Item 1	Specifications Section 09671 Epoxy Flooring Part 2 - Products , paragraph 2.3 Components Under item 1 <u>delete</u> sub-item .9 and <u>replace</u> with "Basis-of-Design Product: Sika Canada Inc., Sikafloor Duochem-9205."
	Under item 4 <u>delete</u> sub-item .12 and <u>replace</u> with "Basis-of-Design Product: Sika Canada Inc., Sikafloor 510 LPL"
Item 2	Specifications Section 08520 Aluminum Windows and Doors Part 2 – Products, paragraph 2.4 Fabrication <u>Add</u> item 8 – "Insulated Panels –Spandrel Glass, mineral wools semi-rigid insulation in galvanized steel back pan to be held in place with stick pins clips and continuously sealed to frame. Panel finish: Duranar XL, three coat, coil-coated finish containing Kynar 500 polyvinylidene fluoride resin. Colour: to Consultant's selection"
Item 3	Specifications Section 07112 Air / Vapour Barrier Part 2 – Products, paragraph 2.1 Membranes <u>Delete</u> item 4 – Air Barrier in its entirety.
Item 4	 Specification Section 07212 – Rigid Insulation Part 2 – Products, paragraph 2.1 Insulation Add item 2. Cavity Wall Insulation - Masonry: Expanded polystyrene insulation to CAN/CGSB-51.20-M87, Type 4 butt or ship lapped edges. For use in cavity wall construction above and below grade. 1 Thickness 100 mm or as indicated. 2 Acceptable Material: "Cavitymate" Type 3 as manufactured by Dow Chemical Canada Inc. .3 Acceptable Material: "Celfort 300" as manufactured by Celfortec Inc. or approved equal." And item 3. Cavity Wall Insulation – Metal Panel: water-repellent and semi-rigid thermal insulation to CAN/ULC-S702-97, formed of bonded basalt fibres. For use in cavity wall construction or portions thereof with metal panel or siding cladding. .1 Acceptable Material: 100mm "CavityRock MD" as manufactured by Rockwool Inc. .2 Acceptable Material: 100mm "MB PLUS" as manufactured by Fibrex Insulations Inc."
Item 5	Specification Section 08800 Glazing Part 2-Products paragraph 2.1 Materials

<u>Add</u> item

" 10. Spandrel Glass (SG) - 6 mm clear tempered float glass conforming to CAN/CGSB-12.3; Opaci-coat 300 by ICD High Performance Coating on 2nd surface.

- a. Spandrel Glass-1 (SG-1) colour by Architect from standard colour range.
 b. Spandrel Glass-2 (SG-2) colour by Architect from standard colour range."
 Delete item 4 Wired Glass in its entirety.
- Item 6 Specification Section 00200 Instruction to Bidders

Under item 4. Subcontractor add subitem

"2. The List of Subcontractors in the Tender Form can be issued 1 hour after tender closing."

and subitem

- "3. The List of Subcontractors to be submitted by email to the following
- Grguric Architects office@2gai.com and to
- the Diocese asmith@thecatholiccemeteries.ca"
- Item 7 Refer to attached A8.00. The frames for doors 107, 109, 111, and 112 have been revised to a hollow metal (HM) frame. The frame for door 102A has bee revised to screen SC3. The material for SC3 in the screen schedule has been revised to aluminium (ALUM).
- Item 8
 Specification Section 09330 Floor Porcelain Tile

 Part 2-Products, paragraph 2.1 Tiles
 Under item 1. Delete subitem .1 and replace with "

 Acceptable material: Vitra Cement Mix Series, distributed by Centura Tiles. Size 600 mm x 600 mm, plus trim and 600 mm x 100 mm bullnosed base. Allow 2 colors from manufacturer's full line.

 Acceptable equal:
 Daltile/American Olean and Crossville."
- **Item 9 Clarification** Refer to revised A2.00 for the extent of the epoxy floor and sealed concrete floor in the Circulation Area (Rm 110) and Retort Room (Rm 121).

Electrical

Refer to attached Electrical Addendum No. E3 and E4 Issued by NRG Consultants Inc dated October 20, 2023 and October 23, 2023

Questions and Answers

Question 1

L-1 drawing indicates strip along asphalt roadway has a 1.5m sodded width, however, scales at 3m. Clarify.

Answer 1

We previously noted a minimum 1.5m sod strip but I have updated the plan to note 3m along the roadway

Same for L-2 loop area, where scale is 2m, but notes indicate 1.5m width. Clarify.

Answer 2

We previously noted a minimum 1.5m sod strip but I have updated the plan to note 2m along the building, parking lot and turn around

Question 3

Could you provide specifications for Sodding, Seeding & Planting. Mainly for installation procedures & Warranty requirements.

Answer 3

We typically do not include specifications for a project that only involves only planting as all of the details, notes, and noted specifications (Canada Landscape Standards) provide all the information required. We have noted a 1 year warranty in our landscape notes but this will need to be confirmed by the client as we do not have a contract for the construction phase of the project and do not want to speak on their behalf if they require a longer warranty period.

Question 4

If native topsoil can be used, are there any amendments for the Seeding & Sodding areas?

Answer 4

Planting notes and details are provided on the drawing and the Landscape Notes refer to the applicable sections (seed and sod) of the Canadian Landscape Standards.

Question 5

L-2 drawing indicates that septic field is seeded, however, septic fields must be sodded. Clarify.

Answer 5

This area has been proposed to be seeded with Turf/sod mix. This area will not be naturalized as this seed will be mowed.

Question 6

Please provide further information and detail regarding the feeder from the existing administration basement utility room 002 to 200A disconnect switch in crematorium building. We need the following clarified and more information to be provided to accurately quote:

- Who is responsible for the tie-in of this feeder to the existing equipment in administration basement utility room 002? If by electrical contractor, we need to know what we are tying into. Is it during afterhours? Do we need to supply and install an overcurrent device in the existing equipment? If so, we require photos and information of the existing equipment
- No detail or information is provided on how the feeder will enter the existing administration building and what routing is required inside the building to the basement utility room 002. Please provide this information as electrical contractor cannot quote this based on assumptions.
- Please confirm the distance provided of 2,100 feet on the site plan on drawing E02 is for the underground duct bank section only from building to building. Confirm this

distance does not include any additional conduit and wire required from underground to electrical equipment in the buildings

Answer 6 Refer to electrical addendum E3

Question 7

Please confirm all EMT conduit fittings inside of building must be watertight as per specification

Answer 7 Refer to electrical addendum E3

Question 8

Please confirm supply and install of all hand dryers is not part of the electrical scope of work

Answer 8 Refer to electrical addendum E3

Question 9

Please clarify that electrical contractor to include for all communication rough-in which includes conduit stub up to ceiling space only. Confirm no conduit is required in the ceiling space and J-hooks are not required. If so, provide what is required and to what location

Answer 9 Refer to electrical addendum E3

Question 10

Please clarify that electrical contractor to include for all security rough-in which includes conduit stub up to ceiling space only. Confirm no conduit is required in the ceiling space and J-hooks are not required. If so, provide what is required and to what location

Answer 10 Refer to electrical addendum E3

Question 11

Electrical specification speaks to wiremold to be installed in exposed areas. Electrical drawings do not show any wiremold or what locations require wiremold. Please revise electrical drawings to show the wiremold in every location that it is required. This includes all vertical and horizontal runs, please also provide a detail showing how the design is intended with transitions to conduit.

Answer 11 Refer to electrical addendum E3

Would you please be able to provide us with the latest SWM report complete with the Hydrostorm HS10 sizing report? It is requested by the manufactures of the structures.

Answer 12

Please refer to the attached SWM report prepared by S. Llewellyn and Associates Ltd dated July 2022.

Question 13

Could you provide a Site Service specification for material & installation procedures?

Answer 13

Our specifications are on our drawings. We do not provide separate written specs.

Question 14

Door frame schedule indicates 6 wood frames. Could you provide a jamb section including width of jamb, casing type, trim profile, & species of wood required. Stained?

Answer 14

All doors are to have hollow metal (HM) frames. Refer to Item #7.

Question 15

Can you provide a jamb schedule for metal frames indicating all profiles?

Answer 15

All doors with a hollow metal frame will have the same jamb profile. The over all dimensions of the profile are shown in the jamb details found on A5.00

Question 16

Door 102A indicates having a frame SC2, was this to be a ST2?

Answer 16

The frame of Door 102A is to be SC3 which is screen type ST2. Refer to item #7.

Question 17

Door Screen SC3 has 2 doors, but they are not listed or have any door dimensions, rating, paint requirements etc. Clarify

Answer 17

The doors in SC3 are to be Door 102A.

In reference to Add#3 item#1 the base layer of ISO has been requested as a base layer of 4.5" thick plus another layer at 2" thick.

4.5" ISO is special order only and not readily available. Standard ISO sizing ends at 4" thick.

Can we substitute with a base layer of 4" and second layer at 2.5" achieving the same overall thickness.

Answer 18

Any combination of insulation thicknesses is acceptable as long as the number of layers does not exceed 2 layers and the thickness of the insulation is 165mm (6.5").

Question 19

It would appear the RTU supplier (Carrier is basis of design) is not quoting this project.

Their reason......"Engineer spec-d a product that is no longer available with Carrier"

Answer 19

The equipment schedule has two alternates, Trane and Lennox.

Question 20

Is there a cut/fill plan available for this project?

Answer 20

A cut/fill plan was not prepared for this site.

Question 21

Electrical contractor needs further detail including a detail drawing showing how the duct bank and all conduits are transitioning from underground to inside of administration building. We also require information on the existing building exterior for penetrations to enter building. A detail drawings is required to show routing inside the admin building from penetration location to existing panel PP-1

Answer 21 Refer to electrical addendum E3

Question 22

Electrical contractor requires pictures and information of the existing panel PP-1 and existing manufacture information to quote the correct 200A-3P breakers

Answer 22 Refer to electrical addendum E3

Question 23

Electrical contractor needs clarification if all work in the admin building, including power shutdown, is to be done during regular business hours

Answer 23 Refer to electrical addendum E3

Duct bank note #8 on drawing E02 says to fix spacers to avoid floating during Concreting. However, in the section, it is Clean sand filling. Please confirm whether we go for sand filling or concreting?

Answer 24 Refer to electrical addendum E3

Question 25

In speaking with a rep at Sika the following came up:

Sika 261 is typically a tinted epoxy and generally they like the quartz broadcast to be put into a clear epoxy. He is recommending 9205 instead of the 261 prime coat and body coat.
 Regarding the 2002 and then the 510 LPL coats, he recommended doing 2 coats of 510 instead. Please advise.

Answer 25

The proposed changes suggested by Sika are acceptable. Refer to Item #1

Question 26

Can we use directional drilling with HDPE conduits in highlighted area, instead of directional boring with steel casing? This approach could potentially offer significant cost savings. Directional drilling is only HDPE conduits, while directional boring is steel casing has conduits. Could you please provide us with more information.

Answer 26 Refer to electrical addendum E3

Question 27

The 200A feeder shown to feed the new crematorium from the Administration Basement Utility room is not sized properly. This run will require an additional parallel run which will increase our duct bank size as shown and we will need to add an additional spare conduit.

Answer 27 Refer to electrical addendum E3

Question 28

We are also concerned with the difficulty of pulling the feeders from the second manhole to the new Crematorium as this is a great distance. We propose installing an additional 1-2 manholes along the roadway leading to the building from the second manhole. This will decrease the distance of the greatest pull.

Answer 28 Refer to electrical addendum E3

Will splices of the building feeder done inside the manholes be accepted? If so, are there any specific requirements for these splices.

Answer 29 Refer to electrical addendum E3

Question 30 Will aluminum cabling be accepted for all feeders above 100A?

> Answer 30 Refer to electrical addendum E3

Question 31

What colour is the curtainwall framing finish?

Answer 31 Medium Bronzed Anodized

Question 32 Has there been a spandrel colour chosen?

> Answer 32 Colour to be provided after tender award.

Question 33

Where the spandrel and back pans are? Do the back pans need to be skinned with the framing finish?

Answer 33

Back pans can be galvanized steel where they are not visible on the interior. Where the back pans are visible, they should be coloured to match the frame colour.

Question 34

On a couple of the elevation drawings, there are posts that require aluminum cladding. Is this under my contract, or will that be taken care of by someone else?

Answer 34

Cladding of the structural posts is to be done by the same supplier as the ACM panels

Question 35

The ACM specs call for 2 different colours, one of them being Wood Grain.. Do you have any clue where this wood grain to be? The panels on the Feature Tower Wall are oversized if we run the wood grain horizontally, Not sure if vertical is the Architect's intent.

Answer 35 Refer to question #7 on addendum #3

Can we submit the Proposed Subcontractors (Section 9 on the Tender Form) one hour post tender via email along with the unit rates?

Answer 36

Submission of the List of Subcontractors 1 hour after the tender closes by email is acceptable. Refer to item #6

Question 37

Reference 9.1.4 of the Supplementary Conditions:

 Please define what can be considered a reasonable precaution necessary to protect the place of work. Would site fencing around areas of work and security cameras be considered reasonable.
 Is it the intent that the General Contractor carry the cost of a security guard even if it is deemed unnecessary.

Answer 37

- 1) Site fencing and security cameras would be considered reasonable precautions for the protection of the work site and owner's adjacent property.
- 2) A security guard will not be necessary.

Question 38

In lieu of torch grade, can we use self-adhering Blueskin throughout masonry cavity walls.

Answer 38

Using self-adhering Blueskin on the masonry cavity walls is acceptable.

Question 39

Please provide a spec for the rigid insulation in above ground masonry walls.

Answer 39

Refer to item #4.

Question 40

DWG M6. Acoustic Treatment Of Ducts – "Supply and install all acoustic insulation as indicated on the drawings by cross hatching or by notation". The acoustic insulation shall be 25mm thick fibre glass insulation. DWG M5, Detail 4 – HVAC-1 & HVAC-2 Plenum Details – The detail indicates the plenum with cross hatching, but the insulation is 1" thick Armaflex installed on the exterior of the ductwork. Please confirm which one will be required for this tender.

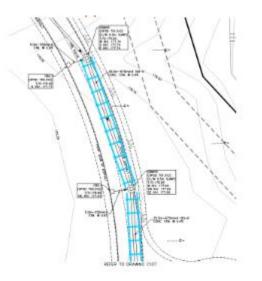
Answer 40

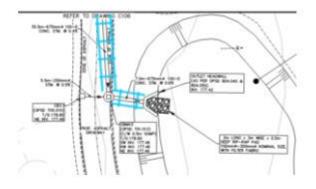
- 1. Crosshatched areas of both supply and return air plenums shall have 1/2" thick cement board installed on the bottom inside surface of the duct.
- 2. Crosshatched areas of both supply and return air plenums shall have AP Armaflex 1" thick insulation, 25/50 smoke and flame spread tested to CAN/ULC- S102 applied to all interior surfaces of the duct.

Is it the intent that 575 & 675 Storm Sewers are to have rigid insulation?

Answer 41

Insulation to be as per Engineering Drawing Notes and Detail Dwg. C109 and to be applied to storm sewer sections noted below.





Question 42

On C108 it says "Dewatering Pump (Sized by Others)". Who is responsible for the pump and please provide spec.

Answer 42

Dewatering is the responsibility of the Contractor who will be responsible for supplying the pump size necessary to complete the work.

Question 43

Section 10620 indicates accordion door partitions, but they have an incorrect length. Clarify

Answer 43

The door for the viewing room (Room 109) is to be the full width of the room from the face of the door pocket to the shared wall with the circulation area (Room 110). The 2 doors in the circulation area (Room 110) are to go from the shared wall with the viewing room (Room 109) to the bulkhead along the face of the retorts.

Question 44

Geotechnical report states the topsoil's depths provided are "not considered sufficient for estimating quantities or associated cost". Please provide a topsoil thickness that we are to use for this tender.

Answer 44

Refer to geotechnical report for topsoil depth at borehole location and to determine the average topsoil depth.

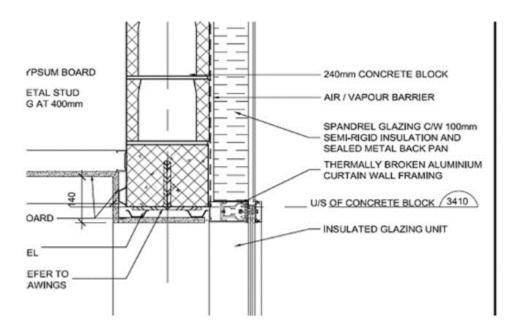
Vestibule frame SC3 calls for Hollow Metal on the screen schedule but door 102A is calling for aluminum frame and door on door schedule above. Please confirm if it's hollow metal or aluminum frame and door?

Answer 45

The material for screen SC3 is to be aluminum. Refer to Item #7.

Question 46

For SG-1/SG-2 spandrel glass, I would interpret this detail below as single spandrel with backpan. Can you confirm if they are, or are they sealed units with backpan?



Answer 46 Spandrel Glass SG-1 / SG-2 is to be a single spandrel with an insulated back pan. Refer to items 2 and 5.

Question 47

Are all windows are curtain wall based on detail above and none are bullnose 970 series as mentioned on the specs?

Answer 47

As per the window frame types/schedule, window W9 is to be an aluminium frame (970 series).

Are all windows are fixed, and non-operable? 1/A3.00 has a note "Firefighting Access", please clarify what it means.

Answer 48

All windows are fixed and non-operable. The note "Firefighting Access" just denoted a window that, when broken, is of sufficient size to satisfy the building code requirement for fire fighting access to the building.

Question 49

Fire rated glass are ceramic and not Georgian Wire Glass, correct?

Answer 49

All fire rated glass is to be ceramic. Refer to item #5.

Question 50

Please confirm Heavy Duty Asphalt detail on Drawing A1.20 is to read a total thickness of 720mm instead of 550mm.

Answer 50

Overall thickness of the Heavy Duty asphalt is to be 720mm.

Question 51

It is unclear whether excavated native backfill is suitable for site servicing backfill under proposed pavement areas (ie, the zone from 300mm above top of pipe to subgrade). Please confirm whether bidders are to backfill site servicing with excavated native soils or granular B.

Answer 51

Native fill can be used for trench backfill if it is suitable.

Question 52

There is a large landscape area north of the "heavy duty asphalt fire truck turn around area" with an annotation stating "Area to be regraded to promote drainage toward proposed asphalt roadway". Will it be permissible to use topsoil as fill in this area to achieve the proposed grades indicated per C102 & C103?

Answer 52

Topsoil can be used to meet grades within landscaped areas.

Question 53

Section 02210 "Site Grading", 3. "Grading" note 5 shows rough grading under grassed areas as 150mm below finish grades. Landscape drawing L-1 has annotations pointing to the grassed areas with a requirement on 200mm of topsoil. Please confirm depth what bidders are to assume as depth of topsoil in grassed areas.

Answer 53

Grassed areas to receive 200mm of topsoil as per the landscape drawings.

1. Will any work pertaining to work inside the regional flood line of Ex. Watercourse SMT-1 such as the installation of a temporary crossing and/or the work involved to install the 6000mm x 1500mm precast box culvert be subject to any kind of a "in-water working window"? Do you have a permit with the conservation authority?

Answer 54

A Conservation Authority Permit has been issued for the work. In Creek works are subject to the "in-water working window".

Question 55

Drawing C108 says that the dewatering pumps are to be sized by others. Is there any information of flows that can be provided?

Answer 55 Refer to question

Refer to question #42.

Question 56

When is the anticipated start date of this project?

Answer 56

It is anticipated that the contractor will start onsite mid November 2023 (November 15).

Question 57

Specification says to stock pile topsoil onsite and to retain top soil onsite. Please provide area where topsoil is to be stockpiled?

Answer 57

Location of topsoil stockpile is to be coordinated with architect onsite after tender award.

Question 58

The Geo –technical report is dated October 9, 2014. Is this report currently accurate? Has any work onsite occurred such as stripping, etc. that would affect the findings in the borehole logs?

Answer 58

The only work that has occurred onsite has been to the south of the creek. No work has been preformed on the north side of the creek where the crematorium is located.

Question 59

There is no analytical testing on the soils. Are we to assume that all excess soil is to remain onsite and if so where will it be stockpiled?

Answer 59 Refer to question #57.

Specifications call for clear stone to the underside of the building slab and exterior concrete slabs and the structural and architectural drawing calls for granular limestone. Please advise which is correct?

Answer 60

For the underside of slabs on grade clear crushed stone is to be used as indicated in the specification and drawings S0.0,

Question 61

Is there a comms spec, or a specific structured cabling system manufacturer required? Are patch cables required? If so, what quantities and lengths? Can all work be done during regular business hours?

Answer 61 Refer to electrical addendum E4

Question 62

I can't find the distributor for **(PT) American Olean, Graniti Fiandre - Urban Active, 24"x24", Slate Finish** I have contacted Daltile (distributor for American Olean) and Shnier (distributor for Graniti Fiandre) and they both said it's not theirs. Can you clarify with the designer please?

Answer 62 Refer to Item #8

Question 63

The room Finish Schedule show The Circulation room 110 to have epoxy floor and the Retort room 121 to have sealed concrete – Drawing A 2.00 show these rooms to be the same room (see below) – can you please identify which floor type is to be in this area?

Answer 63 Refer to Item #9

End of Addendum No. 4

Holy Family Cemetery Crematorium Building 2523 Lower Base Line Road, Milton ON

October 20, 2023

ELECTRICAL ADDENDUM #E3

NRG Consultants Inc.

This addendum issued before the closing of tenders, comprises clarifications and changes to the specifications and drawings and is hereby made a part thereof.

Questions & Responses

Q1. Please provide further information and detail regarding the feeder from the existing Administration Basement Utility Room 002 to the 200A disconnect switch in the Crematorium Building. We need the following clarified and more information to be provided to accurately quote:

a) Who is responsible for the tie-in of this feeder to the existing equipment in the Administration Basement Utility Room 002? If by Electrical Contractor, we need to know what we are tying into. Is it during afterhours? Do we need to supply and install an over-current device in existing equipment? If so, we require photos and information of the existing equipment.

b) No detail or information is provided on how the feeder will enter the existing Administration Building and what routing is required inside the building to the Basement Utility Room 002. Please provide this information as Electrical Contractor cannot quote this based on assumptions.

c) Please confirm the distance provided of 2,100 ft. on the Site Plan on Drawing E02 is for the underground duct bank section only from building to building. Confirm this distance does not include any additional conduit and wire required from underground to electrical equipment in the buildings

 R1. a) Tie-in of feeder to the existing equipment in the Administration Building Basement Utility Room 002 is by the Electrical Contractor. Tie-in will be to an existing 200A-3P breaker in existing 800A Square D Switchboard PP-1. Tie-in connection may be performed during regular day-time hours. A new over-current device is not required.

b) From the existing Administration Building Basement Utility Room 002, five (5) conduit stub-outs to match requirements of Underground Duct Bank Section C-C are provided through the basement wall terminating underground at an exterior point 2000mm to the west of the basement wall. Within the existing Administration Building Basement Utility Room 002 allow for two (2) 3000mm runs of 100mm (4") EMT conduit c/w power cables from the stub-outs to existing Switchboard PP-1.

c) The distance provided of 2,100 ft. on the Site Plan on Drawing E03 is from the Administration Building Basement Utility Room 002 exterior conduit stub-outs to the Crematorium Building Elect / Mech Room 117 exterior wall only.

- *Q2. Please confirm all EMT conduit fittings inside the building must be watertight per specification.*
- R2. All EMT conduit fitting inside both building shall be watertight type. Set-screw type are not permitted.
- *Q3. Please confirm supply and install of all hand dryers is not part of the electrical scope of work.*
- R3. All hand dryers shown on the drawings are to be supplied and installed by the Electrical Contractor.
- Q4. Please clarify that Electrical Contractor to include for all communication rough-in which includes conduit stub-up to ceiling space only. Confirm no conduit is required in the ceiling space and J-hooks are not required. If, so provide what is required and to what location.
- R4. All data and telephone outlets shown on the drawings to consist of recessed outlet box and conduit stub-up into ceiling space only. No above ceiling conduits or J-hooks are required.
- Q5. Please clarify that Electrical Contractor to include for all security rough-in which includes conduit stub-up to ceiling space only. Confirm no conduit is required in the ceiling space and J-hooks are not required. If, so provide what is required and to what location.
- R5. All security device outlets shown on the drawings to consist of recessed outlet box and conduit stub-up into ceiling space only. No above ceiling conduits or J-hooks are required.
- Q6. Electrical specification speaks to wiremold to be installed in exposed areas. Electrical drawings do not show any wiremold or what locations require wiremold. Please revise electrical drawings to show wiremold in every location that it is required. This includes all vertical and horizontal runs, please also provide a detail showing how the design is intended with transitions to conduit.
- R6. Conduits to be concealed in all Public Areas. Surface wiremold may be used in Public Areas only if concealed conduits are not possible. Architect's and Engineer's prior approval required before installation.
- Q7. Electrical Contractor needs further detail including a detail drawing showing how the duct bank and all conduits are transitioning from underground to inside of Administration Building. We also required information on the existing building exterior for penetrations to enter the building. A detailed drawings is required to show routing inside The Administration Building from penetration location to existing Panel PP-1.
- R7. Refer to response R1 (b) above

- *Q8. Electrical Contractor requires pictures and information of the existing Panel PP-1 and existing manufacturer information to quote the correct 200A-3P breaker.*
- R8. Refer to response R1 (a) above.
- *Q9.* Electrical Contractor needs clarification if all work in Administration Building, including power shut-down, is to be done during regular business hours.
- R9. Refer to response R1 (a) above.
- Q10. Duct Bank Note #8 on Drawing E02 says to fix spacers to avoid floating during concreting. However, in the Section, it is clean sand filling. Please confirm whether we go for sand filling or concreting?
- R10. Clean sand filling is to be used.
- Q11. Can we use directional drilling with HDPE conduits in highlighted area, instead of directional boring with steel casing? Directional drilling is only HDPE conduits, while directional boring is steel casing has conduits. Could you please provide us with more information.
- R11. Directional drilling with HDPE conduits is preferred.
- Q12. The 200A feeder shown to feed the new Crematorium Building from the Administration Building Basement Utility Room is not sized properly. This run will require an additional parallel run which will increase our duct bank size as shown and we will need to add an additional spare conduit.
- R12. Refer to Drawing E02, Underground Duct Bank Section C-C: Revise Duct #2 use for Power Service Cables. (No spare 100mm duct required).
 Refer to Drawing E04, Conduit & Wire Schedule: Revise Item # 1 to 8 #350MCM RWU90 Copper + GND in 2 100mm (4") Dia. PVC DB-II underground ducts. (ie. Parallel cable run).
 Refer to Drawing E04, Conduit & Wire Schedule: Revise Item # 2 to 8 #350MCM RWU90 Copper + GND in 2 76mm (3") Dia. EMT conduits. (ie. Parallel cable run).
- Q13. We are also concerned with the difficulty of pulling the feeders from the second manhole to the new Crematorium Building as this is a great distance. We propose installing an additional 1-2 manholes along the roadway leading to the building from the second manhole. This will decrease the distance of the greatest pull.
- R13. Provide one (1) additional manhole between the existing Administration Building and the first manhole shown. Provide two (2) additional manholes between the second manhole shown and the new Crematorium Building.

- *Q14.* Will splices of the building feeder done inside the manholes be accepted? If so, are there any specific requirements for these splices?
- R14. Splices will not be accepted.
- Q15. Will aluminum cabling be accepted for all feeders above 100A?
- R15. All cables to be copper.

General

- 1. Drawing E01, Electrical Notes, Item #19 Electrical Cash Allowances: Revise two (2) items as follows:
 - 1. \$50,000 For Connection of Power Service.
 - 5. \$75,000 For Possible Additional Electrical Work.

END OF ELECTRICAL ADDENDUM #E3

NRG Consultants Inc.

Holy Family Cemetery Crematorium Building 2523 Lower Base Line Road, Milton ON

October 23, 2023

ELECTRICAL ADDENDUM #E4

NRG Consultants Inc.

This addendum issued before the closing of tenders, comprises clarifications and changes to the specifications and drawings and is hereby made a part thereof.

Questions & Responses

- Q1. (a) Is there a Communications Specification, or a specific Structured Cabling System Manufacturer required? Are patch cables required? If so, what quantities and lengths?
 - (b) Can all work be done during regular business hours?
- R1. (a) There is no specific Communications Specification nor specific Structured Cabling System Manufacturer. Electrical Contractor to provide data outlet boxes c/w conduits to T-Bar ceiling space in locations shown on the drawings. Data jacks, Cat. 6 wiring, terminations, testing and patch cables by Owner's Data Subcontractor.
 - (b) All work can be performed during regular business hours.

END OF ELECTRICAL ADDENDUM #E4

NRG Consultants Inc.



Stormwater Management Report

HOLY FAMILY CATHOLIC CEMETERY PHASE 2 (CREMATORIUM BUILDING)

THE CATHOLIC CEMETERIES OF THE DIOCESE OF HAMILTON

TOWN OF MILTON

Revised: July 2022 June 2021

SLA File: 13084

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1.0 INTRODUCTION AND BACKGROUND

1.1 OVERVIEW

S. Llewellyn & Associates Limited has been retained by The Catholic Cemeteries of the Dioceses of Hamilton to provide consulting engineering services for the proposed Phase 2 portion of the Holy Family Catholic Cemetery development at the corner of Regional Road No. 25 and Lower Baseline Road in the Town of Milton (see Figure 1.0 for location plan). This report will outline the stormwater management strategy for the proposed development.

The proposed Phase 2 portion of the development consists of constructing one (1) single storey building for use as a crematorium facility. Additionally, there will be an associated asphalt parking lot with concrete curbing/sidewalks, landscaped areas and an asphalt roadway which will connect to the previously completed portion of the cemetery.

This Stormwater Management Report will provide detailed information of the proposed servicing scheme for this development. Please refer to the site engineering plans prepared by S. Llewellyn and Associates Limited and the site plan prepared by Grguric Architects for additional information.

1.2 BACKGROUND INFORMATION

The following documents were referenced in the preparation of this report:

- Ref. 1: MOE Stormwater Management Practices Planning and Design Manual (Ministry of Environment, March 2003)
- Ref. 2: Guidelines for Site Plan Approval (Town of Milton, January 2020)
- Ref. 3: Stormwater Management Report for the Proposed Developments at Regional Road No. 25 and lower baseline Road, Milton, Ontario (AMEC Environmental, February 2012)
- Ref. 4: Hydrogeological Investigation Proposed Holy Family Catholic Cemetery (First Phase) Part of Lot 1 Concession 2, Town of Milton, Ontario (Terraprobe, May 2014)
- Ref. 5: Erosion & Sediment Control Guidelines for Urban Construction (December 2006)



Figure 1.0 – Location Plan

2.0 STORMWATER MANAGEMENT

The following stormwater management (SWM) criteria will be applied to the site, in accordance with the Town of Milton:

Quantity Control

The stormwater discharge rate from the proposed site shall be controlled to the discharge rate that was previously modeled in the "Stormwater Management Report for the Proposed Cemetery Developments at Regional Road No. 25 and Lower Baseline Road, Milton, Ontario" (October 2012), prepared by AMEC Environmental for the correlating catchment area.

Quality Control

The stormwater runoff from the proposed parking areas on site must meet Level 1 (Enhanced) stormwater quality control (80% TSS removal, 90% average annual runoff treatment). Quality control is not warranted for the asphalt road system on site as vehicular traffic is generally limited. These criteria are in accordance with the "Stormwater Management Report for the Proposed Cemetery Developments at Regional Road No. 25 and Lower Baseline Road, Milton, Ontario" (October 2012), prepared by AMEC Environmental.

Erosion Control

Erosion and sediment control measures will be implemented in accordance with the standards of the Town of Milton.

3.0 EXISTING CONDITIONS

In the existing condition, the 4.1-hectare area comprising the Phase 2 portion of the site consists entirely of agricultural land. The site is bound by Regional Road No. 25 to the north, Lower Base line Road to the east, and existing agricultural lands to the west and south. Discharge from this section of the site sheet drains towards the watercourse SMT-4 previously defined in the 2009 report titled "Meander Belt Width Assessment" completed by Parish Geomorphic for this development. This watercourse ultimately discharges to Sixteen Mile Creek.

One catchment area, Catchment 101, has been identified in the existing condition. Catchment 101 represents the drainage area for the entire Phase 2 portion of the site which discharges to watercourse SMT-4. See Table 3.1 below and the Pre-Development Drainage Area Plan in Appendix A for details.

Table 3.1 – Existing Conditions Catchment Areas				
Catchment ID	Description	Area (ha)	Percent Impervious	Run-off Coefficient
101	Sheet drainage to Watercourse SMT-4	4.1	0%	0.25

An analysis was performed on Catchment 101 using the SWMHYMO hydrologic modeling program developed by J.F. Sabourin & Associates for the 2-year to 100-year design storms. In order to stay consistent with the SWMHYMO modeling previously completed by AMEC, the same Town of Milton 12 hr SCS storm files were utilized in the SWMHYMO modeling carried out in this report. Additionally, the same CN values and weighted initial abstraction calculations from the AMEC stormwater management report were also utilized. A summary of the results can be found in Table 3.2 and detailed SWMHYMO input/output information can be found in Appendix C.

Table 3.2 – Existing Condition Stormwater Discharge		
Storm Event	Catchment 101 Discharge (m³/s)	
2-Yr Event	0.175	
5-Yr Event	0.308	
10-Yr Event	0.403	
25-Yr Event	0.526	
50-Yr Event	0.619	
100-Yr Event	0.713	

4.0 **PROPOSED CONDITIONS**

The proposed Phase 2 portion of the development consists of constructing one (1) single storey building for use as a crematorium facility. Additionally, there will be an associated asphalt parking lot with concrete curbing/sidewalks, landscaped areas and an asphalt roadway which will connect to the previously completed portion of the cemetery. Furthermore, this catchment also includes the future development of a mausoleum building with an associated asphalt parking lot with concrete curbing/sidewalks and landscaped areas. It is proposed to service the site with a private storm sewer system designed and constructed in accordance with the standards and specifications of the Town of Milton.

SWMHYMO modeling for the catchment area encompassing Phase 2 was previously completed as part of the "Stormwater Management Report for the Proposed Cemetery Developments at Regional Road No. 25 and Lower Baseline Road, Milton, Ontario" (October 2012), prepared by AMEC Environmental. The discharge rates for the 2-100 year and regional storm events for Catchment area 201 have been controlled to the discharge rates for the correlating catchment area in the AMEC Stormwater Management Report. The detailed SWMHYMO input/output file for Catchment B1d can be found in Appendix B with the summary results in Table 4.1 below:

Table 4.1 – Catchment Area B1d ProposedCondition Discharge Rate			
Storm Event	Catchment B1d Controlled Discharge (m ³ /s)	Required Storage (m³)	
2-Yr	0.103	482	
5-Yr	0.160	767	
10-Yr	0.194	983	
25-Yr	0.227	1266	
50-Yr	0.249	1484	
100-Yr	0.269	1709	
Regional Storm	0.467	2231	

One catchment area, Catchment 201, has been identified in the proposed condition. Catchment 201 represents the drainage area for the proposed development which will be captured and controlled by the proposed storm sewer system & detention pond before ultimately discharging to the existing watercourse SMT-4. See Table 4.2 below and the Post-Development Drainage Area Plan in Appendix A for details.

Table 4.2 – Proposed Condition Catchment Areas				
Catchment ID	Description	Area (ha)	Percent Impervious	Run-off Coefficient
201	Controlled discharge to watercourse SMT-4	4.1	36%	0.49

4.1 WATER QUANTITY CONTROL

It is proposed to apply quantity control measures to the runoff from Catchment 201 by means of a 300mmø orifice pipe to restrict discharge from the site to the specified discharge rate in the Stormwater Management Report completed by AMEC Environmental. Refer to the Grading & Servicing Plan for the orifice location.

With the installation of on-site quantity control measures for Catchment 201, it will be required to provide stormwater storage during storm events up to and including the 100-year event. To provide the required storage, a dry detention pond has been graded at the northeast corner of the property, which will provide the required volume of stormwater storage. It should be noted that this detention pond is in accordance with the pond proposed in the Stormwater Management Report completed by AMEC for the corresponding catchment area. Furthermore, as noted in the May 2014 hydrogeological report prepared by Terraprobe, groundwater on site is generally found at approximately 1.0m below the ground surface; however, because the site consists of low permeability glacial till which will act as a natural liner there will be no significant effect on groundwater levels or groundwater quality due to the construction of the proposed pond. Furthermore, due to the native soil's impermeability characteristics pond operating levels are also not anticipated to be affected by groundwater. Details of the proposed pond can be found on the Grading & Servicing Plan. The stage-storage-discharge characteristics can be seen in Table 4.3 below and Appendix A for details.

Table 4.3 – Proposed Condition Stage-Storage-Discharge			
Elevation (m)	Storage (m ³)	Discharge (m³/s)	
177.30 (Bottom of Pond)	0	0.0033	
177.50 (0.2m Depth)	310	0.0512	
177.70 (0.4m Depth)	646	0.1169	
177.90 (0.6m Depth)	1009	0.1650	
178.10 (0.8m Depth)	1400	0.2014	
178.30 (1.0m Depth)	1820	0.2322	
178.50 (Top of Pond)	2270	0.5311	

An analysis was performed on the proposed condition site using the SWMHYMO hydrologic modeling program to determine the volume of stormwater storage that is required during the 2-year to 100-year Town of Milton 12 hr SCS design storm and the regional storm event. As noted in section 3.0 to stay consistent with the AMEC Stormwater Management Report the same storm files, CN values and weighted initial abstractions have been utilized. A summary of the results can be found in Table 4.4 and detailed SWMHYMO input/output information can be found in Appendix C.

Table 4.4 – Proposed Condition Stormwater Discharge			
Storm Event	Catchment 201 Controlled Discharge (m³/s)	Allowable Discharge ¹ (m ³ /s)	Required Storage (m³)
2-Yr	0.090	0.103	501
5-Yr	0.138	0.160	796
10-Yr	0.165	0.194	1011
25-Yr	0.192	0.227	1294
50-Yr	0.210	0.249	1510
100-Yr	0.226	0.269	1732
Regional Storm	0.454	0.467	2194
¹ Allowable discha	rge = Discharge Rate t	from Table 4.1	

This analysis determined the following:

- The 2-year to 100-year and regional post development controlled discharge will not exceed the allowable discharge rate computed by AMEC with the installation of a 300mmø orifice pipe.
- Catchment 201 will require 1732m³ of stormwater storage during the 100-year event, which can be accommodated by the proposed dry pond, having a volume of 2270m³ at the top of pond elevation.
- The proposed pond is in accordance with the "Stormwater Management Report for the Proposed Cemetery Developments at Regional Road No. 25 and Lower Baseline Road, Milton, Ontario" (October 2012), prepared by AMEC Environmental.
- The fill generated from the proposed pond will be distributed across Phase 2 to bring the site up to the proposed finished grades.

4.2 FLOODPLAIN MODELLING

As part of the proposed asphalt road system, it is required to cross the existing watercourse SMT-1. The proposed crossing of STM-1 will be completed using a 6000mm x 1500mm concrete box culvert. Furthermore, the proposed box culvert will be countersunk by 15% (225mm) in accordance with the recommendations from Conservation Halton. The HEC-RAS modeling completed as part of the AMEC Stormwater Management Report was revised to analyze the effect of the culvert crossing on SMT-1 upstream of the culvert.

The 6000mm x 1500mm box culvert exceeds the specifications set out in the AMEC report which states that the soffit of the culvert requires 0.3m freeboard from the 25-year flood elevation. The proposed culvert is not overtopped during any storm event and the minor flood plain increase immediately upstream of the culvert has been reflected on the

updated drawings. Furthermore, the HEC-RAS model shows that there will be no increase in the regional flood line elevation at the development site property limits. Please refer to the Floodplain Memo in Appendix E for further details.

4.3 WATER QUALITY CONTROL

The proposed development is required to achieve an "Enhanced" (80% TSS removal) level of water quality protection. To achieve this criteria, discharge from the parking area surrounding the proposed crematorium building will be subject to treatment from a HydroStorm oil/grit separator before ultimately discharging to the private storm sewer system. The HydroStorm sizing software was used to determine the required size of oil/grit separator unit for the site. It was determined that a HydroStorm HS10 will provide 85% TSS removal and 96% average annual runoff treatment, which satisfies the requirements for an "Enhanced" level for quality control. Refer to the Hydroworks Sizing Summary Report in Appendix D for details.

HydroStorm units require regular inspection and maintenance as per the manufacturer's specifications to ensure the unit operates properly. See HydroStorm Maintenance Manual in Appendix D for details.

Quality control is not warranted for the asphalt road system on site as vehicular traffic is generally limited. These criteria are in accordance with the "Stormwater Management Report for the Proposed Cemetery Developments at Regional Road No. 25 and Lower Baseline Road, Milton, Ontario" (October 2012), prepared by AMEC Environmental.

5.0 SEDIMENT AND EROSION CONTROL

In order to minimize erosion during the grading and site servicing period of construction, the following measures will be implemented:

- Install silt fencing along the outer boundary of the site to ensure that sediment does not migrate to the adjacent properties;
- Install sediment control (silt sacks) in the proposed catchbasins as well as the nearby existing catchbasins to ensure that no untreated runoff enters the existing conveyance system;
- Stabilize all disturbed or landscaped areas with hydro seeding/sodding to minimize the opportunity for erosion.

To ensure and document the effectiveness of the erosion and sediment control structures, an appropriate inspection and maintenance program is necessary. The program will include the following activities:

- Inspection of the erosion and sediment controls (e.g. silt fences, sediment traps, outlets, vegetation, etc.) with follow up reports to the governing municipality; and
- The developer and/or his contractor shall be responsible for any costs incurred during the remediation of problem areas.

Prior to completion of construction, the following permanent erosion measure will be implemented:

• Place river stone as sized on the drawings at the inlet and outlet of the culvert and at the pond outlet to provide sufficient energy dissipation to prevent erosion of the watercourse and adjacent lands. Detailed stone sizing calculations are provided in Appendix A.

For details on the proposed erosion and sediment control for the proposed site, see the Grading & Servicing Plan included in the engineering drawings.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the information provided herein, it is concluded that the proposed Phase 2 development of Holy Family Cemetery can be constructed to meet the requirements of the Town of Milton. Therefore, it is recommended that:

- The development be graded and serviced in accordance with the Grading & Servicing Plan prepared by S. Llewellyn & Associates Limited;
- A 300mmø orifice pipe be installed as per the Grading & Servicing Plan and this report to provide adequate quantity control for the proposed site;
- A dry detention pond be graded as per the Grading & Servicing Plan and this report to provide sufficient stormwater surface storage for the proposed development;
- A HydroStorm HS10 oil/grit separator be installed as per the Grading & Servicing Plan and this report to provide efficient stormwater quality control for the proposed development;
- Erosion and sediment controls be installed as described in this report to meet Town of Milton requirements;

We trust the information enclosed is satisfactory. Should you have any questions please do not hesitate to contact our office.

Prepared by: S. LLEWELLYN & ASSOCIATES LIMITED

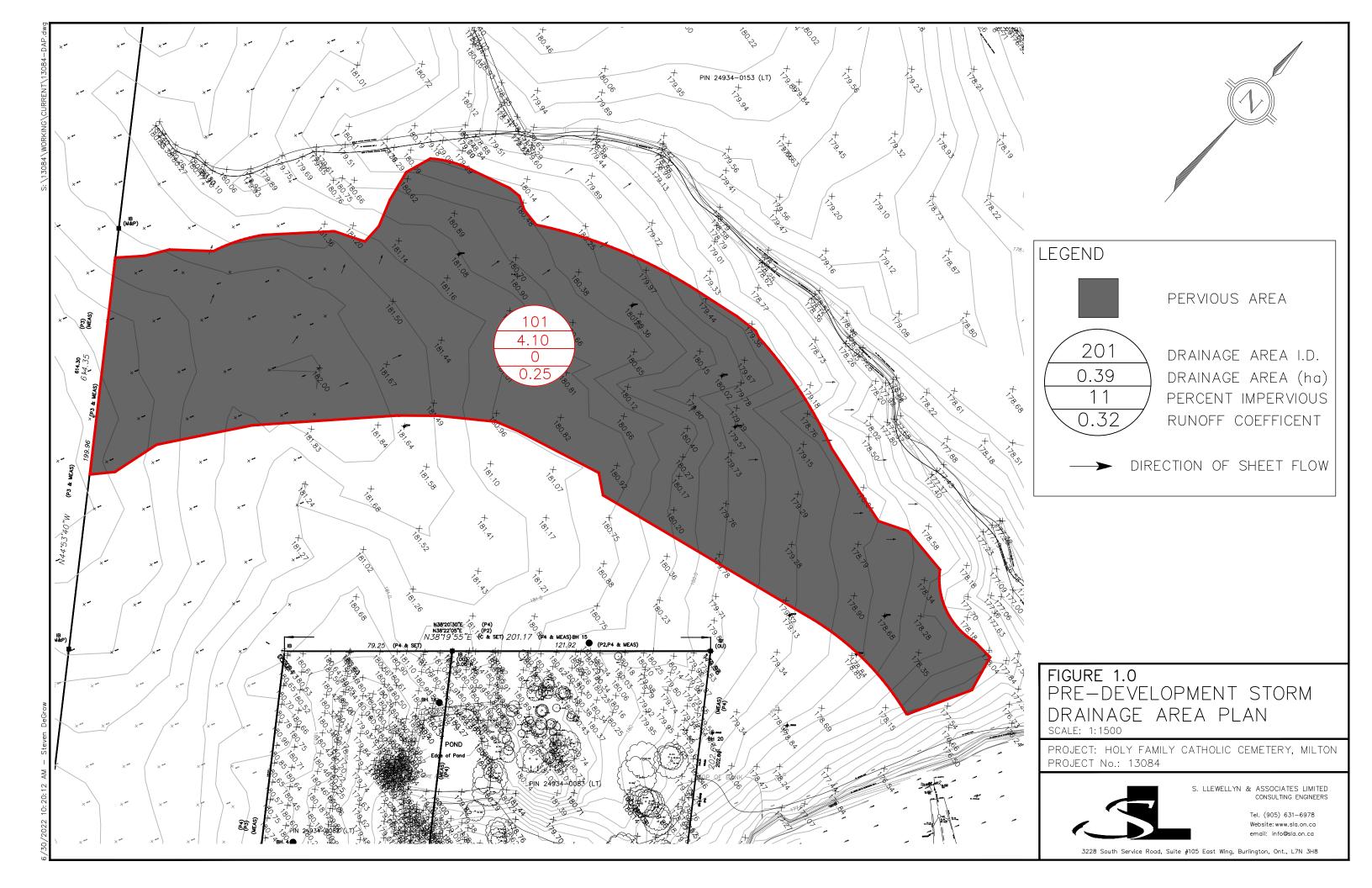
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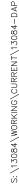
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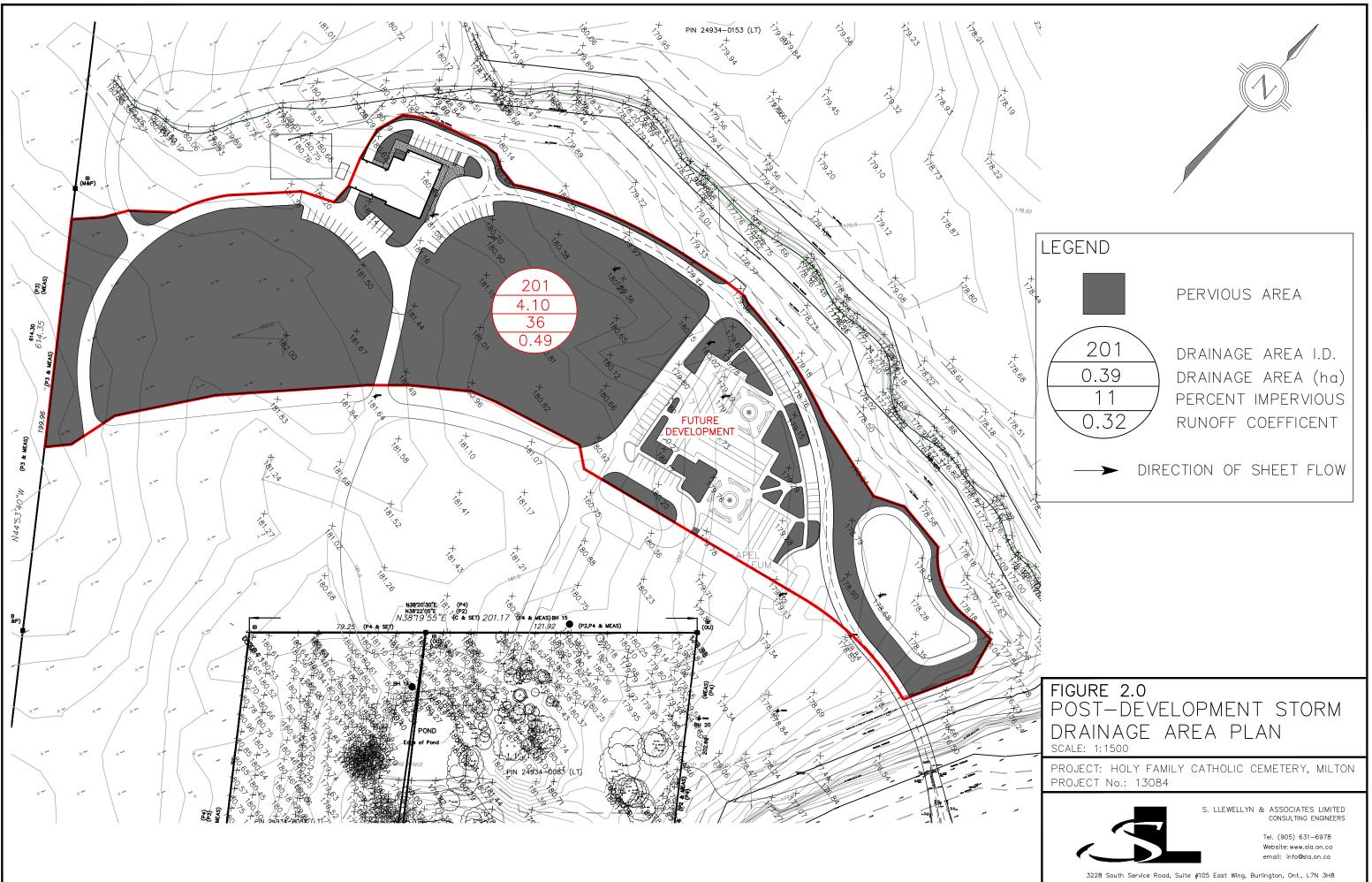


APPENDIX A

STORMWATER MANAGEMENT INFORMATION







Rating Table Report 300mm Orifice Pipe

Range Data:				
	Minimum	Maximum	Increment	
Allowable HW	E 177.30	178.50	0.05	m
HW Elev. (m) D	ischarge (m³∕s)			
177.30	0.00332			
177.35	0.01071			
177.40	0.02162			
177.45	0.03539			
177.50	0.05123			
177.55	0.06822			
177.60	0.08541			
177.65	0.10194			
177.70	0.11690			
177.75	0.12997			
177.80	0.14239			
177.85	0.15413			
177.90	0.16499			
177.95	0.17481			
178.00	0.18412			
178.05	0.19297			
178.10	0.20144			
178.15	0.20956			
178.20	0.21738			
178.25	0.22493			
178.30	0.23224			
178.35	0.23932			
178.40	0.24619			
178.45	0.25288			
178.50	0.25940			

Solve For: Discharge	-			
Culvert		Inverts		
Discharge: 0.25940	m³/s	Invert Upstream: 17	7.24	m
Maximum Allowable HW: 178.50	m	Invert Downstream: 17	7.23	m
Tailwater Elevation: 0.00	m	Length: 2.5	50	m
Section		Slope: 0.0	004000	m/m
Shape: Circular	T	Headwater Elevations		
Material: Corrugated HDPE (Sm	ooth In 👻	Maximum Allowable:	178.50	m
Size: 300 mm	•	Computed Headwater:	178.50	m
Number: 1		Inlet Control:	178.50	m
Mannings: 0.012	T	Outlet Control:	178.45	m
Inlet		Exit Results		
Entrance: Beveled ring, 33.7° bev	rels 👻	Discharge: 0.25940)	m³/s
Ke: 0.20		Velocity: 3.56		m/s
,		Depth: 0.30		m

STAGE-STORAGE-DISCHARGE CALCULATIONS

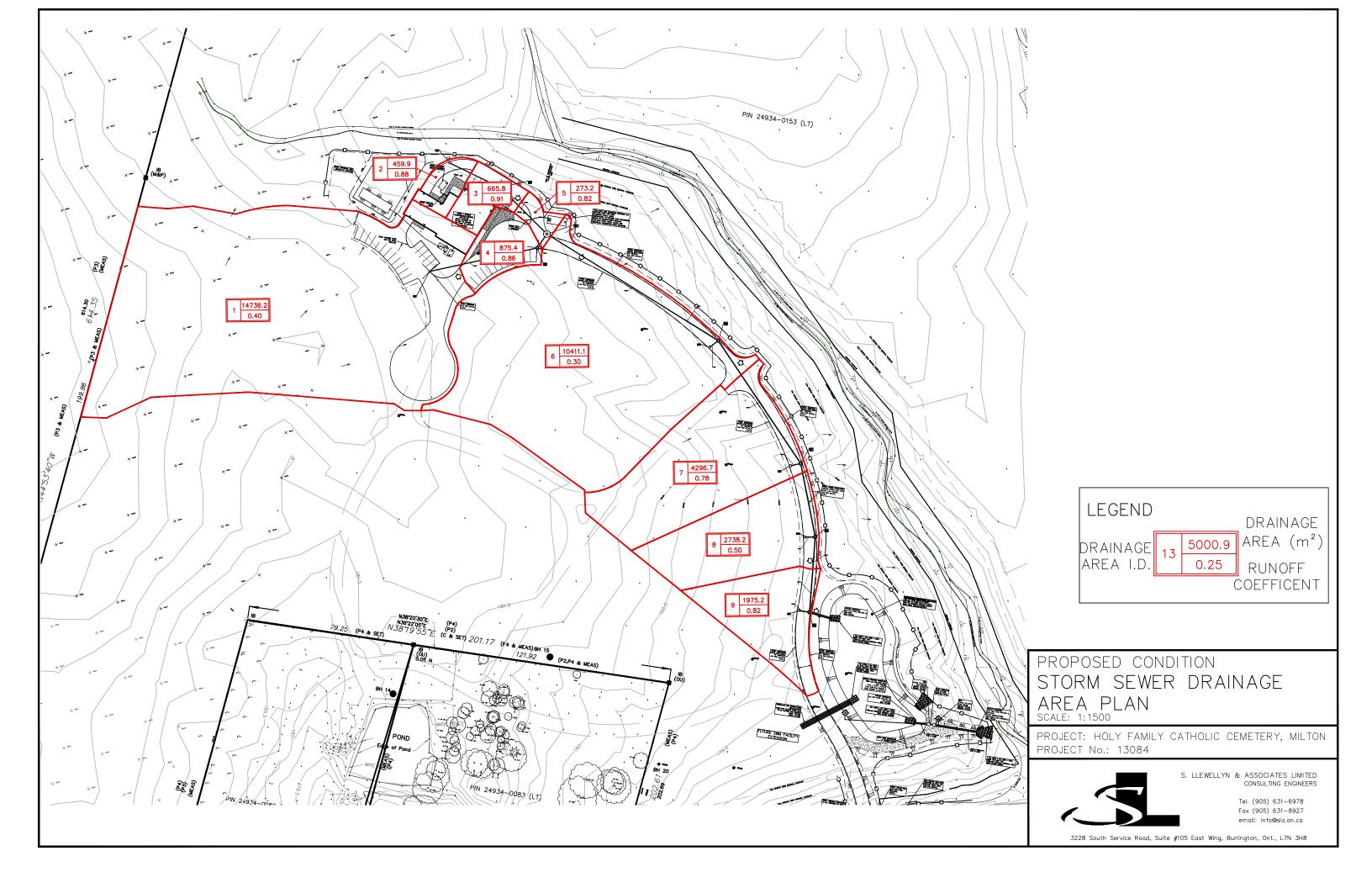


Outlet Device (Quantity)

Type:	Orifice Pipe 1
Diameter (mm)	300
Area (m ²)	0.07069
Invert Elev. (m)	177.27
C/L Elev. (m)	177.42
Disch. Coeff. (C _d)	0.8
Discharge (Q) =	C _d A (2 g H) ^{0.5}
Number of Orifices:	1



			Pond Volume	S	Outlet	No. 1	Outlet No. 2		
	Elevation m	Pond Area m ²	Pond Increm. Volume m ³	Cumulative Tank Volume m ³	H	Discharge m ³ /s	H	Discharge m ³ /s	Total Discharge m ³ /s
Orifice Invert	177.27	0	0	0	0.000	0.0000			0.0000
Bottom of Pond	177.30	1491	0	Ő	0.030	0.0033			0.0033
0.10m Depth of ponding	177.40	1548	152	152	0.130	0.0216			0.0216
0.20m Depth of ponding	177.50	1613	158	310	0.230	0.0512			0.0512
0.30m Depth	177.60	1678	165	475	0.330	0.0854			0.0854
0.40m Depth of Ponding	177.70	1745	171	646	0.430	0.1169			0.1169
0.50m Depth of Ponding	177.80	1814	178	824	0.530	0.1424			0.1424
0.60m Depth of Ponding	177.90	1884	185	1009	0.630	0.1650			0.1650
0.70m Depth of Ponding	178.00	1955	192	1200	0.730	0.1841			0.1841
0.80m Depth	178.10	2027	199	1400	0.830	0.2014			0.2014
0.90m Depth of Ponding	178.20	2101	206	1606	0.930	0.2174			0.2174
1.00m Depth of Ponding	178.30	2176	214	1820	1.030	0.2322			0.2322
Weir Sill Elevation	178.35	2214	110	1930	1.080	0.2393	0.000	0.0000	0.2393
1.10m Depth of Ponding	178.40	2252	112	2041	1.130	0.2462	0.050	0.0523	0.2985
Top of Pond	178.50	2330	229	2270	1.230	0.2594	0.150	0.2717	0.5311



Project		13084																
Sheet N	lo.	1							N OF MIL						. А		A=	959.00
Checke	d by:				S	ΓORΜ	SEWER	DES	IGN - (5 year	Town o	of Milto	on)		I = (T+B) ^C		B=	5.70
Comput	ed by:	YM					Project:	Holy Family Catholic Cemetery							C=	0.8024		
Date:		June 21, 202	2														n=	0.013
Area							Cumulative	Time of				Pipe	e Character	istcs		Travel	Fraction	
No.	Street Name	From MH	To MH	Area [ha]	С	A*C	A*C	Conc. [min]	Intensity [mm/hr]	Qpeak [m³/s]	Diameter [mm]	Slope [%]	Length [m]	Capacity [m³/s]	Velocity [m/s]	Time [min]	Full [%]	Remarks
Drainag	ge to Stormwater Man	nagement Dry F	Pond															
1		CB9.1	CBMH9	1.47	0.40	0.59	0.59	10.00 10.45	105.25	0.172	450	1.50%	52.0	0.315	1.92	0.45	55%	
4		CBMH9	CBMH8	0.09	0.86	0.08	0.67	10.45 10.54	102.89	0.190	450	1.00%	8.0	0.257	1.57	0.08	74%	
								10.54										
2		CB10.1	CBMH10	0.05	0.88	0.04	0.04	10.00	105.25	0.013	250	1.00%	26.5	0.054	1.06	0.42	24%	
								10.42										
3		CBMH10	CBMH8	0.07	0.91	0.06	0.11	10.42	103.06	0.031	300	1.60%	31.0	0.111	1.52	0.34	28%	
5		CBMH8	CBMH7	0.03	0.82	0.02	0.80	10.76 12.01	101.35	0.225	525	0.40%	95.5	0.283	1.27	1.25	79%	
6		CBMH7	CBMH6	1.04	0.30	0.31	1.11	12.01	95.55	0.295	600	0.40%	70.0	0.406	1.39	0.84	73%	
7		CBMH6	CBMH5	0.43	0.78	0.34	1.45	12.85	92.06	0.370	675	0.40%	35.5	0.555	1.50	0.39	67%	
8		CBMH5	CBMH3	0.27	0.50	0.14	1.58	13.25	90.52	0.398	675	0.40%	35.5	0.555	1.50	0.39	72%	
9		CBMH3	Headwall	0.20	0.82	0.16	1.74	13.64 13.64	89.04	0.431	675	0.60%	7.0	0.680	1.84	0.06	63%	
								13.70										

RIVER STONE SIZING WITHIN SMT-1

River Stone sizing calculations based on procedures outlined in Chapter 5 of the MTO Drainage Manual.

RIVER STONE APRON HYDRUALIC CHARACTERISTICS

Consider a cross-section through the river stone apron immediately downstream of the culvert structure:

Bottom width (m) =	4.5	
Long. Slope (%) (S) =	0.55	
Side slope H:V =	3:1	
Mannings 'n' =	0.030	
Flow rate (m³/s) =	12.660	(Worst case scenario - Regional Storm)
Analysis results from HEC-RAS	:	
Depth of flow (m) =	1.28	
Flow velocity (m/s) =	1.51	
Area of flow (m ²) =	8.39	
Wetted Perim. (m) =	6.77	
Hydraulic Radius (m) (R) =	1.239	

DETERMINE SHEAR STRESS ON CHANNEL BED AND BANK

Unit weight of water (γ) N/m ³ =	9810			
Mean boundary shear stress ($ au_{ m c}$) :				
$ au_{ m c}$ = γ R S=		67	N/m ²	
Shear stress on channel bottom ($\tau_{\rm b}$) :		•••	2	<i>,</i> ,
$\tau_{\rm b}$ = K _b $\tau_{\rm c}$ = 1.43 x 67 =		96	N/m²	(governs)
Shear stress on channel bank ($ au_{ extsf{b}}$) :				
$\tau_{s} = K_{bk} \tau_{c} = 1.29 \times 67 =$		86	N/m ²	

Note: K $_{b}$ & K $_{b\,k}$ from Design Sheets 2.11 and 2.12 of the MTO Drainage Manual

DETERMINE RIVER STONE SIZING

Based on Equation 5.31 (MTO drainage manual), the critical shear stress on a particle can be determined by:

	$ au_{ m cb}$ = 0.0642 x D ₅₀ x 9.81	
	τ_{cb} = 126	
	$ au_{ m cs}$ = Kcs x ${m {\cal T}}$ cb	Kcs=0.775
	$ au_{ m cs}$ = 0.775 x 126	Note: Equation 5.37 or Design Chart 2.14
	$ au_{ m cs}$ = 97.65	
For D ₅₀ (mm)=	200 $ au_{\rm cs}$ = Tcb x 0.775	98 N/m² > 96 O.K.

Therefore, use minimum 200 mm riverstone (D_{50} = 250 mm) at all locations

APPENDIX B

AMEC SWMHYMO INPUT/OUTPUT INFORMATION

The Catholic Cemeteries of the Diocese of Hamilton Stormwater Management Report Proposed Cemetery Development -Regional Road 25 and Lower Baseline Road, Town of Milton February, 2012



FUTURE LAND USE CONDITIONS WITH STORMWATER MANAGEMENT

SWM.dat

2 Metric units *# Project Name: [Holy Family Catholic Cemetery] Project Number: [111063] *# : 08-16-2011 Date : [C. Silvestri] : Philips Engineering Ltd *# Modeller *# Company *# License # 3569108 *#********** START=0.0 HRS METOUT=2 NSTORM=1 NRUN=1 START MILSCS12,002 * "STORM.001" READ STORM * Existing Conditions \mathbf{x} * Subarea 103 - Existing Conditions Conditions Entering Property CALIB NASHYD ID= 1 NHYD=103 DT=5 min AREA=42.1 ha DWF=0.0 cms CN=86.0 IA=2.5 mm N=3.0 Tp=0.399 hrs END=-1 * * Route through Channel 104 ID=2 NHYD=2104 IDIN=1 DT=5.0 min ROUTE CHANNEL CHLGTH=440 m CHSLP=1 % FPSLP=1 % VSN=104 NSEG=3 ROUGH DIST(m) 0.04 59 -0.03 60 0.04 89 DIST(m) ELEV(m) 179.5 0.0 18.0 178.5 59.0 178.0 59.5 177.7 60.0 178.0 89.0 178.5 * Subarea 104 - Creek Block Upstream of Proposed 5 acre Pond CALIB NASHYD ID= 3 NHYD=104 DT=5 min AREA= 24.1 ha DWF=0.0 cms CN=86.0 IA=2.5 mm N=3.0 Tp=0.208 hrs END=-1 * ID= 1 NHYD=1104 IDI= 3 IDII= 2 ADD HYD * Route through channel 105 ID=2 NHYD=2105 IDIN=1 DT=5.0 min ROUTE CHANNEL CHLGTH=365 m CHSLP=0.4 % FPSLP=0.4 % VSN=105 NSEG=3 ROUGH DIST(m) 52 53 0.04 -0.03 0.04 100 DIST(m) ELEV(m) 0.0 178.0 177.0 28.0 52.0 176.9 52.5 176.6 53.0 176.9 80.0 177.0 100.0 177.5 * Subarea 105 - Creek Block Upstream of Proposed Pond 2nd 5 acre pond ID=3 NHYD=105 DT=5 min AREA= 19.2 ha DWF=0.0 cms CN=86.8 IA=2.5 mm N=3.0 Tp=0.176 hrs END=-1 CALIB NASHYD *

ADD HYD	SWM.dat ID=1 NHYD=1105 IDI=3 IDII=2
ROUTE CHANNEL	ID=2 NHYD=2106 IDIN=1 DT=5.0 min CHLGTH=385 m CHSLP=0.67 % FPSLP=0.67 % VSN=106 NSEG=3 ROUGH DIST(m) 0.04 77 -0.03 78 0.04 120
*	$\begin{array}{llllllllllllllllllllllllllllllllllll$
* Subarea 106 - Cre CALIB NASHYD	ek Block Upstream of Pond ID= 3 NHYD=106 DT=5 min AREA= 15.3 ha DWF=0.0 cms CN=87.2 IA=2.5 mm N=3.0 Tp=0.168 hrs END=-1
* ADD HYD *	ID= 1 NHYD=1106 IDI= 3 IDII= 2
* Subarea 107 - Eas CALIB STANDHYD	t drainage area for tributary ID= 3 NHYD=107 DT=5 min AREA= 15.27 ha XIMP=0.10 TIMP=0.17 DWF=0.0 cms LOSS=2 CN=88 DPSP=2.5 mm SLPP=1.27 % LGP=717 MNP=0.250 SCP=0.0 DPSI=1.57 mm SLPI=1.27 % LGI=100 MNI=0.017 SCI=0.0 END=-1
* ADD HYD	ID=2 NHYD=1107 IDI=1 IDII=3
* Route Eastern Sec ROUTE CHANNEL	tion of Tributary through Channel-108 ID=1 NHYD=2108 IDIN=2 DT=5.0 min CHLGTH=1300 m CHSLP=1.67 % FPSLP=1.67 % VSN=108 NSEG=3 ROUGH DIST(m)
	0.04 65 -0.03 66 0.04 110
	0.04 65 -0.03 66
* * Subarea 108 CALIB NASHYD *	0.04 65 -0.03 66 0.04 110 DIST(m) ELEV(m) 0.0 172.0 42.0 167.5 51.0 160.0 65.0 159.0 65.5 158.7 66.0 159.0 88.0 165.0
* Subarea 108 CALIB NASHYD * ADD HYD PRINT HYD	0.04 65 -0.03 66 0.04 110 DIST(m) ELEV(m) 0.0 172.0 42.0 167.5 51.0 160.0 65.0 159.0 65.5 158.7 66.0 159.0 88.0 165.0 110.0 170.0 ID= 2 NHYD=108 DT=5 min AREA=33.5 ha DWF=0.0 cms
* Subarea 108 CALIB NASHYD * ADD HYD PRINT HYD *	0.04 65 -0.03 66 0.04 110 DIST(m) ELEV(m) 0.0 172.0 42.0 167.5 51.0 160.0 65.0 159.0 65.5 158.7 66.0 159.0 88.0 165.0 110.0 170.0 ID= 2 NHYD=108 DT=5 min AREA=33.5 ha DWF=0.0 cms CN=86.8 IA=2.5 mm N=3.0 Tp=0.295 hrs END=-1 ID=3 NHYD=004 IDI=1 IDII=2

*	SWM.dat XIMP=0.20 TIMP=0.495 DWF=0.0 cms LOSS=2 CN=83.4 DPSP=5.0 mm SLPP=0.625 % LGP=700 MNP=0.250 SCP=0.0 DPSI=1.57 mm SLPI=0.625 % LGI=3200 MNI=0.017 SCI=0.0 END=-1
* *Route NHYD=101 thr ROUTE CHANNEL	ough channel 102 ID=5 NHYD=2101 IDIN=4 DT=5.0 min CHLGTH=700 m CHSLP=0.42 % FPSLP=0.42 % VSN=102 NSEG=3 ROUGH DIST(m) 0.04 110 -0.03 111 0.04 160
*	DIST(m) ELEV(m) 0.0 182.5 90.0 180.0 110.0 179.8 110.5 179.5 111.0 179.8 130.0 180.0 160.0 182.5
* Subarea 102 - CALIB STANDHYD	ID= 4 NHYD=102 DT=5 min AREA= 272.9 ha XIMP=0.13 TIMP=0.275 DWF=0.0 cms LOSS=2 CN=84 DPSP=5.0 mm SLPP=0.98 % LGP=1350 MNP=0.250 SCP=0.0 DPSI=1.57 mm SLPI=0.98 % LGI=40 MNI=0.017 SCI=0.0 END=-1
* * Node 001 ADD HYD PRINT HYD *	ID= 6 NHYD= 001 IDI=4 IDII=5 ID= 6 NPCYC=-1
*Route NHYD=001 thr ROUTE CHANNEL	ough channel 109 ID=4 NHYD=2109 IDIN=6 DT=5.0 min CHLGTH=1000 m CHSLP=0.54 % FPSLP=0.54 % VSN=109 NSEG=3 ROUGH DIST(m) 0.04 50 -0.03 51 0.04 88
	DIST(m) ELEV(m) 0.0 176.0 14.0 175.5 18.0 175.0 26.0 174.0 42.0 173.0 50.0 173.0 50.5 172.7 51.0 173.0 58.0 173.5 88.0 174.0
* Subarea 109 CALIB NASHYD	ID= 5 NHYD=109 DT=5 min AREA= 35.1 ha DWF=0.0 cms CN=86.8 IA=2.5 mm N=3.0 Tp=0.318 hrs END=-1
* ADD HYD	ID = 6 NHYD=1109 IDI=4 IDII=5
* *Route NHYD=1109 th ROUTE CHANNEL	rough Channel 110 ID=4 NHYD=2110 IDIN=6 DT=5.0 min CHLGTH=900 m CHSLP=0.71 % FPSLP=0.71 % VSN=110 NSEG=3

SWM.dat ROUGH DIST(m) 0.04 61 -0.03 62 0.04 114 DIST(m) ELEV(m) 0.0 175.0 172.5 10.0 18.0 170.0 20.0 168.0 61.0 167.5 167.2 61.5 62.0 167.5 80.0 170.0 98.0 172.5 114.0 175.5 * * Subarea 110 ID= 5 NHYD=110 DT=5 min AREA= 21.8 ha DWF=0.0 cms CALIB NASHYD CN=87.2 IA=2.5 mm N=3.0 Tp=0.215 hrs END=-1 * ADD HYD ID= 6 NHYD= 1110 IDI=4 IDII=5 *Route NHYD=1110 through Channel 111 ID=4 NHYD=2111 IDIN=6 DT=5.0 min CHLGTH=920 m CHSLP=1.25 % FPSLP=1.25 % ROUTE CHANNEL VSN=111 NSEG=3 ROUGH DIST(m) 0.04 56 -0.03 57 105 0.04 DIST(m) ELEV(m) 172.0 0.0 16.0 170.0 44.0 159.0 159.0 56.0 158.7 56.5 159.0 57.0 84.0 170.0 105.0 175.0 2 * Subarea 111 ID= 1 NHYD=0111 DT=5 min AREA=17.3 ha DWF=0.0 cms CALIB NASHYD CN=86.4 IA=2.5mm N=3.0 Tp=0.235 hrs END=-1 * Node 002 ADD HYD ID=2 NHYD= 002 IDI=1 IDII=4 ID=2 NPCYC=-1 PRINT HYD * *#*********************** *# ID revised to ID=9, PREVIOUSLY ID=1 WAS BEING OVER-WRITEN * At confluence of two main branches ADD HYD ID=9 NHYD=1108 IDI=3 IDII=2 * * Calculations for South-West section of site (3 subcatchments have been created for catchment 201) *#******************************* **** ***# SUBCATCHMENT CONTAINING CEMETERY LANDS** **** ***# PROPOSED IMPERVIOUSNESS LESS THAN 20%**

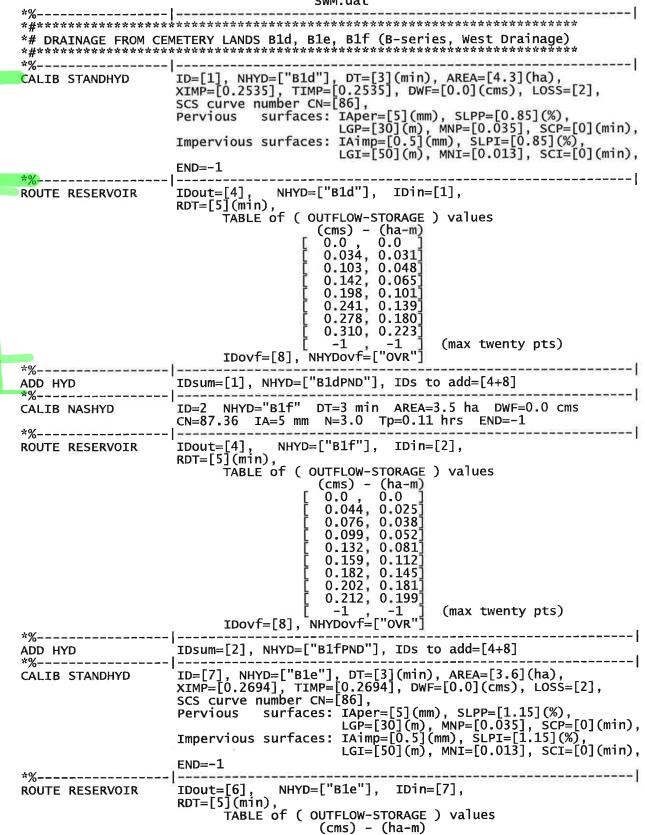
SWM.dat *# THEREFORE, CN VALUE HAS BEEN MODIFIED TO ACCOUNT FOR PROPOSED IMPERVIOUS SURFACES ×# *#******** *# DRAINAGE FROM 201A (EXTERNAL) *#********** *%-----|-----| ID=1 NHYD="201A" DT=5 min AREA=68.2 ha DWF=0.0 cms CN=86.0 IA=5 mm N=3.0 Tp=0.47 hrs END=-1 CALIB NASHYD *#Route NHYD=201A through Channel SMT-2 ID=2 NHYD="SMT-2R" IDIN=1 DT=5.0 min ROUTE CHANNEL CHLGTH=450 m CHSLP=0.75 % FPSLP=0.75 % VSN=CA1 NSEG=3 ROUGH DIST(m) 0.04 35 -0.03 45 0.04 90 DIST(m) ELEV(m) 101.0 0.0 35.0 100.5 40.0 100.0 45.0 100.5 90.0 101.0 *%-----|-----| ______ *#*********************** ID=1 NHYD="A1a" DT=5 min AREA=0.8 ha DWF=0.0 cms CALIB NASHYD CN=87.69 IA=5 mm N=3.0 Tp=0.27 hrs END=-1 *%-----|-----| _____ ID=3 NHYD="A1b" DT=3 min AREA=6.1 ha DWF=0.0 cms CN=86.13 IA=5 mm N=3.0 Tp=0.07 hrs END=-1 CALIB NASHYD *%-----ID=4 NHYD="A1c" DT=3 min AREA=3.2 ha DWF=0.0 cms CALIB NASHYD CN=87.24 IA=5 mm N=3.0 Tp=0.14 hrs END=-1 *%-----|----------ID=6 NHYD="A1d" DT=5 min AREA=5.3 ha DWF=0.0 cms CALIB NASHYD CN=87.31 IA=5 mm N=3.0 Tp=0.21 hrs END=-1 *%-----|-----|------ROUTE RESERVOIR IDout=[7], NHYD=["A1d"], IDin=[6], RDT = [5](min), TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m) 0.0, 0.0] 0.034, 0.028] 0.103, 0.043] 0.142, 0.059] 0.198, 0.093] 0.241, 0.129] 0.278, 0.168] 0.278, 0.168 0.310, 0.209 -1 -1 (max twenty pts) IDovf=[8], NHYDovf=["OVR"]*%-----| IDsum=[6], NHYD=["A1dPND"], IDs to add=[7+8] ADD HYD IDsum=[5], NHYD=["SMT2"], IDs to add=[1+2+3+4+6] ADD HYD *%_____| -----

SWM.dat

SWM.dat							
*#************************************							
*%CALIB NASHYD	ID=1 NHYD="201B" DT=5 min AREA=13.4 ha DWF=0.0 cms CN=86.0 IA=5 mm N=3.0 Tp=0.31 hrs END=-1						

CALIB NASHYD	ID=2 NHYD="B1a" DT=3 min AREA=4.6 ha DWF=0.0 cms CN=87.02 IA=5 mm N=3.0 Tp=0.17 hrs END=-1						
*%ROUTE RESERVOIR	<pre>IDout=[4], NHYD=["B1a"], IDin=[2], RDT=[5](min), TABLE of (OUTFLOW-STORAGE) values</pre>						
*%ADD HYD	 IDsum=[2], NHYD=["B1aPND"], IDs to add=[4+8]						
*%							
ADD HYD *%	IDsum=[3], NHYD=["201B"], IDs to add=[1+2]						
11	*******						
^# ROUTE NHYD=201B · *#**********************************	+ B1a through Channel SMT-4 ************************************						
ROUTE CHANNEL	ID=1 NHYD="SMT-4R" IDIN=3 DT=5.0 min CHLGTH=600 m CHSLP=0.85 % FPSLP=0.85 % VSN=CB1 NSEG=3 ROUGH DIST(m) 0.04 35 -0.03 45 0.04 90						
<u>ئەر</u>	DIST(m) ELEV(m) 0.0 101.0 35.0 100.5 40.0 100.0 45.0 100.5 90.0 101.0						
*%	 ID=3 NHYD="B1b" DT=3 min AREA=5.0 ha DWF=0.0 cms CN=86.14 IA=5 mm N=3.0 Tp=0.17 hrs END=-1						
CALIB NASHYD	ID=4 NHYD="B1c" DT=3 min AREA=1.0 ha DWF=0.0 cms CN=87.71 IA=5 mm N=3.0 Tp=0.10 hrs END=-1						
	TDSUM=[2] NHVD=["B1b/c"] TDS to add=[3+4]						
*#******	***********						
*# TOTAL DRAINAGE FI	ROM SUBCATCHMENTS 201B + B1a + B1b + B1c ************************************						
ADD HYD	IDsum=[3], NHYD=["B1East"], IDs to add=[1+2]						

SWM.dat



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	SWM.dat [0.0 , 0.0] [0.034, 0.041] [0.103, 0.062] [0.142, 0.085] [0.198, 0.133] [0.241, 0.184] [0.278, 0.240] [0.310, 0.299] [-1 , -1] (max twenty pts) IDovf=[8], NHYDovf=["OVR"]
*% ADD HYD	
ADD HYD *% ADD HYD	 IDsum=[2]. NHYD=["B1west"]. IDs to add=[1+2+7]
*%	IDsum=[2], NHYD=["B1West"], IDs to add=[1+2+7]
*# TOTAL DRAINAGE F	ROM SUBCATCHMENTS 201B+B1a+B1b+B1c+B1d+B1e+B1f
ADD HYD	 IDsum=[4], NHYD=["SMT4"], IDs to add=[2+3]
*#************************************	
*# DRAINAGE FROM 20 *#****	1C (EXTERNAL)
	ID=1 NHYD="201C" DT=5 min AREA=91.0 ha DWF=0.0 cms CN=86.0 IA=5 mm N=3.0 Tp=0.50 hrs END=-1 ***********
*#************************************	METERY LANDS C1a, C1b, C2
CALIB NASHYD	 ID=2 NHYD="C1a" DT=5 min AREA=7.0 ha DWF=0.0 cms CN=86.0 IA=5 mm N=3.0 Tp=0.21 hrs END=-1
*% *#*********************	 *******
*# Cla_SWM_FACTLITY	***
ROUTE RESERVOIR	IDout=[6], NHYD=["C1a"], IDin=[2], RDT=[5](min),
*%	TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m) [0.0, 0.0] [0.034, 0.021] [0.103, 0.032] [0.142, 0.043] [0.198, 0.067] [0.241, 0.093] [0.278, 0.120] [0.310, 0.150] [0.325, 0.165] [-1 , -1] (max twenty pts) IDovf=[8], NHYDovf=["OVR"]
*#************	****************
*# DISCHARGE FROM C *#****	1a SWM FACILITY ************
ADD HYD *%	IDsum=[2], NHYD=["C1aPND"], IDs to add=[6+8]
CALIB NASHYD	ID=3 NHYD="C1b" DT=2 min AREA=0.5 ha DWF=0.0 cms CN=86.54 IA=5 mm N=3.0 Tp=0.04 hrs END=-1
*% *#*************	
*# DISCHARGE FROM E *#*****	XTERNAL LANDS(WEST)+ MILTON CEMETERY LANDS ************************************
ADD HYD	IDsum=[2], NHYD=["EX+MC"], IDs to add=[1+2+3]
*%	

