



Stantec Consulting Ltd.
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May 1, 2017
File: 165620102-202

Town of Kingsville
2021 Division Road North
Kingsville, Ontario, N9Y 2Y9

**Attention: Mr. Andrew Plancke, CET
Director of Municipal Services**

Dear Andrew:

Reference: M&M Farms Ltd. Water Works Petition – Engineer’s Report

As requested, we have prepared an engineer’s report to address a Petition for Water Works (Petition) to extend an existing watermain easterly along County Road 18 (CR18) from County Road 34 (CR34). The Petition was filed with the Town on February 23rd, 2017 by a sole petitioner (Mike Mastronardi of M&M Farms Ltd. (MMF)) to service a proposed greenhouse development located on CR18 immediately east of Sun-Brite Canning.

The petition was accepted by Kingsville Council on February 27th, 2017 per resolution 220-2017 with Stantec Consulting Limited (Stantec) being appointed as the Engineer. A copy of the Petition and Council resolution can be found in Appendix “B”.

Background

In July 2002, MMF applied and received approval from the Union Water Supply System (UWSS) to reserve 100,000 Imp. gallons per day (Igpd) of water treatment capacity to support a proposed 10 acre hydroponic greenhouse development on the south side of CR18 between CR34 and CR31.

Later in July 2002, MMF reapplied and received approval from the UWSS to increase the original 100,000 Igpd of water treatment capacity allocation to 320,000 Igpd to support a larger proposed 20 acre greenhouse development.

Also in July of 2002, Mr. Mastronardi received Kingsville Council authorization to purchase a peak water delivery capacity of 167 Imp. gallons per minute (Igpm) from the Town under the Northeast Area Trunk Watermain Project on the existing 600mm dia. trunk watermain located at the intersection of CR18 and CR34 to support the proposed greenhouse development. A copy of the Council resolution can be found in Appendix “B”.

The authorization was based on Stantec’s water availability report prepared for this development dated July 19, 2002 which documented the impact on the overall water distribution system and availability of unreserved capacity to support the development. The Town has confirmed that MMF has paid in full for the above noted delivery capacity over the course of 2002 and 2003.

Per the recommendations of Stantec’s July 2002 report, a Petition for Water Line to extend an existing watermain easterly along CR18 from CR34 was filed with the Town on October 30th, 2002 by MMF with one other petitioner. The petition was accepted by Council per resolution 714-2002. However, one of the petitioners known as 1206782 Ontario Limited later withdrew their name from the petition leaving MMF as the sole petitioner. Stantec was appointed as the Engineer and



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Reference: M&M Farms Ltd. Water Works Petition – Engineer’s Report

an Engineers report was filed with the Town in April 2003. The Engineer’s report was subsequently put on hold and did not proceed to Council for consideration.

Following a long period of inactivity, MMF has recently revived their development plans and is proceeding with a larger proposed greenhouse development on the same site. Due to the expiration of time limitations for obtaining building permits and using of availed water treatment capacity under the original approvals, a new application for 200,000 Igpd of water treatment capacity was resubmitted by MMF in April 2016.

Following the submission of an updated water availability report from Stantec in May 2016, MMF received approval in June 2016 from both the Town and UWSS for 200,000 Igpd of water delivery & treatment capacity to support their proposed greenhouse development.

Per the recommendations of Stantec’s May 2016 report, MMF refiled a new Petition for Water Works with the Town to extend an existing watermain easterly along CR18 from CR34 to service their proposed greenhouse development at Municipal No. 1755 and the subject of this Engineer’s report.

Servicing Considerations

In servicing this greenhouse development, an effort was made to follow good planning practices to minimize the number of watermains that are ultimately constructed along municipal rights-of-way. The selection of final pipe sizes and system configuration should be based on projected future water demands that may develop over and above that required to service the 20 year residential growth projections within the local service corridor. These future water demands could stem from either residential, greenhouse and/or industrial developments contemplated by current or future land owners. The local service corridor is defined in this case as those lands abutting the CR18 right-of-way from CR34 to CR31 and the proposed greenhouse development is located at Municipal No. 1755 all as shown in Figure’s 1 and 2 found in Appendix “A”.

Currently, all abutting land owners within the service corridor have access to potable water for domestic purposes from the existing 150mm dia. watermain running along CR18 using private service connections. Hence, there is no requirement to service any un-serviced lands with domestic potable water from the petitioned new watermain extension.

February 2003

A mailing survey of all land owners within the service corridor was conducted by the Town in February 2003 in response to the original petition to gauge the interest level and identify any potential future developments. A written inquiry and plan was prepared and mailed to all property owners. A copy of this letter and list of all property owners contacted can be found in Appendix “B”.

The inquiry resulted in an expression of interest from four property owners all whom are identified in Appendix “B”. These four property owners were later contacted by phone to gauge their level of interest and understanding of the initiative. In all cases, these property owners were interested in acquiring water capacity to support potential greenhouse development, however, they were not prepared to invest any significant sums of money to secure a suitable supply to their property. Consequently, these property owners declined to participate further in the Petition and



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requested to be withdrawn from the initiative acknowledging that the opportunity may never present itself again. Thus, MMF became the sole petitioner.

February 2017

The refiled Petition was circulated by MMF to seven (7) properties along the service corridor that could potentially benefit from the proposed watermain extension to make them aware of the Petition while regauging their interest level and identifying any potential future developments. A list of all property owners contacted can be found in Appendix “B”.

The inquiry resulted in no expressions of interest other than MMF as most land owners were not prepared to invest significant sums of money to secure an increased water supply to their property. Thus, MMF remains the sole petitioner (as in 2003) for the proposed watermain extension along CR18 to service their proposed greenhouse development on the south side of CR18 on land owned by MMF.

Hydraulic Considerations

The Stantec May 2016 report established that the existing 150mm dia. municipal watermain infrastructure running along CR18 it fronts the MMF property has insufficient unreserved capacity to deliver the allocated 167 Igpm delivery capacity to support the proposed MMF greenhouse development without having a significant impact on the remainder of the water distribution system.

The Stantec report also established that sufficient unreserved delivery capacity to support the MFF development is available westerly on the existing 400mm dia. municipal watermain stub off the existing 600mm dia. municipal trunk watermain located in the northeast corner of the CR18 and CR34 intersection; and that this delivery capacity could be conveyed to the MMF property using new watermain infrastructure along CR18. This available delivery capacity was purchased by MMF in 2002 and still remains reserved at this location for MMF.

To establish the most suitable pipe size and configuration of this new watermain infrastructure, an updated version of the hydraulic computer model for UWSS was employed. The model was originally developed as part of the 1999 Leamington Master Plan and 2000 Union Model studies and was recently updated as part of the recent Kingsville Southwest Service Area Water Supply Study in 2017. The model uses the Windows based WaterCAD software program developed by Bentley Systems Inc (formerly Haested Methods, Inc.). The model is used for evaluating water availability to support growth as well as proposed developments within the UWSS service area. System improvements that were planned under the 2012 UWSS Master Plan, 2003 UWSS Water Expansion ESR, 2002 Leamington Class EA, 2001 Union ESR Addendum and 1999 Kingsville Northeast Area Class EA have all been maintained in the model and considered in the evaluations.

Of particular relevance in this case is that the MMF property is situated in an area of the water distribution system where residual pressures are well below the Ministry of Environment & Climate Change (MOECC) benchmark of 40 psi. This is a result of the elevation difference between the water level in the existing nearby Union & Leamington Water Tower’s and relatively high ground elevation in the vicinity of the MMF property.

In fact, the MMF property is situated in the area of the highest land elevation (227.24 meters above sea level) in the entire UWSS service area as well as all of Essex County. If the water level in



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the water towers’ were at their top water level, the maximum residual pressure that could be generated at the MMF property during static conditions would be in the order of approximately 30 psi. Under flowing conditions, residual pressures during peak demand periods can drop to as low as 24 psi depending on pump output pressures at the Union Water Treatment Plant. This observation has been well documented in a number of recent studies and master plans completed over the last 30 years for the UWSS service area and is a generally accepted system limitation by the Town and UWSS.

As a result, it was considered very important to minimize the impact of any proposed distribution system improvements needed to convey water to the MMF property on account of the relatively low residual pressures that predominate this local area.

Many computer runs of the model were performed to achieve a system configuration that would adequately supply the allocated delivery capacity to the MMF property while attempting to achieve and maintain sufficient residual pressure under peak hour and/or maximum day + fire flow conditions in accordance with MOECC Design Guidelines under both existing and future 20 year water demand projections. The analyses were also predicated on the allocated delivery rate to the proposed MMF greenhouse development being regulated using an automatic flow control system in compliance with Town bylaws and policies governing greenhouse developments and expansions.

Results of Hydraulic Analyses

Based on the above considerations, model simulations predict that a new 250mm dia. pipeline from the existing 600mm dia. trunk watermain at the intersection of CR18 and CR 34 to the proposed greenhouse facility along County Road 18 would have the least impact on existing and future residual pressures; and any further increase in size offering minimal benefits other than some increased conveyance capacity and increased level of fire protection. The results of the hydraulic simulations supporting the above noted scenarios are presented in Appendix “C”.

Further analyses were also performed to assess the ability of the proposed 250mm dia. pipeline to carry minimum fire flows for fire protection purposes with results of the hydraulic simulations presented in Appendix “D”.

Normally, the Town would not be concerned with providing a piped water supply for fire protection purposes within the rural corridors, but rather with providing an adequate potable water supply to existing and future water consumers. However, in the case of new greenhouse developments and expansions, some minimum level of fire protection may be required in order to conform with local building codes; the actual level being dependent on building classification. Specific requirements for fire protection are under the jurisdiction of Kingsville Building Services and its Chief Building Official (CBO).

In this case, it was observed that the proposed 250mm dia. watermain along CR18 where it would front the proposed greenhouse operation would have sufficient capacity to provide the minimum recognized fire flow of 400 Igpm and up to 650 Igpm while maintaining the required min. 20 psi residual pressure benchmark in the remainder of the water distribution system. Obtaining this fire flow rate would require at least one hydrant off the proposed 250mm dia. watermain. Hence, hydrants are to be located in the vicinity of the greenhouse building structure for fire protection as well as for flushing purposes.



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It was also observed that if the proposed 250mm dia. watermain along CR18 were oversized to 300mm dia., it would have sufficient capacity to provide the minimum recognized fire flow of 400 Igpm and up to 850 Igpm while maintaining the required min. 20 psi residual pressure benchmark in the remainder of the water distribution system. Obtaining this fire flow rate would require at least two hydrants off the proposed 300mm dia. watermain.

Other Considerations

1. It was observed that residual pressures along CR18 & CR31 immediately east of the existing 250mm dia. trunk watermain located midway between CR34 & CR31 adjacent to the County lands are being significantly impacted by the large frictional losses currently being experienced within the existing 150mm diameter watermain on CR18.

Computer simulations show that these residual pressures can be significantly enhanced towards the 40 psi benchmark during peak demand periods by augmenting the existing 150mm dia. watermain on CR18 with a new 250mm dia. watermain from the proposed 250mm dia. watermain at MMF easterly to CR31 and southerly to Road 3 East. The enhancement was particularly beneficial under future water demand projections and fire flow scenarios. Results of hydraulic simulations depicting this scenario under both existing and future conditions are presented in Appendix “E”.

