

November 25, 2025

S251182

2797123 Ontario Inc.
403 Egremont Dr,
Komoka, ON N0L 1R0

Attn: Mike Van Logtenstein and John Van Logtenstein

**Re: Servicing Feasibility Study
Proposed Agricultural Related Operations Facility
10651 Gold Creek Drive, Lobo Ontario**

1. INTRODUCTION

This Servicing Feasibility Study (Study) has been prepared by Strik, Baldinelli, Moniz Ltd. (SBM) for 2797123 Ontario Inc. to address the servicing feasibility for the proposed development at 10651 Gold Creek Drive, Lobo Ontario.

The subject property is 42 hectares (ha), located southeast of the rural community of Lobo. A portion of the site is proposed for Rezoning to M3, the "Subject Site" (site) is 7.9 ha. The remainder of the property is to be unchanged and therefore not included in the scope of the study. The site is bordered by Gold Creek Drive to the northwest, a storage facility to the northeast, and agricultural land of the subject property to the east and south. For additional details, refer to the proposed site plan prepared by SBM, dated November 3, 2025, appended attached.

This Study is to determine the adequacy of the existing services in support of a Zoning By-Law Amendment (ZBA) for the proposed development.

Design requirements have been based on the Middlesex Centre Infrastructure Design Standards (MCIDS), updated January 2018, National Fire Protection Association (NFPA) 1142A, MECP Design Guidelines for Drinking-Water Systems (MECP DGDWS) and the current edition of the Ontario Building Code (OBC).

2. WATER SERVICING

2.1 General Consideration

There are no municipal servicing infrastructure available to the site as per email correspondence with the municipality, appended to this study. A private well (design by others) and adequately sized water storage for fire protection are proposed to provide sufficient domestic and fire protection water supply for the subject site.

2.2 Domestic Water Demand

The domestic water supply can be provided via a private drilled well which will be designed by others. The well location will be determined at time of detailed design. Due to the industrial usage, the proposed development

references Chapter 10 (Distribution Systems) of MECP's DGDWS; Light industrial water demand of 35m³/ha/day and peaking factors for maximum day and maximum hour of 3.5 and 7.8, respectively. The light industrial water demand was determined based on a building area of 11,650 m² as per the Site Plan by SBM, appended attached. The building area (1.17 ha) multiplied by the light industrial demand of 35 m³/ha/day produces a combined maximum day and hour flow of 1.65 L/s and 3.67 L/s, respectively. Domestic Water Demand calculations are attached.

2.3 On-Site Water Supply for Fire Protection

The following references were used for designing the on-site water supply for fire protection:

- 2012 National Fire Protection Agency (NFPA) 1142
- 2024 Ontario Building Code (OBC) A-3.2.5.7.

The minimum required fire flow rate = 9,000L/min (2,378 USGPM); as per the water supply for fire-fighting calculations (OBC A-3.2.5.7.), appended attached.

As per OBC 2024, sentence A-3.2.5.7.(3)(c), the minimum duration of fire-fighting is 30 minutes. The calculated minimum flow of 2,378 USGPM (9,000 L/min) at draft so the minimum required water volume = 9,000 L/min * 30 min = 270,000 L. A minimum capacity of 270,000 L is proposed for fire protection water supply. The storage will be provided by a Cistern either inside or outside the proposed development. Holding tank type/supplier will be selected by owner based on site area availability allocated for tank(s), water table restrictions, frost line below grade, cost etc. at detailed design. A single tank or multiple interconnected tanks with a combined working capacity meeting the minimum volume may be acceptable. Two hydrants are proposed, with the flow divided by the number of proposed hydrants, and 4,500 L/min per hydrant was calculated. The construction of the dry hydrant will adhere to all applicable Middlesex Centre standards and recommendations. The location of the hydrants and underground cisterns will be provided at the time of Site Plan Approval application.

3. SANITARY SERVICING

As there is no existing municipal sanitary sewer in proximity to the subject site, the sanitary flows generated from the proposed site are proposed to discharge into a septic system, as detailed below.

As per Table 8.2.1.3.-B of the OBC, septic flows for the proposed operations facility are to be determined using 75 L/day per person and 150 L/day per bay door. This yields a total daily flow rate of 4,200 L/day. The septic tank will be required to have a minimum total capacity of 12,600 L (three times the daily flow). Since a geotechnical investigation has not been completed at the time of preparing this Study, a percolation rate (T-time) greater than 50 min/cm was assumed as the worst-case scenario for sizing the mantle area. Per Table 8.7.4.1 of the OBC and based on the total daily flow rate of 4,200 L/day and assumed T-time of 50.01 min/cm, a mantle area of 1,050 m² is required. Refer to the Preliminary Sewage System Sizing Calculations (OBC 2024), appended attached. The septic bed location will conform to the setbacks provided in Table 8.2.1.6-B of the OBC, and will be determined at the time of detailed design. A site-specific geotechnical investigation is recommended to assist with detailed design at the time of Site Plan Approval application.

4. STORM SERVICING AND STORMWATER MANAGEMENT

The site is tributary to the McKellar Drain. The outlet will remain unchanged; however, stormwater quantity controls will be implemented to maintain post-development flows at pre-development levels, as required.

4.1 Pre-Development Conditions

Pre-development conditions were confirmed using aerial imagery. The site is comprised entirely of agricultural land, with a runoff coefficient (C-value) of 0.20.