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SWM.dat
*#****************
*# Route NHYD=201C through Channel SMT-1
*#********
           ID=1 NHYD=["SMT-1"] IDIN=2 DT=5.0 min
CHLGTH=275 m CHSLP=0.50 % FPSLP=0.50 %
ROUTE CHANNEL
           VSN=CC1 NSEG=3
           ROUGH DIST(m)
            0.04 35
            -0.03 45
            0.04 90
           DIST(m) ELEV(m)
             0.0
                 101.0
             35.0
                 100.5
            40.0
                 100.0
             45.0
                 100.5
             90.0
                 101.0
*# TOTAL DRAINAGE FROM SUBCATCHMENTS
ADD HYD _____IDsum=[1], NHYD=["SMT1"], IDs to add=[1+7]
*%------|------|
*#**********
ADD HYD
*#****
*# DRAINAGE FROM 201D (EXTERNAL)
*#*********
CALIB NASHYD ID=2 NHYD="201D" DT=5 min AREA=28.9 ha DWF=0.0 cms CN=86.0 IA=5 mm N=3.0 Tp=0.41 hrs END=-1
*%-----
                                  ------|
*#*********************
*# SUBCATCHMENT 201D ROUTED
*# THROUGH Channel SMT-3
*#*****
*%------|------|
           ID=3 NHYD="SMT-3R" IDIN=2 DT=5.0 min
CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 %
ROUTE CHANNEL
           VSN=CD1 NSEG=3
           ROUGH DIST(m)
            0.04 10
-0.03 15
0.04 20
           DIST(m) ELEV(m)
             0.0
                 178.0
             26.0
                 177.6
             30.0
                 176.0
                 177.57
             34.0
             50.0
                 178.0
*%______|______|
*#*************
*# DRAINAGE FROM CEMETERY LANDS D1a, D1b
*#**********
*%-----|
           'ID=2, NHYD=["D1a"], DT=3 min, AREA=1.9 ha, DWF=0.0 cms
CALIB NASHYD
```

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20/	SWM.dat CN=87.99, IA=5 mm, N=3.0, Tp=0.13 hrs, END=-1
CALTB NASHYD	ID=7, NHYD=["D1b"], DT=3 min, AREA=1.9 ha, DWF=0.0 cms CN=86.0, IA=5 mm, N=3.0, Tp=0.09 hrs, END=-1
*%	 ****************************
# TOTAL DIATRAGE T *#***********************************	ROM SUBCATCHMENTS 201D+D1a+D1b
*%	**************************************
*#*****	**********
*# CONFLUENCE SMT 1	-3
*% ADD HYD	**************************************
*%	
$\begin{array}{c} *\# * * * * * * * * * * * * * * * * * *$	*************************************
	ROM SUBJECT LANDS + EXT.SUBCATCHMENTS 201A/B/C/D
ADD HYD *%	ID=[8] NHYD=["1201"] IDs to add=[1+4+6+5]
*Route NHYD=201 thr	ough Channel 202 ID=3 NHYD=2202 IDIN=8 DT=5.0 min CHLGTH=475 m CHSLP=1.05 % FPSLP=1.05 % VSN=202 NSEG=3 ROUGH DIST(m) 0.04 55 -0.03 56 0.04 105
*	DIST(m) ELEV(m) 0.0 180.0 15.0 175.0 55.0 174.9 55.5 174.6 56.0 174.9 70.0 175.0 105.0 180.0
* Subarea 202 CALIB NASHYD *	ID= 4 NHYD=202 DT=5 min AREA=21.6 ha DWF=0.0 cms CN=86.8 IA=2.5 mm N=3.0 Tp=0.303 hrs END=-1
ADD HYD	ID=2 NHYD=1202 IDI=3 IDII=4
* Subarea 203 CALIB NASHYD *	ID= 3 NHYD=203 DT=5 min AREA=26.3 ha DWF=0.0 cms CN=86.8 IA=2.5mm N=3.0 Tp=0.240 hrs END=-1
* Node 003 - exit f ADD HYD PRINT HYD *	rom site ID= 4 NHYD=003 IDI=3 IDII=2 ID= 4 NPCYC=-1
*#************************************	**************************************
*Subarea 204 - off CALIB NASHYD *	site ID= 2 NHYD=204 DT=5 min AREA=53.6 ha DWF=0.0 cms CN=87.6 IA=5 mm N=3.0 Tp=0.626 hrs END=-1
* ADD HYD *	ID= 3 NHYD= 1204 IDI= 2 IDII= 4

*#*****	****	SWM.dat **********	*****	****
*# ROUTE through Ch *#***********************************	annel 205 ELIMI	NATED, OUT *********	SIDE OF ST ********	UDY AREA
*#*****	******	******	******	****
*# SUBCATCHMENT 205 *#***********************************	ELIMINTATED, O	UTSIDE OF S *********	TUDY AREA *****	****
* Confluence of tri	butaries off si	te *********	*****	****
*# ID REVISED TO ID *#****			******	****
ADD HYD PRINT HYD *#***********************************	ID=2 NHYD=008 ID=2 NPCYC=-1		II=3 *******	****
START	START=0.0 HRS MILSCS12.005	metout=0	NSTORM=1	NRUN=2
* START	START=0.0 HRS MILSCS12.010	METOUT=0	NSTORM=1	NRUN=3
* START	START=0.0 HRS MILSCS12.025	METOUT=0	NSTORM=1	NRUN=4
* START	START=0.0 HRS MILSCS12.050	METOUT=0	NSTORM=1	NRUN=5
* START	START=0.0 HRS MILSCS12.100	METOUT=0	NSTORM=1	NRUN=6

FINISH

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					14C.	M.sun							
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	single	event	: and	conti	านอนรุ	hydro	ologi	c si	mulat	ion	mode		****
******	based	on th	e pr	inciple HYMO-83	es of	HYMO	and	its	succe	SSO	rs		****
******	******	*****	0111	******	5 anu ******	UIIA1	*****	7. ****	****	***	****		
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		Maxin	ium va	alue fo	DL. TD	numpe	ers		10				
****		Max.	numb	er of I	rainfa	all po	oints		5000				
*******	al al de de de de de	Max. Max.	numb	er of i er of ⁻	rainfa flow p	all po points	oints s	: 1	5000 5000			* *	****
****	*****	Max. Max.	numb	er of i er of ⁻	rainfa flow p	all po points	oints s	: 1	5000 5000	***	****	* *	****
******* ******* **** DESCRIP		Max. Max. ******	numbo	er of er of *****	rainfa flow p *****	all po points	oints 5 *****	: <u>1</u> ****	5000 5000 *****			**	**** *****
******* ******* *** DESCRIP ***	TION SU	Max. Max. ******	numbo numbo *****	er of er of ******	rainfa flow p ****** DERS (all po points ****** (units	oints ***** 5 dep	: 1 **** end	5000 5000 ***** on ME			**	·***** ·***** ·) **
******* ******** *** DESCRIP *** *** ID:	TION SU	Max. Max. ****** UMMARY	numbo numbo ***** TABI	er of er of ****** LE HEAI	rainfa flow p ***** DERS (all po points ***** (units numbe)	s dep	: 1 **** end 1-10	5000 5000 ***** on ME	TOU	Г in	** ***** START	
******* **** DESCRIP *** ID: *** ID: *** NHYD:	TION SU	Max. Max. ****** UMMARY	numbo numbo ***** TABI	er of er of ****** LE HEAI	rainfa flow p ***** DERS (all po points ***** (units numbe)	s dep	: 1 **** end 1-10	5000 5000 ***** on ME	TOU	Г in	** ***** START	***** ***** () ** ** **
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**** DESCRIP *** DESCRIP *** DESCRIP *** ID: *** NHYD: *** AREA: *** QPEAK: *** TpeakDa *** R.C.: *** R.C.:	PTION SU Hydrog Hydrog Draina Peak te_hh:r Runof Runof see W see W	Max. Max. ****** graph graph age ar flow co mm is f Volu f Coef ARNING ERROR	TAB TAB TDEN rea a: of sin the o ficio or l mes:	er of er of ****** LE HEAI tifica rence i rence i ssocia mulate date a f simu f simu ent of NOTE mu sage p	rainfa flow p ***** DERS (tion r number ted w ted w d hydr d hydr d hydr lated simu essage rinted	all po points (units (units (units (units (units) (uni	s dep s dep rs, (6 dig ydrog oh, (5 or oph, (5 or))) (5 or oph, (5 or oph	: 1 **** end its raph ft^3 peak h, (ogra at e f ru	5000 5000 ***** or ch , cac / s) o / flow in) of nd of	iara iara ir (i ir (i irat	τ in or (h n^3/s nm). io). n.	** START). a.).).	****** ******************************
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*** DESCRIP *** DESCRIP *** ID: *** ID: *** NHYD: *** AREA: *** QPEAK: *** TpeakDa *** R.V.: *** R.C. *** * **	PTION SU Hydrog Draina Peak te_hh:r Runof Runof see W see I	Max. Max. ****** UMMARY graph graph age ar flow c mm is f Volu f Coef ARNING ERROR *****	number number reme reme for a for a for a for a for a for a mes for a for a fo	er of er of tifica rence i ssocia mulate date a f simu ent of NOTE mu sage p	rainfa flow p ***** DERS tion r number ted w d hydr nd tir lated simu essage rinted ****	all po points (units number rs, ((ith hy rograp ne of hydrc hydrc a priu d at (*****	s dep rs, (6 dig ydrog oh, (the ograp hydr nted end o *****	: 1 **** end 1-10 its ft^3 peak h, (ogra at et **** ****	5000 5000 ***** or ch , (ac /s) o flow in) o ph, (ind of m. *****	arac arac or (i rat ru	Γ in cters or (h n^3/s nm). io). n. *****	** START). a.).). ******	······································
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<pre>#************************************</pre>	lic Cemete g Ltd	ery] Project Nur	nber: [111063]
RUN:COMMAND# 001:0001			
START			
$\Gamma TZERO = .00 hrs on$	01		
[TZERO = .00 hrs on [METOUT= 2 (1=imperial, [NSTORM= 1] [NRUN = 1]	2=metric d	putput)]	
[NRUN = 1] 001:0002			
READ STORM			
Filename = STORM.001			
Comment = TOWN OF MILTON 12	HOUR 2 YEA	AR SCS STORM (1998	IDF DATA)
[SDT=12.00:SDUR= 12.00:PTOT=	42.82]		
001:0003ID:NHYD CALIB NASHYD 01:000103	AREA	QPEAK-TpeakDate_I	nn:mmR.VR.C
[CN = 86.0: N = 3.00]	42.10	1.550 NO_date	0.18 19.90 .405
[Tp = .40:DT = 6.00]			
001 · 0004TD : NHYD	AREA	QPEAK-TpeakDate_	hh:mmR.VR.C
ROUTE CHANNEL \rightarrow 01:000103 [RDT= 6.00] out<- 02:002104	42.10	1.550 No_date	6:18 19.90 n/a
[RDT = 6.00] out < - 02:002104	42.10	1.365 No_date	6:30 19.90 n/a
[L/S/n= 440./1.000/.030] {Vmax= .616:Dmax= .476}			
001:0005ID:NHYD	AREA	OPEAK-TpeakDate_	hh:mmR.VR.C
CALIB NASHYD 03:000104	24.10	1.349 No_date	6:06 19.90 .465
[CN= 86.0: N= 3.00]			
[Tp= .21:DT= 6.00]		ODEAK TROOKDATO	
	AKEA	1 349 No date	6.06 19 90 n/a
+ 02:002104	42.10	1.365 No date	6:30 19.90 n/a
[DT= 6.00] SUM= 01:001104	66.20	2.167 No_date	6:12 19.90 n/a
[TP= .21:D1= 0.00] 001:0006ID:NHYD ADD HYD 03:000104 + 02:002104 [DT= 6.00] SUM= 01:001104 001:0007ID:NHYD ROUTE CHANNEL -> 01:001104 [RDT= 6.00] out<- 02:002105 [L/S/n= 365./ .400/.030]	AREA	QPEAK-TpeakDate_	hh:mmR.VR.C
ROUTE CHANNEL $\rightarrow 01:001104$	66.20	2.167 No_date	6:12 19.90 n/a
[RD1 = 6.00] OUT <- 02:002105 [L/S/n = 365./ .400/.030]	66.20	1.825 NO_date	6:30 19.90 h/a
$\{Vmax = .367: Dmax = .456\}$			
001:0008ID:NHYD	AREA	QPEAK-TpeakDate_	hh:mmR.VR.C
001:0008ID:NHYD * CALIB NASHYD 03:000105	19.20	1.210 No_date	6:00 20.59 .481
[CN= 86.8: N= 3.00]			
[Tp= .18:DT= 6.00] 001:0009ID:NHYD		OPFAK-TheakDate	hhimmRV-RC-
ADD HYD 03:000105	19.20	1.210 No_date	6:00 20.59 n/a
+ 02:002105	66.20	1.825 No_date	6:30 19.90 n/a
[DT= 6.00] SUM= 01:001105	85.40	2.302 No_date	6:12 20.06 n/a
001:0010ID:NHYD ROUTE CHANNEL -> 01:001105	AREA 85.40	QPEAK-TpeakDate_ 2.302 No_date	nn:mmR.VR.C 6:12 20.06 n/a
[RDT= 6.00] out<- 02:002106	85.40	2.166 No_date	6:30 20.06 n/a
[L/S/n= 385./ .670/.030]	05110		20100 11/4
{Vmax= .536:Dmax= .448}		_	
001:0011ID:NHYD			
* CALIB NASHYD 03:000106	15.30	1.020 No_date	6:00 20.95 489
[CN= 87.2: N= 3.00] [Tp= .17:DT= 6.00]			
001:0012ID:NHYD	AREA	QPEAK-TpeakDate_	hh:mmR.VR.C
ADD HYD 03:000106	15.30	1.020 No date	6:00 20.95 n/a
+ 02:002106	85.40	2.166 No_date	6:30 20.06 n/a
[DT= 6.00] SUM= 01:001106 001:0013ID:NHYD	100.70	2.496 No_date	
* CALIB STANDHYD 03:000107	15.27	.309 No_date	
		1212 <u>_</u> ww.co	

SWM.SU	Im
[XIMP=.10:TIMP=.17]	
[LOSS= 2 :CN= 88.0]	
[Pervious area: IAper= 2.50:SLPP=]	.27:LGP= 717.:MNP=.250:SCP= .0]
Ermonyjous anos Thimp- 1 57:SLDT-1	$27 \cdot 1 \text{ GT} = 100 \cdot \text{MNT} = 017 \cdot \text{SCT} = 01$
[Impervious area: IAimp= 1.57:SLPI=1 001:0014AREA	OPEAK TrockDate hbimmP V = P C = 0
001:0014ID:NHYDAREA ADD HYD 01:001106 100.70 + 03:000107 15.27 [DT= 6.00] SUM= 02:001107 115.97 001:0015ID:NHYDAREA ROUTE CHANNEL -> 02:001107 115.97 [RDT= 6.00] out<-	$2 400 \text{ M}_{2}$
ADD HYD 01:001106 100.70	2.490 NO_0 date 0:10 20.19 Π/a
+ 03:000107 15.2/	.309 No_date 6:00 24.51 N/a
[DT= 6.00] SUM= 02:001107 115.97	2.662 No_date 6:18 20.76 n/a
001:0015AREA	QPEAK-TpeakDate_hh:mmR.VR.C
ROUTE CHANNEL -> 02:001107 115.97	2.662 No_date 6:18 20.76 n/a
[RDT = 6.00] out < - 01:002108 115.97	2.426 No date 6:42 20.76 n/a
[L/S/n= 1300./1.670/.030]	I Ho Ho_aato official attrict in a
{Vmax= 1.288:Dmax= .530}	OPEAK TrockDote blumm R.VR.C
001:0016AREA- CALIB NASHYD 02:000108 33.50	$QPEAK-IPEaKDate_III.IIIIIK.VK.C$
CALIB NASHYD 02:000108 33.50	1.559 NO_date 0:12 20.59.461
[CN = 86.8: N = 3.00]	
[Tp= .29:DT= 6.00]	
[1p= .29:D1= 6.00] 001:0017ID:NHYDAREA ADD HYD 01:002108 + 02:000108 33.50 [DT= 6.00] SUM= 03:000004 149.47 001:0018AREA PRINT HYD 03:000004 149.47 001:0019AREA DO1:0019	QPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 01:002108 115.97	2.426 No_date 6:42 20.76 n/a
+ 02.000108 33.50	1.559 No date 6:12 20.59 n/a
[DT - 6, 00] SUM - 03:000004 149 47	3 445 No date 6:18 20.72 n/a
[D] = 0.00] 50% = 05.000004 145.47	$OPEAK_T neakDate bh:mm R V -R C -$
001:0010 10. MID	2.445 No data 6.18 20.72 m/a
PRINT HYD 03:00004 149.47	5.445 NO_UALE 0.10 20.72 II/A
001:0019AREA-	QPEAK-IpeakDate_nn:mmk.vk.C
CALIB STANDHYD 04:000101 207.00	4.326 No_date 6:42 25.83 .603
[XIMP=.20:TIMP=.50]	
[LOSS= 2 :CN= 83.4]	
[Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI=	.63:LGP= 700.:MNP=.250:SCP= .0]
Tmpervious area: TAimp= 1.57:SLPT=	.63:LGT=3200.:MNI=.017:SCI= .0]
001:0020AREA-	OPFAK-TneakDate hh:mmR.VR.C
$001.0020^{$	4326 No date $6:42$ 25.83 n/a
ROUTE CHANNEL -> 04:000101 287.80 [RDT= 6.00] out<- 05:002101 287.80	$4.520 \text{ No_date} = 0.42 25.05 \text{ m/a}$
[RD] = 6.00] OUT <- 05:002101 207.00	4.204 NO_UALE 7.40 23.03 17a
[L/S/n= 700./ .420/.030]	
{Vmax= .508:Dmax= .579}	
001:0021AREA-	QPEAK-TpeakDate_hh:mmR.VR.C
* CALIB STANDHYD 04:000102 272.90	6.080 No_date 6:00 21.82 .510
[XIMP=.13:TIMP=.28]	
[LOSS = 2 : CN = 84.0]	
[Pervious area: IAper= 5.00:SLPP=	$98 \cdot 1 \text{ GP} = 1350 \cdot \text{MNP} = 250 \cdot \text{SCP} = 01$
[Impervious area: IAimp= 1.57:SLPI=	$08!1CT = 10 \cdot MNT = 017:SCT = 017$
001:0022AREA-	OPEAK TrockDate hhimm P.VP.C
001:0022AREA-	$QPEAK-IPEaKDate_III.IIIIIK.VK.C$
ADD HYD 04:000102 272.90	$6.080 \text{ NO}_{date} = 0.00 21.02 \text{ I/a}$
+ 05:002101 287.80	4.264 No_date 7:48 25.83 N/a
[DT= 6.00] SUM= 06:000001 560.70	7.428 No_date /:42 23.88 n/a
ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:00001 560.70 001:0023ID:NHYDAREA-	QPEAK-TpeakDate_hh:mmR.VR.C
001:0024AREA-	OPFAK-TpeakDate hh:mmR.VR.C
ROUTE CHANNEL $-> 06:000001 - 560.70$	7.428 No date 7:42 23.88 n/a
ROUTE CHANNEL -> 06:000001 560./0	7.428 No_date 7:42 23.88 n/a 7.227 No date 7:54 23.88 n/a
ROUTE CHANNEL $\rightarrow 06:000001 560.70$ [RDT= 6.00] out<- 04:002109 560.70	OPEAK-TpeakDate_hh:mmR.VR.C 7.428 No_date 7:42 23.88 n/a 7.227 No_date 7:54 23.88 n/a
[L/S/n= 1000./ .540/.030]	7.428 No_date 7:42 23.88 n/a 7.227 No_date 7:54 23.88 n/a
[L/S/n= 1000./ .540/.030] {\/max= 938.Dmax= 777}	
[L/S/n= 1000./ .540/.030] {\/max= 938.Dmax= 777}	
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025AREA- CALIB NASHYD 05:000109 35.10	
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]	
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025AREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025AREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025AREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025AREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025AREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025AREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025AREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025AREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [Tp= .32:DT= 6.00] 001:0026ID:NHYDAREA- ADD HYD 04:002109 560.70 + 05:000109 35.10 [DT= 6.00] SUM= 06:001109 595.80 001:0027ID:NHYDAREA- ROUTE CHANNEL -> 06:001109 595.80 [RDT= 6.00] out<- 04:002110 595.80	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [Tp= .32:DT= 6.00] 001:0026ID:NHYDAREA- ADD HYD 04:002109 560.70 + 05:000109 35.10 [DT= 6.00] SUM= 06:001109 595.80 001:0027ID:NHYDAREA- ROUTE CHANNEL -> 06:001109 595.80 [RDT= 6.00] out<- 04:002110 595.80 [L/S/n= 900./ .710/.030]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [Tp= .32:DT= 6.00] 001:0026ID:NHYDAREA- ADD HYD 04:002109 560.70 + 05:000109 35.10 [DT= 6.00] SUM= 06:001109 595.80 001:0027ID:NHYDAREA- ROUTE CHANNEL -> 06:001109 595.80 [RDT= 6.00] out<- 04:002110 595.80 [L/S/n= 900./ .710/.030] {Vmax= .803:Dmax= .715}	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481 QPEAK-TpeakDate_hh:mmR.VR.C 7.227 No_date 7:54 23.88 n/a 1.570 No_date 6:12 20.59 n/a 7.409 No_date 7:54 23.68 n/a QPEAK-TpeakDate_hh:mmR.VR.C 7.409 No_date 7:54 23.68 n/a 7.199 No_date 8:12 23.68 n/a
[L/S/n= 1000./ .540/.030] {Vmax= .938:Dmax= .777} 001:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [Tp= .32:DT= 6.00] 001:0026ID:NHYDAREA- ADD HYD 04:002109 560.70 + 05:000109 35.10 [DT= 6.00] SUM= 06:001109 595.80 001:0027ID:NHYDAREA- ROUTE CHANNEL -> 06:001109 595.80 [RDT= 6.00] out<- 04:002110 595.80 [L/S/n= 900./ .710/.030]	QPEAK-TpeakDate_hh:mmR.VR.C 1.570 No_date 6:12 20.59 .481 QPEAK-TpeakDate_hh:mmR.VR.C 7.227 No_date 7:54 23.88 n/a 1.570 No_date 6:12 20.59 n/a 7.409 No_date 7:54 23.68 n/a QPEAK-TpeakDate_hh:mmR.VR.C 7.409 No_date 7:54 23.68 n/a 7.199 No_date 8:12 23.68 n/a

S	M.sum	
	.80 1.270 No_date	6:06 20.95 .489
[CN= 87.2: N= 3.00] [Tp= .22:DT= 6.00]		
001:0029ID:NHYDA ADD HYD 04:002110 595	REAQPEAK-TpeakDat	e_hh:mmR.VR.C
ADD HYD 04:002110 595	.80 7.199 No_date	8:12 23.68 n/a
+ 05:000110 21 [DT= 6.00] SUM= 06:001110 617	.80 1.270 No_date .60 7.301 No_date	6:06 20.95 n/a 8:06 23.59 n/a
001:0030A	REAOPEAK-TpeakDat	e hh:mmR.VR.C
ROUTE CHANNEL -> 06:001110 617	.60 7.301 No_date .60 7.223 No_date	8:06 23.59 n/a 8:18 23.59 n/a
[RDT= 6.00] out<- 04:002111 617 [L/S/n= 920./1.250/.030]	.00 7.225 NO_UALE	8:18 23.59 n/a
$\{Vmax = 1, 164: Dmax = .530\}$		
001:0031A CALIB NASHYD 01:000111 17	REAQPEAK-TpeakDat	e_hh:mmR.VR.C
[CN = 86.4: N = 3.00]	.50 .520 NO_uale	0.00 20.24 .475
$\bar{\Gamma}_{Tn} = 23 \cdot DT = 6.001$		
	REAQPEAK-TpeakDat 30 926 No date	$e_nn:mm R.V R.C 6.06 20 24 n/a$
+ 04:002111 617	.60 7.223 No_date	8:18 23.59 n/a
[DT = 6.00] SUM = 02:000002 634	.90 7.293 No_date	8:18 23.50 n/a
001:0032A ADD HYD 01:000111 17 + 04:002111 617 [DT= 6.00] SUM= 02:000002 634 001:0033ID:NHYDA PRINT HYD 02:000002 634	-90 7.293 No date	8:18 23.50 n/a
#**************************************	* * * * * * * * * * * * * * * * * * * *	
# ID revised to ID=9, PREVIOUSLY ID=1 W	AS BEING OVER-WRITEN	
001:0034ID:NHYDADD HYD 03:000004 149	.47 3.445 No date	6:18 20.72 n/a
(DT= 6.00] SUM= 09:001108 784 #************************************	90 7.293 No_date	8:18 23.50 n/a
[DT= 6.00] SUM= 09:001108 784	.37 8.531 No_date	8:06 22.97 n/a
#*************************************	*****	******
# SUBCATCHMENT CONTAINING CEMETERY LAND	S • • • • • • • • • • • • • • • • • • •	
# PROPOSED IMPERVIOUSNESS LESS THAN 209	* * * * * * * * * * * * * * * * * * * *	
# FROFOSED IMFERVIOUSNESS EESS THAT ZO		
<pre># THEREFORE, CN VALUE HAS BEEN MODIFIEL</pre>	TO ACCOUNT FOR PROPO	SED IMPERVIOUS SURF
<pre># THEREFORE, CN VALUE HAS BEEN MODIFIEL #</pre>	TO ACCOUNT FOR PROPO	SED IMPERVIOUS SURF
# #*********	TO ACCOUNT FOR PROPO	DSED IMPERVIOUS SURF
# #********************************** # DRAINAGE FROM 201A (EXTERNAL) #********		
# #***********************************	REAOPEAK-TpeakDat	te_hh:mmR.VR.C
# #***********************************	REAOPEAK-TpeakDat	
<pre># # #*********************************</pre>	REAOPEAK-TpeakDat	te_hh:mmR.VR.C
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date ************************************	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date *********** * A1c, A1d *********** REAQPEAK-TpeakDat .80 .038 No_date	te_hh:mmR.VR.C 6:24
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date *********** * A1c, A1d *********** REAQPEAK-TpeakDat .80 .038 No_date	te_hh:mmR.VR.C 6:24 18.06 .422 te_hh:mmR.VR.C 6:24 18.06 n/a 6:30 18.06 n/a te_hh:mmR.VR.C 6:06 19.46 .455 te_hh:mmR.VR.C
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date .20 1.979 No_date ************************************	te_hh:mmR.VR.C 6:24 18.06 .422 te_hh:mmR.VR.C 6:24 18.06 n/a 6:30 18.06 n/a te_hh:mmR.VR.C 6:06 19.46 .455 te_hh:mmR.VR.C
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date ************************************	te_hh:mmR.VR.C 6:24 18.06 .422 te_hh:mmR.VR.C 6:24 18.06 n/a 6:30 18.06 n/a te_hh:mmR.VR.C 6:06 19.46 .455 te_hh:mmR.VR.C 6:00 18.17 .424
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date ************************************	te_hh:mmR.VR.C 6:24 18.06 .422 te_hh:mmR.VR.C 6:24 18.06 n/a 6:30 18.06 n/a te_hh:mmR.VR.C 6:06 19.46 .455 te_hh:mmR.VR.C 6:00 18.17 .424
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date ************************************	te_hh:mmR.VR.C 6:24 18.06 .422 te_hh:mmR.VR.C 6:24 18.06 n/a 6:30 18.06 n/a te_hh:mmR.VR.C 6:06 19.46 .455 te_hh:mmR.VR.C 6:00 18.17 .424
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date ************************************	te_hh:mmR.VR.C 6:24 18.06 .422 te_hh:mmR.VR.C 6:24 18.06 n/a 6:30 18.06 n/a te_hh:mmR.VR.C 6:06 19.46 .455 te_hh:mmR.VR.C 6:00 18.17 .424 te_hh:mmR.VR.C 6:03 19.08 .446
<pre># # #*********************************</pre>	REAQPEAK-TpeakDat .20 2.032 No_date REAQPEAK-TpeakDat .20 2.032 No_date .20 1.979 No_date ************************************	te_hh:mmR.VR.C 6:24 18.06 .422 te_hh:mmR.VR.C 6:24 18.06 n/a 6:30 18.06 n/a te_hh:mmR.VR.C 6:06 19.46 .455 te_hh:mmR.VR.C 6:00 18.17 .424 te_hh:mmR.VR.C 6:03 19.08 .446

	SWM.sun	m
[CN= 87.3: N= 3.00]		
[тр= .21:DT= 6.00]		
001:0041ID:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.C
ROUTE RESERVOIR -> 06:A1d	5.30	.290 No_date 6:06 19.14 n/a
[RDT = 6.00] out <- 07:A1d	5.30	.103 No_date 6:30 19.14 n/a
overflow <= 08:0VR	.00	
{MxStoUsed=.4308E-01, TotOvfVol	=.0000E+0	00, N-Ovf= 0, TotDurOvf= 0.hrs}
		QPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 07:A1d	5.30	.103 No_date 6:30 19.14 n/a
+ 08:0VR	.00	.000 No_date 0:00 .00 n/a
[DT = 6.00] SUM = 06:A1dPND	5.30	.103 No_date 6:30 19.14 n/a
[DT= 6.00] SUM= 06:A1dPND #************************************		***************************************
# TOTAL DRAINAGE FROM SUBCATCHMENTS #******	ZUIA + A.	1a + AID + AIC + AIQ
#******		ODDAY TreekDate blumm DV DC
	AKEA	QPEAK-TpeakDate_hh:mmR.VR.C .038 No date 6:06 19.46 n/a
ADD HYD 01:A1a	.80	
+ 02:SMT-2R	68.20	
+ 03:A1b	6.10	$.524 \text{ No_date} 6:00 18.17 \text{ n/a}$
+ 04:A1c	3.20 5.30	.219 No_date 6:03 19.08 n/a .103 No date 6:30 19.14 n/a
	5.30	.103 No_date 6:30 19.14 n/a
[DT = 3.00] SUM = 05:SMT2	83.60	2.211 No_date
#*****		
# DRAINAGE FROM 201B (EXTERNAL) #*****		
"001.0044TD:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.C
CALIB NASHYD 01:201B	13.40	.537 No_date 6:12 18.06 .422
[CN = 86.0 + N = 3.00]		
$T_{\rm Tr} = .31: DT = 6.001$		
[Tp= .31:DT= 6.00] #*****	******	*******
# DRATNAGE FROM CEMETERY LANDS B1a.	B1b. B1c	(B-Series, East Drainage)
<pre># DRAINAGE FROM CEMETERY LANDS B1a, #************************************</pre>	*****	*****
"001.0045TD:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.C
CALIB NASHYD 02:B1a	4.60	.280 No_date 6:03 18.89 .441
[CN= 87.0: N= 3.00]		
[Tp = .17: DT = 3.00]		
001:0046	AREA	QPEAK-TpeakDate_hh:mmR.VR.C
ROUTE RESERVOIR -> 02:Bla	4.60	.280 No_date 6:03 18.89 n/a
[RDT= 3.00] out<- 04:B1a		.116 No_date 6:21 18.89 n/a
overflow <= 08:0VR	4.60	.000 No_date 0:00 .00 n/a
{MxStoUsed=.3268E-01, TotOvfVo	1=.0000E+	
001:0047TD:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 04:B1a	4.60	.116 No_date 6:21 18.89 n/a
	.00	.000 No date 0:00 .00 n/a
[DT= 3.00] SUM= 02:B1aPND	.00 4.60	.116 No_date 6:21 18.89 n/a
001:0048TD:NHYD		QPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 01:201B	13.40	.537 No_date 6:12 18.06 n/a
+ 02:B1aPND	4,60	.116 No_date 6:21 18.89 n/a
[DT- 3 00] SUM- 03·201B	18.00	.642 No date 6:12 18.28 n/a
#*************************************	******	****
# Route NHYD=201B + B1a through Chai	nnel SMT-	-4
#*************************************	******	******
"001:0049TD:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.C
ROUTE CHANNEL -> 03:201B	18.00	.642 No_date 6:12 18.28 n/a
* [RDT= 3.00] out<- 01:SMT-4R	18.00	
[L/S/n= 600./ .850/.030]	-0100	
{Vmax= .817:Dmax= .277}		
001·0050TDINAX-		QPEAK-TpeakDate_hh:mmR.VR.C
CALIB NASHYD 03:B1b	5,00	.291 No_date 6:03 18.17 .424
[CN = 86.1: N = 3.00]	5.00	.251 No_wate 0100 10111 1121
[Tp = .17:DT = 3.00]		
LIN= ידעייאב בייסיאמאר בייסיאמאר בייסי 101•0021		QPEAK-TpeakDate_hh:mmR.VR.C
CALIB NASHYD 04:B1C	^_	
	AKEA 1 00	082 No date 6:00 19 48 455
	AREA 1.00	.082 No_date 6:00 19.48 .455
[CN= 87.7: N= 3.00]	AREA 1.00	.082 No_date 6:00 19.48 .455
[CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00]	1.00	.082 No_date 6:00 19.48 .455
[CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00]	1.00	.082 No_date 6:00 19.48 .455

	SWM.su	m		
ADD HYD 03:B1b + 04:B1c	1 00	.291 No_date .082 No_date	6:00	18.17 n/a 19.48 n/a
[DT= 3.00] SUM= 02:B1b #*****	/c 6.00	.366 No_date	6:03	18.39 n/a
<pre># TOTAL DRAINAGE FROM SUBCATCH #************************************</pre>				
001:0053ID:NHY ADD HYD 01:SMT	DAREA -1r 18.00	QPEAK-TpeakDate		-R.VR.C 18.28 n/a
⊥ 02•B1P	/c 6.00	.543 No_date .366 No_date	6.03	18.39 n/a
[DT= 3.00] SUM= 03:B1E #*****	ast 24.00	.712 No_date	6:15 ******	18.30 n/a *
<pre># DRAINAGE FROM CEMETERY LANDS #************************************</pre>	B1d, B1e, B1f	(B-series, West	Drainage) *******	*
001:0054ID:NHY	DAREA	QPEAK-TpeakDate	_hh:mm	-R.VR.C
<pre>* CALIB STANDHYD 01:B1d [XIMP=.25:TIMP=.25]</pre>	4.30	.415 No_date	6:00	24.21 .565
ΓLOSS= 2 :CN= 86.0]				. 7
[Pervious area: IApe	r= 5.00:SLPP=	.85:LGP= 30.:MNP .85:LGI= 50.:MNI	=.035:SCP	= .0] = .0]
001:0055ID:NHY	DAREA	OPEAK-TpeakDate	_hh:mm	-R.VR.C.~
ROUTE RESERVOIR -> 01:Blc [RDT= 3.00] out<- 04:Blc overflow <= 08:0VF	4.30	415 No_date	6:00	24.21 n/a
[RDT= 3.00] out<- 04:B10	4.30	.103 No_date	6:15 0:00	24.21 n/a .00 n/a
{MxStoUsed=.4822E-01, Tot	ovfvol=.0000E+	00. N-Ovf = 0.	TotDurOvf	= 0.hrs
001:0056ID:NHY	'DAREA	QPEAK-TpeakDate	_hh:mm	-R.VR.C
ADD HYD 04:B10	4.30	.103 No_date	6:15	24.21 n/a .00 n/a
+ 08:0VF [DT= 3.00] SUM= 01:B10	PND 4.30	.103 No date	6:15	.00 n/a 24.21 n/a
001:0057ID:NHY	DAREA	QPEAK-TpeakDate	_hh:mm	-R.VR.C
001:0057ID:NHY CALIB NASHYD 02:B1f	3.50	.268 No_date	6:00	19.18 .448
[CN= 87.4: N= 3.00] [Tp= .11:DT= 3.00]				
001:0058ID:NH	DAREA	QPEAK-TpeakDate	_hh:mm	-R.VR.C
001:0058ID:NHY ROUTE RESERVOIR -> 02:B1f [RDT= 3.00] out<- 04:B1f overflow <= 08:0VF	3.50	.268 No_date	6:00	19.18 n/a
[RDT= 3.00] out<- 04:B11	3.50	.057 No_date	6:21	19.18 n/a
{MxStoUsed=.3035E-01, Tot	0vfVol=.000EH	-00. N-0vf = 0.	TotDurOvf	= 0.hrs
001:0059ID:NH)	DAREA	QPEAK-TpeakDate	_hh:mm	-R.VR.C
ADD HYD 04:B11	3.50	.057 No_date	6:21	19.18 n/a .00 n/a
+ 08:0VF [DT= 3.00] SUM= 02:B11	PND 3.50	.057 No date	0:00 6:21	19.18 n/a
001:0060ID:NHY	′DAREA	QPEAK-TpeakDate	_nn:mm	-R.VR.C
* CALIB STANDHYD 07:B16	3.60	.358 No_date	6:00	24.60 .574
[XIMP=.27:TIMP=.27] [LOSS= 2 :CN= 86.0]				
Dervious area. TAna	er= 5.00:SLPP=3	L.15:LGP= 30.:MNP	=.035:SCP	= .0]
Impervious area: IAin	1p= .50:SLPI=.	L.15:LGI= 50.:MN1	=.013:SCI:	= .0]
001:0061ID:NHY	2AREA 3 60	QPEAK-TpeakDate 358 No date	_nn:mm 6:00	24.60 n/a
ROUTE RESERVOIR -> 07:B16 [RDT= 3.00] out<- 06:B16 overflow <= 08:OVE	3.60	.053 No_date	6:24	24.60 n/a
overflow <= 08:0VF	.00	.000 No_date	0:00	.00 n/a
{MxStoUsed=.4674E-01, Tot 001:0062ID:NH	D	OPFAK-TneakDate	hh•mm	-R.VR.C
ADD HYD 06:B16	3.60	.053 No_date	6:24	24.60 n/a
+ 08:0VF	.00	.000 No_date	0:00	.00 n/a
ADD HYD 06:B10 + 08:OVF [DT= 3.00] SUM= 07:B10 001:0063ID:NHY	2PND 3.60	.053 NO_date	6:24 bb:mm	24.60 n/a
ADD HYD 01:B10	IPND 4.30	.103 No_date	6:15	24.21 n/a
+ 02:B1	lest 3.50	057 No_date	6:21	19.18 n/a
+ 07:B10	$\begin{array}{c} \text{PND} & 3.60 \\ \text{Most} & 11.40 \end{array}$.053 No_date	6:24 6:18	24.60 n/a 22 79 n/a
001:0063ID:NHY ADD HYD 01:B10 + 02:B1V + 07:B10 [DT= 3.00] SUM= 02:B1V #************************************	**************************************	.212 NO_UALC	****	<i>LL113</i> 11/a
		1+010+010+010+010+010+	DTI	
#*************************************				
001.0004ID:NH	DAREA-	-		KIVI KICI-

		SWM.sum	1				
ADD HYD +	02:B1West 03:B1East	11.40 24.00		No_date No_date	6:18 6:15	22.79 18.30	n/a n/a
[DT= 3.00] SUM= #*****	04:SMT4	35.40	.922	No_date	6:15	19.75	n/a
<pre># DRAINAGE FROM 201C (E #************************************</pre>	******						
001:0065 CALIB NASHYD [CN= 86.0: N= 3.0 [Tp= .50:DT= 6.0	01:201C 00] 001	91.00	QPEAK- 2.603	-TpeakDate_ No_date	_hh:mm 6:24	R.V 18.06	R.C .422
#*************************************	Y LANDS C1a,	C1b, C2					
001:0066 CALIB NASHYD [CN= 86.0: N= 3.0 [Tp= .21:DT= 6.0	02:C1a 00] 001	7.00	QPEAK- .360	-TpeakDate No_date	_hh:mm 6:06		
#*************************************	******						
#*************************************				Thesknate	hh:mm_~	RV-	PC-
ROUTE RESERVOIR ->		7.00	. 360	No_date	6:06		n/a
[RDT= 6.00] out<-		7.00		No_date	6:30	18.06	n/a
overflow <=	= 08:0VR	.00	.000	No_date		.00	
{MxStoUsed=.4651E- #****	·UL, IOTOVTVO	1=.0000E+U	JU, N-0	VT= 0,	TotDurOv	/T= 0	.hrs}
# DISCHARGE FROM C1a SW #****	M FACTLITY						
001:0068					_hh:mm		R.Ç
ADD HYD	06:C1a	7.00		No_date	6:30	18.06	n/a
+ [DT= 6.00] SUM=		.00 7.00		No_date No_date	0:00 6:30	.00 18.06	n/a n/a
001:0069	-ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm		
<pre>* CALIB NASHYD</pre>	03:C1b)0]	. 50	.047	No_date	6:00	18.49	
Tp= .04:DT= 2.0 #****)0] *************	******	******	*******	* *		
# DISCHARGE FROM EXTERN #****	IAL LANDS (WE	$ST) + MIL^{-}$	FON CEMI	ETERY LAND	S		
"001:0070						R.V	R.C
ADD HYD	01:201C	91.00		No_date	6:24	18.06	n/a
	02:EX+MC 03:C1b	7.00 .50		No_date No_date	6:30 6:00	18.06 18.49	n/a n/a
+ [DT= 2.00] SUM=	02:EX+MC	98.50		No_date	6:24	18.07	n/a
#*******	*******	******					
<pre># Route NHYD=201C throu #************************************</pre>	**********	*******					
001:0071		08 50	QPEAK	-IpeakDate No_date	_nn:mm 6:24		n/a
* [RDT= 2.00] out<-		98.50	2.704	No_date	6:28		n/a
[L/S/n= 275./ .5 {Vmax= .960:Dmax	500/.030] <= .525}						
001:0072							
CALIB NASHYD [CN= 86.1: N= 3.0	07:C2	3.80	. 222	No_date	6:03	18.17	.424
[Tp= .17:DT= 3.(100	*******	*****	**			
# TOTAL DRAINAGE FROM	SUBCATCHMENTS	5					
# EXTERNAL LANDS (WEST) #*****							
001:0073			QPEAK	-TpeakDate	_hh:mm	R.V	
ADD HYD	01:SMT1 07:C2	98.50 3.80	2,704	No_date No_date	6:28 6:03	$18.07 \\ 18.17$	n/a n/a
[DT= 2.00] SUM=	01:SMT1	102.30	2.771	No_date	6:26	18.07	n/a
#*****	***********	*******	**				

*

		SWM.sun	1		
# CONFLUENCE SMT 1-4 #****************************	*****	*****	**		
001:0074	-ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mm	R.VR.C
ADD HYD	04:SMT4	35.40	.922 No_date	6:15	19.75 n/a
+ [DT= 2.00] SUM= #****	02:SMT1-4	102.30 137.70	2.771 No_date 3.627 No_date	6:26 6:24	18.07 n/a 18.50 n/a
# DRAINAGE FROM 201D (E	EXTERNAL)				
001:0075	-ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mm	R.VR.C
CALIB NASHYD [CN= 86.0: N= 3.0 [Tp= .41:DT= 6.0 #*****	00] 100	28.90	.955 No_date	6:18	18.06 .422
<pre># SUBCATCHMENT 201D ROU # THROUGH Channel SMT-3 #************************************</pre>	3				
001:0076			QPEAK-TpeakDate	_hh:mm	
ROUTE CHANNEL -> [RDT= 6.00] out<- [L/S/n= 100./ .7 {Vmax= 1.039:Dmay	- 03:SMT-3R 700/.030] <= .600}	28.90 28.90	.955 No_date .955 No_date	6:18 6:18	18.06 n/a 18.06 n/a
#*************************************					
"001:0077			QPEAK-TpeakDate	_hh:mm	R.VR.C
	02:D1a 00]	1.90	.138 No_date	6:03	19.73 .461
001:0078	ID:NHYD				
* CALIB NASHYD [CN= 86.0: N= 3.0 [Tn= 09.DT= 3.0	001		.150 No_date	6:00	18.06 .422
[Tp= .09:DT= 3.0 #*****	*****	*******	****		
<pre># TOTAL DRAINAGE FROM S #************************************</pre>	SUBCATCHMENTS	5 201D+D1a	+D1b		
#*************************************				hh∙mm	
ADD HYD	02:D1a	1.90	.138 No_date	6:03	19.73 n/a
+		28.90	.955 No_date	6:18	18.06 n/a
+ [DT 2 00] CUM	07:D1b	1.90	.150 No_date 1.034 No_date		18.06 n/a 18.16 n/a
[DT= 3.00] SUM= #********	06:SMT3	32 . 70	**	0.10	10.10 II/a
# CONFLUENCE SMT 1-3 #****					
001:0080					
ADD HYD +	01:SMT1 04:SMT4	102.30 35.40	2.771 No_date .922 No_date	6:15	18.07 n/a 19.75 n/a
+	06:SMT3	32.70	1.034 No_date	6:18	18.16 n/a
[DT= 2.00] SUM= #******************************	03:SMT1-3	170.40	4.613 No_date	6:24	18.44 n/a
#*************************************					
001:0081					R.VR.C
ADD HYD	01:SMT1	102.30	2.771 No_date	6:26	18.07 n/a
+	04:SMT4 06:SMT3	35.40 32.70	.922 No_date 1.034 No_date	6:15 6:18	19.75 n/a 18.16 n/a
+ +	05:SMT2	83.60	2.211 No_date	6:24	18.29 n/a
[DT= 2.00] SUM=	08:1201	254.00	6.824 No_date	6:24	18.39 n/a
001:0082					R.VR.C
ROUTE CHANNEL -> * [RDT= 2.00] out<·	> 08:1201	254.00 254.00	6.824 No_date 6.497 No_date	6:24 6:32	18.39 n/a 18.39 n/a
[L/S/n = 475./1.0]		234.00	0.797 NO_date	0.52	10.55 H/d
{Vmax= .937:Dmax	x= .439}			. Internet	
001:0083	TD:NHYD	ARFA	OPFAK-TheakDate	nn:mm	K.VR.C
CALIB NASHYD	04:000202	21.60	.992 No_date		20.59 .481

[CN= 86.8: N= 3.00]

[Tp= .30:DT= 6.00] 001:0084------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-03:002202 254.00 6.497 No_date 6:32 18.39 n/a 04:000202 21.60 .992 No_date 6:12 20.59 n/a 02:001202 275.60 7.099 No_date 6:30 18.56 n/a ADD HYD + 04:000202 [DT= 2.00] SUM= 02:001202 6:30 18.56 n/a 001:0085-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-20.59.481 CALIB NASHYD 03:000203 26.30 1.414 No_date 6:06 [CN= 86.8: N= 3.00] [Tp= .24:DT= 6.00] 001:0086-----REA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 03:000203 26.30 1.414 No_date 6:06 20.59 n/a + 02:001202 275.60 7.099 No_date 6:30 18.56 n/a [DT= 2.00] SUM= 04:000003 301.90 7.789 No_date 6:26 18.74 n/a 001:0087-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-# SUBCATCHMENT 204 AREA REVISED 001:0088-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:000204 53.60 1.399 No_date 6:30 19.39 .453 [CN= 87.6: N= 3.00] [Tp= .63:DT= 6.00] 001:0089-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 DD
 HYD
 O2:000204
 53.60
 1.399 No_date
 6:30
 19.39 n/a

 +
 04:000003
 301.90
 7.789 No_date
 6:26
 18.74 n/a

 [DT=
 2.00]
 SUM=
 03:001204
 355.50
 9.158 No_date
 6:26
 18.84 n/a
 ADD HYD #***** # ROUTE through Channel 205 ELIMINATED, OUTSIDE OF STUDY AREA #************* 001:0090-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-DD HYD 09:001108 784.37 8.531 No_date 8:06 22.97 n/a + 03:001204 355.50 9.158 No_date 6:26 18.84 n/a [DT= 2.00] SUM= 02:000008 1139.87 17.516 No_date 6:26 21.68 n/a ADD HYD 001:0091-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-PRINT HYD 02:000008 1139.87 17.516 No_date 6:26 21.68 n/a ** END OF RUN : 1 ****** RUN: COMMAND# 002:0001-----START 01 .00 hrs on TZERO =2 (1=imperial, 2=metric output)]
1] METOUT= ĪNSTORM= 2 1 [NRUN = Project Name: [Holy Family Catholic Cemetery] Project Number: [111063] Date : 08-16-2011 # # Modeller : [C. Silvestri] Company : Philips Engineering Ltd License # : 3569108 # # #

READ S Filena							
Filen		01					
Commo	ame = STORM.C nt = TOWN OF	MTI TON 12		AD SCS	TOPM (100		
	12.00:SDUR=	12.00 PTOT	= 59.901	AR SCS .	510101 (1550		
002:0003		ID:NHYD	AREA	OPEAK	-TpeakDate	_hh:mm	R.VI
CALIB	NASHYD	01:000103	12.10	2.620	No_date	6:18	33.36
[CN= 8	86.0: N= 3.00)]					
[Тр=	.40:DT= 6.00)]					
002:0004		ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.VI
ROUTE	CHANNEL -> 6.00] out<-	01:000103	42.10	2.620	No_date	6:18	33.36
	6.00] OUT<-	02:002104	42.10	2.367	No_date	0:24	33.30
[[/]]	n= 440./1.00 = .674:Dmax=	10/.030]					
1002.0005	= .074.Dillax=	TD'NHVD			-TneakDate	hh•mm	R V -I
CALTE !	NASHYD	03:000104	24.10	2.266	No date	6:06	33.36
[CN=	86.0: N= 3.00)]	211120	21200	<u>no_uuco</u>	0100	
ΓTm .	21.DT. 6 00	1					
002:0006		ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.V
ADD HY	2	03:000104	24.10	2.266	No_date	6:06	33.36
-	+	02:002104	42.10	2.367	No_date	6:24	33.36
[DT= 1	6.00] SUM= CHANNEL -> 6.00] out<- n= 365./ .40	01:001104	66.20	3.774	No_date	6:12	33.36
002:0007		-1D:NHYD	AREA	QPEAK	-IpeakDate	_nn:mm-·	K.VI
		02.001104	66 20	3.774	No date	6.24	33.30
[KD]= [i/c/:	n = 365./.40	0/.0301	00.20	7.720	no_uate	0.24	17.30
{Vmax	- 447 Dmax=	5013					
002:0008	NASHYD	ID:NHYD	AREA	OPEAK	-TpeakDate	_hh:mm	R.V
* CALIB	NASHYD	03:000105	19.20	2.033	No_date	6:00	34.31
LCN= i	80.8: N= 3.00	/J					
[Тр=	.18:DT= 6.00)]					
002:0009	.18.DI= 0.00 	ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm-·	R.V
ADD HY	2	03:000105	19.20	2.033	No_date	6:00	34.3L
[nt_	+ 	02:002105	85 40	3.330	No_date	0:24	22 57
002.0010	J.UU] JUM=		AREA	OPFAK	-TheakDate	hh:mm_	
ROUTE /	CHANNEI ->	01:001105	85.40	4.327	No date	6:12	33.57
[RDT=	6.001 out<-	02:002106	85.40	4.052	No_date	6:24	33.57
ĪL/S/	n= 385./.67	70/.0301					
{Vmax:	= .643:Dmax=	= .514}					
002:0011	NASHYD	ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm-	R.V
* CALIB	NASHYD	03:000106	15.30	1.704	No_date	6:00	34.79
LCN=	87.2: N= 3.00	싞					
LTP=	.17:DT= 6.00				Those	hhimm	
		03.000106	AKEA 15 30	1 701	No date	6.00	K.V
	ر ــــــــــــــــــــــــــــــــــــ	02:002106	85 40	4,052	No date	6:24	33.57
Γοτ=	6.001 SUM=	01:001106	100.70	4.757	No date	6:18	33.76
002:0013	D + 6.00] SUM=	ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm-	R.V
* CALIB	STANDHYD	03:000107	15.27	.416	No_date	6:00	39.17
	=.10:TIMP=.17						
2	= 2 :CN= 88.0	-	-				
[Perv	ious area rvious area	IAper= 2	.50:SLPP=1		= /1/.:MNP	=.250:S	CP= .0
	rvious area	a: IATMP = 1	.5/:SLPI=]	L.Z/:LGI	= LUU.:MNI	=.U1/:S	CI = .0
ADD HY		01:001106			- I peakDate No_date		к.v 33.76
AUD HY	ر	03.000107	15 27	416	No date	6.00	39 17
Гот-	6.001 SUM=	02:001107	115.97	4,936	No date	6:18	34.47
002:0015	6.00] SUM=	-ID:NHYD	AREA	OPEAK	-TpeakDate	hh:mm-	R.V
ROUTE	CHANNEL ->	02:001107	115.97	4.936	No_date	6:18	34.47
[RDT=	CHANNEL -> 6.00] out<-	01:002108	115.97	4.469	No_date	6:30	34.47
[L/S/	n= 1300./1.67	70/.030]					

		SWM.su	m			
CALIB NASHYD [CN= 86.8: N= 3.00]	02:000108]	33.50	2.609	No_date	6:12	34.31 .573
[Tp= .29:DT= 6.00]					
002:0017 ADD HYD [DT= 6.00] SUM= 002:0018	ID:NHYD	AREA 115 07	QPEAK-	-TpeakDate	_nn:mm	
	02:000108	33.50	2.609	No date	6:12	34.31 n/a
[DT= 6.00] SUM=	03:000004	149.47	6.397	No_date	6:18	34.44 n/a
002:0018	ID:NHYD	AREA	QPEAK-	-TpeakDate	_hh:mm	R.VR.C
PRINT HYD 002:0019 CALIB STANDHYD	03:000004	149.47	6.397	No_date	6:18	34.44 n/a
	10:NHYD	AREA	QPEAK-	-IpeakDate	_nn:mm	R.VR.C
[XIMP=.20:TIMP=.50 [LOSS= 2 :CN= 83.4]	207.00	J.0JZ	NO_UALE	0.50	40.72 .000
[Pervious area	: IAper= 5	.00:SLPP=	.63:LGP=	= 700.:MNP	=.250:sc	[P= .0]
[Pervious area [Impervious area	: IAimp= 1	.57:SLPI=	.63:LGI=	=3200.:MNI	=.017:SC	[0. =I
002:0020 ROUTE CHANNEL -> [RDT= 6.00] out<-	ID:NHYD	AREA	QPEAK-	-TpeakDate	_hh:mm~-	R.VR.C
$\begin{array}{c} KOUIE CHANNEL -> \\ [RDT_{-} \in \mathcal{OO}] out_{} \end{array}$	04:000101	287.80	5.852	No_date	6:48	40.72 n/a 40.72 n/a
[L/S/n = 700./.42]	0/.0301	207.00	J.103	NO_UALE	0.40	40.72 II/a
{Vmax= .590:Dmax=	.627}					
002:0021 * CALIB STANDHYD	ID:NHYD	AREA	QPEAK-	-TpeakDate	_hh:mm	R.VR.C
* CALIB STANDHYD	04:000102	272.90	9.096	No_date	6:00	35.71 .596
[XIMP=.13:TIMP=.28 [LOSS= 2 :CN= 84.0						
		.00:SLPP=	.98:1 GP=	=1350. • MNP:	=.250:50	P= .01
[Pervious area [Impervious area 002:0022 ADD HYD [DT= 6.00] SUM= 002:0023 PRINT HYD 002:0024 ROUTE CHANNEL -> [RDT= 6.00] out<- [L/S/n= 1000./ .54]	: IAimp= 1	.57:SLPI=	.98:LGI=	= 40.:MNI	=.017:SC	I= .0]
002:0022	ID:NHYD	AREA	QPEAK-	-TpeakDate	_hh:mm	R.VR.C
ADD HYD	04:000102	272.90	9.096	No_date	6:00	35.71 n/a
	05:002101	287.80	5.169	No_date	6:48	40.72 n/a
[D]= 0.00] SUM=		ARFA	TO.973	-TheakDate	/:24 hh:mm	
PRINT HYD	06:000001	560.70	10.973	No date	7:24	38.28 n/a
002:0024	ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.VR.C
ROUTE CHANNEL ->	06:000001	560.70	10.973	No_date	7:24	38.28 n/a
[RDT= 6.00] out<-	04:002109	560.70	10.6/0	No_date	7:30	38.28 n/a
[Vmax 1 007.Dmax	0001					
{VMax= 1.005:DMax= 002:0025 CALIB NASHYD	ID:NHYD	AREA	OPEAK	-TpeakDate	hh:mm	R.VR.C
CALIB NASHYD	05:000109	35.10	2.633	No_date	6:12	34.31 .573
[CN - 00.0. N - 5.00]	1					
[Tp= .32:DT= 6.00				TheskBate	مسبع ما ما	
	10:NHYD 04:002109	AREA	10 670	No date	_nn:mm 7:30	38.28 n/a
	05:000109	35.10	2,633	No date	6:12	34.31 n/a
ADD HYD [DT= 6.00] SUM=	06:001109	595.80	11.000	No_date	7:30	38.05 n/a
002:0027 ROUTE CHANNEL -> [RDT= 6.00] out<-	ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.VR.C
ROUTE CHANNEL ->	06:001109	595.80	11.000	No_date	7:30	38.05 n/a
[L/S/n = 900./.71]	04:002110	292.00	10.001	NO_date	7;40	30.03 N/a
{Vmax= .849:Dmax=						
002:0028	ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.VR.C
CALIB NASHYD	05:000110	21.80	2.112	No_date	6:06	34.79 .581
[CN= 87.2: N= 3.00						
Tp= .22:DT= 6.00 002:0029		APEA		-Tnoaknato	hh:mm	
ADD HYD	04:002110	595.80	10.801	No date	7:48	38.05 n/a
+	05:000110	21.80	2.112	No_date	6:06	34.79 n/a
[DT= 6.00] SUM=	04:002110 05:000110 06:001110	617.60	10.976	No_date	7:48	37.93 n/a
002:0030================	TD'NULLD	AKEA	UPEAN	- I DeakDale	1111.0001	
ROUTE CHANNEL ->	00:001110 04:002111	617 60	10.9/6	No_date	7:48	37.93 n/a
[RDT= 6.00] out<- [L/S/n= 920./1.25	04:002111	011.00	TO.973	NO_uale	/:34	37.93 n/a
$\{Vmax = 1.316: Dmax =$						
002:0031	ID:NHYD~	AREA	QPEAK	-TpeakDate	_hh:mm	R.VR.C
CALIB NASHYD	01:000111	17.30	1.556	No_date	6:06	33.83 .565

[CN= 86.4: N= 3.00] [Tp= .23:DT= 6.00] 002:0032-----REA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 01:000111 17.30 1.556 No_date 6:06 33.83 n/a + 04:002111 617.60 10.929 No_date 7:54 37.93 n/a [DT= 6.00] SUM= 02:000002 634.90 11.066 No_date 7:54 37.82 n/a --R.V.-R.C.-002:0033-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm--634.90 11.066 No_date 02:000002 7:54 37.82 n/a PRINT HYD # ID revised to ID=9, PREVIOUSLY ID=1 WAS BEING OVER-WRITEN 002:0034-----R.V.-R.C.-ADD HYD 03:000004 149.47 6.397 No_date 6:18 34.44 n/a + 02:000002 634.90 11.066 No_date 7:54 37.82 n/a [DT= 6.00] SUM= 09:001108 784.37 15.005 No_date 6:24 37.18 n/a #****** **# SUBCATCHMENT CONTAINING CEMETERY LANDS** # PROPOSED IMPERVIOUSNESS LESS THAN 20% # THEREFORE, CN VALUE HAS BEEN MODIFIED TO ACCOUNT FOR PROPOSED IMPERVIOUS SURF #********* 002:0035-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:201A 68.20 3.579 No_date 6:18 31.31 .523 [CN= 86.0: N= 3.00] [Tp= .47:DT= 6.00] #Route NHYD=201A through Channel SMT-2 002:0036-----R.V.-R.C.-ROUTE CHANNEL -> 01:201A 68.20 3.579 No_date 6:18 31.31 n/a [RDT= 6.00] out<- 02:SMT-2R 68.20 3.503 No_date 6:24 31.31 n/a [RDT= 6.00] out<- 02:SMT-2R [L/S/n= 450./ .750/.030] [Vmax= 1.190:Dmax= .534] #****** # DRAINAGE FROM CEMETERY LANDS A1a, A1b, A1c, A1d #********** 002:0037-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:A1a .80 .066 No_date 6:06 33.28 .556 [CN= 87.7: N= 3.00] [Tp= .27:DT= 6.00] 002:0038-----TD:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:A1b 6.10 .892 No_date 6:00 31.46 .525 [CN= 86.1: N= 3.00] [Tp= .07:DT= 3.00] 002:0039-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:A1c 3.20 .374 No_date 6:03 32.74 .547 [CN= 87.2: N= 3.00] [Tp= .14:DT= 3.00] 002:0040-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 06:Ald 5.30 .499 No_date 6:06 32.82 .548 [CN= 87.3: N= 3.00] [Tp= .21:DT= 6.00] 002:0041-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-32.82 n/a 32.82 n/a .00 n/a
 ROUTE RESERVOIR -> 06:A1d
 5.30
 .499 No_date

 [RDT= 6.00] out<- 07:A1d</td>
 5.30
 .167 No_date

 overflow
 - 08:0VR
 00
 .000 No_date
 6:06 6:30 overflow <= 08:0VR .00 .000 No_date 0:00 {MxStoUsed=.7395E-01, TotOvfVol=.0000E+00, N-Ovf= 0, TotDurOvf= 0.hrs} 002:0042------nd:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-32.82 n/a .00 n/a 32.82 n/a 07:A1d 5.30 .167 No_date 6:30 ADD HYD 0:00 6:30

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			SWM.sum	1			
002:0043			AREA	QPEAK-	TpeakDate_	hh:mm	
ADD HYD		01:A1a 02:SMT-2R	.80 68.20		No_date No_date	6:06 6:24	33.28 n/a 31.31 n/a
	+	03:A1b	6.10		No_date	6:00	31.46 n/a
	+	04:A1c	3.20	.374	No_date	6:03	32.74 n/a
	±	06:A1dPND	5.30		No_date No_date	6:30 6:24	32.82 n/a 31.55 n/a
[DT= 3.00] #****	SOM=	UD:SMIZ	83.60	3.910	NO_uate	0.24	51.55 II/a
# DRAINAGE FROM 20	******	*****					
002:0044		-ID:NHYD	AREA	QPEAK-	-TpeakDate_	_hh:mm 6:12	R.VR.C 31.31 .523
CALIB NASHYD [CN= 86.0: N		01:201в	13.40	.942	No_date	0:12	31.31 .323
רמי 31 – דת	r- 6 00	רר					
#*************************************	******	*************	**************************************	(P_50r	************ East [rainade	·**
# DRAINAGE FROM CE	-MEIEK'	Y LANDS Bid, *****	BID, BIC	******	105, Edst L *********	******	:) ***
002:0045		-ID:NHYD	AREA	QPEAK-	-TpeakDate_	<u>hh:</u> mm	R.VR.C
CALIB NASHYD			4.60	.484	No_date	6:03	32.48 .542
[CN= 87.0: N [Tp= .17:D]	ν= 3.00 Γ= 3.00						
002:0046		-ID:NHYD	AREA	QPEAK	-TpeakDate_	_hh:mm	R.VR.C
ROUTE RESERVO	DIR ->	02:B1a	4.60	.484	No_date No_date	6:03 6:24	32.48 n/a 32.48 n/a
[RDT= 3.00]		04:B1a 08:OVR	.00	.000	No_date		.00 n/a
{MxStoUsed=.	5711E-0	01. TotOvfVo	1=.0000E+	00, N-0	vf= 0, 7	TotDur0	/f= 0.hrs}
002:0047		-ID:NHYD	AREA		-TpeakDate	_hh:mm 6:24	R.VR.C 32.48 n/a
ADD HYD	+	04:B1a 08:OVR	-00	.000	No_date No_date	0:00	
[DT= 3.00]	SUM=	02:B1aPND	4.60	.185	No_date	6:24	32.48 n/a
002:0048						_hh:mm	
ADD HYD	+	01:201B 02:B1aPND	13.40 4.60		No_date No_date	6:12 6:24	
[DT= 3.00] #****	SUM=	03:201B	18.00	1,113	No_date	6:12	31.61 n/a
#*************	*****	*************	*********	**************************************	****		
# Route NHYD=201B #*****	+ B1a	through Cha	INNET SMI-	4 *****	***		
["] 002:0049		-ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	
ROUTE CHANNEL		03:201B	$18.00 \\ 18.00$	070	No_date No_date	6:12 6:21	31.61 n/a 31.61 n/a
[L/S/n = 600]	0ut<-	01:SMT-4R 50/.0301	10.00	.979	NO_UALE	0.21	51.01 II/a
{vmax= .94	3:Dmax	= .342}					
002:0050			AREA	QPEAK	-TpeakDate	_hh:mm 6:03	R.VR.C 31.47 .525
CALIB NASHYD [CN= 86.1:		03:B1b 01	5.00	. 309	No_date	0.05	JT.47 .JCJ
Īτp= .17:D	T = 3.0	01					
002:0051		-ID:NHYD	AREA	QPEAK	-TpeakDate No_date	_hh:mm	R.VR.C 33.30 .556
CALIB NASHYD [CN= 87.7:		04:B1c 01	1.00	. 130	NU_uale	0.00	33.30 .330
Īτp= .10:D	T = 3.0	01					
002:0052		-ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm-· 6:03	R.VR.C 31.47 n/a
ADD HYD	+	03:B1b 04:B1c	5.00 1.00	.138	No_date No_date	6:00	
[DT= 3.00]	SUM=	02:B1b/c	6.00	.634	No_date	6:03	
#*************************************	FROM S	UBCATCHMENT	201R + R	1a + B1	b + B1c		
#*************************************						la la susse	
002:0053		-1D:NHYD 01:SMT-4R	AREA 18.00	QPEAK	No_date	_nn:nm 6:21	31.61 n/a
	+	$02 \cdot B1h/c$	6.00	. 634	No_date	6:03	31.77 n/a
[DT= 3.00] #*****	STIM-	03.B1Fact	24.00	1.316	No_date	6:12	31.65 n/a
#************************************	××××××× FMFTFR	Y I ANDS R1d	. Ble. B1f	B-ser	ies. West	Drainad	e)
" # DRAINAGE FROM C #********************************	*****	****	*****	*****	******	******	***
002:0054		-ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm-	R.VR.C

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	SWM.sum
* CALIB STANDHYD 01:B1d	4.30 .678 No_date 6:00 38.43 .642
[XIMP=.25:TIMP=.25]	
LOSS= 2 :CN= 86.0]	
[Pervious area: IAper= 5.00):SLPP= .85:LGP= 30.:MNP=.035:SCP= .0]
[Impervious area: IAimp= .50	SLPP= .85:LGP= 30.:MNP=.035:SCP= .0] SLPI= .85:LGI= 50.:MNI=.013:SCI= .0] AREAQPEAK-TpeakDate_hh:mmR.VR.C
002:0055ID:NHYD	-AREAQPEAK-TpeakDate_hh:mmR.VR.C
ROUTE RESERVOIR -> 01:B1d	4.30 .678 No_date 6:00 38.43 n/a 4.30 .160 No_date 6:15 38.43 n/a .00 .000 No_date 0:00 .00 n/a
[RDT= 3.00] out<- 04:Bld	4.30 .160 No_date 6:15 38.43 n/a
overflow <= U8:0VR	.00 .000 No_date 0:00 .00 n/a
{MXSTOUSEd=./b/1E-01, IOTOVTVOI=	=.0000E+00, N-Ovf= 0, TotDurOvf= 0.hrs}
	-AREAQPEAK-TpeakDate_hh:mmR.VR.C
	4.30 .160 No_date 6:15 38.43 n/a .00 .000 No_date 0:00 .00 n/a 4.30 .160 No_date 0:00 .00 n/a 4.30 .160 No_date 6:15 38.43 n/a -AREAQPEAK-TpeakDate_hh:mmR.VR.C 3.50 .457 No_date 6:00 32.88 .549
[DT = 3.00] SUM= 01.B1dPND	$4 30$ 160 No_date 6:15 38.43 n/a
002:0057TD:NHYD	-AREAOPEAK-TpeakDate hh:mmR.VR.C
CALTB NASHYD 02:B1f	3.50 .457 No date 6:00 32.88 .549
[CN= 87.4: N= 3.00]	
$[T_{D} - 11 \cdot DT - 300]$	
002:0058ID:NHYD	-AREAQPEAK-TpeakDate_hh:mmR.VR.C 3.50 .457 No_date 6:00 32.88 n/a 3.50 .100 No_date 6:21 32.88 n/a .00 .000 No_date 0:00 .00 n/a =.0000E+00, N-Ovf= 0, TotDurOvf= 0.hrs}
ROUTE RESERVOIR -> 02:B1f	3.50 .457 No_date 6:00 32.88 n/a
[RDT= 3.00]_out<- 04:B1f	3.50 .100 No_date 6:21 32.88 n/a
overflow <= 08:0VR	.00 .000 No_date 0:00 .00 n/a
{MxStoUsed=.5322E-01, TotOvfVol=	=.0000E+00, N-0vf= 0, TotDurOvf= 0.hrs}
002:0059ID:NHYD	AREAQPEAK-TpeakDate_nh:mmR.VR.C
ADD HYD U4:BLT	3.50 .100 No_date 6:21 32.88 n/a
+ 00:0VK	250 100 No_date 0:00 .00 N/a
	3.30 .100 NO_UALE 0:21 32.00 H/a
* CALTE STANDUYD 07-810	AREAQPEAK-TpeakDate_hh:mmR.VR.C 3.50 .100 No_date 6:21 32.88 n/a .00 .000 No_date 0:00 .00 n/a 3.50 .100 No_date 6:21 32.88 n/a -AREAQPEAK-TpeakDate_hh:mmR.VR.C 3.60 .599 No_date 6:00 38.88 .649
[XIMP=.27:TIMP=.27]	5100 1555 No_date 0100 50100 1045
[LOSS = 2 : CN = 86.0]	
):SLPP=1.15:LGP= 30.:MNP=.035:SCP= .0]
[Impervious area: IAimp= .50):SLPI=1.15:LGI= 50.:MNI=.013:SCI= .0]
002 · 0061 TD · NUVD	AREA ODEAK-TOASKDate hhimmR V -R C -
ROUTE RESERVOIR -> 07:B1e	3.60 .599 No_date 6:00 38.88 n/a
[RDT= 3.00] out<- 06:B1e	3.60 .118 No_date 6:15 38.88 n/a
overflow <= 08:0VR	.00 .000 No_date 0:00 .00 n/a
{MxStoUsed=.7088E-01, TotOvfVol=	3.60 .599 No_date 6:00 38.88 n/a 3.60 .118 No_date 6:15 38.88 n/a .00 .000 No_date 0:00 .00 n/a =.000E+00, N-Ovf= 0, TotDurOvf= 0.hrs}
002:0062ID:NHYD	AREAQPEAK-TpeakDate_hh:mmR.VR.C 3.60 .118 No_date 6:15 38.88 n/a .00 .000 No_date 0:00 .00 n/a 3.60 .118 No_date 6:15 38.88 n/a AREAQPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 06:B1e	3.60 .118 No_date 6:15 38.88 n/a
+ U8:OVR	.00 .000 No_date 0:00 .00 n/a
[DI = 3.00] SUM = 07:BIEPND	3.00 .118 NO_GATE 0:15 58.88 N/A
	4.30 .160 No_date 6:15 38.43 n/a
	3.50 100 No_date 6.21 32.88 n/a
+ 07.B1	4.30 .160 No_date 6:15 38.43 n/a 3.50 .100 No_date 6:21 32.88 n/a 3.60 .118 No_date 6:15 38.88 n/a
[DT= 3.00] SUM= 02:B1West	11.40 .377 No_date 6:15 36.87 n/a
#*************************************	******
# TOTAL DRAINAGE FROM SUBCATCHMENTS 2	201B+B1a+B1b+B1c+B1d+B1e+B1f
#*****	*****
002:0064ID:NHYD	AREAQPEAK-TpeakDate_hh:mmR.VR.C
	11 10 277 No data 6115 26 87 m/a
+ 03:B1East	11.40 .377 No_date 6:15 36.87 n/a 24.00 1.316 No_date 6:12 31.65 n/a
DT = 3.00 SUM = 04:SMT4	35.40 1.691 No_date 6:12 33.33 n/a
#********	
<pre># DRAINAGE FROM 201C (EXTERNAL)</pre>	
#*************************************	ADEA ODEAK TRACKDATA AL. D. V. D. C.
002:0065ID:NHYD	AREAQPEAK-TpeakDate_hh:mmR.VR.C
CALIB NASHYD 01:201C	91.00 4.591 No_date 6:24 31.31 .523
[CN = 86.0; N = 3.00]	
[Tp= .50:DT= 6.00] #***********************************	*****
# DRAINAGE FROM CEMETERY LANDS C1a, (#************************************	-10, ~~
	AREAQPEAK-TpeakDate_hh:mmR.VR.C

	SWM.sum	·		
CALIB NASHYD 02:Cla [CN= 86.0: N= 3.00]		.627 No_date	6:06	31.31 .523
[Tp= .21:DT= 6.00] #***********************************	******			
# Cla SWM FACILITY #************************************	******		1.1	
002:0067 ROUTE RESERVOIR -> 02:Cla	AREA 7.00	-QPEAK-TpeakDate_ .627 No_date	_nn:mm 6:06	R.VR.C 31.31 n/a
[RDT= 6.00] out<- 06:Cla	7.00	.228 No date	6:30	31.31 n/a
$\alpha_{\rm Verflow} < -08.0V/R$.00	.000 No_date		.00 n/a
{MxStoUsed=.8510E-01, TotOvfVol= #************************************	=.0000E+0 *****	0, N - 0 V = 0,		1- 011113)
#*********************************	*****			
002:0068 ADD HYD 06:Cla	AREA 7.00	-QPEAK-TpeakDate .228 No_date	_nn:mm 6:30	к.vк.с 31.31 n/a
+ 08:0VR	- 00	.000 No date	0:00	.00 n/a
[DT= 6.00] SUM= 02:C1aPND	7.00	.228 No_date	6:30	31.31 n/a
002:0069 * CALIB NASHYD 03:C1b	AREA	.079 No_date	6:00	31.92.533
[CN= 86.5: N= 3.00]				
[Tp= .04:DT= 2.00] #***********************************	*****	*****	**	
# DISCHARGE FROM EXTERNAL LANDS (WES'	T) + MILT *******	ON CEMETERY LAND	5	
002:0070ID:NHYD	AREA	-QPEAK-TpeakDate	_hh:mm	
ADD HYD 01:201C + 02:EX+MC	91.00 7.00	4.591 No_date .228 No_date	6:30	
+ 03:C1b	. 50	.079 No_date	6:00	31.92 n/a
[DT= 2.00] SUM= 02:EX+MC #************************************	98.50	4.826 No_date	6:24	31.31 n/a
<pre># Route NHYD=201C through Channel SM #************************************</pre>	******	ODEAK TrackDate	le le s sere	DV DC
002:0071ID:NHYD	AKEA 98 50 (-QPEAK-IpeakDate	_nn:mm 6:24	31.31 n/a
ROUTE CHANNEL -> 02:EX+MC * [RDT= 2.00] out<- 01:SMT-1	98.50	4.720 No_date	6:28	
Γ̈́L/S/n= 27̄5./ .500/.030]				
{Vmax= .988:Dmax= .620} 002:0072ID:NHYD	AREA	-OPEAK-TpeakDate	_hh:mm	R.VR.C
CALIB NASHYD 07:C2	3.80	.387 No_date	6:03	31.47 .525
[CN = 86.1: N = 3.00]				
[Tp= .17:DT= 3.00] #******	*****	****		
# TOTAL DRAINAGE FROM SUBCATCHMENTS				
# EXTERNAL LANDS (WEST) + MILTON CEM #************************************	ETERY LAN	NDS + CZ		
"002:0073ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mm-·	R.VR.C
ADD HYD 01:SMT1	98.50	4.720 No_date	6:28	31.31 n/a
+ 07:C2 [DT= 2.00] SUM= 01:SMT1	3.80 102.30	.387 No_date 4.832 No_date	6:03 6:26	31.47 n/a 31.32 n/a
#**********	******	r#		,
# CONFLUENCE SMT 1-4 #************************************	*******	**		
002:0074ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mm-	R.VR.C
ADD HYD 04:SMT4	35.40	1.691 No_date	6:12	33.33 n/a
	102.30	4.832 No_date 6.342 No_date	6:26 6:24	31.32 n/a 31.84 n/a
[DT= 2.00] SUM= 02:SMT1-4 #*****	13/./0	01542 Ho_date	0121	52101, .
# DRAINAGE FROM 201D (EXTERNAL) #********			ă.	
002:0075ID:NHYD	AREA	QPEAK-TpeakDate 1.681 No_date	_nn:mm-	R.VR.C 31.31 .523
CALIB NASHYD 02:201D [CN= 86.0: N= 3.00]	20,90	1.001 NO_uate	0.10	JI.JI .JEJ
$\bar{\Gamma}_{TP}$.41:DT= 6.00]				
#******				

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SUBCATCHMENT 201D ROUTED # THROUGH Channel SMT-3 #********* 002:0076-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-ROUTE CHANNEL -> 02:201D 28.90 1.681 No_date 6:18 31.31 n/a [RDT= 6.00] out<- 03:SMT-3R 28.90 1.686 No_date 6:18 31.31 n/a [L/S/n= 100./ .700/.030] Vmax= 1.201:Dmax= .715 #**** CALIB NASHYD 02:D1a 1.90 .234 No_date 6:03 33.65 .562 [CN= 88.0: N= 3.00] [Tp= .13:DT= 3.00] 002:0078-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-* CALIB NASHYD 07:D1b 1.90 .257 No_date 6:00 31.31 .523 [CN= 86.0: N= 3.00] Tp= .09:DT= 3.00] #******* # TOTAL DRAINAGE FROM SUBCATCHMENTS 201D+D1a+D1b #****************** 002:0079-----ID:NHYD----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-DD HYD 02:D1a 1.90 .234 No_date 6:03 + 03:SMT-3R 28.90 1.686 No_date 6:18 + 07:D1b 1.90 .257 No_date 6:00 [DT= 3.00] SUM= 06:SMT3 32.70 1.832 No_date 6:12 ADD HYD 33.65 n/a 31.31 n/a 31.31 n/a 31.45 n/a #**** 002:0080-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 01:SMT1 102.30 4.832 No_date 6:26 31.32 n/a + 04:SMT4 35.40 1.691 No_date 6:12 33.33 n/a + 06:SMT3 32.70 1.832 No_date 6:12 31.45 n/a [DT= 2.00] SUM= 03:SMT1-3 170.40 8.070 No_date 6:22 31.76 n/a 002:0081-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---~R.V.-R.C.-102.30 4.832 No_date 6:26 ADD HYD 01:SMT1 31.32 n/a 35.40 32.70 1.691 No_date 33.33 + 04:SMT4 35.40 1.691 No_date 6:12 + 06:SMT3 32.70 1.832 No_date 6:12 + 05:SMT2 83.60 3.918 No_date 6:24 [DT= 2.00] SUM= 08:1201 254.00 11.975 No_date 6:24 + 04:SMT4 6:12 n/a 31.45 n/a 31.55 n/a 31.69 n/a 002:0082-----ID:NHYD----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 08:1201 254.00 11.975 No_date 6:24 31.69 n/a * [RDT= 2.00]_out<- 03:002202 254.00 11.518 No_date 6:30 31.69 n/a [RDT= 2.00] out<- 03:002202 [L/S/n= 475./1.050/.030] {Vmax= .996:Dmax= .547} 002:0083-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:000202 21.60 1.661 No_date 6:12 34.31 .573 [CN= 86.8: N= 3.00] [Tp= .30:DT= 6.00] 002:0084------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 03:002202 254.00 11.518 No_date 6:30 31.69 n/a + 04:000202 21.60 1.661 No_date 6:12 34.31 n/a [DT= 2.00] SUM= 02:001202 275.60 12.594 No_date 6:28 31.90 n/a 002:0085-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:000203 26.30 2.371 No_date 6:06 34.31 .573 [CN= 86.8: N= 3.00] [Tp= .24:DT= 6.00] 002:0086-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 03:000203 26.30 2.371 No_date 6:06 34.31 n/a + 02:001202 275.60 12.594 No_date 6:28 31.90 n/a [DT= 2.00] SUM= 04:000003 301.90 13.840 No_date 6:24 32.11 n/a [DT= 2.00] SUM= 04:000003

SWM.sum 002:0087-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-PRINT HYD 04:00003 301.90 13.840 No_date 6:24 32.11 n/a
#***** # SUBCATCHMENT 204 AREA REVISED 002:0088-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-02:000204 53.60 2.443 No_date 6:30 33.17 554 CALIB NASHYD [CN= 87.6: N= 3.00] [Tp= .63:DT= 6.00] 002:0089-----R.V.-R.C.-33.17 n/a 02:000204 53.60 2.443 No_date 6:30 ADD HYD 13.840 No_date 16.223 No_date + 04:000003 301.90 6:24 32.11 n/a 32.27 n/a [DT= 2.00] SUM= 03:001204 6:24 355.50 # ROUTE through Channel 205 ELIMINATED, OUTSIDE OF STUDY AREA #************* OUTSIDE OF STUDY AREA #******************** 002:0090-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-09:001108 784.37 15.005 No_date 03:001204 355.50 16.223 No_date 02:000008 1139.87 31.228 No_date 6:24 37.18 n/a ADD HYD 6:24 32.27 n/a + 03:001204 6:24 35.64 n/a [DT= 2.00] SUM= 02:000008 1139.87 002:0091-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-PRINT HYD 02:000008 1139.87 31.228 No_date 6:24 35.64 n/a ** END OF RUN : 2 RUN:COMMAND# 003:0001------START [TZERO = .00 hrs on 0] [METOUT= 2 (1=imperial, 2=metric output)] [NSTORM= 1] [NRUN = 3] #***** Project Name: [Holy Family Catholic Cemetery] Project Number: [111063] # # : 08-16-2011 Date : [C. Silvestri] : Philips Engineering Ltd # Modeller # Company License # : 3569108 # #*************** _____ 003:0002-----READ STORM Filename = STORM.001Comment = TOWN OF MILTON 12 HOUR 10 YEAR SCS STORM (1998 IDF DATA) [SDT=12.00:SDUR= 12.00:PTOT= 71.35] 003:0003-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-01:000103 42.10 3.384 No_date 6:18 43.02 .603 CALIB NASHYD [CN= 86.0: N= 3.00] [Tp= .40:DT= 6.00] 003:0004-----TD:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 01:000103 42.10 3.384 No_date 6:18 43.02 n/a [RDT= 6.00] out<- 02:002104 42.10 3.104 No_date 6:24 43.02 n/a [RDT= 6.00] out<- 02:002104 [L/S/n= 440./1.000/.030]