It is not proposed to undertake this particular system improvement as part of this Petition at this time. However, it should be considered by the Town in cooperation with existing greenhouse operations and currently approved future greenhouse developments that are located within this specific corridor when the need arises in the future.

2. It was also observed that water delivery capacity to support up to an additional 10 acres of greenhouse development could be conveyed easterly along CR18 from CR34 up to the proposed MMF property with minimal impact on the remainder of the distribution system by oversizing the proposed 250mm dia. watermain to 300mm diameter.

However, this is only valid as long unreserved delivery capacity remains available in the 600mm dia. trunk watermain at CR34. Any future approvals that make use of this available capacity upstream in the existing 600mm trunk watermain would invalidate this statement unless augmented by (yet to be determined) future watermain infrastructure.

This delivery capacity can also be conveyed further east by augmenting the existing 150mm dia. watermain with a new 300mm dia. watermain looped in with the existing 250mm dia. trunk watermain located adjacent to the County lands. Results of hydraulic simulations depicting the above scenarios under both existing and future conditions are presented in Appendix “F”.

The 2003 mailing survey showed that although there is interest in further greenhouse development within this local service corridor, landowners were not prepared to pay the significant costs necessary to construct additional infrastructure to secure an adequate municipal water supply. However, there remains the possibility for this to change in future.

If the number of watermains constructed within the Town rights-of way is to be minimized, then it is recommended that the Town give serious consideration to having the proposed 250mm dia. watermain to MMF oversized to the next available pipe size of



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300mm dia. so as to create additional spare conveyance capacity for long term future benefit when and if the proposed pipeline were ever to be extended easterly towards CR31.

Preliminary Design

A preliminary plan of the proposed watermain extension to service MMF is presented in Figure 3 found in Appendix “A”. The proposed 250mm watermain would connect into the existing 400mm dia. trunk watermain stub on CR18 at CR34 and extend easterly along CR18 to front at the western limits of MMF’s property. Interconnections would also be made with the existing 300mm dia. watermain stub fronting Sun-Brite Canning and existing 150mm watermain fronting MMF.

An 150mm dia. valved service stub would be provided for future extension into the greenhouse facility. The greenhouse developer is responsible for extending this line into the proposed greenhouse facility along with the implementation of an automatic water flow control system and sufficient clear water storage facilities when the greenhouse is constructed. Two fire hydrants would also be provided in front of the greenhouse structure within the Town right-of-way to serve as a source of fire protection.

Due to the high level of utility congestion and existing storm drainage system that is located within the boulevard areas along both sides of the existing road pavement along CR18, the proposed watermain will need to be routed under the existing pavement structure and road shoulder (where possible) to avoid conflicts. However, this avoidance will result in significantly higher construction costs along with increased traffic disruptions during the construction period that will need to be mitigated as much as possible during the final design and construction stages. Note that the exact route of the proposed watermain will be finalized during the detailed design stage after all utilities have been located in the field with the intention of routing the proposed watermain in the more desirable boulevard area (where the opportunity lends itself) with its associated lower construction and maintenance costs.

Cost Estimates & Assessment Charges

Preliminary capital and construction cost estimates for the proposed 250mm dia. watermain extension is presented in Appendix “G” and includes the cost of engineering, contingencies and HST. Cost estimates to oversize the proposed 250mm to 300mm dia. have also been prepared and presented in Appendix “G” for the Town’s consideration.

The estimated capital cost to construct the 250 dia. watermain is approximately \$576,000 excluding HST. The estimated capital cost to construct a 300mm dia. watermain in lieu of 250mm dia. is approximately \$612,000 excluding HST. Thus, the estimated capital cost of oversizing is approximately \$36,000 excluding HST.

Since all other lands abutting the proposed watermain installation are already serviced by watermains and/or private service connections located along the frontage of their properties, there is no requirement for cost sharing of the proposed watermain extension with these adjacent lands. Hence, the full capital cost of constructing the proposed 250mm dia. watermain, including all appurtenances, incidentals and engineering estimated at \$576,000 plus HST is to be borne solely by MMF who is the sole petitioner for the water line.

Note that the above capital cost estimates are for budgetary purposes and that MMF will be assessed the actual costs necessary to complete the project to a successful conclusion. Therefore,



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Reference: M&M Farms Ltd. Water Works Petition – Engineer’s Report

upon completion of watermain construction, the Town will total all costs with carrying out the project and assess this total cost to MMF for reimbursement.

If the Town is interested in having the watermain oversized from 250mm to 300mm diameter, then the Town would be responsible for bearing the capital cost to carry out the oversizing portion only. Based on the above estimates, the capital cost assessable to the Town for oversizing would be approximately \$36,000 plus HST or 6% of the total project cost with the remaining \$576,000 plus HST or 94% assessable to MMF.

It is suggested that the project be designed and tendered with both the 250mm & 300mm diameter alternatives and the tender prices used to establish an actual cost sharing ratio. This will also give the Town an opportunity to review costs prior to making a final decision on whether to proceed with oversizing. Should the Town decide to proceed with oversizing, then upon completion of watermain construction, the Town will total all costs of carrying out the project and share these costs with MMF in the ratio set above adjusted to reflect actual cost.

We trust the foregoing report is to the Town’s satisfaction and would be pleased to meet with your administration and council at their convenience to further discuss this report and answer any questions that may arise.

Thank you for appointing Stantec to carry out this work on the Town’s behalf and look forward to receiving further instruction to proceed with the preparation of contract documents including engineered construction drawings and specifications followed by the tendering process, contract administration and construction review.

In the meantime, please contact me directly should you have any questions or concerns or require additional information.

Sincerely,

STANTEC CONSULTING LTD.

Tony Berardi, P.Eng.
Principal & Sector Leader
Phone: (519) 966-2250 Ext. 255 ; Fax: (519) 966-5523
tony.berardi@stantec.com

Attachment: Appendix’s A, B, C, D, E, F & G

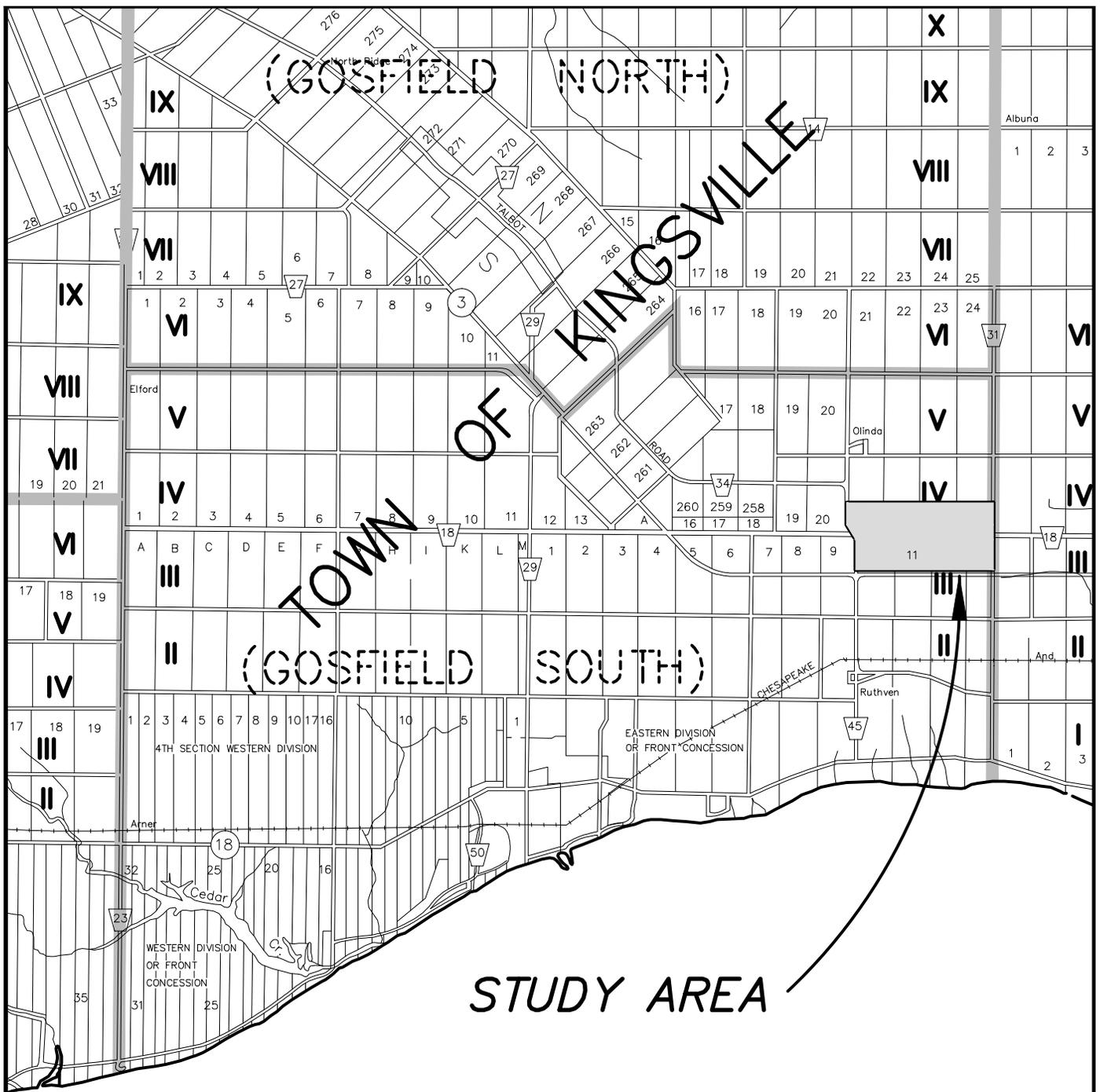
- c. Peter Valore - Chief Building Official – Kingsville
- Robert Brown – Manager of Planning & Development - Kingsville
- Rodney Bouchard - Manager of Union Water Supply System
- Mike Mastronardi – M&M Farms Ltd.
- Tom Bateman, P.Eng., - County Of Essex – County Engineer

APPENDIX “A”

