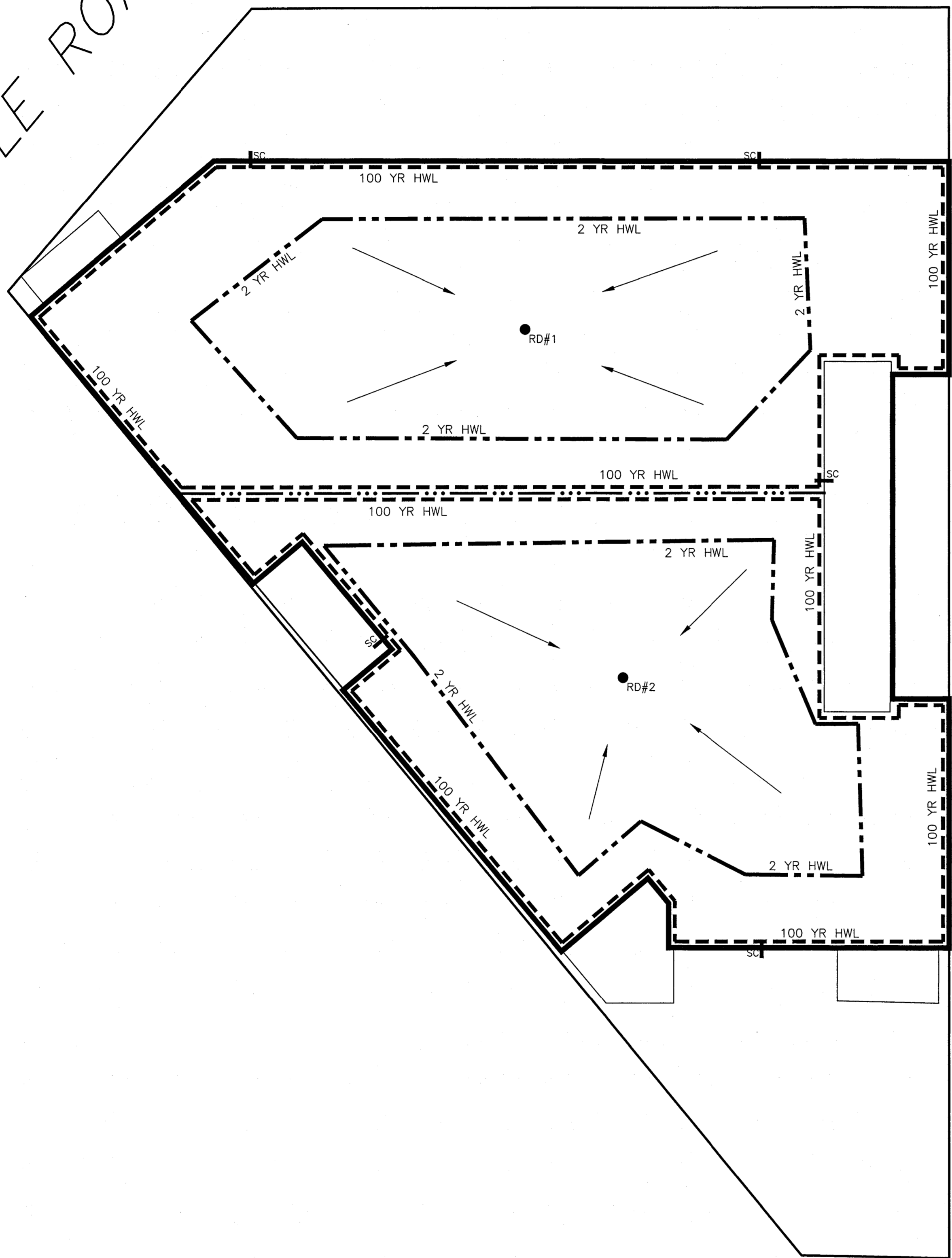


MERIVALE ROAD

CARLING AVENUE



**NOTES**

1. STORMWATER MANAGEMENT NOTES

**ROOF DRAIN DETAILS**

ROOF DRAIN No. 1

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 15.0 US GAL/MIN. OR 0.95 L/s UNDER A HEAD OF 150mm AND 12.5 US GAL/MIN. OR 0.87 L/s UNDER A HEAD OF 100mm.