4.2 Post-Development Conditions

Post-development conditions were obtained from the site plan prepared by SBM. The SWM calculations (attached to this Study) show that the post-development C-value of 0.52 for the entire site is greater than the pre-development C-value of 0.20. Therefore, storm water management quantity controls will be proposed for this development. Post-development major overland flows will be restricted to match the allowable pre-development levels.

The SWM quantity controls will be addressed via a wet pond which will have sufficient storage to attenuate the storm flows to allowable pre-development conditions. Detailed design of the wet pond will be provided at the time of Site Plan Approval application.

4.3 Stormwater Management – Quality Control

Stormwater management quality controls demonstrating compliance with the SWM criteria and environmental targets identified will be addressed to the standards of the Ministry of the Environment, Conservation and Parks (MECP) (quality control of 70% TSS removal (Normal)). This will be assessed at the time of Site Plan Approval.

5. LIMITATIONS

This Study was prepared by SBM for 2797123 Ontario Inc. and Middlesex Centre. Use of this Study by any third party, or any reliance upon its findings, is solely the responsibility of that party. SBM accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions undertaken as a result of this Study. Third party use of this Study, without the express written consent of the Consultant, denies any claims, whether in contract, tort, and/or any other cause of action in law, against the Consultant.

All findings and conclusions presented in this Study are based on site conditions as they appeared in the information presented to SBM and related to in this document. This Study is not intended to be exhaustive in scope, or to imply a risk-free development. It should be recognized that the passage of time may alter the opinions, conclusions, and recommendations provided herein, as well as any changes in the layout of the development.

The design was limited to the documents referenced herein and SBM accepts no responsibility for the accuracy of the information provided by others. All designs and recommendations presented in this Study are based on the information available at the time of the review.

This document is deemed to be the intellectual property of SBM in accordance with Canadian copyright law.

6. CLOSURE

We trust this Study meets your satisfaction. Should you have any questions or require further information, please do not hesitate to contact us.

Respectfully submitted,

Strik, Baldinelli, Moniz Ltd.

Planning • Civil • Structural • Mechanical • Electrical

Reuben Saarloos

Reuben Saarloos, P.Eng.,
Civil Project Lead. Eng I



L. Prinsen

Levi Prinsen
Civil Eng Trn III

Encl:

Proposed Site Plan by SBM
Email Correspondence with Middlesex Centre for Servicing
Domestic Water Demand Calculations by SBM
Fire Flow Calculations by SBM
Preliminary Septic Design Calculations by SBM
Trunk No.5 of the Mckellar Drain by A.M. Spriet & Associates Ltd. dated 1974
Runoff Coefficient (C-value) Calculations by SBM



RE: As-Built request

From Fatehbir Singh <singh@middlesexcentre.ca>

Date Fri 8/1/2025 9:21 AM

To Mohamad El Nesar <melneser@sbmltd.ca>

Cc Ryan Frouws <rfruws@sbmltd.ca>

Good morning Mohamad,

We don't have any municipal servicing infrastructure in this area.

Regards



Fatehbir Singh, C.Tech, rcji. (he/him)

Development Review Coordinator

Municipality of Middlesex Centre

10227 Ilderton Road, Ilderton, ON, N0M 2A0

519-666-0190 Ext. 5269 | singh@middlesexcentre.ca

middlesexcentre.ca

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From: Mohamad El Nesar <melneser@sbmltd.ca>

Sent: Friday, August 1, 2025 8:54 AM

To: Fatehbir Singh <singh@middlesexcentre.ca>

Cc: Ryan Frouws <rfruws@sbmltd.ca>

Subject: RE: As-Built request

CAUTION: This email originated from outside of the Middlesex Centre email system. DO NOT click links or open attachments unless you are 100% sure that the email is safe.

Good morning Fatehbir,

Following up on this email, are you able to provide the information requested below?

Best regards,

Mohamad El Nesar

Civil Intern

E: melneser@sbmltd.ca



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From: Mohamad El Nesser
Sent: Friday, July 25, 2025 2:18 PM
To: singh@middlesexcentre.ca
Cc: Ryan Frouws <rfrrouws@sbmltd.ca>
Subject: As-Built request

Good afternoon Fatehbir,

We are exploring design options for a development at **10651 Gold Creek Drive**, west of Lobo. Are you able to provide all relevant record drawings and/or watermain information in the vicinity of this address?

Thank you and hope you have a great weekend.

Best regards,

Mohamad El Nesser

Civil Intern

E: melneser@sbmltd.ca



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DOMESTIC WATER DEMAND, VELOCITY, AND TURNOVER CALCULATION

LONDON LOCATION
1599 Adelaide St. N., Unit 301
London, ON N5X 4E8
P: 519-471-6667

KITCHENER LOCATION
132 Queen St. S. Unit 4
Kitchener, ON N2G 1V9
P: 519-725-8093

www.sbmtd.ca

sbm@sbmtd.ca

DATE:
JOB No.:

November 12, 2025

S251182

Client:
Project:
Location:

2797123 Ontario Inc.
Proposed Agricultural Related Operations Facility
10651 Gold Creek Drive, Lobo Ontario

DEMAND CALCULATION

Light Industrial Demand = 35 m³/ha/day
35000 L/ha/day
Max. Day Peaking Factor = 3.50
Max. Hour Peaking Factor = 7.8

OBC	Area (ha)	Avg. Day (L/s)	Max. Hour (L/s)	Max. Day (L/s)
Commercial/Industrial Area	1.17 *	0.47	3.67	1.65
Total		0.47	3.67	1.65

*Refer to Site Plan prepared by SBM for building area, appended attached.