Figure No. 1 – Key Plan

Figure No. 2 – Location Plan

Figure No. 3 – Proposed Watermain Extension



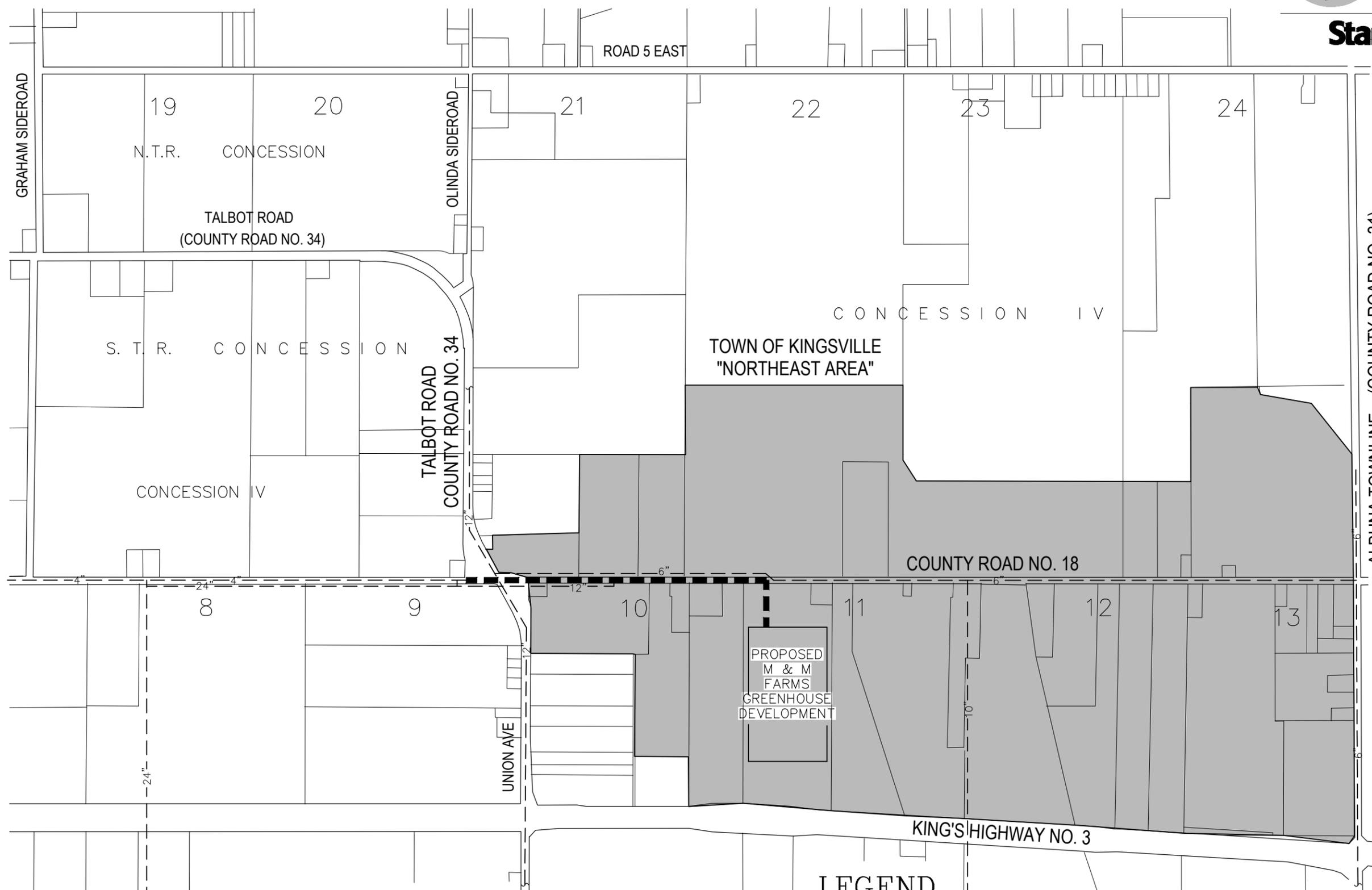
KEY PLAN COUNTY ROAD 18 WATERMAIN EXTENSION

NOT TO SCALE

FIGURE 1



Stantec

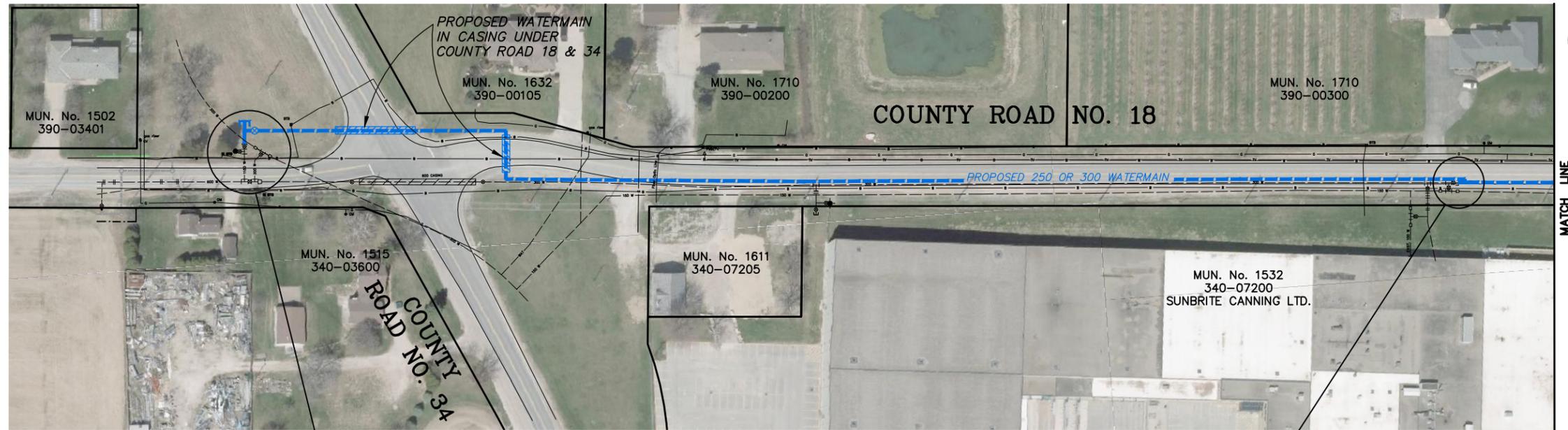


LEGEND

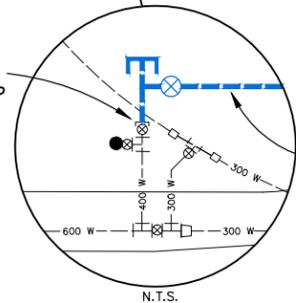
-  STUDY AREA
-  PROPOSED ROUTE OF WATERMAIN
-  EXISTING WATERMAIN

LOCATION PLAN
COUNTY ROAD 18 WATERMAIN EXTENSION

FIGURE 2

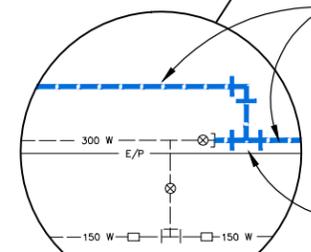


PROPOSED CONNECTION TO EXISTING 400mm CPP TRUNK WATERMAIN



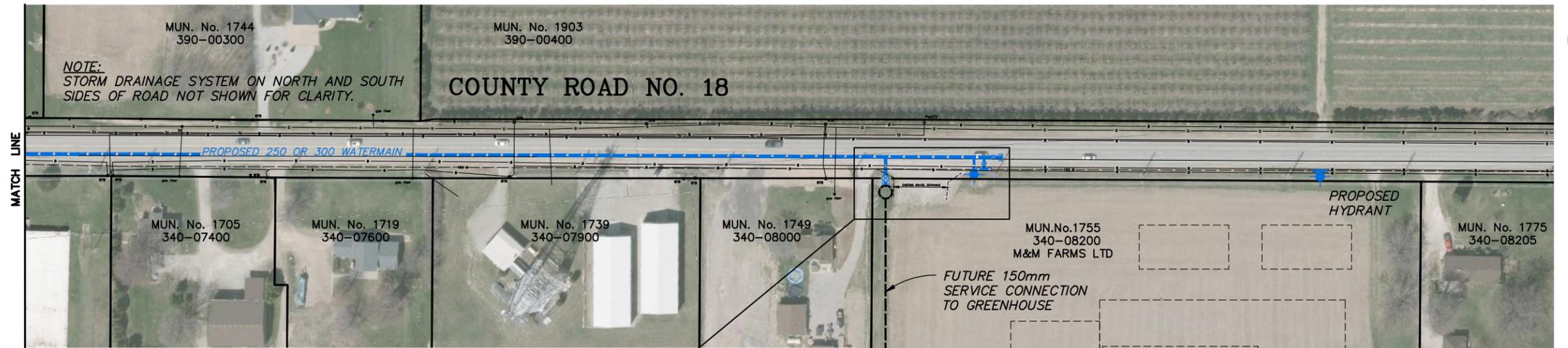
PROPOSED 250mm OR 300mm WATERMAIN

NOTE:
STORM DRAINAGE SYSTEM ON NORTH AND SOUTH SIDES OF ROAD NOT SHOWN FOR CLARITY.



PROPOSED 250mm OR 300mm DIA. WATERMAIN

PROPOSED CONNECTION TO EXISTING 300mm DIA. PVC WATERMAIN



NOTE:
STORM DRAINAGE SYSTEM ON NORTH AND SOUTH SIDES OF ROAD NOT SHOWN FOR CLARITY.

PROPOSED 250mm OR 300mm DIA. WATERMAIN

PROPOSED VALVE AND PLUG FOR FUTURE EXTENSION

PROPOSED HYDRANT

PROPOSED 150mm DIA. SERVICE STUB

FUTURE METER CHAMBER AND 150mm DIA. SERVICE CONNECTION TO GREENHOUSE

PROPOSED CONNECTION TO EXISTING 150mm AC WATERMAIN

FUTURE 150mm SERVICE CONNECTION TO GREENHOUSE

SITE OF PROPOSED 24 ACRE GREENHOUSE



TOWN OF KINGSVILLE
COUNTY ROAD NO. 18
WATERMAIN EXTENSION
PROPOSED WATERMAIN EXTENSION



W:\active\165620102\TASK_202\preliminary\drawing\civil\165600698 - Fig. 3.dwg 2017-05-01 01:07pm Br: Holmes

APPENDIX “B”

A. 2002 PETITION FOR WATER LINE

Copy of Petition

Copy of Council Resolution

B. 2003 SURVEY

Copy of Letter of Inquiry & Plan

List of Property Owners

Respondents to Letter of Inquiry

C. PURCHASE OF WATER DELIVERY CAPACITY

Copy of Council Resolution

D. 2017 PETITION FOR WATERWORKS

Copy of Petition

Copy of Council Resolution

E. 2017 SURVEY

List of Property Owners

PRESENTED TO
KINGSVILLE COUNCIL
NOV 12 '02
11



CORPORATION OF THE TOWN OF KINGSVILLE

2021 Division Road North
Kingsville, Ontario N9Y 2Y9
Phone: (519) 733-2305 FAX: (519) 733-8108

PETITION FOR WATERLINE

I/We, being the owners of lands as set out in this petition, in the Town of Kingsville, as indicated by the last revised assessment roll, hereby petition for the extension of the existing 600 mm. diameter Northeast Trunk Watermain, located west of County Road 34, easterly across County Road 34 and along County Road 18 East to Farm Lot 11. The petitioner(s) also authorize preparation of an Engineer's Report to determine the feasibility and cost to associated property owners.

NAME/ADDRESS OF PETITIONER	SIGNATURE	CON., LOT or PLAN NO.	ROLL NO.
M & M Farms Ltd. (Per: Mike Mastronardi)	<i>Mike Mastronardi</i>	Part Lot 11, Concession 3	340-082
1206782 Ontario Ltd.	<i>Peter Quiring</i>	PART LOT 11 CONCESSION 3 ED	340-08405

We, being the owners, also acknowledge that any costs associated with the preparation of a Preliminary Engineering Report shall be paid by the Petitioners, as listed in this petition, in equal proportions.

Water Petition filed this 30th day of OCTOBER, 2002.