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 0.95 L/s.

SCUPPER LOCATION: AS SHOWN ON THIS DRAWING

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

100 YEAR ELEVATION: 150MM ABOVE THE ROOF DRAIN FOR ROOF AREA #1

— ROOF DRAIN #1 SHALL BE SIZED FOR A MAXIMUM RELEASE RATE OF 15.0 U.S. GAL/MIN. OR 0.95 L/s UNDER A HEAD OF 150mm AND UNDER A HEAD OF 100mm THE RELEASE RATE SHALL BE 12.5 US GAL/MIN. OR 0.87 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 AS-BUILT RECORDS TO ENSURE PROPER RELEASE RATE FOR STORMWATER MANAGEMENT COMPLIANCE.

ROOF DRAIN No. 2

MODEL TYPE: WATTS MODEL "ADJUSTABLE ACCUTROL WEIR" (MODEL No. RD-100A-ADJ), (WEIR OPENING EXPOSED IS : CLOSED) TO PERMIT A RELEASE FLOW RATE OF 5.0 US GAL/MIN. OR 0.32 L/s UNDER A HEAD OF 110mm AND AT A MAXIMUM FLOW RATE OF 5.0 US GAL/MIN. OR 0.32 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: 5.0 U.S. GAL/MIN. OR 0.32 L/s.