Therefore, the highlighted Average Day (0.47 L/s), Maximum Hourly (3.67 L/s), and Maximum Day (1.65 L/s) water demands are to be used for the pressure calculations.



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KITCHENER LOCATION
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Kitchener, ON N2G 1V9
P: 519-725-8093

sbm@sbmltd.ca

Fire-Fighting Flow (OBC A-3.2.5.7.) Calculations

For data entry
Calculated, not for data entry

DATE:	November 11, 2025
JOB NO.:	S251182

Client:	2797123 Ontario Inc.
Project:	Proposed Agricultural Related Operations Facility
Location:	10651 Gold Creek Drive, Lobo Ontario

$$Q=K*V*S_{Tot}$$

Fire Flow Demand

Proposed Building	
Building Classification (3.1.2.1):	F-2
Type of Construction:	Noncombustible
Fire Resistance Rating:	FRR
K (Table 1):	17
Building Area, m ² :	11650.00
Building Height, m:	9.00
Building Volume, m ³ :	104,850

$$S_{Tot} = 1.0 + (S_{side1} + S_{side2} + S_{side3} + S_{side4})$$

S_{side1} (Figure 1) =	0.00	(North)
S_{side2} (Figure 1) =	0.00	(East)
S_{side3} (Figure 1) =	0.00	(South)
S_{side4} (Figure 1) =	0.00	(West)
S_{Tot} =	1.0	
$S_{Tot} < or = 2$, therefore S_{Tot} =	1.0	

$$Q_{Prop, L} = 1,782,450$$

$$Q_{Total} = 1,782,450$$

$$\text{Required Supply Flow Rate, L/min (Table 2)} = 9000 \quad 2,378 \text{ gpm}$$

Multiple Dry Hydrants

$$\text{Number of Hydrants} = 2$$

$$\text{Required Supply Flow Rate per Hydrant, L/min} = 4500 \quad 1,189 \text{ gpm/hydrant}$$

$$\text{Minimum Underground Cistern Size (L)} = \text{Required Supply Flow Rate (L/min)} * \text{Minimum Duration of Firefighting (min)}$$

$$9000 \quad 30 \text{ min} * \quad 270,000 \text{ L}$$

*As per O.B.C. 2012, sentence A-3.2.5.7.3.c, minimum duration of fire fighting is 30 min.



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Kitchener, ON N2G 1V9
P: 519-725-8093

sbm@sbmtd.ca

Preliminary Sewage System Sizing Calculations (OBC 2024)

DATE:	November 12, 2025
JOB NO.:	S251182

Client:	2797123 Ontario Inc.
Project:	Proposed Agricultural Related Operations Facility
Location:	10651 Gold Creek Drive, Lobo Ontario

DAILY SEWAGE FLOW (Based on Sewage System Design Flows), OBC Volume 1, Section 8.2.1.3

Establishment Type	Number	Volume, Litres	Calculated Flow (L/day)
Staff/Visitors	50	75	3750
Bay Door ***	3	150	450
**Total			4200

* Refer to the Site Plan prepared by SBM.

**If the total design capacity is greater than 10,000 litres per day falls under the jurisdiction of MECP

***Number of Bay doors to be confirmed during detailed design

Design Capacity: Daily Flow

Daily Flow 4200 L/Day

Minimum Septic Tank Size = 3 * Daily Flow = 12600 **** L

The septic tank is required to have a minimum capacity of 12600L based on the proposed daily design flow of 4200L/Day

****Minimum tank size is 3600L regardless of design flow per OBC 8.2.2.3.(1)

Soil Characteristics

Soil Type: TBD
T-Time: 50.01***** min/cm

*****Worst case scenario assumed for preliminary sizing calculations. T-Time to be confirmed by Geotechnical Investigation prior to detailed design.

