

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.

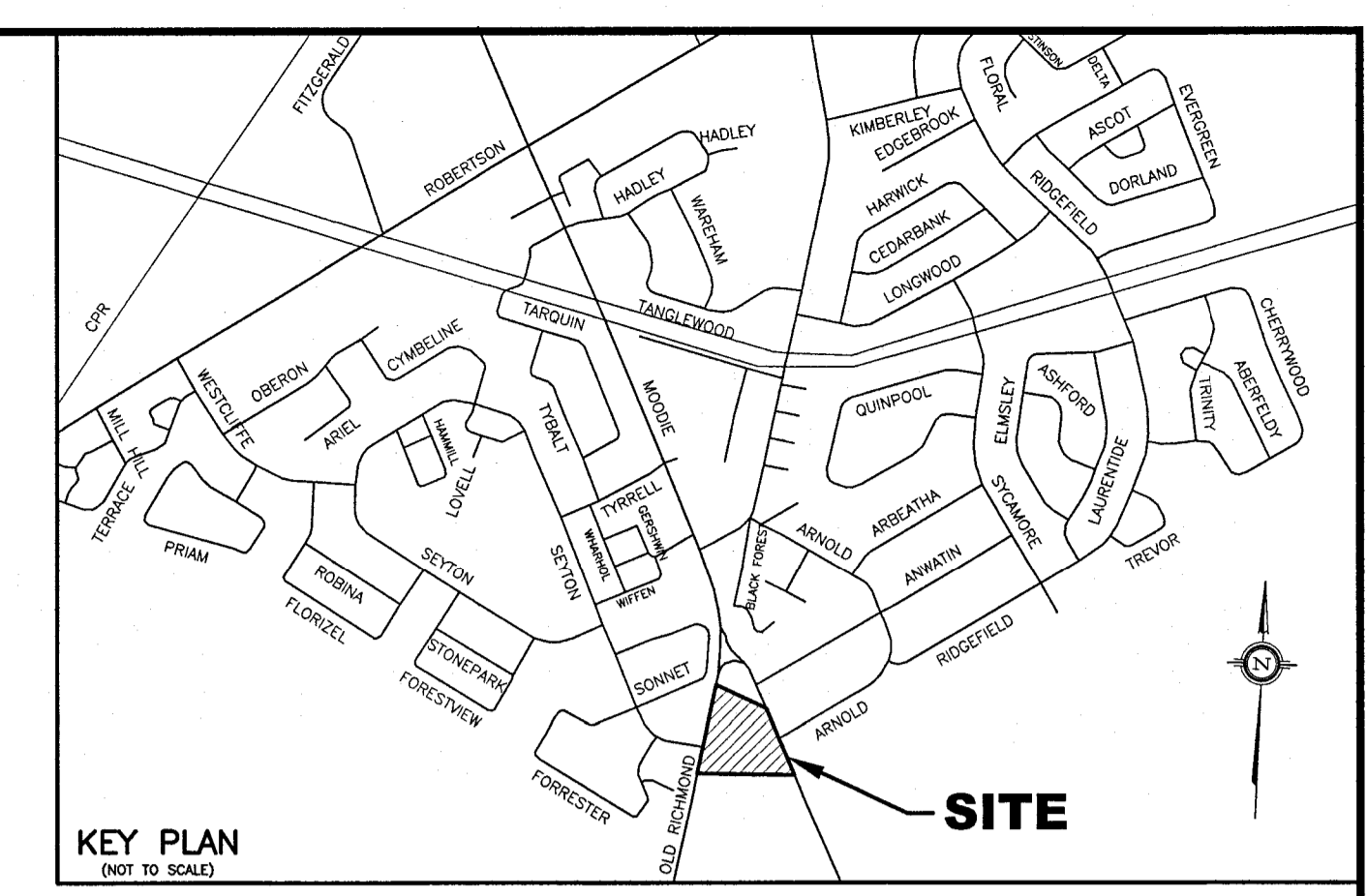
TABLE 1. Adjustable Accutrol Flow Rate Settings

| Weir Opening Exposed | 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 | 8.75 | 11.25 | 13.75 | 16.25 |
| 1/4 | 5 | 10 | 4.375 | 5.625 | 7.0625 | 8.5 |
| Closed | 5 | 5 | 5 | 5 | 5 | 5 |