D. Gibson
Authorized Employee,
Town of Kingsville



CORPORATION OF THE TOWN OF KINGSVILLE

2021 Division Road North
Kingsville, Ontario N9Y 2Y9

Phone: (519) 733-2305

FAX: (519) 733-8108

FAX: 966-5523

November 14, 2002

Stantec Consulting Limited
3260 Devon Drive
Windsor, Ontario N8X 4L4

RECEIVED

NOV 19 2002

STANTEC CONSULTING LTD.
Consulting Engineers

ATTN: Mr. Tony Berardi, P. Eng.

RE: Petition for Waterline
Northeast Trunk Watermain, located west of County Road 34,
easterly across County Road 34 and along County Road 18 East to
Farm Lot 11

Dear Mr. Berardi:

Council for the Town of Kingsville reviewed the attached Petition for Waterline at their recent meeting of Council. Please note their resolution of support:

714-2002 *Moved by B. Sanger, seconded by G. Queen to accept the petition for the extension of the existing 600 mm diameter Northeast Trunkmain located west of County Road 34, easterly across County Road 34 and along County Road 18 to Farm Lot 11 and to authorize Stantec Consulting Ltd. to prepare an Engineer's report to determine the feasibility and costs associated to the property owners.*

CARRIED

Regards,

Kim Siddall,
Deputy-Clerk

KS

Enclosure 1

c.c. Mr. David Gibson, CBO ✓

Original in Mail

Corporation of the Town of Kingsville

2021 Division Road North
Kingsville, Ontario N9Y 2Y9

Phone: (519) 733-2305

FAX: (519) 733-8108



February 17, 2003

ATTN:

**RE: PETITION FOR WATERLINE ALONG COUNTY ROAD 18 FROM COUNTY ROAD 34
 EASTERLY**

The Town of Kingsville is planning the construction of a new watermain along County Road 18 from County Road 34 easterly in response to a "Petition for Waterline" filed on October 30th, 2003 and accepted by Council per Resolution 714-2002.

The purpose of this watermain is primarily to service the proposed 20 acre M&M Farms Greenhouse development on Part Lot 11, Concession 3, Roll No. 340-082 along County Road 18 between County Road 34 & County Road 31.

The Town Engineer has requested that the property owners along the route of the proposed watermain be contacted to determine if they have any future plans requiring municipal water for greenhousing or industrial needs. The Engineer has further indicated that the pipe size will be determined in accordance with the report demand by the property owner.

Property owners who express an interest will be required to sign the petition. In addition, those who indicate an interest in greenhouse acreage will also be required to complete and submit a greenhouse application which will initiate the preparation of a water availability report. Pending the results of the water availability report, the property owner will be retained or removed from the Petition. Those who do not respond will have no opportunity for future water services beyond domestic use.

On completion of the Engineer's Report, a meeting will be held with all property owners that have been assessed a cost for the purchase of water capacity.

Kindly respond by March 3, 2003.

Should further information be required, please do not hesitate to contact Mr. Steve Branch, Acting Environmental Services Manager at 733-2305.

Sincerely,



Dan DiGiovanni
Chief Administrative Officer

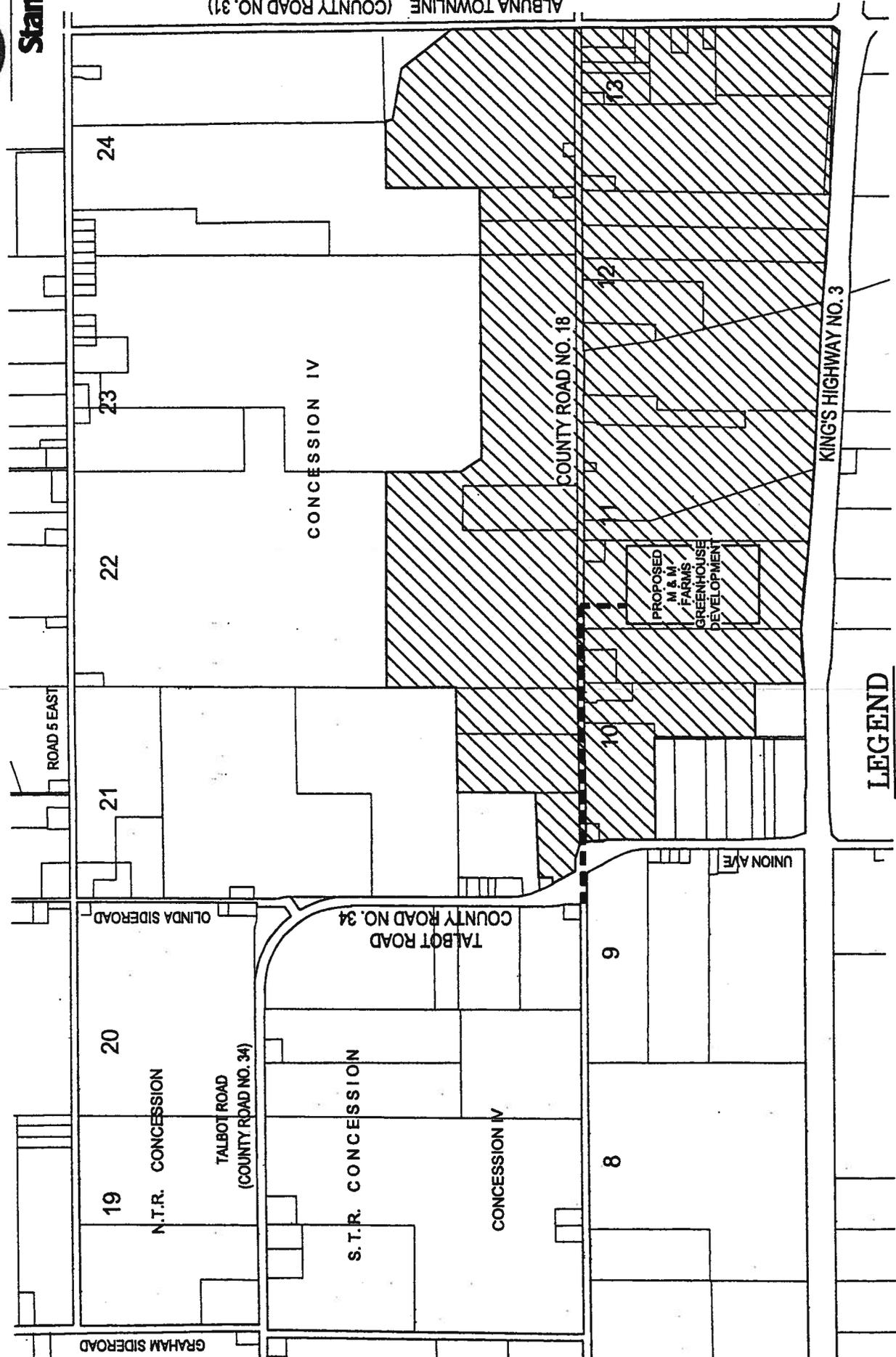
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Enclosures



Stantec

ALBUA TOWNLIN (COUNTY ROAD NO. 31)



LEGEND

AREA OF NOTIFICATION

PROPOSED ROUTE OF WATERMAIN

PROJECT NO. 65600698
DATE 2003.02.03

340-000-09890-0000
 PANNUNZIO SALVATORE
 PANNUNZIO MAUREEN ANNE
 PO BOX 373 STN MAIN
 LEAMINGTON ON N8H 3W3

340-000-10000-0000
 DICK KEVIN WILLIAM
 DICK CARMEN
 PO BOX 206 STN MAIN
 LEAMINGTON ON N8H 3W3

340-000-10100-0000
 COSTE RITA ELIZABETH
 RR 2 STN MAIN
 KINGSVILLE ON N8Y 2E5
 CAN

340-000-10105-0000
 VANDRUNEN ARIE
 VANDRUNEN ADRIANA
 2481 ALBUNA TOWNLINE RR 2
 KINGSVILLE ON N8Y 2E5

340-000-10200-0000
 FRIESEN GERHARD KLASSEN
 FRIESEN OLGA
 2477 ALBUNA TOWNLINE
 KINGSVILLE ON N8Y 2E5

340-000-10300-0000
 MASTRONARDI MICHAEL FRANK
 363 TALBOT ST W
 LEAMINGTON ON N8H 4H3
 CAN

340-000-10400-0000
 CRISTOFARI GIOVANNI
 2301 ALBUNA
 RR 2
 KINGSVILLE ON N8Y 2E5 CAN

340-000-10450-0000
 CRISTOFARI DOMENICO
 328 ALBUNA TOWNLINE
 LEAMINGTON ON N8H 3V5

340-000-10500-0000
 TRANSPORTATION MINISTRY
 659 EXETER RD
 LONDON ON N6E 1L3
 CAN

340-000-10800-0000
 TWIN PEAKS HYDROPONICS INC
 TWIN PEAKS HYDROPONICS INC
 PO BOX 251 STN MAIN
 LEAMINGTON ON N8H 3W2

390-000-00100-0000
 DI CARLO LUIGI
 DI CARLO MARIA
 1640 RD 4 E RR 2
 KINGSVILLE ON N8Y 2E5

390-000-00105-0000
 DICARLO UGO
 RR 1
 1632 ROAD 4 E
 KINGSVILLE ON N8Y 2E5 CAN

390-000-00200-0000
 ABBRUZZESE JOHN
 RR 2
 1710 ROAD 4 E
 KINGSVILLE ON N8Y 2E5 CAN

390-000-00300-0000
 ABBRUZZESE EUGENIO
 RR 2
 1744 ROAD 4 E
 KINGSVILLE ON N8Y 2E5 CAN

390-000-00400-0000
 GEORGE WHALEY & SONS LIMITED
 RR 2
 RUTHVEN ON N8P 2G0
 CAN

390-000-00500-0000
 MASTRON ENTERPRISES INC
 2100 ROAD 4 E
 KINGSVILLE ON N8Y 2E5
 CAN

390-000-00800-0000
 WIEBE WILHELM
 2112 ROAD 4 E
 RR 2 STN MAIN
 KINGSVILLE ON N8Y 2E5 CAN

390-000-00850-0000
 WIEBE DIEDRICH
 2124 ROAD 4 E
 RR 2 STN MAIN
 KINGSVILLE ON N8Y 2E5 CAN

390-000-00900-0000
 HYDRO ONE NETWORKS INC
 ASSESSMENT & TAXATION
 483 BAY ST 12TH FLOOR TGT12
 TORONTO ON M5G 2P5

340-000-07200-0000
SUN-BRITE CANNING LIMITED
PO BOX 70
RUTHVEN ON N0P 2G0

340-000-07205-0000
WIEBE FRANZ
1811 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5 CAN

340-000-07400-0000
SCHERER PETER
1705 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5 CAN

340-000-07800-0000
KOHL JOHN PETER
RR 2
1719 ROAD 4 E
KINGSVILLE ON N0Y 2E5 CAN

340-000-07700-0000
FISHERIES AND OCEANS CANADA
CANADIAN COAST GUARD
4800 YONGE ST
NORTH YORK ON M2N 6A8

340-000-07800-0000
NEUMANN COMMUNICATIONS LTD
363 EUGENIE ST E
WINDSOR ON N8X 2Y2
CAN

340-000-08000-0000
INGRATTA FIORENTINO
1749 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5 CAN