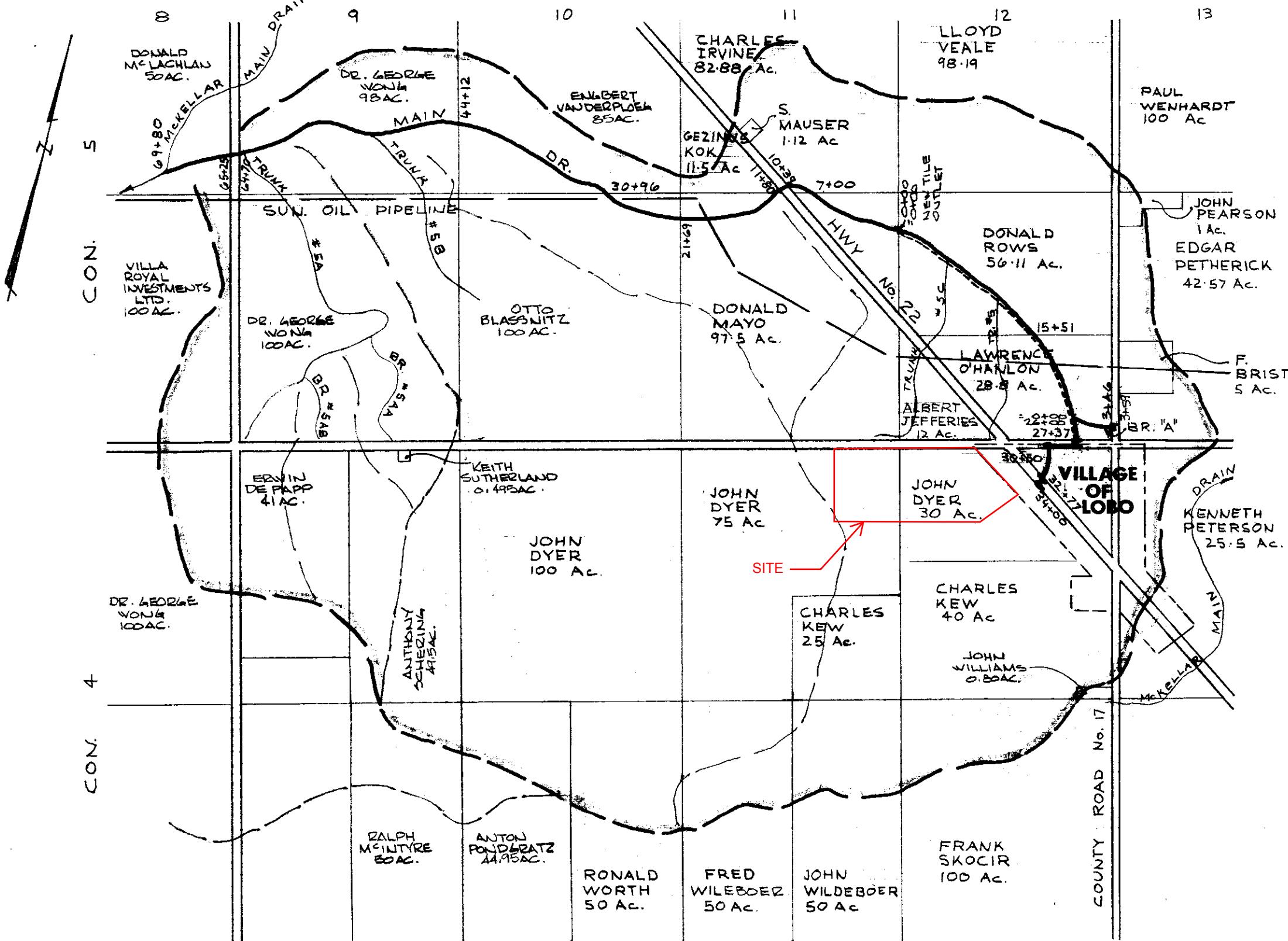
*****For Septic Bed Designs with a mantle, an extension of 15.0m is required per OBC A-8.7.5.3.(6) and (7)