SWM	.sum
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5 ·	5403	SWM.SUN	1			
{Vmax= .706:Dmax=	548}		00001/	Turalizata	b b c m	
003:0005	·ID:NHYD	AREA	QPEAK-	-треакрате	_nn:mm	
CALIB NASHYD	03:000104	24.10	2.918	No_date	6:06	43.02.603
LCN= 86.0: N= 3.00	<u>)</u>					
[Tp= .21:DT= 6.00)]					
003:0006	ID:NHYD	AREA	QPEAK-	-TpeakDate	_hh:mm	R.VR.C
ADD HYD	03:000104	24.10	2.918	No_date	6:06	43.02 n/a
1	02:002104	12.10	3.104	No_date	6:24	43.02 n/a
[DT= 6,00] SUM=	01:001104	66.20	4.951	No_date	6:12	43.02 n/a
DO3:0006 ADD HYD [DT= 6.00] SUM= 003:0007 ROUTE CHANNEL -> [RDT= 6.00] out<- [L/S/n= 365 / 40	ID:NHYD	AREA	OPEAK	-TpeakDate	_hh:mm	R.VR.C
ROUTE CHANNEL ->	01:001104	66.20	4.951	No date	6:12	43.02 n/a
[RDT= 6.00] out<-	02:002105	66.20	4.443	No date	6:24	43.02 n/a
[L/S/n= 365./ .40	07.0301					
{Vmax= .485:Dmax=	5283					
003:0008 * CALIB NASHYD	-TD:NHYD	ARFA	OPFAK	-TpeakDate	hh:mm	R.VR.C
* CALTE NASHVD	03-000105	19 20	2 617	No date	6:00	44.11 .618
[CN = 86.8: N = 3.00]	11	13.20	2.017	no_uucc	0.00	TITL TOTO
[Tp= .18:DT= 6.00]						
003:0009			ODEAK	Thesebate	hh:mm	P V -P C -
005:0009	02.00010E	10 20	2 617	No data		$\frac{14}{11}$ n/a
ADD HYD [DT= 6.00] SUM= 003:0010	03:000103	19.20	4 442	No_date	6.24	44.11 n/a
	02:002105	00.20	4.443	No_date	6.12	43.02 m/a
	01:001102	85.40	2.010	NO_uate	0:12	43.20 II/a
003:0010	-ID:NHYD	AKEA	QPEAK	-треакрате	_nn:mm	K.VK.C
ROUTE CHANNEL ->	01:001105	85.40	5.810	No_date	6:12	43.26 n/a
ROUTE CHANNEL -> [RDT= 6.00] out<-	02:002106	85.40	5.445	No_date	6:24	43.26 n/a
[L/S/N= 303./ .0/	0/.030]					
{Vmax= .688:Dmax=	549}			_		
003:0011	-ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.VR.C
* CALIB NASHYD	03:000106	15.30	2.188	No_date	6:00	44.67 .626
[CN= 87.2: N= 3.00)]					
$\bar{\Gamma}_{TD} = 17 \cdot DT - 6.00$	דר					
003:0012	-ID:NHYD	AREA	OPEAK	-TpeakDate	_hh:mm	R.VR.C
ADD HYD	03:000106	15.30	2.188	No_date	6:00	44.67 n/a
+	02:002106	85.40	5.445	No date	6:24	43.26 n/a
[DT= 6 00] SUM	01:001106	100.70	6.468	No date	6:12	43.48 n/a
003:0012 ADD HYD [DT= 6.00] SUM= 003:0013		ARFA	OPFAK	-TneakDate	hh:mm	R.VR.C
* CALIB STANDHYD	03.000107	15 27	543	No date	7:18	49.47 .693
[XIMP=.10:TIMP=.17	7]	13.27	1010	no_uuce	7110	
[LOSS = 2 : CN = 88.0						
[Pervious area	$\gamma_{\rm J}$	50 · CI DD-1	27.1 60	- 717 • MND	- 250.50	CP- 0]
	.	F7.CLDT 1	27.167	100 . MNIT	017.0	
[Impervious area 003:0014 ADD HYD [DT= 6.00] SUM=	a: IAImp = I	. J/ : SLPI=I	. 27 . LGI	These Pote	=.017.3	
003:0014	-1D:NHYD	AKEA	UPEAK	-ipeakbale		$R_V - R_C R_V - R_C$
ADD HYD	01:001106	15 27	0.400	No_date	0:12	45.40 II/d
+	03:000107	15.27	. 543	No_date	7:10	49.47 II/d
[DT= 6.00] SUM=	02:001107	112.97	6.740	No_date	0:12	44.27 fl/d
	- 1 // . NOT //		UFEAN	-ιυςακυαις	1111.1111	
ROUTE CHANNEL ->	02:001107					44.27 n/a
[RDT= 6.00] out<-	01:002108	115.97	6.271	No_date	6:24	44.27 n/a
[L/S/n= 1300./1.6]	/0/.030]					
{Vmax= 1.756:Dmax=	= .885}					
003:0016	-ID:NHYD	AREA	QPEAK			
CALIB NASHYD	02:000108	33.50	3.352	No_date	6:12	44.11 .618
[CN= 86.8: N= 3.00						
Tp= .29:DT= 6.00	D]			à		
003:0017	-ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm-	
ADD HYD	01:002108 02:000108	115.97	6.271	No_date	6:24	44.27 n/a
+	02:000108	33.50	3.352	No_date	6:12	44.11 n/a
[DT= 6.00] SUM=	03:000004	149.47	8.909	No_date	6:18	44.23 n/a
003.0018	-TD:NHYD	ARFA	OPEAK	-TpeakDate	hh:mm-	R.VR.C
PRINT HYD	03:000004	149.47	8,909	No_date	6:18	44.23 n/a
PRINT HYD 003:0019	-ID:NHYD	AREA	OPEAK	-TpeakDate	hh:mm-	R.VR.C
CALIB STANDHYD	04:000101	287.80	7.769	No date	6:30	51.12 .716
[XIMP=.20:TIMP=.50						
[LOSS = 2 : CN = 83.4						
L_000- 7 101- 001.						
[Pervious area	a: IAper= 5	.00:SLPP=	.63:LGP	= 700.:MNP	=.250:S	CP= .0]

SWM.s	sum							
[Impervious area: IAimp= 1.57:SLPI=	= .63:LGI=3200.:MNI=.017:SCI= .0]							
003:0020AREA	$QPEAK-IPEaKDate_nn:mmR.VR.C$							
[RDT - 6.00] out <= 05:002101 287.80	7.769 No_date 6:30 51.12 n/a 7.095 No_date 8:06 51.12 n/a							
[L/S/n= 700./ .420/.030]	, 1055 No_uutu 0100 01111 N, 1							
$\frac{1}{2}$ Vmax - 629 · Dmax = 665								
003:0021AREA- * CALIB STANDHYD 04:000102 272.90	QPEAK-TpeakDate_hh:mmR.VR.C							
* CALIB STANDHYD 04:000102 272.90	11.431 No_date 6:00 45.60 .639							
[XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 84.0]								
[Pervious area: IAper= 5.00:SLPP=	= .98:LGP=1350.:MNP=.250:SCP= .0]							
[Impervious area: IA1mp= 1.57:SLP1= 003:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 003:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 003:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70 [L(s(n= 1000) (540) (030]	QPEAK-TpeakDate_hh:mmR.VR.C							
ADD HYD 04:000102 272.90	11.431 No_date 6:00 45.60 n/a							
+ U5:002101 287.80	$7.095 \text{ NO}_\text{Gate} = 6:00 51.12 1/a$							
003.0023ARFA-	OPFAK-TpeakDate hh:mmR.VR.C							
PRINT HYD 06:00001 560.70	15.616 No_date 7:12 48.44 n/a							
003:0024AREA-	QPEAK-TpeakDate_hh:mmR.VR.C							
ROUTE CHANNEL -> 06:000001 560.70	15.616 No_date 7:12 48.44 n/a							
[RDT = 6.00] out <- 04:002109 560.70	15.100 No_date /:18 48.44 h/a							
[L/S/n= 1000./ .540/.030] {Vmax= 1.061:Dmax= .999}								
003:0025AREA-	OPEAK-TpeakDate_hh:mmR.VR.C							
003:0025D:NHYDAREA- CALIB NASHYD 05:000109 35.10	3.387 No_date 6:12 44.11 .618							
[CN = 00.01 N = 5.00]								
[Tp= .32:DT= 6.00]	OPEAK Trockbate blumm R. V -R. C -							
003:0026ID:NHYDAREA ADD HYD 04:002109 560.70 + 05:000109 35.10 [DT= 6.00] SUM= 06:001109 595.80 003:0027ID:NHYDAREA ROUTE CHANNEL -> 06:001109 595.80 [RDT= 6.00] out<- 04:002110 595.80	$QPEAK-IPEaKDale_nn:nsnK.VK.C$ 15 100 No date 7:18 48 44 n/a							
+ 05:000109 35.10	3.387 No date $6:12$ 44.11 n/a							
[DT= 6.00] SUM= 06:001109 595.80	15.601 No_date 7:18 48.18 n/a							
003:0027AREA	QPEAK-TpeakDate_hh:mmR.VR.C							
ROUTE CHANNEL -> 06:001109 595.80	15.601 No_date 7:18 48.18 n/a							
[RDT = 6.00] out <- 04:002110 595.80	15.282 No_date 7:30 48.18 h/a							
[L/S/n= 900./ .710/.030] {Vmax= .917:Dmax= .824}								
003:0028AREA	OPEAK-TpeakDate hh:mmR.VR.C							
003:0028AREA CALIB NASHYD 05:000110 21.80	2.707 No_date 6:06 44.67 .626							
[CN= 87.2: N= 3.00]								
[Tp= .22:DT= 6.00]								
003:0029ID:NHYDAREA ADD HYD 04:002110 595.80 + 05:000110 21.80 [DT= 6.00] SUM= 06:001110 617.60 003:0030AREA	QPEAK-IpeakDate_nn:mmk.vk.C 15 282 No date 7.30 /8 18 p/a							
ADD HYD $04:002110 595.80$ $\pm 05:000110 21.80$	2.707 No date $6:06$ 44.67 n/a							
[DT = 6.00] SUM= 06:001110 617.60	15.506 No_date 7:30 48.06 n/a							
003:0030AREA	QPEAK-TpeakDate_hh:mmR.VR.C							
ROUTE CHANNEL -> U6:UUIIIU 617.60	15.500 NO_date 7:50 40.00 n/a							
[RDT = 6.00] out <- 04:002111 617.60	15.514 No_date							
[L/S/n= 920./1.250/.030] {Vmax= 1.570:Dmax= .794}								
003:0031AREA	OPEAK-TpeakDate hh:mmR.VR.C							
CALIB NASHYD 01:000111 17.30	2.004 No_date 6:06 43.56 .610							
[CN= 86.4: N= 3.00]								
[Tp= .23:DT= 6.00]	ODTAK TRANKDATA HAVEN D.V. D.C.							
003:0032AREA ADD HYD 01:000111 17.30	2.004 No_date 6:06 43.56 n/a							
ADD HYD $01:000111 17.30$ + $04:002111 617.60$	15.514 No_date 7:36 48.06 n/a							
[DT= 6.00] SUM= 02:000002 634.90								
003:0033AREA	QPEAK-TpeakDate_hh:mmR.VR.C							
PRINT HYD 02:000002 634.90	15.688 No_date 7:36 47.93 n/a							
<pre>#************************************</pre>								
# ID revised to ID=9, PREVIOUSLY ID=1 WAS 003:0034AREA	OPFAK-TpeakDate hh:mm~R.VR.C							
ADD HYD 03:00004 149.47								
+ 02:000002 634.90 [DT= 6.00] SUM= 09:001108 784.37								
[DT= 6.00] SUM= 09:001108 784.37	20.743 No_date 6:24 47.23 n/a							

SWM.sum **# SUBCATCHMENT CONTAINING CEMETERY LANDS # PROPOSED IMPERVIOUSNESS LESS THAN 20%** # THEREFORE, CN VALUE HAS BEEN MODIFIED TO ACCOUNT FOR PROPOSED IMPERVIOUS SURF #******** [CN= 86.0: N= 3.00] [Tp= .47:DT= 6.00] #Route NHYD=201A through Channel SMT-2 003:0036-----ROUTE CHANNEL -> 01:201A 68.20 4.704 No_date 6:18 40.88 n/a [RDT= 6.00] out<- 02:SMT-2R 68.20 4.572 No_date 6:24 40.88 n/a [L/S/n= 450./ .750/.030] {Vmax= 1.219:Dmax= .580} #**** 003:0037-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:A1a .80 .085 No_date 6:06 43.16 .605 [CN= 87.7: N= 3.00] [Tp= .27:DT= 6.00] 003:0038-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-* CALIB NASHYD 03:A1b 6.10 1.150 No_date 6:00 41.05 .575 [CN= 86.1: N= 3.00] [Tp= .07:DT= 3.00] 003:0039-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:A1c 3.20 .483 No_date 6:03 42.54 .596 [CN= 87.2: N= 3.00] [Tp= .14:DT= 3.00] 003:0040-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 06:A1d 5.30 .647 No_date 6:06 42.63 .597 [CN= 87.3: N= 3.00] [Tp= .21:DT= 6.00] 003:0041-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-0041-----ID:NHYD-----AREA----QPEAK-IPEAKDate_III.IIIII ROUTE RESERVOIR -> 06:A1d 5.30 .647 No_date 6:06 42.63 n/a [RDT= 6.00] out<- 07:A1d 5.30 .204 No_date 6:30 42.63 n/a overflow <= 08:0VR .00 .000 No_date 0:00 .00 n/a overtiow <= 08:0VR .00 .000 No_date {MxStoUsed=.9833E-01, TotovfVol=.0000E+00, N-0vf= 0, 0042------0, TotDurOvf= 0.hrs} 003:0042-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 ADD HYD
 07:A1d
 5.30
 .204 No_date
 6:30
 42.63 n/a

 +
 08:0VR
 .00
 .000 No_date
 0:00
 .00
 n/a

 [DT= 6.00]
 SUM=
 06:A1dPND
 5.30
 .204 No_date
 6:30
 42.63 n/a
 003:0043-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-ADD HYD 01:A1a .80 .085 No_date 6:06 43.16 n/a

 01:A14
 .60
 .003 NO_date
 0.003

 + 02:SMT-2R
 68.20
 4.572 No_date
 6:24

 + 03:A1b
 6.10
 1.150 No_date
 6:00

 + 04:A1c
 3.20
 .483 No_date
 6:03

 + 06:A1dPND
 5.30
 .204 No_date
 6:30

 4= 05:SMT2
 83.60
 5.093 No_date
 6:24

 40.88 n/a 41.05 n/a 42.54 n/a + 06:A1dPND SUM= 05:SMT2 42.63 n/a [DT = 3.00]41.14 n/a #****** 003:0044-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:201B 13.40 1.232 No_date 6:12 40.88 .573 [CN= 86.0: N= 3.00] [Tp= .31:DT= 6.00]

SWM.sum 003:0045-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:Bla 4.60 .629 No_date 6:03 42.24 .592 [CN= 87.0: N= 3.00] [Tp= .17:DT= 3.00] 003:0046-----TD:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 ROUTE RESERVOIR -> 02:Bla
 4.60

 [RDT= 3.00] out<- 04:Bla</td>
 4.60

 overflow <= 08:0VR</td>
 .00
 6:03 42.24 n/a .629 No_date 6:24 42.24 n/a 0:00 .00 n/a .222 No_date overflow <= 08:0VR .00 .000 No_date 0:00 .00 n/a {MxStoUsed=.7621E-01, TotOvfVol=.0000E+00, N-Ovf= 0, TotDurOvf= 0.hrs} 003:0047-----R.V.-R.C.-ADD HYD 04:B1a 4.60 .222 No_date 6:24 42.24 n/a + 08:0VR .00 .000 No_date 0:00 .00 n/a [DT= 3.00] SUM= 02:B1aPND 4.60 .222 No_date 6:24 42.24 n/a LDIE 5.00J SUME U2:BLAPND 4.00 .222 NO_date 6:24 42.24 n/a 003:0048-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-ADD HYD 01:201B 13.40 1.232 No_date 6:12 40.88 n/a + 02:BlaPND 4.60 .222 No_date 6:24 42.24 n/a [DT= 3.00] SUM= 03:201B 18.00 1.440 No_date 6:12 41.23 n/a #***** 003:0049-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-

 ROUTE CHANNEL
 -> 03:201B
 18.00
 1.440 No_date
 6:12
 41.23
 n/a

 [RDT= 3.00]
 out<-01:SMT-4R</td>
 18.00
 1.283 No_date
 6:21
 41.23
 n/a

 [L/S/n= 600./ .850/.030] {Vmax= 1.004:Dmax= .376} 003:0050-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:B1b 5.00 .663 No_date 6:03 41.06 .575 [CN = 86.1: N = 3.00][Tp= .17:DT= 3.00] 003:0051-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:B1C 1.00 .178 No_date 6:00 43.19 .605 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 003:0052-----ntil:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 03:B1b 5.00 .663 No_date 6:03 + 04:B1c 1.00 .178 No_date 6:00 [DT= 3.00] SUM= 02:B1b/c 6.00 .824 No_date 6:03 #**** 41.06 n/a 43.19 n/a 41.42 n/a # TOTAL DRAINAGE FROM SUBCATCHMENTS 201B + B1a + B1b + B1c #*************** 003:0053-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 01:SMT-4R 18.00 1.283 No_date 6:21 41.23 n/a + 02:B1b/c 6.00 .824 No_date 6:03 41.42 n/a [DT= 3.00] SUM= 03:B1East 24.00 1.746 No_date 6:12 41.27 n/a 003:0054-----hh:mm----R.V.-R.C.-CALIB STANDHYD 01:B1d 4.30 .891 No_date 6:00 48.48 .679 [XIMP=.25:TIMP=.25] [LOSS= 2 :CN= 86.0] [Pervious area: IAper= 5.00:SLPP= .85:LGP= 30.:MNP=.035:SCP= .0] [Impervious area: IAimp= .50:SLPI= .85:LGI= 50.:MNI=.013:SCI= .0] 003:0055-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-48.48 n/a 48.48 n/a .00 n/a

 ROUTE RESERVOIR -> 01:B1d
 4.30
 .891 No_date
 6:00
 48.48 n/a

 [RDT= 3.00] out<- 04:B1d</td>
 4.30
 .194 No_date
 6:12
 48.48 n/a

 overflow <= 08:0VR</td>
 .00
 .000 No_date
 0:00
 .00 n/a

 {MxStoUsed=.9826E-01, TotovfVol=.0000E+00, N-0vf=
 0, TotDurovf=
 0.hrs}

 003:0056-----R.V.-R.C.-ADD HYD 04:B1d 4.30 .194 No_date 6:12 48.48 n/a + 08:0VR .00 .000 No_date 0:00 .00 n/a [DT= 3.00] SUM= 01:B1dPND 4.30 .194 No_date 6:12 48.48 n/a + 08:0VR [DT= 3.00] SUM= 01:B1dPND

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		SWM.su	m		
003:0057 CALIB NASHYD	ID:NHYD	AREA	QPEAK-TpeakDat	e_hh:mm	R.VR.C
		3.50	.591 No_date	6:00	42.70 .598
[CN= 87.4: N= 3. [Tp= .11:DT= 3.					
003:0058		-AREA	OPEAK-TpeakDat	e hh:mm	R.VR.C
ROUTE RESERVOIR -	> 02:B1f	3.50	.591 No_date .120 No_date .000 No_date	6:00	42.70 n/a
[RDT= 3.00]_out<	<- 04:B1f	3.50	.120 No_date	6:21	42.70 n/a
<pre>overflow < {MxStoUsed=.7078B</pre>	(= 08:0VR -01	.00 - 0000E1	.000 No_date		.00 n/a /f= 0.hrs}
003:0059		ARFA	OPFAK-TpeakDat	e hh:mm	
ADD HYD [DT= 3.00] SUM= 003:0060	04:B1f	3.50	.120 No_date	6:21	42.70 n/a
	- 08:0VR	.00	.000 No_date	0:00	.00 n/a
[DI= 3.00] SUM=	= UZ:BITPND	3.50 	.120 NO_date	6:21 a bb:mm	42.70 n/a
* CALIB STANDHYD	07:B1e	3,60	.757 No_date	6:00	48.95 .686
[XIMP=.27:TIMP=.	.27]				
[LOSS= 2 :CN= 86	5.0]		15	D 025.00	CD 01
[Pervious an [Impervious an	rea: IAper= 5.00):SLPP=1):SLPP=1	.15:LGP= 30.:MN .15:LGI= 50.:MN	P=.035:50 T= 013·50	CP= .0] CI= .0]
003:0061		ARFA	OPFAK-TheakDat	e hh:mm	R.VR.C
ROUTE RESERVOIR -	> 07:B1e	3.60	.757 No_date	6:00	48.95 n/a
[RDT= 3.00] out	<- 06:B1e	3.60	.147 No_date	6:12	48.95 n/a
ROUTE RESERVOIR - [RDT= 3.00] out overflow < {MxStoUsed=.8931E	<= 08:0VK -01	.00 - 0000F+	00 N-0yf = 0		.00 n/a vf= 0.hrs}
003:0062	ID:NHYD	AREA	OPEAK-TDeakDat	e hh:mm	R.VR.C
ADD HYD [DT= 3.00] SUM= 003:0063	06:B1e	3.60	.147 No_date	6:12	48.95 n/a
	- 08:0VR	.00	.000 No_date	0:00	.00 n/a
003:0063		-ΔRFΔ	-~OPFAK-TneakDat	e hh:mm-	40.95 II/a
ADD HYD	01:B1dPND	4.30	.194 No_date	6:12	48.48 n/a
4	01:B1dPND 02:B1West 07:B1ePND	3.50	.120 No_date	6:21	42.70 n/a
	- 07:BlePND	3.60	.147 No_date	6:12	48.95 n/a
[DT= 3.00] SUM= #******************	= UZ:BIWeST	11.40 *****	.439 NO_Qate	6:15 *****	46.86 n/a
# TOTAL DRAINAGE FROM #****	SUBCATCHMENTS 2	201в+в1а	+B1b+B1c+B1d+B1e	+B1f	
003:0064	0.0	11 40		C . 1 F	
ADD HYD	- 03:B1West	24.00	.459 No_date	6:15 6:12	46.86 n/a 41.27 n/a
ADD HYD [DT= 3.00] SUM= #************************************	= 04:SMT4	35.40	2.203 No_date	6:12	43.07 n/a
#*********************	*****				
# DRAINAGE FROM 201C (#********	EXTERNAL)				
003:0065		ARFA	OPFAK-TpeakDat	e hh:mm-	R.VR.C
CALIB NASHYD	01:201C		6.019 No_date		
[CN = 86.0: N = 3]	.00]				
ĒTp= .50:DT= 6. #****	, UU] ; * * * * * * * * * * * * * * * * * *	*******			
<pre># DRAINAGE FROM CEMETE #***********************************</pre>	*****	*******			
003:0066					
CALIB NASHYD	02:Cla	7.00	.817 No_date	6:06	40.88 .573
[CN= 86.0: N= 3. [Tp= .21:DT= 6.					
#*****	******	******			
<pre># Cla SWM FACILITY</pre>					
#*************************************				o hhemm	
ROUTE RESERVOIR -	-> 02:C1a	AREA 7.00	.817 No_date	6:06	40.88 n/a
[RDT= 6.00] out<	- 06:C1a	7.00	.272 No_date	6:30	40.88 n/a
overflow <	<= 08:0VR	.00	.000 No_date	0:00	.00 n/a
{MxStoUsed=.1155E #****	E+UU, TotOv†Vol=	=.0000E+	00, N-0vt = 0,	TotDur0	vf= 0.hrs}
# DISCHARGE FROM Class					
#****		****			

.272 No_date 6:30 40.88 n/a .000 No_date 0:00 00 00 00 SWM.sum 003:0068-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 06:Cla 7.00 ADD HTD + 08:0VR .00 .000 No_date 0:00 .00 n/a [DT= 6.00] SUM= 02:ClaPND 7.00 .272 No_date 6:30 40.88 n/a 003:0069-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-6:00 41.59 .583 CALIB NASHYD .101 No_date . 50 03:c1b [CN= 86.5: N= 3.00] [Tp= .04:DT= 2.00] ******* 003:0070-----R.V.-R.C.-6:24 40.88 n/a 91.00 6.019 No_date ADD HYD 01:201C .272 No_date 6:30 + 02:EX+MC + 03:C1b 40.88 n/a 7,00 .101 No_date 6:00 41.59 n/a . 50 98.50 40.88 n/a 6:24 [DT= 2.00] SUM= 02:EX+MC 6.300 No_date #****** 003:0071-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 ROUTE CHANNEL
 ->
 02:EX+MC
 98.50
 6.300 No_date
 6:24
 40.88
 n/a

 [RDT=
 2.00]
 out<-</td>
 01:SMT-1
 98.50
 6.156 No_date
 6:28
 40.88
 n/a
 ÷ [L/S/n= 275./ .500/.030] {Vmax= .972:Dmax= .669} 003:0072-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 07:C2 3.80 .504 No_date 6:03 41.06 .575 [CN= 86.1: N= 3.00] # TOTAL DRAINAGE FROM SUBCATCHMENTS 003:0073-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 01:SMT1 98.50 6.156 No_date 6:28 40.88 n/a + 07:C2 3.80 .504 No_date 6:03 41.06 n/a [DT= 2.00] SUM= 01:SMT1 102.30 6.302 No_date 6:26 40.89 n/a #***** # CONFLUENCE SMT 1-4 #******** 003:0074-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 04:SMT4 35.40 2.203 No_date 6:12 43.07 n/a + 01:SMT1 102.30 6.302 No_date 6:26 40.89 n/a [DT= 2.00] SUM= 02:SMT1-4 137.70 8.236 No_date 6:24 41.45 n/a # DRAINAGE FROM 201D (EXTERNAL) #********** 003:0075-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:201D 28.90 2.202 No_date 6:18 40.88 .573 [CN= 86.0: N= 3.00] [Tp= .41:DT= 6.00] #***** **# SUBCATCHMENT 201D ROUTED** # THROUGH Channel SMT-3 #***** 003:0076-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 02:201D 28.90 2.202 No_date 6:18 40.88 n/a [RDT= 6.00] out<- 03:SMT-3R 28.90 2.209 No_date 6:18 40.88 n/a [RDT= 6.00] out<- 03:SMT-3R [L/S/n= 100./ .700/.030] # DRAINAGE FROM CEMETERY LANDS D1a, D1b #********* 003:0077-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-1.90 .301 No_date 6:03 43.58 .611 CALIB NASHYD 02:D1a [CN= 88.0: N= 3.00]

		-	SWM.su	m			
	T= 3.0			ODEAK	TrackDate		
003:0078 * CALIB NASHYD		-10:NHYD 07:01h	AREA 1 90		No_date		
[CN= 86.0:	N= 3.0	0]	1.50		No_date	0100	10100 1575
[Tp= .09:D	T = 3.0	0]					
#*************************************							
# TOTAL DRAINAGE #**************	FRUM 5	06CATCHMENT:	> 2010+01d	+UT0 ******			
003:0079		-ID:NHYD	AREA	QPEAK-	-TpeakDate	_hh:mm	R.VR.C
ADD HYD		02:D1a	1.90	.301	No_date	6:03	43.58 n/a
	+		28.90	2,209	No_date	6:18 6:00	
[DT = 3.00]	+ SUM=	07:D10 06:SMT3	28.90 1.90 32.70	2.406	No_date No_date		40.88 n/a 41.04 n/a
[DT= 3.00] #*****	*****	*****	****	**	No_uuce	VIIL	iiioi iiyu
# CONFLUENCE SMT							
#*************************************					TheskDate	hh•mm	
ADD HYD		01:SMT1				6:26	40.89 n/a
	+	04.5474	25 40	2 202	No data	6.12	12 07 1/2
	+	06:SMT3	32.70	2.406	No_date	6:12	41.04 n/a
[DT= 2.00] #*****************	SUM=	03:SMT1-3	170.40	10.500	No_date	6:20	41.37 n/a
# TOTAL DRATNAGE	FROM S	UBJECT LAND	5 + FXT SU	BCATCHM	NTS 2014/	в/с/п	
<pre># TOTAL DRAINAGE #************************************</pre>	*****	*****	****	******	****	*****	****
003:0081							
ADD HYD		01:SMT1	102.30 35.40		No_date	6:26	40.89 n/a 43.07 n/a
	++	04:SMT4 06:SMT3	32 70	2.205	No_date No date	6:12 6:12	43.07 n/a 41.04 n/a
		05:SMT2	83.60	5.093	No_date	6:24	41.14 n/a
[DT= 2.00]	SUM=	08:1201	32.70 83.60 254.00	15,564	No_date	6:24	41.29 n/a
003:0082		-10:0010	AKEA		-TpeakDate	_hh:mm	
ROUTE CHANNE		08:1201 03:002202	254.00	15.504	No_date No_date	6:24 6:30	41.29 n/a 41.29 n/a
[L/S/n = 47]	5./1.0	50/.0301	234:00	T1.010	NO_uate	0.50	41.23 II/a
{Vmax= 1.03	8:Dmax	= .608}					
003:0083							
CALIB NASHYD		04:000202	21.60	2.136	No_date	6:12	44.11 .618
[CN= 86.8: [Tp= .30:D							
003:0084		-ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.VR.C
003:0084 ADD HYD		03:002202	254.00	15.058	No_date	6:30	41.29 n/a
[pt 3 00]	+	04:000202	21.60		No_date	6:12 6:26	44.11 n/a
[DT= 2.00] 003:0085			275.60		No_date		
CALIB NASHYD		03:000203	26.30		No_date		
[CN= 86.8:	N= 3.0						
	T= 6.0			ODEAK	Thesk Dete	In In	
003:0086 ADD HYD		03:000203	AREA 26.30		No_date	_nn:mm 6:06	R.VR.C 44.11 n/a
	+	02:001202	275.60		No_date	6:26	41.52 n/a
[DT= 2.00]	SUM=	04:000003	301.90	18.143	No_date	6:22	41.74 n/a
003:0087		-ID:NHYD					R.VR.C
PRINT HYD #*******	*****	04:000003	301.90 ********	18.143	No_date	* 6: 22	41.74 n/a
# SUBCATCHMENT 20							
# NEW AREA = 70.0 #*****			52.3 ha				
25871							
003:0088		-ID:NHYD 02:000204	AREA 53.60		-TpeakDate Nodate	_hh:mm 6:30	
CALIB NASHYD [CN= 87.6:			JJ.00	2.103	NU_uate	0.30	+J.U4 .UUJ
	T = 6.0						
003:0089		-ID:NHYD					
ADD HYD		02:000204	53.60		No_date	6:30	43.04 n/a
[DT= 2.00]	+ SUM=	04:000003 03:001204	301.90 355.50	10.143 21 227	No_date No_date	6:22 6:24	41.74 n/a 41.94 n/a
	-1102	001001204	555.50	LI.LJ/	No_uate	0.27	TIJT II/a

SWM.sum # ROUTE through Channel 205 ELIMINATED, OUTSIDE OF STUDY AREA #********** # SUBCATCHMENT 205 ELIMINTATED, OUTSIDE OF STUDY AREA #***************************** #************************ 003:0090-----R.V.-R.C.-DD HYD 09:001108 784.37 20.743 No_date + 03:001204 355.50 21.237 No_date [DT= 2.00] SUM= 02:00008 1139.87 41.980 No_date 47.23 n/a 6:24 ADD HYD 6:24 41.94 n/a 45.58 n/a 6:24 003:0091-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-PRINT HYD 02:000008 1139.87 41.980 No_date 45.58 n/a 6:24 ** END OF RUN : 3 RUN:COMMAND# 004:0001-----START [TZERO = .00 hrs on 0] [METOUT= 2 (1=imperial, 2=metric output)] [NSTORM= 1] [NRUN = 4] Project Name: [Holy Family Catholic Cemetery] Project Number: [111063] Date : 08-16-2011 # # Date : [C. Silvestri] : Philips Engineering Ltd : 3569108 # Modeller # Company License # # 004:0002-----READ STORM Filename = STORM.001Comment = TOWN OF MILTON 12 HOUR 25 YEAR SCS STORM (1998 IDF DATA) [SDT=12.00:SDUR= 12.00:PTOT= 85.71] 004:0003-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:000103 42.10 4.375 No_date 6:18 55.58 .649 [CN= 86.0: N= 3.00] [Tp= .40:DT= 6.00] 004:0004------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 01:000103 42.10 4.375 No_date 6:18 55.58 n/a [RDT= 6.00] out<- 02:002104 42.10 4.069 No_date 6:24 55.58 n/a [L/S/n= 440./1.000/.030] {Vmax= .746:Dmax= .578} 004:0005-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:000104 24.10 3.761 No_date 6:06 55.58 .649 [CN= 86.0: N= 3.00] [Tp= .21:DT= 6.00] 004:0006------TD:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-55.58 n/a 55.58 n/a 03:000104 24.10 3.761 No_date 6:06 ADD HYD + 02:002104 [DT= 6.00] SUM= 01:001104 42.10 4.069 No_date 6.498 No_date 6:24 55.58 n/a 66.20 6:12 004:0007-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 01:001104 66.20 6.498 No_date 6:12 55.58 n/a [RDT= 6.00] out<- 02:002105 66.20 5.922 No_date 6:24 55.58 n/a [L/S/n= 365./ .400/.030] {Vmax= .535:Dmax= .561}

		SWM.sur	n			
004:00081 * CALIB NASHYD	ED:NHYD	AREA	QPEAK-	-TpeakDate_	hh:mm	
* CALIB NASHYD [[CN= 86.8: N= 3.00]	1 13:000T02	19.20	3.3/1	No_date	6:00	50.83 .003
[Tp = .18:DT = 6.00]						
004-000		AREA	QPEAK-	-TpeakDate_	_hh:mm	R.VR.C
ADD HYD + ([DT= 6.00] SUM= (004:0010	03:000105	19.20	3.371	No_date	6:00	56.83 n/a
+ ([DT_ 6 00] SUM_ (J2:002105	66.20	5.922	No_date	6:24	55.58 n/a
[D] = 0.00 $[SOM = 0.00]$	11:001102	03.40 ARFA	00EVK-	-TneakDate	bh:mm	RV - RC -
ROUTE CHANNEL -> (01:001105	85.40	7.819	No_date	6:12	55.86 n/a
[RDT= 6.00] out<- 0	02:002106	85.40	7.403	No_date	6:18	55.86 n/a
	/					
{Vmax= .752:Dmax=	.593}			TheakDate	hh:mm	
004:0011 * CALIB NASHYD	03:000106	15.30	2.811	No date	6:00	57.46 .670
[CN= 87.2: N= 3.00]]					
[Tp= .17:DT= 6.00]]					
004:0012	ED:NHYD	AREA	QPEAK	-TpeakDate_	_hh:mm	
	J3:000106	15.30 85.40	7 403	No_date	6:00	57.40 fl/a
ГDT= 6.001 SUM= (01:001106	100.70	8.785	No date	6:12	56.11 n/a
004:0013	ID:NHYD	AREA	QPEAK	-TpeakDate_	_hh:mm	R.VR.C
* CALIB STANDHYD U	12:000101	15.27	.773	No_date	7:00	62.69 .731
[XIMP=.10:TIMP=.17]						
[LOSS= 2 :CN= 88.0] [Pervious area:] • TAper= 2	50 · SI PP=1	27 · I GP:	= 717 ·MNP=	= 250.50	°P= 01
[Pervious area [Impervious area 004:0014	: IAimp= 1	.57:SLPI=1	.27:LGI	= 100.:MNI=	=.017:SC	I= .0]
004:00141	ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.VR.C
ADD HYD (01:001106	100.70	8.785	No_date	6:12	56.11 n/a
+ ([DT- 6.00] cum- (03:000107	15.27	0, 202	No_date	7:00	62.69 n/a
ADD HYD ([DT= 6.00] SUM= (004:0015	JZ:001107	ΩRFΔ	9.202 0PF4K	-TneakDate	hh:mm	
ROUTE CHANNEL -> ([RDT= 6.00] out<- (02:001107	115.97	9.202	No_date	6:12	56.97 n/a
[RDT= 6.00] out<- (01:002108	115.97	8.454	No_date	6:24	56.97 n/a
[L/S/N= 1300./1.6/(J/.030]			<u>8</u>		
{Vmax= 1.809:Dmax= 004:00161				Those	bb mm	
CALIB NASHYD (12:000108	33.50	4,320	No date	6:06	56.83.663
[CN= 86.8: N= 3.00]]	55100			0.00	50105 1000
$[T_{n} - 20, n_{-} - 6, 00]$	1					
LTP= .29.DT= 0.00 004:0017	ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.VR.C
ADD HYD	J1:002108	115.97	8.454 4 320	No_date	6:06	56.97 n/a 56.83 n/a
[DT= 6.00] SUM= (03:000004	149.47	11.991	No_date	6:18	56.94 n/a
004:0018	ID:NHYD	AREA	QPEAK	-TpeakDate	_hh:mm	R.VR.C
PRINT HYD (03:000004	149.47	11,991	No_date	6:18	56.94 n/a
004.0019				- i peakbate		
CALIB STANDHYD ([XIMP=.20:TIMP=.50]		207.00	10.457	NO_uate	0:24	04.45 .752
[LOSS= 2 :CN= 83.4]						
[Pervious area	: IAper= 5	.00:SLPP=				
[Impervious area:	: IAimp= 1	.57:SLPI=	.63:LGI	=3200.:MNI=	=.017:SC	[0II]
	LD:NHYD	AKEA	QPEAK	-IpeakDate	_nn:mm	R.VR.C 64.45 n/a
ROUTE CHANNEL -> ([RDT= 6.00] out<- (05:002101	287.80	9,803	No date	7:54	64.45 n/a
[L/S/n= 700./ .420	0/.030]					
{Vmax= .693:Dmax=	.718}					
	ID:NHYD	AREA	QPEAK	-TpeakDate	_nh:mm	R.VR.C
* CALIB STANDHYD ([XIMP=.13:TIMP=.28]	1 1	212.90	14.4/5	NU_uate	0:00	58.41 .681
[LOSS = 2 : CN = 84.0]						
		.00:SLPP=	.98:LGP	=1350.:MNP=	=.250:sc	[P= .0]
[Impervious area:	: IA $imp=1$.57:SLPI=	.98:LGI	= 40.:MNI:	=.017:SC	CI= .0]
004:0022	ID:NHYD	AREA	QPEAK	-TpeakDate_	_hh:mm	R.VR.C
ADD HYD (J4:000102	272.90	14.4/5	NO_Gate	0:00	58.41 n/a

		SWM.su	m		
[DT= 6.00] SUM=	05:002101 06:000001	287.80 560.70	9.803 No_date 21.500 No_date	7:54 7:00	64.45 n/a 61.51 n/a
004:0023 PRINT HYD 004:0024	-10:NHYD	AREA 560.70	21.500 No_date	2_nn:mm 7:00	61.51 n/a
004:0024	-ID:NHYD	AREA	QPEAK-TpeakDate	e_hh:mm	R.VR.C
ROUTE CHANNEL -> [RDT= 6.00] out<-	06:000001	560.70	21.500 No_date 20.781 No_date	7:00	61.51 n/a 61.51 n/a
[L/S/n= 1000./ .5	40/.030]				,
{vmax= 1.117:Dmax	= 1.103	ARFA	OPEAK-TheakDat	⊳ hh:mm	
004:0025 CALIB NASHYD	05:000109	35.10	4.361 No_date	6:12	56.83 .663
[CN = 80.8: N = 3.0]	U I				
Tp= .32:DT= 6.0 004:0026		AREA	QPEAK-TpeakDat	e_hh:mm	R.VR.C
004:0026 ADD HYD + [DT= 6.00] SUM= 004:0027 ROUTE CHANNEL -> [RDT= 6.00] out<- [L/S/n= 900 / 7	04:002109	560.70	20.781 No_date	7:12	61.51 n/a
+ [DT- 6 00] SUM=	05:000109	35.10 595.80	21.502 No date	0:12 7:12	61.23 n/a
004:0027	-ID:NHYD	AREA	QPEAK-TpeakDat	e_hh:mm	R.VR.C
ROUTE CHANNEL ->	06:001109	595.80	21.502 No_date	7:12	61.23 n/a 61.23 n/a
[L/S/n= 900./.7	10/.030]	393.00	21.100 NO_date	1.64	01.25 11/4
$\sqrt{Vmax} = 1.022$: Dmax	= .902}	1051	ODENK THOOLOGT		
004:0028 CALIB NASHYD	-1D:NHYD 05:000110	AREA 21.80	3.471 No date	e_nn:mm 6:06	57.46 .670
[CN= 87.2: N= 3.0	00]				
Tp= .22:DT= 6.0 004:0029	TT TD + 11113 (10)	AREA	OPFAK-TheakDat	e hh:mm	
ADD HYD	04:002110	595.80	21.186 No_date	7:24	61.23 n/a
	05:000110	21.80	3.471 No_date	6:06 7:18	57.46 n/a
004:0029 ADD HYD + [DT= 6.00] SUM= 004:0030 ROUTE CHANNEL -> [RDT= 6.00] out<- [RDT= 6.00] out<-	-ID:NHYD	AREA	OPEAK-TpeakDat	e_hh:mm	
ROUTE CHANNEL ->	06:001110	617.60	21.487 No_date	7:18	61.10 n/a
[RDT= 6.00] out<- [L/S/n= 920./1.2	· 04:002111	617.60	21.666 No_date	7:18	61.10 n/a
{Vmax= 2.098:Dmax	(= .985}				
004:0031 CALIB NASHYD	-ID:NHYD	AREA 17 30	QPEAK-TpeakDat	e_hh:mm 6:06	R.VR.C
[CN = 86.4: N = 3.0]		17.50	2.502 No_date	0.00	50120 1050
	101	4054	ODEAK TROOKDOT	o bhumm	
ADD HYD	01:000111	AREA 17.30	2.582 No_date	e_nn:nn== 6:06	56.20 n/a
+	04:002111	617.60	21.666 No_date	7:18	61.10 n/a
[DT= 6.00] SUM=	02:000002	634.90 AREA	21.913 NO_date	/:18 e hh:mm	60.97 n/a
[Tp= .23:DT= 6.0 004:0032 ADD HYD + [DT= 6.00] SUM= 004:0033 PRINT HYD	02:000002	634.90	21.913 No_date	7:18	60.97 n/a
<i>H</i> <i>xxxxxxxxxxxxx</i>					
# ID revised to ID=9, F 004:0034	ID:NHYD	AREA	QPEAK-TpeakDat	e_hh:mm	R.VR.C
ADD HYD	03:000004	149.47	11.991 No_date	6:18	56.94 n/a
+ [DT= 6.00] SUM= #*****	02:000002	784.37	21.913 No_date 29.062 No date	7:18 6:24	60.97 n/a 60.20 n/a
#****	*****	******	*****	ala ala ala ala ala ala ala ala ala	م ماہ ماہ باہ باہ باہ باہ باہ باہ باہ باہ باہ
#*************************************			**********	*******	*****
#******	*******	*****	*****	******	****
<pre># PROPOSED IMPERVIOUSNE # THEREFORE, CN VALUE F</pre>	ESS LESS THA IAS BEEN MOD	N 20% IFIED TO /	ACCOUNT FOR PROPO	SED IMPER	VIOUS SURF
# #*****	*****				
# DRAINAGE FROM 201A (8	EXTERNAL)				
004:0035	ID: NHYD	AREA- 68.20	QPEAK-TpeakDat 6.168 No_date	e_hh:mm	R.VR.C 53.37 .623
CALIB NASHYD [CN= 86.0: N= 3.0	01:201A 00]	00.20	U.100 NU_UALE	0.10	JJ.J/ .ULJ
[Tp= .47:DT= 6.0					

		Child out			
#Route NHYD=201A thro	ough Channel SM	SWM.sum ⊤−2	n		
004:0036	ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mm	
ROUTE CHANNEL		68.20		6:18	
[RDT= 6.00] ou ¹ [L/S/n= 450./		68.20	5.939 NO_date	6:24	53.37 n/a
{Vmax= 1.207:Dr	max= .627}				
#****************					
<pre># DRAINAGE FROM CEME #***********************************</pre>	TERY LANDS Ala, *****	A1b, A1c	, Ald *****		
004:0037	ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mm	R.VR.C
		.80	.111 No_date	6:06	55.97 .653
[CN= 87.7: N= [Tp= .27:DT= 6					
004:0038 * CALIB NASHYD	ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mm	R.VR.C
* CALIB NASHYD	03:A1b	6.10	1.480 No_date	6:00	53.56 .625
[CN= 86.1: N= ([Tp= .07:DT=]					
004:0039		AREA	OPEAK-TpeakDate	hh:mm	
CALIB NASHYD	04:A1c		.623 No_date		
[CN= 87.2: N=	3.00]				
[Tp= .14:DT= : 004:0040	3.UU] TD:NHVD		OPFAK-TneakDate	hh:mm	
CALIB NASHYD	06:A1d	5.30	.836 No_date	6:06	55.38 .646
[CN= 87.3: N= 3	3.00]				
[Tp= .21:DT= 0			ODEAK Theakbate	hhimm	
004:0041 ROUTE RESERVOIR	-> 06:A1d			6:06	
[RDT= 6.00] ou	t<- 07:A1d <= 08:OVR	5.30 5.30 .00	.243 No_date	6:30	55.38 n/a
overflow	<= 08:0VR	.00	.000 No_date	0:00	
{MXStoUsed=.131	/E+UU, TOtOVTVO	1≈.0000E+	00, N-Ovf= 0,	bh·mm	/f= 0.hrs}
ADD HYD	07:A1d	5.30	.243 No_date	6:30	55.38 n/a
	+ 08:0VR	.00	.000 No_date	0:00	.00 n/a
[DT= 6.00] SUI #*****	M= 06:A1dPND	5.30	.243 No_date	6:30	55.38 n/a
# TOTAL DRAINAGE FRO! #****	M SUBCATCHMENTS	201A + A	1a + A1b + A1c +	Ald	
004:0043	ID:NHYD 01:A1a		QPEAK-TpeakDate .111 No_date		R.VR.C 55.97 n/a
ADD HTD	+ 02:SMT-2R	68.20	5.939 No date	6:24	53.37 n/a
	+ 03:A1b	6.10	5.939 No_date 1.480 No_date .623 No_date	6:00	53.56 n/a
	+ 04:A1c	3.20	.623 No_date	6:03	55.27 n/a
[DT= 3.00] SU	+ 06:A1dPND M= 05:SMT2	83.60	.243 No_date 6.583 No_date	6:30 6:24	55.38 n/a 53.65 n/a
#****	*****	05.00	01909 No_date	0124	55105 H/u
# DRAINAGE FROM 201B #******	(EXTERNAL)				
004:0044		AREA	OPEAK-TpeakDate	_hh:mm	R.VR.C
CALIB NASHYD	01:201в	13.40			
CN= 86.0: N=					
[Tp= .31:DT= (#**********	****************	*******	*****	******	***
# DRAINAGE FROM CEME					
004:0045					
CALIB NASHYD	02:B1a	4.60	.815 No_date		54.92 .641
[CN= 87.0: N=	3.00]				
[Tp= .17:DT=] 004:0046			OPFAK-TRASKData	hh mm	
ROUTE RESERVOIR		4.60	.815 No_date	6:03	54.92 n/a
[RDT= 3.00] ou	t<- 04:B1a	4.60	.262 No_date	6:24	54.92 n/a
	<= 08:0VR	.00	.000 No_date		.00 n/a
{MxStoUsed=.102} 004:0047	/E+UU, TOTOVTVO) I = . UUUUE+	UU, N-UVT = 0,	TotDuro	/t= 0.hrs}
ADD HYD	04:B1a	4.60	.262 No_date	6:24	54.92 n/a

SWM.sum + 08:OVR .00 .000 No_date 0:00 .00 n/a [DT= 3.00] SUM= 02:BlaPND 4.60 .262 No_date 6:24 54.92 n/a 004:0048ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.· ADD HYD 01:201B 13.40 1.607 No_date 6:12 53.36 n/a + 02:BlaPND 4.60 .262 No_date 6:12 53.76 n/a ##***********************************
<pre>[DT= 3.00] SUM= 02:B1aPND 4.60 .262 No_date 6:24 54.92 n/a 004:0048</pre>
004:0048TD:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. ADD HYD 01:201B 13.40 1.607 No_date 6:12 53.36 n/a + 02:BlaPND 4.60 .262 No_date 6:24 54.92 n/a [DT= 3.00] SUM= 03:201B 18.00 1.853 No_date 6:12 53.76 n/a #************************************
+ 02:BlaPND 4.60 .262 No_date 6:24 54.92 n/a [DT= 3.00] SUM= 03:201B 18.00 1.853 No_date 6:12 53.76 n/a #************************************
<pre>[DT= 3.00] SUM= 03:201B 18.00 1.853 No_date 6:12 53.76 n/a #************************************</pre>
<pre># Route NHYD=201B + B1a through Channe] SMT-4 #************************************</pre>
<pre># Route NHYD=201B + B1a through Channel SMT-4 #************************************</pre>
004:0049ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 03:201B 18.00 1.853 No_date 6:12 53.76 n/a * [RDT= 3.00] out<- 01:SMT-4R 18.00 1.679 No_date 6:18 53.76 n/a [L/S/n= 600./ .850/.030] {Vmax= 1.071:Dmax= .414} 004:0050ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:B1b 5.00 .863 No_date 6:03 53.58 .625 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00] 004:0051ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 04:B1c 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C
ROUTE CHANNEL -> 03:201B 18.00 1.853 No_date 6:12 53.76 n/a * [RDT= 3.00] out<- 01:SMT-4R 18.00 1.679 No_date 6:18 53.76 n/a [L/S/n= 600./ .850/.030] {Vmax= 1.071:Dmax= .414} 004:0050ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 03:B1b 5.00 .863 No_date 6:03 53.58 .625 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00] 004:0051DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 04:B1c 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.
<pre>* [RDT= 3.00] out<- 01:SMT-4R 18.00 1.679 No_date 6:18 53.76 n/a [L/S/n= 600./ .850/.030] {Vmax= 1.071:Dmax= .414} 004:0050ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 03:B1b 5.00 .863 No_date 6:03 53.58 .625 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00] 004:0051ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 04:B1C 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.</pre>
<pre>[L/s/n= 600./ .850/.030] {Vmax= 1.071:Dmax= .414} 004:0050ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 03:B1b 5.00 .863 No_date 6:03 53.58 .625 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00] 004:0051DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 04:B1C 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.</pre>
<pre>{vmax= 1.071:Dmax= .414} 004:0050ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 03:B1b 5.00 .863 No_date 6:03 53.58 .625 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00] 004:0051ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 04:B1c 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.</pre>
004:0050ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 03:B1b 5.00 .863 No_date 6:03 53.58 .625 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00] 004:0051ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 04:B1c 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.
CALIB NASHYD 03:B1b 5.00 .863 No_date 6:03 53.58 .625 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00] 004:0051ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 04:B1c 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.
<pre>[Tp= .17:DT= 3.00] 004:0051ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C. CALIB NASHYD 04:B1C 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.</pre>
004:0051RVR.C. CALIB NASHYD 04:B1C 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052RVR.C.
CALIB NASHYD 04:B1c 1.00 .229 No_date 6:00 56.01 .653 [CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052R.VR.C.
[CN= 87.7: N= 3.00] [Tp= .10:DT= 3.00] 004:0052R.VR.C.
[Tp= .10:DT= 3.00] 004:0052R.VR.C.
004:0052R.VR.C.
ADD HYD 03:B1b 5.00 .863 No_date 6:03 53.58 N/a
+ 04:B1c 1.00 .229 No_date 6:00 56.01 n/a
+ 04:B1c 1.00 .229 No_date 6:00 56.01 n/a [DT= 3.00] SUM= 02:B1b/c 6.00 1.069 No_date 6:03 53.98 n/a
[DT= 3.00] SUM= 02:B1b/c 6.00 1.069 No_date 6:03 53.98 n/a #*****
TOTAL DRAINAGE FROM SUBCATCHMENTS 201B + B1a + B1b + B1c #**********
004:0053R.VR.C. ADD HYD 01:SMT-4R 18.00 1.679 No_date 6:18 53.76 n/a
ADD HYD 01:SMT-4R 18.00 1.679 No_date 6:18 53.76 n/a + 02:B1b/c 6.00 1.069 No_date 6:03 53.98 n/a
$I_{DT} = 3.001$ SUM= 03:B1Fast 24.00 2.306 No date 6:09 53.82 n/a
<pre># DRAINAGE FROM CEMETERY LANDS B1d, B1e, B1f (B-series, West Drainage) #************************************</pre>
004:0054R.VR.C.
* CALIB STANDHYD 01:B1d 4.30 1.131 No_date 6:00 61.44 .717
[XIMP=.25:TIMP=.25]
[LOSS = 2 : CN = 86.0]
[Pervious area: IAper= 5.00:SLPP= .85:LGP= 30.:MNP=.035:SCP= .0] [Impervious area: IAimp= .50:SLPI= .85:LGI= 50.:MNI=.013:SCI= .0]
004:0055ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.
ROUTE RESERVOIR -> 01:B1d 4.30 1.131 No_date 6:00 61.44 n/a
[RDT= 3.00] out<- 04:B1d 4.30 .227 No_date 6:12 61.44 n/a
overflow <= 08:0VR .00 .000 No_date 0:00 .00 n/a
<pre>{MxStoUsed=.1266E+00, TotOvfVol=.0000E+00, N-Ovf= 0, TotDurOvf= 0.hrs 004:0056ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.</pre>
ADD HYD 04:B1d 4.30 .227 No date 6:12 61.44 n/a
+ 08:0VR .00 .000 No_date 0:00 .00 n/a
+ 08:0VR .00 .000 No_date 0:00 .00 n/a [DT= 3.00] SUM= 01:B1dPND 4.30 .227 No_date 6:12 61.44 n/a
004:005/ID:NHYDAREAQPEAR-IPEARDate_III:IIIIAR.VR.C.
CALIB NASHYD 02:B1f 3.50 .762 No_date 6:00 55.45 .647 [CN= 87.4: N= 3.00]
[Tp= .11:DT= 3.00]
004:0058R.VR.C.
ROUTE RESERVOIR -> 02:B1f 3.50 .762 No_date 6:00 55.45 n/a
ROUTE RESERVOIR -> 02:B1f 3.50 .762 No_date 6:00 55.45 n/a [RDT= 3.00] out<- 04:B1f 3.50 .144 No_date 6:21 55.45 n/a overflow <= 08:0VR .00 .000 No_date 0:00 .00 n/a
{MxStoUsed=.9434E-01, TotOvfVol=.0000E+00, N-Ovf= 0, TotDurOvf= 0.hrs
001.0059
ADD HYD 04:B1f 3.50 .144 No_date 6:21 55.45 n/a
$+$ 08:0VR .00 .000 No_date 0:00 .00 n/a
ADD HYD 04:B1f 3.50 .144 No_date 6:21 55.45 n/a + 08:OVR .00 .000 No_date 0:00 .00 n/a [DT= 3.00] SUM= 02:B1fPND 3.50 .144 No_date 6:21 55.45 n/a 004:0060ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C.

* CALIB STANDHYI [XIMP=.27:TII	MP=.27]	SWM.sum 3.60	.958 No_date	6:00	61.94 .723
ROUTE RESERVO	area: IAper= 5.0 area: IAimp= .5 ID:NHYD IR -> 07:B1e	0:SLPI=1.1	S:LGI= 50.:MN QPEAK-TpeakDat .958 No_date	I=.013:SC	[0. =II]
004:0062 ADD HYD	140E+00, TotOvfVol ID:NHYD 06:B1e + 08:OVR SUM= 07:B1ePND	=.0000E+00 AREA 3.60 .00 3.60), N-Ovf= 0, QPEAK-TpeakDat .176 No_date	6:12 0:00 6:12 e_hh:mm	R.VR.C 61.94 n/a .00 n/a 61.94 n/a
[DT= 3.00] #***********************************	+ 02:B1West + 07:B1ePND SUM= 02:B1West	3.50 3.60 11.40 *********	.144 No_date .176 No_date .544 No_date	6:21 6:12 6:15	55.45 n/a 61.94 n/a 59.76 n/a
004:0064 ADD HYD	ID:NHYD 02:B1West + 03:B1East SUM= 04:SMT4 ******	AREA 11.40 24.00		e_hh:mm 6:15 6:09	R.VR.C 59.76 n/a 53.82 n/a 55.73 n/a
#******	**************************************	91.00	QPEAK-TpeakDat 7.875 No_date	e_hh:mm 6:24	R.VR.C 53.37 .623
# DRAINAGE FROM CE	METERY LANDS C1a, ************************************	C1b, C2	-QPEAK-TpeakDat 1.064 No_date		
#*************************************	**************************************	******** AREA 7.00 7.00	1.064 No_date .317 No_date	6:06 6:30	53.36 n/a 53.36 n/a
{MxStoUsed=.1 #************************************		********	-QPEAK-TpeakDat	TotDurov e_hh:mm	
004:0069 * CALIB NASHYD [CN= 86.5: N	06:Cla + 08:OVR SUM= 02:ClaPND ID:NHYD 03:Clb = 3.00] - 2.001	AREA .50	.129 No_date	0:00 6:30 e_hh:mm 6:00	.00 n/a 53.36 n/a
[Tp= .04:DT #************************************	XTERNAL LANDS (WES	T) + MILT(********	ON CEMETERY LAN	DS ** e_hh:mm 6:24	R.VR.C 53.37 n/a 53.36 n/a

SWM.sum + 03:C1b .50 [DT= 2.00] SUM= 02:EX+MC 98.50 #***** .129 No_date 6:00 8.203 No_date 6:24 54.18 n/a 53.37 n/a # Route NHYD=201C through Channel SMT-1 004:0071-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 ROUTE CHANNEL
 ->
 02:EX+MC
 98.50
 8.203 No_date
 6:24
 53.37 n/a

 [RDT= 2.00] out<-</td>
 01:SMT-1
 98.50
 8.023 No_date
 6:28
 53.37 n/a
 [RDT= 2.00] out<- 01:SMT-1 [L/S/n= 275./ .500/.030] [Vmax= .962:Dmax= .719] 004:0072-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 07:C2 3.80 .656 No_date 6:03 53.58 .625 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00] #**** **# TOTAL DRAINAGE FROM SUBCATCHMENTS** 004:0073-----R.V.-R.C.-DD HYD 01:SMT1 98.50 8.023 No_date + 07:C2 3.80 .656 No_date [DT= 2.00] SUM= 01:SMT1 102.30 8.217 No_date 6:28 53.37 n/a ADD HYD 53.58 n/a 6:03 53.38 n/a 6:26 # CONFLUENCE SMT 1-4 #***** ADD HYD 04:SMT4 35.40 2.843 No_date 6:09 55.73 n/a + 01:SMT1 102.30 8.217 No_date 6:26 53.38 n/a [DT= 2.00] SUM= 02:SMT1-4 137.70 10.672 No_date 6:24 53.98 n/a 004:0074-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-# DRAINAGE FROM 201D (EXTERNAL) #******** 004:0075-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:201D 28.90 2.879 No_date 6:18 53.37 .623 [CN= 86.0: N= 3.00] [Tp= .41:DT= 6.00] #***** # SUBCATCHMENT 201D ROUTED # THROUGH Channel SMT-3 #***** 004:0076-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-004:0077------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C. CALIB NASHYD 02:D1a 1.90 .386 No_date 6:00 56.45 .659 [CN= 88.0: N= 3.00] [Tp= .13:DT= 3.00] 004:0078-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-* CALIB NASHYD 07:D1b 1.90 .431 No_date 6:00 53.36 .623 [CN= 86.0: N= 3.00] [Tp= .09:DT= 3.00] # TOTAL DRAINAGE FROM SUBCATCHMENTS 201D+D1a+D1b #********* 004:0079-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 02:D1a 1.90 .386 No_date 6:00 56.45 n/a + 03:SMT-3R 28.90 2.890 No_date 6:18 53.37 n/a + 07:D1b 1.90 .431 No_date 6:00 53.36 n/a [DT= 3.00] SUM= 06:SMT3 32.70 3.153 No_date 6:12 53.55 n/a #*****

SWM.sum

			SWM.su	m		
# CONFLUENCE SMT 1	-3			4.4.		
#*****						
004:0080						
ADD HYD		01:SMT1	102.30	8.217 No_date		53.38 n/a
	+	04:SMT4	35.40	2.843 No_date	6:09	55.73 n/a
[0.00]	+	06:SMT3	32.70	3.153 No_date	6:12	53.55 n/a
[DT= 2.00] #*****	SUM=	03:SMT1-3	1/0.40	13.656 No_date	6:20	53.90 n/a
#**************	****	*********	******	***************	********** /- /- /-	***
<pre># TOTAL DRAINAGE F #************************************</pre>	ROM SU	BJECT LANDS	5 + EXT.SU	BCATCHMENTS 201A	/B/C/D ******	* * *
004:0081		ID:NHYD	AREA	QPEAK-TpeakDat	e_hh:mm	R.VR.C
ADD HYD		01:SMT1	102.30		6:26	53.38 n/a
	+	04:SMT4	35.40 32.70	2.843 No_date	6:09	55.73 n/a
	+	06:SMT3	32.70	3.153 No_date	6:12	53.55 n/a
	+	05:SMT2	83.60	6.583 No_date	6:24	53.65 n/a
[DT= 2.00]	SUM=	08:1201	254.00	20.162 No_date	6:24	53.82 n/a
[DT= 2.00] 004:0082 ROUTE CHANNEL * [RDT= 2.00]		ID:NHYD	AREA	QPEAK-TpeakDat	e _hh: mm	R.VR.C
ROUTE CHANNEL	>	08:1201	254.00	20.162 No_date	6:24	53.82 n/a
* [RDT= 2.00]	out<-	03:002202	254.00	19.61 4 No_date	6:28	53.82 n/a
[L/S/n= 475	5./1.05	0/.030]				
{Vmax= 1.089						
004:0083				QPEAK-TpeakDat		
CALIB NASHYD		04:000202	21.60	2.748 No_date	6:12	56.83 .663
[CN= 86.8: N]				
[Tp= .30:DT	= 6.00]				
004:0084 ADD HYD		ID:NHYD	AREA	QPEAK-TpeakDat	e_hh:mm	R.VR.C
ADD HYD		03:002202	254.00	19.614 No_date	6:28	53.82 n/a
	+	04:000202	21.60	2.748 No_date 21.497 No_date	6:12 6:26	56.83 n/a
[DT= 2.00]	SUM=	02:001202	275.60	21.497 No_date	6:26	54.05 n/a
004:0085			^		o hhimm	-PV - PC -
CALIB NASHYD		03:000203	26.30	3.924 No_date	6:06	56.83 .663
[CN= 86.8: N	I= 3.00]				
[Tp= .24:DT						
004:0086		ID:NHYD	AREA	QPEAK-TpeakDat	e_hh:mm	R.VR.C
ADD HYD		03:000203	26.30	3.924 No_date	6:06	56.83 n/a
	+	02:001202	275.60	3.924 No_date 21.497 No_date	6:06 6:26	54.05 n/a
[DT= 2.00]	SUM≕	04:000003	301.90	23.708 No_date	6:22	54.29 n/a
004.0082		TD · NHYD	ARFA	OPFAK TpeakDat	e_hh:mm	R.VR.C
PRINT HYD #*****		04:000003	301.90	23.708 No_date	6:22	54.29 n/a
#*******	****	******	*****	*****	* *	
# SUBCATCHMENT 204	AREA	REVISED				
# NEW AREA = 70.0 #****	ha, PR	EVIOUSLY =	52.3 ha			
#*****	*****	******	****	******	* *	
004:0088				QPEAK-TpeakDat		
CALIB NASHYD			53.60	4.144 No_date	6:30	55.83 .651
[CN= 87.6: N	I= 3.00]				
[Tp= .63:DT	= 6.00]				
004:0089		ID:NHYD	AREA	QPEAK-TpeakDat	e_hh:mm	R.VR.C
ADD HYD		02:000204	53.60	4.144 No_date	6:30	55.83 n/a
	+	04:000003	301.90	23.708 No_date	6:22	54.29 n/a
[DT= 2.00] #*****	SUM=	03:001204	355.50	27.701 No_date	6:24	54.53 n/a
#*****	******	*******	******	*****	**	
# ROUTE through Ch #*************	ianne1	205 ELIMIN	ATED, OUT	SIDE OF STUDY AR	EA	
					* *	
#******	*****	******	****	****		
# SUBCATCHMENT 205	5 ELIMI	NTATED, OU	TSIDE OF S	TUDY AREA		
#*****						
#*****	*****	******	*****	******		
# ID REVISED TO ID #*****)=9, PR	EVIOUSLY I	D=1			
#*****	******	********	*******	*****		
004:0090						
ADD HYD		09:001108		29.062 No_date		60.20 n/a
	+	03:001204	355.50	27.701 No_date		54.53 n/a
[DT= 2.00]		02:000008	1139.87	56.763 No_date		58.43 n/a
004:0091				QPEAK-TpeakDat	e_hh:mm	R.VR.C

SWM.sum

PRINT HYD 02:000008 11 #***********************************	SWM.sum 39.87 5 *******	6.763 *****	No_date ******	6:24	58.43	n/a
************	*****	*****	******	******	******	* * *
RUN: COMMAND#						
005:0001						
START [TZERO = .00 hrs on 0	1					
[METOUT= 2 (1=imperial, 2=	metric ou	(tput)				
$\begin{bmatrix} NSTORM = 1 \end{bmatrix}$ $\begin{bmatrix} NRUN = 5 \end{bmatrix}$						
$\begin{bmatrix} NRUN = 5 \end{bmatrix}$ $\# * * * * * * * * * * * * * * * * * * *$	******	*****	*******	******	*****	* * *
# Project Name: [Holy Family Catholi						
# Date : 08-16-2011			-			
<pre># Modeller : [C. Silvestri] # Godeller</pre>	1 + d					
<pre># Company : Philips Engineering # License # : 3569108</pre>						
#*************************************	*******	*****	******	*****	******	***
[*] 005:0002						
READ STORM Filename = STORM.001						
Comment = TOWN OF MILTON 12 HC	OUR 50 YEA	AR SCS	STORM (199	8 IDF D	DATA)	
[SDT=12.00; SDUR= 12.00; PTOT=	96.337					
005:0003ID:NHYD		-QPEAK-	TpeakDate_	hh:mm		R.C
CALIB NASHYD 01:000103 [CN= 86.0: N= 3.00]	42.10	3.123	NO_UALE	0.10	03.13	.070
$\bar{\Gamma}_{TP} = 40 \cdot pT = 6.001$						
$\begin{array}{rcl} \text{(1)} & ($	-AREA	-QPEAK-	TpeakDate_	hh:mm		R.C
ROUTE CHANNEL $\rightarrow 01:000103$	42.10	5.123	No_date	6:18	65.13 65.13	n/a n/a
[L/S/n = 440./1.000/.030]	42.10	4./92	NU_uale	0.24	03.13	n/a
$\{V_{max} = 770 \cdot D_{max} = .596\}$						
005:0005ID:NHYD CALIB NASHYD 03:000104	-AREA	-QPEAK-	TpeakDate_	hh:mm		R.C
CALIB NASHYD $03:000104$	24.10	4.395	No_date	6:06	02.12	.070
[CN= 86.0: N= 3.00] [Tp= .21:DT= 6.00]						
005:0006ID:NHYD ADD HYD 03:000104 + 02:002104 [DT= 6.00] SUM= 01:001104	AREA	-QPEAK-	TpeakDate_	hh:mm	R.V	R.C
ADD HYD 03:000104	24.10	4.395	No_date	6:06	65.13	n/a
+ 02:002104	42.10	4.792	NO_date	6:12	65.13	n/a
005:0007TD:NHVD		-Ωνμακ-	IDEAKDATE	nn:mm	K.V	-к.с
ROUTE CHANNEL -> 01:001104 [RDT= 6.00] out<- 02:002105	66.20	7.676	No_date	6:12	65.13	n/a
[RDT = 6.00] out < -02:002105	66.20	7.046	No_date	6:18	65.I3	n/a
[L/S/n= 365./ .400/.030] {Vmax= .565:Dmax= .583}						
005:0008ID:NHYD	AREA	-QPEAK-	TpeakDate_	hh:mm	R.V	R.C
* CALIB NASHYD 03:000105	19.20	3.938	No_date	6:00	66.47	.690
[CN= 86.8: N= 3.00] [Tp= .18:DT= 6.00]						
005:0009ID:NHYD	AREA	-QPEAK-	-TpeakDate_	hh:mm	R.V	R.C
$\begin{array}{c} 110 = 110.012 & 0.003 \\ 005:0009 ID:NHYD \\ ADD HYD & 03:000105 \\ + & 02:002105 \\ [DT= 6.00] & SUM= & 01:001105 \\ 005:0010 & T:NHYD$	19.20	3.938	No_date	6:00	66.47	n/a
+ 02:002105	66.20 85 40	7.046	No_date	6.18 6.12	65.13	n/a n/a
			ι ρεακράτε_			1
ROUTE CHANNEL -> 01:001105 [RDT= 6.00] out<- 02:002106	85.40	9.318	No_date	6:12	65.43	n/a
[RDT= 6.00] out<- 02:002106	85.40	8.847	No_date	6:18	65.43	n/a
[L/S/n = 385./.670/.030]						
{Vmax= .784:Dmax= .620} 005:0011ID:NHYD	AREA	-OPEAK-	-TpeakDate	hh:mm	R.V	R.C
	,		·			

2(4))

	D 03:000106	SWM.SU	1m 3 2 7 0	No data	6.00	67 15 607
[CN= 87.2:	N= 3.001	13.30	J.275	NO_uale	0.00	07.13 .037
ןיTn– 17ין	DT- 6 001					
005:0012	ID:NHYD 03:000106 + 02:002106 SUM= 01:001106 ID:NHYD	AREA	QPEAK-	-TpeakDate	e_hh:mm-	R.VR.C
ADD HYD	03:000106	15.30	3.279	No_date	6:00	67.15 n/a
[DT- 6 00]	+ U2:002100 SUM- 01:001106	85.40 100 70	8.847 10 545	No_date	6:18 6:12	65.69 n/a
005:0013	TD:NHYD	ARFA	OPFAK	TpeakDate	hh:mm	- R.V. R.C.
" CALIB STAND	HID 02:000T01	15.27	.957	No_date	6:54	72.64 .754
[XIMP=.10]	IIMP=.I/J					
[LOSS= 2 :0	CN= 88.0]					
[Pervious	area: IAper=	2.50:SLPP=	1.27:LGP=	= 717.:MNF	250:S	CP= .0]
005.0014	s area: IAimp= : ID:NHYD		ODEAK	These kosts	hala a usua	
ADD HYD		100.70	10.545	No date	6:12	65.69 n/a
	+ 03:000107	15.27	.957	No_date	6:54	72.64 n/a
[DT= 6.00]	SUM= 02:001107	115.97	11.089	No_date	6:12	66.60 n/a
005:0015	ID:NHYD	AREA	QPEAK-	-TpeakDate	e_hh:mm-	R.VR.C.
ROUTE CHANNI	EL -> 02:001107	115.97	11.089	No_date	6:12	66.60 n/a
[RD] = 0.00	$\int 001 < - 01:002108$	115.97	10.128	Νο_αατε	6:24	66.60 n /a
$\sqrt{\frac{1}{2}} = \frac{1}{2}$	$52 \cdot Dmax = 977$					
005:0016	00./1.670/.030] 52:Dmax= .977} ID:NHYD D 02:000108 N= 3.00]	AREA	OPEAK-	-TpeakDate	hh:mm-	R.VR.C.
CALIB NASHY	D 02:000108	33.50	5.055	No_date	6:06	66.47 .690
[CN= 86.8:	N= 3.00]					
[Tp= .29:1	DT= 6.00]			_		
005:001/	ID:NHYD	AREA	QPEAK-	-TpeakDate	e_hh:mm-	R.VR.C.
ADD HYD	- 01:002108	33 50	10.128	No_date	6:06	66.00 n/a
[DT= 6.00]	SUM= 03:000004	149.47	14.265	No date	6.18	66 57 n/a
005:0018	ID:NHYD	AREA	QPEAK	-TpeakDate	hh:mm-	R.VR.C.
PRINT HYD	03:000004	149.47	14.265	No_date	6:18	66.57 n/a
005:0019	DI= 6.00] ID:NHYD 01:002108 + 02:000108 SUM= 03:000004 ID:NHYD 03:000004 ID:NHYD HYD 04:000101	AREA	QPEAK-	-TpeakDate	_hh:mm-	R.VR.C.
CALID DIAND		287.80	12.760	No_date	6:24	74.47 .773
[XIMP=.20: [LOSS= 2 :0						
	area: IAper=	5.00:SI PP=	.63:1 GP=	= 700. : MNF	250:50	CP= .01
[Impervious	s area: IAimp= 1	1.57:SLPI=	.63:LGI=	=3200 . :MNI	=.017:S	CI= .0]
005:0020	ID:NHYD	~AREA	OPEAK-	 TpeakDate 	hh:mm-	R.VR.C.
ROUTE CHANNI	EL -> 04:000101] out<- 05:002101	287.80	12.760	No_date	6:24	74.47 n/a
[RDT = 6.00]] out<- 05:002101	287.80	12.373	No_date	7:42	74.47 n/a
	00./ .420/.030] 59:Dmax= .765}					
005:0021	TD:NHYD	ARFA	0PF4K-	-TpeakDate	hh:mm-	R.VR C
* CALIB STAND	HYD 04:000102	272.90	14.347	No_date	6:00	68.10 .707
[XIMP=.13:]	TIMP=.28]					
[LOSS= 2 :0						
[Pervious	area: IAper=	5.00:SLPP=	.98:LGP=	=1350.:MNF	250:S	CP = .0]
[Impervious	s area: IAimp= : ID:NHYD					
ADD HYD	04:000102	272.90	14 347	No_date	6:00	68.10 n/a
	+ 05:002101	287.80	12.373	No_date	7:42	74.47 n/a
[DT= 6.00]	+ 05:002101 SUM= 06:000001	560.70	21.656	No_date	7:48	71.37 n/a
005:0023	ID:NHYD	AREA		-TpeakDate	e_hh:mm-∙	
PRINT HYD	06:000001	560.70	21.656	No_date	7:48	71.37 n/a
	ID:NHYD EL -> 06:000001	AREA		· ipeakDate		R.VR.C.
] out<- 04:002109	560.70	21.030	No_date No_date	7:40 8:00	71.37 n/a 71.37 n/a
	00./ .540/.030]	500.70	23.27J	no_uale	0.00	71.57 II/d
{Vmax= 1.11	18:Dmax= 1.106}					
005:0025	ID:NHYD	AREA	QPEAK-	-TpeakDate	_hh:mm	R.V.~R.C.
CALIB NASHY	D 05:000109	35.10	5.094	No_date	6:12	
[CN= 86.8:						
[Tp= .32:[DT= 6.00] ID:NHYD	ADEA	00544	Theakbata	hhumm	
003.0020		AKEA	QPEAK-	преакрате		ĸ.vĸ.c

		SWM.su					,
ADD HYD	04:002109 05:000109	560.70 35 10	21.245	No_date	8:00 6:12		n/a n/a
[DT= 6.00] SUM=	06:001109	35.10 595.80	21.750	No_date	8:00	71.08 r	1/a
005:0027 ROUTE CHANNEL -> [RDT= 6.00] out<-	-ID:NHYD	AREA 595.80	QPEAK- 21.750	·TpeakDate_ No date	_nn:mm 8:00	к.vк. 71.08 г	1/a
[RDT= 6.00] out<-	04:002110	595.80	21.511	No_date	8:06	71.08 r	1/a
[L/S/n= 900./ .7 {Vmax= 1.027:Dmax	10/.030]						
005:0028 CALIB NASHYD	-ID:NHYD	AREA	QPEAK-	TpeakDate	_hh:mm	R.VR	C
CALIB NASHYD [CN= 87.2: N= 3.0	05:000110	21.80	4.044	No_date	6:06	67.15 .6	597
Tp= .22:DT= 6.0	0]						
005.0020		AREA	QPEAK-	-TpeakDate	_hh:mm	R.VR.	.C
ADD HYD	05:000110	21.80	4.044	No_date	6:06	67.15	1/a 1/a
ADD HYD [DT= 6.00] SUM= 005:0030	06:001110	617.60	21.806	No_date	8:06	70.94 r	1/a
ROUTE CHANNEL ->	-1D:NHYD	AREA 617.60	21.806	No_date	_nn:m=-~ 8:06	70.94	1/a
[RDT= 6.00] out<-	04:002111	617.60	21.776	No_date	8:06	70.94 I	n/a
[L/S/n= 920./1.2 {Vmax= 2.102:Dmax	= .990}						
005:0031 CALIB NASHYD	-ID:NHYD	AREA	QPEAK-	-TpeakDate	_hh:mm	R.VR	.C
CALIB NASHYD [CN= 86.4: N= 3.0	01:000111	17.30	3.018	No_date	6:06	65.79 .0	083
$\bar{\Gamma}_{Tn} = 22 \cdot DT = 6.0$	01						
	-ID:NHYD	AREA 17 30	QPEAK- 3 018	-TpeakDate No date	_hh:mm 6:06	R.VR	.C n/a
ADD 1110 +	04:002111	617.60	21.776	No_date	8:06	70.94	n/a
005:0032 ADD HYD [DT= 6.00] SUM= 005:0033		634.90	22.010	No_date -TneakDate	8:06 hh:mm	70.80 I	n/a
PRINT HYD #************************************	02:000002	634.90	22.010	No_date	8:06	70.80	n/a
#*************************************							
005:0034	-ID:NHYD	AREA	QPEAK-	-TpeakDate	_hh:mm	R.VR	.Ç
	03-000004	149 47	14 265	No date	6:18	66.57	n/a
т= 6.001 SUM=	02:000002	784.37	32.959	No_date	6:18	70.00	n/a n/a
#*************************************	******	******	******	*******	******	*******	**
#*************************************	NG CEMETERY	LANDS					
			****	********	******	*******	* *
<pre># PROPOSED IMPERVIOUSNE # THEREFORE, CN VALUE H</pre>	ISS LESS THAN	IZU% FIED TO A		FOR PROPOS	ED IMPER	VIOUS SU	RF
#							
#*************************************							
#*****	*****						-
005:0035 CALIB NASHYD	ID:NHYD 01:201A	AREA 68 20	QPEAK 7,276	-TpeakDate No_date	_hh:mm 6:18	R.VR 62.87 .	.C 653
[CN= 86.0: N= 3.0	00]	00.20	/12/0	No_uucc	0110	02107 1	
[Tp= .47:DT= 6.0 #Route NHYD=201A throug		IT_2					
005:0036		AREA	QPEAK	-TpeakDate	_hh:mm		.c
ROUTE CHANNEL -> [RDT= 6.00] out<-	⊳ 01:201A	68.20	7.276	No_date	6:18	62.87	n/a n/a
[L/S/n = 450./.7]	750/.030]	00.20	0.902	No_date	0.24	02.07	11 <i>7</i> u
{Vmax= 1.194:Dmax #*****	(= .658}	*****	*****				
# DRAINAGE FROM CEMETER							
#**********	***********	*******	******	Thesk Dete	la la s name		c
005:0037 CALIB NASHYD			.130	No_date	6:06	65.68	682
[CN= 87.7: N= 3.0	[00						
Tp= .27:DT= 6.0 005:0038	ID:NHYD	AREA	OPEAK	-TpeakDate	hh:mm	R.VR	.c
00010000	1011110		<u></u> ,, не	- F			

* CALIB NASHYD	03:A1b	SWM.sum 6.10	1 777	No data	6.00	62 00	CEE **
$\begin{bmatrix} CN = 86.1: N = 3.00\\ [Tp = .07:DT = 3.00] \end{bmatrix}$]	0.10	1.727	No_date	6:00	63.08	.035
005:0039	J TD:NHYD		OPFAK-	TneakDate	hh•mm		PC-
	04:A1c	3.20		No_date			
[CN= 87.2: N= 3.00]							
[Tp= .14:DT= 3.00]]						
	ID:NHYD	-AREA	QPEAK-	-TpeakDate_	hh:mm	-R.V	R.C
CALIB NASHYD [CN= 87.3: N= 3.00	06:A1d 1	5.50	.970	No_date	0:00	65.04	.075
Tp= .21:DT= 6.00	1						
005:0041	ID:NHYD	-AREA	QPEAK-	-TpeakDate_	hh:mm	-R.V	R.C
ROUTE RESERVOIR -> (06:Ald	5.30	.978	No_date No_date	6:06	65.04	n/a
[RDT= 6.00] out<-	0/:Ald 08:OVR	5.30	.268	No_date		65.04	n/a
overflow <= {MxStoUsed=.1580E+0				No_date	0:00	.00	n/a
005:0042	ID:NHYD	-AREA	OPEAK-	-TpeakDate	hh:mm		R.C
ADD HYD	07:A1d	5.30	.268	No_date No_date	6:36	65.04	n/a
+	08:0VR	.00	.000	No_date	0:00	.00	n/a
[DT= 6.00] SUM= (U6:AldPND	5.30	.268	No_date	_6 : 36	65.04	n/a
# TOTAL DRATNAGE FROM SU	RCATCHMENTS 20	λλολοδο 11Λ ± Λ1α	L A16		14		
<pre># TOTAL DRAINAGE FROM SU #************************************</pre>	****	******	*****	, T AIC T A	1U ***		
005:0043	ID:NHYD	-AREA	QPEAK-	-TpeakDate_	hh:mm	-R.V	R.C
ADD HYD	01:Ala	.80	.130	No_date	6:06	65.68	n/a
		58.20 6.10	6.982	No_date	6:24	62.87	n/a
	03:A1b 04:A1c	6.10 3.20		No_date No_date		63.08 64.92	n/a
	06:A1dPND	5.30	268	No_date	6:03 6:36	65.04	n/a n/a
[DT= 3.00] SUM=	05:SMT2 8	33.60	7.714	No_date	6:24	63.20	n/a
#*****	****						,
<pre># DRAINAGE FROM 201B (EX</pre>	TERNAL)						
#**************************************			ODEAK	Theskoats	la la	D 1/	
005:0044 CALIB NASHYD	01:201B	-AREA 13.40	1 801	No_date	nn:mm 6:12	62.87	
[CN= 86.0: N= 3.00]		13140	1.051	No_date	0.12	02.07	.055
[Tp = .31: DT = 6.00]	1						
#*****							
<pre># DRAINAGE FROM CEMETERY #************************************</pre>	LANDS BIA, B.	LD, BIC (B-Seri	es, East D	rainage)		
^{**} 005:0045:							RC-
CALIB NASHYD	02:B1a	4.60	.954	No_date	6:03	64.55	
[CN= 87.0: N= 3.00]]						
[Tp= .17:DT= 3.00]]						
005:0046 ROUTE RESERVOIR -> (ID:NHYD	-AREA	QPEAK-	-TpeakDate_	hh:mm	-R.V	R.C
[RDT= 3.00] out <- (02;B1d 04•B1a	4.60	289	No_date	6:27	64.55	n/a n/a
overflow <= (00		No_date	0:00	.00	
{MxStoUsed=.1235E+00	0, TotOvfVol=.	0000E+00	, N-OV	/f= 0, Τ	otDurovf	² = 0	.hrs}
005:0047	ID:NHYD		QPEAK-	-TpeakDate_			R.C
	04:B1a	4.60		No_date	6:27	64.55	n/a
	08:OVR 02:BlaPND	_00 4_60		No_date No_date	0:00 6:27	.00 64.55	n/a n/a
005:0048	ID:NHYD-~	-AREA	OPEAK-	TpeakDate	hh:mm	-R.V	R.C
ADD HYD (01:201в 🔅	L3.40	1.891	No_date		62.87	n/a
+ (02:BlaPND	4.60	.289	No_date	6:27	64.55	n/a
[DT= 3.00] SUM= (#*****	US:201B	L8.00	2.160	No_date	6:12	63.30	n/a
# Route NHYD=201B + B1a 1			*****				
# ROULE NHID=2010 + BId	+*************	=	*****	******			
["] 005:0049					hh:mm	-R.V	R.C
ROUTE CHANNEL -> (03:201B 1	L8.00	2.160	No_date	6:12	63.30	n/a
* [RDT= 3.00] out<- (L8.00	1.969	No_date	6:18	63.30	n/a
[L/S/n= 600./ .850 {Vmax= 1.113:Dmax=							
(vinax- 1,113.Dillax=	1733J						

			SWM.sum	1			
	005:0050 CALIB NASHYD	ID:NHYD	AREA	-QPEAK-T	peakDate_	hh:mm	R.VR.C
2	CALIB NASHYD [CN= 86.1: N= 3.00	03:BTD	5.00	1.014 NG	o_date	0:03	03.09 .000
	$\bar{[Tp}=.17: pT=3.00$	1					