340-000-08200-0000
M & M FARMS LTD
331 TALBOT ST W
LEAMINGTON ON N8H 4H3
CAN

340-000-08205-0000
FISCHER KEVIN ALEX
FISCHER BARBARA ANN
1775 ROAD 4 EAST RR 2
KINGSVILLE ON N0Y 2E5

340-000-08250-0000
PAVAO JOHN MANUEL
1835 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5 CAN

340-000-08300-0000
698634 ONTARIO INC
PO BOX 417
LEAMINGTON ON N8H 2W5
CAN

340-000-08400-0000
WHALEY GEO & SONS LTD
RR 2
RUTHVEN ON N0P 2G0
CAN

340-000-08401-0000
STEWART PETER RICHARD
1801 RD 4 E
RR 2
KINGSVILLE ON N0Y 2E5 CAN

340-000-08405-0000
WILLOR ACRES LIMITED
2025 SPINKS DR
KINGSVILLE ON N0Y 2E5

340-000-08600-0000
KINGSVILLE TOWN
2021 DIVISION RD N
KINGSVILLE ON N0Y 2Y9
CAN

340-000-08700-0000
ESSEX COUNTY
380C FAIRVIEW AVE W
ESSEX ON N8M 1Y6
CAN

340-000-08701-0000
TRANSPORTATION MINISTRY
650 EXETER RD
LONDON ON N6E 1L3
CAN

340-000-08800-0000
MASTRONARDI NICK D
434 TALBOT ST W
LEAMINGTON ON N8H 4H4
CAN

340-000-08900-0000
PEARCE RICHARD DEAN
PEARCE MARIE REINE
1979 ROAD 4 EAST RR 2
KINGSVILLE ON N0Y 2E5

340-000-09000-0000
VANROIE ADOLF VICTOR
2003 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5 CAN

340-000-09100-0000
MARIOTTE BASIL
1335 TANGLEWOOD CRES
WINDSOR ON N9J 2K3
CAN

340-000-09200-0000
COPPOLA VITO
2057 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5

340-000-09300-0000
FYSH DOROTHY MARGARET
RR 2
2073 ROAD 4 E
KINGSVILLE ON N0Y 2E5

340-000-09400-0000
MASTRONARDI IRENA
389 TALBOT ST W
LEAMINGTON ON N8H 4H3
CAN

340-000-09490-0000
MASTRONARDI IRENA
369 TALBOT ST W
LEAMINGTON ON N8H 4H3
CAN

340-000-09600-0000
WILKINSON TIMOTHY REID
2151 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5

340-000-09700-0000
COSTA PETER MANUEL
2173 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5 CAN

340-000-09705-0000
COSTA MARIA
2177 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5

340-000-09800-0000
FRIESEN BERNARD
2189 ROAD 4 E
RR 2
KINGSVILLE ON N0Y 2E5 CAN

340-000-09800-0000
627439 ONTARIO LIMITED
PO BOX 373 STN MAIN
LEAMINGTON ON N8H 3W3
CAN

FAX CORPORATION OF THE TOWN OF KINGSVILLE



2021 Division Road North
Kingsville, Ontario N9Y 2Y9

Phone: (519) 733-2305 FAX: (519) 733-8108
Email: newkings@mnsi.net

Number of pages including cover sheet

2

Date MARCH 20 / 03
TO: TONY BERARDI
FAX# 966-5523

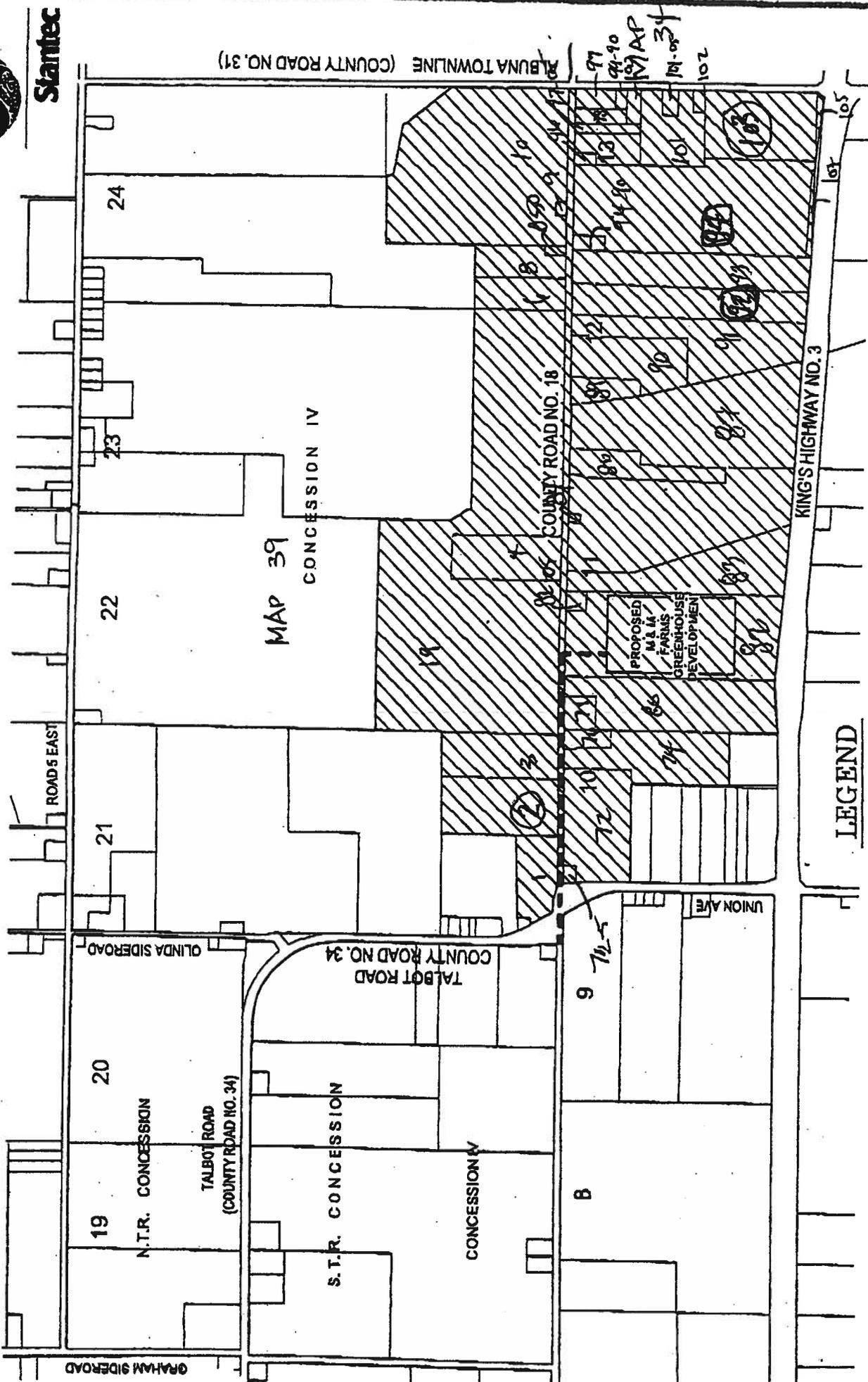
FROM: STEVE BRANCH
Phone (519) 733-2305
Fax Phone (519) 733-8108

REMARKS: Urgent For your review Reply ASAP Please Comment

TONY, THIS IS THE LIST OF CUSTOMERS WHICH HAVE SHOWN INTEREST TOWARDS PROPOSED WATERMAIN ALONG CRY RD. 18 E.

① JOHN ABBRUZZESE 1710 Rd. 4 E PH # 326-4274 ON MAP PROPERTY # 2	② VITO COPPOLA 2057 ROAD 4 E PH # 326-8440 ON MAP PROPERTY # 92
③ IRENA MASTRONARDI 369 TALBOT ST. W LEAMINGTON PH # 322-0895 ON MAP PROPERTY # 94	④ MIKE MASTRONARDI 363 TALBOT ST. W LEAMINGTON PH # 322-0895 ON MAP PROPERTY # 103

Stantec



LEGEND

▨ AREA OF NOTIFICATION

--- PROPOSED ROUTE OF WATERMAIN

PROJECT NO. — 65600598
 DATE — 2003.02.03

DATE PLOTTED: 03/20/03 11:58 AM

CORPORATION OF THE TOWN OF KINGSVILLE



2021 Division Road North
Kingsville, Ontario N9Y 2Y9

Phone: (519) 733-2305

FAX: (519) 733-8108

August 29, 2002

RECEIVED

SEP 03 2002

STANTEC CONSULTING LTD.
Consulting Engineers

Stantec Consulting Ltd.
3260 Devon Drive
Windsor, ON N8X 4L4

ATTN: Tony Berardi, P. Eng., Project Manager

**RE: M & M Farms Ltd. – 20 Acre Greenhouse Development –
Water Availability**

Dear Mr. Berardi:

Council for the Town of Kingsville reviewed your July 19, 2002 correspondence at their recent meeting of Council. The following is a copy of their resolution of support:

Resolution #517-2002

Moved by D. McGuire, seconded by G. Queen

THAT Council concurs with Engineer Berardi's report dated July 19, 2002 to authorize Mr. Mastronardi of M & M Farms to purchase 167 Igpm of water delivery capacity to support a proposed twenty (20) acre hydroponic tomato greenhouse, initially being regulated at 83 Igpm for 10 acres as set by the Town, that the applicant be granted access to the municipal water distribution system on the existing 600 mm dia. trunk watermain located west of County Road 34, along County Road 18 to service the development; and that granting of water capacity be contingent on the applicant receiving approval from Union Water for production capacity and providing a rate of flow control system that will regulate inflow at 167 Igpm including adequate on site storage having a working volume of 150,000 Imp. Gallons or greater;

AND FURTHER, if the Town grants the applicant access to the municipal system to support the development, then the applicant shall be given a time limit of three (3) weeks to purchase and reserve the capacity and a building permit (limiting the acreage to that granted by Union Water) taken out within eighteen (18) months from the date of approval;

AND FURTHER, that any initiative to convey water capacity to the proposed development site along municipal rights-of-way will require a Petition for Waterworks from the applicant authorizing the preparation of an Engineers' Report that will consider the existing and future water demands along the County Road 18 corridor from County Road 34 to County Road 31.

CARRIED

I trust you will find this satisfactory.

Yours truly,



Kim Siddall,
Deputy Clerk

KS

c.c. *D. Gibson, Chief Building Official* ✓
W. Cox, Environmental Services Manager ✓

D

TOWN OF KINGSVILLE

PETITION FOR WATERWORKS

To: The Mayor and Municipal Council
Town of Kingsville

WE HEREBY PETITION that Council of the Town of Kingsville authorize the preparation of an engineer's report for the installation of water works for the area described below:

Part of Lots 10 AND 11 Concession 3, and Part of Lots 21-23 Concession 11, in the former Township of Gosfield South, and being on the north and south sides of County Road 18, a distance of approximately 350 meters.

The undersigned owners of land within the above-mentioned area petition that:

- a) the area be defined as a waterworks area with the installation of water mains, service connections as required;
- b) the private water service connections be installed by property owners subject to all necessary permits obtained from the Town prior to installation; and
- c) an Engineer's Report be prepared to determine the feasibility and cost to the property owners within the above mentioned area.