Preliminary Septic Bed Design Summary

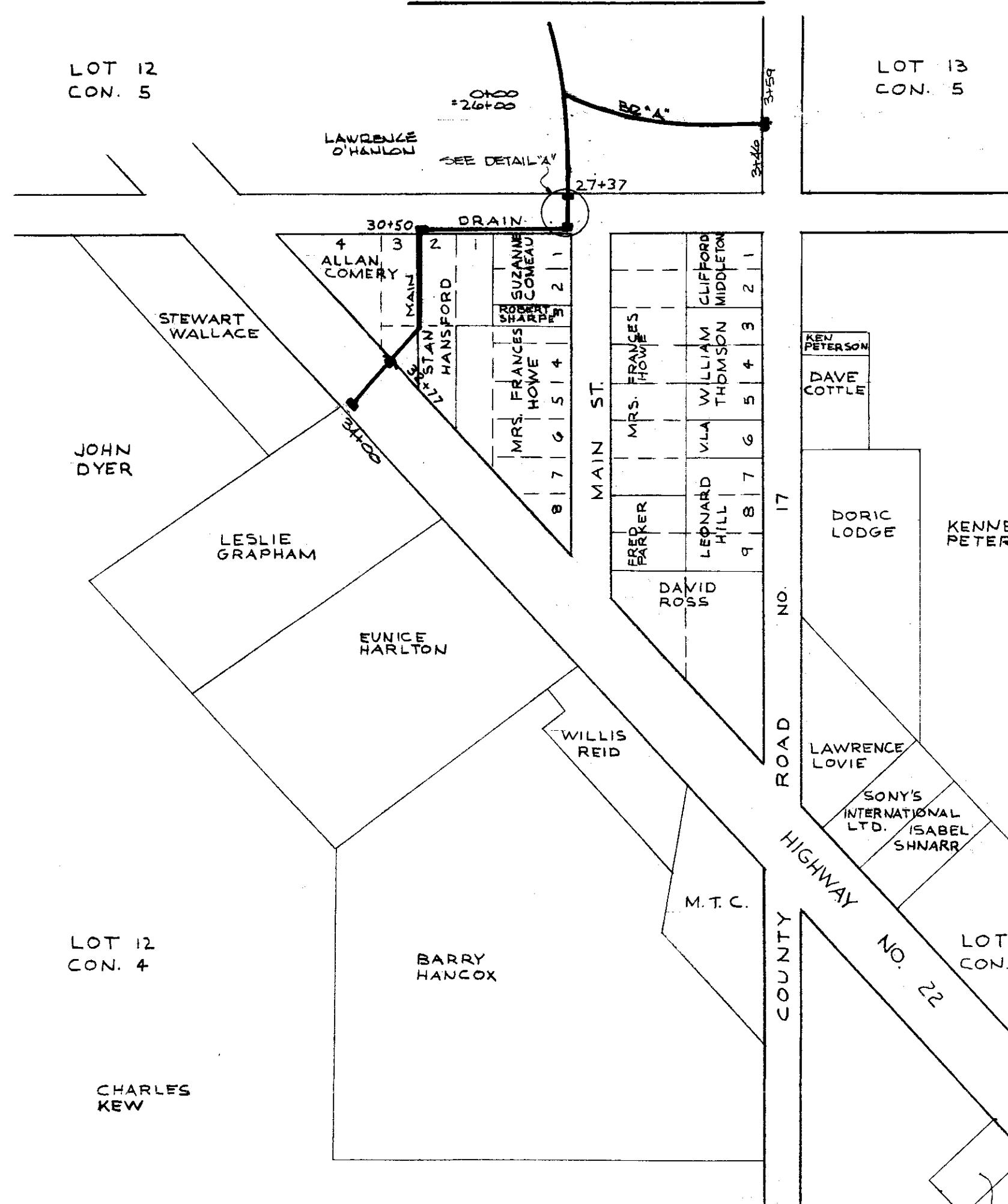
Daily Flow Rate = 4200 L/day

Minimum Septic Tank Size = 12600 L

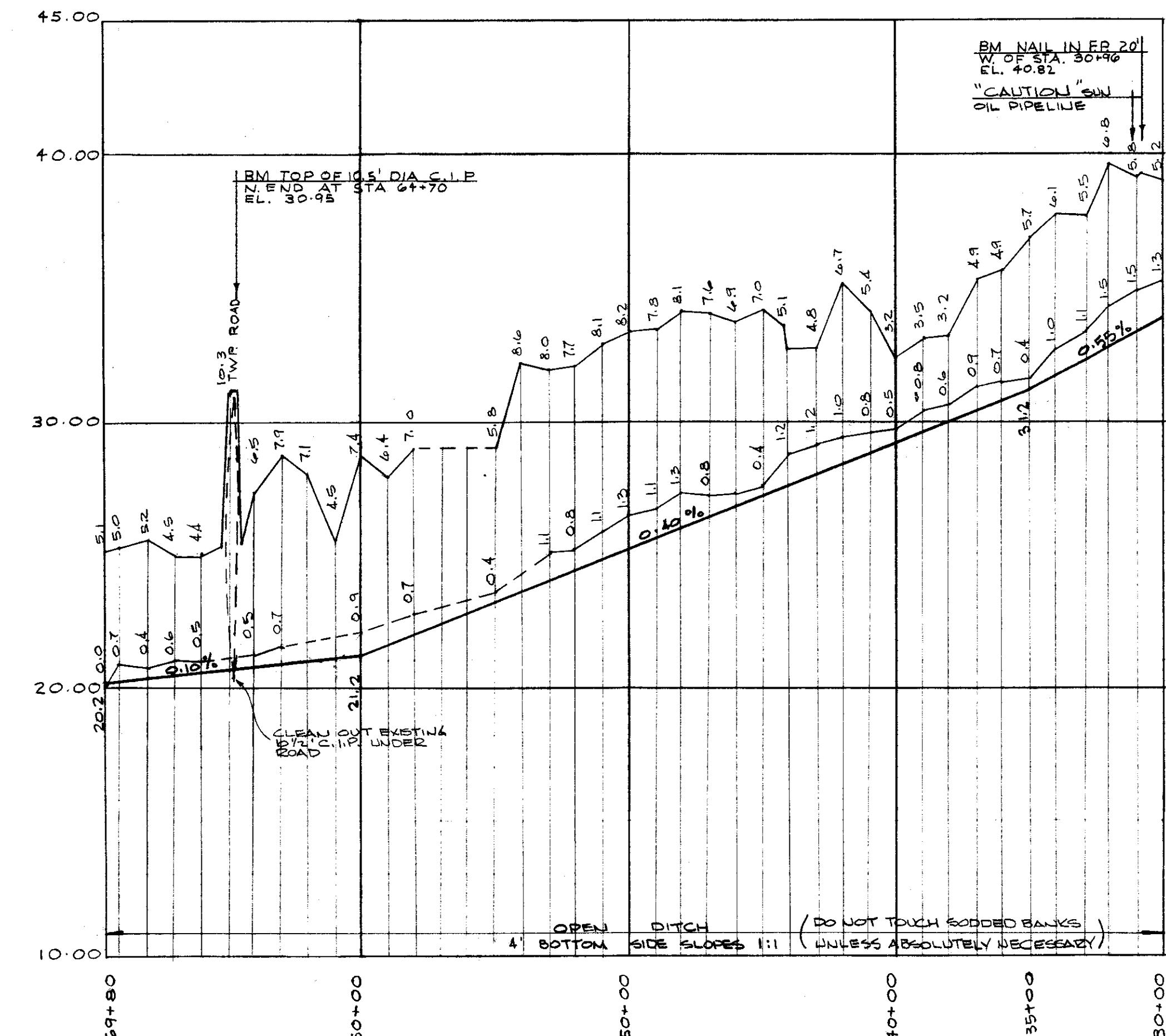
Mantle Area [Table 8.7.4.1] = Q/4 = $(4200)/(4) = 1050 \text{ m}^2$
Mantle Dimensions: Length (m) = 15
Width (m) = 70
Area (m^2) = 1050



PLAN SCALE 1"=1000'