	005:0051 CALIB NASHYD	ID:NHYD	AREA	QPEAK-Tp	peakDate_	hh:mm	R.VR.C
	[CN = 87.7: N = 3.00]		1.00	.207 NO	J_uale	0.00	03.72 .002
	Tp= .10:DT= 3.00]			·		
	005:0052 ADD HYD	ID:NHYD 03:B1b	AREA	QPEAK-T	peakDate_ o_date	hh:mm	R.VR.C 63.09 n/a
	+	04:B1c	1.00	.267 NG	o_date	6:00	
	[DT= 3.00] SUM= #************************************	02:B1b/c	6.00	1.253 No	o_date	6:03	63.53 n/a
	#*************************************	IBCATCHMENTS	201B + B1	La + B1b -	+ B1C		
	#*************************************					hh:mm	
	ADD HYD	01:SMT-4R	18.00	1.969 No	o_date	6:18	63.30 n/a
	+	02:B1b/c	6.00	1.253 No	o_date	6:03	63.53 n/a
141	ADD HYD [DT= 3.00] SUM=	U3:B1East *******	24.00 *******	Z./31 N(0_0ate ********	0:09 *****	63.35 n/a **
	# DRAINAGE FROM CEMETERY	′ LANDS B1d,	B1e, B1f ******	(B-series	s, West [********	rainage) **
	005:0054	ID:NHYD	AREA	OPEAK-TI	peakDate	hh:mm	R.VR.C
	* CALIB STANDHYD [XIMP=.25:TIMP=.25	01:B10	4.30	1.310 NG	o_date	6:00	/1.22 ./39
	LOSS= 2 :CN= 86.0)]					
	[Pervious area	IAper= 5.0	0:SLPP=	.85:LGP=	30.:MNP=	=.035:SC	P= .0]
	[Impervious area 005:0055	TD:NHYD	ARFA	.05:LGI= OPEAK-TI	peakDate		1= .U] R.VR.C
	ROUTE RESERVOIR -> [RDT= 3.00] out<- overflow <=	01:B1d	4.30	1.310 N	o_date	6:00	71.22 n/a
	[RDT= 3.00] out<-	04:B1d	4.30	.249 N	o_date	6:12 0:00	71.22 n/a .00 n/a
	Mystollcod 1/8/EL		- 0000E10	10 N_0V+	- 0 7	[otDurov	f = 0 hrs
	005:0056	ID:NHYD	AREA	QPEAK-T	peakDate_	_hh:mm	R.VR.C
	ADD HYD	04:Bld	4.30	.249 N	o_date	6:12	/1.22 n/a 00 n/a
	 ГDT= 3.00] SUM=	01:B1dPND	4.30	.249 N	o_date	6:12	71.22 n/a
	003.003/===========	·ID.NDID	AKLA		ρεακρατε_		
	CALIB NASHYD [CN= 87.4: N= 3.00	02:RTL	3.50	.889 N	o_date	6:00	03.12 .070
	ĪΤp= .11:DT= 3.00)]					
	005:0058	ID:NHYD	AREA		peakDate_	_hh:mm	R.VR.C 65.12 n/a
	ROUTE RESERVOIR ->	02:B11 04:B1f	3.50	.009 N	o_date	6:24	65.12 n/a
	ROUTE RESERVOIR -> [RDT= 3.00] out<- overflow <=	08:0VR	.00	.000 N	o_date	0:00	.00 n/a
	{MxStoUsed=.1126E+(005:0059)0, TotOvtVol	=.0000E+	UU, N-OVT	= 0, ⁻ neakDate	FotDurOv hh:mm	f = 0.nrs
	ADD HYD	04:B1f		4 - 0		6:24	65.12 n/a
	+	08:0VR	.00	.159 N .000 N	o_date	0:00	.00 n/a
	[DT= 3.00] SUM= 005:0060	UZ:BITPND	3.5U ARFA	.159 N OPFAK-T	o_date neakDate	6:24 hh:mm	65.12 n/a
	* CALIB STANDHYD	07:B1e	3.60	1.108 N	o_date	6:00	71.75 .745
	[XIMP=.27:TIMP=.27						
	[LOSS= 2 :CN= 86.([Pervious area	1: IAper= 5.0	0:SLPP=1	.15:LGP=	30.:MNP	=.035:SC	P= .0]
	ĪImpervious area	a: IAimp= .5	0:SLPI=1	.15:LGI=	50.:MNI:	=.013:SC	I= .0]
	005:0061 ROUTE RESERVOIR ->	-ID:NHYD 07:810	AREA 3.60	QPEAK-I 1,108 N		_nn:mm 6:00	71.75 n/a
	[RDT= 3.00] out<-	06:Ble	3.60	.197 N	o_date	6:12	71.75 n/a
				.000 N	o_date		.00 n/a
	{MxStoUsed=.1328E+(005:0062	-ID:NHYD	AREA	OPEAK-T	– v, peakDate	_hh:mm	f= 0.hrs}
	ADD HYD	06:B1e	3.60	.197 N	o date	6:12	71.75 n/a
	+ [DT= 3.00] SUM=	08:0VR	.00 3.60		o_date o_date	0:00 6:12	.00 n/a 71.75 n/a
		OV BIGHND	2.00	1137 N	U_uale	0.14	riis nya

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SWM.sum 005:0063-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 ADD HYD
 01:B1dPND
 4.30
 .249 No_date
 6:12
 71.22 n/a

 + 02:B1West
 3.50
 .159 No_date
 6:24
 65.12 n/a

 + 07:B1ePND
 3.60
 .197 No_date
 6:12
 71.75 n/a

 [DT= 3.00]
 SUM=
 02:B1West
 11.40
 .604 No_date
 6:15
 69.51 n/a
 #****** # TOTAL DRAINAGE FROM SUBCATCHMENTS 201B+B1a+B1b+B1c+B1d+B1e+B1f #**** 005:0064-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 02:B1West 11.40 .604 No_date 6:15 69.51 n/a + 03:B1East 24.00 2.731 No_date 6:09 63.35 n/a [DT= 3.00] SUM= 04:SMT4 35.40 3.326 No_date 6:09 65.34 n/a #***** # DRAINAGE FROM 201C (EXTERNAL) #*********************************** 005:0065-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:201C 91.00 9.278 No_date 6:24 62.87 .653 [CN= 86.0: N= 3.00] [Tp= .50:DT= 6.00] #***** 005:0066-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:Cla 7.00 1.249 No_date 6:06 62.87 .653 [CN= 86.0: N= 3.00] [Tp= .21:pT= 6.00] #***** # C1a SWM FACILITY #******************* 005:0067-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-

 ROUTE RESERVOIR -> 02:Cla
 7.00
 1.249 No_date
 6:06
 62.87 n/a

 [RDT= 6.00] out<- 06:Cla</td>
 6.55
 .325 No_date
 6:18
 62.87 n/a

 overflow <= 08:0VR</td>
 .45
 .593 No_date
 6:18
 62.87 n/a

 # DISCHARGE FROM Cla SWM FACILITY #*********************************** 005:0068-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 06:Cla 6.55 .325 No_date 6:18 62.87 n/a + 08:OVR .45 .593 No_date 6:18 62.87 n/a [DT= 6.00] SUM= 02:ClaPND 7.00 .918 No_date 6:18 62.87 n/a 005:0069-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:C1b .50 .150 No_date 6:00 63.75 .662 005:0070-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 01:201C 91.00 9.278 No_date 6:24 62.87 n/a + 02:EX+MC 7.00 .918 No_date 6:18 62.87 n/a + 03:C1b .50 .150 No_date 6:00 63.75 n/a [DT= 2.00] SUM= 02:EX+MC 98.50 10.147 No_date 6:18 62.87 n/a #***** 005:0071-----ID:NHYD----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 ROUTE CHANNEL
 ->
 02:EX+MC
 98.50
 10.147
 No_date
 6:18
 62.87
 n/a

 [RDT= 2.00]
 out<-</td>
 01:SMT-1
 98.50
 9.589
 No_date
 6:24
 62.87
 n/a

 *
 [RDT= 2.00] out<- 01:SMT-1</td>
 98.50
 9.589 No_date
 6:24
 62.87
 n/a

 [L/S/n= 275./ .500/.030]
 {Vmax= .962:Dmax= .760}

 005:0072-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.

 CALIB NASHYD
 07:C2
 3.80
 .770 No_date
 6:03
 63.09
 .655

 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00]

SWM.sum #********************** **# TOTAL DRAINAGE FROM SUBCATCHMENTS** 005:0073-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-01:SMT1 98.50 9.589 No_date 6:24 62**.**87 n/a ADD HYD + 07:C2 [DT= 2.00] SUM= 01:SMT1 63.09 n/a 3.80 .770 No_date 6:03 9.852 No_date 102.30 6:24 62.88 n/a #************************************ 005:0074-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-04:SMT4 35.40 3.326 No_date 6:09 01:SMT1 102.30 9.852 No_date 6:24 ADD HYD 04:SMT4 + 01:SMT1 [DT= 2.00] SUM= 02:SMT1-4 65.34 n/a 62.88 n/a 63.51 n/a 6:22 137.70 12.820 No_date #***** 005:0075-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:201D 28.90 3.390 No_date 6:18 62.87 .653 [CN= 86.0: N= 3.00] [Tp= .41:DT= 6.00] #***** **# SUBCATCHMENT 201D ROUTED** 005:0076-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 02:201D 28.90 3.390 No_date 6:18 62.87 n/a [RDT= 6.00] out<- 03:SMT-3R 28.90 3.403 No_date 6:18 62.87 n/a [RDT= 6.00] out<- 03:SMT-3R 28.9 [L/S/n= 100./ .700/.030] {Vmax= 1.429:Dmax= .967} #**** # DRAINAGE FROM CEMETERY LANDS D1a, D1b #***** 005:0077-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:D1a 1.90 .450 No_date 6:00 66.20 .687 [CN= 88.0: N= 3.00] [Tp= .13:DT= 3.00] 005:0078-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-* CALIB NASHYD 07:D1b 1.90 .504 No_date 6:00 62.87 .653 [CN= 86.0: N= 3.00] [Tp= .09:DT= 3.00] #**** # TOTAL DRAINAGE FROM SUBCATCHMENTS 201D+D1a+D1b #********************* 005:0079-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 02:D1a 1.90 .450 No_date 6:00 + 03:SMT-3R 28.90 3.403 No_date 6:18 + 07:D1b 1.90 .504 No_date 6:00 [DT= 3.00] SUM= 06:SMT3 32.70 3.716 No_date 6:12 66.20 n/a 62.87 n/a 62.87 n/a 63.06 n/a 005:0080-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-01:SMT1 102.30 9.852 No_date 6:24 62.88 n/a + 04:SMT4 35.40 3.326 No_date 6:09 65.34 n/a + 06:SMT3 32.70 3.716 No_date 6:12 63.06 n/a ADD HYD + 06:SMT3 32.70 3.716 No_date [DT= 2.00] SUM= 03:SMT1-3 170.40 16.370 No_date 6:20 63.42 n/a #******** 005:0081-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-01:SMT1 102.30 9.852 No_date 6:24 62.88 n/a 04:SMT4 35.40 3.326 No_date 6:09 65.34 n/a 06:SMT3 32.70 3.716 No_date 6:12 63.06 n/a ADD HYD + 04:SMT4 32.70 3.716 No_date 6:12 63.06 n/a + 06:SMT3

SWM.sum 7.714 No_date + 05:SMT2 83.60 6:24 63.20 n/a 23.922 No_date 6:22 63.35 n/a [DT= 2.00] SUM= 08:1201 254.00 005:0082-----ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 08:1201 254.00 23.922 No_date 6:22 63.35 n/a [RDT= 2.00] out<- 03:002202 [L/S/n= 475./1.050/.030] {Vmax= 1.134:Dmax= .672} 254.00 23.248 No_date 6:28 63.35 n/a 005:0083------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:000202 21.60 3.208 No_date 6:12 66.47 .690 [CN= 86.8: N= 3.00] [Tp= .30:DT= 6.00] 005:0084------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-03:002202 254.00 23.248 No_date ADD HYD 63.35 n/a 6:28 21.60 3.208 No_date + 04:000202 6:12 66.47 n/a [DT= 2.00] SUM= 02:001202 275.60 25.525 No_date 6:24 63.59 n/a 005:0085------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 26.30 4.582 No_date 6:06 66.47 .690 03:000203 [CN= 86.8: N= 3.00] [Tp= .24:DT= 6.00] 005:0086------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 03:000203 26.30 4.582 No_date 6:06 66.47 n/a + 02:001202 275.60 25.525 No_date 6:24 63.59 n/a 63.84 n/a [DT= 2.00] SUM= 04:000003 301.90 28.161 No_date 6:22 005:0087-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-PRINT HYD 04:000003 301.90 28.161 No_date 6:22 63.84 n/a **# SUBCATCHMENT 204 AREA REVISED** 005:0088-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:000204 53.60 4.865 No_date 6:30 65.53 .680 [CN= 87.6: N= 3.00] [Tp= .63:DT= 6.00] 005:0089-----TD:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-02:000204 53.60 4.865 No_date 04:000003 301.90 28.161 No_date 03:001204 355.50 32.849 No_date ADD HYD 6:30 65.53 n/a 6:22 63.84 n/a 64.10 n/a 6:22 # ROUTE through Channel 205 ELIMINATED, OUTSIDE OF STUDY AREA #************************** #********** 005:0090------R.V.-R.C.-DD HYD 09:001108 784.37 32.959 No_date 6:18 + 03:001204 355.50 32.849 No_date 6:22 [DT= 2.00] SUM= 02:00008 1139.87 65.757 No_date 6:22 70.00 n/a ADD HYD 64.10 n/a 68.16 n/a 005:0091-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-PRINT HYD 02:000008 1139.87 65.757 No_date 6:22 68.16 n/a 5 ** END OF RUN : RUN: COMMAND# 006:0001----------START [TZERO = .00 hrs on 0]

SWM.sum (1=imperial, 2=metric output)] [METOUT= 2 ĪNSTORM= 1] 「NRUN = 6 Project Name: [Holy Family Catholic Cemetery] Project Number: [111063] Date_____: 08-16-2011 # # # Modeller : [C. Silvestri] Philips Engineering Ltd # Company License # : 3569108 # 006:0002-----READ STORM Filename = STORM.001Comment = TOWN OF MILTON 12 HOUR 100 YEAR SCS STORM (1998 IDF DATA) [SDT=12.00:SDUR= 12.00:PTOT= 106.96] 006:0003-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:000103 42.10 5.881 No_date 6:18 74.84 .700 [CN= 86.0: N= 3.00] [Tp= .40:DT= 6.00] 006:0004-----DI:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 01:000103 42.10 5.881 No_date 6:18 74.84 n/a [RDT= 6.00] out<- 02:002104 42.10 5.531 No_date 6:24 74.84 n/a [RDT= 6.00] out<- 02:002104 [L/S/n= 440./1.000/.030] {Vmax= .795:Dmax= .614} 006:0005-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:000104 24.10 5.036 No_date 6:06 74.84 .700 [CN= 86.0: N= 3.00] [Tp= .21:DT= 6.00] 006:0006------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 03:000104 24.10 5.036 No_date 6:06 74.84 n/a + 02:002104 42.10 5.531 No_date 6:24 74.84 n/a [DT= 6.00] SUM= 01:001104 66.20 8.873 No_date 6:12 74.84 n/a 006:0007------R.V.-R.C.-ROUTE CHANNEL -> 01:001104 66.20 8.873 No_date 74.84 n/a 6:12 [RDT= 6.00] out<- 02:002105 [L/S/n= 365./ .400/.030] {Vmax= .595:Dmax= .604} 74.84 n/a 66.20 8.238 No_date 6:18 006:0008-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:000105 19.20 4.511 No_date 6:00 76.26 .713 [CN= 86.8: N= 3.00] [Tp= .18:DT= 6.00] 006:0009-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 03:000105 19.20 4.511 No_date 6:00 76.26 n/a + 02:002105 66.20 [DT= 6.00] SUM= 01:001105 85.40 74.84 n/a 75.16 n/a 8.238 No_date 6:18 10.898 No_date 6:12 006:0010-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-10.898 No_date 75.16 n/a ROUTE CHANNEL -> 01:001105 85.40 6:12 [RDT= 6.00] out<- 02:002106 [L/S/n= 385./ .670/.030] 85.40 10.393 No_date 6:18 75.16 n/a {Vmax= .821:Dmax= .648} 006:0011-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-* CALIB NASHYD 03:000106 15.30 3.750 No_date 6:00 76.98 .720 [CN= 87.2: N= 3.00] [Tp= .17:DT= 6.00] 006:0012-----R.V.-R.C.-ADD HYD 03:000106 15.30 3.750 No_date 6:00 76.98 n/a + 02:002106 85.40 10.393 No_date 6:18 75.16 n/a [DT= 6.00] SUM= 01:001106 100.70 12.397 No_date 6:12 75.43 n/a [DT= 6.00] SUM= 01:001106 006:0013-----ID:NHYD-----AREA----OPEAK-TpeakDate_hh:mm----R.V.-R.C.-* CALIB STANDHYD 03:000107 15.27 1.172 No_date 6:48 82.70 .773 [XIMP=.10:TIMP=.17] LOSS= 2 :CN= 88.0] [Pervious area: IAper= 2.50:SLPP=1.27:LGP= 717.:MNP=.250:SCP= [Impervious area: IAimp= 1.57:SLPI=1.27:LGI= 100.:MNI=.017:SCI= .01 .01 006:0014------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-

SWM. SI	um
ADD HYD 01:001106 100.70	12.397 No_date 6:12 75.43 n/a
+ 03:000107 15.27	1.172 No_date 6:48 82.70 n/a
[DT= 6.00] SUM= 02:001107 115.97	13.099 No_date 6:12 76.39 n/a
006:0015AREA-	QPEAK-TpeakDate_hh:mmR.VR.C
ROUTE CHANNEL -> 02:001107 115.97	13.099 No_date 6:12 76.39 n/a 11.941 No date 6:24 76.39 n/a
[RDT= 6.00] out<- 01:002108 115.97 [L/S/n= 1300./1.670/.030]	11.941 No_date 6:24 76.39 n/a
$\{Vmax = 1.901:Dmax = 1.020\}$	
006:0016AREA-	OPEAK-TpeakDate_hh:mmR.VR.C
006:0016AREA- CALIB NASHYD 02:000108 33.50	5.799 No_date 6:06 76.26 .713
[CN= 86.8: N= 3.00]	
[Tp= .29:DT= 6.00]	
006:0017AREA- ADD HYD 01:002108 115.97	QPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 01:002108 115.97	5.799 No_date 6:06 76.26 n/a
+ 02:000108 33.50 [DT= 6.00] SUM= 03:00004 149.47	16.688 No_date 6:18 76.36 n/a
006:0018AREA-	OPFAK-TpeakDate hh:mmR.VR.C
006:0018ID:NHYDAREA- PRINT HYD 03:000004 149.47 006:0019AREA- CALIB STANDHYD 04:000101 287.80	16.688 No_date 6:18 76.36 n/a
006:0019AREA-	QPEAK-TpeakDate_hh:mmR.VR.C
CALIB STANDHYD 04:000101 287.80	15.077 No_date 6:24 84.59 .791
[XIMP=.20:TIMP=.50]	
[LOSS= 2 :CN= 83.4]	
[Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI=	63:LGP = 700.:MNP = .250:SCP = .0]
Limpervious area: IAImp= 1.57:SLPI=	OPEAK-TopokDato hb:mmP V -R C -
006:0020AREA- ROUTE CHANNEL -> 04:000101 287.80 [RDT= 6.00] out<- 05:002101 287.80	15.077 No date $6:24$ 84.59 n/a
[RDT = 6.00] out < -05:002101 287.80	14.785 No date 7:36 84.59 n/a
[L/S/n= 700./ .420/.030]	
{Vmax= .799:Dmax= .801}	
006:0021AREA- * CALIB STANDHYD 04:000102 272.90	QPEAK-TpeakDate_hh:mmR.VR.C
* CALIB STANDHYD 04:000102 272.90	16.381 No_date
[XIMP=.13:TIMP=.28]	
[LOSS= 2 :CN= 84.0]	98.1 CP-1350 MNP- 250.5 CP- 01
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP=	.98:LGP=1350.:MNP=.250:SCP= .0]
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI=	.98:LGI= 40.:MNI=.017:SCI= .0]
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI=	.98:LGI= 40.:MNI=.017:SCI= .0]
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI=	.98:LGI= 40.:MNI=.017:SCI= .0]
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70	98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA-	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a OPEAK-TpeakDate hh:mmR.VR.C
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PBINT HYD 06:000001 560.70	98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PBINT HYD 06:000001 560.70	98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PBINT HYD 06:000001 560.70	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70 [L/S/n= 1000./ .540/.030]	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a
[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70 [L/S/n= 1000./ .540/.030] {Vmax= 1.158:Dmax= 1.177} 006:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10</pre>	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C.= 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.=
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70 [L/S/n= 1000./ .540/.030] {Vmax= 1.158:Dmax= 1.177} 006:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00]</pre>	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70 [L/S/n= 1000./ .540/.030] {Vmax= 1.158:Dmax= 1.177} 006:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [Tp= .32:DT= 6.00]</pre>	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C.= 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 5.835 No_date 6:12 76.26 .713
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70 [L/S/n= 1000./ .540/.030] {Vmax= 1.158:Dmax= 1.177} 006:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [TP= .32:DT= 6.00] 006:0025AREA- CALIB NASHYD 05:000109 35.10</pre>	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 5.835 No_date 6:12 76.26 .713
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70 [L/S/n= 1000./ .540/.030] {Vmax= 1.158:Dmax= 1.177} 006:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [TP= .32:DT= 6.00] 006:0025AREA- CALIB NASHYD 05:000109 35.10</pre>	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 5.835 No_date 6:12 76.26 .713
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [RDT= 6.00] out<- 04:002109 560.70 [L/S/n= 1000./ .540/.030] {Vmax= 1.158:Dmax= 1.177} 006:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [TP= .32:DT= 6.00] 006:0025AREA- CALIB NASHYD 05:000109 35.10</pre>	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 5.835 No_date 6:12 76.26 .713
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:00001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:00001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [L/S/n= 1000./ .540/.030] {Vmax= 1.158:Dmax= 1.177} 006:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [TP= .32:DT= 6.00] 006:0026ID:NHYDAREA- ADD HYD 04:002109 560.70 + 05:000109 35.10 [DT= 6.00] SUM= 06:001109 595.80 006:0027ID:NHYDAREA-</pre>	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C.= 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:48 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 5.835 No_date 6:12 76.26 .713 QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 5.835 No_date 6:12 76.26 n/a 26.500 No_date 7:48 81.05 n/a OPEAK-TpeakDate_hh:mmR.VR.C.=
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<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:000001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:000001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [L/S/n= 1000./ .540/.030] {Vmax= 1.158:Dmax= 1.177} 006:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [TP= .32:DT= 6.00] 006:0026ID:NHYDAREA- ADD HYD 04:002109 560.70 + 05:000109 35.10 [DT= 6.00] SUM= 06:001109 595.80 006:0027ID:NHYDAREA- ROUTE CHANNEL -> 06:001109 595.80 [RDT= 6.00] out<- 04:002110 595.80</pre>	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C.= 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:48 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 5.835 No_date 6:12 76.26 .713 QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 5.835 No_date 6:12 76.26 n/a 26.500 No_date 7:48 81.05 n/a OPEAK-TpeakDate_hh:mmR.VR.C.=
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD 04:000102 272.90 + 05:002101 287.80 [DT= 6.00] SUM= 06:00001 560.70 006:0023ID:NHYDAREA- PRINT HYD 06:00001 560.70 006:0024ID:NHYDAREA- ROUTE CHANNEL -> 06:000001 560.70 [L/S/n= 1000./ .540/.030] {Vmax= 1.158:Dmax= 1.177} 006:0025ID:NHYDAREA- CALIB NASHYD 05:000109 35.10 [CN= 86.8: N= 3.00] [TP= .32:DT= 6.00] 006:0026ID:NHYDAREA- ADD HYD 04:002109 560.70 + 05:000109 35.10 [DT= 6.00] SUM= 06:001109 595.80 006:0027ID:NHYDAREA- ROUTE CHANNEL -> 06:001109 595.80 [RDT= 6.00] out<- 04:002110 595.80 [RDT= 6.00] out<- 04:002110 595.80 [L/S/n= 900./ .710/.030]</pre>	 .98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C.= 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:48 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 5.835 No_date 6:12 76.26 .713 QPEAK-TpeakDate_h:mmR.VR.C 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 25.911 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.500 No_date 7:48 81.05 n/a
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD</pre>	 98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C.= 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 5.835 No_date 6:12 76.26 .713 QPEAK-TpeakDate_hh:mmR.VR.C.= 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.500 No_date 7:48 81.05 n/a 25.911 No_date 7:48 81.05 n/a 26.500 No_date 7:48 81.05 n/a
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD</pre>	 98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 5.835 No_date 6:12 76.26 .713 QPEAK-TpeakDate_hh:mmR.VR.C 26.500 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.500 No_date 7:48 81.05 n/a 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_7:48 81.05 n/a QPEAK-TpeakDate_7:48 81.05 n/a
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD</pre>	 98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C.= 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 5.835 No_date 6:12 76.26 .713 QPEAK-TpeakDate_hh:mmR.VR.C.= 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.500 No_date 7:48 81.05 n/a 25.911 No_date 7:48 81.05 n/a 26.500 No_date 7:48 81.05 n/a
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD</pre>	 98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 5.835 No_date 6:12 76.26 .713 QPEAK-TpeakDate_hh:mmR.VR.C 26.500 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.500 No_date 7:48 81.05 n/a 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_7:48 81.05 n/a QPEAK-TpeakDate_7:48 81.05 n/a
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD</pre>	 98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C.= 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 5.835 No_date 6:12 76.26 .713 QPEAK-TpeakDate_hh:mmR.VR.C.= 26.500 No_date 7:48 81.05 n/a 5.835 No_date 6:12 76.26 n/a 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.330 No_date 7:54 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.330 No_date 6:06 76.98 .720
<pre>[LOSS= 2 :CN= 84.0] [Pervious area: IAper= 5.00:SLPP= [Impervious area: IAimp= 1.57:SLPI= 006:0022ID:NHYDAREA- ADD HYD</pre>	 98:LGI= 40.:MNI=.017:SCI= .0] QPEAK-TpeakDate_hh:mmR.VR.C.= 16.381 No_date 6:00 77.94 n/a 14.785 No_date 7:36 84.59 n/a 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.504 No_date 7:42 81.35 n/a 25.911 No_date 7:48 81.35 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 5.835 No_date 6:12 76.26 .713 QPEAK-TpeakDate_hh:mmR.VR.C.= 26.500 No_date 7:48 81.05 n/a 5.835 No_date 6:12 76.26 n/a 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.500 No_date 7:48 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.330 No_date 7:54 81.05 n/a QPEAK-TpeakDate_hh:mmR.VR.C.= 26.330 No_date 6:06 76.98 .720

SWM.sum 6:06 76.98 n/a 7:54 80.91 n/a 21.80 + 05:000110 4.622 No_date [DT= 6.00] SUM= 06:001110 617.60 26.681 No_date 006:0030-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 06:001110 617.60 26.681 No_date [RDT= 6.00] out<- 04:002111 617.60 26.569 No_date [L/S/n= 920./1.250/.030] {Vmax= 2.173:Dmax= 1.057} 80.91 n/a 80.91 n/a 7:54 8:00 006:0031-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:000111 17.30 3.458 No_date 6:06 75.55 .706 [CN= 86.4: N= 3.00] [Tp= .23:DT= 6.00] 006:0032------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 01:000111 17.30 3.458 No_date + 04:002111 617.60 26.569 No_date [DT= 6.00] SUM= 02:000002 634.90 26.845 No_date 6:06 75.55 n/a 8:00 80.91 n/a 8:00 80.76 n/a 006:0033-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-PRINT HYD 02:000002 634.90 26.845 No_date 8:00 80.76 n/a # SUBCATCHMENT CONTAINING CEMETERY LANDS **# PROPOSED IMPERVIOUSNESS LESS THAN 20%** THEREFORE, CN VALUE HAS BEEN MODIFIED TO ACCOUNT FOR PROPOSED IMPERVIOUS SURF # #****** # DRAINAGE FROM 201A (EXTERNAL) #******** 006:0035-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:201A 68.20 8.399 No_date 6:18 72.54 .678 [CN= 86.0: N= 3.00] Tp= .47:DT= 6.00 #Route NHYD=201A through Channel SMT-2 006:0036-----R.V.-R.C.-ROUTE CHANNEL -> 01:201A 68.20 8.399 No_date 6:18 72.54 n/a [RDT= 6.00] out<- 02:SMT-2R 68.20 8.049 No_date 6:24 72.54 n/a [L/S/n= 450./ .750/.030] {Vmax= 1.187:Dmax= .684} #******** # DRAINAGE FROM CEMETERY LANDS A1a, A1b, A1c, A1d #********** 006:0037-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:A1a 80 149 No_date 6:06 75.54 .706

 [CN= 87.7: N= 3.00]

 [Tp= .27:DT= 6.00]

 006:0038------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.

 * CALIB NASHYD
 03:A1b

 6.10
 1.976 No_date
 6:00

 [CN= 86.1: N= 3.00] [Tp= .07:DT= 3.00] 006:0039-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:A1C 3.20 .832 No_date 6:03 74.73 .699 [CN= 87.2: N= 3.00] [Tp= .14:DT= 3.00] 006:0040-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 06:A1d 5.30 1.121 No_date 6:06 74.86 .700 CALIB NASHYD [CN= 87.3: N= 3.00] [TP= .21:DT= 6.00] 006:0041------TD:NHYD-----AREA----OPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 ROUTE RESERVOIR -> 06:A1d
 5.30
 1.121 No_date
 6:06
 74.86
 n/a

 [RDT= 6.00] out<- 07:A1d</td>
 5.30
 .291 No_date
 6:36
 74.86
 n/a

	SWM.su	m		
overflow <= 08:0VR	.00 fv/-1 00005.	.000 No_date	0:00 .00	n/a
{MxStoUsed=.1850E+00, TotOv 006:0042ID:NHYD-	ARFA	UU, N-OVT= U, OPFAK-TneakDate	hh·mmR V -R	hrs}
ADD HYD 07:A1d	5.30	.291 No_date		n/a
+ 08:0VR	.00	.000 No_date	0:00 .00	n/a
[DT= 6.00] SUM= 06:A1dPNI #*****	U 3.3U *****	.291 NO_Qate	6:36 74.86	n/a
<pre># TOTAL DRAINAGE FROM SUBCATCHMEN #************************************</pre>	NTS 201A + A *****	1a + A1b + A1c + *******	A1d ****	
006:0043ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mmR.VR	.c
ADD HYD 01:A1a + 02:SMT-2i	.80 R 68.20	.149 No_date		n/a
+ 02.3MT-21 + 03:A1b	6.10	8.049 No_date 1.976 No_date		n/a n/a
+ 04:A1c	3.20	.832 No_date	6:03 74.73	n/a
+ 06:A1dPNI 		.291 No_date		n/a
[DT= 3.00] SUM= 05:SMT2 #*********	83.60	8.867 No_date	6:24 73.01	n/a
# DRAINAGE FROM 201B (EXTERNAL) #************************************				
006:0044ID:NHYD		QPEAK-TpeakDate	_hh:mmR.VR	
CALIB NASHYD 01:201B [CN= 86.0: N= 3.00]	13.40	2.177 No_date	6:12 72.54 .	678
$\begin{bmatrix} Tp = .31: pT = 6.00] \\ # * * * * * * * * * * * * * * * * * *$	****	*****	****	
# DRAINAGE FROM CEMETERY LANDS B #**********				
006:0045ID:NHYD	AREA			.c
CALIB NASHYD 02:B1a [CN= 87.0: N= 3.00]	4.60	1.095 No_date		
[Tp= .17:DT= 3.00]			5 X	
006:0046ĪD:NHYD ROUTE RESERVOIR -> 02:B1a	AREA 4.60	QPEAK-TpeakDate 1.095 No_date		.C n/a
[RDT = 3.00] out <- 04:B1a	4.60	.313 No_date		n/a
overflow <= 08:0VR	.00	.000 No_date	0:00 .00	n/a
{MxStoUsed=.1451E+00, TotOv1	FVo1=.0000E+	00, N-Ovf = 0,	TotDurOvf= 0.	hrs}
006:0047ID:NHYD ADD HYD 04:Bla	AREA 4.60	QPEAK-TpeakDate .313 No_date	_nn:mmR.VR 6:27 74.34	.C n/a
+ 08:0VR	.00	.000 No_date	0:00 .00	n/a n/a
[DT= 3.00] SUM= 02:B1aPND	.00 9 4.60	.313 No_date	6:27 74.34	n/a
006:0048ID:NHYD	AREA	QPEAK-TpeakDate		
ADD HYD 01:201B + 02:B1aPNE	13.40 0 4.60	2.177 No_date .313 No_date		n/a n/a
[DT= 3.00] SUM= 03:201B #************************************	18.00	2.469 No_date		n/a n/a
# Route NHYD=201B + Bla through (Channel SMT-	4		
#*********	*****	*****		
006:0049ID:NHYD ROUTE CHANNEL -> 03:201B	AREA	QPEAK-TpeakDate	_hh:mmR.VR	.C
* [RDT= 3.00] out<- 01:SMT-4		2.469 No_date 2.268 No_date		n/a n/a
[L/S/n= 600./ .850/.030]	20100		0110 / 5100	ii) u
{Vmax= 1.151:Dmax= .462}				
006:0050ID:NHYD CALIB NASHYD 03:B1b	AREA 5.00	QPEAK-TpeakDate 1.166 No_date		.C
[CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00]	5100	1.100 No_uate	0.03 72.79	000
006:0051ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mmR.VR	.c
CALIB NASHYD 04:B1c [CN= 87.7: N= 3.00]	1.00	.305 No_date	6:00 75.58	707
[Tp = .10:DT = 3.00]				
006:0052ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mmR.VR	.c
ADD HYD 03:B1b	5.00	1.166 No_date	6:03 72.79 i	n/a
+ 04:B1c [DT= 3.00] SUM= 02:B1b/c	1.00 6.00	.305 No_date 1.439 No_date		n/a
#******************************	*********	*******	6:03 73.25 I	n/a
# TOTAL DRAINAGE FROM SUBCATCHMEN	NTS 201B + B	1a + B1b + B1c		

SWM.sum

#*****	*******	******	*******	. 1416 14444444	********	******			
006:00	53 D HYD		ID:NHYD	AREA	QPEAK	-TpeakDat	te_hh:mm	R.V	R.C
AD	D HYD		01:SMT-4F	x 18.00	2.268	No_date	6:18	73.00	n/a
г	DT 2 001	+	02:B1b/c	6.00		No_date	6:03	73.25	n/a
#*****	DT= 3.00]	20141=	03.B1Ed5	24.00	1 2 • TOO	NO_uale	0:09	73.06	n/a
# DRAIN #*****	AGE FROM C	EMETER)	(LANDS B1	Ld, B1e, E	81f (B-ser	ies, West *******	t Drainage	2) ***	
006:00	54		ID:NHYD	AREA	QPEAK	-TpeakDat	te_hh:mm	R.V	R.C
* CA	LIB STANDH	YD	01:B1d	4.30) 1.489	No_date	6:00	81.14	.759
	XIMP=.25:T LOSS= 2 :C								
	Pervious	area	: IAper=	5.00:SLP	P= .85:LGP	= 30.:MN	NP=.035:SC	P= .0	1
ז 🔰	Impervious	area	IAimp=	.50:SLP	P= .85:LGP = .85:LGI	= 50.:MN	I=.013:SC	. = .0]
006:00	55		ID:NHYD	ARE/	QPEAK	-TpeakDat	te_hh:mm		
RO	UTE RESERV RDT= 3.00] overf	01R ->	01:BId	4.30	1.489	No_date	6:00 6:12	81.14 81.14	n/a n/a
L L	overf	10w <=	08:0VR	50	.000	No date	0:00	.00	
4 M	xStoUsed=.	1709E+0	0, TotOvi	rvol=.0000)E+00, N-0'	vt= 0.	. TotDur0∖	∕f= 0	.hrs}
006.00	FC		TD + MUN/D			Thealthat		D 1/	R.C
AD	D HYD		04:Bld	4.30	.269	No_date	6:12	81.14	n/a
г	D HYD DT= 3.00] 57 LIB NASHYD CN= 87.4:	+ 		1 - 430) .000	No_date	6:12	.00 81 14	n/a n/a
<u> </u>	57		ID:NHYD	ARE/	OPEAK	-TpeakDat	te_hh:mm		
CA	LIB NASHYD		02:B1f	3.50) 1.018	No_date	6:00	74.95	.701
006.00	Tp= .11:D	1= 3.00	/] .TD • NHVD	ADE/		-Those Dat	- hhimm		
RO	UTE RESERV	OTR ->	02:B1f	3.5(1.018	No date	6:00	74.95	n/a
Ĩ	RDT= 3.00]	out<-	04:B1f	3.50) .173	No_date	6:24	74.95	n/a
-	UTE RESERV RDT= 3.00] overf	low <=	08:0VR	.00	.000	No_date	0:00	.00	n/a
5 19	xslouseu≓.	13146+0	υ. Ιστονι	VOI ≒.0000	JE+UU. N-U	VI U.	. 10°EDURUV	/T= U	.nrs≀
000:00	59		$04 \cdot R1f$	AREA 3_5(173	- IpeakDat	6:24	K.V	$K_{1}C_{1}$
AU		+	08:0VR	.00	000	No date	0:00	.00	n/a
Γ	DT= 3.00]	SUM=	02:B1fpnc	3.50	.173	No_date	6:24	74.95	n/a
006:00	D HYD DT= 3.00] 60		ID:NHYD	ARE/	QPEAK	-TpeakDat	te_hh:mm	R.V	R.C
^ CA	LIB STANDH XIMP=.27:T	YD	01:RTG	3.60	1.258	No_date	6:00	81.68	.764
ŕ	LOSS = 2:C	N = 86.0	i f						
Ţ	Pervious Impervious	area	: IAper=	5.00:SLP	P=1.15:LGP	= 30.:MN	NP=.035:SC	.0 P=]
[Impervious	area	: IAimp=	.50:SLPI	[=1.15:LGI	= 50.:MN	VI=.013:SC	.0 =I]
006:00	61		ID:NHYD	AREA		-TpeakDat	te_hh:mm		R.C
KU F	RDT = 3.001		06:Ble	3.60) 1.250	No_date	6-15	81 68	n/a n/a
Ļ	UTE RESERV RDT= 3.00] overf	10w <=	08:0VR	.00	Ó	No_date	0:00	.00	n/a
{ [M]	xStousea=.	1222F+C	υ, ιστονι	-voi=.0000)E+00, N-0	VT= U,	, IOTDUROV	/T= 0	.nrs}
	62		ID:NHYD	AREA		-TpeakDat	te_hh:mm		
AD	D HYD		06:B1e 08:OVR	3.60		No_date No_date		81.68 .00	n/a n/a
E	DT= 3.00]		07:B1ePND			No_date		81.68	n/a
006:0Ō	63		ID:NHYD	ARE/	QPEAK	-TpeakDat	te_hh:mm	R.V	R.C
AD	D HYD		01:B1dPNE			No_date		81.14	n/a
			02:B1West 07:B1ePND			No_date No_date		74.95 81.68	n/a n/a
f	DT= 3.00]	SUM=	02:B1West	11.40	.654	No_date	6:15	79.41	n/a
									., .
	DRAINAGE								
	64		ID:NHYD	ARE/	QPEAK	-TpeakDat	te_hh:mm		
ADI	d hyd		02:B1West 03:B1East	11.4() .654) 3.160	No_date	6:15	79.41	n/a
Г	DT= 3.00]			35.40		No_date		73.06 75.11	n/a n/a
#*****	****	*****	****	55110			0100		<i>,</i> u
# DRATH	AGE FROM 2	01C (FX	TERNAL)						

DRAINAGE FROM 201C (EXTERNAL)

SWM.sum #***** 006:0065-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:201C 91.00 10.699 No_date 6:24 72.54 .678 [CN= 86.0: N= 3.00] 006:0066-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:Cla 7.00 1.436 No_date 6:06 72.54 .678 [CN= 86.0: N= 3.00] Tp= .21:DT= 6.00] # C1a SWM FACILITY #************** 006:0067------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-1.436 No_date 6:06 72.54 n/a ROUTE RESERVOIR -> 02:C1a 7.00 # DISCHARGE FROM Cla SWM FACILITY #******** 006:0068-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 06:Cla 6.03 .325 No_date 6:12 72.54 n/a + 08:OVR .97 .994 No_date 6:12 72.54 n/a [DT= 6.00] SUM= 02:ClaPND 7.00 1.319 No_date 6:12 72.54 n/a 006:0069-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:C1b .50 .171 No_date 6:00 73.49 .687 [CN= 86.5: N= 3.00] [Tp= .04:DT= 2.00] 006:0070-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-91.00 10.699 No_date 6:24 72.54 n/a ADD HYD 01:201C 02:EX+MC 7.00 1.319 No_date 6:12 72.54 n/a 98.50 + 03:C1b [DT= 2.00] SUM= 02:EX+MC .171 No_date 6:00 73.49 n/a 72.55 n/a 6:18 006:0071------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ROUTE CHANNEL -> 02:EX+MC 98.50 11.713 No_date 6:18 72.55 n/a [RDT= 2.00] out<- 01:SMT-1 [L/S/n= 275./ .500/.030] {Vmax= .965:Dmax= .789} 98.50 11.183 No_date 6:22 72.55 n/a 006:0072-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 07:C2 3.80 .886 No_date 6:03 72.79 .680 [CN= 86.1: N= 3.00] [Tp= .17:DT= 3.00] #****** # TOTAL DRAINAGE FROM SUBCATCHMENTS # EXTERNAL LANDS (WEST) + MILTON CEMETERY LANDS + C2 006:0073-----ID:NHYD-----AREA----OPEAK-TpeakDate_hh:mm----R.V.-R.C.-01:SMT1 98.50 11.183 No_date 6:22 72.55 n/a ADD HYD + 07:C2 [DT= 2.00] SUM= 01:SMT1 .886 No_date 3.80 6:03 72.79 n/a 102.30 11.525 No_date 6:22 72.55 n/a #********* 006:0074-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 04:SMT4 35.40 3.805 No_date 6:09 75.11 n/a + 01:SMT1 102.30 11.525 No_date 6:22 72.55 n/a

			ShiM chi	n				
[DT= 2.00] #*****	SUM= 02:5	SMT1-4	SWM.sur 137.70		No_date	6:20	73.21	n/a
# DRAINAGE FROM 20	01D (EXTERN	NAL) ****						
006:0075 CALIB NASHYD [CN= 86.0: M [Tp= .41:D]	02:2 [N= 3.00 [5.00]	NHYD 201D	AREA 28.90	QPEAK- 3.907	-TpeakDate_ No_date	6:18	R.VI 72.54	.678
#*************************************	1D ROUTED SMT-3 *****							
006:0076 ROUTE CHANNEI [RDT= 6.00] [L/S/n= 100 {Vmax= 1.483	L -> 02:2 out<- 03:2 0./ .700/.0 1:Dmax= 1.0	201D SMT-3R 030] 020} ********	28.90 28.90	3.907	-TpeakDate_ No_date No_date	6:18	R.VI 72.54 72.54	R.C n/a n/a
# DRAINAGE FROM CI #****	EMETERY LA	NDS D1a, ********	D1b ****					
006:0077 CALIB NASHYD [CN= 88.0: f [Tp= .13:D]	02:1	NHYD D1a		QPEAK- .515	-TpeakDate_ No_date	hh:mm 6:00	R.V 76.09	R.C .711
006:0078 * CALIB NASHYD [CN= 86.0:	ID: 07:0 N= 3.00]	D1b	1.90	. 578	-TpeakDate_ No_date	hh:mm 6:00	R.V 72.54	R.C .678
[Tp= .09:D #************************************								
#*************************************	******	******	******	******	Thosebosto	bb:mm	P V	P C -
ADD HYD	02:	D1a	1.90	.515	No_date	6:00	76.09	n/a
	+ 03: + 07:	D1b	28.90 1.90	.578	No_date No_date	6:18 6:00	72.54 72.54	n/a n/a
[DT= 3.00] #****	SUM= 06:	SMT3 ********	32.70 *******	4.289	No_date	6:12	72.75	n/a
# CONFLUENCE SMT								
#**************************************					-TpeakDate_	_hh:mm	R.V	R.C
ADD HYD	1.1	SMT1	102.30		No_date	6:22 6:09	72.55	n/a n/a
	+ 06:	SMT4 SMT3	35.40 32.70		No_date No_date	6:12	72.75	n/a
[DT= 2.00] #*****	SUM= 03:	SMT1-3	170.40	19.103	No_date	6:18	73.12	n/a
# TOTAL DRAINAGE #*****	FROM SUBJE	CT LANDS	+ EXT.SU	BCATCHM	ENTS 201A/E	3/C/D *****	***	
006:0081		NHYD SMT1	AREA 102.30	QPEAK	-TpeakDate_ No_date	_hh:mm 6:22	R.V 72.55	R.C n/a
ADD HYD		SMT4	35.40		No_date	6:09	75.11	n/a
	+ 06:	SMT3	32.70		No_date	6:12	72.75	n/a
[DT_ 2 00]	+ 05: SUM= 08:		83.60 254.00		No_date No_date	6:24 6:20	73.01 73.09	n/a n/a
[DT= 2.00] 006:0082					-TpeakDate		R.V	
ROUTE CHANNE	L -> 08:	1201	254.00		No_date	6:20	73.09	n/a
* [RDT= 2.00] [L/S/n= 47 {Vmax= 1.18	5./1.050/. 4:Dmax= .	030] 702}	254.00		No_date	6:26	73.09	n/a
006:0083	ID:	NHYD	AREA 21.60	QPEAK	-TpeakDate_ No_date	_hh:mm 6:12	R.V 76.26	R.C
CALIB NASHYD [CN= 86.8: [Tp= .30:D	N= 3.00] T= 6.00]	000202						
006:0084	ID:	NHYD 002202	AREA 254.00	QPEAK	-TpeakDate No_date	_hh:mm 6:26	R.V 73.09	R.C n/a
ADD HYD		002202	21.60		No_date	6:12	76.26	n/a

SWM.sum	
[DT= 2.00] SUM= 02:001202 275.60 29.716 No_date 6:24 73.34 n/a	
006:0085ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000203 26.30 5.247 No_date 6:06 76.26 .713	
[CN= 86.8: N= 3.00]	
[Tp = .24:DT = 6.00]	
006:0086ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000203 26.30 5.247 No_date 6:06 76.26 n/a	
+ 02:001202 275.60 29.716 No_date 6:24 73.34 n/a	
+ 02:001202 275.60 29.716 No_date 6:24 73.34 n/a [DT= 2.00] SUM= 04:000003 301.90 32.906 No_date 6:20 73.59 n/a	
006:0087TD:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C PRINT HYD 04:000003 301.90 32.906 No_date 6:20 73.59 n/a	
#************	
<pre># SUBCATCHMENT 204 AREA REVISED # NEW AREA = 70.0 ha, PREVIOUSLY = 52.3 ha #************************************</pre>	
006:0088TD:NHYDAREAOPEAK-TpeakDate hh:mmR.VR.C	
CALIB NASHYD U2:000204 53.60 5.593 No_date 6:30 /5.38 ./05	
[CN= 87.6: N= 3.00] [Tp= .63:DT= 6.00]	
[Tp= .63:DT= 6.00] 006:0089ID:NHYDARFAOPFAK-TpeakDate hh:mmR.VR.C	
006:0089TD:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 02:000204 53.60 5.593 No_date 6:30 75.38 n/a	
+ 04:000003 301.90 32.906 No_date 6:20 73.59 n/a	
$\begin{array}{c} \text{ADD HYD} & 02:000204 & 53.60 & 5.595 \text{ NO_date} & 6:50 & 75.58 & \text{n/a} \\ + & 04:000003 & 301.90 & 32.906 \text{ No_date} & 6:20 & 73.59 & \text{n/a} \\ \text{[DT= 2.00] SUM= } & 03:001204 & 355.50 & 38.245 \text{ No_date} & 6:22 & 73.86 & \text{n/a} \\ \end{array}$	
# ROULE THROUGH CHANNEL 205 ELIMINATED, OUTSIDE OF STUDY AREA #***********	
#**************	
# SUBCATCHMENT 205 ELIMINTATED, OUTSIDE OF STUDY AREA #**********	
#**************************************	
# ID REVISED TO ID=9, PREVIOUSLY ID=1 #*************	
006:0090ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C	<u> </u>
ADD HYD 09:001108 784.37 40.288 No_date 6:18 79.92 n/a + 03:001204 355.50 38.245 No_date 6:22 73.86 n/a	
[n-2, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,	
006:0091ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C	
#*************************************	
006:0091RVR.C PRINT HYD 02:000008 1139.87 78.317 No_date 6:20 78.03 n/a #************************************	
FINISH	

WARNINGS / ERRORS / NOTES	
001:0008 CALIB NASHYD	
*** WARNING: Time step is too large for value of TP.	
R.V. may be ok. Peak flow could be off. 001:0011 CALIB NASHYD	
*** WARNING: Time step is too large for value of TP.	
R.V. may be ok. Peak flow could be off.	
001:0013 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT!	
Use a smaller DT or a larger area.	
*** WARNING: For areas with impervious ratios below	
20%, this routine may not be applicable. 001:0021 CALIB STANDHYD	
*** WARNING: Storage Coefficient is smaller than DT!	
Use a smaller DT or a larger area.	
001:0038 CALIB NASHYD *** WARNING: Time step is too large for value of TP.	
R.V. may be ok. Peak flow could be off.	
001:0049 ROUTE CHANNEL ->	

SWM.sum

001:0054 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 001:0060 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 001:0069 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 001:0071 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 001:0078 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 001:0082 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 002:0008 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 002:0011 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 002:0013 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. *** WARNING: For areas with impervious ratios below 20%, this routine may not be applicable. 002:0021 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 002:0038 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 002:0049 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 002:0054 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 002:0060 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 002:0069 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 002:0071 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 002:0078 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 002:0082 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 003:0008 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 003:0011 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 003:0013 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area.

SWM.sum *** WARNING: For areas with impervious ratios below 20%, this routine may not be applicable. 003:0021 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 003:0038 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 003:0049 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 003:0054 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 003:0060 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 003:0069 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 003:0071 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 003:0078 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 003:0082 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 004:0008 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 004:0011 CALIB NASHYD *** WARNING: Time step is too large for value of TP R.V. may be ok. Peak flow could be off. 004:0013 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. *** WARNING: For areas with impervious ratios below 20%, this routine may not be applicable. 004:0021 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 004:0038 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 004:0049 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 004:0054 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 004:0060 CALIB STANDHYD *** WARNING: Storage Coefficient is_smaller than DT! Use a smaller DT or a larger area. 004:0069 CALIB NASHYD *** WARNING: Time step is too large for value of TP R.V. may be ok. Peak flow could be off. 004:0071 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 004:0078 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 004:0082 ROUTE CHANNEL ->

SWM.sum *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 005:0008 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 005:0011 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 005:0013 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. *** WARNING: For areas with impervious ratios below 20%, this routine may not be applicable. 005:0021 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 005:0038 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 005:0049 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 005:0054 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 005:0060 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 005:0069 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 005:0071 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 005:0078 CALIB NASHYD *** WARNING: Time step is too large for value of TP R.V. may be ok. Peak flow could be off. 005:0082 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 006:0008 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 006:0011 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 006:0013 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. *** WARNING: For areas with impervious ratios below 20%, this routine may not be applicable. 006:0021 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 006:0038 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 006:0049 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 006:0054 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 006:0060 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT!

	SWM.sum
	Use a smaller DT or a larger area.
006:0069	CALIB NASHYD
***	WARNING: Time step is too large for value of TP.
	WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off.
006:0071	ROUTE CHANNEL ->
***	WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT.
	Routing DT set to inflow hydrograph DT.
006:0078	CALIB NASHYD
***	WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off.
	R.V. may be ok. Peak flow could be off.
006:0082	ROUTE CHANNEL ->
***	WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT.
	Routing DT set to inflow hydrograph DT.
Simulat	tion ended on 2011-12-06 at 12:10:23

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swmr.dat

2 Metric units Project Name: [Holy Family Catholic Cemetery] Date : 08-16-2011 Project Number: [111063] *# *# [C. Silvestri] Philips Engineering Ltd *# Modeller *# Company START=0.0 HRS METOUT=0 NSTORM=1 NRUN=1 START HAZEL, STM * "STORM.001" READ STORM * * Subarea 103 - Entering Property ID=1 NHYD=103 DT=5 min AREA=42.1 ha DWF=0.0 cms CN=94 IA=0 mm N=3.0 Tp=0.399 hrs END=-1 CALIB NASHYD * * Route through Channel 104 ROUTE CHANNEL ID=2 NHYD=2104 IDIN=1 DT=5.0 min CHLGTH=440 m CHSLP=1 % FPSLP=1 % VSN=104 NSEG=3 ROUGH DIST(m) 0.04 59 -0.03 60 0.04 89 DIST(m) ELEV(m) 179.5 178.5 0.0 18.0 59.0 178.0 59.5 177.7 60.0 178.0 178.5 89.0 × * Subarea 104 - Creek Block Upstream of Proposed 5 acre Pond ID= 3 NHYD=104 DT=5 min AREA= 24.1 ha DWF=0.0 cms CN=94.0 IA=0 mm N=3.0 Tp=0.208 hrs END=-1 CALIB NASHYD * ID= 1 NHYD=1104 IDI= 3 IDII= 2 ADD HYD * Route through channel 105 ID=2 NHYD=2105 IDIN=1 DT=5.0 min ROUTE CHANNEL CHLGTH=365 m CHSLP=0.4 % FPSLP=0.4 % VSN=105 NSEG=3 ROUGH DIST(m) 52 53 0.04 -0.03 0.04 100 DIST(m) ELEV(m) 178.0 0.0 28.0 177.0 52.0 176.9 52.5 176.6 176.9 177.0 177.5 53.0 80.0 100.0 * * Subarea 105 - Creek Block Upstream of Proposed Pond 2nd 5 acre pond CALIB NASHYD ID=3 NHYD=105 DT=5 min AREA= 19.2 ha DWF=0.0 cms CN=95 IA=0 mm N=3.0 Tp=0.176 hrs END=-1 × ID=1 NHYD=1105 IDI=3 IDII=2 ADD HYD

ROUTE CHANNEL	SWMR.dat ID=2 NHYD=2106 IDIN=1 DT=5.0 min CHLGTH=385 m CHSLP=0.67 % FPSLP=0.67 % VSN=106 NSEG=3 ROUGH DIST(m) 0.04 77 -0.03 78 0.04 120
*	$\begin{array}{llllllllllllllllllllllllllllllllllll$
	ek Block Upstream of Pond ID= 3 NHYD=106 DT=5 min AREA= 15.3 ha DWF=0.0 cms CN=95 IA=0 mm N=3.0 Tp=0.168 hrs END=-1
ADD HYD	ID= 1 NHYD=1106 IDI= 3 IDII= 2
	t drainage area for tributary ID= 3 NHYD=107 DT=5 min AREA= 15.27 ha XIMP=0.10 TIMP=0.17 DWF=0.0 cms LOSS=2 CN=93 DPSP=5.0 mm SLPP=1.27 % LGP=717 MNP=0.250 SCP=0.0 DPSI=1.57 mm SLPI=1.27 % LGI=100 MNI=0.017 SCI=0.0 END=-1
ADD HYD	ID=2 NHYD=1107 IDI=1 IDII=3
	tion of Tributary through Channel-108 ID=1 NHYD=2108 IDIN=2 DT=5.0 min CHLGTH=1300 m CHSLP=1.67 % FPSLP=1.67 % VSN=108 NSEG=3 ROUGH DIST(m) 0.04 65 -0.03 66 0.04 110
*	DIST(m) ELEV(m) 0.0 172.0 42.0 167.5 51.0 160.0 65.0 159.0 65.5 158.7 66.0 159.0 88.0 165.0 110.0 170.0
* Subarea 108 CALIB NASHYD *	ID= 2 NHYD=108 DT=5 min AREA=33.5 ha DWF=0.0 cms CN=95 IA=0 mm N=3.0 Tp=0.295 hrs END=-1
ADD HYD PRINT HYD *	ID=3 NHYD=004 IDI=1 IDII=2 ID=3 NPCYC=-1
* CALULATE FLOWS EN	TERING SITE FROM NORTHWEST
* Subarea 101 - CALIB STANDHYD	ID= 4 NHYD=101 DT=5 min AREA= 287.8 ha XIMP=0.20 TIMP=0.495 DWF=0.0 cms LOSS=2 CN=93 DPSP=5.0 mm SLPP=0.625 % LGP=700 MNP=0.250 SCP=0.0

SWMR.dat DPSI=1.57 mm SLPI=0.625 % LGI=3200 MNI=0.017 SCI=0.0 END = -1× * *Route NHYD=101 through channel 102 ID=5 NHYD=2101 ROUTE CHANNEL IDIN=4 DT=5.0 min CHLGTH=700 m CHSLP=0.42 % FPSLP=0.42 % VSN=102 NSEG=3 ROUGH DIST(m) 0.04 110 -0.03 111 0.04 160 DIST(m) ELEV(m) 182.5 0.0 90.0 180.0 110.0 179.8 179.5 110.5 179.8 111.0 180.0 130.0 160.0 182.5 * * Subarea 102 -ID= 4 NHYD=102 DT=5 min AREA= 272.9 ha CALIB STANDHYD XIMP=0.13 TIMP=0.275 DWF=0.0 cms LOSS=2 DPSP=5.0 mm SLPP=0.98 % LGP=1350 MNP=0.2 DPSI=1.57 mm SLPI=0.98 % LGI=40 MNI=0.0 CN=93 MNP=0.250 SCP=0.0 MNI=0.017 SCI=0.0 END = -1* * Node 001 ID= 6 NHYD= 001 IDI=4 IDII=5 ADD HYD ID= 6 NPCYC=-1 PRINT HYD *Route NHYD=001 through channel 109 ID=4 NHYD=2109 IDIN=6 DT=5.0 min ROUTE CHANNEL CHLGTH=1000 m CHSLP=0.54 % FPSLP=0.54 % VSN=109 NSEG=3 ROUGH DIST(m) 0.04 50 -0.03 51 0.04 88 ELEV(m) DIST(m) 0.0 176.0 175.5 14.0 175.0 174.0 18.0 26.0 173.0 42.0 50.0 173.0 50.5 172.7 51.0 173.0 58.0 173.5 174.0 88.0 * Subarea 109 ID= 5 NHYD=109 DT=5 min AREA= 35.1 ha DWF=0.0 cms CALIB NASHYD IA=0 mm N=3.0 Tp=0.318 hrs END=-1 CN=95 * ID= 6 NHYD=1109 IDI=4 IDII=5 ADD HYD *Route NHYD=1109 through Channel 110 ID=4 NHYD=2110 IDIN=6 DT=5.0 min ROUTE CHANNEL CHLGTH=900 m CHSLP=0.71 % FPSLP=0.71 % VSN=110 NSEG=3 ROUGH DIST(m) 0.04 61

SWMR.dat -0.03 62 114 0.04 DIST(m) ELEV(m) 0.0 175.0 10.0 172.5 170.0 18.0 20.0 168.0 167.5 61.0 61.5 167.2 62.0 167.5 80.0 170.0 172.5 98.0 114.0 175.5 × * Subarea 110 ID= 5 NHYD=110 DT=5 min AREA= 21.8 ha DWF=0.0 cms CALIB NASHYD IA=0 mm N=3.0 Tp=0.215 hrs END=-1 CN=95 * ADD HYD ID= 6 NHYD= 1110 IDI=4 IDII=5 *Route NHYD=1110 through Channel 111 ROUTE CHANNEL ID=4 NHYD=2111 IDIN=6 DT=5.0 min CHLGTH=920 m CHSLP=1.25 % FPSLP=1.25 % VSN=111 NSEG=3 ROUGH DIST(m) 0.04 56 57 -0.03 0.04 105 DIST(m) ELEV(m) 0.0 172.0 16.0 170.0 159.0 44.0 56.0 159.0 158.7 56.5 57.0 84.0 159.0 170.0 105.0 175.0 * * Subarea 111 CALIB NASHYD ID= 1 NHYD=0111 DT=5 min AREA=17.3 ha DWF=0.0 cms IA=0mm N=3.0 Tp=0.235 hrs END=-1 CN=94 * Node 002 ADD HYD ID=2 NHYD= 002 IDI=1 IDII=4 ID=2 NPCYC=-1 PRINT HYD *# ID revised to ID=9, PREVIOUSLY ID=1 WAS BEING OVER-WRITEN * At confluence of two main branches ADD HYD ID=9 NHYD=1108 IDI=3 IDII=2 *#********************************** * * Calculations for South-West section of site (3 subcatchments have been created for catchment 201) **** ***# SUBCATCHMENT CONTAINING CEMETERY LANDS** **** ***# PROPOSED IMPERVIOUSNESS LESS THAN 20%** *# THEREFORE, CN VALUE HAS BEEN MODIFIED TO ACCOUNT FOR PROPOSED IMPERVIOUS SURFACES *#

SWMR.dat

ale 11 de 18 de 19	SWMR.dat
*#************************************	1A (EXTERNAL)
CALIB NASHYD	ID=1 NHYD="201A" DT=5 min AREA=68.2 ha DWF=0.0 cms CN=94.0 IA=3 mm N=3.0 Tp=0.47 hrs END=-1
	hrough Channel SMT-2
	DIST(m) ELEV(m) 0.0 101.0 35.0 100.5 40.0 100.0 45.0 100.5 90.0 101.0
*%	 *******************************
*# DRAINAGE FROM CE *#***********************************	METERY LANDS ALa, Alb, ALC, ALG ************************************
CALIB NASHYD	ID=1 NHYD="A1a" DT=5 min AREA=0.8 ha DWF=0.0 cms CN=94.19 IA=3 mm N=3.0 Tp=0.27 hrs END=-1
CALIB NASHYD	ID=3 NHYD="A1b" DT=3 min AREA=6.1 ha DWF=0.0 cms CN=94.01 IA=3 mm N=3.0 Tp=0.07 hrs END=-1
CALIB NASHYD	ID=4 NHYD="A1c" DT=3 min AREA=3.2 ha DWF=0.0 cms CN=94.14 IA=3 mm N=3.0 Tp=0.14 hrs END=-1
*%CALIB NASHYD	ID=6 NHYD="A1d" DT=5 min AREA=5.3 ha DWF=0.0 cms CN=94.15 IA=3 mm N=3.0 Tp=0.21 hrs END=-1
*%ROUTE RESERVOIR	<pre>Image: Construct of the second s</pre>
*% ADD HYD	<pre>IDsum=[6], NHYD=["A1dPND"], IDs to add=[7+8]</pre>
*%	
*# TOTAL DRAINAGE F *#****************	**************************************
*% ADD HYD *%	IDsum=[5], NHYD=["SMT2"], IDs to add=[1+2+3+4+6]
*#******	*****
*# DRAINAGE FROM 20 *#*****	

*#*****

*%	SWMR.dat
CALIB NASHYD	ID=1 NHYD="201B" DT=5 min AREA=13.4 ha DWF=0.0 cms CN=94.0 IA=3 mm N=3.0 Tp=0.31 hrs END=-1
*# DRAINAGE FROM CEN *#****	**************************************
CALIB NASHYD	ID=2 NHYD="B1a" DT=3 min AREA=4.6 ha DWF=0.0 cms CN=94.11 IA=3 mm N=3.0 Tp=0.17 hrs END=-1
ROUTE RESERVOIR	<pre>IDout=[4], NHYD=["B1a"], IDin=[2], RDT=[5](min), TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m) [0.0, 0.0] [0.034, 0.019] [0.103, 0.029] [0.142, 0.040] [0.198, 0.062] [0.241, 0.087] [0.278, 0.114] [0.310, 0.142] [0.325, 0.158] [-1 , -1] (max twenty pts) IDovf=[8], NHYDovf=["OVR"]</pre>
*%ADD HYD	[] IDsum=[2], NHYD=["B1aPND"], IDs to add=[4+8]
*% ADD HYD	IDsum=[3], NHYD=["SMT-4"], IDs to add=[1+2]
*% *#Route NHYD=201B + ROUTE CHANNEL	Bla through Channel SMT-4 ID=1 NHYD="SMT-4R" IDIN=3 DT=5.0 min CHLGTH=600 m CHSLP=0.85 % FPSLP=0.85 % VSN=CB1 NSEG=3 ROUGH DIST(m) 0.04 35 -0.03 45 0.04 90
40/	DIST(m) ELEV(m) 0.0 101.0 35.0 100.5 40.0 100.0 45.0 100.5 90.0 101.0
*% CALIB NASHYD	ID=3 NHYD="B1b" DT=3 min AREA=5.0 ha DWF=0.0 cms CN=94.02 IA=3 mm N=3.0 Tp=0.17 hrs END=-1
CALIB NASHYD	ID=4 NHYD="B1c" DT=3 min AREA=1.0 ha DWF=0.0 cms CN=94.19 IA=3 mm N=3.0 Tp=0.10 hrs END=-1
^% ADD HYD	I
*#****	
	ROM SUBCATCHMENTS 201B + B1a + B1b + B1c ************************************
	 IDsum=[3], NHYD=["B1East"], IDs to add=[1+2]
*#************************************	/*************************************
* %	

CALIB STANDHYD *% ROUTE RESERVOIR	SWMR.dat ID=[1], NHYD=["B1d"], DT=[3](min), AREA=[4.3](ha), XIMP=[0.2535], TIMP=[0.2535], DWF=[0.0](cms), LOSS=[2], SCS curve number CN=[94], Pervious surfaces: IAper=[5](mm), SLPP=[1.00](%), LGP=[30](m), MNP=[0.035], SCP=[0](min), Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.00](%), LGI=[50](m), SLPI=[1.00](%), LGI=[50](m), MNI=[0.013], SCI=[0](min), END=-1
*%	IDovf=[8], NHYDovf=["OVR"]
ADD HYD	IDsum=[1], NHYD=["B1dPND"], IDs to add=[4+8]
*%	 ID=2 NHYD="B1f" DT=3 min AREA=3.5 ha DWF=0.0 cms CN=94.15 IA=3 mm N=3.0 Tp=0.11 hrs END=-1
ROUTE RESERVOIR	<pre>IDout=[4], NHYD=["B1f"], IDin=[2], RDT=[5](min), TABLE of (OUTFLOW-STORAGE) values</pre>
ADD HYD *%	IDsum=[2], NHYD=["B1fPND"], IDs to add=[4+8]
*%	<pre>ID=[7], NHYD=["B1e"], DT=[3](min), AREA=[3.6](ha), XIMP=[0.2694], TIMP=[0.2694], DWF=[0.0](cms), LOSS=[2], SCS curve number CN=[94], Pervious surfaces: IAper=[5](mm), SLPP=[1.00](%), LGP=[30](m), MNP=[0.035], SCP=[0](min), Impervious surfaces: IAimp=[0.5](mm), SLPI=[1.00](%), LGI=[50](m), MNI=[0.013], SCI=[0](min), END=-1</pre>
ROUTE RESERVOIR	IDout=[6], NHYD=["B1e"], IDin=[7], RDT=[5](min), TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m) [0.0 , 0.0] [0.034, 0.041] [0.103, 0.062] [0.142, 0.085] [0.198, 0.133]

Page 7

*%	SWMR.dat [0.241, 0.184] [0.278, 0.240] [0.310, 0.299] [-1 , -1] (max twenty pts) IDovf=[8], NHYDovf=["OVR"]
ADD HYD *%	IDsum=[7]. NHYD=["B1ePND"]. IDs to add=[6+8]
ADD HYD *%	IDsum=[2], NHYD=["B1d/e/f"], IDs to add=[1+2+7]
*#************************************	**************************************
ADD HYD *%	IDsum=[4], NHYD=["SMT4"], IDs to add=[2+3]
*# DRAINAGE FROM 20 *#****	
CALIB NASHYD	ID=1 NHYD="201C" DT=5 min AREA=91.0 ha DWF=0.0 cms CN=94.0 IA=3 mm N=3.0 Tp=0.50 hrs END=-1
11	*********************
*%	METERY LANDS C1a, C1b, C2 ************************************
CALIB NASHYD	ID=2 NHYD="C1a" DT=5 min AREA=7.0 ha DWF=0.0 cms CN=94.11 IA=3 mm N=3.0 Tp=0.21 hrs END=-1
ROUTE RESERVOIR	IDout=[6], NHYD=["C1a"], IDin=[2], RDT=[5](min), TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m) [0.0, 0.0] [0.034, 0.021] [0.103, 0.032] [0.142, 0.043] [0.198, 0.067] [0.241, 0.093] [0.278, 0.120] [0.310, 0.150] [0.325, 0.165] [-1 , -1] (max twenty pts)
*%	IDovf=[8], NHYDovf=["OVR"]
ADD HYD *%	IDsum=[2], NHYD=["C1aPND"], IDs to add=[6+8]
CALIB NASHYD	ID=3 NHYD="C1b" DT=2 min AREA=0.5 ha DWF=0.0 cms CN=94.06 IA=3 mm N=3.0 Tp=0.04 hrs END=-1
*# DISCHARGE FROM E	Image: Internal constraints Image: Internal constraints Image: Internal constraints XTERNAL LANDS (WEST) + MILTON CEMETERY LANDS IDsum=[2], NHYD=["EX+MC"], IDs to add=[1+2+3] I
*#************	******************
*# Route NHYD=201C *#********	through Channel SMT-1
ROUTE CHANNEL	ID=1 NHYD="SMT-1" IDIN=2 DT=5.0 min CHLGTH=275 m CHSLP=0.50 % FPSLP=0.50 % VSN=CC1 NSEG=3 ROUGH DIST(m) 0.04 35 -0.03 45 0.04 90

	SWMR.dat
	DIST(m) ELEV(m)
	0.0 101.0 35.0 100.5
	40.0 100.0
	40.0 100.0 45.0 100.5
	90.0 101.0
*%	
CALIB NASHYD	ID=7 NHYD="C2" DT=3 min AREA=3.8 ha DWF=0.0 cms CN=94.02 IA=3 mm N=3.0 Tp=0.17 hrs END=-1
*%	***************************************
*# TOTAL DRAINAGE F	FROM SUBCATCHMENTS
*# EXTERNAL LANDS (*#*****	(WEST) + MILTON CEMETERY LANDS + C2
ADD HYD	IDsum=[1], NHYD=["SMT1"], IDs to add=[1+7] -[
*#*****	*****
*# CONFLUENCE SMT 1	L-4
жыр птр *%	
*#*****	*****
*# DRAINAGE FROM 20 *#****************	*****
CALIB NASHYD	ID=2 NHYD="201D" DT=5 min AREA=28.9 ha DWF=0.0 cms CN=94.0 IA=3 mm N=3.0 Tp=0.41 hrs END=-1 -
*%	
*# SUBCATCHMENT 201 *# THROUGH Channel	SMT-3
*#************************************	*******
*%	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min
*%	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 %
*%	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3
*%	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m)
*%	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15
*#************************************	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10
*%	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15 0.04 20
	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15 0.04 20 DIST(m) ELEV(m) 0.0 178.0
*%	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15 0.04 20 DIST(m) ELEV(m) 0.0 178.0 26.0 177.6
*%	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15 0.04 20 DIST(m) ELEV(m) 0.0 178.0 26.0 177.6 30.0 176.0 34.0 177.57
*%ROUTE CHANNEL	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15 0.04 20 DIST(m) ELEV(m) 0.0 178.0 26.0 177.6 30.0 176.0 34.0 177.57
*%ROUTE CHANNEL	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15 0.04 20 DIST(m) ELEV(m) 0.0 178.0 26.0 177.6 30.0 176.0 34.0 177.57
*% ROUTE CHANNEL *% *#*****************	
*% ROUTE CHANNEL *% #*****************************	- ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15 0.04 20 DIST(m) ELEV(m) 0.0 178.0 26.0 177.6 30.0 176.0 34.0 177.57 50.0 178.0 -
*% ROUTE CHANNEL *%	<pre></pre>
*% ROUTE CHANNEL *%	<pre></pre>
*% ROUTE CHANNEL *%	<pre></pre>
*% ROUTE CHANNEL *#***********************************	<pre></pre>
*% ROUTE CHANNEL *#***********************************	<pre></pre>
*% ROUTE CHANNEL *#***********************************	<pre>ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15 0.04 20 DIST(m) ELEV(m) 0.0 178.0 26.0 177.6 30.0 176.0 34.0 177.57 50.0 178.0 </pre>
*% ROUTE CHANNEL *#***********************************	<pre>ID=3 NHYD="SMT-3" IDIN=2 DT=5.0 min CHLGTH=100 m CHSLP=0.70 % FPSLP=0.70 % VSN=CD1 NSEG=3 ROUGH DIST(m) 0.04 10 -0.03 15 0.04 20 DIST(m) ELEV(m) 0.0 178.0 26.0 177.6 30.0 176.0 34.0 177.57 50.0 178.0 </pre>

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SWMR.dat
