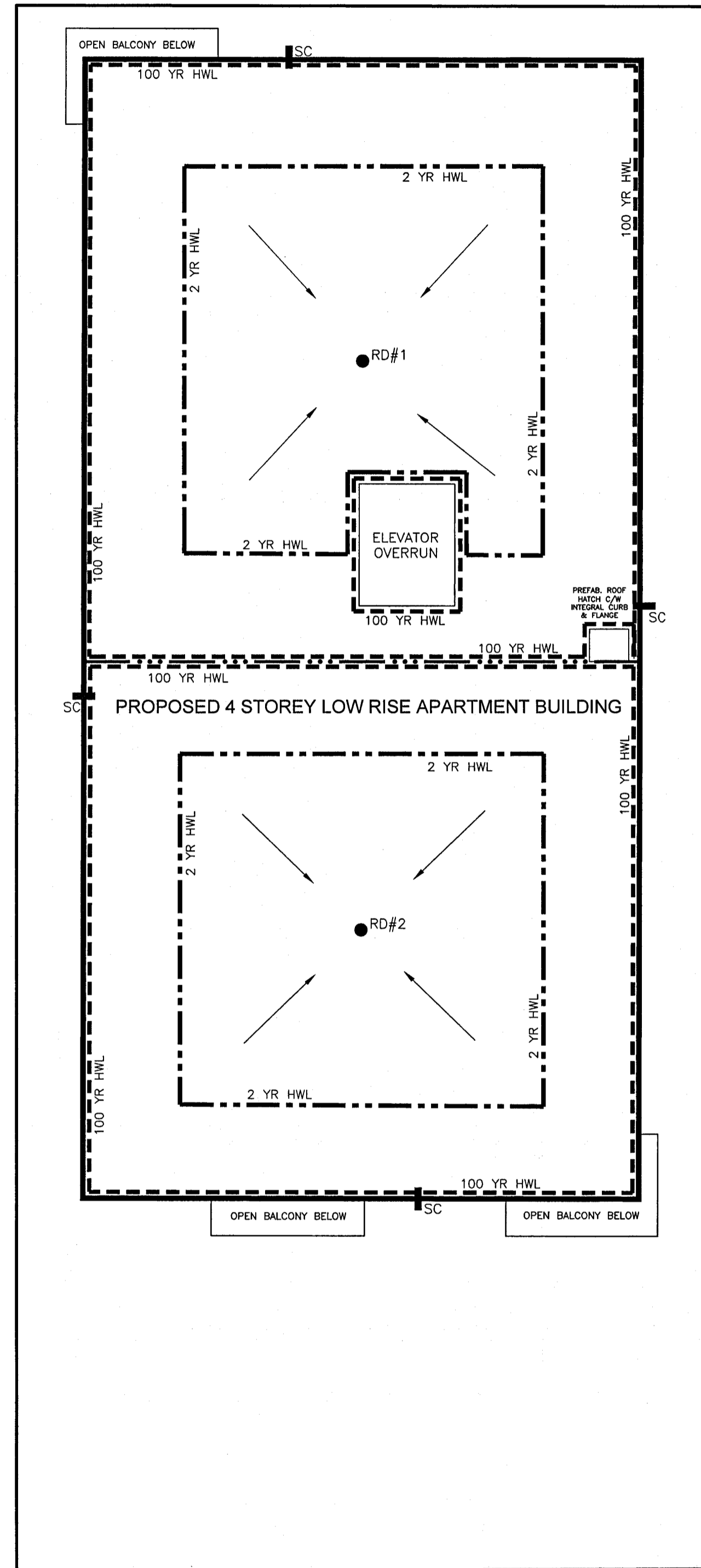


CAMBRIDGE STREET NORTH



ARTHUR LANE

NOTES

1. STORMWATER MANAGEMENT NOTES

ROOF DRAIN DETAILS

MODEL TYPE: WATTS MODEL "ADJUSTABLE ACCUTROL WEIR" (MODEL No. RD-100A-ADJ). (WEIR OPENING EXPOSED IS : 1/4 OPENING AS SPECIFIED) TO PERMIT A RELEASE FLOW RATE OF 12.5 US GAL/MIN. OR 0.788 L/s UNDER A HEAD OF 100mm AND AT MAXIMUM FLOW RATE OF 15.0 US GAL/MIN. OR 0.946 L/s UNDER A HEAD OF UP TO 150mm.

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

MAXIMUM FLOW PER ROOF DRAIN: 15.0 U.S. GAL/MIN. OR 0.946 L/s.