The undersigned owners agree that should the Engineer's Report not be accepted by the persons signing this document, that any and all costs accumulated will be apportioned equally between those persons that have signed this document.

It is understood that should the Engineer's Report not be accepted by the persons signing this document, that any and all costs accumulated will be apportioned equally between those persons that have signed this Request for Waterworks.

D

cell
bener
work

NAME/ADDRESS OF PETITIONER	SIGNATURE	CONC., LOT OR PLAN NO.	ROLL NUMBER
Jacob [redacted] Abe Klassen Polina Klassen 8963 Road 8 Cottam, ON N0R 1B0	NO	CON 3 ED PT LOT 10 RP 12R9411 PART 1 RP 12R336 PART 4	340-07600
[redacted] Neumann Communications Ltd 363 Eugenie St. E Windsor, ON N8X 2Y2 [redacted]	NO I/We have the authority to bind the Corporation	CON 3 ED PT LOT 10	340-07900
Laszo A Lakatos Krisztina G Szabo 1749 Road 4 E Kingsville, ON N9Y 2E5	NO	CON 3 ED PT LOT 10	340-08000
Low [redacted] Sun-Brite Foods Inc. PO Box 70 Ruthven, ON N0P 2G0 [redacted]	NO I/We have the authority to bind the Corporation	GOSFIELD SOUTH CON 3 ED PT LOT 10 RP 12R24285 PARTS 4 TO 6	340-07400
M&M Farms Ltd 331 Talbot St. W Leamington, ON N8H 4H3	Michael Macdonald I/We have the authority to bind the Corporation	CON 3 ED PT LOT 11 RP 12R8331 PART 2	340-08200

It is understood that should the Engineer's Report not be accepted by the persons signing this document, that any and all costs accumulated will be apportioned equally between those persons that have signed this Request for Waterworks.

D

Eugenio Abbruzzese Nancy Abbruzzese 1744 Road 4 E, RR2 Kingsville, ON N9Y 2E5	NO	CON 4 ED PT LOT 21	390-00300
doug George Whaley & Sons Limited 1903 Road 5 E Ruthven, ON N0P 2G0	NO I/We have the authority to bind the Corporation	GOSFIELD SOUTH CON 4 PT LOTS 22 AND 23 AND RP 12R7799 PART 1 RP 12R8536 PART 1 RP 12R23896 PART 2	390-00400

Filed this 23 day of February 2017.

J. Stolo
Authorized Employee, Town of Kingsville

It is understood that should the Engineer's Report not be accepted by the persons signing this document, that any and all costs accumulated will be apportioned equally between those persons that have signed this Request for Waterworks.

M&M Farms Ltd Water Works Petition

ROAD 5 RD E

D

390-00400

390-00300

COUNTY RD 18

340-07900

340-07600

340-07400

340-08000

340-08200

HIGHWAY 3 HWY

0

500 Meters





-----Original Message-----

From: Andrew Plancke [mailto:aplancke@kingsville.ca]
Sent: Thursday, March 09, 2017 2:34 PM
To: Berardi, Tony <tony.berardi@stantec.com>
Subject: RE: Waterworks Agreement - M&M Farms- engineers report

M&M Farms Ltd Water Works Petition

220-2017 Moved by Councillor Larry Patterson
 Seconded by Councillor Tony Gaffan

Council authorize the Director of Municipal Services to appoint Stantec Consulting Limited as the engineer on this project and to proceed with the preparation of the construction plans, tendering, and oversee construction of the water works after the engineer's report is presented to Council.

That Council approve the draft agreement and accept the signed Petition for Waterworks for the provision of water services to the lands identified as vacant farmland described as Con 3 ED PT LOT 11 RP 12R8331 Part 2 located adjacent to Road 4 East (CR18), Roll No. 340-08200, as requested by Mr. Mike Mastronardi of M&M Farms Ltd, and authorize Administration to prepare the necessary by-law for passage at the next Regular Meeting.

CARRIED

G.A. Plancke Civil Eng. Tech (Env)
Director of Municipal Services
The Corporation of the Town of Kingsville
2021 Division Road North
Kingsville, Ontario N9Y 2Y9
Phone: (519) 733-2305 x 304
Email: aplancke@kingsville.ca
Web: www.kingsville.ca

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E

NAME/ADDRESS OF PETITIONER	SIGNATURE	CONC., LOT OR PLAN NO.	ROLL NUMBER
Jacob [redacted] Abe Klassen Polina Klassen 8963 Road 8 Cottam, ON N0R 1B0	NO	CON 3 ED PT LOT 10 RP 12R9411 PART 1 RP 12R336 PART 4	340-07600
[redacted] Neumann Communications Ltd 363 Eugenie St. E Windsor, ON N8X 2Y2 [redacted]	NO I/We have the authority to bind the Corporation	CON 3 ED PT LOT 10	340-07900
Laszo A Lakatos Krisztina G Szabo 1749 Road 4 E Kingsville, ON N9Y 2E5	NO	CON 3 ED PT LOT 10	340-08000
Low [redacted] Sun-Brite Foods Inc. PO Box 70 Ruthven, ON N0P 2G0 [redacted]	NO I/We have the authority to bind the Corporation	GOSFIELD SOUTH CON 3 ED PT LOT 10 RP 12R24285 PARTS 4 TO 6	340-07400
M&M Farms Ltd 331 Talbot St. W Leamington, ON N8H 4H3	Michael [signature] I/We have the authority to bind the Corporation	CON 3 ED PT LOT 11 RP 12R8331 PART 2	340-08200

cell
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work

It is understood that should the Engineer's Report not be accepted by the persons signing this document, that any and all costs accumulated will be apportioned equally between those persons that have signed this Request for Waterworks.

E

Eugenio Abbruzzese Nancy Abbruzzese 1744 Road 4 E, RR2 Kingsville, ON N9Y 2E5	NO	CON 4 ED PT LOT 21	390-00300
<i>dog</i> George Whaley & Sons Limited 1903 Road 5 E Ruthven, ON N0P 2G0	NO I/We have the authority to bind the Corporation	GOSFIELD SOUTH CON 4 PT LOTS 22 AND 23 AND RP 12R7799 PART 1 RP 12R8536 PART 1 RP 12R23896 PART 2	390-00400

Filed this *23* day of *February* 2017.

[Signature]

Authorized Employee, Town of Kingsville

It is understood that should the Engineer's Report not be accepted by the persons signing this document, that any and all costs accumulated will be apportioned equally between those persons that have signed this Request for Waterworks.

WATER UTILITIES LTD WATER WORKS PETITION

ROAD 5 RD E

E

390-00400

390-00300

COUNTY RD 18

340-07900
340-07600

340-07400

340-08000 340-08200

HIGHWAY 3 HWY

0 500 Meters



APPENDIX “C”

RESULTS OF HYDRAULIC ANALYSIS (Peak Demand Period)

A. Existing Conditions

Sheet 1 – without proposed greenhouse demands

Sheet 2 – with proposed 24 Acre greenhouse demand & new 250mm dia. watermain

Sheet 3 – with proposed 24 Acre greenhouse demand & new 300mm dia. watermain

B. 20 Year Future Conditions

Sheet 1 – without proposed greenhouse demands

Sheet 2 – with proposed 24 Acre greenhouse demand & new 250mm dia. watermain

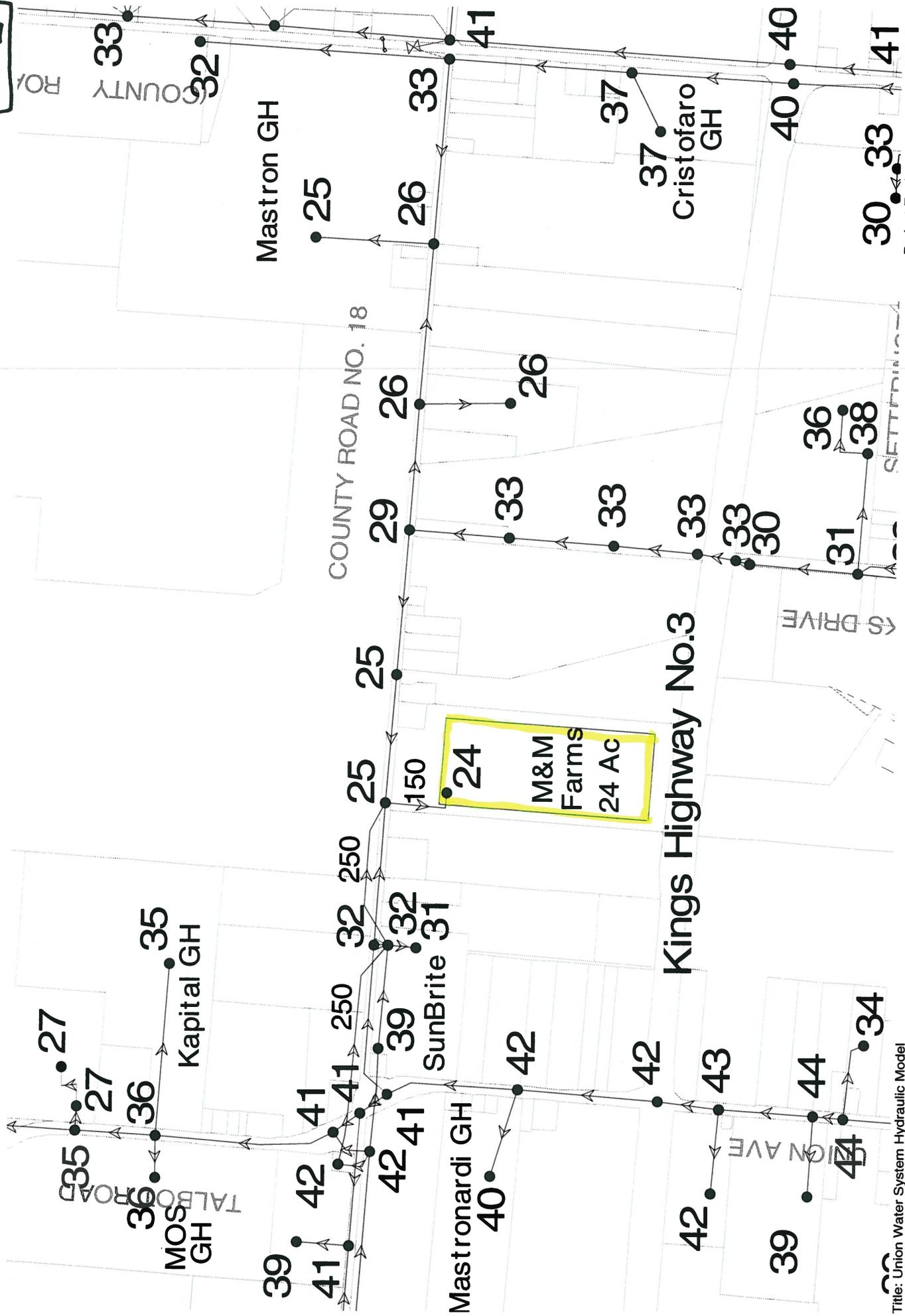
Sheet 3 – with proposed 24 Acre greenhouse demand & new 300mm dia. watermain