*# CONFLUENCE SMT 1-3
*#********
*%------|-------|
           IDsum=[3], NHYD=["SMT1-3"], IDs to add=[1+4+6]
ADD HYD
*%------
*# TOTAL DRAINAGE FROM SUBJECT LANDS + EXT.SUBCATCHMENTS 201A/B/C/D
*#***
      ID=[8] NHYD=["1201"] IDs to add=[1+4+5+6]
ADD HYD
*%------|------|
4.
ż
*Route NHYD=201 through Channel 202
           ID=3 NHYD=2202 IDIN=8 DT=5.0 min
CHLGTH=475 m CHSLP=1.05 % FPSLP=1.05 %
ROUTE CHANNEL
           VSN=202 NSEG=3
           ROUGH DIST(m)
           0.04 55
-0.03 56
0.04 105
           DIST(m) ELEV(m)
                180.0
            0.0
            15.0
55.0
                175.0
                174.9
            55.5
                174.6
            56.0
                174.9
            70.0
                175.0
           105.0
                180.0
* Subarea 202
CALIB NASHYD
           ID= 4 NHYD=202 DT=5 min AREA=21.6 ha DWF=0.0 cms
           CN=95 IA=0 mm N=3.0 Tp=0.303 hrs END=-1
×
               NHYD=1202 IDI=3 IDII=4
ADD HYD
           ID=2
* Subarea 203
           ID= 3 NHYD=203 DT=5 min AREA=26.3 ha DWF=0.0 cms
CALIB NASHYD
           CN=95 IA=0mm N=3.0 Tp=0.240 hrs END=-1
* Node 003 - exit from site
           ID= 4 NHYD=003 IDI=3 IDII=2
ADD HYD
PRINT HYD
           ID= 4 NPCYC=-1
*# SUBCATCHMENT 204 AREA REVISED
*Subarea 204 - off site
           ID = 2
               NHYD=204 DT=5 min AREA=53.6 ha DWF=0.0 cms
CALIB NASHYD
           CN=95 IA=0 mm N=3.0 Tp=0.626 hrs END=-1
sk.
           ID= 3 NHYD= 1204 IDI= 2 IDII= 4
ADD HYD
4
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Page 10
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SWMR.dat

FINISH

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******	********	*****	SWMHYM	10-99 Ve	er/4.02	******	******	**********	***
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****** **** DESCRIP *** *** ID: *** NHYD:	Ma Ma ******** TION SUMM Hydrogra Hydrogra	x. numbe x. numbe ******* ARY TABL ph IDent ph IDent	alue for er of f treated for E HEAD tificat	or ID nur rainfal flow po- DERS (un DERS (un tion nur numbers	l points ints nits dep nbers, (, (6 dig	5: 1500 : 1500 pend on (1-10). gits or	00 00 METOUT 	*** *** in START) ters).	*** *** ** ** **
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******* *** DESCRIP *** ID: *** ID: *** NHYD: *** AREA: *** QPEAK: *** TpeakDa	Ma Ma ********* TION SUMM Hydrogra Hydrogra Drainage Peak flo te_hh:mm	x. numbe x. numbe ******** ARY TABL ph IDent ph refer area as w of sin is the c	E HEAD E HEAD rence r ssociat nulated	or ID nu cainfal flow po DERS (un cion num tion tion num tion num tion num tion num tion num tion num tion tion tion tion num tion num tio	l points ints mits dep mbers, (, (6 dig n hydrog graph, (of the	5: 1500 : 1500 pend on (1-10). gits or graph, ((ft^3/s) peak fl	00 METOUT charact (ac.) or or (m [/]	*** in START) ters). (ha.). \3/s).	***
******* *** DESCRIP *** ID: *** ID: *** NHYD: *** AREA: *** QPEAK: *** TpeakDa *** R.V.:	Ma Ma ********* TION SUMM Hydrogra Hydrogra Drainage Peak flo te_hh:mm Runoff V	x. numbe x. numbe ******* ARY TABL ph IDent ph refet area as w of sin is the c olume of	E HEAD E HEAD Trence r Ssociat nulated date ar f simul	or ID nu cainfal flow po DERS (un numbers ted with d hydrog nd time lated hydrog	l points ints mbers, (, (6 dig n hydrog graph, (of the ydrograg	5: 1500 : 150	00 00 ********* (metout charact (ac.) or o or (m/ low. o or (m/	*** in START) cers). (ha.). (3/s).	*** ****
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******* *** DESCRIP *** ID: *** ID: *** NHYD: *** AREA: *** QPEAK: *** TpeakDa *** R.V.: *** R.C.: *** *:	Ma Ma ********* Hydrogra Hydrogra Drainage Peak flo te_hh:mm Runoff V Runoff C see WARN	x. numbe x. numbe ******* ARY TABL ph IDent ph refer area as w of sin is the (olume of oefficie ING or h	LE HEAD tificat rence r ssociat date ar f simulated art of wore me	DERS (un tion num tion num tio	l points ints mbers, (, (6 dig graph, (of the ydrograp ted hydrograp	5: 1500 : 150	00 00 METOUT (ac.) or (or (m/ or (m/ ov.) or (mn)	*** in START) ters). (ha.). (3/s).).	*** ****
**** DESCRIP *** DESCRIP *** ID: *** ID: *** AREA: *** QPEAK: *** TpeakDa *** R.V.: *** R.C.: *** *:	Ma Ma Ma TION SUMM Hydrogra Hydrogra Drainage Peak flo te_hh:mm Runoff V Runoff C see WARN see ERR	x. numbe x. numbe ******* ARY TABI ph IDent ph refer area as w of sin is the c olume of oefficie ING or N OR mess	LE HEAD LE HEAD LE HEAD Lificat rence r sociat nulate ar f simulate sociat date ar f simulate sociat nulate ar f simulate sociat	DERS (un tion num bers (un tion num tion num tio	l points ints ******** nits dep nbers, (, (6 dig of the ydrograp ydrograp ted hydr printed at end (*****	5: 1500 : 150	METOUT charact (ac.) or or (m/ low. or (mn (ratic of run.	*** in START) ters). (ha.). (ba.). (ha.). (ba.). (ba.).	** ***********************************
**** DESCRIP *** DESCRIP *** ID: *** ID: *** AREA: *** QPEAK: *** TpeakDa *** R.V.: *** R.C.: *** *:	Ma Ma Ma TION SUMM Hydrogra Hydrogra Drainage Peak flo te_hh:mm Runoff V Runoff C see WARN see ERR	x. numbe x. numbe ******* ARY TABI ph IDent ph refer area as w of sin is the c olume of oefficie ING or N OR mess	LE HEAD LE HEAD LE HEAD Lificat rence r sociat nulate ar f simulate sociat date ar f simulate sociat nulate ar f simulate sociat	DERS (un tion num bers (un tion num tion num tio	l points ints ******** nits dep nbers, (, (6 dig of the ydrograp ydrograp ted hydr printed at end (*****	5: 1500 : 150	METOUT charact (ac.) or or (m/ low. or (mn (ratic of run.	*** in START) (ha.). (ha.). (3/s).	** ***********************************
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**************************************	Ma Ma Ma Ma TION SUMM Hydrogra Drainage Peak flo te_hh:mm Runoff V Runoff V Runoff C see WARN see ERR	x. numbe x. numbe x. numbe x. numbe x. numbe x. numbe ph IDent ph IDent ph refer area as w of sin is the co oefficie ING or M OR mess ******* ******* *******	Alue for er of r er of f ser of f er of f er of f ent of sociat nulated date ar f simul ent of NOTE me sage pr ser simul ent of NOTE me sage pr ser simul ent of NOTE me sage pr ser simul ent of NOTE me sage pr	Pr ID nu cainfal flow po bers (un bumbers tion num humbers ted with d hydrog hd time lated hy simula essage printed simula essage printed simula essage printed simula	l points ints mbers, (, (6 dig graph, (of the ydrograp ted hydro printed at end (************************************	5: 1500 : 150	00 00 mETOUT charact (ac.) or or (m/ ow.) or (mn) (ratic of run.	*** in START) ters). (ha.). 3/s). n). ************************************	 A share a share a
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*** ID: *** ID: *** AREA: *** QPEAK: *** QPEAK: *** R.V.: *** R.C.: *** *********************************	Ma Ma Ma TION SUMM Hydrogra Hydrogra Drainage Peak flo te_hh:mm Runoff C see WARN see ERR ********* ::::::::::::::::::::::::::	<pre>x. numbe x. numbe x. numbe x. numbe x. numbe x. numbe ph IDent ph refer area as w of sin is the c oefficie ING or N OR mess ******* ******** ******** * S U ********</pre>	Alue for er of r er of f the HEAD tificat rence r sociat nulate ar f simul ent of NOTE me sage pu the tof NOTE me sage pu	Pr ID nu rainfal flow po the second DERS (un tion num numbers ted with d hydrog d time lated hy simula essage rinted simula essage rinted ******* ******* R Y ******* *******	l points ints mits dep mbers, (, (6 dig of the ydrograp ted hydr printed at end (******* ******** ::::::::::::::::::::	5: 1500 : 150	METOUT charact charact ac.) or or (m/ low. or (mn (ratic of run. 	*** in START) ters). (ha.). 3/s). n). b). ************************************	** ************************************
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**************************************	Ma Ma Ma TION SUMM Hydrogra Drainage Peak flo te_hh:mm Runoff V Runoff C see WARN see ERR ********* ::::::::::::::::::::::::::	<pre>x. numbe x. numbe x. numbe x. numbe x. numbe x. numbe ph IDent ph refer area as w of sin is the c oefficie ING or N OR mess ******* ******** ******** * S U ********</pre>	Alue for er of r er of f the HEAD tificat rence r sociat nulate ar f simul ent of NOTE me sage pu the tof NOTE me sage pu	Pr ID nu rainfal flow po the second DERS (un tion num numbers ted with d hydrog d time lated hy simula essage rinted simula essage rinted ******* ******* R Y ******* *******	l points ints mits dep mbers, (, (6 dig of the ydrograp ted hydr printed at end (******* ******** ::::::::::::::::::::	5: 1500 : 150	METOUT charact charact ac.) or or (m/ low. or (mn (ratic of run. 	*** in START) ters). (ha.). 3/s). n). b). ************************************	** ************************************
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<pre>NuN:COMAND# Ol:0001</pre>	<pre># Project Name: [Holy Family Catho # Date : 08-16-2011 # Modeller : [C. Silvestri] # Company : Philips Engineering # License # : 3569108</pre>	lic Cemet g Ltd	
<pre>START</pre>		*********	***************************************
<pre>[TZERO = .00 hrs on 0] [MSTORM = 1] [NSTORM = 1] [NSTORM = 1] [NSTORM = 1] [NSTORM = 1] [SDT=60.00:SDUR = 12.00:PTOTE 212.00] [01:0003TDINHYDOAREAOPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 01:000103 42.10 5.719 No_date 10:05 196.94 .929 [CM = 94.0: N= 3.00] [Tp = .40:DT = 5.00] [01:0004DINHYDOAREAOPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:000103 42.10 5.719 No_date 10:05 196.94 n/a [V/S/n= 4.00:N= 3.00] [Tp = .40:DT = 5.00] [01:0005DINHYDOAREAOPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:000103 42.10 5.719 No_date 10:05 196.94 n/a [V/S/n= 440.71.0007.030] {Vmaxe .789:Dmaxe .610} [01:0005DINHYDOAREAOPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000104 24.10 5.626 No_date 10:01 196.94 .929 [CM = 94.0: N= 3.00] [Tp = .21:DT = 5.00] [01:0006DINHYDOAREAOPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000104 24.10 3.506 No_date 10:01 196.94 n/a [DT = 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [DT = 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [DT = 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [L/S/n= 365.7.4.4007.030] {Vmaxe .596:Dmaxe .605} [001:0007</pre>	001:0001		
<pre>[METOUT= 2 (l=imperial, 2=metric output)] [NRUN = 1] [SDT=60.00:SDUR= 12.00] Comment = Regional storm event (Hurricane Hazel) [SDT=60.00:SDUR= 12.00] Ol:0003REAQPEAK-TpeakDate_h:mmR.VR.C CALIB NASHYD 01:000103 42.10 5.719 No_date 10:05 196.94 .929 [CM= 94.0: N= 3.00] [Tp = .40:DTE 5.00] Ol:0014REAQPEAK-TpeakDate_h:mmR.VR.C ROUTE CHANNEL -> 01:000103 42.10 5.719 No_date 10:05 196.94 n/a [L/S/n= 440.71.000103 42.10 5.719 No_date 10:05 196.94 n/a [ROT= 5.00] out<- 02:002104 42.10 5.719 No_date 10:05 196.94 n/a [L/S/n= 440.71.000103 42.10 5.719 No_date 10:05 196.94 n/a [L/S/n= 440.71.000103 42.10 5.626 No_date 10:05 196.94 n/a [L/S/n= 440.71.000103 42.10 5.626 No_date 10:00 196.94 .929 [CM= 94.0: N= 3.00] [Th = .21:DTE 5.00] Ol:0006AREAQPEAK-TpeakDate_h:mmR.VR.C ADD HYD 03:000104 24.10 3.506 No_date 10:00 196.94 n/a [DT= 5.00] SUM= 01:001104 66.20 8.80 No_date 10:05 196.94 n/a [DT= 5.00] SUM= 01:001104 66.20 8.80 No_date 10:05 196.94 n/a [ROT= 5.00] SUM= 01:001104 66.20 8.712 No_date 10:15 196.94 n/a [ROT= 5.00] SUM= 01:001104 66.20 8.712 No_date 10:10 196.94 n/a [L/S/n= 365./ .400/.030] {Vmax= .596:Dmax= .605} Ol:008</pre>	$\Gamma TZERO = .00 hrs on$	01	
[NRUN = 1] READ STORM Filename = STORM.001 Comment = Regional storm event (Hurricane Hazel) [SDT=60.00:SDUR= 12.00] O01:0002 CALIB NASHYD 01:000103 42.10 5.719 No_date 10:05 196.94 .929 [CM=94.0: N= 3.00] [TD = A4:DT = 5.00] O01:0004 CHARDE CHANNEL -> 01:000103 42.10 5.719 No_date 10:05 196.94 n/a [KOT = 5.00] out <- 02:002104 42.10 5.719 No_date 10:05 196.94 n/a	[METOUT= 2 (1=imperial,	2=metric	output)]
001:0002	I = I		
<pre>Filename = STORM.001 Comment = Regional storm event (Hurricane Hazel) [SDT=60.00:SDUR= 12.00:PTOT= 212.00] 001:0003</pre>	001:0002		
Comment = Regional storm event (Hurricane Hazel) [SDT=60.00:SDUK= 12.00] 001:0003DE:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 01:000103 42.10 5.719 No_date 10:05 196.94 .929 [CN= 94.0: N= 3.00] Tp= .40:DT= 5.00] 001:0004REAOPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:000103 42.10 5.626 No_date 10:15 196.94 n/a [L/S/n= 440./1.000/.030] {Vmax= .789:Dmax= .610} 001:0005			
CALIB MASHYD 01:00103 42.10 5.719 No_date 10:05 196.94 .929 [CN= 94.0: N= 3.00] [Tp = .40:DT= 5.00] 001:0004REAOPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:000103 42.10 5.719 No_date 10:05 196.94 n/a [RTT= 5.00] out<- 02:002104 42.10 5.626 No_date 10:15 196.94 n/a [VMax= .789:Dmax= .610] 01:0005REAOPEAK-TpeakDate_hh:mmR.VR.C CALIB MASHYD 03:000104 24.10 3.506 No_date 10:00 196.94 .929 [CN= 94.0: N= 3.00] 101:0005DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000104 24.10 3.506 No_date 10:00 196.94 n/a [DT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [RTT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [RTT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [RTT= 5.00] OUT<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [RTT= 5.00] OUT<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [RTT= 5.00] OUT<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [RTT= 5.00] OUT<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [NTT= 5.00] OUT<- 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [VMax= .596:Dmax= .605] 001:0008DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [TT= .18:TF 5.00] 001:0019DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] 01:0010DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] 01:001DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] 01:001DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [TT= 5.00] OUT<- 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [L/5/n= 385./ .670/.030] [TD=17:DT 5.00] 001:0012DI:NHYD	Comment = Regional storm even	nt (Hurri	cane Hazel)
CALIB MASHYD 01:00103 42.10 5.719 No_date 10:05 196.94 .929 [CN= 94.0: N= 3.00] [Tp = .40:DT= 5.00] 001:0004REAOPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:000103 42.10 5.719 No_date 10:05 196.94 n/a [RTT= 5.00] out<- 02:002104 42.10 5.626 No_date 10:15 196.94 n/a [VMax= .789:Dmax= .610] 01:0005REAOPEAK-TpeakDate_hh:mmR.VR.C CALIB MASHYD 03:000104 24.10 3.506 No_date 10:00 196.94 .929 [CN= 94.0: N= 3.00] 101:0005DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000104 24.10 3.506 No_date 10:00 196.94 n/a [DT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [RTT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [RTT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [RTT= 5.00] OUT<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [RTT= 5.00] OUT<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [RTT= 5.00] OUT<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [RTT= 5.00] OUT<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [NTT= 5.00] OUT<- 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [VMax= .596:Dmax= .605] 001:0008DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [TT= .18:TF 5.00] 001:0019DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] 01:0010DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] 01:001DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] 01:001DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [TT= 5.00] OUT<- 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [L/5/n= 385./ .670/.030] [TD=17:DT 5.00] 001:0012DI:NHYD	[SDT=60.00:SDUR= 12.00:PTOT=	212.00]	
<pre>[CN= 94.0: N= 3.00] [Tp= .40:DT= 5.00] 001:0004</pre>	CALIB NASHYD 01:000103	42.10	5.719 No_date 10:05 196.94 .929
001:0004R.VR.C ROUTE CHANNEL -> 01:000103 42:10 5.719 No_date 10:05 196.94 n/a [L/S/n= 440./1.000/.030] [Vmax= .789:Dmax= .610] 001:0005	[CN= 94.0: N= 3.00]		
<pre>[L/S/m= 440.71.000/.030] {\max=.789:Dmax=.610} 001:0005D:D:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000104 24.10 3.506 No_date 10:00 196.94 .929 [CN= 94.0: N= 3.00] [Tp= .21:DT= 5.00] 001:0006D:D:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000104 24.10 5.626 No_date 10:15 196.94 n/a</pre>	[IP= .40:DI= 5.00] 001:0004TD:NHYD	ARFA	
<pre>[L/S/m= 440.71.000/.030] {\max=.789:Dmax=.610} 001:0005D:D:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000104 24.10 3.506 No_date 10:00 196.94 .929 [CN= 94.0: N= 3.00] [Tp= .21:DT= 5.00] 001:0006D:D:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000104 24.10 5.626 No_date 10:15 196.94 n/a</pre>	ROUTE CHANNEL -> 01:000103	42.10	5.719 No_date 10:05 196.94 n/a
<pre>{vmax= .789:Dmax= .610} 001:0005AREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000104 24.10 3.506 No_date 10:00 196.94 .929 [CN= 94.0: N= 3.00] [Tp= .21:DT= 5.00] 001:0006DINHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000104 24.10 5.626 No_date 10:15 196.94 n/a [DT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a 001:0007DINHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [RDT= 5.00] out<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [kDT= 5.00] out<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [kDT= 5.00] out<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [kDT= 5.00] out<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [kDT= 5.00] out<- 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .18:DT= 5.00] 001:0009</pre>	[RDT = 5.00] out <- 02:002104	42.10	5.626 No_date
001:0005R.VR.C CALIB NASHYD 03:000104 24.10 3.506 No_date 10:00 196.94 .929 [TP= .21:DT= 5.00] 001:0006AREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000104 24.10 3.506 No_date 10:00 196.94 n/a [DT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [DT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [RDT= 5.00] out<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [L/S/n= 365./ .400/.030] {Wmax= .596:Dmax= .605} 001:0008ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [TP= .18:DT= 5.00] 001:0009ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [TP= .18:DT= 5.00] 001:0009ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [TP= .18:DT= 5.00] 001:0009ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [DT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:10 196.94 n/a [DT= 5.00] out<- 02:002106 66.20 8.712 No_date 10:05 197.50 n/a [RDT= 5.00] out<- 02:002106 85.40 11.273 No_date 10:05 197.50 n/a [RDT= 5.00] out<- 02:002106 85.40 11.137 No_date 10:01 197.50 n/a [CM= 95.0: N= 3.00] [TP= .17:DT= 5.00] 001:0011DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CM= 95.0: N= 3.00] [TP= .17:DT= 5.00] 001:0012	{Vmax= .789:Dmax= .610}		
[CN= 94.0: N= 3.00] [Tp= .21:DT= 5.00] 001:0006ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000104 24.10 3.506 No_date 10:00 196.94 n/a [DT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [DT= 5.00] SUM= 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [ROTE CHANNEL -> 01:001104 66.20 8.712 No_date 10:10 196.94 n/a [RDT= 5.00] out<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [L/S/n= 365./ .400/.030] {Vmax= .596:Dmax= .605} 001:0008ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .18:DT= 5.00] 001:0009ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 n/a + 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [DT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:10 196.94 n/a [RT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:51 197.50 n/a 001:0010ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:51 197.50 n/a [RT= 5.00] out<- 02:002106 85.40 11.37 No_date 10:05 197.50 n/a [L/S/n= 385./ .670/.030] {Vmax= .830:Dmax= .655} 001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N = 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N = 3.00] [Tp= .17:DT= 5.00] 001:0012	001:0005ID:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.C
<pre>[Tp= .21:DT= 5.00] 001:0006</pre>	[CN = 94.0; N = 3.00]	24.10	5.506 NO_date 10:00 196.94 .929
ADD HYD 03:000104 24.10 3.506 No_date 10:00 196.94 n/a + 02:002104 42.10 5.626 No_date 10:15 196.94 n/a 001:0007DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [RDT= 5.00] out<- 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [L/S/n= 365./ .400/.030] {vmax= .596:Dmax= .605} 001:0008DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [TP= .18:DT= 5.00] 001:0009DI:NHYDAREAOPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:10 196.94 n/a [DT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:10 196.94 n/a [DT= 5.00] out<- 02:002106 85.40 11.273 No_date 10:05 197.50 n/a [RDT= 5.00] out<- 02:002106 85.40 11.273 No_date 10:10 197.50 n/a [RDT= 5.00] out<- 02:002106 85.40 11.273 No_date 10:10 197.50 n/a [L/S/n= 385./.670/.030] {vmax= .830:Dmax= .655} 001:0011	[Tp= .21:DT= 5.00]		
ROUTE CHANNEL -> 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [L/S/n= 365./ .400/.030] {Vmax= .596:Dmax= .605} 001:0008	001:0006ID:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.C
ROUTE CHANNEL -> 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [L/S/n= 365./ .400/.030] {Vmax= .596:Dmax= .605} 001:0008	+ 02:002104	42.10	5.626 No_date 10:15 196.94 n/a
ROUTE CHANNEL -> 01:001104 66.20 8.880 No_date 10:05 196.94 n/a [L/S/n= 365./ .400/.030] {Vmax= .596:Dmax= .605} 001:0008	[DT= 5.00] SUM= 01:001104	66.20	8.880 No_date 10:05 196.94 n/a
<pre>[L/ 3/II_ 303.7 .+007.1303] {Vmax= .596:Dmax= .605} 001:0008ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] Tp= .18:DT= 5.00] 001:0009ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 66.20 8.712 No_date 10:10 196.94 n/a [DT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:05 197.50 n/a 001:0010ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:05 197.50 n/a [RDT= 5.00] out<- 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [L/s/n= 385.7 .670/.030] {Vmax= .830:Dmax= .655} 001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0] SUM= 01:001106 10.70 13.116 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013</pre>	001:0007ID:NHYD ROUTE CHANNEL -> 01:001104	AREA	QPEAK-TpeakDate_nn:mmR.VR.C 8.880 No date 10:05 196.94 n/a
<pre>[L/ 3/II_ 303.7 .+007.1303] {Vmax= .596:Dmax= .605} 001:0008ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] Tp= .18:DT= 5.00] 001:0009ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 n/a + 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [DT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:05 197.50 n/a 001:0010ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:05 197.50 n/a [RDT= 5.00] out<- 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [L/s/n= 385.7 .670/.030] {Vmax= .830:Dmax= .655} 001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= 5.00] SUM= 01:001106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= 5.00] SUM= 01:001106 15.30 2.237 No_date 10:01 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:10 197.79 n/a 001:0013</pre>	[RDT= 5.00] out<- 02:002105	66.20	8.712 No_date 10:10 196.94 n/a
001:0008ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000105 19.20 2.806 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] 001:0009ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 n/a + 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [DT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:05 197.50 n/a 001:0010ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:05 197.50 n/a [RDT= 5.00] out<- 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [L/S/n= 385./ .670/.030] {Vmax= .830:Dmax= .655} 001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 15.30 2.237 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 15.30 2.237 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 15.30 2.237 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C			
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<pre>[Tp= .18:DT= 5.00] 001:0009ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 n/a + 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [DT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:05 197.50 n/a 001:0010ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:05 197.50 n/a [RDT= 5.00] out<- 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [L/S/n= 385./ .670/.030] {Vmax= .830:Dmax= .655} 001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:10 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C</pre>	CALIB NASHYD 03:000105	19.20	2.806 No_date 10:00 199.42 .941
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ADD HYD 03:000105 19.20 2.806 No_date 10:00 199.42 n/a + 02:002105 66.20 8.712 No_date 10:10 196.94 n/a [DT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:05 197.50 n/a 001:0010ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:05 197.50 n/a [L/S/n= 385./ .670/.030] {Vmax= .830:Dmax= .655} 001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [TP= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C	001:0009ID:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.C
<pre>[DT= 5.00] SUM= 01:001105 85.40 11.273 No_date 10:05 197.50 n/a 001:0010ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:05 197.50 n/a [RDT= 5.00] out<- 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [L/S/n= 385./ .670/.030] {Vmax= .830:Dmax= .655} 001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C</pre>	ADD HYD 03:000105	19.20	2.806 No_date 10:00 199.42 n/a
ROUTE CHANNEL -> 01:001105 85.40 11.273 No_date 10:05 197.50 n/a [RDT= 5.00] out<- 02:002106	[DT= 5.00] SUM= 01:001105		11.273 No_date 10:05 197.50 n/a
<pre>[RDT= 5.00] out<- 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [L/S/n= 385./ .670/.030] {Vmax= .830:Dmax= .655} 001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C</pre>			
<pre>[L/s/n= 385./ .670/.030] {Vmax= .830:Dmax= .655} 001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C</pre>			
001:0011ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C	[L/S/n= 385./ .670/.030]		
CALIB NASHYD 03:000106 15.30 2.237 No_date 10:00 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
<pre>[Tp= .17:DT= 5.00] 001:0012ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C</pre>			
001:0012TD:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C			
ADD HYD 03:000106 15.30 2.237 No_date 10:00 199.42 n/a + 02:002106 85.40 11.137 No_date 10:10 197.50 n/a [DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C		ARFA	OPFAK-TpeakDate hh:mmR.VR.C
[DT= 5.00] SUM= 01:001106 100.70 13.116 No_date 10:05 197.79 n/a 001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C	ADD HYD 03:000106	15.30	2.237 No_date 10:00 199.42 n/a
001:0013ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR.C			

Page 2

SWMR.sum	
[XIMP=.10:TIMP=.17]	
$f_{LOSS} = 2 : CN = 93.01$	
IPPErvious area: TAPPEr 5 00:SLPP=1.27:LGP= 717.:MNP=.250:SCP= .01	
[Tmpervious area: IAimp= 1.57:SLPI=1.27:LGI= 100.:MNI=.017:SCI= .0]	
001:0014ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR	.C
1001106 100 70 13 116 No date 10.05 197 79	n/a
ADD HYD (1.001100 100.70 11.110 No_date 10.03 137.77 + 03:000107 15.27 1.602 No_date 11:00 193.07 [DT= 5.00] SUM= 02:001107 115.97 14.432 No_date 10:10 197.17 001:0015ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR ROUTE CHANNEL -> 02:001107 115.97 14.432 No_date 10:10 197.17 [RDT= 5.00] out<- 01:002108 115.97 14.097 No_date 10:20 197.17	n⁄a
LDT- 5 00] SUM- 02:001107 115.97 14.432 No date 10:10 197.17	n⁄a
001.0015	.C
POITE CHANNEL -> 02:001107 115 97 14 432 No date 10:10 197.17	n/a
$F_{\text{DDE}} = 5.001 \text{ out} = -01.002108 115.97 14.097 \text{ No date } 10.20 197.17$	n/a
[L/S/n = 1300./1.670/.030]	ii) u
[L/S/n = 1500./1.0/0/.050]	
$\{V_{max}= 1.934: D_{max}= 1.048\}$	C -
001:0016ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR	0/1
CALIB NASHYD 02:000108 33.50 4.791 No_date 10:00 199.42.	341
[CN=95.0: N=3.00]	
[Tp= .29:DT= 5.00]	~
001:0017ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR	
O01:0017ID:NHYDAREA OPEAK-rpeakDate_Infilm ADD HYD 01:002108 115.97 14.097 No_date 10:20 197.17 + 02:000108 33.50 4.791 No_date 10:00 199.42 [DT= 5.00] SUM= 03:000004 149.47 18.476 No_date 10:15 197.67 001:0018	n/a
+ 02:000108 33.50 4.791 No_date 10:00 199.42	n/a
[DT= 5.00] SUM= 03:000004 149.47 18.476 No_date 10:15 197.67	n/a
001:0018ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VR	Ç
PRINT HYD 03:000004 149.47 18.476 No_date 10:15 197.67 001:0019ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF	n/a
001:0019ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF	.c
CALIB STANDHYD 04:000101 287.80 26.354 No_date 11:15 200.03	944
[XIMP=.20:TIMP=.50]	
[10SS = 2 : CN = 93.0]	
[Pervious area: IAper= 5.00:SLPP= .63:LGP= 700.:MNP=.250:SCP= .0]	
[Impervious area: IAimp= 1.57:SLPI= .63:LGI=3200.:MNI=.017:SCI= .0]	
001:0020ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF	. C
$R_{\rm eff} = 11.10$	n/a
ROUTE CHANNEL -> 04:000101 287.80 26.354 No_date 11:15 200.03 [RDT= 5.00] out<- 05:002101 287.80 26.125 No_date 11:25 200.03	n/a
$[RD] = 5.00 001 < - 03.002101 207.00 20.123 NO_0010 11.23 200.03 11.23 200.03 11.23 11.23 200.03 11.23 11.$	n, u
[L/S/n = 700./.420/.030]	
$\{V_{max} = .955: D_{max} = .954\}$	с -
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF	.C
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30	921
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28]	921
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0]	921
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0]	921
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Tmpervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0]	921
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF	921 8.C
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No date 11:00 195.30	921 a.c
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No date 11:00 195.30	921 n/a n/a
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73	921 n/a n/a n/a
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023	921 n/a n/a n/a
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023	921 n/a n/a n/a
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024	921 n/a n/a n/a c n/a c
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024	921 n/a n/a n/a c n/a c
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024	921 n/a n/a n/a c n/a c
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 48.639 No_date 11:35 197.73	921 n/a n/a n/a c n/a c
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 48.639 No_date 11:35 197.73 [L/S/n= 1000./ .540/.030]	921 n/a n/a n/a c n/a c
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 [L/S/n= 1000./ .540/.030] [Vmax= 1.225:Dmax= 1.295]	921 n/a n/a a.c n/a a.c n/a n/a
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 [L/S/n= 1000./ .540/.030] [Vmax= 1.225:Dmax= 1.295]	921 n/a n/a a.c n/a a.c n/a n/a
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:00 195.30 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 [L/S/n= 1000./ .540/.030] VMax= 1.225:Dmax= 1.295} 001:0025ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42	921 n/a n/a a.c n/a a.c n/a n/a
001:0021ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:35 197.73 [L/S/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42 A [CN= 95.0: N= 3.00]	921 n/a n/a a.c n/a a.c n/a n/a
001:0021RVF * CALIB STANDHYD 04:000102 272.90 24.298 No_date_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGP=40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 [L/S/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42 . [CN= 95.0: N= 3.00] [Tp= .32:DT= 5.00]	921 n/a n/a a.c n/a a.c n/a n/a a.c 941
001:0021RVF * CALIB STANDHYD 04:000102 272.90 24.298 No_date_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGP=40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 [L/S/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42 . [CN= 95.0: N= 3.00] [Tp= .32:DT= 5.00]	921 n/a n/a n/a s.c n/a n/a s.c 941 s.c
001:0021RVF * CALIB STANDHYD 04:000102 272.90 24.298 No_date_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGP=40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 [L/S/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42 . [CN= 95.0: N= 3.00] [Tp= .32:DT= 5.00]	921 n/a n/a n/a n/a n/a n/a
001:0021RVF * CALIB STANDHYD 04:000102 272.90 24.298 No_date_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGP=40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 [L/S/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42 . [CN= 95.0: N= 3.00] [Tp= .32:DT= 5.00]	921 n/a n/a n/a c.c n/a c.c n/a c.c 941 c.c n/a n/a
001:0021ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 : CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNI=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 01:0022ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:00 197.73 01:0023ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 [L/s/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42 [CN= 95.0: N= 3.00] [Tp= .32:DT= 5.00] 001:0026ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:002109 560.70 48.639 No_date 11:35 197.73 [DT= 5.00] SUM= 06:00109 35.10 4.969 No_date 11:35 197.73 (CN= 95.0: N= 3.00] [Tp= .32:DT= 5.00] 001:0026	921 n/a n/a n/a n/a .C n/a n/a .C .941 .C n/a n/a n/a .C n/a n/a
001:0021ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 : CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNI=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 01:0022ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:00 197.73 01:0023ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 [L/s/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42 [CN= 95.0: N= 3.00] [Tp= .32:DT= 5.00] 001:0026ID:NHYDAREAOPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:002109 560.70 48.639 No_date 11:35 197.73 [DT= 5.00] SUM= 06:00109 35.10 4.969 No_date 11:35 197.73 (CN= 95.0: N= 3.00] [Tp= .32:DT= 5.00] 001:0026	921 n/a n/a n/a n/a .C n/a n/a .C .941 .C n/a n/a n/a .C n/a n/a
001:0021ReAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGI= 40.:MNI=.017:SCI= .0] 001:0022DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26.125 No_date 11:25 200.03 [DT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 48.639 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 48.639 No_date 11:35 197.73 [L/S/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42 [CN= 95.0: N= 3.00] [TP= .32:DT= 5.00] 001:0026DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:002109 560.70 48.639 No_date 11:35 197.73 + 05:000109 35.10 4.969 No_date 10:00 199.42 [DT= 5.00] SUM= 06:001109 595.80 50.677 No_date 11:20 197.83 001:0027DI:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:001109 595.80 50.677 No_date 11:20 197.83	921 n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a
001:0021REAQPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [01:0022	921 n/a n/a n/a n/a .C n/a n/a .C .941 .C n/a n/a n/a .C n/a n/a
001:0021QPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGF= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26:125 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 48.639 No_date 11:35 197.73 [L/s/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025	921 n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a n/a
001:0021QPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGT= 40.:MNI=.017:SCT= .0 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 PT= 5.00] SUM= 06:000001 560.70 49.278 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 48.639 No_date 11:03 197.73 [L/S/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0026ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 10:00 199.42 [Tp= .32:DT= 5.00] 001:0026ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF CALIB NASHYD 05:000109 35.10 4.969 No_date 11:35 197.73 [DT= 5.00] SUM= 06:001109 595.80 50.677 No_date 11:20 197.83 [DT= 5.00] SUM= 06:001109 595.80 50.677 No_date 11:20 197.83 [RDT= 5.00] out<- 04:002109 560.70 48.639 No_date 11:35 197.73 [DT= 5.00] SUM= 06:001109 595.80 50.677 No_date 11:20 197.83 [RDT= 5.00] out<- 04:002110 595.80 50.591 No_date 11:30 197.83 [L/S/n= 900./ .710/.030] {Vmax= 1.529:Dmax= 1.203}	921 n/a n/a n/a n/a n/a n/a n/a n/a
001:0021QPEAK-TpeakDate_hh:mmR.VF * CALIB STANDHYD 04:000102 272.90 24.298 No_date 11:00 195.30 . [XIMP=.13:TIMP=.28] [LOSS= 2 :CN= 93.0] [Pervious area: IAper= 5.00:SLPP= .98:LGP=1350.:MNP=.250:SCP= .0] [Impervious area: IAimp= 1.57:SLPI= .98:LGF= 40.:MNI=.017:SCI= .0] 001:0022ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ADD HYD 04:000102 272.90 24.298 No_date 11:00 195.30 + 05:002101 287.80 26:125 No_date 11:00 197.73 001:0023ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF PRINT HYD 06:000001 560.70 49.278 No_date 11:00 197.73 001:0024ID:NHYDAREAQPEAK-TpeakDate_hh:mmR.VF ROUTE CHANNEL -> 06:000001 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 49.278 No_date 11:00 197.73 * [RDT= 5.00] out<- 04:002109 560.70 48.639 No_date 11:35 197.73 [L/s/n= 1000./ .540/.030] {Vmax= 1.225:Dmax= 1.295} 001:0025	921 n/a n/a n/a n/a n/a n/a n/a n/a

	SWMR.s	um		
CALIB NASHYD 05:000110	21.80	3.178 No_date	10:00 199.42 .9	41
[CN= 95.0: N= 3.00] [Tp= .22:DT= 5.00]				
001:0029ID:NHYD	AREA	OPEAK-TpeakDate	hh:mmR.VR.	c
ADD HYD 04:002110	595.80	50.591 No_date	11:30 197.83 n	/a
+ 05:000110 [DT= 5.00] SUM= 06:001110	21.80 617.60	3.178 No_date 51.769 No_date		/a
001:0030ID:NHYD	AREA	OPEAK-TpeakDate	hh:mm - R.V. R.	/a C
ROUTE CHANNEL -> 06:001110	617.60	51.769 No_date	11:15 197.88 n	/a
[RDT= 5.00] out<- 04:002111 [L/S/n= 920./1.250/.030]	617,60	51.727 No_date	11:20 197.88 n	/a
{Vmax= 2.629:Dmax= 1.406}				
001:0031ID:NHYD CALIB NASHYD 01:000111	AREA	QPEAK-TpeakDate	_hh:mmR.VR.	с
CALIB NASHYD 01:000111 [CN= 94.0: N= 3.00]	17.30	2.508 No_date	10:00 196.94 .9	29
$[T_{D} = .23: D_{T} = 5.00]$				
001:0032ID:NHYD ADD HYD 01:000111 + 04:002111 [DT= 5.00] SUM= 02:000002	AREA	QPEAK-TpeakDate	_hh:mmR.VR.	с
ADD HYD 01:000111	17.30	2.508 No_date	10:00 196.94 n	/a
[DT= 5.00] SUM= 02:00002	634.90	52.989 No date	11:20 197.88 n	/a /a
			_hh:mmR.VR.	c
PRINT HYD 02:000002 #*******	634.90	52.989 No_date		/a
# ID revised to ID=9, PREVIOUSLY I	D=1 WAS BE	EING OVER-WRITEN		
001:0034ID:NHYD	AREA	QPEAK-TpeakDate	_hh:mmR.VR.	с
	1/0 /7	18 /76 No data	10.15 107 67	1-
+ 02:000002 [DT= 5.00] SUM= 09:001108 #************************************	784.37	68.678 No date	11:15 197.86 n 11:05 197.82 n	/a /a
#******	******	*****	11.05 157.02 11,	/u
#*************************************	**********	*****	*****	*
<pre># SUBCATCHMENT CONTAINING CEMETERY #************************************</pre>	' LANDS	*****	****	*
<pre># PROPOSED IMPERVIOUSNESS LESS THA</pre>	N 20%			
# THEREFORE, CN VALUE HAS BEEN MOD	IFIED TO A	ACCOUNT FOR PROPOS	ED IMPERVIOUS SUR	F
# THEREFORE, CN VALUE HAS BEEN MOD # #***********	DIFIED TO A	ACCOUNT FOR PROPOS	ED IMPERVIOUS SUR	F
# #***********************************	DIFIED TO A	ACCOUNT FOR PROPOS	ED IMPERVIOUS SUR	F
# #***********************************				
# #***********************************	AREA	QPEAK-TpeakDate	_hh:mmR.VR.(с
<pre># # #*********************************</pre>	AREA		_hh:mmR.VR.(с
<pre># #***********************************</pre>	AREA 68.20	QPEAK-TpeakDate	_hh:mmR.VR.(с
<pre># #***********************************</pre>	AREA 68.20	QPEAK-TpeakDate 8.910 No_date	_hh:mmR.VR.0 10:10 193.95 .9	c 15
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20	QPEAK-TpeakDate 8.910 No_date QPEAK-TpeakDate 8.910 No date	_hh:mmR.VR.0 10:10 193.95 .9 _hh:mmR.VR.0 10:10 193.95 n	C 15 C
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20	QPEAK-TpeakDate 8.910 No_date QPEAK-TpeakDate 8.910 No date	_hh:mmR.VR.0 10:10 193.95 .9 _hh:mmR.VR.0 10:10 193.95 n	C 15 C
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20	QPEAK-TpeakDate 8.910 No_date QPEAK-TpeakDate 8.910 No date	_hh:mmR.VR.0 10:10 193.95 .9 _hh:mmR.VR.0 10:10 193.95 n	C 15 C
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20 68.20	QPEAK-TpeakDate 8.910 No_date QPEAK-TpeakDate 8.910 No_date 8.827 No_date	_hh:mmR.VR.0 10:10 193.95 .9 _hh:mmR.VR.0 10:10 193.95 n	C 15 C
<pre># #***********************************</pre>	AREA 68.20 AREA 68.20 68.20 68.20	QPEAK-TpeakDate 8.910 No_date QPEAK-TpeakDate 8.910 No_date 8.827 No_date	_hh:mmR.VR.0 10:10 193.95 .9 _hh:mmR.VR.0 10:10 193.95 n	C 15 C
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20 68.20 	QPEAK-TpeakDate 8.910 No_date •QPEAK-TpeakDate 8.910 No_date 8.827 No_date ******	_hh:mmR.VR.(10:10 193.95 .9 _hh:mmR.VR.(10:10 193.95 n, 10:20 193.95 n,	C 15 C /a /a
<pre># #***********************************</pre>	AREA 68.20 AREA 68.20 68.20 68.20 ***********	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date 4.827 No_date	_hh:mmR.VR.(10:10 193.95 .9 _hh:mmR.VR.(10:10 193.95 n, 10:20 193.95 n,	C 15 C /a /a
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20 68.20 	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date 4.827 No_date	_hh:mmR.VR.(10:10 193.95 .9 _hh:mmR.VR.(10:10 193.95 n, 10:20 193.95 n,	C 15 C /a /a
<pre># #***********************************</pre>	MT-2 68.20 MT-2 AREA 68.20 68.20 *********** , A1b, A1c *********** AREA .80	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date ****** QPEAK-TpeakDate .115 No_date	_hh:mmR.VR.(10:10 193.95 .9 _hh:mmR.VR.(10:10 193.95 n, 10:20 193.95 n, _hh:mmR.VR.(10:00 194.42 .9	C 15 C /a /a C 17
<pre># #***********************************</pre>	MT-2 68.20 MT-2 AREA 68.20 68.20 ********** , A1b, A1c ********** AREA .80	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date ****** A1d ****** QPEAK-TpeakDate .115 No_date	_hh:mmR.VR.(10:10 193.95 .9 _hh:mmR.VR.(10:10 193.95 n, 10:20 193.95 n, _hh:mmR.VR.(10:00 194.42 .9 _hh:mmR.VR.(C 15 c /a /a c 17
<pre># #***********************************</pre>	MT-2 68.20 MT-2 AREA 68.20 68.20 *********** , A1b, A1c *********** AREA .80	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date ****** QPEAK-TpeakDate .115 No_date	_hh:mmR.VR.(10:10 193.95 .9 _hh:mmR.VR.(10:10 193.95 n, 10:20 193.95 n, _hh:mmR.VR.(10:00 194.42 .9	C 15 c /a /a c 17
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20 68.20 *********** AREA .80 AREA 6.10	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date ****** . A1d ****** . 115 No_date . 115 No_date . 890 No_date	_hh:mmR.VR.0 10:10 193.95 .9 _hh:mmR.VR.0 10:10 193.95 n, 10:20 193.95 n, _hh:mmR.VR.0 10:00 194.42 .9 _hh:mmR.VR.0 10:00 193.98 .9	C 15 C /a C 17 C 15
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20 68.20 *********** AREA 6.10 AREA	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date ****** QPEAK-TpeakDate .115 No_date .890 No_date	_hh:mmR.VR.0 10:10 193.95 .9 _hh:mmR.VR.0 10:10 193.95 n, 10:20 193.95 n, _hh:mmR.VR.0 10:00 194.42 .9 _hh:mmR.VR.0 10:00 193.98 .9 _hh:mmR.VR.0	C 15 C /a C 17 C 15
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20 68.20 *********** AREA .80 AREA 6.10	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date ****** QPEAK-TpeakDate .115 No_date .890 No_date	_hh:mmR.VR.0 10:10 193.95 .9 _hh:mmR.VR.0 10:10 193.95 n, 10:20 193.95 n, _hh:mmR.VR.0 10:00 194.42 .9 _hh:mmR.VR.0 10:00 193.98 .9	C 15 C /a C 17 C 15
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20 68.20 ********** AREA .80 AREA 6.10 AREA 3.20	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date ****** QPEAK-TpeakDate .115 No_date ****** QPEAK-TpeakDate .890 No_date	_hh:mmR.VR.0 10:10 193.95 .9 _hh:mmR.VR.0 10:10 193.95 n, 10:20 193.95 n, 10:20 193.95 n, _hh:mmR.VR.0 10:00 194.42 .9 _hh:mmR.VR.0 10:00 193.98 .9 _hh:mmR.VR.0 10:00 194.30 .9	C /a /a C 17 C 15 C 17
<pre># #***********************************</pre>	AREA 68.20 MT-2 AREA 68.20 68.20 ********** AREA .80 AREA 6.10 AREA 3.20	QPEAK-TpeakDate 8.910 No_date 8.910 No_date 8.910 No_date 8.827 No_date ****** QPEAK-TpeakDate .115 No_date ****** QPEAK-TpeakDate .890 No_date	_hh:mmR.VR.(10:10 193.95 .9 _hh:mmR.VR.(10:10 193.95 n, 10:20 193.95 n, 10:20 193.95 n, _hh:mmR.VR.(10:00 194.42 .9 _hh:mmR.VR.(10:00 193.98 .9 _hh:mmR.VR.(10:00 194.30 .9 _hh:mmR.VR.(C 15 C /a C 17 C 15 C

Т

		SWMR.su	Im	
[CN= 94.2: N= 3.0				
[Tp= .21:DT= 5.0				-
001:0041	-ID:NHYD		QPEAK-TpeakDate_hh:mmR.VR.(
ROUTE RESERVOIR ->		5.30	—	/a
[RDT= 5.00] out<-	07:A10	4.56 .74		/a
=> overflow <		./4 1_ 1447E.		/a
			00, N-Ovf= 2, TotDurOvf= 1.h QPEAK-TpeakDate_hh:mmR.VR.(
ADD HYD	07:A1d	4.56		/a
	08:0VR	.74		/a /a
[DT= 5,00] SUM=		5 30	.770 No_date 10:00 194.33 n	/a
#*****	*******	*******	*****	u
# TOTAL DRAINAGE FROM S #*****	*****	*******	****	
			QPEAK-TpeakDate_hh:mmR.VR.(c
ADD HYD	01:A1a	.80		/a
+		68.20		/a
+	03:A1b	6.10		/a
+	04:A1c			/a
+	06:A1dPND	3.20 5.30	.770 No_date 10:00 194.33 n	/a
[DT= 3.00] SUM=		83.60		/a
#********	******			
# DRAINAGE FROM 201B (E #*****	XTERNAL) *****			
001:0044	-ID:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.0	с
CALIB NASHYD	01:201в	13.40	1.897 No_date 10:00 193.95 .93	15
[CN= 94.0: N= 3.0	0]			
[Tp= .31:DT= 5.0	0]		********	
<pre># DRAINAGE FROM CEMETER</pre>	Y LANDS Bla,	Blb, Blc	(B-Series, East Drainage) *******	
				_
			QPEAK-TpeakDate_hh:mmR.VR.(
CALIB NASHYD		4.60	.671 No_date 10:00 194.23 .9	10
[CN = 94.1: N = 3.0]				
[Tp= .17:DT= 3.0			OPENK Theakbate blumm B V B	~
	-1D:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.(
ROUTE RESERVOIR ->				/a
<pre>->RDT= 3.00] out => overflow</pre>		4.17 .43		/a /a
{MxStoUsed=.1577E+				
			QPEAK-TpeakDate_hh:mmR.VR.(
ADD HYD	04:B1a	4,17		/a
		.43	.345 No_date 10:00 194.23 n	/a
[DT= 3.00] SUM=				/a
			QPEAK-TpeakDate_hh:mmR.VR.	
ADD HYD	01:201B	13.40		/a
	02:BlaPND	4.60		/a
	03:SMT-4	18.00		/a
#Route NHYD=201B + B1a				
			QPEAK-TpeakDate_hh:mmR.VR.(c
ROUTE CHANNEL ->	03:SMT-4	18.00		/a
* [RDT= 3.00] out<-		18.00		/a
[L/S/n= 600./ .8			_	
{Vmax= 1.162:Dmax				
001:0050		AREA	QPEAK-TpeakDate_hh:mmR.VR.(С
CALIB NASHYD	03:B1b	5.00	.729 No_date 10:00 194.00 9	15
[CN= 94.0: N= 3.0				
[Tp= .17:DT= 3.0				
001:0051	-ID:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.0	
CALIB NASHYD		1.00	.146 No_date 10:00 194.42 .9	17
[CN= 94.2: N= 3.0				
[Tp= .10:DT= 3.0	0]			
	-ID:NHYD	AREA	QPEAK-TpeakDate_hh:mmR.VR.0	
ADD HYD	03:B1b	5.00		/a
+	04:B1c	1.00	.146 No_date 10:00 194.42 n	/a
1	OLIDIC	2100	TTO NO_date Toroo Torra in	

	SWMR.sum
[DT= 3.00] SUM= 02:B1b/c #************************************	
<pre># TOTAL DRAINAGE FROM SUBCATCHMENTS #************************************</pre>	201B + B1a + B1b + B1c ************
001:0053ID:NHYD	AREAQPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 01:SMT-4R	18.00 2.442 No_date 10:09 194.02 n/a
+ 02:B1b/c	6.00 .875 No_date 10:00 194.07 n/a
[DT= 3.00] SUM= 03:B1East	24.00 3.237 No_date 10:06 194.04 n/a
#*******	
<pre># DRAINAGE FROM CEMETERY LANDS B1d, #************************************</pre>	BLe, BLt (B-series, West Drainage)
	AREAQPEAK-TpeakDate_hh:mmR.VR.C
* CALIB STANDHYD 01:B1d	4.30 .629 No_date 10:00 196.92 .929
[XIMP=.25:TIMP=.25]	
[LOSS= 2 :CN= 94.0]	
Pervious area: IAper= 5.0	0:SLPP=1.00:LGP= 30.:MNP=.035:SCP= .0]
[Impervious area: IAimp= .5	50:SLPI=1.00:LGI= 50.:MNI=.013:SCI= .0]
001:0055ID:NHYD	AREAQPEAK-TpeakDate_hh:mmR.VR.C
ROUTE RESERVOIR -> 01:B1d	4.30 .629 No_date 10:00 196.92 n/a
[RDT= 3.00] out<- 04:Bld	4.09 .310 No_date 10:15 196.92 n/a
overflow <= 08:0VR	.21 .157 No_date 10:15 196.92 n/a
<pre>{MxStoUsed=.2231E+00, TotOvfVol 001.0056</pre>	
	AREAQPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 04:B1d	4.09 .310 No_date 10:15 196.92 n/a
	.21 .157 No_date 10:15 196.92 n/a 4.30 .467 No_date 10:15 196.92 n/a
	AREAQPEAK-TpeakDate_hh:mmR.VR.C
CALIB NASHYD 02:B1f	3.50 .511 No_date 10:00 194.33 .917
[CN= 94.2: N= 3.00]	5.50 .511 NO_0020 10:00 154.55 .51
[Tp = .11:DT = 3.00]	
001:0058TD:NHYD	AREAQPEAK-TpeakDate_hh:mmR.VR.C
ROUTE RESERVOIR -> 02:B1f	3.50 .511 No_date 10:00 194.33 n/a
[RDT= 3.00] out<- 04:B1f	3.22 .212 No_date 10:09 194.33 n/a
overflow <= 08:0VR	3.50 .511 No_date 10:00 194.33 n/a 3.22 .212 No_date 10:09 194.33 n/a .28 .226 No_date 10:09 194.33 n/a
{MxStoUsed=.1987E+00, TotOvfVo]	<pre>l=.5475E-01, N-Ovf= 2, TotDurOvf= 1.hrs}</pre>
001:0059ID:NHYD	AREAQPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 04:B1f	3.22 .212 No_date 10:09 194.33 n/a
+ 08:0VR	.28 .226 No_date 10:09 194.33 n/a
[DT= 3.00] SUM= 02:B1fPND	3.50 .438 No_date 10:09 194.33 n/a
	AREAQPEAK-TpeakDate_hh:mmR.VR.C
* CALIB STANDHYD 07:B1e	3.60 .526 No_date 10:00 197.23 .930
[XIMP=.27:TIMP=.27]	
[LOSS= 2 :CN= 94.0]	
Pervious area: IAper= 5.0	00:SLPP=1.00:LGP= 30.:MNP=.035:SCP= .0] 50:SLPI=1.00:LGI= 50.:MNI=.013:SCI= .0]
[Impervious area: IAimp= .5	50:SLPI=1.00:LGI= 50.:MNI=.013:SCI= .0] AREAQPEAK-TpeakDate_hh:mmR.VR.C
ROUTE RESERVOIR -> 07:B1e	3.60 .526 No_date 10:00 197.23 n/a
[RDT= 3.00] out<- 06:B1e	3.60 .277 No_date 11:03 197.23 n/a
overflow <= 08:0VR	.00 .000 No_date 0:00 .00 n/a
{MxStoUsed=.2379E+00, TotOvfVo	
001:0062ID:NHYD	AREAQPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 06:Ble	3.60 .277 No_date 11:03 197.23 n/a
+ 08:0VR	.00 .000 No_date 0:00 .00 n/a
[DT= 3.00] SUM= 07:B1ePND	3.60 .277 No_date 11:03 197.23 n/a
	AREAQPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD 01:B1dPND	4.30 .467 No_date 10:15 196.92 n/a
+ 02:B1d/e/	3.50 .438 No_date 10:09 194.33 n/a
+ 07:B1ePND	3.60 .277 No_date 11:03 197.23 n/a
[DT= 3.00] SUM= 02:B1d/e/ #***********************************	11.40 1.115 No_date 10:15 196.22 n/a
11	
# TOTAL DRAINAGE FROM SUBCATCHMENTS #************************************	ZOTD+DTG+RTD+RTC+RTG+RTE *******
"	AREAQPEAK-TpeakDate_hh:mmR.VR.C
ADD HYD $02:B1d/e/$	11.40 1.115 No_date 10:15 196.22 n/a
+ 03:B1East	24.00 3.237 No_date 10:06 194.04 n/a
T VJ.BIEdSU	27.00 J.2J/ NO_UALE 10.00 134.04 11/A

SWMR.sum [DT= 3.00] SUM= 04:SMT4 35.40 4.237 No_date 10:15 194.74 n/a *********** #***** 001:0065-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:201C 91.00 11.714 No_date 10:15 193.95 .915 [CN= 94.0: N= 3.00] Tp= .50:DT= 5.00] #***** 001:0066-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:Cla 7.00 1.018 No_date 10:00 194.23 .916 [CN= 94.1: N= 3.00] [Tp= .21:DT= 5.00] 001:0067------TD:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-

 ROUTE RESERVOIR -> 02:Cla
 7.00
 1.018 No_date
 10:00
 194.23 n/a

 [RDT= 5.00] out<- 06:Cla</td>
 5.25
 .325 No_date
 9:30
 194.23 n/a

 overflow <= 08:0VR</td>
 1.75
 .692 No_date
 10:00
 194.23 n/a

 001:0069-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD .50 .073 No_date 03:C1b 10:00 194.10 .916 [CN= 94.1: N= 3.00] [Tp= .04:DT= 2.00] # DISCHARGE FROM EXTERNAL LANDS (WEST) + MILTON CEMETERY LANDS 001:0070-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-91.00 11.714 No_date 10:15 193.95 n/a ADD HYD 01:201C + 02:EX+MC + 03:C1b [DT= 2.00] SUM= 02:EX+MC 7.00 .50 98.50 1.017 No_date 10:00 194.23 n/a .073 No_date 10:00 194.10 n/a 10:14 193.98 n/a # Route NHYD=201C through Channel SMT-1 #***** 001:0071-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 ROUTE CHANNEL
 ->
 02:EX+MC
 98.50
 12.666
 No_date
 10:14
 193.98
 n/a

 [RDT= 2.00]
 out<-</td>
 01:SMT-1
 98.50
 12.602
 No_date
 10:18
 193.98
 n/a
 [RDT= 2.00] out<- 01:SMT-1 [L/S/n= 275./ .500/.030] {Vmax= .968:Dmax= .805} 001:0072-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 07:C2 3.80 .554 No_date 10:00 194.00 .915 [CN= 94.0: N= 3.00] [Tp= .17:DT= 3.00] #******* # TOTAL DRAINAGE FROM SUBCATCHMENTS 001:0073-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 01:SMT1 98.50 12.602 No_date 10:18 193.98 n/a + 07:C2 3.80 .554 No_date 10:00 194.00 n/a [DT= 2.00] SUM= 01:SMT1 102.30 13.045 No_date 10:16 193.98 n/a #***** # CONFLUENCE SMT 1-4 #************** 001:0074-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 04:SMT4 35.40 4.237 No_date 10:15 194.74 n/a + 01:SMT1 102.30 13.045 No_date 10:16 193.98 n/a [DT= 2.00] SUM= 02:SMT1-4 137.70 17.256 No_date 10:16 194.17 n/a

DRAINAGE FROM 201D (EXTERNAL)

	SWMR.s	um		
#*************************************		OPEAK-TheakDa	te bb·mm	
CALIB NASHYD 02:20 [CN= 94.0: N= 3.00]			10:10	193.95 .915
[Tp= .41:DT= 5.00] #*****				
# SUBCATCHMENT 201D ROUTED # THROUGH Channel SMT-3 #*******				
001:0076ID:NH		QPEAK-TpeakDa	te_hh:mm	
ROUTE CHANNEL -> 02:20 [RDT= 5.00] out<- 03:SM [L/S/n= 100./ .700/.03 {Vmax= 1.480:Dmax= 1.02 #****	т-3 28.90 0] 0}	3.899 No_date 3.904 No_date		193.95 n/a 193.95 n/a
<pre># DRAINAGE FROM CEMETERY LAND #************************************</pre>	S D1a, D1b			
001:0077ID:NH		OPEAK-TpeakDa	te_hh:mm	R.VR.C
CALIB NASHYD 02:D1 [CN= 94.2: N= 3.00] [TD= .13:DT= 3.00]	.a 1.90	.277 No_date	10:00	194.50 .917
001:0078ID:NH	YDAREA-	QPEAK-TpeakDa	tehh:mm	R.VR.C
* CALIB NASHYD 07:D1 [CN= 94.0: N= 3.00]	b 1.90	.277 No_date	10:00	193.95 .915
[Tp= .09:DT= 3.00] #******************************	*****	*****		
<pre># TOTAL DRAINAGE FROM SUBCATC #************************************</pre>	HMENTS 201D+D1	a+D1b		
001:0079ID:NH			te_hh:mm	R.VR.C
ADD HYD 02:D1	.a 1.90	.277 No_date	10:00	194.50 n/a
+ 03:SM + 07:D1		3.904 No_date .277 No_date		193.95 n/a 193.95 n/a
[DT= 3.00] SUM= 06:ST #*****	M3 32.70			193.99 n/a
#*************************************				
"001:0080ID:NH	IYDAREA-	QPEAK-TpeakDa	te_hh:mm	R.VR.C
ADD HYD 01:SM + 04:SM		13.045 No_date 4.237 No_date		193.98 n/a 194.74 n/a
+ 06:57	M3 32.70	4.386 No_date	10:03	193.99 n/a
[DT= 2.00] SUM= 03:SM #****	1T1-3 170.40	21.519 No_date	10:16	194.13 n/a
#*************************************	LANDS + EXT.S	UBCATCHMENTS 201	A/B/C/D	* * *
001:0081ID:NH	IYDAREA-		te_hh:mm	R.VR.C
ADD HYD 01:SM	IT1 102.30	13.045 No_date	10:16	193.98 n/a
+ 04:sm + 05:sm		4.237 No_date 10.587 No_date		194.74 n/a 194.07 n/a
+ 06:51		4.386 No_date		193.99 n/a
[DT= 2.00] SUM= 08:12	201 254.00	32.100 No_date		194.12 n/a
001:0082ID:NH ROUTE CHANNEL -> 08:12		QPEAK-TpeakDa 32.100 No_date		к.vк.с 194.12 n/a
<pre>* [RDT= 2.00] out<- 03:00 [L/S/n= 475./1.050/.03</pre>)2202 254.00 30]	31.916 No_date		194.12 n/a
{Vmax= 1.247:Dmax= .73 001:0083ID:NH	5)} ΙVDΔRFΔ-	OPFAK-TneakDa	te_hh:mm	R.VR.C
CALIB NASHYD 04:00	00202 21.60	3.079 No_date	10:00	199.42 .941
[CN= 95.0: N= 3.00]				
[Tp= .30:DT= 5.00] 001:0084ID:NH		OPFAK-TheakDa	te hh:mm	
ADD HYD 03:00)2202 254.00	31.916 No_date	2 10:20	194.12 n/a
+ 04:00	0202 21.60	3.079 No_date	e 10:00	199.42 n/a
[DT= 2.00] SUM= 02:00 001:0085ID:NH)1202 275.60	34.698 No_date		194.53 n/a
CALIB NASHYD 03:00		3.821 No_date	2 10:00	199.42 .941

[CN= 95.0: N= 3.00] [Tp= .24:DT= 5.00] 001:0086-----TD:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-DD HYD 03:000203 26.30 3.821 No_date + 02:001202 275.60 34.698 No_date [DT= 2.00] SUM= 04:000003 301.90 37.995 No_date 10:00 199.42 n/a ADD HYD 10:18 194.53 n/a 10:16 194.96 n/a 001:0087-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh mm----R.V.-R.C.-PRINT HYD 04:000003 301.90 37.995 No_date 10:16 194.96 n/a **#** SUBCATCHMENT 204 AREA REVISED 001:0088-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:000204 53.60 6.507 No_date 10:30 199.42 .941 [CN= 95.0: N= 3.00] [Tp= .63:DT= 5.00] 001:0089------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-ADD HYD 02:000204 53.60 6.507 No_date 10:30 199.42 n/a + 04:000003 301.90 37.995 No_date 10:16 194.96 n/a [DT= 2.00] SUM= 03:001204 355.50 44.391 No_date 10:18 195.63 n/a # ROUTE through Channel 205 ELIMINATED, OUTSIDE OF STUDY AREA #********** 001:0090-----ID:NHYD----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-DD HYD 09:001108 784.37 68.678 No_date + 03:001204 355.50 44.391 No_date [DT= 2.00] SUM= 02:000008 1139.87 107.826 No_date 11:05 197.82 n/a ADD HYD 10:18 195.63 n/a 11:00 197.14 n/a 001:0091------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-PRINT HYD 02:000008 1139.87 107.826 No_date 11:00 197.14 n/a #***************** 001:0092-----FINISH ***** WARNINGS / ERRORS / NOTES 001:0013 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. *** WARNING: For areas with impervious ratios below 20%, this routine may not be applicable. 001:0021 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 001:0024 ROUTE CHANNEL -> *** WARNING: TRAVEL TIME TABLE was exceeded 001:0038 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 001:0049 ROUTE CHANNEL *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 001:0054 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 001:0060 CALIB STANDHYD *** WARNING: Storage Coefficient is smaller than DT! Use a smaller DT or a larger area. 001:0069 CALIB NASHYD

SWMR.sum *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 001:0071 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. 001:0078 CALIB NASHYD *** WARNING: Time step is too large for value of TP. R.V. may be ok. Peak flow could be off. 001:0082 ROUTE CHANNEL -> *** WARNING: Requested routing DT > than inflow DT. Routing DT set to inflow hydrograph DT. Simulation ended on 2011-12-06 at 12:48:30

APPENDIX C

SWMHYMO INPUT/OUTPUT INFORMATION

(T:\...13084.dat)

<pre>2 Metric units *#***********************************</pre>	*****
*# Project Name:	HOLY FAMILY CATHOLIC CEMETERY 10WER BASE LINE, MILTON, ONTARIO
*# JOB NUMBER :	13084
*# Date : *# Revised :	MARCH 2021 JUNE 2022