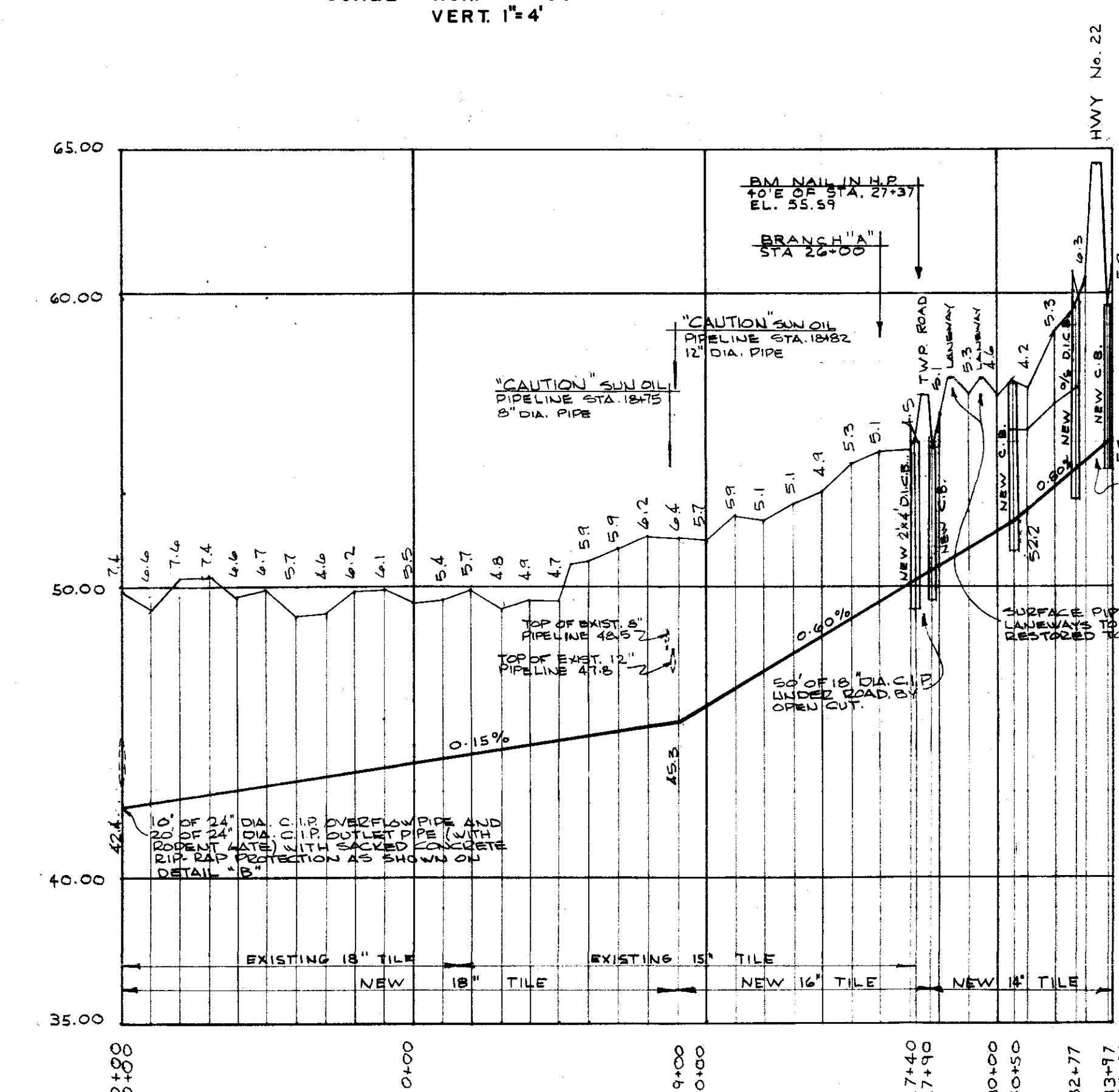


PLAN OF THE VILLAGE OF LOBO
SCALE 1"=200'