Scenario: Exist + Approved GH to date + Leam Service Area Exp



Scenario: Exist + Approved GH to date + Learn Service Area Exp

A-2



Scenario: Exist + Approved GH to date + Leam Service Area Exp



Scenario: Y2037 Infilling & Approved + Future GH + Leam Future Service Area Exp

B-2



Scenario: Y2037 Infilling & Approved + Future GH + Leam Future Service Area Exp

6-3



APPENDIX “D”

RESULTS OF HYDRAULIC ANALYSIS (with 400 Igpm Fire Flow Demand)

A. Existing Conditions

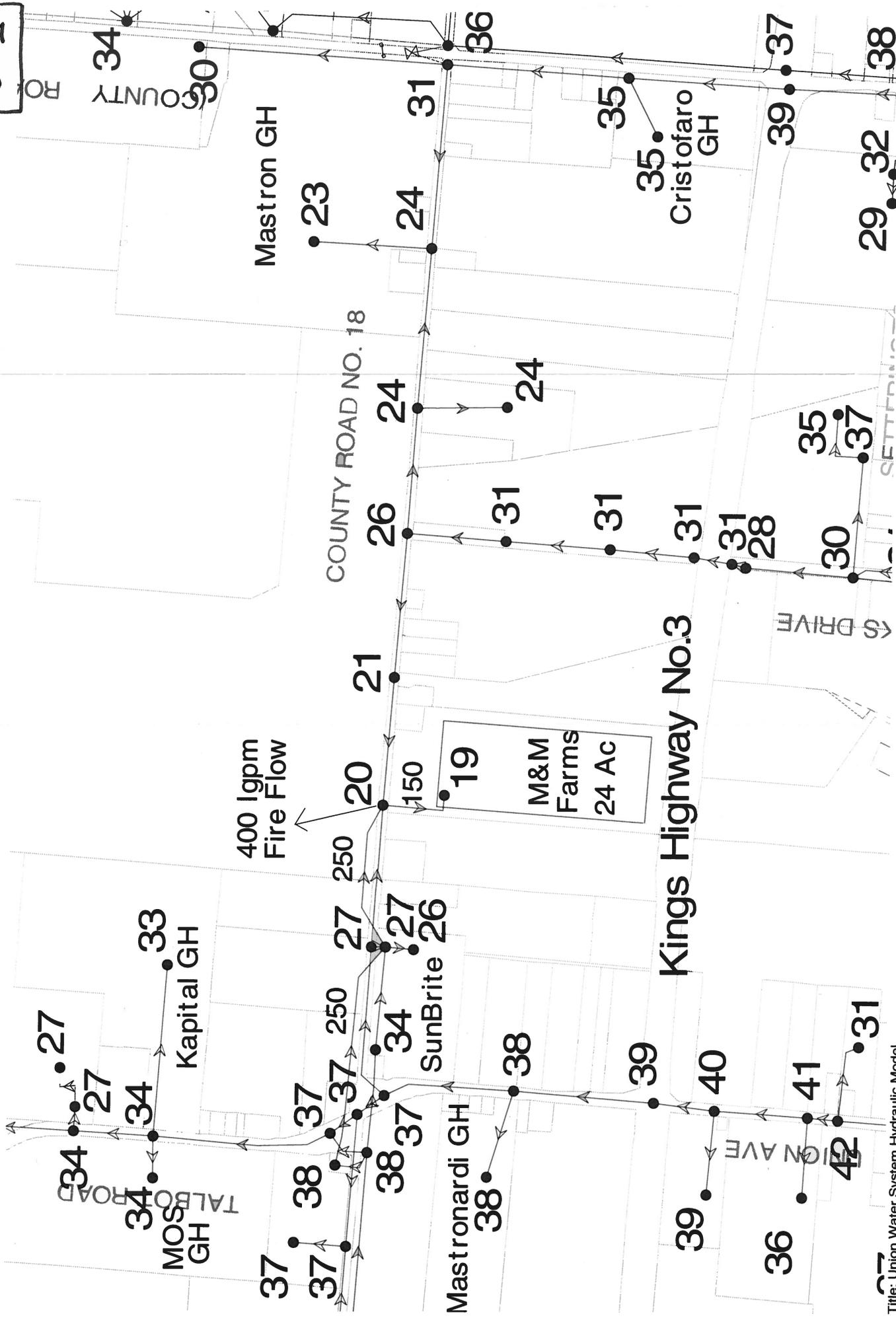
**Sheet 1 – with proposed 24 Acre greenhouse
demand & new 250mm dia.
watermain**

B. 20 Year Future Conditions

**Sheet 1 – with proposed 24 Acre greenhouse
demand & new 250mm dia.
watermain**

Scenario: Y2037 Infilling & Approved + Future GiH + Leam Future Service Area Exp

B-1



APPENDIX “E”

RESULTS OF HYDRAULIC ANALYSIS (Peak Demand Period)

A. Existing Conditions

Sheet 1 – with proposed 24 Acre greenhouse demand & new 250mm dia. watermain

Sheet 2 – with proposed 24 Acre greenhouse demand & new 250mm dia. watermain + fire flow demand

B. 20 Year Future Conditions

Sheet 1 – with proposed 24 Acre greenhouse demand & new 250mm dia. watermain

Sheet 2 – with proposed 24 Acre greenhouse demand & new 250mm dia. watermain + fire flow demand

Scenario: Exist + Approved GH to date + Learn Service Area Exp

A-1



Scenario: Exist + Approved GH to date + Learn Service Area Exp

A-2



Scenario: Y2037 Infilling & Approved + Future GH + Learn Future Service Area Exp

B-1



Scenario: Y2037 Infilling & Approved + Future GH + Learn Future Service Area Exp

B-2



APPENDIX “F”

RESULTS OF HYDRAULIC ANALYSIS (Peak Demand Period)

A. Existing Conditions

**Sheet 1 – with proposed 24 Acre + 10 Acre
greenhouse demand & new 300mm
dia. watermain**

**Sheet 2 – with proposed 24 Acre + 10 Acre
greenhouse demand & new 300mm
dia. watermain + fire flow demand**

B. 20 Year Future Conditions

**Sheet 1 – with proposed 24 Acre + 10 Acre
greenhouse demand & new 300mm
dia. watermain**

**Sheet 2 – with proposed 24 Acre + 10 Acre
greenhouse demand & new 300mm
dia. watermain + fire flow demand**

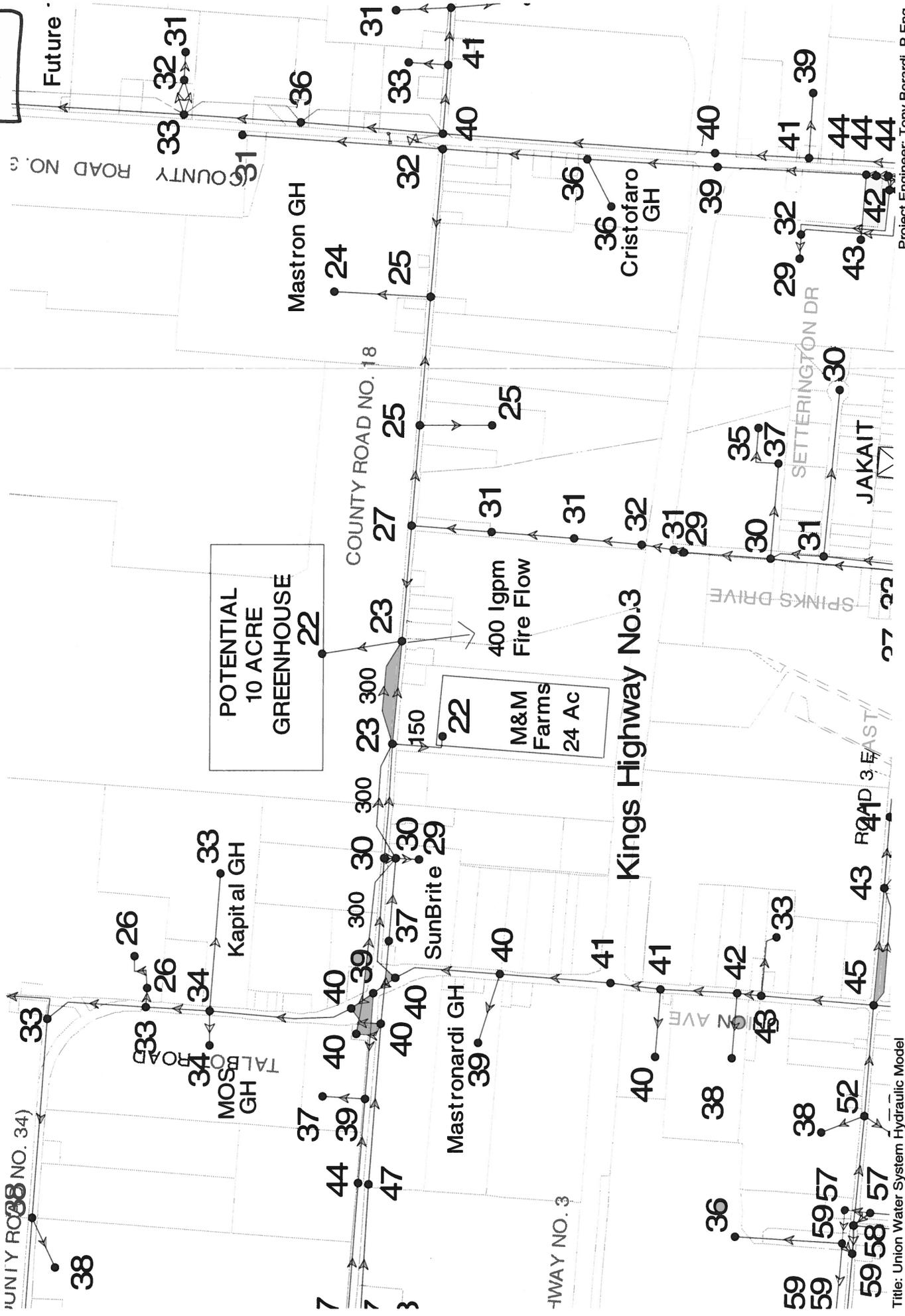
Scenario: Exist + Approved GH to date + Leam Service Area Exp