NOTES

- STORMWATER MANAGEMENT NOTES
 - ROOF DRAIN DETAILS
 - MODEL TYPE: WATTS MODEL "ADJUSTABLE ACCUTROL WEIR" (MODEL No. RD-100A-ADJ). (WEIR OPENING EXPOSED IS AS SPECIFIED BELOW) TO PERMIT A RELEASE FLOW RATE RANGING FROM 25.0 US GAL/MIN. (1.58 L/s) TO 30.0 US GAL/MIN. (1.89 L/s) UNDER A HEAD OF UP TO 152mm (6 INCHES).
 - NUMBER OF CONTROL DEVICES: 1 CONTROLLED ROOF DRAIN PER DESIGNATED ROOF AREA FOR SWM ATTENUATION
 - FLOW PER ROOF DRAINS ARE: ROOF DRAIN #1 (1.89 L/s), ROOF DRAIN #2 (1.58 L/s), AND ROOF DRAIN #3 (15.8 L/s)
 - TOTAL FLOW FROM FLAT ROOFTOP OF BUILDING AT MAXIMUM HEAD OF 152mm (6 INCHES) PER DRAIN AT THE (3) PROPOSED DRAINS = 5.05 L/s
 - DEPTH AND VOLUME:

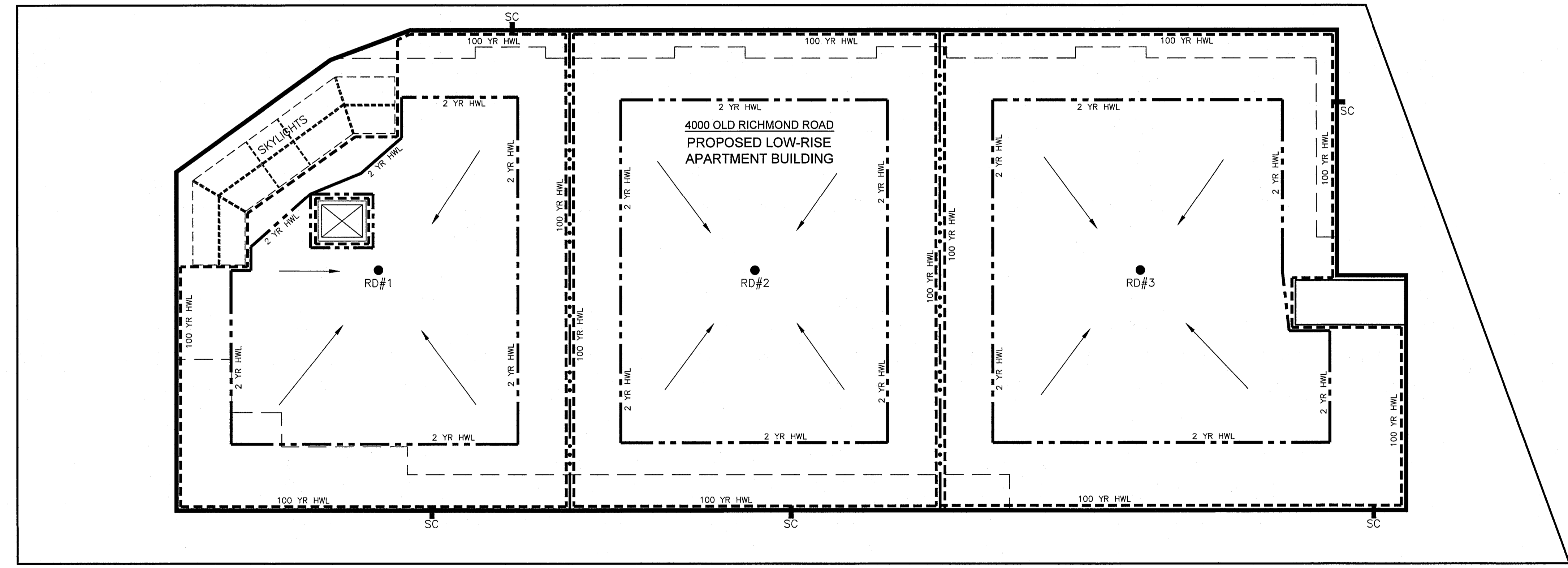
| ROOF DRAIN ID & DRAINAGE AREA (ha) | NUMBER OF ROOF DRAINS | WATTS ROOF DRAIN MODEL ID (WEIR OPENING) | CONTROLLED FLOW PER DRAIN (L/s) | | APPROXIMATE PONDING DEPTH ABOVE DRAINS (m) | | STORAGE VOLUME REQUIRED (m ³) | | MAX. STORAGE AVAILABLE (m ³) |
|------------------------------------|-----------------------|--|---------------------------------|--------|--|--------|---|--------|--|
| | | | 2 YR | 100 YR | 2 YR | 100 YR | 2 YR | 100 YR | |
| RD-1 (0.0529 ha) | 1 | RD-100A-ADJ (FULLY EXPOSED OPENING) | 1.42 | 1.89 | 0.11 | 0.152 | 7.04 | 22.85 | 22.96 |
| RD-2 (0.0538 ha) | 1 | RD-100A-ADJ (1/4 EXPOSED OPENING) | 1.22 | 1.58 | 0.11 | 0.152 | 7.70 | 24.74 | 25.98 |
| RD-3 (0.0628 ha) | 1 | RD-100A-ADJ (3/4 EXPOSED OPENING) | 1.22 | 1.58 | 0.11 | 0.152 | 9.57 | 30.24 | 30.44 |
| TOTAL ROOF (0.1695 ha) | 3 | | 3.86 | 5.05 | - | - | 24.31 | 77.83 | 79.38 |
 - SCUPPER LOCATION: AS SHOWN ON THIS DRAWING
 - 2 YEAR ELEVATION: 110mm ABOVE THE ROOF DRAIN FOR ROOF AREA #1, #2 AND #3
 - 100 YEAR ELEVATION: 152mm (6 INCHES) ABOVE THE ROOF DRAIN FOR ROOF AREA #1, #2 AND #3
 - EACH ROOF DRAIN SHALL BE SIZED FOR A RELEASE RATE AS SPECIFIED ABOVE. THE OWNER'S MECHANICAL ENGINEER SHALL SPECIFY THE REQUIRED ROOF DRAIN TYPE AND MODEL NUMBER 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 1.0% (MIN.) SLOPE.
 - ROOF SCUPPERS ARE RECOMMENDED TO BE INSTALLED 0mm ABOVE EDGE OF ROOFTOP ELEVATION FOR EMERGENCY OVERFLOW PURPOSES AT ROOF AREA #1, #2 AND #3 AT PERIMETER OF BUILDING.
 - SEE STORM DRAINAGE REPORT No. R-819-106 DATED DECEMBER 2024 FOR DETAILS ALSO.
- PROPOSED ROOF DRAINS AND SCUPPER LOCATIONS SHOWN ON THIS PLAN SHALL BE REVIEWED BY THE OWNER AND OWNER'S BUILDING DESIGNER FOR APPROVAL.
- 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, #2 AND #3 AND ANY OF THE SUPPORTING STRUCTURES THAT MAY BE AFFECTED BY THE STORED WATER.
- ROOF DRAIN #1, #2 AND #3 INCLUSIVE SHALL OUTLET INTO THE DESIGNATED 150mm ϕ PVC STORMWATER PIPE AS SHOWN ON THE PROPOSED GRADING AND SERVICING PLAN (DWG No. 819-106, G-1).
- FOR GRADING AND SERVICING DETAILS OF THIS SITE, REFER TO DWG. No. 819-106, G-1.