*# Company :	S. LLEWELLYN & ASSOCIATES LIMITED 13084.DAT
*#***********	13084.DAT ************************************
*# *#********	*****
* START	TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[002]
*	MILSCS12.002
* READ STORM	STORM_FILENAME "STORM.001"
* *#*********	*****
*# *# PRE-DEVE	LOPMENT CONDITIONS HYDROLOGIC MODELING
*# =======	

*# CATCHMENT 101 - *	PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC
CALIB NASHYD	<pre>ID=[1], NHYD=["101"], DT=[1]min, AREA=[4.1](ha), DWF=[0](cms), CN/C=[86], IA=[5.00](mm), N=[3], TP=[0.28]hrs,</pre>
*#****	RAINFALL=[, , , ,](mm/hr), END=-1
*#	ELOPMENT CONDITIONS HYDROLOGIC MODELING
*# =======	ELOPMENT CONDITIONS HYDROLOGIC MODELING
	CONTROLLED DISCHARGE TO WATERCOURSE SMT-4
* CALIB STANDHYD	<pre>ID=[1], NHYD=[*201"], DT=[1](min), AREA=[4.1](ha), XIMP=[0.36], TIMP=[0.36], DWF=[0](cms), LOSS=[2],</pre>
	<pre>XIMP=[0.36], TIMP=[0.36], DWF=[0](cms), LOSS=[2], SCS curve number CN=[86],</pre>
	<pre>Pervious surfaces: IAper=[5.00](mm), SLPP=[2.0](%),</pre>
	<pre>Impervious surfaces: IAimp=[1.0](mm), SLPI=[1.0](%),</pre>
	LGI=[15](m), MMI=[0.015], SCI=[0](min), RAINFALL=[, , , ,](mm/hr), END=-1
*% *#	-
*# ROUTE CATCHMENT	201 THROUGH DDUAL STAGE ORIFICE DEVICE
	NT FLOWS FROM CATCHMENT 201
*#	1
ROUTE RESERVOIR	<pre>IDout=[2], NHYD=["201-SWM"], IDin=[1], RDT=[1](min),</pre>
	TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m)
	0.0033 0 0.0216 0.01520
	0.0512 0.03100
	0.0854 0.04750 0.1169 0.06460
	0.1424 0.08240 0.1650 0.10090
	0.1841 0.12000
	0.2014 0.14000 0.2174 0.16060
	0.2322 0.18200
	0.2393 0.19300 0.2985 0.20410
	0.5311 0.22700 -1 -1 (max twenty pts)
* %	IDovf=[3], NHYDovf=["OFL-ORF"]
*	
START	START=0.0 HRS METOUT=0 NSTORM=1 NRUN=[005] MILSCS12.005
* START	START=0.0 HRS METOUT=0 NSTORM=1 NRUN=[010]
*	MILSCS12.010
START	START=0.0 HRS METOUT=0 NSTORM=1 NRUN=[025]
*	MILSCS12.025
START	START=0.0 HRS METOUT=0 NSTORM=1 NRUN=[050] MILSCS12.050
* START	START=0.0 HRS METOUT=0 NSTORM=1 NRUN=[100]
*	MILSCS12.100
* FINISH	

	*#***********************************
	*#
SSSSS W W M M H H Y Y M M OOO 999 999 ======= S W W W MM M H H Y Y MM MM O O 9 9 9 9	*# PRE-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING
SSSSS WWW MMM HHHHH Y MMM O O ## 9 9 9 9 Ver 4.05	*#
SSSSS WWW MMM HHHHH Y MMM O O ## 9 9 9 9 Ver 4.05 S WW M M H H Y Y M M O O 9999 9999 Sept 2011 SSSSS WW M M H H Y M M OOO 9 9 9 ===========	
SSSSS WWMMHHYMM000 9 9 ====== 9 9 9 # 3902680	*# CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC *
StormWater Management HYdrologic Model 999 999 =======	
***********	CALIB NASHYD Area (ha)= 4.10 Curve Number (CN)=86.00 01:101 DT= 1.00 Ia (mm)= 5.000 # of Linear Res.(N)= 3.00
**************************************	U.H. Tp(hrs)= .280
********* A single event and continuous hydrologic simulation model ************************************	
**************************************	Unit Hyd Qpeak (cms)= .559
**************************************	PEAK FLOW (cms) = .175 (i)
********* Distributed by: J.F. Sabourin and Associates Inc. ********* ********** Ottawa, Ontario: (613) 836-3884 *********	TIME TO PEAK (hrs)= 6.200 RUNOFF VOLUME (mm)= 18.064
********* Gatineau, Quebec: (819) 243-6858 ********	TOTAL RAINFALL (mm) = 42.816
********** E-Mail: swmhymo@jfsa.Com ************************************	RUNOFF COEFFICIENT = .422
	(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

+++++++ Licensed user: S. Llewellyn & Associates Ltd ++++++++ ++++++++ Burlington SERIAL#:3902680 +++++++++	002:0004
***************************************	*#*************************************
*****	*# *# POST-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING
******** ++++++ PROGRAM ARRAY DIMENSIONS ++++++ ********	*#
********* Maximum value for ID numbers : 10 ********* ********* Max. number of rainfall points: 105408 *********	*#
********* Max. number of flow points : 105408 *********	*# CATCHMENT 201 - CONTROLLED DISCHARGE TO WATERCOURSE SMT-4
***************************************	*
	CALIB STANDHYD Area (ha)= 4.10
******************************** DETAILED OUTPUT ********************************	01:201 DT= 1.00 Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00
* DATE: 2022-06-28 TIME: 17:43:18 RUN COUNTER: 000743 *	IMPERVIOUS PERVIOUS (i)
***************************************	Surface Area (ha)= 1.48 2.62
* Input filename: T:\PROJECTS\13084\SWM\SWMHYMO\13084.dat * * Output filename: T:\PROJECTS\13084\SWM\SWMHYMO\13084.out *	Dep. Storage (mm)= 1.00 5.00 Average Slope (%)= 1.00 2.00
* Summary filename: T:\PROJECTS\13084\SWM\SWMHYMO\13084.sum *	Length (m)= 15.00 5.00
* User comments: * * 1:*	Mannings n = .015 .250
* 1:*	Max.eff.Inten.(mm/hr)= 57.95 33.73
* 3:*	over (min) 1.00 4.00
************	Storage Coeff. (min)= 1.11 (ii) 4.24 (ii) Unit Hyd. Tpeak (min)= 1.00 4.00
	Unit Hyd. peak (cms)= 1.01 .27
001:0001	*TOTALS* PEAK FLOW (cms)= .24 .21 .452 (iii)
*# Project Name: HOLY FAMILY CATHOLIC CEMETERY	TIME TO PEAK (hrs)= 6.00 6.00 6.000
*# 2523 lower base line, milton, ontario *# Job number : 13084	RUNOFF VOLUME (mm) = 41.82 18.06 26.615 TOTAL RAINFALL (mm) = 42.82 42.82 42.816
*# Date : MARCH 2021	TOTAL RAINFALL (mm) = 42.82 42.82 42.816 RUNOFF COEFFICIENT = .98 .42 .622
*# Date : MARCH 2021 *# Revised : JUNE 2022	
*# Company : S. LLEWELLYN & ASSOCIATES LIMITED *# File : 13084.DAT	<pre>(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES: CN* = 86.0 Ia = Dep. Storage (Above)</pre>
*#*************************************	(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
*#	THAN THE STORAGE COEFFICIENT. (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
·	(;
n	
** END OF RUN : 1	002:0005
** END OF RUN : 1	002:0005
	*# *# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE
	*# *# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#
	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#
	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201
START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#</pre>
 START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *# *# *# COUTE RESERVOIR Requested routing time step = 1.0 min. IN>01:(201)
START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ 	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#</pre>
START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ 	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\</pre>	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#</pre>
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\</pre>	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#</pre>
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\</pre>	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#</pre>
<pre> START</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
<pre>START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=MILSCS12.002 002:0002</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *# ***********************************
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1-MILSCS12.002 002:0002</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 ************************************
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# COST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=MILSCS12.002 002:0002</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
<pre>/ START / Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=MILSCS12.002 002:0002</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\</pre>	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#</pre>
<pre>START</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# JOST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
<pre>START</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1-MILSCS12.002 002:0002</pre>	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************</pre>
<pre> START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1-MILSCS12.002 002:0002</pre>	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#</pre>
<pre> START</pre>	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# COST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************</pre>
	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# COST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
	** ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE ** ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE ************************************
	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# OOST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************
	** FOUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE ** OST DEVELOPEMENT FLOWS FROM CATCHMENT 201 ************************************
START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\	** FOUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE ** OST DEVELOPEMENT FLOWS FROM CATCHMENT 201 ************************************
START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\	** FOUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE ** OST DEVELOPEMENT FLOWS FROM CATCHMENT 201 ************************************
	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *** ** ** ** ** ** ** ** ** ** ** ** *</pre>
START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *** *# ** * ** ** ** ** ** ** ** ** **</pre>
- STLAFT Project dir.: T:\PROJECTS\13084\SNM\SNMHYMO\	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *** *# ** *# ** ** ** ** ** ** ** ** **</pre>
	<pre>*# ROUTE CATCHNENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************</pre>
	<pre>** ROTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE ** REVELOPENDATION FLOWS FROM CATCHMENT 201 *** *** *** *** *** *** *** *** *** *</pre>
- STLAFT Project dir.: T:\PROJECTS\13084\SNM\SNMHYMO\	<pre>*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************</pre>
START Project dir.: T:\PROJECTS\13084\SNM\SNMHYMO\ TZERO = .00 hrs onO 0 METOUT= 2 (output = METRIC) NNUN = 002 NNUN= 1 # 1=MLLSCS12.002 002:0002	<pre>** ROTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE ** REVELOPENDATION FLOWS FROM CATCHMENT 201 *** *** *** *** *** *** *** *** *** *</pre>

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Page 0

(T:\...13084.out)

005:0002	.651 .3100E-01 .217 .1606E+00 .085 .4750E-01 .232 .1820E+00 .117 .6640E-01 .239 .1930E+00 .142 .8240E-01 .299 .2041E+00 .165 .1009E+00 .531 .2270E+00 .165 .1009E+00 .531 .2270E+00
*# Company : S. LLEWELLYN & ASSOCIATES LIMITED *# File : 13084.DAT *# *# *#	ROUTING RESULTS AREA QPEAK TPEAK R.V.
*	TOTAL NUMBER OF SIMULATED OVERFLOWS = 0 CUMULATIVE TIME OF OVERFLOWS (hours)= .00 PERCENTAGE OF TIME OVERFLOWING (%)= .00
READ STORM Filename: TOWN OF MILTON 12 HOUR 5 YEAR SCS STORM Ptotal= 59.90 mm Comments: TOWN OF MILTON 12 HOUR 5 YEAR SCS STORM TIME RAIN TIME RAIN	PEAK FLOW REDUCTION [Qout/Qin](%)= 19.486 TIME SHIFT OF PEAK FLOW (min)= 13.00 MAXIMUM STORAGE USED (ha.m.)=.7958E-01
Intel RAIN Intel RAIN Intel RAIN RAIN RAIN hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr .20 1.180 3.20 2.370 6.20 14.500 9.20 2.370 .40 1.180 3.40 2.370 6.40 8.580 9.40 2.370 .60 1.180 3.60 2.370 6.60 6.220 9.60 2.370	005:0006*
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	005:0002 * ** END OF RUN : 9 START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\
005:0003	Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 010 NSTORM= 1
<pre>*# *# PRE-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING *# *# *# *# *# *# *# *# CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC ** CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC * CATCHMENT 101 - PRE DEVELOPMENT 101 - 2.00 * * * * * * * * * * * * * * * * * *</pre>	<pre># 1=MILSCS12.010</pre>
Unit Hyd Qpeak (cms)= .559 PEAK FLOW (cms)= .308 (i)	*# *# *
TIME TO PEAK (hrs)= 6.183 RUNOF VOLUME (mm)= 31.312 TOTAL RAINFALL (mm)= 59.897 RUNOFF COEFFICIENT = .523	010:0002
(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.	READ STORM Filename: TOWN OF MILTON 12 HOUR 10 YEAR SCS STORM Ptotal= 71.35 mm
005:0004	$ \left[\begin{array}{cccccccccccccccccccccccccccccccccccc$
CALIB STANDHYD Area (ha)= 4.10 01:201 DT= 1.00 Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00 IMPERVIOUS PERVIOUS (i) Surface Area (ha)= 1.48 2.62 Dep. Storage (mm)= 1.00 5.00 Average Slope (%)= 1.00 2.00	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Length (m)= 15.00 5.00 Mannings n = .015 .250 Max.eff.Inten.(mm/hr)= 81.10 56.43	010:0003
over (min) 1.00 4.00 Storage Coeff. (min) = .97 (ii) 3.52 (ii) Unit Hyd. Tpeak (min) = 1.00 4.00 Unit Hyd. exek (cms) = 1.09 .31	*# PRE-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING *# ====================================
TOTALS PEAK FLOW (cms)= .33 .38 .710 (iii) TIME TO PEAK (hrs)= 6.00 6.00 6.000 RUNOFF VOLUME (mm)= 58.90 31.31 41.242 TOTAL RAINFAL (mm)= 59.90 59.90 59.897	*#************************************
RUNOFF COEFFICIENT = .98 .52 .689 (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES: CN* = 86.0 Ia = Dep. Storage (Above) (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL	U1:101 D1= 1.00 1a (mm)= 5.000 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= .280 Unit Hyd Qpeak (cms)= .559
THAN THE STORAGE COEFFICIENT. (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.	PEAK FLOW (cms) = .403 (i) TIME TO PEAK (hrs) = 6.183 RUNOFF VOLUME (mm) = 40.880 TOTAL RAINFALL (mm) = 71.354
005:0005 *# *# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# =	RUNOFF COEFFICIENT = .573 (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
*# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *# *#	010:0004
ROUTE RESERVOIR Requested routing time step = 1.0 min. IN>01:(201) OUT<02:(201-SW)	*# POST-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING *#
OUTFLOW STORAGE OUTFLOW STORAGE (cms) (ha.m.) (cms) (ha.m.) *** WARNING: First OUTFLOW value in table should be ZERO. .003 .0000E+00 .184 .1200E+00 .022 .1520E-01 .201 .1400E+00 .201 .1400E+00	*#************************************
.022 .1520E-01 .201 .1400E+00	CALIB STANDHYD Area (ha)= 4.10

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01:201 DT= 1.00 Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00 IMPERVIOUS PERVIOUS (i)	1.60 1.690 4.60 5.930 7.60 5.080 10.60 1.690 1.80 1.690 4.80 5.930 7.80 5.080 10.80 1.690 2.00 1.690 5.00 5.930 7.80 5.080 11.00 1.690
Surface Area (ha) = 1.48 2.62 Dep. Storage (mm) = 1.00 5.00 Average Slope (%) = 1.00 2.00 Length (m) = 15.00 5.00 Mannings n = .015 .250	2.100 3.390 5.200 7.620 8.20 3.390 11.200 1.690 2.40 3.390 5.40 11.010 8.40 3.390 11.40 1.690 2.60 3.390 5.60 25.410 8.60 3.390 11.40 1.690 2.60 3.390 5.60 25.410 8.60 3.390 11.60 1.690 2.60 3.390 5.80 55.480 8.80 3.390 11.80 1.690 3.00 3.390 6.00 116.040 9.00 3.390 12.00 1.690
Max.eff.Inten.(mm/hr)= 96.59 72.73 over (min) 1.00 3.00 Storage Coeff. (min)= .90 (ii) 3.21 (ii) Unit Hyd. Tpeak (min)= 1.00 3.00 Unit Hyd. peak (cms)= 1.14 .35	025:0003
TOTALS PEAK FLOW (cms)= .40 .50 .896 (iii) TIME TO PEAK (hrs)= 6.00 6.000 6.000 RUNOFF VOLUME (mm)= 70.35 40.88 51.491 TOTAL RAINFALL (mm)= 71.35 71.35 71.354 RUNOFF COEFFICIENT = .99 .57 .722	*# PRE-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING *#
 (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES: CN* = 86.0 Ia = Dep. Storage (Above) (ii) TIME STEP (DT) SHOULD BE SWALLER OR EQUAL THAN THE STORAGE COEFFICIENT. (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY. 	CALIE NASHYD Area (ha)= 4.10 Curve Number (CN)=86.00 01:101 DT= 1.00 Ia (mm)= 5.000 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= .280 Unit Hyd Qpeak (cms)= .559
010:0005	PEAK FLOW (cms)= .526 (i) TIME TO PEAK (hrs)= 6.183
*# *# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#	TIME TO PEAK (hrs)= 6.183 RUNOFF VOLUME (mm)= 53.365 TOTAL RAINFALL (mm)= 85.706 RUNOFF COEFFICIENT = .623 (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
""" ROUTE RESERVOIR Requested routing time step = 1.0 min. IN>01:(201)	025:0004
(cmms) (ha.m.) (cmms) (ha.m.) **** WARNING: First OUTFLOW value in table should be ZERO. .003 .0000E+00 .184 .1200E+00 .002 .1520E-01 .201 .1400E+00 .021 .1200E .051 .3100E-01 .217 .1606E+00 .085 .4750E-01 .232 .1820E+00 .163 .405E-01 .239 .1930E+00 .117 .6460E+01 .239 .1930E+00 .124 .8240E-01 .299 .2041E+00 .142 .8240E+00 .531 .2270E+00	*# *# *# *# CATCHMENT 201 - CONTROLLED DISCHARGE TO WATERCOURSE SMT-4 *
.117 .6460E-01 .239 .1930E+00 .142 .8240E-01 .299 .2041E+00	CALIB STANDHYD Area (ha)= 4.10 01:201 DT=1.00 Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00
ROUTING RESULTS AREA QPEAK TPEAK R.V.	IMPERVIOUS PERVIOUS (i) Surface Area (ha) = 1.48 2.62 Dep. Storage (mm) = 1.00 5.00 Average Slope (%) = 1.00 2.00 Length (m) = 15.00 5.00 Mannings n = .015 .250
TOTAL NUMBER OF SIMULATED OVERFLOWS = 0 CUMULATIVE TIME OF OVERFLOWS (hours) = .00 PERCENTAGE OF TIME OVERFLOWING (%) = .00	Max.eff.Inten.(mm/hr)= 116.04 92.90 over(min) 1.00 3.00 Storage Coeff.(min)= .84 (ii) 2.93 (ii) Unit Hyd. Tpeak(min)= 1.00 3.00
PEAK FLOW REDUCTION [Qout/Qin](%)= 18.444 TIME SHIFT OF PEAK FLOW (min)= 13.00 MAXIMUM STORAGE USED (ha.m.)=.1011E+00	PEAK FLOW (cms)= .48 .65 1.124 (iii) TIME TO PEAK (hrs)= 6.00 6.00 6.00 RUNOFF VOLUME (mm)= 84.71 53.36 64.648 TOTAL RAINFALL (mm)= 85.71 85.71 85.70
10:0006*	RUNOFF COEFFICIENT = .99 .62 .754 (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
010:0002 * 010:0002	<pre>CN* = 86.0 Ia = Dep. Storage (Above) (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT. (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.</pre>
* ** END OF RUN : 24	
	225:005 *# *# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *# ===================================
START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ 	*#
NRUN = 025 NSTORM= 1 # 1=MILSCS12.025	(cms) (ha.m.) (cms) (ha.m.) *** WARNING: First OUTPLOW value in table should be ZERO. .003 .0000E+00 .184 .1200E+00 .022 .1520E-01 .201 .1400E+00 .051 .3100E-01 .217 .1606E+00
<pre>## Project Name: HOLY FAMILY CATHOLIC CEMETERY *# 2523 lower Base LINE, MILTON, ONTARIO *# JOB NUMBER : 13084 *# Date : MARCH 2021</pre>	.085 .4750E-01 2.32 .1820E+00 .117 .6460E-01 2.39 .1930E+00 .142 .8240E-01 2.99 .2041E+00 .165 .1009E+00 5.31 .2270E+00
*# Revised : JUNE 2022 *# Company : S. LLEWELLYN & ASSOCIATES LIMITED *# File : 13084.DAT # #	ROUTING RESULTS AREA QPEAK TPEAK R.V.
*	TOTAL NUMBER OF SIMULATED OVERFLOWS = 0 CUMULATIVE TIME OF OVERFLOWS (hours)= .00 PERCENTAGE OF TIME OVERFLOWING (%)= .00
READ STORM Filename: TOWN OF MILTON 12 HOUR 25 YEAR SCS STORM Ptotal= 85.71 mm Comments: TOWN OF MILTON 12 HOUR 25 YEAR SCS STORM TIME RAIN TIME RAIN	<pre>PEAK FLOW REDUCTION [Qout/Qin](%)= 17.107 TIME SHIFT OF PEAK FLOW (min)= 13.00 MAXIMUM STORAGE USED (ha.m.)=.1294E+00</pre>
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr .20 1.690 3.20 3.390 6.20 20.750 9.20 3.390	025:0006
.60 1.690 3.60 3.390 6.60 8.890 9.60 3.390 .80 1.690 3.80 3.390 6.80 8.470 9.80 3.390	*
1.00 1.690 4.00 3.390 7.00 5.930 10.00 3.390 1.20 1.690 4.20 5.930 7.20 5.080 10.20 1.690 1.40 1.690 4.40 5.930 7.40 5.080 10.40 1.690	* 025:0002

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*	(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
025:0002	THAN THE STORAGE COEFFICIENT. (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
* ** END OF RUN : 49	
******	050:0005*#
	*# ROUTE CATCHMENT 201 THROUGH DDUAL STAGE ORIFICE DEVICE *#
	*# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201
	*#
START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\	ROUTE RESERVOIR Requested routing time step = 1.0 min.
TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC)	UUT<02:(201-SW) ========= OUTLFOW STORAGE TABLE ====================================
NRUN = 050	(cms) (ha.m.) (cms) (ha.m.)
NSTORM= 1 # 1=MILSCS12.050	*** WARNING: First OUTFLOW value in table should be ZERO. .003 .0000E+00 .184 .1200E+00 .022 .1520E-01 .201 .1400E+00
050:0002	.051 .3100E-01 .217 .1606E+00
*#************************************	.085 .4750E-01 .232 .1820E+00 .117 .6460E-01 .239 .1930E+00 .142 .8240E-01 .299 .2041E+00
*# 2523 lower base line, milton, ontario *# Job Number : 13084	.142 .8240E-01 .299 .2041E+00 .165 .1009E+00 .531 .2270E+00
*# Date : MARCH 2021 *# Revised : JUNE 2022	ROUTING RESULTS AREA QPEAK TPEAK R.V.
*# Company : S. LLEWELLYN & ASSOCIATES LIMITED *# File : 13084.DAT	(ha) (cms) (hrs) (mm)
*#	OUTFLOW<01:
π *#***********************************	
* 	CUMULATIVE TIME OF OVERFLOWS (hours)= .00
050:0002*	PERCENTAGE OF TIME OVERFLOWING (%)= .00
READ STORM Filename: TOWN OF MILTON 12 HOUR 50 YEAR SCS STORM	PEAK FLOW REDUCTION [Qout/Qin](%)= 16.235 TIME SHIFT OF PEAK FLOW (min)= 13.00
Ptotal= 96.33 mm Comments: TOWN OF MILTON 12 HOUR 50 YEAR SCS STORM	TIME SHIFT OF PEAK FLOW (min)= 13.00 MAXIMUM STORAGE USED (ha.m.)=.1510E+00
TIME RAIN TIME RAIN TIME RAIN TIME RAIN hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr	
.20 1.900 3.20 3.810 6.20 23.320 9.20 3.810 .40 1.900 3.40 3.810 6.40 13.800 9.40 3.810	050:0006*
.60 1.900 3.60 3.810 6.60 10.000 9.60 3.810 .80 1.900 3.80 3.810 6.80 9.520 9.80 3.810	
1.00 1.900 4.00 3.810 7.00 6.660 10.00 3.810 1.20 1.900 4.20 6.660 7.20 5.710 10.20 1.900	*
1.40 1.900 4.40 6.660 7.40 5.710 10.40 1.900 1.60 1.900 4.60 6.660 7.60 5.710 10.60 1.900	050:0002
1.80 1.900 4.80 6.660 7.80 5.710 10.80 1.900 2.00 1.900 5.00 6.660 8.00 5.710 11.00 1.900	
2.20 3.810 5.20 8.570 8.20 3.810 11.20 1.900 2.40 3.810 5.40 12.380 8.40 3.810 11.40 1.900	*
2.60 3.810 5.60 28.560 8.60 3.810 11.60 1.900 2.80 3.810 5.80 62.360 8.80 3.810 11.60 1.900	050:0002
3.00 3.810 5.80 62.300 8.80 5.810 11.80 11.80 3.00 3.810 6.00 130.420 9.00 3.810 12.00 1.900	** END OF RUN : 99

050:0003*	
*#*************************************	
*# PRE-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING *# ====================================	
*# *#****	START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\
*# CATCHMENT 101 - PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC *	TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC)
CALIB NASHYD Area (ha) = 4.10 Curve Number (CN) = 86.00	NRUN = 100 NSTORM= 1
01:101 DT= 1.00 Ia (mm)= 5.000 # of Linear Res.(N)= 3.00 U.H. Tp(hrs)= .280	# 1=MILSCS12.100
Unit Hyd Qpeak (cms)= .559	100:0002*
PEAK FLOW $(cms) = .619$ (i)	*# Project Name: HOLY FAMILY CATHOLIC CEMETERY *# 2523 lOWER BASE LINE, MILTON, ONTARIO
TIME TO PEAK (hrs)= 6.183 RUNOFF VOLUME (mm)= 62.866	*# JOB NUMBER : 13084
TOTAL RAINFALL (mm) = 96.328 RUNOFF COEFFICIENT = .653	*# Date : MARCH 2021 *# Revised : JUNE 2022 *# Company : S. LLEWBLLYN & ASSOCIATES LIMITED
(i) PRAK FLOW DORS NOT INCLUDE BASEFLOW IF ANY.	*# File : 13084.DAT
(-, - mar room bodo not include inderion if Aut.	
050:0004	^# *
*#	100:0002
*# POST-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING *# ====================================	
	READ STORM Filename: TOWN OF MILTON 12 HOUR 100 YEAR SCS STOR Ptotal= 106.96 mm Comments: TOWN OF MILTON 12 HOUR 100 YEAR SCS STOR
*# CATCHMENT 201 - CONTROLLED DISCHARGE TO WATERCOURSE SMT-4	TIME RAIN TIME RAIN TIME RAIN TIME RAIN TIME RAIN
CALIB STANDHYD Area (ha)= 4.10	hrs mm/hr hrs mm/hr hrs mm/hr .20 2.110 3.20 4.230 6.20 25.900 9.20 4.230
01:201 DT= 1.00 Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$
IMPERVIOUS PERVIOUS (i) Surface Area (ha)= 1.48 2.62	1.00 2.110 4.00 4.230 7.00 7.400 10.00 4.230
Dep. Storage (mm)= 1.00 5.00 Average Slope (%)= 1.00 2.00	1.20 2.110 4.20 7.400 7.20 6.340 10.20 2.110 1.40 2.110 4.40 7.400 7.40 6.340 10.40 2.110
Length (m)= 15.00 5.00 Mannings n = .015 .250	1.60 2.110 4.60 7.400 7.60 6.340 10.60 2.110 1.80 2.110 4.80 7.400 7.80 6.340 10.80 2.110
Max.eff.Inten.(mm/hr)= 130.42 107.93	2.00 2.110 5.00 7.400 8.00 6.340 10.00 2.110 2.00 2.110 5.00 7.400 8.00 6.340 11.00 2.110 2.20 4.230 5.20 9.510 8.20 4.230 11.20 2.110
over (min) 1.00 3.00	2.40 4.230 5.40 13.740 8.40 4.230 11.40 2.110
Unit Hyd. Tpeak (min)= 1.00 3.00	2.80 4.230 5.80 69.230 8.80 4.230 11.80 2.110
Unit Hyd. peak (cms)= 1.21 .40 **TOTALS*	
TOTALS PEAK FLOW (cms)= .53 .76 1.293 (iii) TIME TO PEAK (hrs)= 6.00 6.00 6.000 RUNOFF VOLUME (mm)= 95.33 62.86 74.552 TOTAL RAINFALL (mm)= 96.33 96.33 96.328	
RUNOFF VOLUME (mm)= 95.33 62.86 74.552 TOTAL RAINFALL (mm)= 96.33 96.33 96.328	100:0003
TOTAL RAINFALL (mm)= 96.33 96.33 96.328	
RUNOFF COEFFICIENT = .99 .65 .774	*# ***********************************
TUTAL KAINFALL (mm)= 90.33 90.32 90.328 RUNOFF COEFFICIENT = .99 .65 .774 (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES: CN* = 86.0 Ia = Dep. Storage (Above)	*

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	00 Ia U.H.	(ha)= (mm)= Tp(hrs)=	4.10 5.000 .280	Curve Nu # of Lin	mber (CN)= ear Res.(N)=	86.00
Unit Hyd Qpea		.559				
PEAK FLOW	(cms)=	.713 (i)				
PEAK FLOW TIME TO PEAK RUNOFF VOLUME TOTAL RAINFAL RUNOFF COEFFI	(hrs)= (mm)= L (mm)= : CIENT =	6.167 72.542 106.961 .678				
(i) PEAK FLOW			FLOW IF A	ANY.		
0004						

	ELOPMENT COL					
*****						*****
ATCHMENT 201 -	CONTROLLED	DISCHARGE	TO WATERO	COURSE SM	T-4	
LIB STANDHYD :201 DT= 1.	00 j Toto	1 Tmp (%) -	4.10 36.00	Dir. Con	n.(%)= 36.	00
Surface Area Dep. Storage Average Slope Length Mannings n	(ha)=	IMPERVIOUS 1.48	PERVI 2.	LOUS (i) .62		
Dep. Storage Average Slope	(mm) = (%) =	1.00	5.	.00		
Length Mannings n	(m) = =	15.00	5.	.00		
Max.eff.Inten	.(mm/hr)=	144.81	123.	.00		
ov Storage Coeff	rer (min) . (min)=	1.00	3. ii) 2	.00 .63 (ii)		
Max.eff.Inten ov Storage Coeff Unit Hyd. Tpe Unit Hyd. pea	ak (min)= k (cms)=	1.00	3.	.00		
PEAK FLOW	(cms)=	.59		.87	*TOTALS* 1.463 (i	ii)
PEAK FLOW TIME TO PEAK RUNOFF VOLUME TOTAL RAINFAL RUNOFF COEFFI	(hrs)= (mm)=	6.00 105.96	6. 72.	.00 .54	1.463 (i 6.000 84.573	
TOTAL RAINFAL RUNOFF COEFFI	L (mm) = CIENT =	106.96 .99	106	.96 .68	106.961 .791	
(i) CN PROC	EDURE SELEC	TED FOR PER	VIOUS LOS	SSES:		
(ii) TIME ST	86.0 Ia EP (DT) SHO	ULD BE SMAL	LER OR EQ	ove) QUAL		
(iii) PEAK FL	IE STORAGE CO LOW DOES NOT	INCLUDE BA	SEFLOW IF	F ANY.		
0005						
		H DDUAL STA	GE ORIFIC	CE DEVICE		
OUTE CATCHMENT	NT FLOWS FR	H DDUAL STA ======= OM CATCHMEN	GE ORIFIC	CE DEVICE	=	
OST DEVELOPEME	ENT FLOWS FR(H DDUAL STA ======== OM CATCHMEN **********	GE ORIFIC	CE DEVICE	=	
OST DEVELOPEME ***********************************	:NT FLOWS FR(H DDUAL STA	GE ORIFIC T 201 **********	CE DEVICE	= ************************************	
OST DEVELOPEME	:NT FLOWS FR(H DDUAL STA	GE ORIFIC T 201 **********	CE DEVICE	= ************************************	
OST DEVELOPEME ***********************************	2017 FLOWS FR ************************************	H DDUAL STA CATCHMEN ************************************	GE ORIFIC ======T T 201 mg time s FOW STORA AGE m.) n table s	CE DEVICE 	= ************************************	
OST DEVELOPEME ***********************************	NT FLOWS FR	H DDUAL STA OM CATCHMEN ested routi LOW STOR ms) (ha. LOW value i CO ODOR	GE ORIFIC T 201 ************************************	CE DEVICE 	= .0 min	
OST DEVELOPEME ***********************************	NT FLOWS FR	H DDUAL STA OM CATCHMEN ested routi LOW STOR ms) (ha. LOW value i CO ODOR	GE ORIFIC T 201 ************************************	CE DEVICE 	= .0 min	
OST DEVELOPEME ***********************************	NT FLOWS FR	H DDUAL STA OM CATCHMEN ested routi LOW STOR ms) (ha. LOW value i CO ODOR	GE ORIFIC T 201 ************************************	CE DEVICE 	= .0 min	
OST DEVELOPEME VITE RESERVOIR N>01:(201) T<02:(201-SW) *** WARNING:	NT FLOWS FR	H DDUAL STA 	GE ORIFIC T 201 ACE FOW STORA ACE m.) n table s +00 -01 -01 -01 -01 -01 +00 +00	CE DEVICE step = 1 GE TABLE OUTFLOW (cms) should be .184 .201 .217 .232 .239 .239 .531	-0 min. 	
OST DEVELOPEME UTE RESERVOIR N>01:(201) T<02:(201-5W) *** WARNING: ROUTING RESUL	NT FLOWS FR	H DDUAL STA ested routi 	GE ORIFIC T 201 T 201 FOW STORJ AGE m.) n tables +00 -01	ZE DEVICE step = 1 AGE TABLE OUTFLOW (cms) should be .184 .201 .217 .232 .239 .531 TPEAK (hrs)	- 0 min. 	
OST DEVELOPEME **** WARNING: ROUTING RESUL INFLOW >01: (201)	TT FLOWS FR	H DDUAL STA mested routi mested routi mested routi LOW STOR ms) (ha. LOW value i 003 .0000e 022 .1520E 051 .3100E 055 .4750E 117 .6460E 055 .4750E 142 .8240E 165 .1009E AREA (ha) 4.10	GE ORIFI(T 201 T 201 FOW STORJ AGE n table s +00 -01 -02 -04	2E DEVICE step = 1 AGE TABLE OUTFLOW (cms) should be .184 .201 .219 .239 .531 TPEAK (hrs) 6.000 6.233	- 0 min. 	
OST DEVELOPEME **** WARNING: ROUTING RESUL INFLOW >01: (201)	ATS ATS ATS ATS ATS ATS ATS ATS	H DDUAL STA 	GE ORIFI(T 201 T 201 T 201 T 201 FOW STORJ AGE m.) n table s +00 -01 -02 -02 -03 -04	CE DEVICE step = 1 AGE TABLE OUTFLOW (cms) should be .184 .201 .217 .232 .239 .531 TPEAK (hrs) 6.000 6.233 .000	- 0 min. - STORAGE (ha.m.) ZERO. .1200E+00 .1202E+00 .1202E+00 .2241E+00 .2241E+00 .2241E+00 .2241E+00 .2040E+00 .2040E+	
OST DEVELOPEME **** WARNING: ROUTING RESUL INFLOW >01: (201)	TTS LOWS FRANCE CONTRACT CONTR	H DDUAL STA mested routi mested routi mested routi LOW STOR ms) (ha. LOW value i 003 .0000e 022 .1520E 051 .3100E 055 .4750E 117 .6460E 055 .4750E 142 .8240E 165 .1009E AREA (ha) 4.10	GE ORIFI(T 201 r 201 r 201 r 400 r 400	2E DEVICE step = 1 AGE TABLE OUTFLOW (cms) should be .184 .201 .217 .232 .239 .531 TPEAK (hrs) .000 RFLOWS = (hours) =	-0 min. 	
OST DEVELOPEME **** WARNING: ROUTING RESUL INFLOW >01: (201)	ATS ATS ATS ATS ATS ATS ATS ATS	H DDUAL STA 	GE ORIFIC T 201 T 201 T 201 T 201 T 201 T 201 T 201 FOW STORA AGE 1 T 0 T 0 -01 -01 -01 -01 -01 -01 -01 -0	<pre>ZE DEVICE Step = 1 AGE TABLE OUTFLOW (cms) (cms) should be .184 .201 .217 .232 .239 .531 TPEAK (hrs) 6.000 6.233 .000 6.233 .000 8PLOWS = (hours)= 3 (\$)= (hours)= 3 (\$)=</pre>	- -0 min. STORAGE (ha.m.) ZERO. .1200E+00 .1400E+00 .1606E+00 .1832E+00 .2041E+00 .2041E+00 R.V. (mm) 84.573 84.574 .000 0 .00 .00 .15.450	
OST DEVELOPEME **** WARNING: ROUTING RESUL INFLOW >01: (201)	ATS CUMPIC CONTENT (CT) First OUTF) (CT) First OUTF) (CT) First OUTF) (CT) CUMUATIVE PERCENTAGE PEAK FLOO TIME SHIFT	H DDUAL STA Bested routi H DUAL STA Bested routi H DUAL STOR BESTER H DUAL H DU	GE ORIFIC mg time s FOW STORJ AGE m.) n table s +00 -01 -02 -03 -04	2E DEVICE step = 1 AGE TABLE OUTFLOW (cms) should be .184 .201 .217 .232 .239 .531 TPEAK (hrs) .000 RELOWS = (hours) = 3 (%) = (qui](%) = (min) =	- -0 min. STORAGE (ha.m.) ZERO. .1200E+00 .1400E+00 .1606E+00 .1832E+00 .2041E+00 .2041E+00 R.V. (mm) 84.573 84.574 .000 0 .00 .00 .15.450	
ST DEVELOPEME ***********************************	TTS	H DDUAL STA 	GE ORIFIC T 201 T 201 T 201 FOW STORJ AGE m.) n table s +00 -01 -01 -01 -01 -01 -01 -01 -	2E DEVICE step = 1 AGE TABLE OUTFLOW (cms) should be .184 .201 .217 .232 .239 .531 TPEAK (hrs) .000 RELOWS = (hours) = 3 (%) = (qui](%) = (min) =	-0 min. 	
CST DEVELOPEME VIE RESERVOIR N>01:(201) T<02:(201-SW) *** WARNING: ROUTING RESUL INFLOW >01:(OUTFLOW-01:(OVERFLOW<03:(0006	ATS CONTRACT AND A CO	H DDUAL STA Bested routi Bested routi LOW STOR ms) (ha. LOW value. LOW value. LOW value. 103.0000e 051.3100e 055.4750e 117.6460E 065.4750e 142.8240E 165.1009E AREA (ha) 4.10 4.10 4.10 0.00 ER OF SIMUL TIME OF OW W REDUCTI OF PEAK FL TORAGE US	GE ORIFIC T 201 T 201 T 201 FOW STORJ AGE m.) n table s +00 -01 -02	<pre>ZE DEVICE Step = 1 AGE TABLE OUTFLOW (cms) should be</pre>	- 0 min. 	
OST DEVELOPPEM UTTE RESERVOIR N>01:(201) T<02:(201-5W) *** WARNING: ROUTING RESUL	ATS COMULATIVE PEAK FLOI TIME SHIFT MAXIMUM S'	H DDUAL STA ested routi 	GE ORIFIC T 201 T 201 T 201 MC 200 AGE M.) T table 5 HOU -01 -01 -01 -01 -01 -01 -01 -01	<pre>ZE DEVICE Step = 1 AGE TABLE OUTFLOW (cms) should be .1844 .201 .217 .232 .239 .531 TPEAK (hrs) 6.000 6.233 .000 AFLOWS = (hours)= 3 (%)= (min)= (ha.m.)=</pre>	= .0 min	
OST DEVELOPEME *** WARNING: RCUTING RESUL *** WARNING: INFLOW >01: (201) COUTFLOW-02: (OUTFLOW-03: (0006	TS Requirements of the second	H DDUAL STA ested routi 	GE ORIFIC T 201 T 201 rg time s FOW STORJ AGE m.) n table s +00 -01 -01 -01 -01 -01 -01 -01 -	<pre>Step = 1 AGE TABLE OUTFLOW (cms) (cms) hould be .184 .201 .217 .232 .239 .531 TPEAK (hrs) 6.000 6.233 .000 CFLOMS = (hours)= 3 (%)= (hours)= (hours)= (min)= ((ha.m.)= .217 .217 .217 .217 .217 .217 .217 .217</pre>	0 min STORAGE (ha.m.) ZERO1200E+00 .1400E+00 .1606E+00 .1202E+00 .2041E+00 .2041E+00 0 .00 15.450 0 .00 15.450 14.00 1732E+00	
OST DEVELOPEME VITE RESERVOIR N>01:(201) T<02:(201-SW) *** WARNING: INFLOW >01:(OUTFLMC02:(OVERFLM<03:(0006	INT FLOWS FR	H DDUAL STA ested routi 	GE ORIFIC mag time a POW STORJ AGE m.) n table s +00 -01 -02 -02 -02 -02 -02 -02 -03 -02	<pre>ZE DEVICE Step = 1 AGE TABLE OUTFLOW (cms) hould be .1844 .201 .217 .232 .239 .299 .299 .299 .299 .299 .299</pre>	0 min STORAGE (ha.m.) ZERO1200E+00 .1400E+00 .1606E+00 .2041E+00 .2041E+00 .2041E+00 0 0 .00 .00 15.450 14.00 1732E+00	
OST DEVELOPEME VITE RESERVOIR N>01:(201) T<02:(201-SW) *** WARNING: INFLOW >01:(OUTFLOW-01:(OVERFLOW<03:(0006	TS Requirements of the second	H DDUAL STA ested routi 	GE ORIFIC T 201 T 201 rg time s FOW STORJ AGE m.) nt table s +00 -01 -02 -02 -02 -03 -04	<pre>Step = 1 AGE TABLE OUTFLOW (cms) (cms) hould be .184 .201 .217 .232 .239 .531 TPEAK (hrs) 6.000 6.233 .0.00 6.233 .0.00 CFLOMS = (hours)= 3 (%)= (min)= (ha.m.)=</pre>	0 min STORAGE (ha.m.) ZERO1200E+00 .1400E+00 .1606E+00 .1202E+00 .2041E+00 .2041E+00 0 .00 1930E+01 .2070E+00 15.450 14.00 1732E+00	
OST DEVELOPEME *** VARNING: ROUTING RESUL *** WARNING: INFLOW >01: (201) COUTELOW:02: (OUTELOW:02: (OVERFLOW:03: (0006	INT FLOWS FR. Required in the second	H DDUAL STA ested routi 	GE ORIFIC 	<pre>ZE DEVICE Step = 1 AGE TABLE OUTFLOW (cms) (cms) should be .1844 .201 .217 .232 .239 .299 .299 .299 .299 .299 .299</pre>	0 min STORAGE (ha.m.) ZERO1200E+00 .1400E+00 .1606E+00 .2041E+00 .2041E+00 .2041E+00 0 0 .00 .00 15.450 14.00 15.450 14.00	
OST DEVELOPEME *** WARNING: ROUTING RESUL T<02:(201-SW) *** WARNING: INFLOW-01:(201 OUTFLOW-01:(0) OUTFLOW-01:(0) OUTFLOW-02:(0) OUTFLOW-03:(0) OUTF	INT FLOWS FR. Required in the second	H DDUAL STA Bested routi ==== OUTL LOW STOR ms) (ha. 103.0000e 021.1520E 051.3100E 055.4750E 117.6460E 045.4750E 142.8240E 165.1009E AREA (ha) 4.10 4.10 4.10 4.10 COP FILL OF OW W REDUCTI TIME OF OW W REDUCTI OF PEAK FL TORAGE US	GE ORIFIC T 201 T 201 T 201 FOW STORJ AGE m.) n table { -01 -01 -02 -02 -02 -03 -04	<pre>ZE DEVIGE SEEDEVIGE S</pre>	0 min STORAGE (ha.m.) ZERO1200E+00 .1400E+00 .1606E+00 .2041E+00 R.V. (mm) 84.573 84.573 84.574 .000 0 .00 15.450 14.00 .1732E+00	

S. Llewellyn & Associates Ltd

***	WARNING:	First	OUTFLOW	value	in	table	should	be	ZERO.
***	WARNING:	First	OUTFLOW	value	in	table	should	be	ZERO.
***	WARNING:	First	OUTFLOW	value	in	table	should	be	ZERO.
***	WARNING:	First	OUTFLOW	value	in	table	should	be	ZERO.
***	WARNING:	First	OUTFLOW	value	in	table	should	be	ZERO.
Simula	tion ended	d on 20	22-06-28	в а	it 3	L7:43:2	21		

(T:\...13084HAZ.dat)

	HOLY FAMILY CATHOLIC CEMETERY
# 2523 # JOB NUMBER :	3 10WER BASE LINE, MILTON, ONTARIO
# Date :	MARCH 2021
# Revised :	June 2022
# Company : # File :	S. LLEWELLYN & ASSOCIATES LIMITED
#************	***************************************
#	*******
#	
TART	TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[002] HAZEL.STM
EAD STORM	STORM_FILENAME "STORM.001"
#	*****
# =======	ELOPMENT CONDITIONS HYDROLOGIC MODELING
:# :#****************	********
	- PRE DEVELOPMENT DISCHARGE TO EXISTING WATERCOURSE (HYDROLOGIC
ALIB NASHYD	ID=[1], NHYD=["101"], DT=[1]min, AREA=[4.1](ha),
	DWF=[0](cms), CN/C=[94], IA=[5.00](mm), N=[3], TP=[0.28]hrs,
	RAINFALL=[, , , ,] (mm/hr), END=-1
#*************************************	*****
	VELOPMENT CONDITIONS HYDROLOGIC MODELING
# =======	
#	*******
	- CONTROLLED DISCHARGE TO WATERCOURSE SMT-4
ALIB STANDHYD	<pre>ID=[1], NHYD=["201"], DT=[1](min), AREA=[4.1](ha),</pre>
	XIMP=[0.36], TIMP=[0.36], DWF=[0](cms), LOSS=[2],
	<pre>SCS curve number CN=[94], Pervious surfaces: IAper=[5.00](mm), SLPP=[2.0](%),</pre>
	LGP=[5.0](m), MNP=[0.250], SCP=[0](min)
	<pre>Impervious surfaces: IAimp=[1.0](mm), SLPI=[1.0](%), LGI=[15](m), MNI=[0.015], SCI=[0](min),</pre>
\$	RAINFALL=[, , , ,](mm/hr) , END=-1
° #	
	T 201 THROUGH DUAL STAGE ORIFICE
# =================	
# ====================================	ENT FLOWS FROM CATCHMENT 201
# ====================================	<pre>ENT FLOWS FROM CATCHMENT 201 IDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min),</pre>
# ====================================	IDOUL=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values
# ====================================	<pre>ENT FLOWS FROM CATCHMENT 201 IDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m) 0.0033 0</pre>
# ====================================	ENT FLOWS FROM CATCHMENT 201 IDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m) 0.0033 0 0.0216 0.01520
# ====================================	<pre>ENT FLOWS FROM CATCEMMENT 201 IDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m) 0.0033 0 0.216 0.01520 0.0512 0.03100</pre>
# ====================================	<pre>ENT FLOWS FROM CATCHMENT 201 IDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values</pre>
# ====================================	ENT FLOWS FROM CATCHMENT 201 IDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values (cmm) - (ha-m) 0.0033 0 0.0216 0.01520 0.0512 0.03100 0.0854 0.04750 0.1169 0.06460 0.1424 0.08240
# ====================================	<pre>ENT FLOWS FROM CATCHMENT 201 TDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values</pre>
# ====================================	ENT FLOWS FROM CATCEMENT 201 IDout=[2], NHYD=[*201-SMM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values (cms) - (ha-m) 0.0036 0 0.0216 0.01520 0.0512 0.03100 0.0854 0.04750 0.1169 0.06460 0.1424 0.08240 0.1650 0.10090 0.1841 0.12000
# ====================================	<pre>ENT FLOWS FROM CATCHEMENT 201 TDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values</pre>
# ====================================	<pre>ENT FLOWS FROM CATCHEMENT 201 TDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min),</pre>
# ====================================	ENT FLOWS FROM CATCEMENT 201 IDout=[2], NHYD=[*201-SMM*], IDin=[1], RDT=[1](min), TABLE of (OTTFLOW-STORAGE) values (cmms) - (ha-m) 0.0033 0 0.0216 0.01520 0.0552 0.03100 0.0854 0.04750 0.1169 0.06460 0.1424 0.08240 0.1650 0.10090 0.1841 0.12000 0.2014 0.14000 0.2014 0.16060 0.2322 0.18200
# ====================================	<pre>ENT FLOWS FROM CATCHEMENT 201 TDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values</pre>
# ====================================	<pre>ENT FLOWS FROM CATCHMENT 201 TDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values</pre>
# ====================================	ENT FLOWS FROM CATCEMMENT 201 IDout=[2], NHYD=[*201-SWM*], IDin=[1], RDT=[1](min), TABLE of (OUTFLOW-STORAGE) values (cmm) - (ha-m) 0.0036 0.01520 0.0512 0.03100 0.0854 0.04750 0.1169 0.06460 0.1624 0.0240 0.1650 0.10090 0.1641 0.12000 0.2014 0.14000 0.2322 0.18200 0.2393 0.19300 0.2393 0.19300 0.2393 0.19300 0.2393 0.2910 10.2774 0.2700 -1 -1 (max twenty pts)
# ========== # POST DEVELOPEME # # "# COUTE RESERVOIR	<pre>RNT FLOWS FROM CATCHMENT 201 IDout=[2], NHYD=["201-SWM"], IDin=[1], RDT=[1](min),</pre>

	Unit Hyd Qpeak (cms)= .559
SSSSS W W M M H H Y Y M M OOO 999 999 =======	PEAK FLOW (cms)= .587 (i)
SSSS W W M M H H Y Y M M OOO 999 999 ====================================	TIME TO PEAK (hrs)= 10.050 RUNOFF VOLUME (mm)= 191.965 TOTAL RAINFALL (mm)= 212.000
9 9 9 9 # 3902680 StormWater Management HYdrologic Model 999 999 ========	RUNOFF COEFFICIENT = .905
****	(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
******** A single event and continuous hydrologic simulation model *********	002:0004
******** based on the principles of HYMO and its successors ********* ********* OTTHYMO-83 and OTTHYMO-89. *********	*#*************************************
***************************************	*# POST-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING
******** Ottawa, Ontario: (613) 836-3884 ********	*# ====================================
******** Gatineau, Quebec: (819) 243-6858 ******** ********* E-Mail: swmhymo@jfsa.Com *********	*#************************************
*****	*
	CALIB STANDHYD Area (ha)= 4.10
+++++++ Licensed user: S. Llewellyn & Associates Ltd ++++++++ +++++++ Burlington SERIAL#:3902680 +++++++++	01:201 DT= 1.00 Total Imp(%)= 36.00 Dir. Conn.(%)= 36.00
***************************************	IMPERVIOUS PERVIOUS (i) Surface Area (ha)= 1.48 2.62
**************************************	Dep. Storage (mm)= 1.00 5.00 Average Slope (%)= 1.00 2.00
******** Maximum value for ID numbers : 10 ********* ********* Max. number of rainfall points: 105408 *********	Average Slope (%) = 1.00 2.00 Length (m) = 15.00 5.00 Mannings n = .015 .250
******* Max. number of flow points : 105408 ********	
************	Max.eff.Inten.(mm/hr)= 53.00 52.52 over (min) 1.00 4.00 Storage Coeff. (min)= 1.15 (ii) 3.77 (ii)
**************************************	Storage Coeff. (min)= 1.15 (ii) 3.77 (ii) Unit Hyd. Tpeak (min)= 1.00 4.00
DATE: 2022-06-28 TIME: 18:00:31 RUN COUNTER: 000744 *	Unit Hyd. Tpeak (min)= 1.00 4.00 Unit Hyd. peak (cms)= .99 .29 *TOTALS*
***************************************	PEAK FLOW (cms)= .22 .38 .600 (iii)
Input filename: T:\PROJECTS\13084\SWM\SWMHYMO\13084HAZ.dat * Output filename: T:\PROJECTS\13084\SWM\SWMHYMO\13084HAZ.out *	PEAK FLOW (cms)= .22 .38 .600 (iii) TIME TO PEAK (hrs)= 9.32 10.00 10.000 RUNOFF VOLUME (mm)= 211.00 191.96 198.818
Summary filename: T:\PROJECTS\13084\SWM\SWMHYMO\13084HAZ.sum * User comments: *	TOTAL RAINFALL (mm) = 212.00 212.00 212.000 RUNOFF COEFFICIENT = 1.00 .91 .938
1:* 2:*	(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
* ::	CN* = 94.0 Ia = Dep. Storage (Above) (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
	THAN THE STORAGE COEFFICIENT.
1:0001	(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

2523 IOWER BASE LINE, MILTON, ONTARIO JOB NUMBER : 13084	*# *# ROUTE CATCHMENT 201 THROUGH DUAL STAGE ORIFICE
Date : MARCH 2021	*#
# Revised : June 2022 # Company : S. LLEWELLYN & ASSOCIATES LIMITED	<pre>*# POST DEVELOPEMENT FLOWS FROM CATCHMENT 201 *#***********************************</pre>
# File : 13084.DAT #************************************	*#
# #***********************************	ROUTE RESERVOIR Requested routing time step = 1.0 min. IN>01:(201)
n l	OUT<02:(201-SW) ====== OUTLFOW STORAGE TABLE =======
** END OF RUN : 1	(cms) (ha.m.) (cms) (ha.m.)
	*** WARNING: First OUTFLOW value in table should be ZERO. .003 .0000E+00 .184 .1200E+00
	.022 .1520E-01 .201 .1400E+00 .051 .3100E-01 .217 .1606E+00
	.085 .4750E-01 .232 .1820E+00 .117 .6460E-01 .239 .1930E+00
Project dir : T:\DDOTECTC\12094\CMMUVMO\	.142 .8240E-01 .299 .2041E+00
Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\	.051 .3100E-01 .217 .1606E+00 .085 .4750E-01 .232 .1820E+00 .117 .6460E-01 .239 .1390E+00 .142 .8240E-01 .299 .2041E+00 .165 .1009E+00 .531 .2270E+00
Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\	ROUTING RESULTS AREA QPEAK TPEAK R.V. (ha) (cms) (hrs) (mm)
Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOJT= 2 (output = METRIC) NRUN = 002	ROUTING RESULTS AREA QPEAK TPEAK R.V.
START Project dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ 	ROUTING RESULTS AREA QPEAK TPEAK R.V. (ha) (cms) (hrs) (mm)
Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1	ROUTING RESULTS AREA QPEAK TPEAK R.V.
TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM = 1 # 1=HAZEL.STM 22:0002	ROUTING RESULTS AREA QPEAK TPEAK R.V.
TZERO = .00 hrs on 0 00 crts\13084\SWM\SWMHYMO\ METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 22:0002	ROUTING RESULTS AREA QPEAK TPEAK R.V.
TZERO = .00 hrs on 0 00 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 22:0002	ROUTING RESULTS AREA QPEAK TPEAK R.V.
TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 22:0002 Project Name: HOLY FAMILY CATHOLIC CEMETERY 22:002 DOB NUMBER = 13084 Date = NARCH 2021 Revised : June 2022 Company : S. LLEWELLIN & ASSOCIATES LIMITED	ROUTING RESULTS AREA QPEAK TPEAK R.V.
<pre>TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 2:0002</pre>	ROUTING RESULTS AREA QPEAK TPEAK R.V.
<pre> Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM </pre>	ROUTING RESULTS AREA QPEAK TPEAK R.V.
Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 	ROUTING RESULTS AREA QPEAK TPEAK R.V.
Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 2:0002 Project Name: HOLY PAMILY CATHOLIC CEMETERY 2523 lOWER BASE LINE, MILTON, ONTARIO JOB NUMBER : 13084 Date : MARCH 2021 Revised : June 2022 Company : S. LLEWELLYN & ASSOCIATES LIMITED File : 13084.DAT	ROUTING RESULTS AREA QPEAK TPEAK R.V.
Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 2:0002	ROUTING RESULTS AREA QPEAK TPEAK R.V.
<pre> Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 2:0002 Project Name: HOLY FAMILY CATHOLIC CEMETERY 2523 100RE BASE LINE, MILTON, ONTARIO JOB NUMBER : 13084 Date : MARCH 2021 Revised : June 2022 Company : S. LLEWELLIN & ASSOCIATES LIMITED File : 13084.DAT File : 13084.DAT</pre>	ROUTING RESULTS AREA QPEAK TPEAK R.V.
TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 2:0002	ROUTING RESULTS AREA QPEAK TPEAK R.V.
Rainfall dir.: T:\PROJECTS\13084\SWM\SWMHYMO\ TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 2:0002	ROUTING RESULTS AREA QPEAK TPEAK R.V.
TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 2:0002	ROUTING RESULTS AREA QPEAK TPEAK R.V. INFLOW >01: (201) 4.10 .600 10.000 198.818 OUTFLOM<202: (201-SW)
TZERO = .00 hrs on 0 METOUT= 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 2:0002	ROUTING RESULTS AREA QPEAK TPEAK R.V.
	ROUTING RESULTS AREA QPEAK TPEAK R.V.
TZERO = .00 hrs on 0 00 HETOOT = 2 (output = METRIC) NRUN = 002 002 NSTORM = 1 # 1=HAZEL.STM 20002	ROUTING RESULTS AREA QPEAK TPEAK R.V. INFLOW >01: (201) 4.10 (cms) (hrs) (ms) (ms) (ms) INFLOW >01: (201) 4.10 .600 10.000 198.818 OUTFLOM<02: (201-SN)
TZERO = .00 hrs on 0 00 HETOOT = 2 (output = METRIC) NRUN = 002 002 NSTORM= 1 # 1=HAZEL.STM 20002	ROUTING RESULTS AREA QPEAK TPEAK R.V. INFLOW >01: (201) 4.10 (cms) (hrs) (mm) 198.818 OUTFLOW<02: (201-SW)
TZERO = .00 hrs on 0 00 METOUT= 2 (output = METRIC) NRTN = 002 NSTORM= 1 # 1=HAZEL.STM 22:0002 Project Name: HOLY FAMILY CATHOLIC CEMETERY 2523 100RE BASE LINE, MILTON, ONTARIO JDB NUMBER : 13084 Date : MARCH 2021 Revised : June 2022 Company : S. LLEWELLIN & ASSOCIATES LIMITED File : 13084.DAT File : 0002	ROUTING RESULTS AREA QPEAK TPEAK R.V. INFLOW >01: (201) 4.10 .600 10.000 198.818 .001 OUTFLOM-02: (201-SN) 4.10 .650 10.000 198.818 .001 OVERFLOW-03: (C0L-CR) .00 .000 .000 .000 TOTAL NUMBER OF SIMULATED OVERFLOWS = 0 .00 .000 PEAK FLOW REDUCTION [Qout/Qin](%) = 0.00 .000 PEAK FLOW REDUCTION [Qout/Qin](%) = 0.00 .000 002:0006 TIME SHIFT OF PEAK FLOW (min) = 8.00 MAXIMUM STORAGE USED (ha.m.) = .2194E+00 .002:0006
TZERO = .00 hrs on 0 00 METOUT= 2 (output = METRIC) NRTN = 002 NSTORM= 1 # 1=HAZEL.STM 22:0002 Project Name: HOLY FAMILY CATHOLIC CEMETERY 2523 100RE BASE LINE, MILTON, ONTARIO JDB NUMBER : 13084 Date : MARCH 2021 Revised : June 2022 Company : S. LLEWELLIN & ASSOCIATES LIMITED File : 13084.DAT Fotal= 212.00 mm Comments: Regional storm event (Hurricane Hazel) Ptotal= 212.00 mm TIME RAIN TIME RAIN TIME RAIN TIME RAIN TIME RAIN hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr J.00 6.360 6.00 12.720 9.00 12.720 2:0003	ROUTING RESULTS AREA QPEAK TPEAK R.V. INFLOW >01: (201) 4.10 .600 10.000 198.818 .001 OUTFLOM-02: (201-SN) 4.10 .650 10.000 198.818 .001 OVERFLOW-03: (C0L-CR) .00 .000 .000 .000 TOTAL NUMBER OF SIMULATED OVERFLOWS = 0 .00 .000 PEAK FLOW REDUCTION [Qout/Qin](%) = 0.00 .000 PEAK FLOW REDUCTION [Qout/Qin](%) = 0.00 .000 002:0006 TIME SHIFT OF PEAK FLOW (min) = 8.00 MAXIMUM STORAGE USED (ha.m.) = .2194E+00 .002:0006
TZERO = .00 hrs on 0 00 METOTT = 2 (output = METRIC) NRUN = 002 NRUN = 002 1 # 1=HAZEL.STM 2523 10WER BASE LINE, MILTON, ONTARIO JOB NUMBER = 13084 2523 10WER BASE LINE, MILTON, ONTARIO JOB NUMBER = 13084 JUN = 2022 Company : S. LEWELLYN & ASSOCIATES LIMITED File : 13084.DAT File : 13084.DAT File : 13084.DAT File : 13084.DAT Comments: Regional storm event (Hurricane Hazel) Ptotal= 212.00 nm Comments: Regional storm event (Hurricane Hazel) TIME RAIN TIME RAIN TIME RAIN TIME RAIN TIME RAIN hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr 2.00 6.360 4.00 12.720 7.00 23.320 10.00 53.000 3.00 6.360 6.00 12.720 9.00 12.720 11.00 38.160 3.00 12.720 PRE-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING FRE-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING FRE-DEVELOPMENT CONDITIONS HYDROLOGIC MODELING	ROUTING RESULTS AREA QPEAK TPEAK R.V. INFLOW >01: (201) 4.10 .600 10.000 198.818 OUTFLOM<02: (201-SW)
TZERO = .00 hrs on 0 METOTT = 2 (output = METRIC) NRUN = 002 NSTORM= 1 # 1=HAZEL.STM 22:0002 Project Name: HOLY FAMILY CATHOLIC CEMETERY 2523 10WER BASE LINE, MILTON, ONTARIO JOB NUMBER : 13084 Date : MARCH 2021 Revised : June 2022 Company : S. LLEWELLYN & ASSOCIATES LIMITED File : 13084.DAT File : 13084	ROUTING RESULTS AREA QPEAK TPEAK R.V. INFLOW >01: (201) 4.10 (cmms) (hrs) (mm) INFLOW >01: (201) 4.10 .600 10.000 198.818 OUTFLOM<02: (201-SW)
	ROUTING RESULTS AREA QPEAK TPEAK R.V. INFLOW >01: (201) 4.10 (cms) (hrs) (mm) (hrs) (cms) (hrs) (mm) (hrs) (cms) (hrs) (mm) OVTFLOM<02: (201-SN)

S. Llewellyn & Associates Ltd

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APPENDIX D

QUALITY CONTROL INFORMATION



Hydroworks Sizing Summary

Holy Family Cemetery Crematorium

03-31-2021

Recommended Size: HS 10

A HydroStorm HS 10 is recommended to provide 80 % annual TSS removal based on a drainage area of 1.69 (ha) with an imperviousness of 30.3 % and Hamilton RBG, Ontario rainfall for the ETV Canada particle size distribution.

The recommended HydroStorm HS 10 treats 96 % of the annual runoff and provides 85 % annual TSS removal for the Hamilton RBG rainfall records and ETV Canada particle size distribution.

The HydroStorm has a headloss coefficient (K) of 1.04. Since a peak flow was not specified, headloss was calculated using the full pipe flow of .1 (m3/s) for the given 300 (mm) pipe diameter at 1% slope. The headloss was calculated to be 99 (mm) based on a flow depth of 300 (mm) (full pipe flow).

This summary report provides the main parameters that were used for sizing. These parameters are shown on the summary tables and graphs provided in this report.

If you have any questions regarding this sizing summary please do not hesitate to contact Hydroworks at 888-290-7900 or email us at support@hydroworks.com.

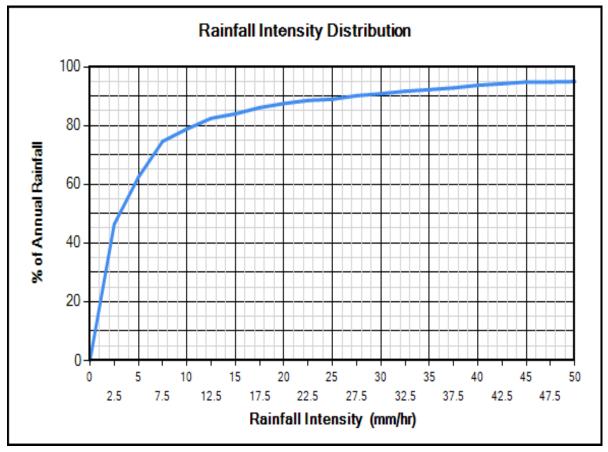
The sizing program is for sizing purposes only and does not address any site specific parameters such as hydraulic gradeline, tailwater submergence, groundwater, soils bearing capacity, etc. Headloss calculations are not a hydraulic gradeline calculation since this requires a starting water level and an analysis of the entire system downstream of the HydroStorm. Design liability is only valid for lawsuits brought within the United States where Hydroworks has its corporate headquarters.

TSS Removal Sizing Summary

File Product	Units Vi	ew Help							
ù 🗁 📙 🎒	0 🞽								
ieneral Dimensi	ons Rainfall	Site TSS	PSD TSS Loading	Quantity Storage E	By-Pas	s Custom C	AD Oth	er	
Site Parameter	s		Units	Rainfall Station	n —				_
Area (ha)	[1.69	🗆 U.S.	Hamilton RBG	i		Onta	rio	
Imperviousne	ess (%)	30.3	Metric	2004 to 2013		Rainfall	Timestep =	= 15 min.	
Project Title H (2 lines)	oly Family Ceme			Dia	et Pipe am. (m	1m) 300	Slope (%)	1	
C Stokes C	Cheng C La	h Results-Line	ear 🕡 Lab Results	-Evponential Pea	ak De	sign Flow (m3	/S)		
O Stokes O Annual TSS Re	-	b Results-Line	ear 🔉 Lab Results	-Exponential Per	_	sign Flow (m3 Particle Size I) 1	
_	-	b Results-Line Qtot (m3/s)	ear (Cab Results Flow Capture (%)	-Exponential Pea TSS Removal (%)	_			sG	
Annual TSS Re	moval Results		1		_	Particle Size I	Distributior		•
Annual TSS Re Model #	moval Results Qlow (m3/s)	Qtot (m3/s)	Flow Capture (%)	TSS Removal (%)	_	Particle Size I Size (um)	Distributior	SG	
Annual TSS Re Model # HS 4	moval Results Qlow (m3/s) .03	Qtot (m3/s) .1	Flow Capture (%) 90 %	TSS Removal (%)	_	Particle Size I Size (um) 2	Distribution	SG 2.65	
Annual TSS Rei Model # HS 4 HS 5	Qlow (m3/s) .03 .05	Qtot (m3/s) .1 .1	Flow Capture (%) 90 % 94 %	TSS Removal (%) 60 % 67 %	_	Particle Size I Size (um) 2 5	Distribution % 5 5 5	SG 2.65 2.65	
Annual TSS Re Model # HS 4 HS 5 HS 6	Moval Results Qlow (m3/s) .03 .05 .07	Qtot (m3/s) .1 .1 .1	Flow Capture (%) 90 % 94 % 95 %	TSS Removal (%) 60 % 67 % 73 %	_	Particle Size Size (um) 2 5 8	Distribution % 5 5 10	SG 2.65 2.65 2.65	
Annual TSS Re Model # HS 4 HS 5 HS 6 Unavailable	Qlow (m3/s) .03 .05 .07	Qtot (m3/s) .1 .1 .1 .1 .1	Flow Capture (%) 90 % 94 % 95 % 95 %	TSS Removal (%) 60 % 67 % 73 % 76 %		Particle Size Size (um) 2 5 8 20	Distribution % 5 5 10 15	SG 2.65 2.65 2.65 2.65 2.65	
Annual TSS Re Model # HS 4 HS 5 HS 6 Unavailable HS 8	Moval Results Qlow (m3/s) .03 .05 .07 .09 .1	Qtot (m3/s) .1 .1 .1 .1 .1 .1 .1	Flow Capture (%) 90 % 94 % 95 % 95 % 96 %	TSS Removal (%) 60 % 67 % 73 % 76 % 79 %		Particle Size Size (um) 2 5 8 20 50	% 5 5 10 15 10 15 10 <td>SG 2.65 2.65 2.65 2.65 2.65 2.65</td> <td></td>	SG 2.65 2.65 2.65 2.65 2.65 2.65	
Annual TSS Rei Model # HS 4 HS 5 HS 6 Unavailable HS 8 Unavailable	Moval Results Qlow (m3/s) .03 .05 .07 .09 .1 .1	Qtot (m3/s) .1 .1 .1 .1 .1 .1 .1 .1	Flow Capture (%) 90 % 94 % 95 % 95 % 96 %	TSS Removal (%) 60 % 67 % 73 % 76 % 79 % 82 %		Particle Size Size (um) 2 5 8 20 50 75	% 5 5 10 15 10 15 10 5 5 10 5 5 10 5 5 10 5 5 10 5 5 10 5 5 10 5 5 5 5 10 5 5 5 10 5 5 5 5 5 10 5 5 5 5 5 10 5 5 5 5 5 5 5 10 5 5 5 5 5 5 5 10 5	SG 2.65 2.65 2.65 2.65 2.65 2.65	
Annual TSS Rei Model # HS 4 HS 5 HS 6 Unavailable HS 8 Unavailable HS 10	moval Results Qlow (m3/s) .03 .05 .07 .09 .1 .1 .1	Qtot (m3/s) .1 .1 .1 .1 .1 .1 .1 .1 .1	Flow Capture (%) 90 % 94 % 95 % 95 % 96 % 96 % 96 %	TSS Removal (%) 60 % 67 % 73 % 76 % 79 % 82 % 85 %		Particle Size (um) 2 5 8 20 50 75 100	Distribution % 5 5 10 15 10 5 10 5 10	SG 2.65 2.65 2.65 2.65 2.65 2.65 2.65 2.65	

TSS Particle Size Distribution

File	Product Units	View Help			
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eneral	Dimensions Rair	nfall Site TSS	PSD TSS Loading	Quantity Storage By-Pass Custom	CAD Other
TSS I	Particle Size Distrib	oution			
	Size (um)	%	SG	Notes:	TSS Distributions
•	2	5	2.65	1. To change data	ETV Canada
	5	5	2.65	just click a cell and type in the new	C OK110
	8	10	2.65	value(s)	C Toronto
	20	15	2.65	To add a row just go to the bottom of	C Ontario (1994)
	50	10	2.65	the table and start typing.	C Calgary Forebay
	75	5	2.65	3. To delete a row.	C E95 Sand
	100	10	2.65	select the row by	
	150	15	2.65	 clicking on the first pointer column, 	O NURP (1983)
	250	15	2.65	then press delete	C Kitchener
	500	5	2.65	4. To sort the table click on one of the	O User Defined
	1000	5	2.65	column headings	
*					Clear
				TSS Removal Requ	uired (%) 80
				Water T	emp (C) 20



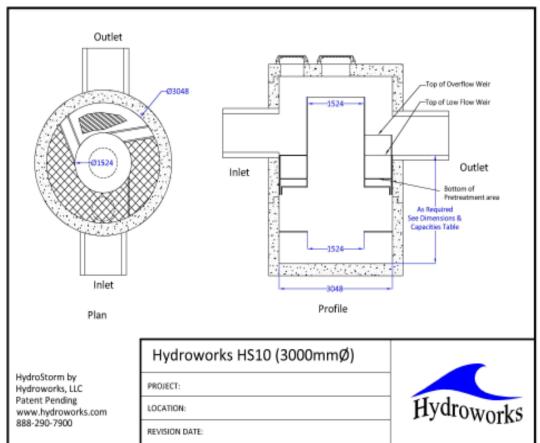
Site Physical Characteristics

File Product Units View Help Image: Second Se	< Hydroworks Hydrodynamic S	eparator Siz	ing Prog	ram - Hy	droStorm					
General Dimensions Rainfall Site TSS PSD TSS Loading Quantity Storage By-Pass Custom CAD Other Catchment Parameters Width (m) 130 Imperv. Mannings n .015 Perv Mannings n .25 Default Width Perv Mannings n .25 Imp. Depress. Storage (mm) .51 Perv. Depress. Storage (mm) 5.08 Daily Evaporation (mm/day) Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 0 0 2.54 2.54 3.81 3.81 2.54 2.54 0 0 Evaporation and Infiltration Max. Infiltation Rate (mm/hr) 63.5 # of Catch basins 2 Resets all parameters excluding input catchment width. Min. Infiltration Decay Rate (1/s) .00055 .00055 .054 .056 .056 .056 .056	File Product Units Vie	w Help								
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Slope (%) 2 Perv. Depress. Storage (mm) 5.08 Daily Evaporation (mm/day) Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 0 0 0 2.54 2.54 3.81 3.81 2.54 2.54 0 0 Evaporation and Infiltration Max. Infiltation Rate (mm/hr) 63.5 # of Catch Basins 2 Resets all parameters excluding input catchment width. Min. Infiltration Rate (mm/hr) 10.16 Controlled Roof Runoff Default Values Infiltration Decay Rate (1/s) .00055 254 Default Values	Default Width	Perv	Manning	s n		.25				
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Max. Infiltation Rate (mm/hr) 63.5 Min. Infiltration Rate (mm/hr) 10.16 Infiltration Decay Rate (1/s) .00055 Baseflow (m3/s) Default Values	0 0 0	2.54	2.54	3.81	3.81	3.81	2.54	2.54	0	0
	Max. Infiltation Rate (mm/hr)		10.16 .00055	#	of Catch I	oasins oof Runoff -		2	exclue catchr	ding input nent width.