A-1



Scenario: Exist + Approved GH to date + Learn Service Area Exp

A-2



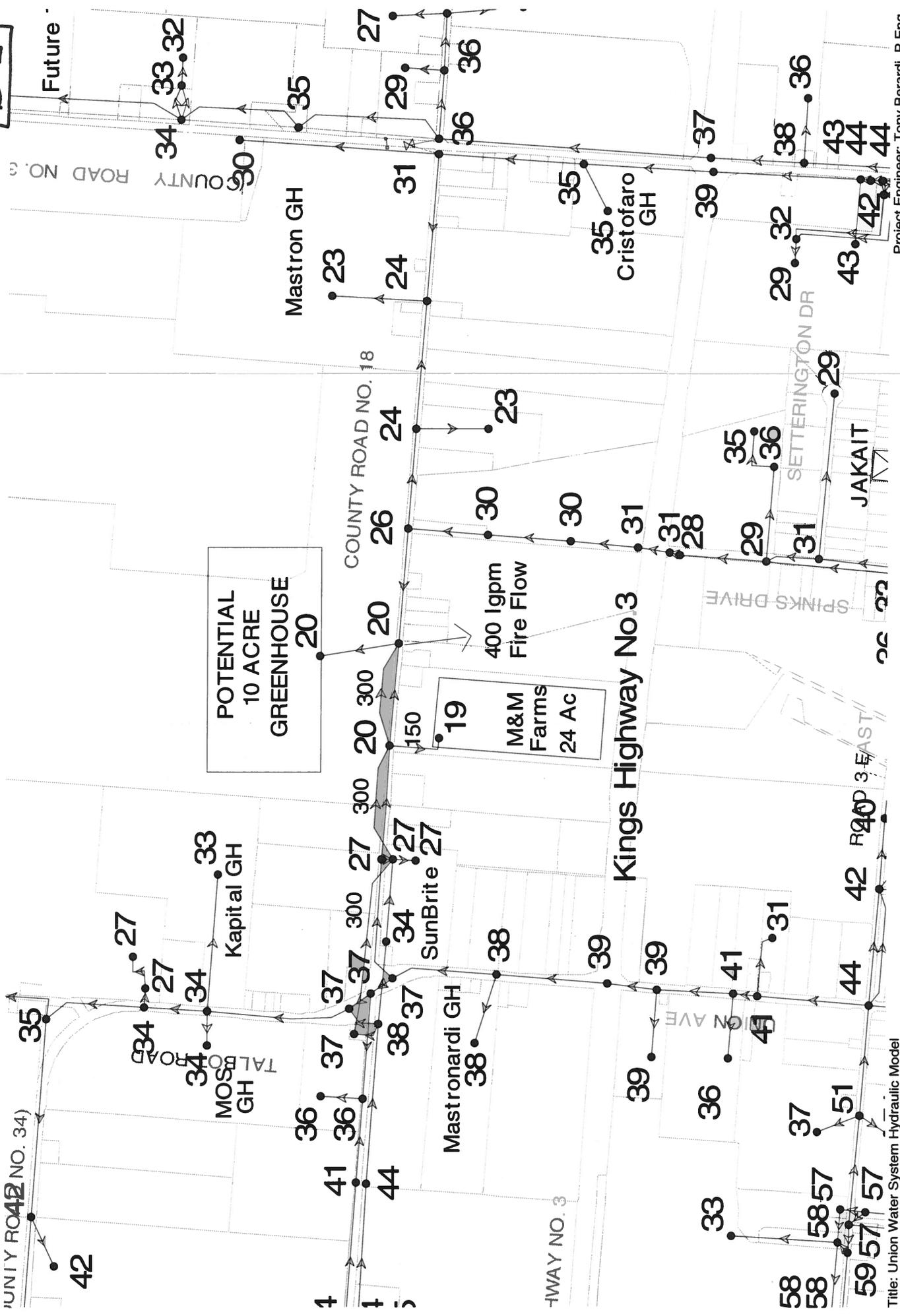
Scenario: Y2037 Infilling & Approved + Future GH + Learn Future Service Area Exp

B-1



Scenario: Y2037 Infilling & Approved + Future GH + Learn Future Service Area Exp

B-2



APPENDIX "G"

COST ESTIMATES

TOWN OF KINGSVILLE
County Road 18 Watermain Extension from County Road 34 Easterly
Preliminary Construction Cost Estimate
250mm Dia. Watermain - PVC DR 18 Class 150 Pipe Option

Description	Estimated Quantity	Unit	Unit Rate	Estimated Cost
Mobilization & Demobilization	1	I.s.	\$5,000	\$5,000
Deflect existing 300 watermain for new 400 watermain	1	I.s.	\$8,000	\$8,000
400 CPP watermain (connect to existing 400 stub)	6	m	\$500	\$3,000
400x400x300 CPP Tee	1	ea	\$4,000	\$4,000
400 CPP Cap	1	ea	\$1,500	\$1,500
250 Gate Valve	1	ea	\$3,000	\$3,000
250 PVC DR18 along boulevard	32	m	\$275	\$8,800
Bore & Jack 450 steel casing + 250 PVC DR18 w/m	27	m	\$1,000	\$27,000
250 PVC DR18 along boulevard	31	m	\$275	\$8,525
250 - 90 Bend	1	ea	\$600	\$600
250 PVC DR18 along boulevard	3	m	\$825	\$2,475
Open Cut 450 steel casing + 250 PVC DR18 w/m	13	m	\$850	\$11,050
250 PVC DR18 along boulevard	3	m	\$275	\$825
250 - 90 Bend	1	ea	\$600	\$600
250 PVC DR18 along boulevard	36	m	\$275	\$9,900
250 PVC DR18 w/m in Pavement	282	m	\$300	\$84,600
250 PVC DR18 w/m in Pavement	1	ea	\$600	\$600
250x250x250 Tee	1	m	\$300	\$300
300x250 Reducer	1	ea	\$550	\$550
Tie in to existing 300	1	I.s.	\$3,000	\$3,000
250 PVC DR18 w/m in Pavement	363	m	\$300	\$108,900
250 Gate Valve	1	ea	\$3,000	\$3,000
250 - Plug	1	ea	\$300	\$300
250x250x150 Tee for service connection	1	ea	\$750	\$750
150 PVC DR 18 pipe stub	10	m	\$250	\$2,500
150 - 45 Bend	4	ea	\$500	\$2,000
150 Gate Valve	1	ea	\$1,500	\$1,500
150 - Plug	1	ea	\$250	\$250
250x250x150 Tee for Hydrant	1	ea	\$750	\$750
150 PVC DR 18 pipe stub	10	m	\$250	\$2,500
150 - 45 Bend	4	ea	\$500	\$2,000
150 Gate Valve	1	ea	\$1,500	\$1,500
Hydrant	1	ea	\$6,500	\$6,500
250x250x150 Tee for tie-in to existing 150 AC watermain	1	ea	\$750	\$750
150 PVC DR 18 pipe stub	3	m	\$250	\$750
150 Gate Valve	1	ea	\$1,500	\$1,500
150 Bolted Coupling	1	ea	\$400	\$400
150x150x150 Tee cut in Tee with two bolted couplings	1	ea	\$3,000	\$3,000
New Hydrant Facility including 150 cut in tee, two bolted couplings, 150 pvc spools & 150 gate valve	1	ea	\$8,000	\$8,000
19 Temporary blowoffs for Testing & Disinfecting	2	ea	\$1,100	\$2,200
Swabbing, Testing & Chlorination	1	I.s.	\$5,000	\$5,000
Traffic Control & Signage	1	I.s.	\$5,000	\$5,000
Sawcutting & Milling of Existing Asphalt	1400	s.m.	\$21	\$29,400
Surface Asphalt	300	tonne	\$125	\$37,500
Restoration & Landscaping	1	I.s.	\$8,000	\$8,000
Control Testing Allowance	1	I.s.	\$5,000	\$5,000
General Contract Requirements (5%)	1	I.s.	\$21,071	\$21,071
Contingency Allowance (10%)	1	I.s.	\$43,750	\$43,750
Probable Construction Cost excl. HST				\$486,246
Surveying Cost Allowance				\$10,000
Engineering Allowance				\$60,000
Probable Capital Cost excl. HST				\$576,246
HST (13%)				\$74,912
Total Probable Capital Cost incl. HST				\$651,158

TOWN OF KINGSVILLE
County Road 18 Watermain Extension from County Road 34 Easterly
Preliminary Construction Cost Estimate
300mm Dia. Watermain - PVC DR 18 Class 150 Pipe Option

Description	Estimated Quantity	Unit	Unit Rate	Estimated Cost
Mobilization & Demobilization	1	I.s.	\$5,000	\$5,000
Deflect existing 300 watermain for new 400 watermain	1	I.s.	\$8,000	\$8,000
400 CPP watermain (connect to existing 400 stub)	6	m	\$500	\$3,000
400x400x300 CPP Tee	1	ea	\$4,000	\$4,000
400 CPP Cap	1	ea	\$1,500	\$1,500
300 Gate Valve	1	ea	\$4,000	\$4,000
300 PVC DR18 along boulevard	32	m	\$300	\$9,600
Bore & Jack 600 steel casing + 300 PVC DR18 w/m	27	m	\$1,250	\$33,750
300 PVC DR18 along boulevard	31	m	\$300	\$9,300
300 - 90 Bend	1	ea	\$750	\$750
300 PVC DR18 along boulevard	3	m	\$300	\$900
Open Cut 600 steel casing + 300 PVC DR18 w/m	13	m	\$1,000	\$13,000
300 PVC DR18 along boulevard	3	m	\$300	\$900
300 - 90 Bend	1	ea	\$750	\$750
300 PVC DR18 w/m in Pavement	1	m	\$325	\$325
300x300x300 Tee	1	ea	\$1,000	\$1,000
300 Bolted Coupling	1	ea	\$500	\$500
Tie in to existing 300	1	I.s.	\$3,000	\$3,000
300 PVC DR18 w/m in Pavement	363	m	\$325	\$117,975
300 Gate Valve	1	ea	\$4,000	\$4,000
300 - Plug	1	ea	\$400	\$400
300x300x150 Tee for service connection	1	ea	\$900	\$900
150 PVC DR 18 pipe stub	10	m	\$250	\$2,500
150 - 45 Bend	4	ea	\$500	\$2,000
150 Gate Valve	1	ea	\$1,500	\$1,500
150 - Plug	1	ea	\$250	\$250
300x300x150 Tee for Hydrant	1	ea	\$850	\$850
150 PVC DR 18 pipe stub	10	m	\$250	\$2,500
150 - 45 Bend	4	ea	\$500	\$2,000
150 Gate Valve	1	ea	\$1,500	\$1,500
Hydrant	1	ea	\$6,500	\$6,500
300x300x150 Tee for tie-in to existing 150 AC watermain	1	ea	\$850	\$850
150 PVC DR 18 pipe stub	3	m	\$250	\$750
150 Gate Valve	1	ea	\$1,500	\$1,500
150 Bolted Coupling	1	ea	\$500	\$500
150x150x150 Tee cut in Tee with two bolted couplings	1	ea	\$3,000	\$3,000
New Hydrant Facility including 150 cut in tee, two bolted couplings, 150 pvc spools & 150 gate valve	1	ea	\$8,000	\$8,000
19 Temporary blowoffs for Testing & Disinfecting	2	ea	\$1,100	\$2,200
Swabbing, Testing & Chlorination	1	I.s.	\$5,000	\$5,000
Traffic Control & Signage	1	I.s.	\$5,000	\$5,000
Sawcutting & Milling of Existing Asphalt	1400	s.m.	\$21	\$29,400
Surface Asphalt	300	tonne	\$125	\$37,500
Restoration & Landscaping	1	I.s.	\$8,000	\$8,000
Control Testing Allowance	1	I.s.	\$5,000	\$5,000
General Contract Requirements (5%)	1	I.s.	\$22,603	\$22,603
Contingency Allowance (10%)	1	I.s.	\$46,965	\$46,965
Probable Construction Cost excl. HST				\$621,618
Surveying Cost Allowance				\$10,000
Engineering Allowance				\$60,000
Probable Capital Cost excl. HST				\$611,618
HST (13%)				\$79,511
Total Probable Capital Cost incl. HST				\$691,129

Probable Oversizing Cost from 250mm to 300mm Dia. excl. HST \$36,372
Probable Oversizing Cost from 250mm to 300mm Dia. incl. HST \$39,970