SCUPPER LOCATION: AS SHOWN ON THIS DRAWING

2 YEAR ELEVATION: 110mm ABOVE THE ROOF DRAIN FOR ROOF AREA #2

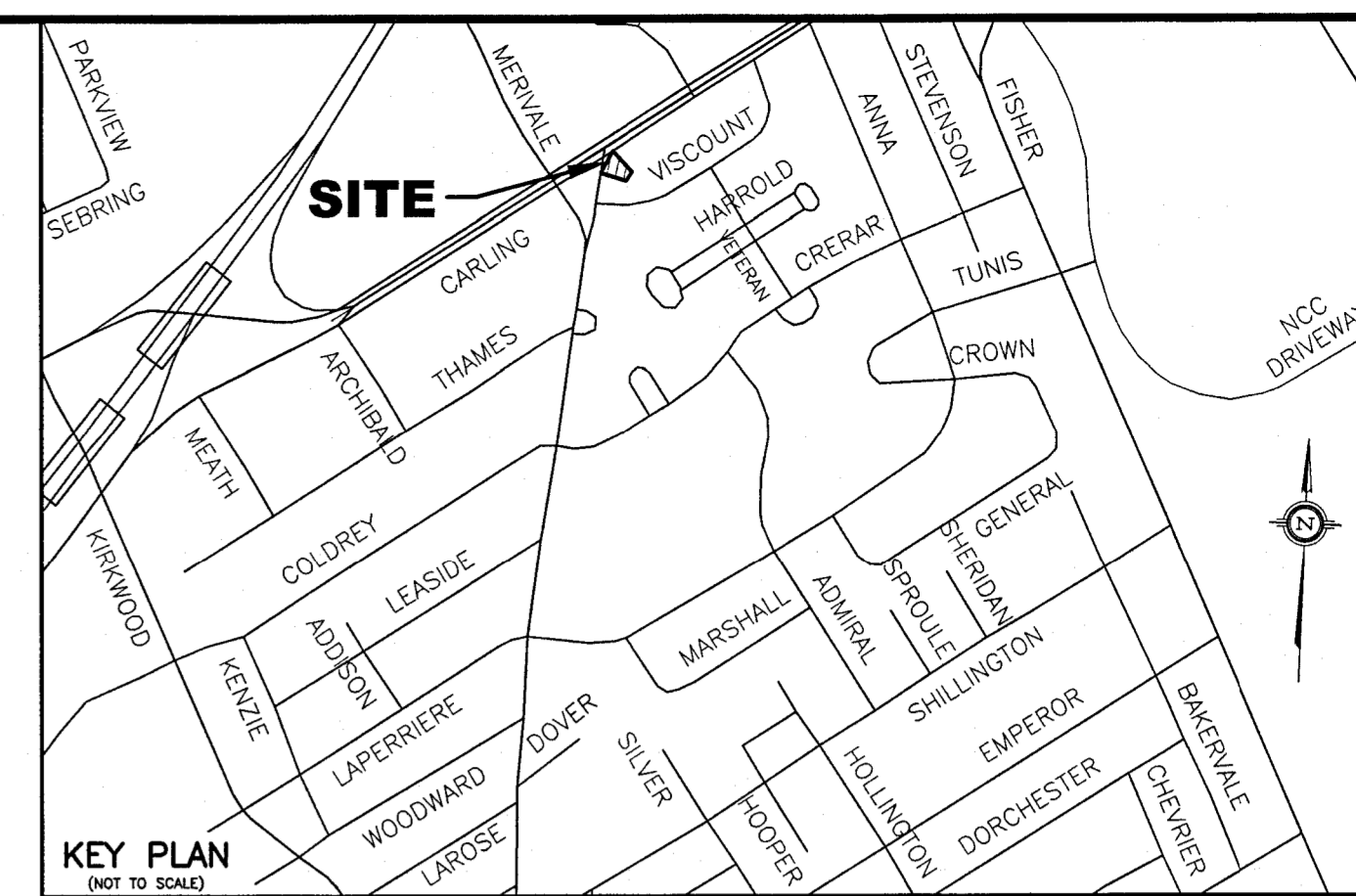
100 YEAR ELEVATION: 150mm ABOVE THE ROOF DRAIN FOR ROOF AREA #2

— ROOF DRAIN #2 SHALL BE SIZED FOR A MAXIMUM RELEASE RATE OF 5.0 U.S. GAL/MIN. OR 0.32 L/s UNDER A HEAD OF 150mm. AND UNDER A HEAD OF 110mm, THE RELEASE RATE SHALL BE 5.0 U.S. GAL/MIN. OR 0.32 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.

**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 (0.0171 ha)	1	RD-100-A-ADJ (1/4 EXPOSED OPENING)	0.87	0.95	0.10	0.15	1.66	6.29	7.92
RD-2 (0.0134 ha)	1	RD-100-A-ADJ (CLOSED)	0.32	0.32	0.11	0.15	1.90	6.57	6.75
TOTAL ROOF (0.0305 ha)	2		1.19	1.27	-	-	3.56	12.86	14.67

- ROOF PITCH IS ASSUMED TO HAVE 1.3% (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-821-157 DATED JUNE 2023 FOR DETAILS ALSO.
- PROPOSED ROOF DRAINS AND SCUPPER LOCATIONS SHOWN ON THIS PLAN SHALL BE REVIEWED BY THE OWNER AND OWNER'S ARCHITECTS FOR APPROVAL.
- THE OWNER'S BUILDING ARCHITECTS AND STRUCTURAL ENGINEERS 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.
- ROOF DRAIN #1 AND #2 INCLUSIVE SHALL OUTLET INTO THE DESIGNATED 150mmØ PVC STORMWATER PIPE AS SHOWN ON THE PROPOSED GRADING AND SERVICING PLAN (DWG No. 821-157, G-1).
- FOR GRADING AND SERVICING DETAILS OF THIS SITE, REFER TO DWG. No. 821-157, G-1.
- TOTAL FLOW FROM FLAT ROOFTOP OF BUILDING AT MAXIMUM HEAD OF 150MM PER DRAIN AT THE (2) PROPOSED DRAINS = 0.95 L/s + 0.32 L/s = 1.27 L/s