Dimensions And Capacities

Model	nd Capacities	D 4 ()			
HS 4	Diam. (m) 1.22	Depth (m)	Float. Vol. (L) 381	Sediment Vol. (m3) 0.9	Total Vol. (m3) 1.4
		1.22			
HS 5	1.52	1.52	642	1.8	2.8
HS 6	1.83	1.83	1041	3.2	4.8
HS 7	2.13	1.98	1575	4.6	7.1
HS 8	2.44	2.13	2354	6.3	10
HS 9	2.74	2.44	3242	9.3	14.4
HS 10	3.05	2.74	4327	13.2	20
HS 12	3.66	3.35	7164	23.8	35.2
epth = Depth	from outlet invert to	inside bottom of t	ank		

Generic HS 10 CAD Drawing



TSS Buildup And Washoff

File Product Units View Help Image: Second State of State Sta	Hydroworks Hydrodynamic Separator Sizing P	rogram - HydroStorm	
General Dimensions Rainfall Site TSS PSD TSS Loading Quantity Storage By-Pass Custom CAD Other TSS Buildup	File Product Units View Help		
TSS Buildup Street Sweeping Soil Erosion Power Linear Efficiency (%) 30 Exponential Start Month May Michaelis-Menton Start Month Sep No Buildup Required Stop Month Sep TSS Washoff Trequency (days) 30 Available Fraction .3 Rating Curve (no upper limit) Reset to Default Event Mean Concentration TSS Washoff Parameters TSS Buildup Parameters TSS Buildup Parameters TSS Washoff Parameters TSS Buildup Limit (kg/ha) 28.02 Coefficient .0855 Coeff (kg/ha) 67.25 Exponent 1.1	1 🗁 🚽 🥔 💌		
Image: Second performance of the secon	General Dimensions Rainfall Site TSS PSD	TSS Loading Quantity Storage By-Pass Custom CAD	Other
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	Limit (kg/ha) 28.02 Coef Coeff (kg/ha) 67.25 Expo	fficient .0855 © Based on Area	

Upstream Quantity Storage

- Hydrow	orks Hydrodynamic Sep	arator Sizing Program - Hyd	droStorm
File Pr	oduct Units View	Help	
1 🗁 🖌	d 🗇 📀 🔺		
General D	Dimensions Rainfall Site	TSS PSD TSS Loading	Quantity Storage By-Pass Custom CAD Other
Quan	tity Control Storage	Discharge (+24)	Notes:
	Storage (m3) 0	Discharge (m3/s) 0	1. To change data just click a
		0	cell and type in the new value (s)
			 2. To add a row just go to the bottom of the table and start typing. 3. To delete a row, select the row by clicking on the first pointer column, then press delete 4. To sort the table click on one of the column headings

Other Parameters

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm	
File Product Units View Help	
General Dimensions Rainfall Site TSS PSD TSS Loading Quantity Storage By-Pass Custom CAD	Other
Scaling Law	
Peclet Scaling based on diameter x depth	
Peclet Scaling based on surface area (diameter x diameter)	
Extreme Fines TSS Removal	
Extrapolate TSS Removal for particles < 15 um (Lab Results Sizing)	
□ No TSS Removal < 15 um during periods of flow (Lab Results Sizing)	
☐ No TSS Removal < 15 um during flow or inter-event periods	
□ Oil / Sediment Storage	
-	
✓ Oil Storage in Pretreatment Area	
Sediment Storage in Pretreatment Area	
50% Oil / 50% Sediment Storage in Pretreatment Area	

Hydroworks Sizing Program - Version 4.9 Copyright Hydroworks, LLC, 2019

VERIFICATION STATEMENT

GLOBE Performance Solutions

Verifies the performance of

Hydroworks[®] HydroStorm (HS) Hydrodynamic Separator

Developed by Hydroworks, LLC Clark, NJ, USA

In accordance with

ISO 14034:2016

Environmental management — Environmental technology verification (ETV)

John D. Wiebe, PhD Executive Chairman GLOBE Performance Solutions

May 15, 2018 Vancouver, BC, Canada





Verification Body GLOBE Performance Solutions 404 – 999 Canada Place | Vancouver, B.C | Canada |V6C 3E2

Verification Statement – Hydroworks® HS Hydrodynamic Separator Page 1 of 10

Technology description and application

The Hydroworks[®] HydroStorm (HS) Hydrodynamic Separator is a concrete cylindrical device with an annular pre-treatment channel, an inner chamber, and lower collection sump. A schematic of the HS 4 test unit is shown in Figure 1. The pre-treatment channel extends below the outlet pipe invert and contains three intermediate low-flow weirs (flush with the outlet invert), and two downstream higher bypass weirs that extend above the outlet invert. The higher weirs bypass high flows to prevent oil and solids from being scoured out of the separator.

As water enters the unit through one or more inlets, coarser solids immediately start to settle below a horizontal grate extending from the inlet to two sets of lower weirs near the outlet pipe. The grating is positioned over the pre-treatment channel to help displace the inflow turbulence and protect the captured sediment from scour. Openings are located on the horizontal plate upstream of each weir to allow the flow to be conveyed into the inner chamber and lower sump. The weirs are positioned to create a counter clockwise rotation of water in the inner chamber to minimize turbulence and maximize settling. After water spirals down the inner chamber to the main settling chamber towards the floor of the separator where it deposits suspended sediments, it flows upwards between the wall of the unit and the outer edge of the disk extended from the inner chamber and through an arced opening at the bottom of the pre-treatment disk, downstream of the bypass weirs, where it is conveyed into the outlet pipe. An annular secondary horizontal plate with 32% of open-perforations is located within the lower sump to protect the collected sediment from scour. Oil and light liquids enter the inner chamber through the holes, reaching the bottom of the pre-treatment area and rises to the top of the water level where they are trapped.

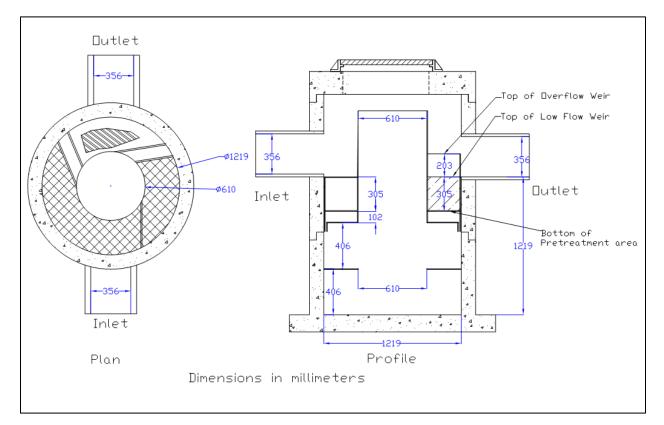


Figure 1: Schematic of the Hydroworks[®] HS4 Hydrodynamic Separator treatment unit tested as part of this verification.

Performance conditions

The data and results published in this Technology Fact Sheet were obtained from the testing program conducted on the Hydroworks® HS4 Hydrodynamic Separator, in accordance with the *Procedure for Laboratory Testing of Oil-Grit Separators (Version 3.0, June 2014)*. The Procedure was prepared by the Toronto and Region Conservation Authority (TRCA) for the Canadian Environmental Technology Verification Program. A copy of the Procedure may be accessed on the Canadian ETV website at <u>www.etvcanada.ca</u>.

Performance claim(s)

Capture test¹:

During the capture test, the Hydroworks[®] HS Hydrodynamic Separator, with a false floor set to 50% of the manufacturer's recommended maximum sediment storage depth and a constant influent test sediment concentration of 200 mg/L, removes 69, 64, 60, 56, 46, 41, and 36 percent of influent sediment by mass at surface loading rates of 40, 80, 200, 400, 600, 1000, and 1400 L/min/m², respectively.

Scour test¹:

During the scour test, the Hydroworks[®] HS Hydrodynamic Separator, with 10.2 cm (4 inches) of test sediment pre-loaded onto a false floor reaching 50% of the manufacturer's recommended maximum sediment sump storage depth and sediment loaded onto the pre-treatment channel emulating depositional pattern of the 40 L/min/m² capture test, generate corrected effluent concentrations of 22.4, 28.5, 20.0, 19.1, and 24.4 mg/L at 5-minute duration surface loading rates of 200, 800, 1400, 2000, and 2600 L/min/m², respectively.

Light liquid re-entrainment test¹:

During the light liquid re-entrainment test, the Hydroworks[®] HS Hydrodynamic Separator with surrogate low-density polyethylene beads preloaded within the inner chamber, representing a floating light liquid volume equal to a depth of 50.8 mm over the sedimentation area, retains 100, 99.9, 95.4, 95.7, and 97.5 percent of loaded beads by mass during the 5-minute duration surface loading rates of 200, 800, 1400, 2000, and 2600 L/min/m², respectively.

Performance results

The test sediment consisted of ground silica (1 - 1000 micron) with a specific gravity of 2.65, uniformly mixed to meet the particle size distribution specified in the testing procedure. The *Procedure for Laboratory Testing of Oil Grit Separators* requires that the three sample average of the test sediment particle size distribution (PSD) meet the specified PSD percent less than values within a boundary threshold of 6%. The comparison of the average test sediment PSD to the CETV specified PSD in Figure 2 indicates that the test sediment used for the capture and scour tests met this condition.

¹ The claim can be applied to other units smaller or larger than the tested unit as long as the untested units meet the scaling rule specified in the Procedure for Laboratory of Testing of Oil Grit Separators (Version 3.0, June 2014)

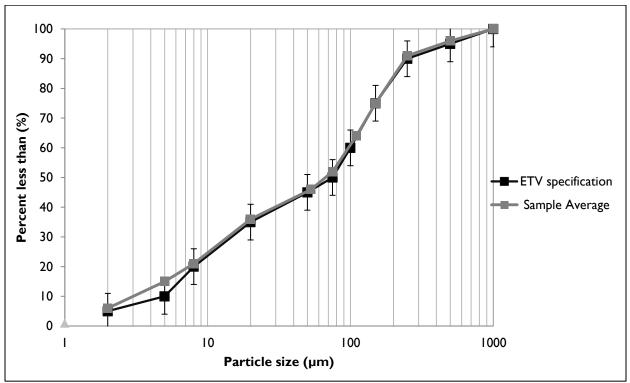


Figure 2. The three sample average particle size distribution (PSD) of the test sediment used for the capture and scour test compared to the specified PSD.

The capacity of the device to retain sediment was determined at seven surface loading rates using the modified mass balance method. This method involved measuring the mass and particle size distribution of the injected and retained sediment for each test run. Performance was evaluated with a false floor at 0.15 m from the bottom, simulating the technology filled to 50% of the manufacturer's recommended maximum sediment storage depth. The test was carried out with clean water that maintained a sediment concentration below 20 mg/L. Based on these conditions, removal efficiencies for individual particle size classes and for the test sediment as a whole were determined for each of the tested surface loading rates (Table I).

In some instances, the removal efficiencies were above 100% for certain particle size fractions. These discrepancies are not unique to any one test laboratory and may be attributed to errors relating to the blending of sediment, collection of representative samples for laboratory submission, and laboratory analysis of PSD. Due to these errors, caution should be exercised in applying the removal efficiencies by particle size fraction for the purposes of sizing the tested device (see <u>Bulletin # CETV 2016-11-0001</u>). The results for "all particle sizes by mass balance" (see Table I and 2) are based on measurements of the total injected and retained sediment mass, and are therefore not subject to blending, sampling or PSD analysis errors.

Particle size	Surface loading rate (L/min/m ²)							
fraction (µm)	40	80	200	400	600	1000	1400	
>500	73	100*	98	67	100*	100*	26	
250 - 500	100	100*	92	64	100*	98	48	
150 - 250	100*	75	89	72	89	60	69	
105 - 150	94	100*	100*	100*	78	99	91	
75 - 105	96	76	79	95	68	54	46	
53 - 75	87	100*	100*	100*	56	69	65	
20 - 53	71	54	46	44	19	14	10	
8 - 20	38	23	15	8	2	2	2	
5 – 8	13	6	1	I	0	0	0	
<5	8	0	0	0	0	0	0	
All particle sizes by								
mass balance	68.6	64.0	60.0	56.I	46.I	41.2	35.7	

* Removal efficiencies were calculated to be above 100%. Calculated values ranged between 103 and 194% (average 128%). See text and <u>Bulletin # CETV 2016-11-0001</u> for more information.

Figure 3 compares the particle size distribution (PSD) of the three sample average of the test sediment to the PSD of the sediment retained by the HS4 unit at each of the tested surface loading rates. As expected, the capture efficiency for fine particles in the unit was generally found to decrease as surface loading rates increased.

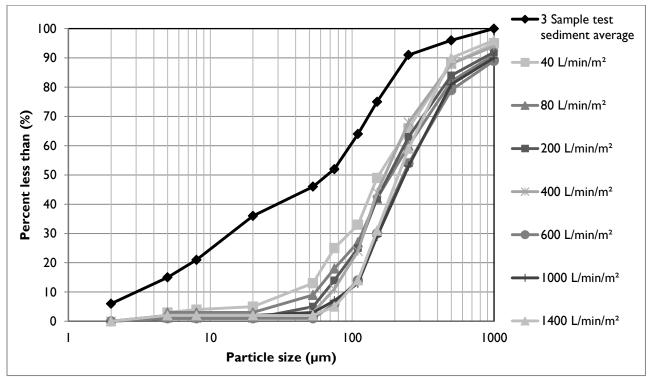


Figure 3. Particle size distribution of sediment retained in the HS4 unit in relation to the injected test sediment average.

For the sediment scour and re-suspension test, two tests were conducted. The first test was conducted with the secondary plate used in the capture tests. The second used a perforated secondary plate. Since sediment during the capture tests was found to settle in the pre-treatment channel, and in roughly the same quantities on the secondary plate and collection sump, all three of these surfaces were preloaded with sediment during the first test. The pre-treatment channel only captures coarse sediment. Therefore, this area was pre-loaded with sediment having a PSD similar to the PSD of the sediment that settled in this area during the 40 L/min/m² SLR sediment capture test. The pre-loaded sediment in the pre-treatment channel was shaped and leveled to correspond with sedimentation patterns and depths observed by the laboratory technician during the 40 L/min/m² SLR capture test. It should be noted that the actual sediment preloaded in this area was finer than the PSD of sediment captured in the same area during the 40 L/min/m² SLR capture test, particularly for particle sizes less than the median size. Both the sump and secondary plate were pre-loaded with the 1-1000 µm sediment mix to a depth of 10.2 cm. The preloaded sediment in the lower sump was placed on a false floor to mimic a device filled to 50% of the manufacturer's maximum recommended sediment storage depth.

After pre-loading the sediment, clean water was run through the device at five SLRs over a 25 minute period. At each SLR, five effluent samples were collected over a four minute interval (one per minute) with the first sample collected at the beginning of each flow rate, and the last collected just prior to the one minute transition to the next flow rate or end of the test. Effluent samples were analyzed for Suspended Sediment Concentration (SSC) and PSD by methods prescribed in the *Procedure*. The effluent samples were subsequently adjusted based on the background concentration of the influent water and the smallest 5% of particles captured during the 40 L/min/m² sediment capture test (7 um), as per the method described in <u>Bulletin # CETV 2016-09-0001</u>.

Measurements of sediment depths in the sump after the first test showed that most of the sediment from the secondary plate was carried into the lower sump. During this process, the fine sediment was likely re-suspended and carried out of the unit with the flow. The average adjusted effluent suspended sediment concentrations for each SLR ranged from 11.3 mg/L at the 200 L/min/m2 SLR to 196.7 mg/L at the 1400 L/min/m2 SLR. Effluent SSCs declined after the 1400 L/min/m2 SLR because the unit begins to bypass flow at this rate. It should be noted that this was a very conservative test as sediment was preloaded in three areas, rather than in the lower sump alone, and the preloaded sediment on the pre-treatment channel and secondary plate had a finer PSD than the sediment found to settle in these areas during the lowest SLR capture test.

The second sediment scour test was conducted on an identical unit but with a 32% open-area perforated secondary plate of the same size and orientation as the solid plate used in the first test. The perforated plate was intended to allow most of the sediment to settle in the lower sump, while still protecting against sediment scour, and not affecting the capacity of the unit to capture sediment. A second capture test was run at the 600 L/min/m² SLR to confirm that the perforated plate would have the same flow characteristics and removal efficiencies as the solid plate. Results of this comparison presented in Table 2 show that removal efficiencies were not affected and that the collection sump was receiving the majority of sediment transported into the lower chamber. Based on the observed sediment deposition zones, the second repeat test with the perforated plate had sediment preloaded in the pre-treatment channel and the lower collection sump only (*i.e.* the major deposition zones). The collection sump was preloaded with 10.2 cm of the I - 1000 μ m test sediment mix, as in the first test, and the pre-treatment channel was preloaded in much the same way as the first test, but with a sediment PSD that more closely mimicked the PSD of sediment observed to settle in this area during the 40 L/min/m² sediment capture test.

Table 2: Injected	mass	captured	at	the	600	L/min/m ²	SLR	for	two	different	configurations	of the
secondary plate												

Secondary Plate type	Target Surface Loading Rate (L/min/m ²)	Tested Flow Rate (L/min)	Removal Efficiency (%)	Pre- treatment Channel (%)	Secondary Plate (%)	Outlet Dispersion Plate (%)	Collection Sump (%)
Solid Plate	600	736.2	46. I	24.7	8.5	3.1	9.9
Perforated Plate	600	740.9	45.9	25.8	2.7	3.0	14.5

Results of the second test are presented in Table 3. Background concentrations were maintained below 10.5 mg/L. The average adjusted effluent suspended sediment concentrations ranged from 19.1 to 28.5 mg/L. Since the commercially available unit will have a perforated secondary plate, these concentrations are the appropriate values to consider for approvals. The verifier acknowledges that the sediment capture removal efficiencies were not all tested with the perforated plate (see variance notes below), but that the repeat test results at the 600 L/min/m² SLR and a statement from the independent test laboratory were sufficient to provide reasonable confidence that the added perforations in the secondary plate would have negligible influence on sediment removal efficiencies.

Run	Surface loading rate (L/min/m²)	Run time (min)	Background sample concentration (mg/L)ª	Average adjusted effluent suspended sediment concentration (mg/L) ^b
I	200	5	3.6	22.4
2	800	5	8.9	28.5
3	1400	5	7.6	20.0
4	2000	5	10.4	19.1
5	2600	5	6.0	24.4

 Table 3. Scour test adjusted effluent sediment concentrations

^a Background concentrations shown here are approximate values based on graphical interpolation

^bThe adjusted effluent suspended sediment concentration represents the actual measured effluent concentration minus the background concentration. For more information see <u>Bulletin # CETV 2016-09-0001</u>. Adjusted concentrations were only calculated for the average of the five samples collected per surface loading rate.

The results of the light liquid re-entrainment test used to evaluate the unit's capacity to prevent reentrainment of light liquids are reported in Table 4. The test involved preloading 58.3 L (corresponding to a 5 cm depth over the collection sump area of $1.17m^2$) of surrogate low-density polyethylene beads (Dow Chemical DowlexTM 2517) within the inner chamber and running clean water through the device continuously at five surface loading rates (200, 800, 1400, 2000, and 2600 L/min/m²). Each flow rate was maintained for 5 minutes with approximately I minute transition time between flow rates (30 minutes total). The effluent flow was screened to capture all re-entrained pellets throughout the test. Results showed maximum re-entrainment of 4.6% at 1400 L/min/m², which is the highest SLR without bypass. Re-entrainment decreased at subsequent SLRs as bypass volumes increased.

Surface	Time Stame	Amount of Beads Re-entrained							
Loading Rate (L/min/m ²)	Time Stamp (min)	Mass (g)	Volume (L)	% of Pre- loaded Mass Re-entrained	% of Pre- loaded Mass Retained				
200	1:00 – 6:00	0	0	0.00	100				
800	800 7:00 - 12:00		0.1	0.1	99.9				
I 400	13:00 - 18:00	1523	2.7	4.6	95.4				
2000	19:00 – 24:00	1445	2.5	4.3	95.7				
2600	25:00 - 30:00	847	1.5	2.5	97.5				
Interim Col	lection Net	39	0.1	0.1	99.9				
Total Re-entrained		3902	6.8	11.7					
Total R	etained	29,497	51.5		88.3				
Total L	.oaded	33,399	58.3						

Table 4. Light liquid re-entrainment test results for the HS4

Variances from testing Procedure

The following deviations from the Procedure for Laboratory Testing of Oil-Grit Separators (Version 3.0, June 2014) have been noted:

- I. The Procedure stipulates that the tested device "must be a full scale, commercially available device with the same configuration and components that would be typical for an actual As noted above, the sediment capture tests were conducted with a solid installation." secondary plate. The solid secondary plate was later modified to a 32% open area perforated plate to reduce sediment settling on the plate, while continuing to provide scour prevention. As described above, the scour test was repeated with the perforated secondary plate, but the sediment capture test was only repeated at the 600 L/min/m² SLR (i.e. one of seven tested SLRs). Removal efficiency results for the repeat test showed very close correspondence with the earlier test using the solid plate and much of the sediment that previously settled on the secondary plate was deposited in the lower collection sump (see Table 2). The independent laboratory provided the following statement regarding the potential for the added perforations to affect sediment removal efficiencies: "Taking into account the close proximity of the plate to the collection sump, as well as our knowledge of sediment transport, it is expected that the deposited sediment would have settled in the lower sump, with no impact on removal efficiency, if the plate was removed." While the verifier acknowledges that stronger evidence would have been provided by additional repeat testing at a lower and higher SLR, the close correlation between the original and repeat test, combined with the statement from the lab were sufficient to provide reasonable confidence that adding the perforations would not likely have changed the capture test results significantly.
- 2. The repeat test at the 600 L/min/m² SLR had background concentrations exceeding the 20 mg/L threshold during the last half of the test. The exceedances occurred in 4 of the 8 samples collected, reaching a maximum of 28.4 mg/L. The experimental apparatus is a closed loop system. Therefore, the sediment in the background samples consists of fine particles not captured by the device, and would therefore not likely bias the mass balance results.

- 3. It was necessary to change flow meters during the sediment scour and light liquid reentrainment test, as the required flows exceeded the minimum and/or maximum range of any single meter. When the flow capacity of the selected meter was reached, the flow was shut down over a period of approximately 10 seconds and all flow data saved. The next data acquisition file was executed and flow increased at a rate that corresponded to reaching each previous target flow after a period of 1-minute. This procedure was approved by CETV prior to testing, in recognition that most particles susceptible to scour at low flows would not be in the sump at higher flows. Similarly, re-entrainment of the oil beads was not expected to be significantly affected by the flow meter change.
- 4. As part of the capture test, evaluation of the 40 and 80 L/min/m² surface loading rate was split into 3 and 2 parts, respectively, due to the long duration needed to feed the required minimum of 11.3 kg of test sediment into the unit. At the end of the first and second parts of the test, the flow rates were gradually shutdown to prevent capture of particles that would have been washed out under normal circumstances. The amended procedure was reviewed and approved by the verifier prior to testing.

Verification

The verification was completed by the Verification Expert, Toronto and Region Conservation Authority, contracted by GLOBE Performance Solutions, using the International Standard ISO 14034:2016 **Environmental management -- Environmental technology verification (ETV)**. Data and information provided by Hydroworks, LLC to support the performance claim included the following: Performance test report prepared by Alden Research Laboratory, Inc., and dated February 2018. This report is based on testing completed in accordance with the *Procedure for Laboratory Testing of Oil-Grit Separators* (Version 3.0, June 2014).

What is ISO14034:2016 Environmental management – Environmental technology verification (ETV)?

ISO 14034:2016 specifies principles, procedures and requirements for environmental technology verification (ETV), and was developed and published by the *International Organization for Standardization* (*ISO*). The objective of ETV is to provide credible, reliable and independent verification of the performance of environmental technologies. An environmental technology is a technology that either results in an environmental added value or measures parameters that indicate an environmental impact. Such technologies have an increasingly important role in addressing environmental challenges and achieving sustainable development.

For more information on the Hydroworks[®] HS Hydrodynamic Separator please contact:

Hydroworks, LLC 136 Central Ave., 2nd FL Clark, NJ 07066 USA Tel: 888-290-7900 Email: info@hydroworks.com www.hydroworks.com For more information on ISO 14034:2016 / ETV please contact:

GLOBE Performance Solutions 404 – 999 Canada Place Vancouver, BC V6C 3E2 Canada Tel: 604-695-5018 / Toll Free: 1-855-695-5018 etv@globeperformance.com www.globeperformance.com

Limitation of verification

GLOBE Performance Solutions and the Verification Expert provide the verification services solely on the basis of the information supplied by the applicant or vendor and assume no liability thereafter. The responsibility for the information supplied remains solely with the applicant or vendor and the liability for the purchase, installation, and operation (whether consequential or otherwise) is not transferred to any other party as a result of the verification.



Hydroworks® HydroStorm

Operations & Maintenance Manual

Version 1.0

Please call Hydroworks at 888-290-7900 or email us at support@hydroworks.com if you have any questions regarding the Inspection Checklist. Please fax a copy of the completed checklist to Hydroworks at 888-783-7271 for our records.

Introduction

The HydroStorm is a state of the art hydrodynamic separator. Hydrodynamic separators remove solids, debris and lighter than water (oil, trash, floating debris) pollutants from stormwater. Hydrodynamic separators and other water quality measures are mandated by regulatory agencies (Town/City, State, Federal Government) to protect storm water quality from pollution generated by urban development (traffic, people) as part of new development permitting requirements.

As storm water treatment structures fill up with pollutants they become less and less effective in removing new pollution. Therefore, it is important that storm water treatment structures be maintained on a regular basis to ensure that they are operating at optimum performance. The HydroStorm is no different in this regard and this manual has been assembled to provide the owner/operator with the necessary information to inspect and coordinate maintenance of their HydroStorm.

Hydroworks[®] HydroStorm Operation

The Hydroworks HydroStorm (HS) separator is a unique hydrodynamic by-pass separator. It incorporates a protected submerged pretreatment zone to collect larger solids, a treatment tank to remove finer solids, and a dual set of weirs to create a high flow bypass. High flows are conveyed directly to the outlet and do not enter the treatment area, however, the submerged pretreatment area still allows removal of coarse solids during high flows.

Under normal or low flows, water enters an inlet area with a horizontal grate. The area underneath the grate is submerged with openings to the main treatment area of the separator. Coarse solids fall through the grate and are either trapped in the pretreatment area or conveyed into the main treatment area depending on the flow rate. Fines are transported into the main treatment area. Openings and weirs in the pretreatment area allow entry of water and solids into the main treatment area and cause water to rotate in the main treatment area creating a vortex motion. Water in the main treatment area is forced to rise along the walls of the separator to discharge from the treatment area to the downstream pipe.

The vortex motion forces solids and floatables to the middle of the inner chamber. Floatables are trapped since the inlet to the treatment area is submerged. The design maximizes the retention of settled solids since solids are forced to the center of the inner chamber by the vortex motion of water while water must flow up the walls of the separator to discharge into the downstream pipe.

A set of high flow weirs near the outlet pipe create a high flow bypass over both the pretreatment area and main treatment chamber. The rate of flow into the treatment area is regulated by the number and size of openings into the treatment chamber and the height of by-pass weirs. High flows flow over the weirs directly to the outlet pipe preventing the scour and resuspension of any fines collected in the treatment chamber.



A central access tube is located in the structure to provide access for cleaning. The arrangement of the inlet area and bypass weirs near the outlet pipe facilitate the use of multiple inlet pipes.

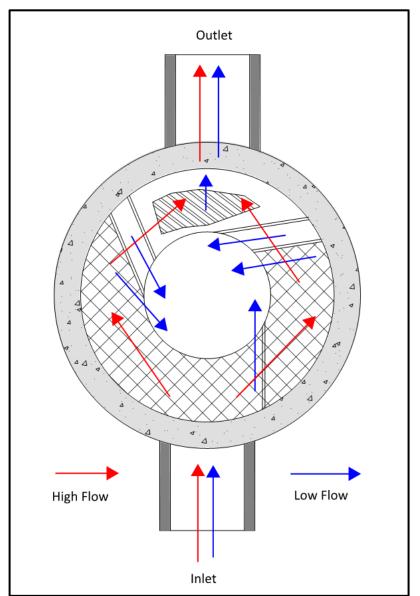


Figure 1. Hydroworks HydroStorm Operation – Plan View

Figure 2 is a profile view of the HydroStorm separator showing the flow patterns for low and high flows.



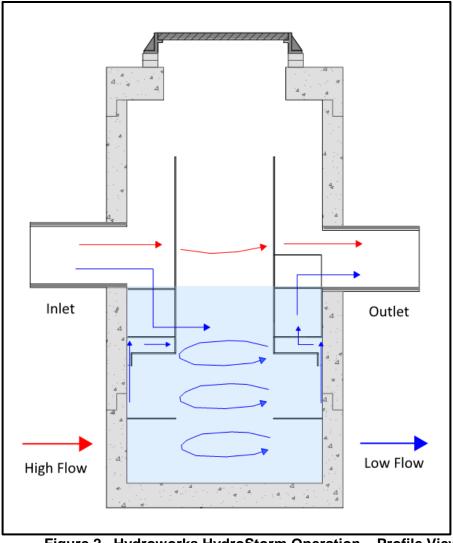


Figure 2. Hydroworks HydroStorm Operation – Profile View

The HS 4i is an inlet version of the HS 4 separator. There is a catch-basin grate on top of the HS 4i. A funnel sits sits underneath the grate on the frame and directs the water to the inlet side of the separator to ensure all lows flows are properly treated. The whole funnel is removed for inspection and cleaning.



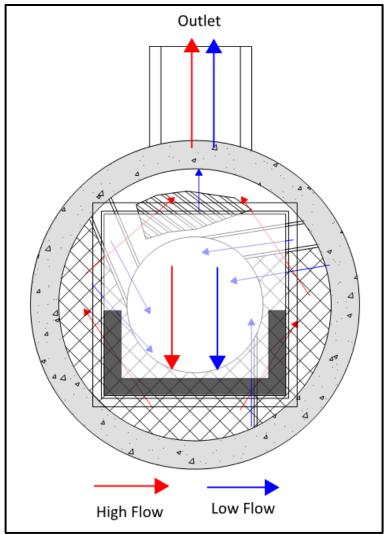


Figure 3. Hydroworks HS 4i Funnel

Inspection

Procedure

Floatables

A visual inspection can be conducted for floatables by removing the covers and looking down into the center access tube of the separator. Separators with an inlet grate (HS 4i or custom separator) will have a plastic funnel located under the grate that must be removed from the frame prior to inspection or maintenance. If you are missing a funnel please contact Hydroworks at the numbers provided at the end of this document.



TSS/Sediment

Inspection for TSS build-up can be conducted using a Sludge Judge®, Core Pro®, AccuSludge® or equivalent sampling device that allows the measurement of the depth of TSS/sediment in the unit. These devices typically have a ball valve at the bottom of the tube that allows water and TSS to flow into the tube when lowering the tube into the unit. Once the unit touches the bottom of the device, it is quickly pulled upward such that the water and TSS in the tube forces the ball valve closed allowing the user to see a full core of water/TSS in the unit. The unit should be inspected for TSS through each of the access covers. Several readings (2 or 3) should be made at each access cover to ensure that an accurate TSS depth measurement is recorded.

Frequency

Construction Period

The HydroStorm separator should be inspected every four weeks and after every large storm (over 0.5" (12.5 mm) of rain) during the construction period.

Post-Construction Period

The Hydroworks HydroStorm separator should be inspected during the first year of operation for normal stabilized sites (grassed or paved areas). If the unit is subject to oil spills or runoff from unstabilized (storage piles, exposed soils) areas the HydroStorm separator should be inspected more frequently (4 times per year). The initial annual inspection will indicate the required future frequency of inspection and maintenance if the unit was maintained after the construction period.

Reporting

Reports should be prepared as part of each inspection and include the following information:

- 1. Date of inspection
- 2. GPS coordinates of Hydroworks unit
- 3. Time since last rainfall
- 4. Date of last inspection
- 5. Installation deficiencies (missing parts, incorrect installation of parts)
- 6. Structural deficiencies (concrete cracks, broken parts)
- 7. Operational deficiencies (leaks, blockages)
- 8. Presence of oil sheen or depth of oil layer
- 9. Estimate of depth/volume of floatables (trash, leaves) captured
- 10. Sediment depth measured
- 11. Recommendations for any repairs and/or maintenance for the unit
- 12. Estimation of time before maintenance is required if not required at time of inspection



A sample inspection checklist is provided at the end of this manual.

Maintenance

Procedure

The Hydroworks HydroStorm unit is typically maintained using a vacuum truck. There are numerous companies that can maintain the HydroStorm separator. Maintenance with a vacuum truck involves removing all of the water and sediment together. The water is then separated from the sediment on the truck or at the disposal facility.

A central access opening (24" or greater) is provided to the gain access to the lower treatment tank of the unit. This is the primary location to maintain by vacuum truck. The pretreatment area can also be vacuumed and/or flushed into the lower treatment tank of the separator for cleaning via the central access once the water level is lowered below the pretreatment floor.

In instances where a vacuum truck is not available other maintenance methods (i.e. clamshell bucket) can be used, but they will be less effective. If a clamshell bucket is used the water must be decanted prior to cleaning since the sediment is under water and typically fine in nature. Disposal of the water will depend on local requirements. Disposal options for the decanted water may include:

- 1. Discharge into a nearby sanitary sewer manhole
- 2. Discharge into a nearby LID practice (grassed swale, bioretention)
- 3. Discharge through a filter bag into a downstream storm drain connection

The local municipality should be consulted for the allowable disposal options for both water and sediments prior to any maintenance operation. Once the water is decanted the sediment can be removed with the clamshell bucket.

Disposal of the contents of the separator depend on local requirements. Maintenance of a Hydroworks HydroStorm unit will typically take 1 to 2 hours based on a vacuum truck and longer for other cleaning methods (i.e. clamshell bucket).



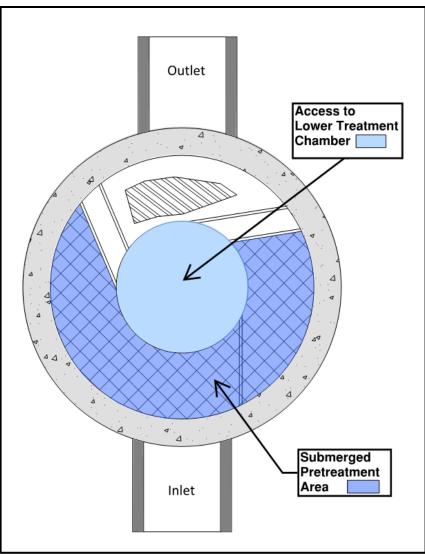


Figure 3. Maintenance Access

Frequency

Construction Period

A HydroStorm separator can fill with construction sediment quickly during the construction period. The HydroStorm must be maintained during the construction period when the depth of TSS/sediment reaches 24" (600 mm). It must also be maintained during the construction period if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the area of the separator

The HydroStorm separator should be maintained at the end of the construction period, prior to operation for the post-construction period.



Post-Construction Period

The HydroStorm was independently tested by Alden Research Laboratory in 2017. A HydroStorm HS 4 was tested for scour with a 50% sediment depth of 0.5 ft. Therefore, maintenance for sediment accumulation is required if the depth of sediment is 1 ft or greater in separators with standard water (sump) depths (Table 1).

There will be designs with increased sediment storage based on specifications or site-specific criteria. A measurement of the total water depth in the separator through the central access tube should be taken and compared to water depth given in Table 1. The standard water depth from Table 1 should be subtracted from the measured water depth and the resulting extra depth should be added to the 1 ft to determine the site-specific sediment maintenance depth for that separator.

For example, if the measured water depth in the HS-7 is 7 feet, then the sediment maintenance depth for that HS-7 is 2 ft (= 1 + 7 - 6) and the separator does not need to be cleaned for sediment accumulation until the measure sediment depth is 2 ft.

The HydroStorm separator must also be maintained if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the water surface of the separator.

Model	Diameter (ft)	Total Water Depth (ft)	Sediment Maintenance Depth for Table 1 Total Water Depth(ft)
HS-3	3	3	1
HS-4	4	4	1
HS-5	5	4	1
HS-6	6	4	1
HS-7	7	6	1
HS-8	8	7	1
HS-9	9	7.5	1
HS-10	10	8	1
HS-11	11	9	1
HS-12	12	9.5	1

 Table 1 Standard Dimensions for Hydroworks HydroStorm Models



HYDROSTORM INSPECTION SHEET

Date Date of Last Inspection				
Site City State Owner				
GPS Coordinates				
Date of last rainfall				
Site Characteristics Soil erosion evident Exposed material storage Large exposure to leaf little High traffic (vehicle) area			Yes	No
HydroStorm Obstructions in the inlet or Missing internal component Improperly installed inlet of Internal component damage Floating debris in the sepa Large debris visible in the Concrete cracks/deficience Exposed rebar Water seepage (water level Water level depth be	nts r outlet pipes ge (cracked, broken, loose pieces rator (oil, leaves, trash) separator es not at outlet pipe invert)) 	Yes * * ** ** ** ** ** ** ** ** ** ** **	No
Routine Measurements Floating debris depth Floating debris coverage Sludge depth	< 0.5" (13mm)	>0.5" 13 > 50% s > 12" (3	surface area	□ * □ * □ *

- *
- **
- Maintenance required Repairs required Further investigation is required ***



Other Comments:
Hydroworks
Les works



Hydroworks[®] HydroStorm

One Year Limited Warranty

Hydroworks, LLC warrants, to the purchaser and subsequent owner(s) during the warranty period subject to the terms and conditions hereof, the Hydroworks HydroStorm to be free from defects in material and workmanship under normal use and service, when properly installed, used, inspected and maintained in accordance with Hydroworks written instructions, for the period of the warranty. The standard warranty period is 1 year.

The warranty period begins once the separator has been manufactured and is available for delivery. Any components determined to be defective, either by failure or by inspection, in material and workmanship will be repaired, replaced or remanufactured at Hydroworks' option provided, however, that by doing so Hydroworks, LLC will not be obligated to replace an entire insert or concrete section, or the complete unit. This warranty does not cover shipping charges, damages, labor, any costs incurred to obtain access to the unit, any costs to repair/replace any surface treatment/cover after repair/replacement, or other charges that may occur due to product failure, repair or replacement.

This warranty does not apply to any material that has been disassembled or modified without prior approval of Hydroworks, LLC, that has been subjected to misuse, misapplication, neglect, alteration, accident or act of God, or that has not been installed, inspected, operated or maintained in accordance with Hydroworks, LLC instructions and is in lieu of all other warranties expressed or implied. Hydroworks, LLC does not authorize any representative or other person to expand or otherwise modify this limited warranty.

The owner shall provide Hydroworks, LLC with written notice of any alleged defect in material or workmanship including a detailed description of the alleged defect upon discovery of the defect. Hydroworks, LLC should be contacted at 136 Central Ave., Clark, NJ 07066 or any other address as supplied by Hydroworks, LLC. (888-290-7900).

This limited warranty is exclusive. There are no other warranties, express or implied, or merchantability or fitness for a particular purpose and none shall be created whether under the uniform commercial code, custom or usage in the industry or the course of dealings between the parties. Hydroworks, LLC will replace any goods that are defective under this warranty as the sole and exclusive remedy for breach of this warranty.

Subject to the foregoing, all conditions, warranties, terms, undertakings or liabilities (including liability as to negligence), expressed or implied, and howsoever arising, as to the condition, suitability, fitness, safety, or title to the Hydroworks HydroStorm are hereby negated and excluded and Hydroworks, LLC gives and makes no such representation, warranty or undertaking except as expressly set forth herein. Under no circumstances shall Hydroworks, LLC be liable to the Purchaser or to any third party for product liability claims; claims arising from the design, shipment, or installation of the HydroStorm, or the cost of other goods or services related to the purchase and installation of the HydroStorm. For this Limited Warranty to apply, the HydroStorm must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Hydroworks' written installation instructions.

Hydroworks, LLC expressly disclaims liability for special, consequential or incidental damages (even if it has been advised of the possibility of the same) or breach of expressed or implied warranty. Hydroworks, LLC shall not be liable for penalties or liquidated damages, including loss of production and profits; labor and materials; overhead costs; or other loss or expense incurred by the purchaser or any third party. Specifically excluded from limited warranty coverage are damages to the HydroStorm arising from ordinary wear and tear; alteration, accident, misuse, abuse or neglect; improper maintenance, failure of the product due to improper installation of the concrete sections or improper sizing; or any other event not caused by Hydroworks, LLC. This limited warranty represents Hydroworks' sole liability to the purchaser for claims related to the HydroStorm, whether the claim is based upon contract, tort, or other legal basis.

APPENDIX E

FLOODPLAIN ANALYSIS MEMO



TECHNICAL MEMORANDUM

То:	Matthew Lauzon, Planning and Regulations Analyst Conservation Halton	From:	Steven DeGrow Steven Frankovich
		Date:	July 6, 2022
Project:	Holy Family Catholic Cemetery 2523 Lower Base line	Pages:	4 + Appendix
	Milton, ON	Job #:	13084
Re:	Floodplain Analysis for the propose Mile Creek Tributary	ed crossin	g culvert crossing of Sixteen

Introduction

S. Llewellyn & Associates Limited has been retained by The Catholic Cemeteries of the Dioceses of Hamilton to provide consulting engineering services for the proposed Phase 2 portion of the Holy Family Catholic Cemetery development at the corner of Regional Road No. 25 and Lower Baseline Road in the Town of Milton (see Figure 1.0 for location plan). The property is traversed by a tributary of Sixteen Mile Creek that flows in a northeastern direction (see Figure 1.0 for location plan). Furthermore, the northeastern quadrant of the property has been redeveloped and converted from agricultural to cemetery lands with an associated asphalt roadway system. The remaining undeveloped portion of the site currently remains agricultural lands.

The proposed Phase 2 portion of the development consists of constructing one (1) single storey building for use as a crematorium facility. Additionally, there will be an associated asphalt parking lot with concrete curbing/sidewalks, landscaped areas, and an asphalt roadway that will connect to the existing cemetery roadway system. In order to connect the roadway system, it will be required to cross SMT-1 which is a tributary of the Sixteen Mile Creek. This technical memorandum will provide detailed information on the proposed watercourse crossing that has been designed to provide safe ingress/egress.

Background

The following information was used in the preparation of this memo:

- Ref. 1: Topographic surveys from Mackay, Mackay & Peters Limited. (December 01, 2014)
- Ref. 2: Stormwater Management Report for the proposed Cemetery Developments At Regional Road No. 25 And Lower Baseline Road In The Town of (AMEC Environment & Infrastructure, February 2012)



Page 2

Ref. 3: Conservation Halton Planning & Permits Map-arcgis.com



Figure 1 – Location Plan

Hydraulic Modeling Information

Hydraulic analysis of the watercourse was performed using the HEC-RAS program developed by the U.S. Army Corp. of Engineers. The current HEC-RAS model for the tributaries of Sixteen Mile Creek which traverse the site was originally prepared by AMEC Environmental & Infrastructure.

Existing HEC-RAS Model

The HEC-RAS hydraulic model provided to S. Llewellyn & Associates was analyzed as provided to establish the existing condition water surface elevations (WSEL) for the 5-year to Regional storm events. See Appendix A for the output listing of the existing conditions. The existing condition WSEL's are also noted in Table 1.

The existing model consisted of nineteen (19) cross sections along SMT-1 with seven (7) downstream of the existing box culvert crossing Regional Road 25 and twelve upstream. Furthermore, there are six (6) cross sections along SMT-2, two (2) cross sections along SMT 3, and five (5) cross sections along SMT-4.



Page 3

PROPOSED CONDITIONS MODEL INFORMATION

Under proposed conditions, the cross-section data was adjusted based on the proposed box culvert. To accurately model the proposed culvert in HEC-RAS an additional, 3 cross sections were added before and after the culvert. It is proposed to install a 6.0m span x 1.5m rise closed bottom box culvert that is counter sunk 15% (0.225m) as per Conservation Halton's requirements. The roadway system will cross SMT-1 over the culvert structure. The culvert will have a total length of approximately 10.0 m.

<u>Boundary Conditions</u> – The boundary conditions of the original model were maintained in the proposed conditions model.

<u>Cross-Section Flows</u> – The flow rates applied to the cross-sections for the 5-yr, 10-yr, 25-yr, 50yr, 100-yr, and Regional storm events in the AMEC HEC-RAS model were maintained in the proposed condition. The hydrology in the original HEC-RAS model was derived from the SWMHYMO file for the future conditions with stormwater management controls which were included in the "Stormwater Management Report for the proposed Cemetery Developments At Regional Road No. 25 and Lower Baseline Road In the Town of Milton" completed in February 2012 by AMEC Environmental & Infrastructure. Since this SWMHYMO model stipulates the maximum permissible post-development flow rates from the site the hydrology in the original AMEC HEC-RAS model is conservative.

<u>Culvert Cross-Section</u> – The proposed culvert cross-section was entered into HEC-RAS model as depicted in the technical drawings completed by MCON products for the typical 6.0m span closed bottom box culvert. The road deck is conservatively 1.29m above the soffit of the culvert at the crown of the road. This accounts for the thickness of the culvert wall along with the pavement buildup over the culvert. See Appendix B for proposed conditions output information.

ANALYSIS RESULTS AND COMMENTS

Table 1.0 summarizes the calculated water surface elevations for the existing and proposed conditions upstream and downstream of the proposed bridge work. Figure 2.0 shows cross-section locations as well as the existing and proposed Regional Event floodline elevations.

The analysis results indicate the following:

- With the installation of the 6.0m x 1.5m box culvert there is a slight increase in the calculated water surface elevation (WSEL) upstream of the culvert crossing. This increase in water surface elevation extends from the proposed culvert to the upstream cross section 2415.
- Downstream of the proposed culvert crossing there is no change in water surface elevation during any of the storm events.
- All storm events including the regional storm will pass under the structure.

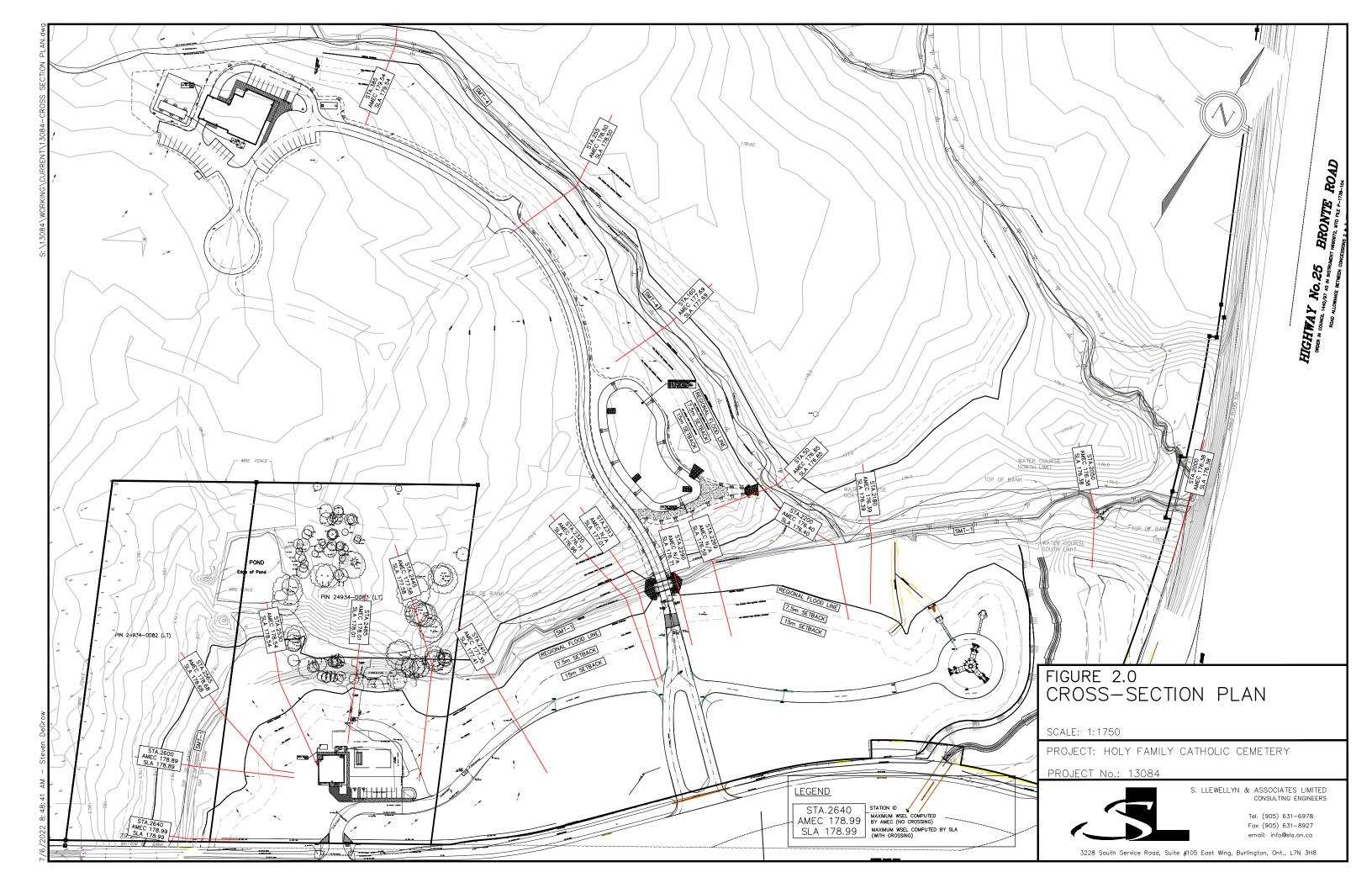


Table 1 - Comparision of Existing & Proposed Water Surface Elevations (see Fig. 2.0 for x-section locations)
--

Reach	River Sta	Profile	Q Total	Existing W.S. Elev	Proposed W.S. Elev	Difference in WSEL
Reach	River Sta	TTOTILE	(m ³ /s)	(m)	(m)	(m)
SMT-4	385	2 YR	0.54	179.33	179.33	0.00
SMT-4	385	5 YR	0.94	179.41	179.41	0.00
SMT-4	385	10 YR	1.23	179.45	179.45	0.00
SMT-4	385	25 YR	1.61	179.49	179.49	0.00
SMT-4	385	50 YR	1.89	179.51	179.51	0.00
SMT-4	385	100 YR	2.18	179.54	179.54	0.00
SMT-4	385	REG	1.90	179.51	179.51	0.00
SMT-4	255	2 YR	0.54	178.35	178.35	0.00
SMT-4 SMT-4	255	2 1R 5 YR	0.54	178.41	178.41	0.00
SMT-4	255	10 YR	1.23	178.44	178.44	0.00
SMT-4	255	25 YR	1.61	178.47	178.47	0.00
SMT-4	255	50 YR	1.89	178.49	178.49	0.00
SMT-4	255	100 YR	2.18	178.50	178.50	0.00
SMT-4	255	REG	1.90	178.49	178.49	0.00
	100		0.54	477.54	477.54	
SMT-4 SMT-4	160 160	2 YR 5 YR	0.54	177.54 177.59	177.54 177.59	0.00
SMT-4	160	10 YR	1.23	177.62	177.62	0.00
SMT-4	160	25 YR	1.61	177.65	177.65	0.00
SMT-4	160	50 YR	1.89	177.67	177.67	0.00
SMT-4	160	100 YR	2.18	177.69	177.69	0.00
SMT-4	160	REG	1.90	177.67	177.67	0.00
		_				
SMT-4	50	2 YR	0.54	176.75	176.75	0.00
SMT-4	50	5 YR	0.94	176.78	176.78	0.00
SMT-4 SMT-4	50 50	10 YR 25 YR	1.23 1.61	176.80 176.82	176.80	0.00
SMT-4 SMT-4	50	25 FR 50 YR	1.81	176.83	176.83	0.00
SMT-4	50	100 YR	2.18	176.85	176.85	0.00
SMT-4	50	REG	1.90	176.83	176.83	0.00
SMT-1	2640	2 YR	2.76	178.69	178.69	0.00
SMT-1	2640	5 YR	4.83	178.77	178.77	0.00
SMT-1	2640	10 YR	6.30	178.82	178.82	0.00
SMT-1 SMT-1	2640 2640	25 YR	8.20	178.88	178.88	0.00
SMT-1 SMT-1	2640	50 YR 100 YR	10.15 11.71	178.93 178.97	178.93 178.97	0.00
SMT-1	2640	REG	12.67	178.99	178.99	0.00
	2040		12.01		110.00	0.00
SMT-1	2600	2 YR	2.76	178.49	178.49	0.00
SMT-1	2600	5 YR	4.83	178.61	178.61	0.00
SMT-1	2600	10 YR	6.30	178.68	178.68	0.00
SMT-1	2600	25 YR	8.20	178.75	178.75	0.00
SMT-1	2600	50 YR	10.15	178.81	178.81	0.00
SMT-1	2600	100 YR	11.71	178.86	178.86	0.00
SMT-1	2600	REG	12.67	178.89	178.89	0.00
SMT-1	2565	2 YR	2.76	178.31	178.31	0.00
SMT-1	2565	5 YR	4.83	178.40	178.40	0.00
SMT-1	2565	10 YR	6.30	178.46	178.46	0.00
SMT-1	2565	25 YR	8.20	178.53	178.53	0.00
SMT-1	2565	50 YR	10.15	178.59	178.59	0.00
SMT-1	2565	100 YR	11.71	178.65	178.65	0.00
SMT-1	2565	REG	12.67	178.68	178.68	0.00
SMT-1	2530	2 YR	2.76	177.98	177.98	0.00
SMT-1	2530	5 YR	4.83	178.15	178.15	0.00
SMT-1	2530	10 YR	6.30	178.24	178.24	0.00
SMT-1	2530	25 YR	8.20	178.33	178.33	0.00
SMT-1	2530	50 YR	10.15	178.43	178.43	0.00
SMT-1	2530	100 YR	11.71	178.50	178.50	0.00
SMT-1	2530	REG	12.67	178.54	178.54	0.00
CMT 4	0405	0.1/2	0.70	477.50	477 50	
SMT-1 SMT-1	2485 2485	2 YR 5 YR	2.76 4.83	177.50 177.62	177.50	0.00
SMT-1	2485	10 YR	6.30	177.71	177.71	0.00
SMT-1	2485	25 YR	8.20	177.82	177.82	0.00
SMT-1	2485	50 YR	10.15	177.92	177.92	0.00
SMT-1	2485	100 YR	11.71	177.98	177.98	0.00
SMT-1	2485	REG	12.67	178.01	178.01	0.00
SMT-1	2445	2 YR	2.76	177.18	177.18	0.00
SMT-1 SMT-1	2445 2445	5 YR 10 YR	4.83	177.29 177.36	177.29 177.36	0.00
SMT-1 SMT-1	2445 2445	25 YR	6.30 8.20	177.44	177.44	0.00
SMT-1	2445	50 YR	10.15	177.50	177.50	0.00
SMT-1	2445	100 YR	11.71	177.56	177.56	0.00
SMT-1	2445	REG	12.67	177.58	177.58	0.00
SMT-1	2415	2 YR	2.76	176.92	176.93	0.01
SMT-1	2415	5 YR	4.83	177.05	177.05	0.00
SMT-1	2415	10 YR	6.30	177.12	177.13	0.01
SMT-1 SMT-1	2415	25 YR 50 YR	8.20	177.20	177.22	0.02
SMT-1 SMT-1	2415 2415	100 YR	10.15 11.71	177.27 177.32	177.30 177.37	0.03
SMT-1	2415	REG	12.67	177.35	177.41	0.05
	2.10		.2.07			5.00
SMT-1	2320	2 YR	2.76	176.19	176.26	0.07
SMT-1	2320	5 YR	4.83	176.34	176.45	0.11
SMT-1	2320	10 YR	6.30	176.43	176.56	0.13
SMT-1	2320	25 YR	8.20	176.53	176.70	0.17
SMT-1	2320	50 YR 100 YR	10.15 11.71	176.61	176.81	0.20
SMT-1	2320			176.67	176.90	0.23

		a (1		Existing	Proposed	Difference
Reach	River Sta	Profile	Q Total	W.S. Elev	W.S. Elev	in WSEL
			(m³/s)	(m)	(m)	(m)
			Proposed Mo	del)	170.01	
SMT-1	2313	2 YR	2.76		176.34	N/A
SMT-1	2313	5 YR 4.83			176.54	N/A
SMT-1	2313	10 YR	6.30		176.64	N/A
SMT-1	2313	25 YR	8.20		176.77	N/A
SMT-1	2313	50 YR	10.15		176.88	N/A
SMT-1	2313	100 YR	11.71		176.96	N/A
SMT-1	2313	REG	12.67		177.01	N/A
6.0mx1.5m	Box Culver	t @ River St	ation 2308			
Noto: Cro	c Section 2	00 only in l	Proposed Mo	dall		
SMT-1	2290	2 YR	2.76	ueij	176.30	N/A
SMT-1	2290	5 YR	4.83		176.45	N/A
SMT-1	2290	10 YR	6.30		176.53	N/A
SMT-1	2290	25 YR	8.20		176.61	N/A
SMT-1	2290	50 YR	10.15		176.66	N/A
SMT-1	2290	100 YR	11.71		176.69	N/A N/A
SMT-1	2290	REG	12.67		176.09	N/A N/A
			12.67 Proposed Mo	del)	170.71	N/A
SMT-1	2269	2 YR	2.76		176.11	N/A
SMT-1	2269	5 YR	4.83		176.24	N/A
SMT-1	2269	10 YR	6.30		176.32	N/A
SMT-1	2269	25 YR	8.20		176.41	N/A
SMT-1	2269	50 YR	10.15		176.50	N/A
SMT-1	2269	100 YR	11.71		176.56	N/A
SMT-1	2269	REG	12.67		176.59	N/A
SMT-1	2200	2 YR	3.63	175.39	175.39	0.00
SMT-1	2200	5 YR	6.34	175.56	175.56	0.00
SMT-1	2200	10 YR	8.24	175.64	175.64	0.00
SMT-1	2200	25 YR	10.67	175.73	175.73	0.00
SMT-1	2200	50 YR	12.82	175.79	175.79	0.00
SMT-1	2200	100 YR	14.98	175.95	175.95	0.00
SMT-1	2200	REG	17.26	176.40	176.40	0.00
SMT-1	2180	2 YR	3.63	175.17	175.17	0.00
SMT-1	2180	5 YR	6.34	175.32	175.32	0.00
SMT-1	2180	10 YR	8.24	175.40	175.40	0.00
SMT-1	2180	25 YR	10.67	175.49	175.49	0.00
SMT-1	2180	50 YR	12.82	175.55	175.55	0.00
SMT-1	2180	100 YR	12.82	175.90	175.90	
SMT-1	2180	REG	17.26	175.90	176.39	0.00
5111-1	2100	ILC	11.20	110.00	110.00	0.00
SMT-1	2050	2 YR	4.61	174.56	174.56	0.00
SMT-1	2050	5 YR	8.07	174.77	174.77	0.00
SMT-1	2050	10 YR	10.50	174.97	174.97	0.00
SMT-1	2050	25 YR	13.66	175.27	175.27	0.00
SMT-1	2050	50 YR	16.37	175.50	175.50	0.00
SMT-1	2050	100 YR	19.10	175.90	175.90	0.00
SMT-1	2050	REG	21.52	176.38	176.38	0.00
0.117 /	00.40		4.04	171.40	474.40	
SMT-1	2040	2 YR	4.61	174.46	174.46	0.00
SMT-1	2040	5 YR	8.07	174.70	174.70	0.00
SMT-1	2040	10 YR	10.50	174.94	174.94	0.00
SMT-1	2040	25 YR	13.66	175.26	175.26	0.00
SMT-1	2040	50 YR	16.37	175.49	175.49	0.00
SMT-1	2040	100 YR	19.10	175.89	175.89	0.00
SMT-1	2040	REG	21.52	176.38	176.38	0.00
SMT-1	2000	2 YR	6.82	174.18	174.18	0.00
SMT-1	2000	5 YR	11.98	174.60	174.60	0.00
SMT-1	2000	10 YR	15.56	174.88	174.88	0.00
SMT-1	2000	25 YR	20.16	175.23	175.23	0.00
SMT-1	2000	50 YR	23.25	175.47	175.47	0.00
SMT-1	2000	100 YR	27.73	175.89	175.89	0.00
						0.00



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Therefore, the proposed crossing does not present an increased flooding risk to life or property.

S. Llewellyn & Associates Limited.

Stre Dedua

S. DeGrow, Dipl.T



Steven Frankovich, P.Eng.



APPENDIX A

HEC-RAS-ORIGINAL AMEC OUTPUT

River	Reach	River Sta	ons: User Define Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
River	Reacti	River Sta	FIOIlle	(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	Floude # Clil
SMT-1	UPPER	2600	2 YR		178.00	178.49	178.44	178.54	0.005158	(11/5)	4.36	31.13	0.64
				2.76			170.44						
SMT-1	UPPER	2600	5 YR	4.83	178.00	178.61		178.66	0.003718	1.21	8.68	37.20	0.5
SMT-1	UPPER	2600	10 YR	6.30	178.00	178.68		178.73	0.003416	1.27	11.26	39.75	0.5
SMT-1	UPPER	2600	25 YR	8.20	178.00	178.75		178.81	0.003268	1.35	14.22	42.49	0.5
SMT-1	UPPER	2600	50 YR	10.15	178.00	178.81		178.87	0.003222	1.43	16.96	44.88	0.5
SMT-1	UPPER	2600	100 YR	11.71	178.00	178.86		178.92	0.003193	1.49	19.08	46.64	0.5
SMT-1	UPPER	2600	REG	12.67	178.00	178.89		178.95	0.003181	1.53	20.33	47.64	0.5
SMT-1	UPPER	2565	2 YR	2.76	177.80	178.31		178.37	0.004890	1.28	4.23	20.74	0.64
SMT-1	UPPER	2565	5 YR	4.83	177.80	178.40	178.36	178.50	0.006644	1.70	6.21	25.37	0.7
SMT-1	UPPER	2565	10 YR	6.30	177.80	178.46	178.42	178.57	0.006864	1.86	7.83	28.61	0.80
SMT-1	UPPER	2565	25 YR	8.20	177.80	178.53	178.49	178.66	0.006777	2.00	9.99	32.18	0.8
							170.49						
SMT-1	UPPER	2565	50 YR	10.15	177.80	178.59		178.73	0.006456	2.09	12.29	35.18	0.8
SMT-1	UPPER	2565	100 YR	11.71	177.80	178.65		178.78	0.006117	2.14	14.23	37.53	0.7
SMT-1	UPPER	2565	REG	12.67	177.80	178.68		178.81	0.005922	2.17	15.43	38.91	0.7
SMT-1	UPPER	2530	2 YR	2.76	177.50	177.98	177.97	178.09	0.013476	1.49	1.85	7.70	0.9
SMT-1	UPPER	2530	5 YR	4.83	177.50	178.15	178.09	178.25	0.006677	1.46	4.07	18.22	0.74
SMT-1	UPPER	2530	10 YR	6.30	177.50	178.24	178.16	178.34	0.005329	1.50	5.92	23.21	0.6
SMT-1	UPPER	2530	25 YR	8.20	177.50	178.33	178.23	178.44	0.004456	1.54	8.42	28.62	0.65
SMT-1	UPPER	2530	_	10.15	177.50	178.43	170.20	178.53	0.003743	1.54	11.33	33.85	0.6
			50 YR										
SMT-1	UPPER	2530	100 YR	11.71	177.50	178.50		178.60	0.003274	1.56	13.93	37.91	0.5
SMT-1	UPPER	2530	REG	12.67	177.50	178.54		178.64	0.002984	1.55	15.65	39.36	0.5
SMT-1	UPPER	2485	2 YR	2.76	176.82	177.50	177.43	177.62	0.005856	1.78	2.93	9.00	0.74
SMT-1	UPPER	2485	5 YR	4.83	176.82	177.62	177.61	177.83	0.008310	2.40	4.14	10.71	0.9
SMT-1	UPPER	2485	10 YR	6.30	176.82	177.71	177.71	177.96	0.008736	2.66	5.13	11.94	0.9
SMT-1	UPPER	2485	25 YR	8.20	176.82	177.82	177.82	178.09	0.008457	2.85	6.56	13.52	0.9
SMT-1	UPPER	2485	50 YR	10.15	176.82	177.92	177.92	178.09	0.008457	3.04	7.93	13.52	0.9
		_											
SMT-1	UPPER	2485	100 YR	11.71	176.82	177.98	177.98	178.30	0.008667	3.21	8.87	15.72	0.99
SMT-1	UPPER	2485	REG	12.67	176.82	178.01	178.01	178.35	0.008930	3.33	9.38	16.22	1.01
SMT-1	UPPER	2445	2 YR	2.76	176.80	177.18	177.18	177.30	0.012237	1.57	2.20	12.05	0.9
SMT-1	UPPER	2445	5 YR	4.83	176.80	177.29	177.29	177.45	0.010592	1.83	3.80	15.97	0.93
SMT-1	UPPER	2445	10 YR	6.30	176.80	177.36	177.36	177.53	0.009884	1.97	4.96	18.29	0.93