TOTAL FLOW FROM FLAT ROOFTOP OF BUILDING AT MAXIMUM HEAD OF 150mm PER DRAIN AT THE (2) PROPOSED DRAINS = 1.90 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 <sup>3</sup> )		MAX. STORAGE AVAILABLE (m <sup>3</sup> )
			2 YR	100 YR	2 YR	100 YR	2 YR	100 YR	
RD-1 (0.0196 ha)	1	RD-100A-ADJ (1/4 EXPOSED)	0.788	0.946	0.10	0.15	2.14	7.71	9.50
RD-2 (0.0173 ha)	1	RD-100A-ADJ (1/4 EXPOSED)	0.788	0.946	0.10	0.15	1.81	6.42	8.46
TOTAL ROOF (0.0369 ha)	2		1.58	1.90	-	-	3.95	14.13	17.96

SCUPPER LOCATION: AS SHOWN ON THIS DRAWING

2 YEAR ELEVATION: 100mm 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 (MAX) RELEASE RATE OF 15.0 U.S. GAL/MIN. OR 0.95 L/s. UNDER A HEAD OF 150mm. 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 1.5% (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.

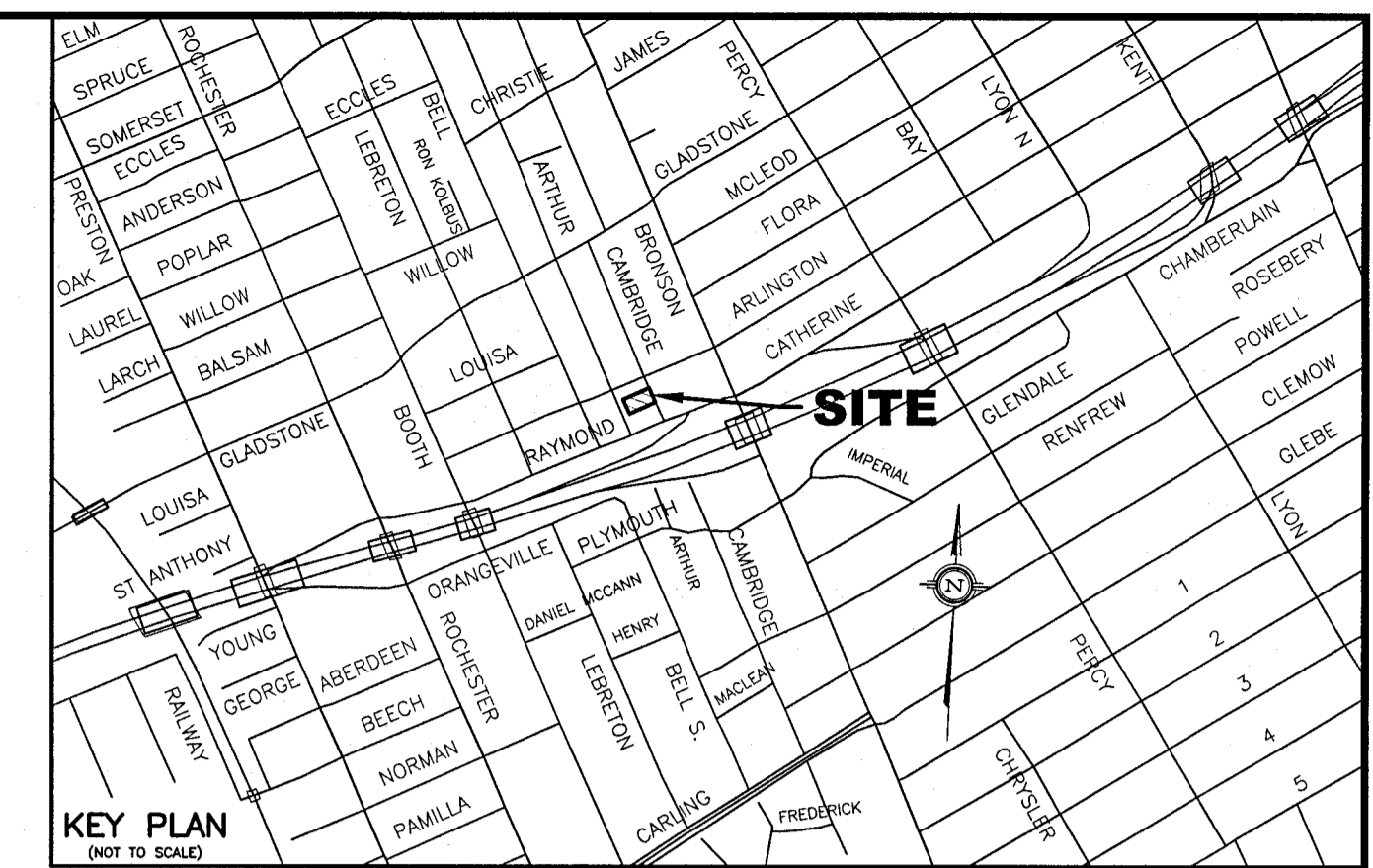
- SEE STORM DRAINAGE REPORT No. R-821-155 DATED JULY 2022 FOR DETAILS ALSO.

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 150mm $\phi$  PVC STORMWATER PIPE AS SHOWN ON THE PROPOSED GRADING AND SERVICING PLAN (DWG No. 821-155, G-1).

