1"	2"	3"	4"	5"	6"
Fully Exposed	5	10	15	20	25	30
3/4	5	10	12.75	17.5	21.25	25
1/2	5	10	12.5	15	17.5	20
1/4	5	10	11.25	12.5	12.75	15
Closed	5	5	5	5	5	5



LEGEND

- PROPOSED GENERAL DIRECTION OF LOT GRADING AND SURFACE FLOW
- 100 YR HIGH WATER LEVEL
- 5 YR HIGH WATER LEVEL
- 2 YR HIGH WATER LEVEL
- PROPOSED HIGH RIDGE LINE
- RD PROPOSED ROOF DRAIN
- SC PROPOSED ROOF SCUPPER LOCATION



APPROVED

By Jenny Kluge at 11:49 am, Mar 09, 2020

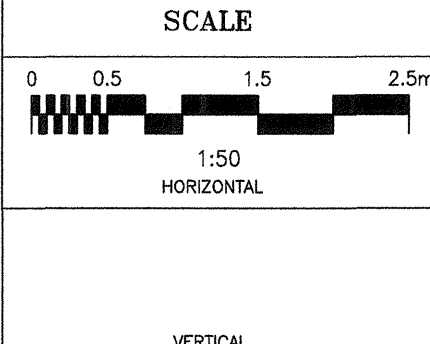
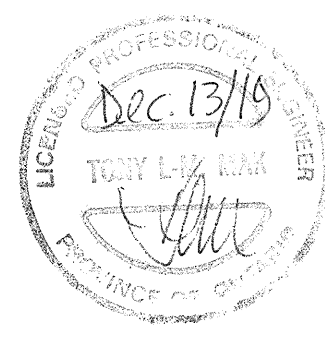
J Kluge

JENNY KLUKE

PLANNER

PLANNING, INFRASTRUCTURE & ECONOMIC
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

NO.	REVISION	DATE	BY
2	REVISIONS AS PER CITY'S REVIEW COMMENTS OF NOVEMBER 21, 2019	12/13/19	TLM
1	REVISIONS AS PER CITY'S REVIEW COMMENTS OF AUGUST 16, 2019 AND REVISED SITE PLAN OF SEPTEMBER 11, 2019	10/18/19	TLM



DESIGN	T.L.M.
CHECKED	T.L.M.
DRAWN BY	G.U.
CHECKED	T.L.M.
APPROVED	T.L.M.

PROJECT	501 BRONSON AVENUE PART OF LOT 44 REGISTERED PLAN 30 CITY OF OTTAWA
OWNER:	ZHAOKUN WANG (613) 656-4699 641 NEW LISKEARD CRES. OTTAWA, ON K2J 0N3
DRAWING TITLE	PROPOSED ROOFTOP STORMWATER MANAGEMENT PLAN



T.L. MAK ENGINEERING CONSULTANTS LTD.
CONSULTING ENGINEERS

PROJECT No.	DATE	DRAWING No.
818-113	MARCH 2019	SWM-1

17987