SMT-1	UPPER	2445	25 YR	8.20	176.80	177.44	177.44	177.63	0.009499	2.13	6.39	20.79	0.93
SMT-1	UPPER	2445	50 YR	10.15	176.80	177.50	177.50	177.71	0.009083	2.10	7.88	23.15	0.93
SMT-1	UPPER	2445	100 YR	11.71	176.80	177.56	177.56	177.77	0.008708	2.33	9.13	25.21	0.92
SMT-1	UPPER	2445	REG	12.67	176.80	177.58	177.58	177.81	0.008606	2.38	9.85	26.32	0.92
SMT-1	UPPER	2415	2 YR	2.76	176.50	176.92		176.98	0.004343	1.10	3.03	13.89	0.59
SMT-1	UPPER	2415	5 YR	4.83	176.50	177.05		177.13	0.004351	1.34	5.09	18.88	0.62
SMT-1	UPPER	2415	10 YR	6.30	176.50	177.12		177.22	0.004420	1.48	6.49	21.52	0.64
SMT-1	UPPER	2415	25 YR	8.20	176.50	177.20		177.31	0.004398	1.62	8.33	24.56	0.65
SMT-1	UPPER	2415	50 YR	10.15	176.50	177.27		177.39	0.004404	1.74	10.16	27.18	0.66
SMT-1	UPPER	2415	100 YR	11.71	176.50	177.32		177.45	0.004441	1.83	11.56	28.89	0.6
SMT-1	UPPER	2415	REG	12.67	176.50	177.35		177.49	0.004448	1.88	12.41	29.89	0.68
SMT-1	UPPER	2320	2 YR	2.76	175.75	176.19	176.19	176.34	0.011851	1.74	1.85	7.84	0.96
SMT-1	UPPER	2320	5 YR	4.83	175.75	176.34	176.34	176.53	0.009785	2.02	3.27	11.99	0.93
SMT-1	UPPER	2320	10 YR	6.30	175.75	176.43	176.43	176.64	0.008713	2.13	4.50	15.15	0.90
SMT-1	UPPER	2320	25 YR	8.20	175.75	176.53	176.53	176.75	0.008097	2.28	6.08	18.56	0.89
SMT-1	UPPER	2320	50 YR	10.15	175.75	176.61	176.61	176.85	0.007611	2.39	7.80	21.88	0.88
SMT-1	UPPER	2320	100 YR	11.71	175.75	176.67		176.83	0.007325	2.39	9.20	21.88	0.88
		_					176.67						
SMT-1	UPPER	2320	REG	12.67	175.75	176.71	176.71	176.96	0.007168	2.51	10.06	25.62	0.8
	_			L									
SMT-1	MID	2200	2 YR	3.63	174.75	175.39		175.43	0.001690	0.92	6.62	27.38	0.40
SMT-1	MID	2200	5 YR	6.34	174.75	175.56		175.60	0.001653	1.09	12.38	40.84	0.4
SMT-1	MID	2200	10 YR	8.24	174.75	175.64		175.69	0.001675	1.18	16.03	46.26	0.42
SMT-1	MID	2200	25 YR	10.67	174.75	175.73	175.49	175.78	0.001739	1.28	20.28	51.86	0.43
SMT-1	MID	2200	50 YR	12.82	174.75	175.79	175.55	175.85	0.001802	1.37	23.76	56.21	0.4
SMT-1	MID	2200	100 YR	14.98	174.75	175.95		175.99	0.001182	1.23	33.47	67.13	0.3
SMT-1	MID	2200	REG	14.30	174.75	176.40		176.41	0.000284	0.76	69.84	92.15	0.19
SIVI 1-1		2200	1120	11.20	114.10	170.40		170.41	0.000204	0.70	09.04	JZ. 10	0.13
ONT :	1415	0400	0.10										
SMT-1	MID	2180	2 YR	3.63	174.75	175.17	175.17	175.31	0.011158	1.70	2.57	12.16	0.93
SMT-1	MID	2180	5 YR	6.34	174.75	175.32	175.32	175.49	0.009071	1.95	4.85	20.86	0.89
SMT-1	MID	2180	10 YR	8.24	174.75	175.40	175.40	175.58	0.007844	2.02	7.02	28.66	0.8
SMT-1	MID	2180	25 YR	10.67	174.75	175.49	175.49	175.68	0.006950	2.10	10.03	36.83	0.8
SMT-1	MID	2180	50 YR	12.82	174.75	175.55	175.55	175.74	0.006848	2.21	12.29	40.70	0.8
SMT-1	MID	2180	100 YR	14.98	174.75	175.90		175.95	0.001476	1.33	30.21	63.67	0.4
SMT-1	MID	2180	REG	17.26	174.75	176.39		176.40	0.000293	0.76	69.02	91.73	0.2
SW1-1		2100	ILC	17.20	114.75	170.39		170.40	0.000200	0.70	03.02	51.75	0.2
SMT 4	MIDO	2050	2 10	1 10	470 75	474 50		474.00	0.00011-		0.55	10 70	
SMT-1	MID2	2050	2 YR	4.61	173.75	174.56		174.63	0.003115	1.44	6.55	19.76	0.5
SMT-1	MID2	2050	5 YR	8.07	173.75	174.77		174.86	0.002838	1.64	11.73	27.43	0.5
SMT-1	MID2	2050	10 YR	10.50	173.75	174.97		175.04	0.001923	1.54	17.36	31.22	0.4
SMT-1	MID2	2050	25 YR	13.66	173.75	175.27		175.31	0.001045	1.33	27.72	37.27	0.3
SMT-1	MID2	2050	50 YR	16.37	173.75	175.50		175.53	0.000748	1.25	36.75	41.84	0.3
SMT-1	MID2	2050	100 YR	19.10	173.75	175.90		175.92	0.000369	1.01	55.23	49.91	0.2
SMT-1	MID2	2050	REG	21.52	173.75	176.38		175.92	0.000309	0.81	81.82	60.21	0.2
SIVIT-1	IVIID2	2000	REG	21.52	113.15	1/6.38		176.40	0.000177	0.81	01.82	oU.21	U.1
	MID2	2040	2 YR	4.61	173.75	174.46	174.40	174.59	0.005954	1.79	4.76	16.28	0.7
			1		120 22	1 - 1			0 00 1000	1.07	0.00		
SMT-1 SMT-1	MID2 MID2	2040	5 YR	8.07	173.75	174.70		174.83	0.004093	1.87	9.88	25.26	0.6

HEC-RAS Plan: PROP_RVA_2,1 Locations: User Defined

River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
SMT-1	MID2	2040	25 YR	13.66	173.75	175.26		175.30	0.001088	1.35	27.26	37.02	0.37
SMT-1	MID2	2040	50 YR	16.37	173.75	175.49		175.53	0.000765	1.26	36.41	41.68	0.31
SMT-1	MID2	2040	100 YR	19.10	173.75	175.89		175.92	0.000372	1.02	55.03	49.83	0.23
SMT-1	MID2	2040	REG	21.52	173.75	176.38		176.39	0.000177	0.81	81.71	60.16	0.16
SMT-1	Lower	2000	2 YR	6.82	173.50	174.18	174.07	174.31	0.007470	1.66	4.42	11.15	0.71
SMT-1	Lower	2000	5 YR	11.98	173.50	174.60	174.28	174.69	0.002678	1.44	13.67	33.70	0.46
SMT-1	Lower	2000	10 YR	15.56	173.50	174.88	174.44	174.94	0.001415	1.24	24.96	45.43	0.35
SMT-1	Lower	2000	25 YR	20.16	173.50	175.23	174.58	175.27	0.000742	1.06	42.67	56.39	0.27
SMT-1	Lower	2000	50 YR	23.25	173.50	175.47	174.65	175.50	0.000503	0.96	57.26	63.85	0.22
SMT-1	Lower	2000	100 YR	27.73	173.50	175.89	174.75	175.90	0.000270	0.80	86.45	75.85	0.17
SMT-1	Lower	2000	REG	32.10	173.50	176.38	174.82	176.39	0.000144	0.67	127.35	93.65	0.13
SMT-1	Lower	800		Culvert									
				21									
SMT-4	SMT-4	385	2 YR	0.54	178.98	179.33		179.35	0.003283	0.51	1.04	5.89	0.39
SMT-4	SMT-4	385	5 YR	0.94	178.98	179.41		179.43	0.003446	0.62	1.57	8.73	0.42
SMT-4	SMT-4	385	10 YR	1.23	178.98	179.45		179.47	0.003561	0.68	1.94	10.92	0.43
SMT-4	SMT-4	385	25 YR	1.61	178.98	179.49		179.52	0.003611	0.76	2.45	14.34	0.45
SMT-4	SMT-4	385	50 YR	1.89	178.98	179.51		179.55	0.003686	0.81	2.84	16.52	0.46
SMT-4	SMT-4	385	100 YR	2.18	178.98	179.54		179.57	0.003718	0.85	3.27	18.58	0.46
SMT-4	SMT-4	385	REG	1.90	178.98	179.51		179.55	0.003691	0.81	2.85	16.56	0.46
SMT-4	SMT-4	255	2 YR	0.54	178.15	178.35	178.35	178.41	0.026649	1.02	0.53	5.18	1.02
SMT-4	SMT-4	255	5 YR	0.94	178.15	178.41	178.41	178.47	0.025173	1.10	0.86	7.20	1.01
SMT-4	SMT-4	255	10 YR	1.23	178.15	178.44	178.44	178.50	0.023765	1.13	1.09	8.36	1.00
SMT-4	SMT-4	255	25 YR	1.61	178.15	178.47	178.47	178.54	0.023633	1.19	1.35	9.49	1.01
SMT-4	SMT-4	255	50 YR	1.89	178.15	178.49	178.49	178.56	0.022911	1.22	1.54	10.27	1.01
SMT-4	SMT-4	255	100 YR	2.18	178.15	178.50	178.50	178.59	0.022912	1.29	1.69	10.83	1.02
SMT-4	SMT-4	255	REG	1.90	178.15	178.49	178.49	178.56	0.022802	1.22	1.55	10.29	1.00
SMT-4	SMT-4	160	2 YR	0.54	177.37	177.54		177.55	0.003022	0.43	1.46	12.95	0.36
SMT-4 SMT-4	SMT-4	160	5 YR	0.94	177.37	177.59		177.60	0.003022	0.45	2.18	12.35	0.39
SMT-4 SMT-4	SMT-4	160	10 YR	1.23	177.37	177.62		177.64	0.003302	0.55	2.18	16.27	0.39
SMT-4 SMT-4	SMT-4	160	25 YR	1.23	177.37	177.65		177.67	0.003302	0.68	3.19	17.60	0.41
SMT-4 SMT-4	SMT-4 SMT-4	160	50 YR	1.61	177.37	177.65		177.67	0.003467	0.68	3.19	17.60	0.43
SMT-4 SMT-4	SMT-4 SMT-4	160	100 YR	2.18	177.37	177.67	177.58	177.70	0.003546	0.73	3.59	18.52	0.44
SMT-4 SMT-4	SMT-4 SMT-4	160	REG	2.10	177.37	177.69	06.111	177.70	0.003549	0.77	3.97	19.35	0.45
0111-4	OWIT-4	100	1120	1.50	111.01	111.01			0.000040	0.10	0.00	10.04	0.44
SMT-4	SMT-4	50	2 YR	0.54	176.62	176.75	176.75	176.78	0.029702	0.80	0.67	10.35	1.00
SMT-4	SMT-4	50	5 YR	0.94	176.62	176.78	176.78	176.83	0.027142	0.93	1.02	12.59	1.00
SMT-4	SMT-4	50	10 YR	1.23	176.62	176.80	176.80	176.85	0.025754	1.00	1.27	13.96	1.00
SMT-4	SMT-4	50	25 YR	1.61	176.62	176.82	176.82	176.88	0.023421	1.08	1.57	15.26	0.98
SMT-4	SMT-4	50	50 YR	1.89	176.62	176.83	176.83	176.90	0.022688	1.14	1.78	16.10	0.99
SMT-4	SMT-4	50	100 YR	2.18	176.62	176.85	176.85	176.92	0.021769	1.19	2.01	16.94	0.98
SMT-4	SMT-4	50	REG	1.90	176.62	176.83	176.83	176.90	0.022640	1.14	1.79	16.12	0.98



APPENDIX B

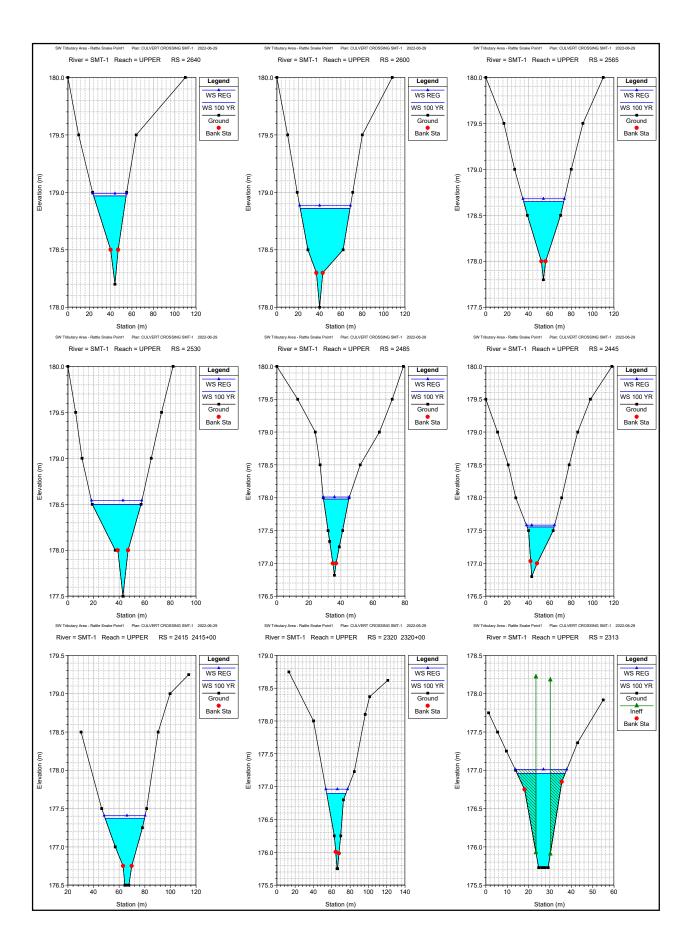
HEC-RAS PROPOSED CONDITIONS OUTPUT

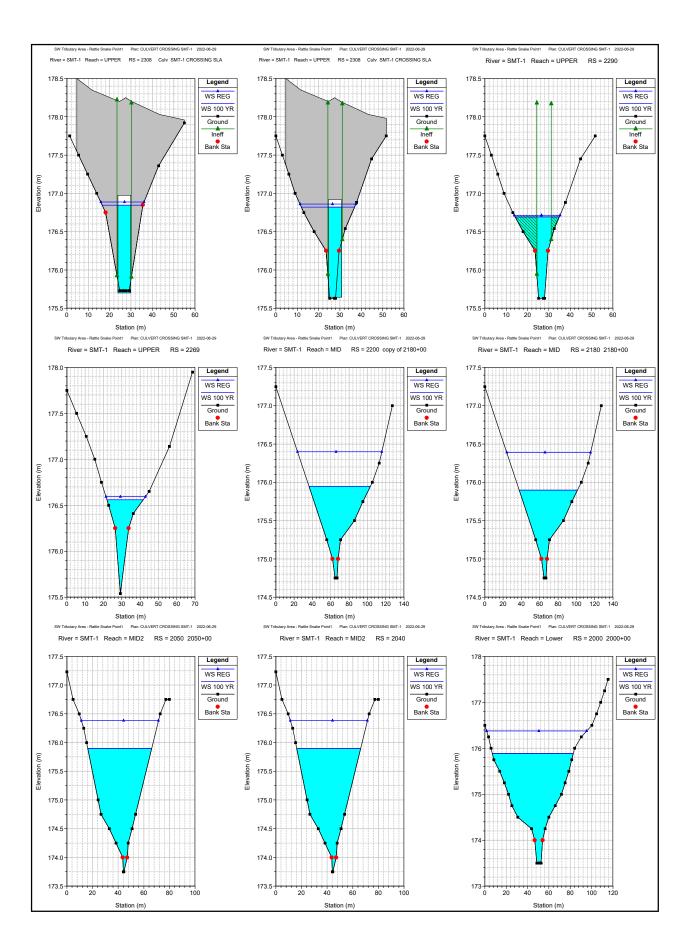
			SMT-1 Location										
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
SMT-1	UPPER	2640	2 YR	2.76	178.20	178.69		178.75	0.004525	1.09	3.29	16.52	0.60
SMT-1	UPPER	2640	5 YR	4.83	178.20	178.77	178.72	178.87	0.006085	1.46	4.84	20.69	0.72
SMT-1	UPPER	2640	10 YR	6.30	178.20	178.82	178.78	178.95	0.006758	1.66	5.93	23.18	0.77
SMT-1	UPPER	2640	25 YR	8.20	178.20	178.88	178.85	179.03	0.007348	1.87	7.32	26.01	0.82
SMT-1	UPPER	2640	50 YR	10.15	178.20	178.93	178.91	179.11	0.007761	2.04	8.72	28.58	0.85
SMT-1	UPPER	2640	100 YR	11.71	178.20	178.97	178.96	179.16	0.008006	2.16	9.84	30.47	0.88
SMT-1	UPPER	2640	REG	12.66	178.20	178.99	178.99	179.19	0.008155	2.23	10.50	31.53	0.89
SMT-1	UPPER	2600	2 YR	2.76	178.00	178.49	178.44	178.54	0.005165	1.15	4.35	31.12	0.64
SMT-1	UPPER	2600	5 YR	4.83	178.00	178.61		178.66	0.003717	1.21	8.68	37.20	0.57
SMT-1	UPPER	2600	10 YR	6.30	178.00	178.68		178.73	0.003416	1.27	11.26	39.75	0.56
SMT-1	UPPER	2600	25 YR	8.20	178.00	178.75		178.81	0.003268	1.35	14.22	42.49	0.56
SMT-1	UPPER	2600	50 YR	10.15	178.00	178.81		178.87	0.003222	1.43	16.96	44.88	0.56
SMT-1	UPPER	2600	100 YR	11.71	178.00	178.86		178.92	0.003193	1.49	19.08	46.64	0.57
SMT-1	UPPER	2600	REG	12.66	178.00	178.89		178.95	0.003181	1.53	20.32	47.64	0.57
OWIT-1	UTTER	2000		12.00	170.00	110.00		170.00	0.000101	1.00	20.02	+7.04	0.07
CMT 4	UPPER	0505	2.1/D	2.76	477.00	470.04	470.04	178.38	0.004872	4.00	4.24	20.76	0.64
SMT-1	UPPER	2565 2565	2 YR 5 YR	4.83	177.80 177.80	178.31 178.40	178.24	178.50	0.004672	1.28 1.70	4.24 6.21		0.64
SMT-1							178.36					25.37	
SMT-1	UPPER	2565	10 YR	6.30	177.80	178.46	178.42	178.57	0.006864	1.86	7.83	28.61	0.80
SMT-1	UPPER	2565	25 YR	8.20	177.80	178.53	178.49	178.66	0.006777	2.00	9.99	32.18	0.81
SMT-1	UPPER	2565	50 YR	10.15	177.80	178.59		178.73	0.006456	2.09	12.29	35.18	0.80
SMT-1	UPPER	2565	100 YR	11.71	177.80	178.65		178.78	0.006117	2.14	14.23	37.53	0.79
SMT-1	UPPER	2565	REG	12.66	177.80	178.68		178.81	0.005922	2.17	15.42	38.90	0.78
SMT-1	UPPER	2530	2 YR	2.76	177.50	177.98	177.97	178.09	0.013605	1.49	1.84	7.68	0.97
SMT-1	UPPER	2530	5 YR	4.83	177.50	178.15	178.09	178.25	0.006676	1.46	4.07	18.22	0.74
SMT-1	UPPER	2530	10 YR	6.30	177.50	178.24	178.16	178.34	0.005329	1.50	5.92	23.21	0.69
SMT-1	UPPER	2530	25 YR	8.20	177.50	178.33	178.23	178.44	0.004456	1.54	8.42	28.62	0.65
SMT-1	UPPER	2530	50 YR	10.15	177.50	178.43		178.53	0.003743	1.56	11.33	33.85	0.61
SMT-1	UPPER	2530	100 YR	11.71	177.50	178.50		178.60	0.003274	1.56	13.93	37.91	0.58
SMT-1	UPPER	2530	REG	12.66	177.50	178.54		178.64	0.002984	1.55	15.64	39.36	0.56
0		2000		12.00		110.01			0.002001		10.01	00.00	
SMT-1	UPPER	2485	2 YR	2.76	176.82	177.50	177.43	177.62	0.005823	1.77	2.94	9.01	0.74
SMT-1	UPPER	2485	5 YR	4.83	176.82	177.62	177.61	177.83	0.008310	2.40	4.14	10.71	0.91
SMT-1	UPPER	2485		6.30	176.82	177.02	177.71	177.96	0.008736	2.40	5.13	11.94	0.91
		_	10 YR										
SMT-1	UPPER	2485	25 YR	8.20	176.82	177.82	177.82	178.09	0.008457	2.85	6.56	13.52	0.95
SMT-1	UPPER	2485	50 YR	10.15	176.82	177.92	177.92	178.21	0.008396	3.04	7.93	14.87	0.97
SMT-1	UPPER	2485	100 YR	11.71	176.82	177.98	177.98	178.30	0.008667	3.21	8.87	15.72	0.99
SMT-1	UPPER	2485	REG	12.66	176.82	178.01	178.01	178.35	0.008937	3.33	9.37	16.21	1.01
SMT-1	UPPER	2445	2 YR	2.76	176.80	177.18	177.18	177.30	0.012237	1.57	2.20	12.05	0.95
SMT-1	UPPER	2445	5 YR	4.83	176.80	177.29	177.29	177.45	0.010592	1.83	3.80	15.97	0.93
SMT-1	UPPER	2445	10 YR	6.30	176.80	177.36	177.36	177.53	0.009884	1.97	4.96	18.29	0.93
SMT-1	UPPER	2445	25 YR	8.20	176.80	177.44	177.44	177.63	0.009499	2.13	6.39	20.79	0.93
SMT-1	UPPER	2445	50 YR	10.15	176.80	177.50	177.50	177.71	0.009083	2.25	7.88	23.15	0.93
SMT-1	UPPER	2445	100 YR	11.71	176.80	177.56	177.56	177.77	0.008708	2.33	9.13	25.21	0.92
SMT-1	UPPER	2445	REG	12.66	176.80	177.58	177.58	177.81	0.008607	2.38	9.84	26.31	0.92
SMT-1	UPPER	2415	2 YR	2.76	176.50	176.93		176.98	0.004162	1.08	3.09	14.06	0.58
SMT-1	UPPER	2415	5 YR	4.83	176.50	170.95		170.30	0.004102	1.32	5.23	14.00	0.60
SMT-1	UPPER	2415	10 YR	6.30	176.50	177.13		177.22	0.003946	1.43	6.84	22.13	0.61
SMT-1	UPPER	2415	25 YR	8.20	176.50	177.22		177.32	0.003894	1.55	8.82	25.31	0.62
SMT-1	UPPER	2415	50 YR	10.15	176.50	177.30		177.41	0.003628	1.63	11.11	28.36	0.61
SMT-1	UPPER	2415	100 YR	11.71	176.50	177.37		177.48	0.003320	1.66	13.21	30.79	0.59
SMT-1	UPPER	2415	REG	12.66	176.50	177.41		177.52	0.003249	1.69	14.32	32.01	0.59
SMT-1	UPPER	2320	2 YR	2.76	175.75	176.26	176.24	176.41	0.009341	1.76	1.97	7.35	0.88
SMT-1	UPPER	2320	5 YR	4.83	175.75	176.45	176.41	176.63	0.007202	1.99	3.65	10.75	0.82
SMT-1	UPPER	2320	10 YR	6.30	175.75	176.56	176.51	176.75	0.006471	2.10	4.91	12.72	0.80
SMT-1	UPPER	2320	25 YR	8.20	175.75	176.70	176.61	176.89	0.005348	2.16	6.86	15.27	0.75
SMT-1	UPPER	2320	50 YR	10.15	175.75	176.81	176.71	177.01	0.004882	2.25	8.75	17.67	0.73
SMT-1	UPPER	2320	100 YR	11.71	175.75	176.90	176.77	177.11	0.004649	2.32	10.45	21.22	0.73
SMT-1	UPPER	2320	REG	12.66	175.75	176.96	176.78	177.16	0.004286	2.32	11.83	23.71	0.70
SMT-1	UPPER	2313	2 YR	2.76	175.73	176.34	176.02	176.37	0.000929	0.71	3.91	11.90	0.30
SMT-1	UPPER	2313	5 YR	4.83	175.73	176.54	176.14	176.58	0.001100	0.93	5.19	14.23	0.34
SMT-1	UPPER	2313	10 YR	6.30	175.73	176.64	176.21	176.70	0.001100	1.07	5.91	14.23	0.34
SMT-1	UPPER	2313	25 YR	8.20	175.73	176.64	176.21	176.70	0.001219	1.07	6.76	15.53	0.30
SMT-1 SMT-1	UPPER		50 YR		175.73	176.77			0.001319	1.21	6.76 7.48	17.28	0.39
		2313		10.15		176.88	176.38	176.97					
SMT-1	UPPER	2313	100 YR	-	175.73		176.44	177.07	0.001511	1.46	8.04	22.52	0.43
SMT-1	UPPER	2313	REG	12.66	175.73	177.01	176.47	177.13	0.001530	1.51	8.39	24.16	0.43
0117	110000	00000											
SMT-1	UPPER	2308		Culvert									
SMT-1	UPPER	2290	2 YR	2.76	175.63	176.30	176.03	176.34	0.001974	0.97	2.87	7.60	0.42
SMT-1	UPPER	2290	5 YR	4.83	175.63	176.45	176.19	176.54	0.002577	1.30	3.86	12.65	0.50
SMT-1	UPPER	2290	10 YR	6.30	175.63	176.53	176.28	176.65	0.003053	1.52	4.39	15.08	0.55
SMT-1	UPPER	2290	25 YR	8.20	175.63	176.61	176.39	176.77	0.003662	1.78	4.94	17.88	0.61
SMT-1	UPPER	2290	50 YR	10.15	175.63	176.66	176.49	176.88	0.004617	2.08	5.28	19.61	0.70
SMT-1	UPPER	2290	100 YR	11.71	175.63	176.69	176.56	176.96	0.005503	2.32	5.48	20.65	0.77
SMT-1	UPPER	2290	REG	12.66	175.63	176.09	176.60	170.90	0.005963	2.32	5.62	20.03	0.77
Givi 1-1	UTTER	2200	ALC .	12.00	175.03	170.71	170.00	111.01	0.000903	2.40	0.02	21.37	0.00
		2269	2 YR	2.76	175.54	176.11	176.11	176.25	0.013954	1.67	1.65	5.82	1.01
SMT-1	UPPER												

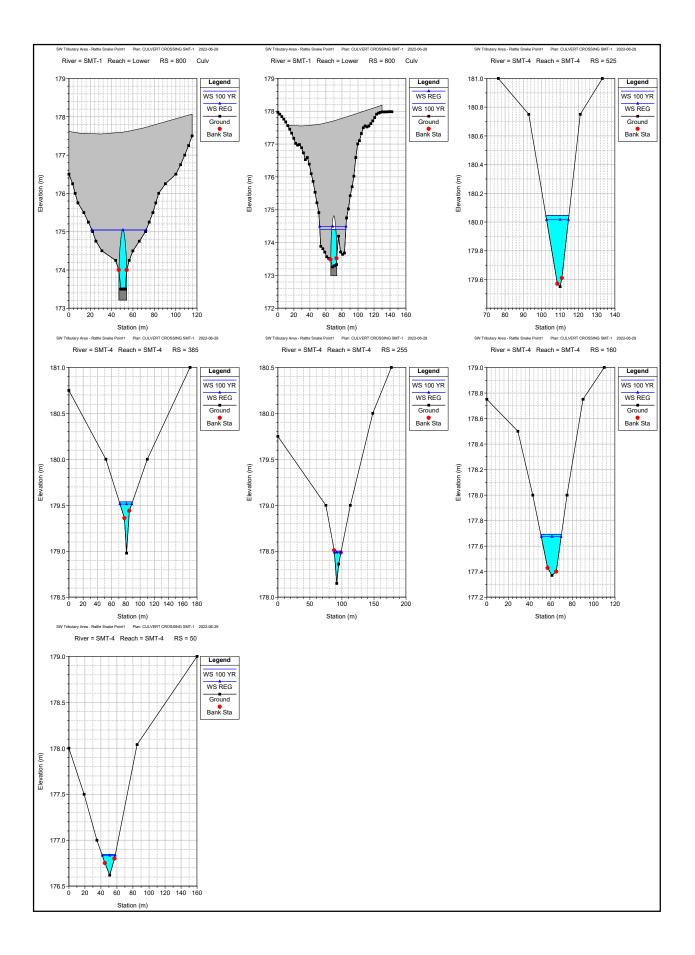
HEC-RAS Plan: CULVERT CROSSING SMT-1 Locations: User Defined

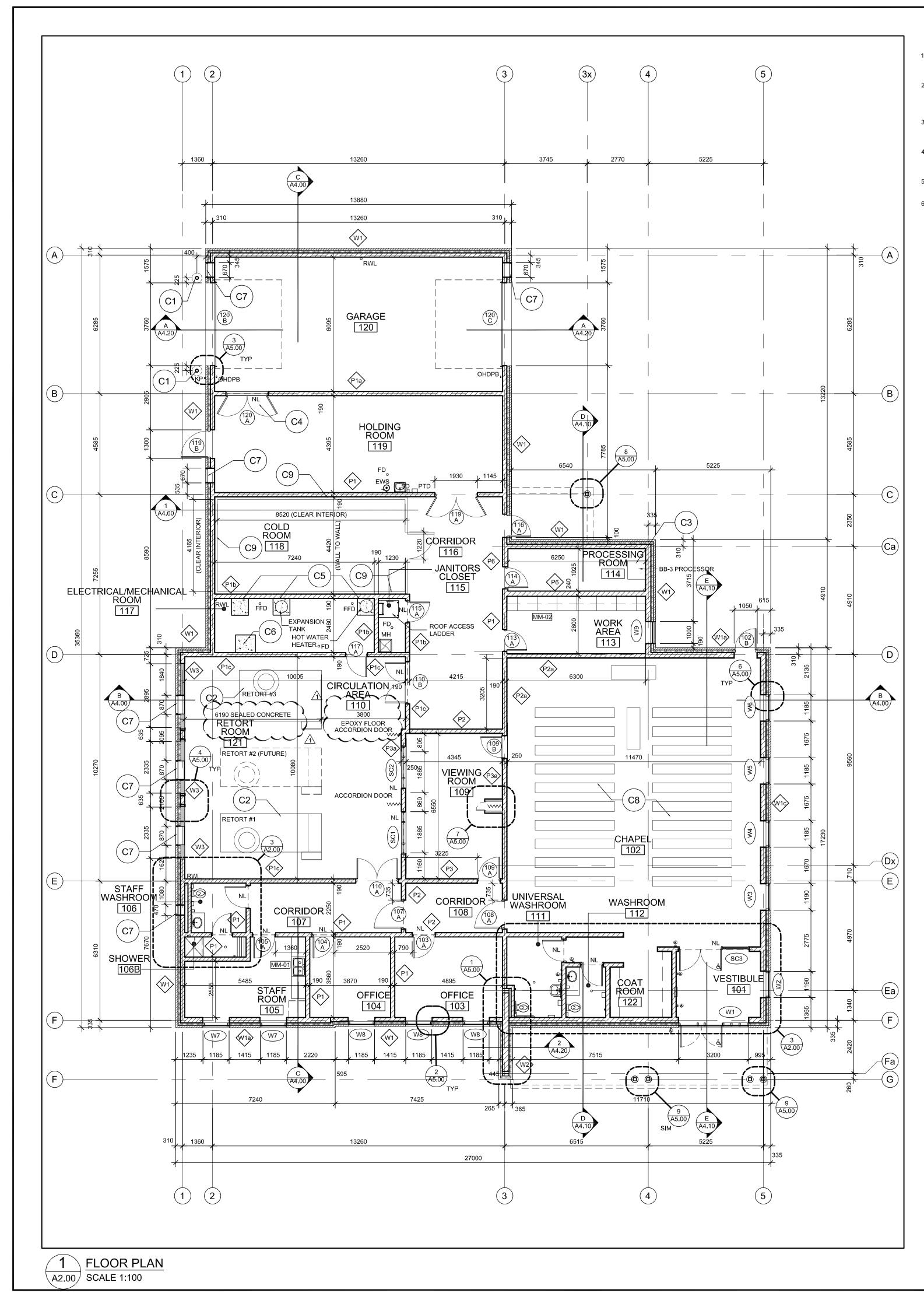
			SMT-1 Location										
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
SMT-1	UPPER	2269	5 YR	4.83	175.54	176.24	176.24	176.43	0.013317	1.89	2.55	7.25	1.02
SMT-1	UPPER	2269	10 YR	6.30	175.54	176.32	176.32	176.53	0.011591	2.01	3.21	9.55	0.98
SMT-1	UPPER	2269	25 YR	8.20	175.54	176.41	176.41	176.64	0.010700	2.17	4.10	12.09	0.97
SMT-1	UPPER	2269	50 YR	10.15	175.54	176.50	176.50	176.75	0.009033	2.23	5.45	16.71	0.92
SMT-1	UPPER	2269	100 YR	11.71	175.54	176.56	176.56	176.82	0.008468	2.31	6.55	19.81	0.90
SMT-1	UPPER	2269	REG	12.66	175.54	176.59	176.59	176.86	0.008170	2.34	7.26	21.59	0.89
SMT-1	MID	2200	2 YR	3.63	174.75	175.39		175.43	0.001690	0.92	6.62	27.38	0.40
SMT-1	MID	2200	5 YR	6.34	174.75	175.56		175.60	0.001653	1.09	12.38	40.84	0.41
SMT-1	MID	2200	10 YR	8.24	174.75	175.64		175.69	0.001675	1.18	16.03	46.26	0.42
		_					175.40	175.78					0.42
SMT-1	MID	2200	25 YR	10.67	174.75	175.73	175.49		0.001739	1.28	20.28	51.86	
SMT-1	MID	2200	50 YR	12.82	174.75	175.79	175.55	175.85	0.001802	1.37	23.76	56.21	0.45
SMT-1	MID	2200	100 YR	14.98	174.75	175.95		175.99	0.001182	1.23	33.47	67.13	0.37
SMT-1	MID	2200	REG	17.26	174.75	176.40		176.41	0.000284	0.76	69.84	92.15	0.19
													1
SMT-1	MID	2180	2 YR	3.63	174.75	175.17	175.17	175.31	0.011158	1.70	2.57	12.16	0.93
SMT-1	MID	2180	5 YR	6.34	174.75	175.32	175.32	175.49	0.009071	1.95	4.85	20.86	0.89
SMT-1	MID	2180	10 YR	8.24	174.75	175.40	175.40	175.58	0.007844	2.02	7.02	28.66	0.86
SMT-1	MID	2180	25 YR	10.67	174.75	175.49		175.68	0.006950	2.10	10.03	36.83	0.83
SMT-1	MID	2180	50 YR	12.82	174.75	175.55	175.55	175.74	0.006848	2.21	12.29	40.70	0.83
SMT-1	MID	2180	100 YR	12.82	174.75	175.90	1, 0.00	175.95	0.000848	1.33	30.21	63.67	0.83
	MID												
SMT-1	IVIID	2180	REG	17.26	174.75	176.39		176.40	0.000293	0.76	69.02	91.73	0.20
													I
SMT-1	MID2	2050	2 YR	4.61	173.75	174.56		174.63	0.003115	1.44	6.55	19.76	0.55
SMT-1	MID2	2050	5 YR	8.07	173.75	174.77		174.86	0.002838	1.64	11.73	27.43	0.55
SMT-1	MID2	2050	10 YR	10.50	173.75	174.97		175.04	0.001923	1.54	17.36	31.22	0.47
SMT-1	MID2	2050	25 YR	13.66	173.75	175.27		175.31	0.001045	1.33	27.72	37.27	0.36
SMT-1	MID2	2050	50 YR	16.37	173.75	175.50		175.53	0.000748	1.25	36.75	41.84	0.31
SMT-1	MID2	2050	100 YR	19.10	173.75	175.90		175.92	0.000369	1.01	55.23	49.91	0.23
SMT-1	MID2	2050	REG	21.52	173.75	176.38		176.40	0.000177	0.81	81.82	60.21	0.16
	WIDZ	2000		21.02	110.10	110.00		170.40	0.000111	0.01	01.02	00.21	0.10
CMT 4	MID2	2040	2 1/12	4.64	470.75	474.40	174.40	474.50	0.005054	1.70	4.70	10.00	0.74
SMT-1		2040	2 YR	4.61	173.75	174.46	174.40	174.59	0.005954	1.79	4.76	16.28	0.74
SMT-1	MID2	2040	5 YR	8.07	173.75	174.70		174.83	0.004093	1.87	9.88	25.26	0.65
SMT-1	MID2	2040	10 YR	10.50	173.75	174.94		175.01	0.002186	1.61	16.45	30.64	0.50
SMT-1	MID2	2040	25 YR	13.66	173.75	175.26		175.30	0.001088	1.35	27.26	37.02	0.37
SMT-1	MID2	2040	50 YR	16.37	173.75	175.49		175.53	0.000765	1.26	36.41	41.68	0.31
SMT-1	MID2	2040	100 YR	19.10	173.75	175.89		175.92	0.000372	1.02	55.03	49.83	0.23
SMT-1	MID2	2040	REG	21.52	173.75	176.38		176.39	0.000177	0.81	81.71	60.16	0.16
SMT-1	Lower	2000	2 YR	6.82	173.50	174.18	174.07	174.31	0.007470	1.66	4.42	11.15	0.71
SMT-1	Lower	2000	5 YR	11.98	173.50	174.60	174.28	174.69	0.002678	1.44	13.67	33.70	0.46
		_											
SMT-1	Lower	2000	10 YR	15.56	173.50	174.88	174.44	174.94	0.001415	1.24	24.96	45.43	0.35
SMT-1	Lower	2000	25 YR	20.16	173.50	175.23	174.58	175.27	0.000742	1.06	42.67	56.39	0.27
SMT-1	Lower	2000	50 YR	23.25	173.50	175.47	174.65	175.50	0.000503	0.96	57.26	63.85	0.22
SMT-1	Lower	2000	100 YR	27.73	173.50	175.89	174.75	175.90	0.000270	0.80	86.45	75.85	0.17
SMT-1	Lower	2000	REG	32.10	173.50	176.38	174.82	176.39	0.000144	0.67	127.35	93.65	0.13
SMT-1	Lower	800		Culvert									
SMT-4	SMT-4	385	2 YR	0.54	178.98	179.33		179.35	0.003283	0.51	1.04	5.89	0.39
											1.04		
SMT-4	SMT-4	385	5 YR	0.94	178.98	179.41		179.43	0.003446	0.62		8.73	0.42
SMT-4	SMT-4	385	10 YR	1.23	178.98	179.45		179.47	0.003561	0.68	1.94	10.92	0.43
SMT-4	SMT-4	385	25 YR	1.61	178.98	179.49		179.52	0.003611	0.76	2.45	14.34	0.45
SMT-4	SMT-4	385	50 YR	1.89	178.98	179.51		179.55	0.003686	0.81	2.84	16.52	0.46
SMT-4	SMT-4	385	100 YR	2.18	178.98	179.54		179.57	0.003718	0.85	3.27	18.58	0.46
SMT-4	SMT-4	385	REG	1.90	178.98	179.51		179.55	0.003691	0.81	2.85	16.56	0.46
SMT-4	SMT-4	255	2 YR	0.54	178.15	178.35	178.35	178.41	0.026649	1.02	0.53	5.18	1.02
SMT-4	SMT-4	255	5 YR	0.94	178.15	178.41	178.41	178.47	0.025173	1.10	0.86	7.20	1.01
SMT-4	SMT-4	255	10 YR	1.23	178.15	178.44	178.44	178.50	0.023765	1.13	1.09	8.36	1.00
SMT-4	SMT-4	255	25 YR	1.23	178.15	178.47	178.47	178.50	0.023633	1.13	1.05	9.49	1.00
SMT-4	SMT-4	255	50 YR	1.89	178.15	178.49		178.56	0.022911	1.22	1.54	10.27	1.01
SMT-4	SMT-4	255	100 YR	2.18	178.15	178.50		178.59	0.022912	1.29	1.69	10.83	1.02
SMT-4	SMT-4	255	REG	1.90	178.15	178.49	178.49	178.56	0.022802	1.22	1.55	10.29	1.00
SMT-4	SMT-4	160	2 YR	0.54	177.37	177.54		177.55	0.003022	0.43	1.46	12.95	0.36
SMT-4	SMT-4	160	5 YR	0.94	177.37	177.59		177.60	0.003189	0.55	2.18	15.06	0.39
SMT-4	SMT-4	160	10 YR	1.23	177.37	177.62		177.64	0.003302	0.61	2.64	16.27	0.41
SMT-4	SMT-4	160	25 YR	1.61	177.37	177.65		177.67	0.003467	0.68	3.19	17.60	0.43
SMT-4	SMT-4	160	50 YR	1.89	177.37	177.67		177.70	0.003546	0.73	3.59	18.52	0.40
SMT-4	SMT-4	160	100 YR	2.18	177.37	177.69	177.58	177.72	0.003639	0.73	3.97	19.35	0.44
SMT-4 SMT-4	SMT-4 SMT-4	_	REG	-	177.37	177.69	177.30	177.70		0.77			0.45
5IVI 1-4	3111-4	160	NEG	1.90	1/1.3/	177.07		177.70	0.003549	0.73	3.60	18.54	U.44
SMT-4	SMT-4	50	2 YR	0.54	176.62	176.75		176.78	0.029702	0.80	0.67	10.35	1.00
SMT-4	SMT-4	50	5 YR	0.94	176.62	176.78		176.83	0.027142	0.93	1.02	12.59	1.00
SMT-4	SMT-4	50	10 YR	1.23	176.62	176.80	176.80	176.85	0.025754	1.00	1.27	13.96	1.00
SMT-4	SMT-4	50	25 YR	1.61	176.62	176.82	176.82	176.88	0.023421	1.08	1.57	15.26	0.98
SMT-4	SMT-4	50	50 YR	1.89	176.62	176.83		176.90	0.022688	1.14	1.78	16.10	0.99
SMT-4	SMT-4	50	100 YR	2.18	176.62	176.85		176.92	0.022000	1.19	2.01	16.94	0.98
	SMT-4 SMT-4	50	REG	1.90	176.62								
SMT-4		100	INEG	1.90	1/0.02	176.83	176.83	176.90	0.022640	1.14	1.79	16.12	0.98

HEC-RAS Plan: CULVERT CROSSING SMT-1 Locations: User Defined (Continued)







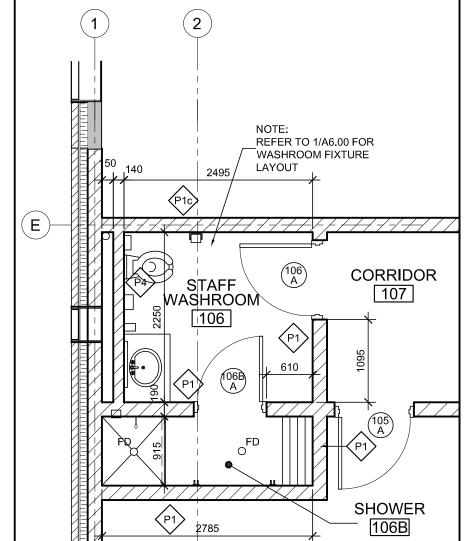


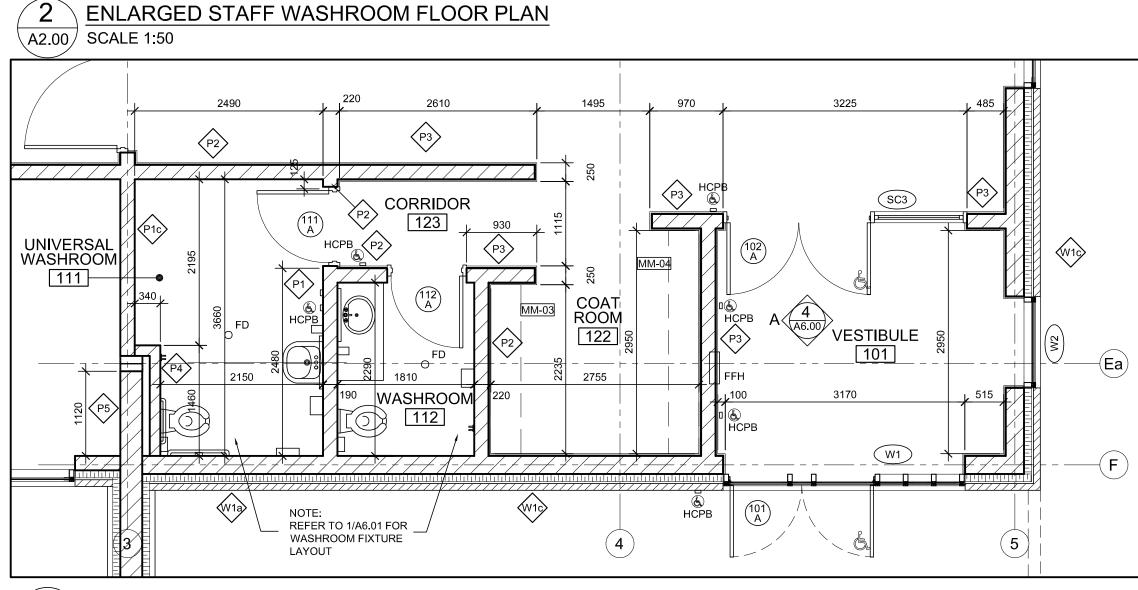
GENERAL NOTES

- MECHANICAL AND ELECTRICAL ITEMS SHOWN, I.E. DUCTWORK, PIPING, LIGHT FIXTURES, ETC. ARE FOR REFERENCE ONLY AND ARE NOT INCLUSIVE. REFER TO MECHANICAL AND ELECTRICAL DRAWING FOR ALL RELATED
- CONNECTIONS OF ALL NON STRUCTURAL ELEMENTS AND EQUIPMENT TO SUPPORTING STRUCTURE TO BE DESIGNED TO COMPLY WITH ARTICLE 4.1.8.18 OF THE 2012 ONTARIO BUILDING CODE FOR SEISMIC LOADS. CONTRACTOR TO SUBMIT SHOP DRAWINGS SHOWING THESE CONNECTIONS STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER IF APPLICABLE.
- 3. TRANSITIONS BETWEEN FLOOR FINISHES TO BE MADE SMOOTH, CONTINUOUS & FLUSH. GRIND DOWN FLOOR SLAB ACROSS DOOR THRESHOLDS WHERE APPLICABLE TO SUIT THICKNESS OF MATERIALS AND ENSURE FLOOR FINISH MATERIALS ARE INSTALLED FLUSH THROUGHOUT
- APPLIANCES SHOWN IN KITCHENS, KITCHENETTES AND LAUNDRY ROOMS ARE SHOWN FOR REFERENCE. SUPPLY & INSTALL BY OTHERS, NOT IN CONTRACT. INCLUDES BUT IS NOT LIMITED TO; WASHERS, DRYERS, FRIDGES, STOVES, MICROWAVES, ETC.
- CONCRETE FLOOR SLAB TO BE SLOPED TOWARDS FLOOR DRAIN (FD) LOCATIONS. REFER TO AND COORDINATE WITH MECHANICAL DRAWINGS FOR ALL FLOOR DRAIN LOCATIONS.
- 6. NL DENOTES A NON-LOAD BEARING LINTEL. REFER TO STRUCTURAL DRAWINGS FOR LINTEL CONSTRUCTION.

CONSTRUCTION NOTES

- 150mm DIA CONCRETE FILLED STEEL BOLLARD. REFER TO (C1) DETAIL 6/A1.20 OWNER SUPPLIED RETORTS. CONTRACTOR RESPONSIBLE FOR UNLOADING OF RETORTS, MOVING THEM INTO THE BUILDING (C2) AND FINAL HOOK UPS. REFER TO AND COORDINATE W/ MECHANICAL AND ELECTRICAL DRAWINGS OWNER SUPPLIED EQUIPMENT. CONTRACTOR RESPONSIBLE MOVING THEM INTO THE BUILDING AND FINAL HOOK UPS. (C3) REFER TO AND COORDINATE W/ MECHANICAL AND ELECTRICAL DRAWINGS NL - DENOTES NON-LOAD BEARING LINTEL. REFER TO (C4) STRUCTURAL DRAWINGS FOR LINTEL CONSTRUCTION 760mm X 760mm x 100MM HOUSE KEEPING PAD. REFER TO AND (C5) COORDINATE LOCATION OF PAD W/ MECHANICAL DRAWINGS. 900mm X 800mm x 100MM HOUSE KEEPING PAD FOR FLOOR (C6) MOUNTED ELECTRICAL TRANSFORMER. REFER TO AND COORDINATE LOCATION AND SIZE OF PAD W/ ELECTRICAL DRAWINGS. MECHANICAL LOUVRE. REFER TO AND COORDINATE LOCATION (C7) AND SIZE OF OPENING W/ MECHANICAL DRAWINGS. CHAPEL FURNISHING SHOWN FOR INFORMTAION PURPOSES (C8) ONLY. FURNISHING TO BE SUPPLIED BY OWNER
- C9 100mm THK x 2440mm HIGH INSULATED METAL PANELS (IMP) C/W 100mm THK IMP CEILING SUSPENDED FROM STRUCTURE ABOVE BY 10mm GALVANIZED THREADED RODS AT 1800mm O/C (MAX). PROVIDE A 1220mm x 2135mm INSULATED COLD STORAGE (ICS) DOOR C/W LATCH. PROVIDE A CONTINUOUS SELF ADHERING AIR/VAPOUR BARRIER TO THE INTERIOR FACE OF THE SURROUNDING CONCRETE BLOCK WALL. PROVIDE 25mm VERTICAL METAL HAT CHANNELS AT EACH WALL PANEL JOINT.





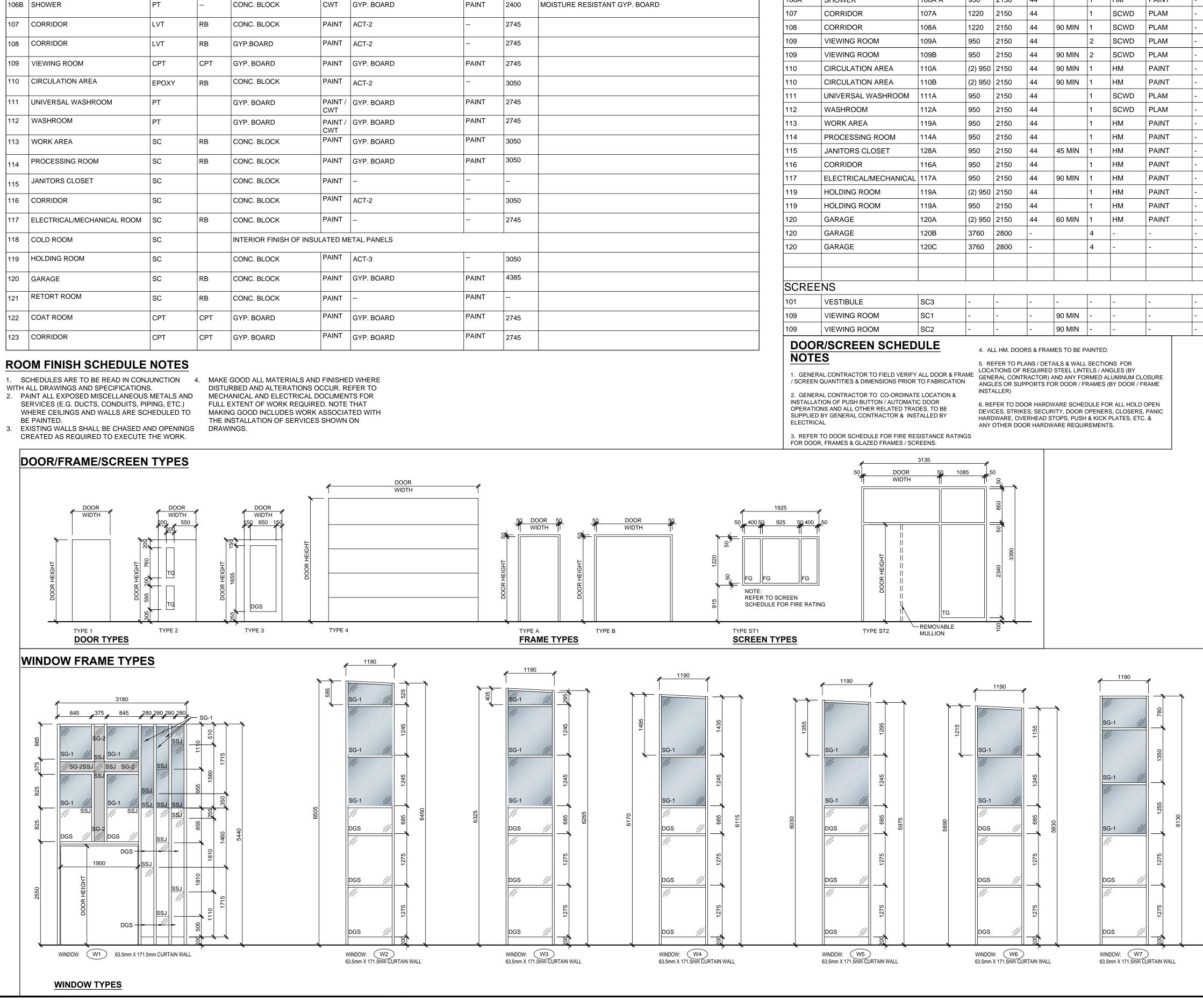
(3) ENLARGED FLOOR PLAN SCALE 1:50

	RIOR WALL TYPES					
NO.	DESCRIPTION		REMARKS			
W1	-90mm BRICK VENEER OR -90mm ARCHITECTURAL MASONRY (AS PER ELEVATIONS & SECTIONS) -25mm AIR SPACE		W1 190mm CONCRETE BLOCK			
W1a	-100mm RIGID INSULATION -AIR / VAPOUR BARRIER ON -CONC. BLOCK		SAME AS W1 W/ 16mm GYPSUM BOARD			
	V * REFER TO ELEVATIONS FOR EXTENT OF BRICK TYPES, MASONRY & PATTERN LOCATIONS		INTERIOR SIDE SAME AS W1a W/ 16mm GYPSUM BOARE W1c ON 13mm RESILIENT CHANNELS ON			
	* SEE REMARKS FOR VARIATIONS OF SIMILAR TYPES		INTERIOR SIDE BULL-NOSE BLOCKS AT ALL EXPOSED CORNERS			
W2	-57mm ALUMINUM COMPOSI (C/W EXTRUSION SYSTEM A SEPARATORS) -100mm GALV. METAL 'Z' SUE -100mm SEMI-RIGID INSULAT CAV. -AIR / VAPOUR BARRIER ON -290mm CONC. BLOCK	ND THERMAL 3-GIRTS FION FILLED				
W 3	-90mm ARCHITECTURAL MASONRY (AS PER ELEVATIONS & SECTIONS) -25mm AIR SPACE -100mm RIGID INSULATION -AIR / VAPOUR BARRIER ON -13mm EXTERIOR GRADE SHEATHING -150mm METAL STUDS @ 400mm O/C -16mm GYPSUM BOARD		W1 190mm CONCRETE BLOCK			
	RIOR WALL PARTITION TYPE O STRUCTURAL FOR MASONRY REINFORCING.	S				
NO.	DESCRIPTION	REMARK	Ś			
(P1)	- 190mm CONC. BLOCK		hr FIRE RESISTANCE RATING C SB-2 TABLE 2.1.1)			
P1a	* SEE REMARKS FOR VARIATIONS OF SIMILAR TYPES	75% SOLID UNITS 2hr FIRE RESISTANCE RATING (OBC SB-2 TABLE 2.1.1)				
P1b P1c						
		EXTEND TO U/S OF STRUCTURE ABOVE BULL-NOSE BLOCKS AT ALL EXPOSED CORNERS				
P2	- 190mm CONC. BLOCK - 13mm RESILIENT CHANNEL (HORIZONTAL)	P2a 75% SOLID UNITS 2 hr FIRE RESISTANCE RATING (OBC SB-2 TABLE 2.1.1)				
P2a	* SEE REMARKS FOR VARIATIONS OF SIMILAR TYPES	EXTEND TO U/S OF STRUCTURE ABOVE BULL-NOSE BLOCKS AT ALL EXPOSED CORNERS				
P3 P3a	- 16mm GYPSUM BOARD - 13mm RESILIENT CHANNEL AT 400mm O/C (HORIZONTAL) ON EA SIDE OF - 190mm CONC. BLOCK	 75% SOLID UNITS 2 hr FIRE RESISTANCE RATING (OBC SB-2 TABLE 2.1.1) EXTEND TO U/S OF STRUCTURE ABOVE BULL-NOSE BLOCKS AT ALL EXPOSED CORNERS 				
P4	PLUMBING WALL - 140mm CONC. BLOCK	EXTEND TO 150mm ABOVE ADJACENT CEILING BULL-NOSE BLOCKS AT ALL EXPOSED CORNERS				
P5	- 290mm CONC. BLOCK	EXTEND	E RESISTANCE RATING (OBC SB-2 TABLE 2.1.1) TO U/S OF STRUCTURE ABOVE DSE BLOCKS AT ALL EXPOSED CORNERS			
P6	- 240mm CONC. BLOCK (GROUT FILL BLOCK CELLS)		TO U/S OF STRUCTURE ABOVE DSE BLOCKS AT ALL EXPOSED CORNERS			
P7	- 16mm GYPSUM BOARD - 92mm METAL STUDS AT 400mm O/C - 16mm GYPSUM BOARD	EXTEND	TO U/S OF CEILING			

THE CATHOLIC CEMETERIES of the Diocese of Hamilton							
TRUE NORTH							
ABBREVIATIONS LEGEND CONCCONCRETEC/WCOMPLETE WITHDIADIAMETEREAEACHEQEQUALEWSEYE WASH STATIONFDFLOOR DRAINFFDFUNNEL FLOOR DRAINFFHFORCE FLOW HEATERHCPBHANDICAPPED PUSH BUTTONHRMINUTEMMMINUTEMMMILLIMETEROHDPBOVERHEAD DOOR PUSH BUTTONPDPAPER TOWEL DISPENSERSDSOAP DISPENSERTYPTYPICALU/SUNDERSIDEW/WITH							
4 ISSUED FOR ADDENDUM 4 2023-10-24 5. ISSUED FOR TENDER 2023-09-21 4. ISSUED FOR BUILDING PERMIT 2023-05-26 3. RE-ISSUED FOR SPA REVIEW #2 2022-07-15 2. ISSUED FOR SITE PLAN APPROVAL 2021-06-03 1. ISSUED FOR PRE-CONSULTATION 2020-05-27 NO REVISIONS DATE DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE PROJECT; AND MUST REPORT ANY DISCREPANCIES TO THE ARCHITECTS BEFORE PROCEEDING WITH THE WORK. THE USE OF THIS DRAWING OR PART THEREOF IS FORBIDDEN WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECTS.							
HOLY FAMILY CEMETERY							
HOLY FAMILY CEMETERY CREMATORIUM 2543 LOWER BASE LINE ROAD MILTON, ONTARIO							
GRGURIC ARCHITECTS INCORPORATED 28 KING STREET EAST, UNIT B STONEY CREEK, ONTARIO, L8G 1J8 Tel. 905-664-8735 Fax. 905-664-8737							
Web: www.2gai.com SCALE: AS NOTED START DATE: OCT. 2019 Web: www.2gai.com PROJECT: 2019 PROJECT: 2019							
DRAWN: D.W. CHECKED: J.G. PRINT DATE 10/24/23 S:\Data\2019\2019-08-Holy-Family-Crematorium-Milton\65Drawings\12-Workin 2019-08-A2.00.dwg							

RM.	ROOM	FLOOR	FINISH	WALLS		CEILING			
NO.	NAME	FINISH	BASE	MAT'L	FINISH	MAT'L	FINISH	HEIGHT	REMARKS
GRC	OUND FLOOR								
101	VESTIBULE	PT	PT	GYP. BOARD	PAINT	GYP. BOARD	PAINT	3655	
102	CHAPEL	CPT	CPT	GYP. BOARD	PAINT	ACT-1 GYP. BOARD	 PAINT	4095 3500	
103	OFFICE	CPT	CPT	CONC. BLOCK	PAINT	ACT-2		2745	
104	OFFICE	СРТ	CPT	CONC. BLOCK	PAINT	ACT-2		2745	
105	STAFF ROOM	LVT	RB	CONC. BLOCK	PAINT	ACT-2		2745	
106	STAFF WASHROOM	PT		CONC. BLOCK	PAINT / CWT	GYP. BOARD	PAINT	2745	
106B	SHOWER	PT		CONC. BLOCK	CWT	GYP. BOARD	PAINT	2400	MOISTURE RESIS
107	CORRIDOR	LVT	RB	CONC. BLOCK	PAINT	ACT-2		2745	
108	CORRIDOR	LVT	RB	GYP.BOARD	PAINT	ACT-2		2745	
109	VIEWING ROOM	CPT	CPT	GYP. BOARD	PAINT	GYP. BOARD	PAINT	2745	
110	CIRCULATION AREA	EPOXY	RB	CONC. BLOCK	PAINT	ACT-2		3050	
111	UNIVERSAL WASHROOM	PT		GYP. BOARD	PAINT / CWT	GYP. BOARD	PAINT	2745	
112	WASHROOM	PT		GYP. BOARD	PAINT / CWT	GYP. BOARD	PAINT	2745	
113	WORK AREA	SC	RB	CONC. BLOCK	PAINT	GYP. BOARD	PAINT	3050	
114	PROCESSING ROOM	SC	RB	CONC. BLOCK	PAINT	GYP. BOARD	PAINT	3050	
115	JANITORS CLOSET	SC		CONC. BLOCK	PAINT				
116	CORRIDOR	SC		CONC. BLOCK	PAINT	ACT-2		3050	
117	ELECTRICAL/MECHANICAL ROOM	SC	RB	CONC. BLOCK	PAINT			2745	
118	COLD ROOM	SC		INTERIOR FINISH OF	INSULATED M	ETAL PANELS			
119	HOLDING ROOM	SC		CONC. BLOCK	PAINT	ACT-3		3050	
120	GARAGE	SC	RB	CONC. BLOCK	PAINT	GYP. BOARD	PAINT	4385	
121	RETORT ROOM	SC	RB	CONC. BLOCK	PAINT		PAINT		
122	COAT ROOM	СРТ	CPT	GYP. BOARD	PAINT	GYP. BOARD	PAINT	2745	
123	CORRIDOR	СРТ	СРТ	GYP. BOARD	PAINT	GYP. BOARD	PAINT	2745	

CREATED AS REQUIRED TO EXECUTE THE WORK.



DOOR / SCREEN SCHEDULE ROOM ROOM DOOR NAME NO. NO

GROUND FLOOR ALUM ANOD VESTIBULE (2) 950 2440 101 101A 3 44 D (2) 950 2440 102 CHAPEL 102A ALUM ANOD 44 3 102 CHAPEL 102B PAINT 950 2150 HM 44 103 950 2150 103A OFFICE 44 SCWD PLAM 104 OFFICE 104A 950 2150 44 HM PAINT 950 2150 105 STAFF ROOM 105A HM PAINT 44 106 106A PAINT STAFF WASHROOM 950 2150 44 HM 106A SHOWER 106A A 950 2150 PAINT HM 44

DOOR / SCREEN

WIDTH HEIGHT THK FIRE TYPE MAT'L FIN.

G

	FRA TYPE	ME MAT'L	FIN.	GLASS	REMARKS	THE CATHOLIC CEMETERIES
ogs 🖌	W1	ALUM	ANOD	DGS	HDO, HPB,WS, TH, CH, INS, PH, CL	
rg 🌔	SC3	ALUM	ANOD	ТG		
	A	ΉМ	PAINT	-	WS, TH, INS, CL, PH. NOTE: NO EXTERIOR HARDWARE REQUIRED.	
	A	HM	PAINT	-		
	A A	нм нм	PAINT PAINT	-		
	A	НМ	PAINT	-		
2	~		PAINT	-		
}	A	НМ	PAINT	-		
<u>}</u>	A A	нм нм		-	CL	
(A	НМ	PAINT	- -	CL	
	B	HM	PAINT	-	CL	
	B ·	HW	PAINT	-	CL	
\rightarrow	A A	нм нм		-	HDO, HPB, ES	
 (A		PAINT	-		
	А	HM	PAINT	-		
	A	НМ		-		
	A A	нм нм	PAINT PAINT	-	WS, TH, INS, CL, PH CL	
	В	НМ	PAINT	-		
	A	нм	PAINT	-	WS, TH, INS, CL, PH	
	В	НМ	PAINT	-	CL, WS, DS, TH	
	-	-	-	- -	OVERHEAD DOOR. REFER TO SPEC., ADO OVERHEAD DOOR. REFER TO SPEC., ADO	
		_				
	ST2	ALUM	ANOD			5 ISSUED FOR ADDENDUM 4 2 2023-10-23
	ST1	НМ	PAINT	FG		4 ISSUED FOR ADDENDUM 3 1 2023-10-16 3 ISSUED FOR TENDER 2023-09-21
	ST1	НМ	PAINT	FG		2 ISSUED PER CITY COMMENTS 2023-07-24
					LEGEND ACT-X ACOUSTIC CEILING TILE	1 ISSUED FOR BUILDING PERMIT 2023-05-26 NO REVISIONS DATE
					CLG CEILING CONC CONCRETE CWT CERAMIC WALL TILE DGS DOUBLE GLAZED SEALED INSULATING GLASS UNITS DS DOOR SWEEP ES ELECTRIC STRIKE EX EXISTING EXP EXPOSED FG FIRE RATED GLASS HDO HANDICAP DOOR OPERATOR HPB HANDICAPPED PUSH BUTTON HM HOLLOW METAL INS THERMALLY INSULATED DOOR / FRAME LVT LUXURY VINYL TILE MTL METAL PH PANIC HARDWARE PLAM PLASTIC LAMINATE PT PORCELAIN TILE RB RUBBER BASE RM REMOVEABLE MULLION SC SEALED CONCRETE SCWD SOLID CORE WOOD DOOR SG-XX SPANDREL GLASS TH THRESHOLD THK THICKNESS UNO UNLESS NOTED OTHERWISE VCT VINYL COMPOSITE TILE VAR VARIES WD WOOD WS WEATHER STRIPPING W/ WITH	HOLY FAMILY CEMETERY CREMATORIUM 2543 LOWER BASE LINE ROAD MILTON, ONTARIO
		11		~ ` `		ROOM FINISH AND DOOR SCHEDULES GRGURIC
		SG-1 /// SG-1 /// DGS	1275 1255 1350	5350		ARCHITECTS INCORPORATED 28 KING STREET EAST, UNIT B STONEY CREEK, ONTARIO, L8G 1J8 Tel. 905-664-8735 Fax. 905-664-8737 Web: www.2gai.com
		DGS	200 1275	ŝ	PGS PG	START DATE: OCT. 20192019-08DRAWN: D.W.DRAWING:
			W8 5mm CURTAIN	WALL	WINDOW: W9 ANODIZED ALUMINIUM FRAME	CHECKED: J.G. PRINT DATE 10/23/23 S:\Data\2019\2019-08-Holy-Family-Crematorium-Milton\65Drawings\12-Workin 2019-08-A8.00-Schedules.dwg

Holy Family Cemetery Crematorium Building ISSUED FOR SI #1 October 17, 2023

CLIENT:

The Catholic Cemeteries 2523 Lower Base Line Milton, ON



DRAWING SCHEDULE:

SHEET

L-1

L-4

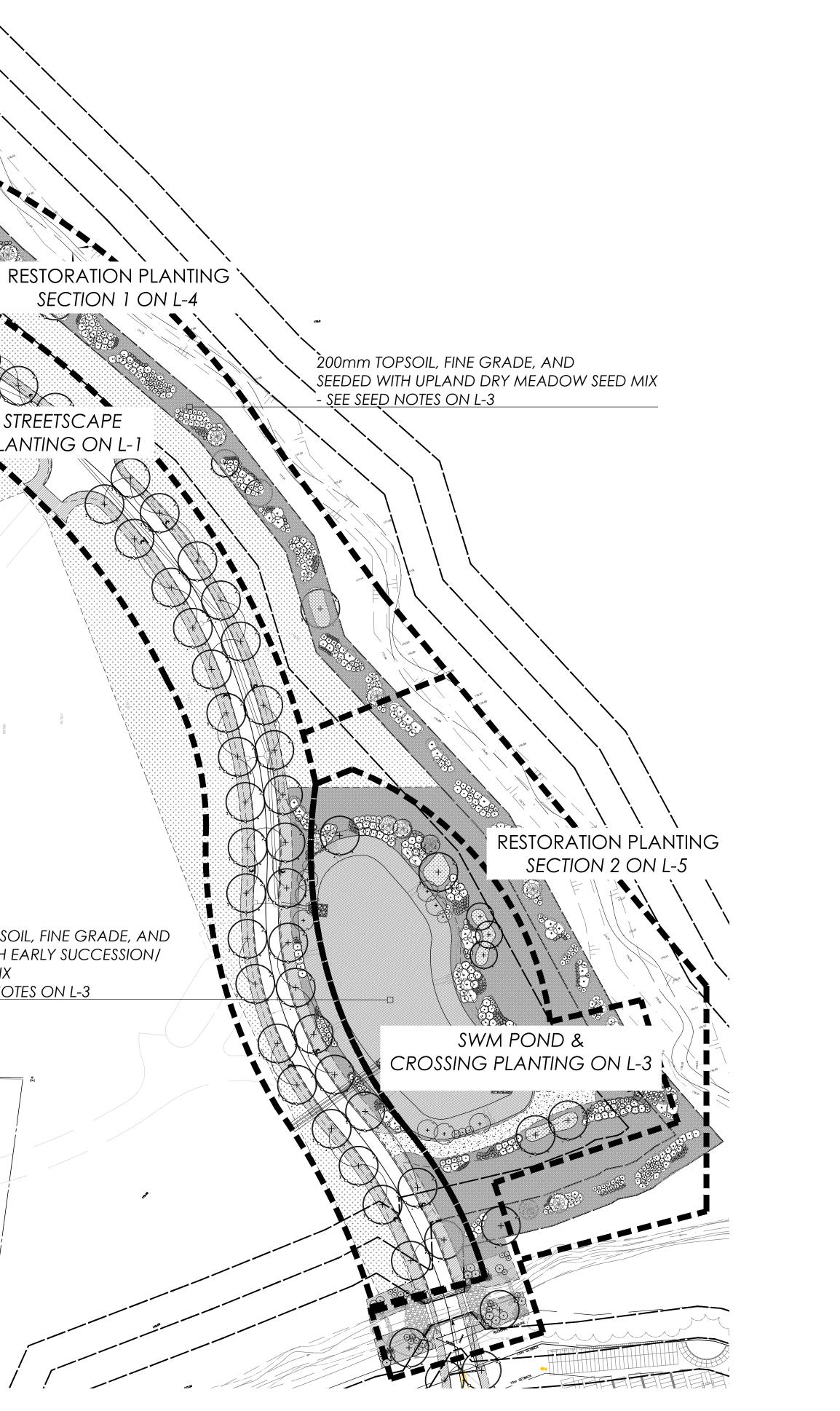
L-5

DRAWING

- Landscape Plan (Street Planting)
- Landscape Plan (Crematorium Building)
- L-2 L-3 Storm Water Management Pond
 - Landscape Plan (Restoration Planting Section 1)
 - Landscape Plan and Details (Restoration Planting Section 2)

× 181.25

SECTION 1 ON L-4 CREMATORIUM LANDSCAPE PLAN ON L-2 STREETSCAPE PLANTING ON L-1 -200mm TOPSOIL, FINE GRADE, AND SEEDED WITH TURF MIX - SEE SEED NOTES ON L-1 2B LANDS UNDER SEPARATE SUBMISSION 200mm TOPSOIL, FINE GRADE, AND SEEDED WITH EARLY SUCCESSION/ RIPARIAN MIX - SEE SEED NOTES ON L-3



adesso design inc. landscape architecture

> 218 Locke Street South, 2nd Floor Hamilton, ON L8P 4B4 1. 905.526.8876 www.adessodesigninc.ca

15 _ 20-• • # +---

LANDSCAPE NOTES:

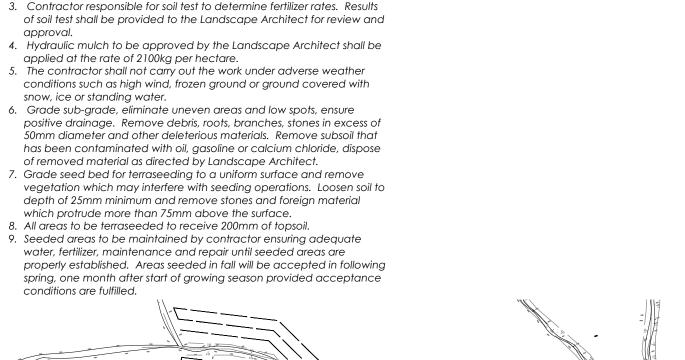
- 1. All work to be carried out in accordance with by-laws and codes having jurisdiction over site location.
- 2. Complete all work to the satisfaction of the Landscape Architect. Report any changes, discrepancies or substitutions to the Landscape
- Architect for review. Obtain approval from the Landscape Architect before proceeding. 4. It is the contractor's responsibility to determine existing service
- locations. 5. Exact locations of plant material will be determined by placement of
- site services such as hydro vaults, meters, utilities roof rain water leaders, driveways, light standards, etc.
- 6. All plant material locations to be staked or marked out and approved by Landscape Architect prior to installation.
- 7. Supply all plant material in accordance with the Canadian Standards for Nursery Stock (8th ed.).
- 8. Install plant material according to details shown. 9. Supply and place mulch in accordance with Canadian Landscape Standard (Section 10, Mulching). Disturbed soil areas around trees and shrubs are to be covered with shredded conifer bark mulch such as 'Cedar Bark Mulch' by All Treat Farms or 'Classic Cedar Mulch' by Gro-Bark, or approved equivalent. Alternative mulches must be approved by the Landscape Architect.
- 10. Contractor to utilize layout dimensions where provided 11. Provide planting bed area as noted on the drawing or to
- accommodate mature size of plant material. 12. All support systems must be removed by the contractor at time of
- final acceptance. No extras will be paid to complete this work 13. Supply and place topsoil in accordance with Canadian Landscape
- Standard (Section 4, Grading & Drainage and Section 6, Growing Medium) to a minimum depth of 200mm unless otherwise specified. 14. Supply and place sod in accordance with Canadian Landscape Standard (Section 7, Lawns & Grass and Section 8, Turfgrass
- Sod)unless otherwise specified. 15. Supply and place seed in accordance with Canadian Landscape Standard (Section 4, Grading & Drainage and Section 6, Growing Medium) unless otherwise specified. All 5:1 or greater slopes to be seeded with tacifier. Contractor to provide necessary erosion control protection as required to ensure soil stabilization and proper seed germination.
- 16. All dimensions in meters unless otherwise noted.
- 17. If discrepancies arise between plant material count shown on drawing and plant list, the drawing shall be considered correct.
- 18. Contractor to provide minimum one (1) year warranty (including trees on municipal property) from date accepted on all work unless otherwise specified.
- 19. Any site plan or grading and servicing shown is for information only. Refer to approved drawings.
- 20. Not for construction unless stamped, signed and dated by
- Landscape Architect. 21. Drawings not to be reproduced without written consent from
- Landscape Architect. 22. Approval of landscape plan to be obtained from municipality.
- 23. All plant material to be planted a minimum of 1.0m from any swales or ditches. 24. For grading and servicing information refer to the consulting
- Engineer's drawings. 25. For lighting information and power distribution refer to the electrical
- consultant's drawings.
- SEED NOTES:
- 1. Areas to be seeded with turf mix shall receive an application of seed at the rate of 25-30 kg/hectare or 2 kg/100m² for spot applications, in the following mixture:

Turfline Turbo Seed Mix	
Turf Perennial Ryegrass	60%
QuickAction® Perennial Ryegrass	10%
TXR Turf Annual Ryegrass	20%
Kentucky Bluegrass	10%

*apply with Annual Oats (Avena sativa) nursecrop at 22kg/hectare.

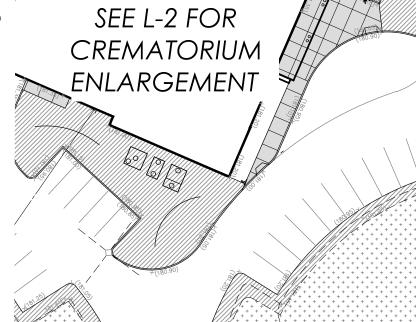
Supplied by: DLF Pickseed (or approved equal) P: 1-705-878-9240 W: www.pickseed.com

- 3. Contractor responsible for soil test to determine fertilizer rates. Results of soil test shall be provided to the Landscape Architect for review and
- approval. 4. Hydraulic mulch to be approved by the Landscape Architect shall be
- applied at the rate of 2100kg per hectare. 5. The contractor shall not carry out the work under adverse weather
- ditions such as high wi snow, ice or standing water. 6. Grade sub-grade, eliminate uneven areas and low spots, ensure
- positive drainage. Remove debris, roots, branches, stones in excess of 50mm diameter and other deleterious materials. Remove subsoil that has been contaminated with oil, gasoline or calcium chloride, dispose of removed material as directed by Landscape Architect.
- 7. Grade seed bed for terraseeding to a uniform surface and remove vegetation which may interfere with seeding operations. Loosen soil to depth of 25mm minimum and remove stones and foreign material
- 8. All areas to be terraseeded to receive 200mm of topsoil.
- water, fertilizer, maintenance and repair until seeded areas are properly established. Areas seeded in fall will be accepted in following spring, one month after start of growing season provided acceptance conditions are fulfilled.



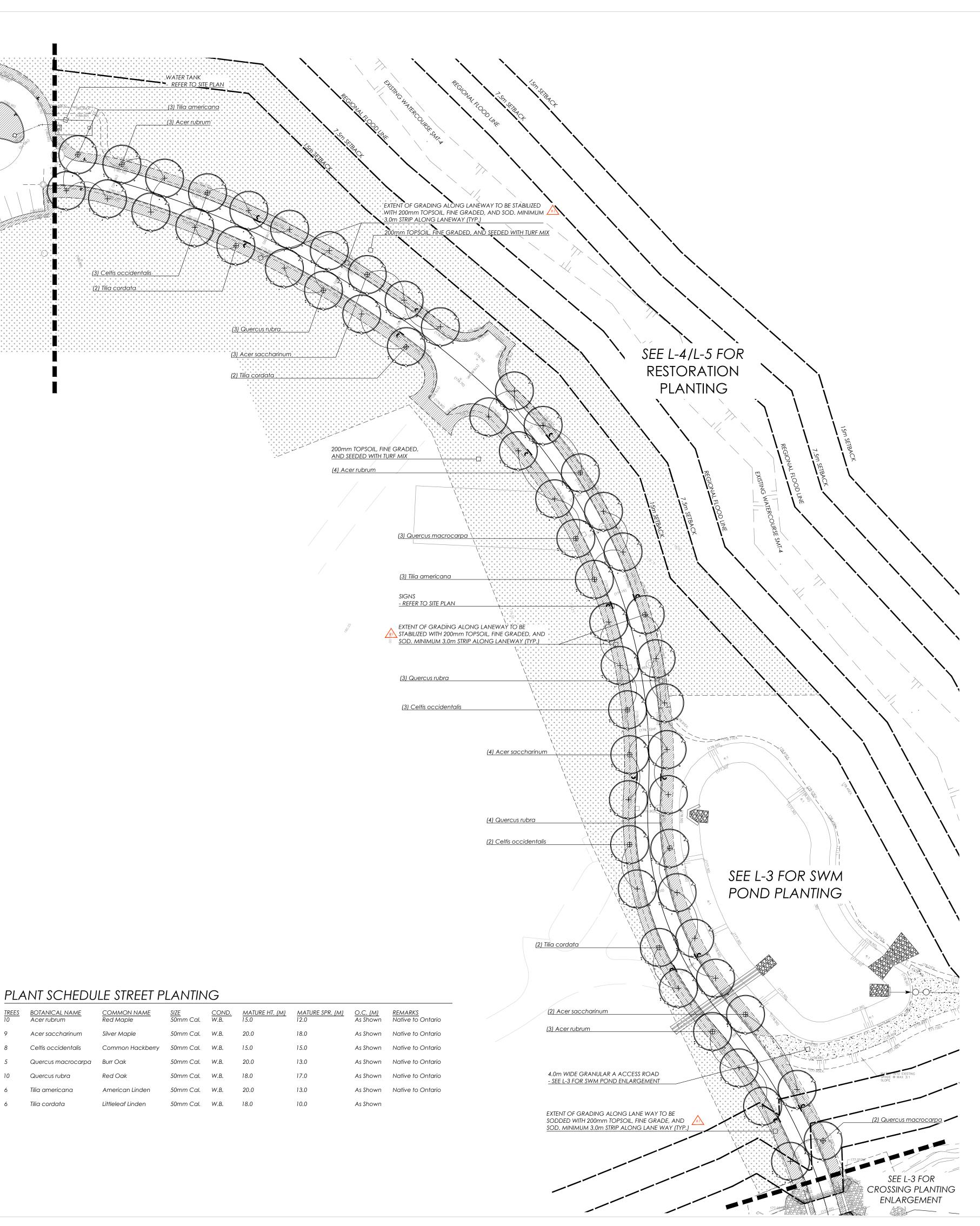
LOWER BASE LINE ROAD

1:500 (m)

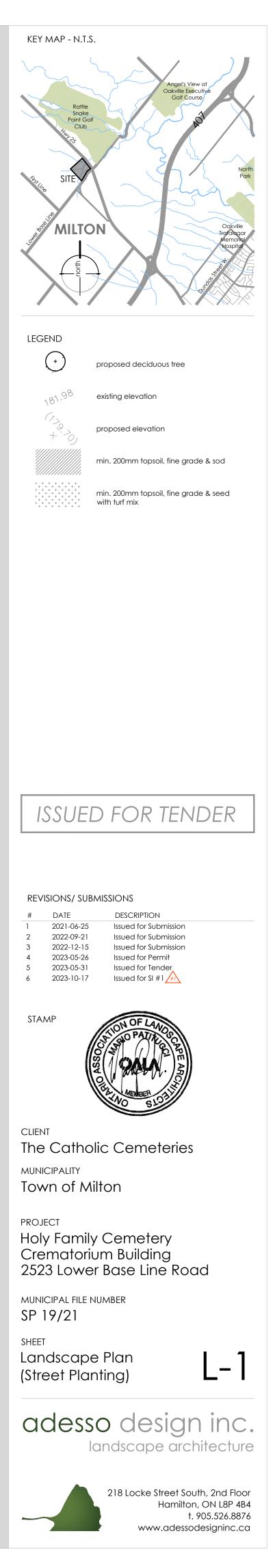


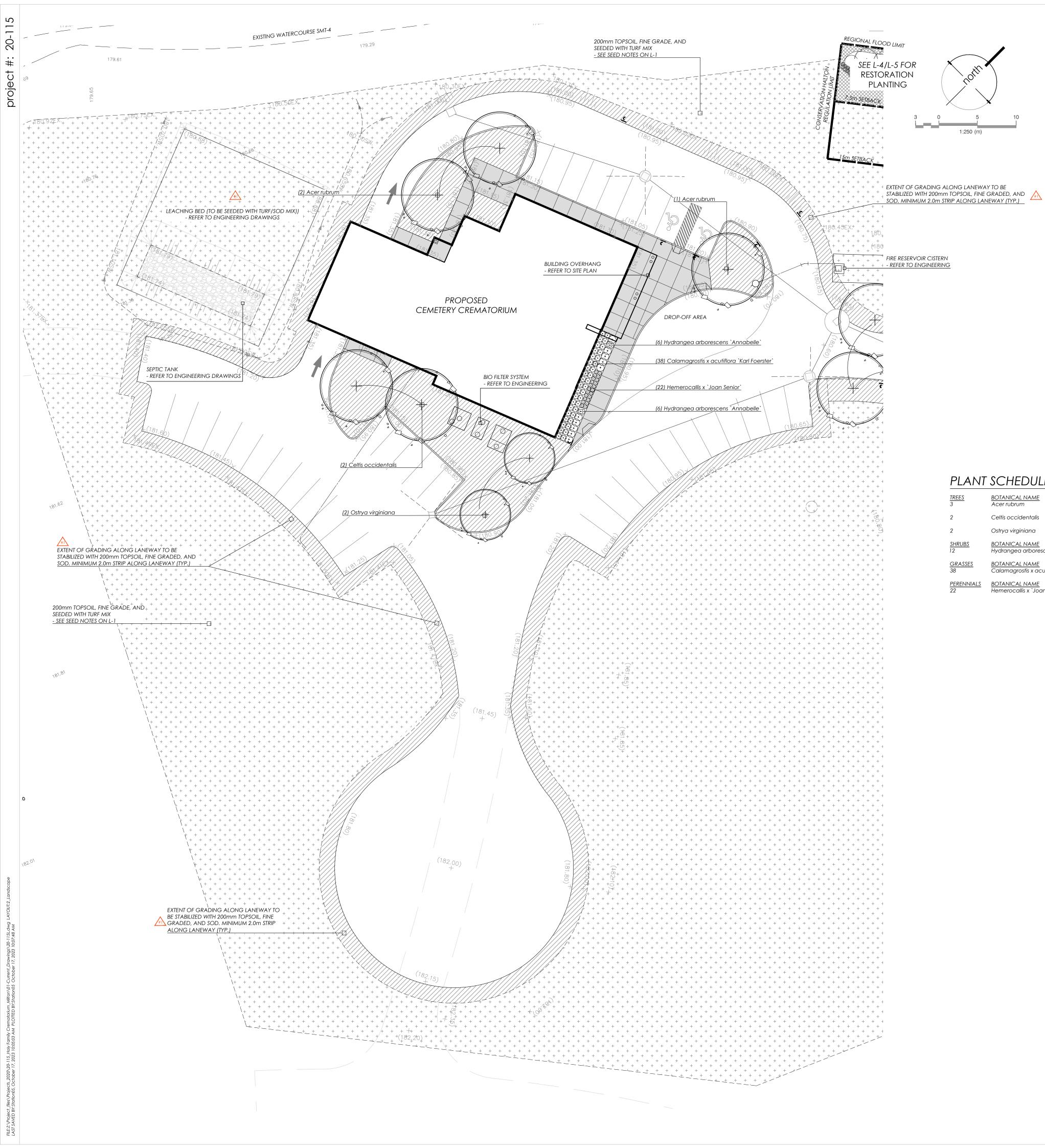


SITE KEY MAP SCALE: NTS



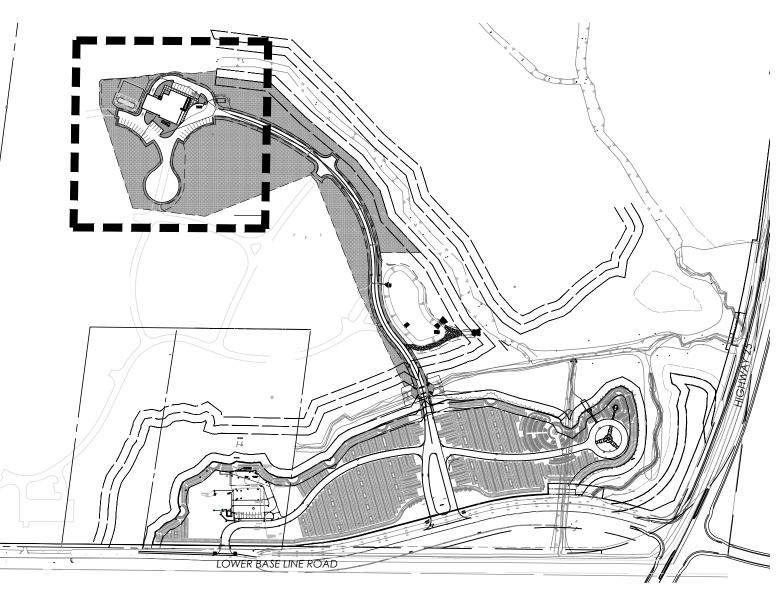
	ne a maple				. 210	/ 10 0110 1111	
Acer saccharinum	Silver Maple	50mm Cal.	W.B.	20.0	18.0	As Shown	Native to C
Celtis occidentalis	Common Hackberry	50mm Cal.	W.B.	15.0	15.0	As Shown	Native to C
Quercus macrocarpa	Burr Oak	50mm Cal.	W.B.	20.0	13.0	As Shown	Native to C
Quercus rubra	Red Oak	50mm Cal.	W.B.	18.0	17.0	As Shown	Native to C
Tilia americana	American Linden	50mm Cal.	W.B.	20.0	13.0	As Shown	Native to C
Tilia cordata	Littleleaf Linden	50mm Cal.	W.B.	18.0	10.0	As Shown	





PLANT SCHEDULE CREMATORIUM

<u>REES</u>	BOTANICAL NAME Acer rubrum	COMMON NAME Red Maple
2	Celtis occidentalis	Common Hackberry
2	Ostrya virginiana	Ironwood
<u>SHRUBS</u> 2	<u>BOTANICAL NAME</u> Hydrangea arborescens `Annabelle`	<u>COMMON NAME</u> Annabelle Hydrangea
<u>GRASSES</u> 38	<u>BOTANICAL NAME</u> Calamagrostis x acutiflora `Karl Foerster`	<u>COMMON NAME</u> Karl Foerster Feather Reed Grass
P <u>ERENNIALS</u> 22	<u>BOTANICAL NAME</u> Hemerocallis x `Joan Senior`	<u>COMMON NAME</u> Joan Senior Daylily

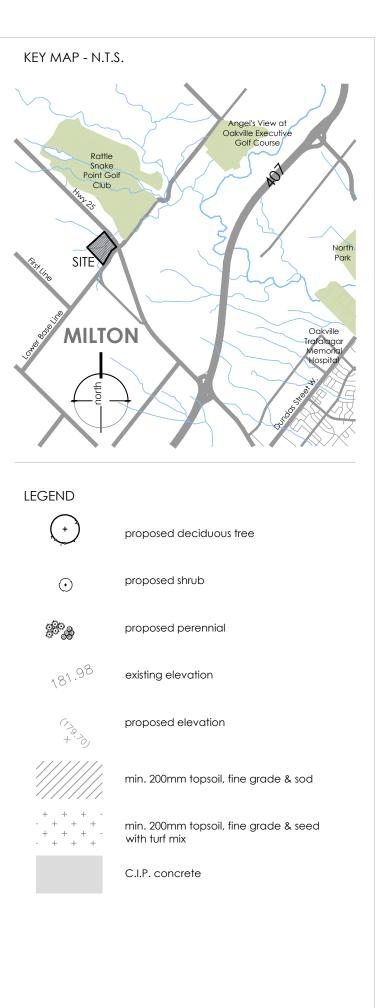


SITE KEY MAP

LANDSCAPE NOTES:

- All work to be carried out in accordance with by-laws and codes
- having jurisdiction over site location.
 Complete all work to the satisfaction of the Landscape Architect.
- Report any changes, discrepancies or substitutions to the Landscape Architect for review. Obtain approval from the Landscape Architect before proceeding.
 It is the contractor's responsibility to determine existing service
- locations.
 Exact locations of plant material will be determined by placement of site services such as hydro vaults, meters, utilities roof rain water
- leaders, driveways, light standards, etc.All plant material locations to be staked or marked out and
- approved by Landscape Architect prior to installation.
- Supply all plant material in accordance with the Canadian Standards for Nursery Stock (8th ed.).
- Install plant material according to details shown.
 Supply and place mulch in accordance with Canadian Landscape Standard (Section 10, Mulching). Disturbed soil areas around trees and shrubs are to be covered with shredded conifer bark mulch such as 'Cedar Bark Mulch' by All Treat Farms or 'Classic Cedar Mulch' by Gro-Bark, or approved equivalent. Alternative mulches must be approved by the Landscape Architect.
- Contractor to utilize layout dimensions where provided
 Provide planting bed area as noted on the drawing or to
- accommodate mature size of plant material. 12. All support systems must be removed by the contractor at time of
- final acceptance. No extras will be paid to complete this work 13. Supply and place topsoil in accordance with Canadian Landscape Standard (Section 4, Grading & Drainage and Section 6, Growing
- Medium) to a minimum depth of 200mm unless otherwise specified.
 Supply and place sod in accordance with Canadian Landscape Standard (Section 7, Lawns & Grass and Section 8, Turfgrass
- Sod)unless otherwise specified.
 15. Supply and place seed in accordance with Canadian Landscape Standard (Section 4, Grading & Drainage and Section 6, Growing Medium) unless otherwise specified. All 5:1 or greater slopes to be seeded with tacifier. Contractor to provide necessary erosion control protection as required to ensure soil stabilization and proper seed germination.
- 16. All dimensions in meters unless otherwise noted.
- If discrepancies arise between plant material count shown on drawing and plant list, the drawing shall be considered correct.
 Contractor to provide minimum one (1) year warranty (including trees on municipal property) from date accepted on all work unless
- otherwise specified. 19. Any site plan or grading and servicing shown is for information only.
- Refer to approved drawings.
- 20. Not for construction unless stamped, signed and dated by Landscape Architect.
- Drawings not to be reproduced without written consent from Landscape Architect.
- 22. Approval of landscape plan to be obtained from municipality.23. All plant material to be planted a minimum of 1.0m from any swales
- or ditches. 24. For grading and servicing information refer to the consulting
- Engineer's drawings.25. For lighting information and power distribution refer to the electrical consultant's drawings.

<u>81ZE</u> 50mm Cal.	<u>COND.</u> W.B.	<u>MATURE HT. (M)</u> 15.0	<u>MATURE SPR. (M)</u> 12.0	<u>O.C. (M)</u> As Shown	<u>REMARKS</u> Native to Ontario
50mm Cal.	W.B.	15.0	15.0	As Shown	Native to Ontario
50mm Cal.	W.B.	10.0	7.0	As Shown	Native to Ontario
<u>BIZE</u> BOCM	<u>COND.</u> #3 cont.	<u>MATURE HT. (M)</u> 1.1	<u>MATURE SPR. (M)</u> 1.0	<u>O.C. (M)</u> 0.90	REMARKS
<u>SIZE</u>	<u>COND.</u> #1 cont.	<u>MATURE HT. (M)</u> 1.25	<u>MATURE SPR. (M)</u> 0.60	<u>O.C. (M)</u> 0.50	REMARKS
<u>SIZE</u>	<u>COND.</u> #1 cont.	<u>MATURE HT. (M)</u> 0.60	<u>MATURE SPR. (M)</u> 0.50	<u>O.C. (M)</u> 0.40	<u>REMARKS</u> Rebloomer



ISSUED FOR TENDER

REVISIONS/ SUBMISSIONS

#	DATE
1	2021-06-2
2	2022-09-2
3	2022-12-1
4	2023-05-2
5	2023-05-3
6	2023-10-1

Issued for Submission Issued for Submission Issued for Permit Issued for Tender Issued for SI #1_#

DESCRIPTION

Issued for Submission

STAMP



CLIENT The Catholic Cemeteries MUNICIPALITY Town of Milton

PROJECT Holy Family Cemetery Crematorium Building 2523 Lower Base Line Road

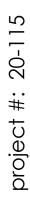
municipal file number SP 19/21

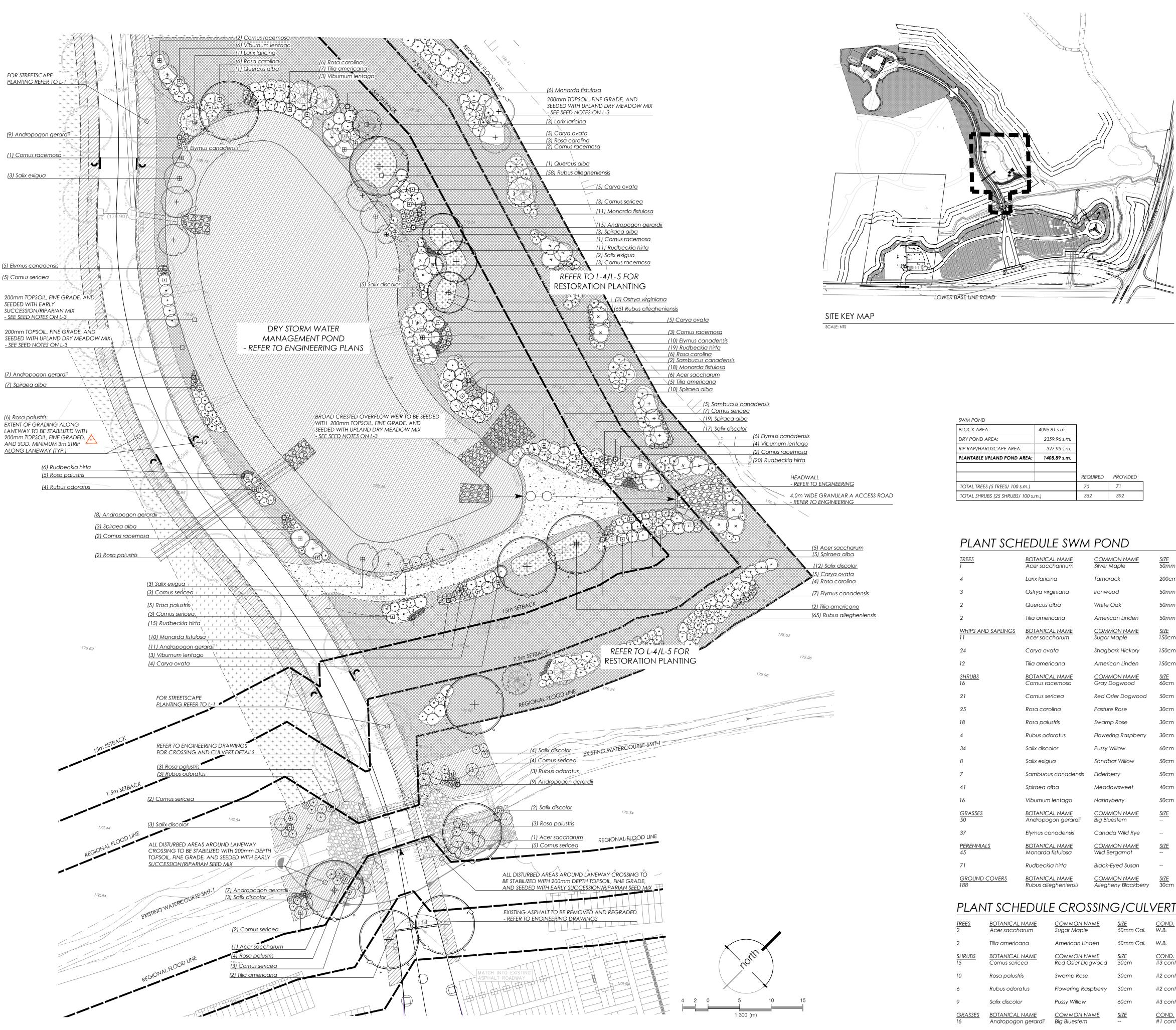
^{sheet} Landscape Plan (Crematorium)



adesso design inc. Iandscape architecture

> 218 Locke Street South, 2nd Floor Hamilton, ON L8P 4B4 t. 905.526.8876 www.adessodesigninc.ca





LANDSCAPE NOTES:

- 1. All areas to be terraseeded to be completed as soon as possible after the required topsoil application.
- 2. For fall seeding, a short term biodegradable erosion control blanket is to be use on any slope to stabilize the soil prior to vegetation establishment and prior to the spring freshnet.
- 3. Areas to be seeded with seed mix shall receive an application of naturalization seed at the rate of 25-30 kg/hectare or 2 kg/100m² for spot applications, in the following mixture:

Conservatio	on Halton Upland Dry Mead	ow Mix
n Name	Botanical Name	Percentage of Mix (%)

Common Name	botanical Name	Percentage of IVIX (70)
Black Eyed Susan	Rudbeckia hirta	15
Big Bluestem	Andropogon gerardii	30
Blue Wood Aster	Symphyotrichum cordifolius	1
Canada Goldenrod	Solidago canadensis	2
Canada Anemone	Anemone canadensis	1
Common Milkweed	Asclepias syriaca	5
Evening Primrose	Oenethera biennis	2
Grass Leaved Goldenrod	Euthamia graminifolia	1
Little Bluestem	Schizachyrium scoparium	20
Meadow/Open Field Sedge	Carex granularis	12
New England Aster	Symphyotrichum novae-angliae	1
Virgins Bower	Clematis virginiana	5
Wild Bergamot	Monarda fistulosa	5
	Halton Early Succession/Rig	
Common Name	Botanical Name	Percentage of Mix (%)
Common Name Black Eyed Susan	Botanical Name Rudbeckia hirta	Percentage of Mix (%) 5
Common Name Black Eyed Susan Blue Vervain	Botanical Name Rudbeckia hirta Verbena hastata	Percentage of Mix (%) 5 10
Common Name Black Eyed Susan Blue Vervain Canada Anemone	Botanical Name Rudbeckia hirta Verbena hastata Anemone canadensis	Percentage of Mix (%) 5 10 1
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint	Botanical Name Rudbeckia hirta Verbena hastata Anemone canadensis Calamagrostis canadensis	Percentage of Mix (%) 5 10 1 2
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint Canada Goldenrod	Botanical Name Rudbeckia hirta Verbena hastata Anemone canadensis Calamagrostis canadensis Solidago canadensis	Percentage of Mix (%) 5 10 1 2 2 2
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint Canada Goldenrod Little Bluestem	Botanical Name Rudbeckia hirta Verbena hastata Anemone canadensis Calamagrostis canadensis Solidago canadensis Schizachyrium scoparuim	Percentage of Mix (%) 5 10 1 2 2 2 10 10 1 1 1 1 1 1 1 1 1 1 1
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint Canada Goldenrod Little Bluestem Common Milkweed	Botanical Name Rudbeckia hirta Verbena hastata Anemone canadensis Calamagrostis canadensis Solidago canadensis Schizachyrium scoparuim Asclepias syriaca	Percentage of Mix (%) 5 10 1 2 2 2 10 5 10 5
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint Canada Goldenrod Little Bluestem Common Milkweed Fowl Bluegrass	Botanical Name Rudbeckia hirta Verbena hastata Anemone canadensis Calamagrostis canadensis Solidago canadensis Schizachyrium scoparuim Asclepias syriaca Poa palustris	Percentage of Mix (%) 5 10 1 2 2 2 10 5 5 5 25
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint Canada Goldenrod Little Bluestem Common Milkweed Fowl Bluegrass Meadow/Open Field Sedge	Botanical Name Rudbeckia hirta Verbena hastata Anemone canadensis Calamagrostis canadensis Solidago canadensis Schizachyrium scoparuim Asclepias syriaca Poa palustris Carex granularis	Percentage of Mix (%) 5 10 1 2 2 2 10 5 5 5 25 25 20
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint Canada Goldenrod Little Bluestem Common Milkweed Fowl Bluegrass Meadow/Open Field Sedge New England Aster	Botanical NameRudbeckia hirtaVerbena hastataAnemone canadensisCalamagrostis canadensisSolidago canadensisSchizachyrium scoparuimAsclepias syriacaPoa palustrisCarex granularisSymphyotrichum novae-angliae	Percentage of Mix (%) 5 10 1 2 2 2 10 5 5 5 25 20 1
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint Canada Goldenrod Little Bluestem Common Milkweed Fowl Bluegrass Meadow/Open Field Sedge New England Aster Path Rush	Botanical Name Rudbeckia hirta Verbena hastata Anemone canadensis Calamagrostis canadensis Solidago canadensis Schizachyrium scoparuim Asclepias syriaca Poa palustris Carex granularis Symphyotrichum novae-angliae Juncus tenuis	Percentage of Mix (%) 5 10 1 2 2 2 10 5 25 25 20 1 10 1 1 10 1 1 10 1 10
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint Canada Goldenrod Little Bluestem Common Milkweed Fowl Bluegrass Meadow/Open Field Sedge New England Aster Path Rush Purple Stemmed Aster	Botanical NameRudbeckia hirtaVerbena hastataAnemone canadensisCalamagrostis canadensisSolidago canadensisSchizachyrium scoparuimAsclepias syriacaPoa palustrisCarex granularisSymphyotrichum novae-angliaeJuncus tenuisSymphyotrichum puniceum	Percentage of Mix (%) 5 10 1 2 2 2 10 5 25 25 20 1 10 1 10 1
Common Name Black Eyed Susan Blue Vervain Canada Anemone Canada Blue-joint Canada Goldenrod Little Bluestem Common Milkweed Fowl Bluegrass Meadow/Open Field Sedge New England Aster Path Rush	Botanical Name Rudbeckia hirta Verbena hastata Anemone canadensis Calamagrostis canadensis Solidago canadensis Schizachyrium scoparuim Asclepias syriaca Poa palustris Carex granularis Symphyotrichum novae-angliae Juncus tenuis	Percentage of Mix (%) 5 10 1 2 2 2 10 5 25 25 20 1 10 1 1 10 1 1 1 10 1 10

*apply with Annual Oats (Avena sativa) nursecrop at 22kg/hectare.

Supplied by: Ontario Seed Company (OSC) (or approved equal)

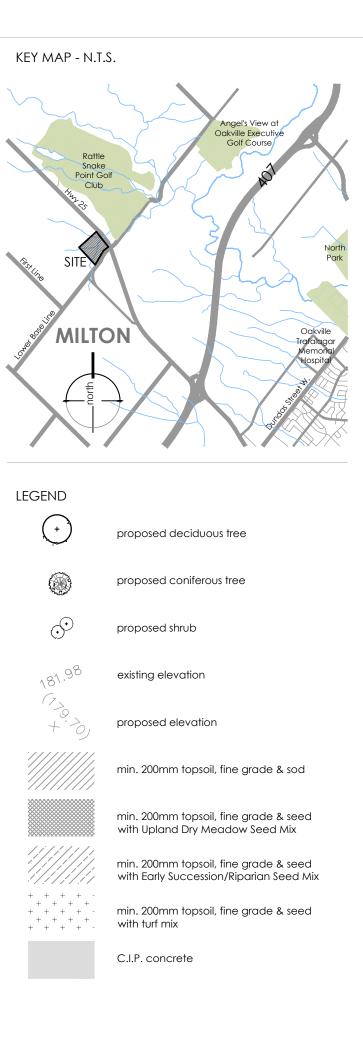
P: 1-519-886-0557 www.oscseeds.com

- 4. Contractor responsible for soil test to determine fertilizer rates. Results of soil test shall be provided to the Landscape Architect for review and approval.
- 5. Hydraulic mulch to be approved by the Landscape Architect shall be applied at
- the rate of 2100kg per hectare. 6. The contractor shall not carry out the work under adverse weather conditions such as high wind, frozen ground or ground covered with snow, ice or standing water. 7. Grade sub-grade, eliminate uneven areas and low spots, ensure positive drainage. Remove debris, roots, branches, stones in excess of 50mm diameter and other
- deleterious materials. Remove subsoil that has been contaminated with oil, gasoline or calcium chloride, dispose of removed material as directed by Landscape Architect. 8. Grade seed bed for terraseeding to a uniform surface and remove vegetation
- which may interfere with seeding operations. Loosen soil to depth of 25mm minimum and remove stones and foreign material which protrude more than 75mm above the surface. 9. Seeded areas to be maintained by contractor ensuring adequate water, fertilizer,
- maintenance and repair until seeded areas are properly established. Areas seeded in fall will be accepted in following spring, one month after start of growing season provided acceptance conditions are fulfilled. 10. All areas to be terraseeded to receive a minimum of 200mm topsoil

Л <u>Е</u>	<u>SIZE</u> 50mm Cal.	<u>COND.</u> W.B.	<u>MATURE HT. (M)</u> 20.0	<u>MATURE SPR. (M)</u> 18.0	<u>O.C. (M)</u> As Shown	<u>REMARKS</u> Native to Ontario
	200cm Ht.	W.B.	8.0	8.0	As Shown	Native to Ontario
	50mm Cal.	W.B.	10.0	7.0	As Shown	Native to Ontario
	50mm Cal.	W.B.	18.0	18.0	As Shown	Native to Ontario
en	50mm Cal.	W.B.	20.0	13.0	As Shown	Native to Ontario
Л <u>Е</u>	<u>SIZE</u> 150cm Ht.	<u>COND.</u> #7 cont.	<u>MATURE HT. (M)</u> 25.0	<u>MATURE SPR. (M)</u> 16.0	<u>O.C. (M)</u> 6.0	<u>REMARKS</u> Native to Ontario
ory	150cm Ht.	#7 cont.	25.0	15.0	6.0	Native to Ontario
en	150cm Ht.	#7 cont.	20.0	15.0	2.0	Native to Ontario
<u>ЛЕ</u> 1	<u>SIZE</u> 60cm	<u>COND.</u> #3 cont.	<u>MATURE HT. (M)</u> 3.0	<u>MATURE SPR. (M)</u> 3.0	<u>O.C. (M)</u> 2.5	<u>REMARKS</u> Native to Ontario
vood	50cm	#3 cont.	1.75	2.0	1.75	Native to Ontario
	30cm	#2 cont.	1.5	1.75	1.6	Native to Ontario
	30cm	#2 cont.	1.5	1.5	1.3	Native to Ontario
berry	30cm	#2 cont.	1.5	1.25	1.0	Native to Ontario
	60cm	#3 cont.	5.0	1.25	1.1	Native to Ontario
/	50cm	#3 cont.	3.0	5.0	4.0	Native to Ontario
	50cm	#3 cont.	2.5	2.0	1.75	Native to Ontario
	40cm	#3 cont.	1.25	1.25	1.1	Native to Ontario
	50cm	#3 cont.	5.0	1.75	1.5	Native to Ontario
Л <u>Е</u>	<u>SIZE</u> 	<u>COND.</u> #1 cont.	<u>MATURE HT. (M)</u> 1.7	<u>MATURE SPR. (M)</u> 0.80	<u>O.C. (M)</u> 0.70	<u>REMARKS</u> Native to Ontario
ye		#1 cont.	1.25	0.70	0.60	Native to Ontario
Л <u>Е</u>	<u>SIZE</u> 	<u>COND.</u> #1 cont.	<u>MATURE HT. (M)</u> 0.90	<u>MATURE SPR. (M)</u> 0.80	<u>O.C. (M)</u> 0.70	<u>REMARKS</u> Native to Ontario
an		#1 cont.	0.60	0.50	0.40	Native to Ontario
<u>AE</u> kberry	<u>SIZE</u> 30cm	<u>COND.</u> #2 cont.	<u>MATURE HT. (M)</u> 1.0	<u>MATURE SPR. (M)</u> 1.5	<u>O.C. (M)</u> 1.25	<u>REMARKS</u> Native to Ontario

Cal.	<u>COND.</u> W.B.	<u>MATURE HT. (M)</u> 30.0	<u>MATURE SPR. (M)</u> 18.0	<u>O.C. (M)</u> As Shown
Cal.	W.B.	20.0	13.0	As Shown
	<u>COND.</u> #3 cont.	<u>MATURE HT. (M)</u> 1.75	<u>MATURE SPR. (M)</u> 2.0	<u>O.C. (M)</u> 1.75
	#2 cont.	1.5	1.5	1.3
	#2 cont.	1.5	1.25	1.0
	#3 cont.	5.0	1.25	1.1
	<u>COND.</u> #1 cont.	<u>MATURE HT. (M)</u> 1.7	<u>MATURE SPR. (M)</u> 0.80	<u>O.C. (M)</u> 0.70

Native to Ontario Native to Ontario Native to Ontario <u>REMARKS</u> Native to Ontario



FOR LANDSCAPE NOTES REFER TO L-2

ISSUED FOR TENDER

REVISIONS/ SUBMISSIONS

#	DATE
1	2021-06-25
2	2022-09-21
3	2022-12-15
4	2023-05-26
5	2023-05-31
6	2023-10-17

Issued for Submission Issued for Permit Issued for Tender Issued for SI #1

DESCRIPTION

Issued for Submission

Issued for Submission

Stamp



CLIENT The Catholic Cemeteries MUNICIPALITY Town of Milton

PROJECT Holy Family Cemetery Crematorium Building 2523 Lower Base Line Road

MUNICIPAL FILE NUMBER SP 19/21

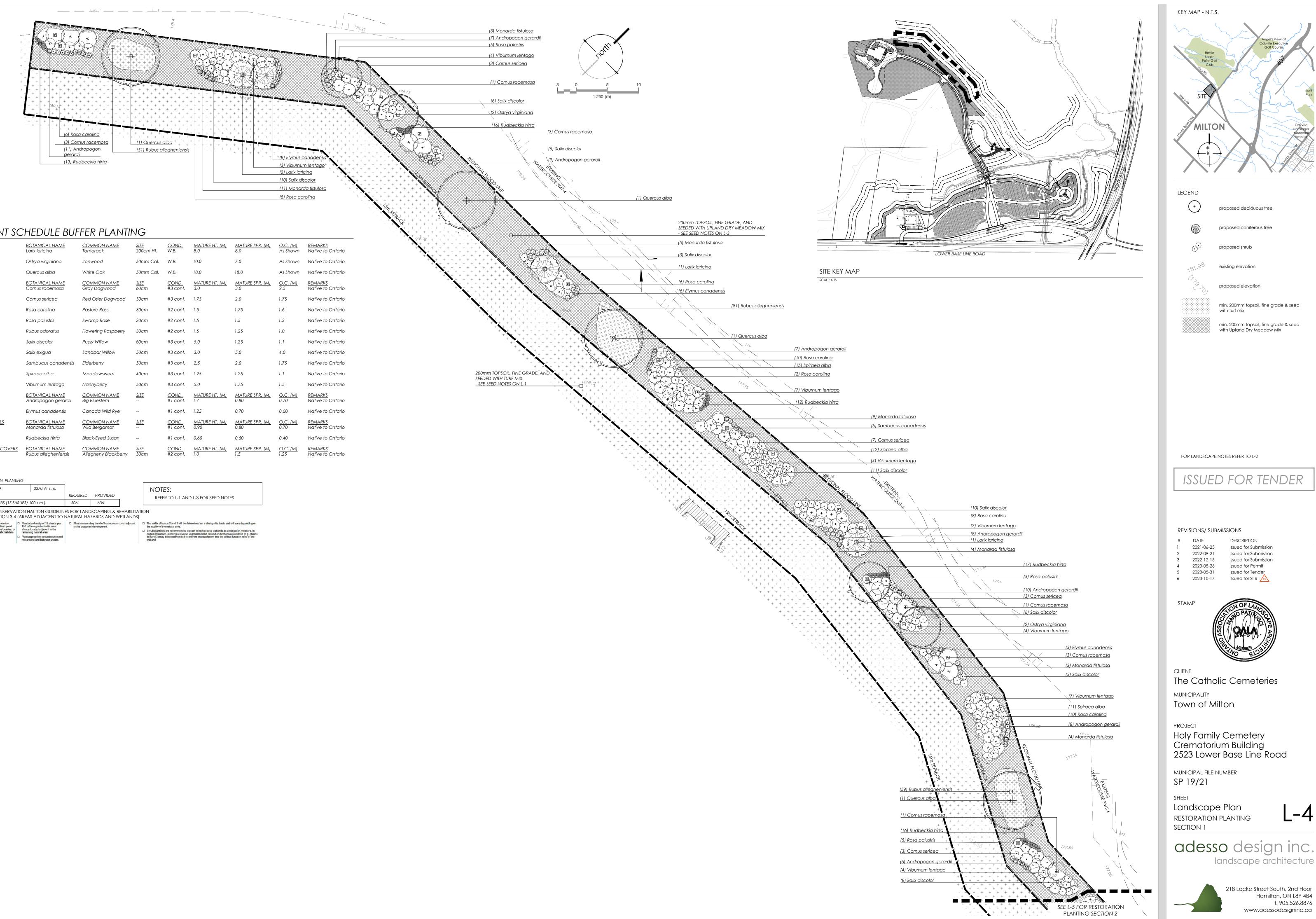
SHEET Landscape Plan (SWM Pond & Road Crossing))



adesso design inc. landscape architecture

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1.25 <u>REMARKS</u> Native to Ontario <u>C. (M)</u> Shown Native to Ontario hown <u>REMARKS</u> Native to Ontario (M)



PLANT SCHEDULE BUFFER PLANTING

<u>TREES</u> 8	<u>BOTANICAL NAME</u> Larix laricina	<u>COMMON NAME</u> Tamarack	<u>SIZE</u> 200cm Ht.	<u>COND.</u> W.B.	<u>MATURE HT. (M)</u> 8.0	<u>MATURE SPR. (M)</u> 8.0	<u>O.C. (M)</u> As Shown	<u>REMARKS</u> Native to Ontario
4	Ostrya virginiana	Ironwood	50mm Cal.	W.B.	10.0	7.0	As Shown	Native to Ontario
5	Quercus alba	White Oak	50mm Cal.	W.B.	18.0	18.0	As Shown	Native to Ontario
<u>SHRUBS</u> 31	<u>BOTANICAL NAME</u> Cornus racemosa	<u>COMMON NAME</u> Gray Dogwood	<u>SIZE</u> 60cm	<u>COND.</u> #3 cont.	<u>MATURE HT. (M)</u> 3.0	<u>MATURE SPR. (M)</u> 3.0	<u>O.C. (M)</u> 2.5	<u>REMARKS</u> Native to Ontario
35	Cornus sericea	Red Osier Dogwood	50cm	#3 cont.	1.75	2.0	1.75	Native to Ontario
84	Rosa carolina	Pasture Rose	30cm	#2 cont.	1.5	1.75	1.6	Native to Ontario
53	Rosa palustris	Swamp Rose	30cm	#2 cont.	1.5	1.5	1.3	Native to Ontario
4	Rubus odoratus	Flowering Raspberry	30cm	#2 cont.	1.5	1.25	1.0	Native to Ontario
99	Salix discolor	Pussy Willow	60cm	#3 cont.	5.0	1.25	1.1	Native to Ontario
2	Salix exigua	Sandbar Willow	50cm	#3 cont.	3.0	5.0	4.0	Native to Ontario
12	Sambucus canadensis	Elderberry	50cm	#3 cont.	2.5	2.0	1.75	Native to Ontario
69	Spiraea alba	Meadowsweet	40cm	#3 cont.	1.25	1.25	1.1	Native to Ontario
51	Viburnum lentago	Nannyberry	50cm	#3 cont.	5.0	1.75	1.5	Native to Ontario
<u>GRASSES</u> 87	<u>BOTANICAL NAME</u> Andropogon gerardii	COMMON NAME Big Bluestem	<u>SIZE</u> 	<u>COND.</u> #1 cont.	<u>MATURE HT. (M)</u> 1.7	<u>MATURE SPR. (M)</u> 0.80	<u>O.C. (M)</u> 0.70	<u>REMARKS</u> Native to Ontario
31	Elymus canadensis	Canada Wild Rye		#1 cont.	1.25	0.70	0.60	Native to Ontario
PERENNIALS 49	<u>BOTANICAL NAME</u> Monarda fistulosa	<u>COMMON NAME</u> Wild Bergamot	<u>SIZE</u> 	<u>COND.</u> #1 cont.	<u>MATURE HT. (M)</u> 0.90	<u>MATURE SPR. (M)</u> 0.80	<u>O.C. (M)</u> 0.70	<u>REMARKS</u> Native to Ontario
82	Rudbeckia hirta	Black-Eyed Susan		#1 cont.	0.60	0.50	0.40	Native to Ontario
<u>GROUND COVERS</u> 191	<u>BOTANICAL NAME</u> Rubus allegheniensis	<u>COMMON NAME</u> Allegheny Blackberry	<u>SIZE</u> 30cm	<u>COND.</u> #2 cont.	<u>MATURE HT. (M)</u> 1.0	<u>MATURE SPR. (M)</u> 1.5	<u>O.C. (M)</u> 1.25	<u>REMARKS</u> Native to Ontario

RESTORATION PLANTING					
BLOCK AREA:	3370.91 s.m.	REQUIRED	PROVIDED		NOTES: REFER TO L-1 AND L-3 FOR SEED NOTES
TOTAL SHRUBS (15 SHRUBS/ 100 s.m.)		506	636]	
AS PER CONSERVATION PLANS SECTION 3.4 (AR					ION
marshes, along wetland pond 100 edges, wet meadows/prairies, or similar shallow aquatic habitats rem	nt at a density of 15 shrubs per) m ² in a gradient with most ubs located adjacent to the naining natural area.	to the propose	lary band of herbaceous o d development.	cover adjacent	The width of bands 2 and 3 will be determined on a site-by-site basis and will vary depending on the quality of the natural area. Shrub plantings are recommended closest to herbaceous wetlands as a mitigation measure. In extrain instances, planting a reverse vegetation band around an herbaceous wetland (e.g. shrubs in Band 3) may be recommended to reverse nerveactment into the critical function zone of the

Oakville Trafalagar Memorial proposed deciduous tree proposed coniferous tree proposed shrub existing elevation proposed elevation min. 200mm topsoil, fine grade & seed min. 200mm topsoil, fine grade & seed with Upland Dry Meadow Mix FOR LANDSCAPE NOTES REFER TO L-2 ISSUED FOR TENDER DESCRIPTION Issued for Submission Issued for Submission Issued for Submission Issued for Permit Issued for Tender Issued for SI # 1/#1/ The Catholic Cemeteries Holy Family Cemetery Crematorium Building 2523 Lower Base Line Road L-4 **RESTORATION PLANTING** adesso design inc.

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