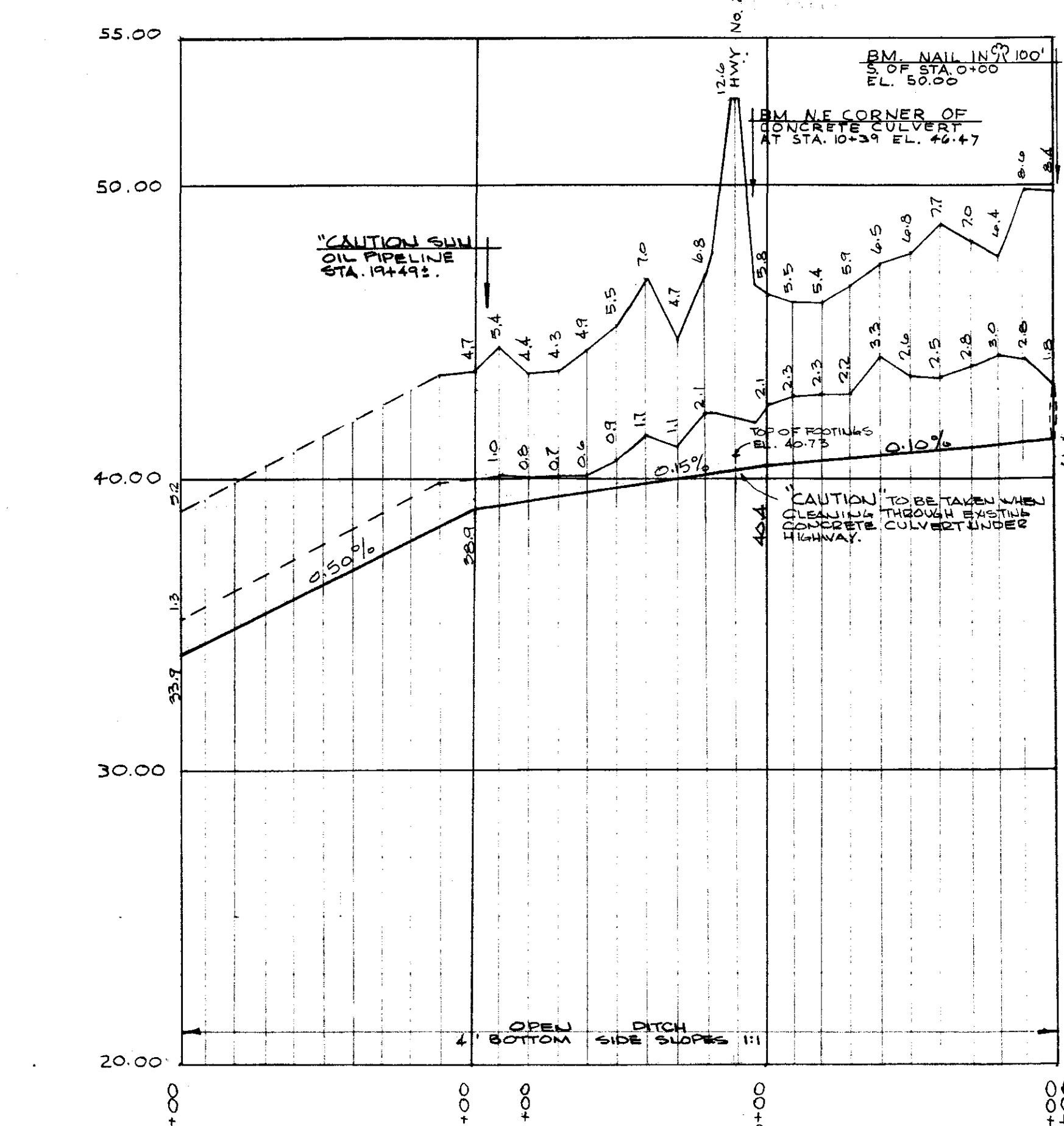


MAIN DRAIN PROFILE (CONT'D)

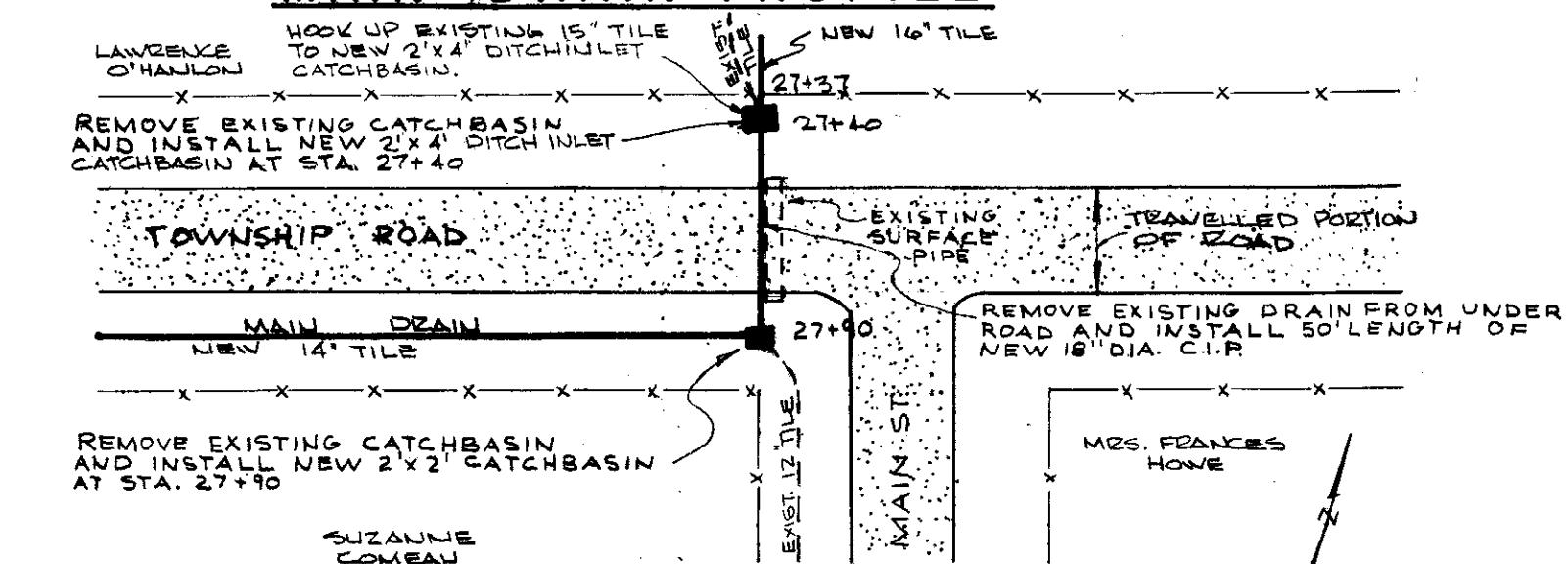
SCALE HOR.
 VERT



MAIN DRAIN PROFILE (CONT'D)



MAIN DRAIN PROFILE



DETAIL "A"

N. T. S.

NOTES

NOTES

TA. 0100 (SEE DETAIL "B")