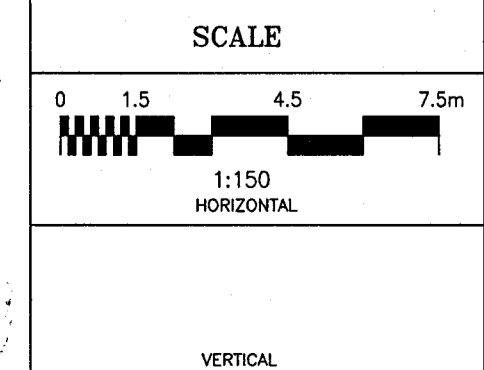
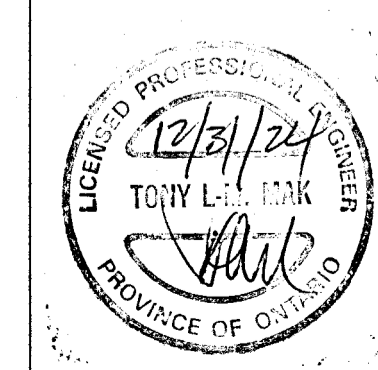
LEGEND

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

OLD RICHMOND ROAD



| No. | REVISION | DATE | BY |
|-----|--|----------|-----|
| 2 | REVISIONS AS PER ARCHITECT'S REVISED SITE PLAN OF NOV. 12, 2024 AND CITY'S REVIEW COMMENTS OF MAY 20, 2022 | 12/31/24 | TLM |
| 1 | ISSUED FOR SITE PLAN APPLICATION | 12/14/21 | TLM |



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

PROJECT: 4000 OLD RICHMOND ROAD
PART OF LOTS 32 AND 33
CONCESSION 5 (RIDEAU FRONT)
GEOGRAPHIC TOWNSHIP OF NEPEAN
CITY OF OTTAWA

DRAWING TITLE: PROPOSED ROOFTOP
STORMWATER MANAGEMENT PLAN

T.L. MAK ENGINEERING CONSULTANTS LTD.
CONSULTING ENGINEERS

PROJECT No. 819-106 DATE JULY 2021 DRAWING No. SWM-1

D07-12-21-0234