**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 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.

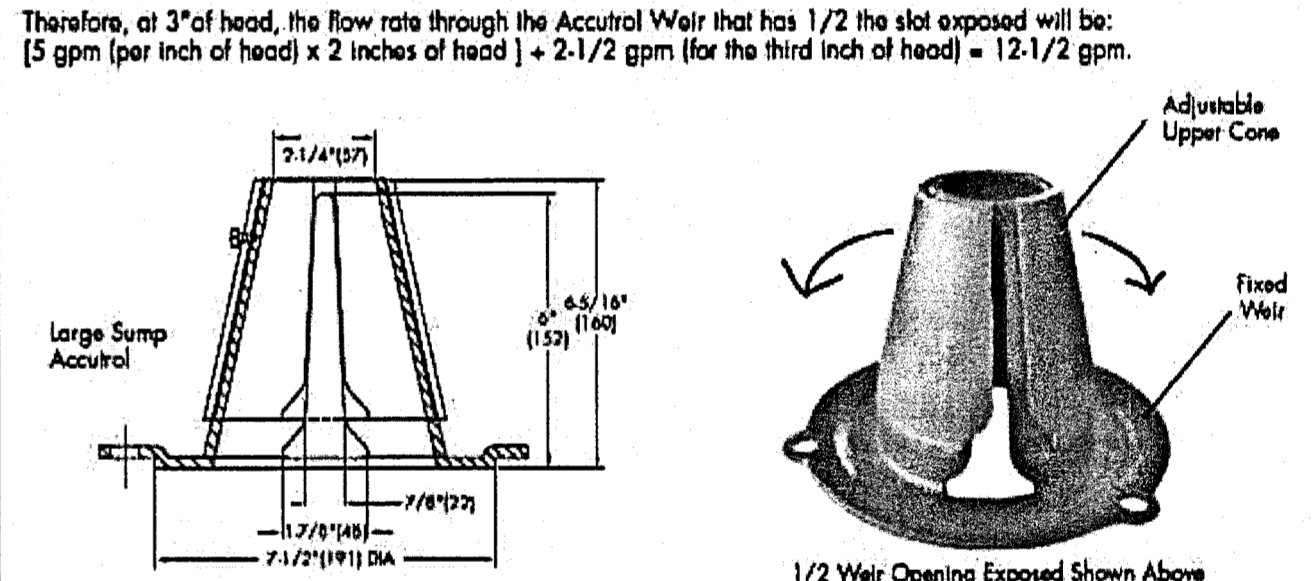


TABLE 1. Adjustable Accutrol Flow Rate Settings

Weir Opening Exposed	Flow Rate (gallons per minute)					
	1"	2"	3"	4"	5"	6"
Fully Exposed	5	10	15	20	25	30
3/4	5	10	13.75	17.5	21.25	25
1/2	5	10	12.5	15	17.5	20
1/4	5	10	11.25	12.5	13.75	15
Closed	5	5	5	5	5	5

NO.	REVISION	DATE	BY

SCALE  
 0 0.75 2.25 3.75m  
 1:75 HORIZONTAL  
 VERTICAL

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

PROFESSIONAL ENGINEER  
 TONY L. MAK  
 PROVINCE OF ONTARIO

PROJECT  
 1240 CARLING AVENUE  
 LOT 3  
 REGISTERED PLAN 267570  
 CITY OF OTTAWA

DRAWING TITLE  
 PROPOSED ROOFTOP  
 STORMWATER MANAGEMENT PLAN

T.L. MAK ENGINEERING CONSULTANTS LTD.  
 CONSULTING ENGINEERS

PROJECT No. 821-157  
 DATE APRIL 2023  
 DRAWING No. SWM-1