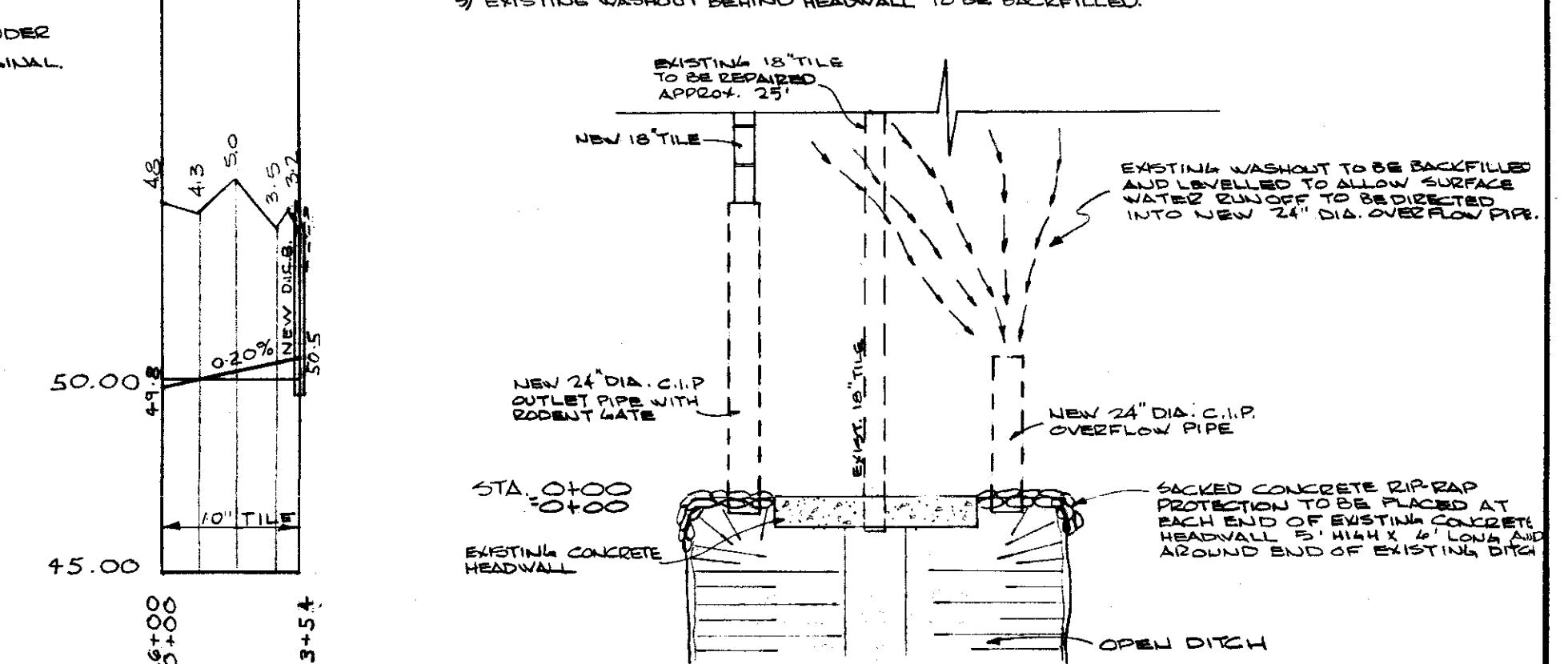
EXISTING 18" DIA. TILE DRAIN TO BE REPAIRED FOR 25' FROM HEADWALL UPSTREAM.

EXISTING CONCRETE HEADWALL TO BE EXTENDED ON BOTH SIDES INTO UNDISTURBED SOIL (APPROX. 6' LONG X 5' HIGH) WITH SACKED CONCRETE RIP-RAP PROTECTION.

10' OF 24" DIA. C.I.P. OVERFLOW PIPE TO BE INSTALLED THROUGH RIP-RAP.

20' OF 24" DIA. PIPE OUTLET WITH RODENT GATE TO BE INSTALLED THROUGH RIP-RAP. AT END OF DRAIN.

EXISTING 18" DIA. HEADWALL TO BE BACKFILLED.



BRANCH "A" PROFILE

APPROX. AMOUNT OF EXCAVATION 3000 CU.YD.

	<h1>TRUNK No. 5 OF THE Mc KELLAR DRAIN</h1> <h2>TOWNSHIP OF LOBO</h2>			
	SCALE: AS SHOWN	APPROVED BY: F B'S D-38,39	JOB NO. 73148	DRAWN BY A K <i>de</i> REVISED
<h3>PLANS, PROFILES & DETAILS</h3>				
A. M. SPIRIET & ASSOCIATES LTD. CONSULTING ENGINEERS			DRAWING NUMBER 1	



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Kitchener, ON N2G 1V9
P: 519-725-8093

sbm@sbmtd.ca

Runoff Coefficient (C-value) Calculations

DATE:
JOB No.:

Client: **2797123 Ontario Inc.**
Project: **Proposed Agricultural Related Operations Facility**
Location: **10651 Gold Creek Drive, Lobo Ontario**

PRE-DEVELOPMENT CATCHMENT AREA

	Area (m ²)	C	A*C
Total Area:	79294.00		
Building Area:	0.00	0.9	0
Concrete/Asphalt:	0.00	0.9	0
Gravel:	0.00	0.7	0
Landscaped/Open:	79294.00	0.25	19823.5
Totals:	79294.00		19823.5
$C_{eq} = \sum(A^*C)/\sum(A) =$	0.20		

POST-DEVELOPMENT CONTROLLED CATCHMENT AREA

	Area (m ²)	C	A*C
Total Area:	79294.00		
Building Area:	11650.00	0.9	10485
Concrete/Asphalt:	4542.00	0.9	4087.8
Gravel:	23340.00	0.7	16338
Landscaped/Open:	39762.00	0.25	9940.5
Totals:	79294.00		40851.3
$C_{eq} = \sum(A^*C)/\sum(A) =$	0.52		

*Post-Development Areas derived from Site Plan by SBM dated November 3, 2025