5. FOR GRADING AND SERVICING DETAILS OF THIS SITE, REFER TO DWG. No. 821-155, G-1.



LEGEND

- 100 YR HIGH WATER LEVEL
- 2 YR HIGH WATER LEVEL
- PROPOSED HIGH RIDGE LINE
- RD#1 PROPOSED ROOF DRAIN NUMBER AND LOCATION
- SC PROPOSED ROOF SCUPPER LOCATION
- PROPOSED GENERAL DIRECTION OF LOT GRADING AND SURFACE FLOW

**WATTS** Adjustable Accutrol Weir Tag: Adjustable Flow Control for Roof Drains

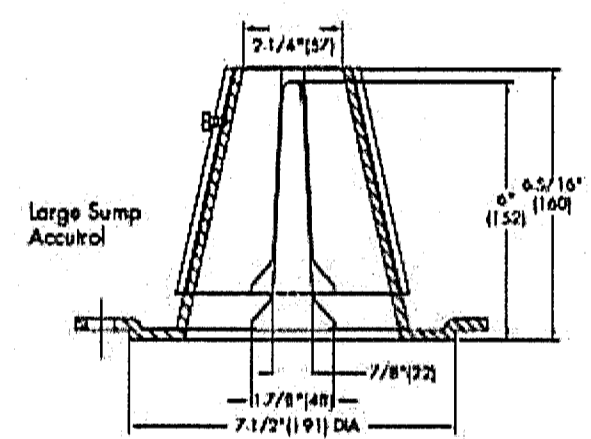
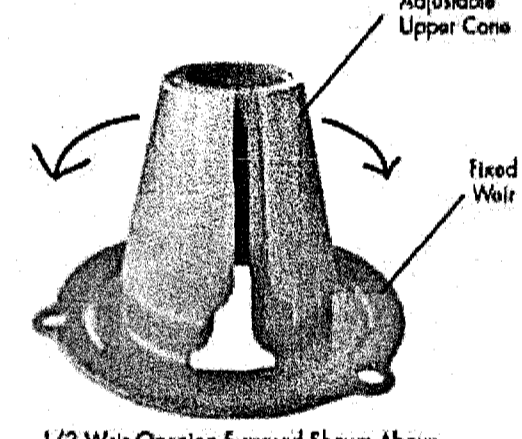
**ADJUSTABLE ACCUTROL (for Large Sump Roof Drains only)**

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.

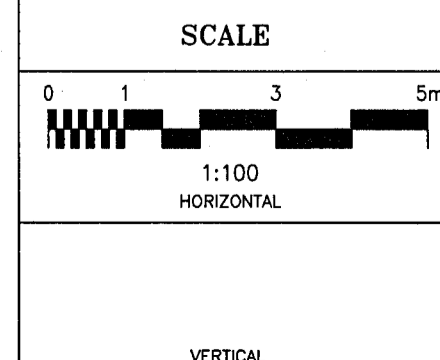
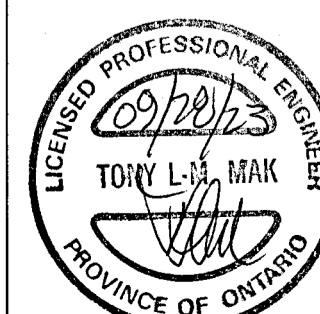
Therefore, at 3" of head, the flow rate through the Accutrol Weir that has 1/2 of the slot exposed will be:  
 [5 gpm (per inch of head) x 2 inches of head] + 2-1/2 gpm (for the third inch of head) = 12-1/2 gpm.

**TABLE 1. Adjustable Accutrol Flow Rate Settings**

Weir Opening Exposed	Flow Rate (gallons per minute)				
	1"	2"	3"	4"	5"
Fully Exposed	5	10	15	20	25
3/4	5	10	13.75	17.5	21.25
1/2	5	10	12.5	15	17.5
1/4	5	10	11.25	13.75	15
Closed	5	5	5	5	5

NO.	REVISION	DATE	BY
2	REVISIONS TO INCLUDE CITY OF OTTAWA PROJECT NUMBER AND PLAN NUMBER AS PER CITY'S REQUEST OF JUNE 20, 2023 AND PER HOUSE RESIDENT'S PROPOSED SITE PLAN OF AUGUST 23, 2022	09/28/23	TLM
1	REVISIONS AS PER HOUSE DESIGNER'S LATEST REVISED SITE PLAN OF AUGUST 8, 2022	08/08/22	TLM



DESIGN	T.L.M.
CHECKED	T.L.M.
DRAWN BY	P.M.
CHECKED	T.L.M.
APPROVED	T.L.M.

PROJECT  
 370 CAMBRIDGE STREET NORTH  
 LOT 15  
 WEST CAMBRIDGE STREET NORTH  
 SOUTH OF STONE BOUNDARY  
 REGISTERED PLAN 33  
 CITY OF OTTAWA

DRAWING TITLE  
**PROPOSED ROOFTOP  
 STORMWATER MANAGEMENT PLAN**

**T.L. MAK ENGINEERING CONSULTANTS LTD.**  
 CONSULTING ENGINEERS

PROJECT No. 821-155	DATE APRIL 2022	DRAWING No. SWM-1
------------------------	--------------------	----------------------