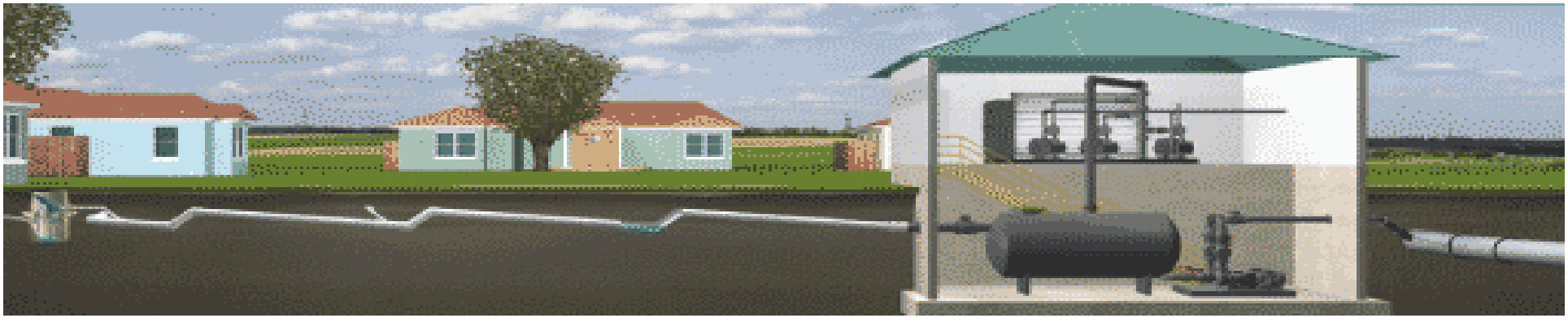
TOWNSHIP OF LANARK HIGHLANDS

SEWER & WATER PROJECT

Public Information Session

Monday, October 26, 2009



THE AGENDA FOR TONIGHT

1. INTRODUCTION

2. PROJECTED COSTS & FINANCING

30-Minute Question Answer Period

3. PRELIMINARY DESIGN OVERVIEW

4. TREATMENT PLANT – ESR ADDENDUM SUMMARY

5. QUESTIONS & ANSWERS

8. CLOSING REMARKS & ADJOURN

PROJECTED COSTS
&
FINANCING

By

Mr. Tom Derreck. CAO

Mr. Rob Bunker
Township Treasurer

Mr. Dave Riis
Township Engineer

WHY THIS PROJECT ?

- *ELIMINATE DRINKING WATER CONTAMINATION*
- *ELIMINATE AQUIFER & SOURCE WATER CONTAMINATION*
- REJUVENATE THE TOWNSHIP'S COMMERCIAL CORE
- **DIVERSIFY THE TOWNSHIP'S TAX BASE**
- **BE COMPETITIVE WITH SURROUNDING COMMUNITIES**
- LONG-TERM FINANCIAL HEALTH & SUSTAINABILITY

OUR ASSESSMENT BASE IS ALMOST TOTALLY RESIDENTIAL

HEAVY TAX BURDEN ON OUR HOMEOWNERS

RESIDENTIAL TAXES	96%
FARM & FOREST TAXES	2.1%
COMM. INDUSTRIAL TAXES	1.9%

VERY RESTRICTED FINANCIAL BASE FOR OUR TOWNSHIP

PROJECT COSTS & FINANCING

ASSUMPTIONS
WORST CASE SCENARIO

- **SERVICE TO VILLAGE CORE ONLY**
- **MAXIMUM 2/3 FED-PROV. FUNDING**
- **NO AFTER-BUILT FED / PROV. FUNDING**
- **DESIGN COSTS WILL NOT BE FUNDED**
- **GROWTH - 4 HOUSEHOLDS PER YEAR OVER 20 YEARS**
- **MANDATORY CONNECTION TO SYSTEM**
- **WILL NOT RECEIVE $400,000 FCM GRANT**

$28.5 MILLION SEWER & WATER PROJECT COST INCLUDES

- Design
- Construction & Construction Admin.
- General Admin (Township)
- Land Acquisitions
- Legal Services
- Decommissioning Of Wells & Septic Systems

PROJECT COST BREAKDOWN

CONSTRUCTION *(excluding Sewage treatment Plant)*	$ 21 MILLION
SEWAGE TREATMENT PLANT	$ 3.5 MILLION
OTHER COSTS *(DESIGN, CONST. ADMIN., ETC.)*	$ 4 MILLION

$ 28.5 MILLION

EXPENDITURES TO DATE

PRE PROJECT			
Env. Study Report	$	348,000	2001 to 2008
PROJECT			
Prelim. Design		603,596	2008 to 2009
2nd Line Reconstruction Design		23,933	
Land Acquisition		106,848	
Administration		124,742	
Legal		675	
		$ 1, 207, 794	

PROJECT REVENUES

Investment	$	7, 900,000
From Sale of PUC		265,000
Fed / Prov Funding		17, 816, 089
		$ 25, 981, 089

USE OF PUBLIC UTILITIES
SALE PROCEEDS - $613,000

Environmental Study Report		$ 348,000
Spent on Project		
Land Acquisition	$ 106,848	$ 265,000
Twsp. Admin, & Prelim. Design	$ 158,152	
		$ 613,000

BALANCE - ZERO

SHARE OF NET COST TO ALL LH TAXPAYERS

MUNICIPAL BUILDINGS	
4% of net project cost	$ 100,756
COMMERCIAL REVITALIZATION	
1% of net project cost	$ 25,189
Benefits all Township homeowners	
SEPTAGE TREATMENT	
Benefits all Township homeowners	$ 159,507
	———————
	$ 285,452

TAX IMPACT ON ALLTAXPAYERS

$10.53 per year

for 10 YEARS

On a home assessed at $150,000

DIFFERENCE TO BE MADE UP BY VILLAGE HOUSEHOLDS

PROJECT COST		$ 28,500,000
REVENUES	$ 25, 981, 089	
TWSP TAXPAYERS	$ 285,452	
NEW DEVELOPMENT	$ 251,891	$ 26, 576,812
OTHERS (ie: School Boards)	$ 58,380	
		$ 1, 923,188

VILLAGE HOUSEHOLDER'S SHARE OF PROJECT COST

- **312 equivalent households**
- **If Cost equally shared among equivalent households**

$ 6,164

per household

MONTHLY COST PER VILLAGE HOUSEHOLD

if project cost share financed over 15 years

Project Cost Share	$ 47
Operation & Maintenance	$ 58
Capital Reserve	$ 13
	———
	$ 118

MONTHLY COST PER VILLAGE HOUSEHOLD

if project cost share paid up front

Project Cost Share	-
Operation/Maintenance	$ 58
Capital Reserve	$ 13
	———
	$ 71

PLUS - POTENTIAL ONE-TIME COSTS TO VILLAGE HOMEOWNER

Water piping from street — $60/meter – if installed with sewer line

Sewer piping from street in excess of 40 meters **PROPOSED**

- *Internal plumbing*
- *Sewer & water connections*
- *Rendering well connections unusable*
- ► *Water meter installation & inspection*

up to $ 3,000

IN SUMMARY

ASSUMING WORST CASE SCENARIO

VILLAGE HOUSEHOLDERS

$ 1, 923,188
Share of net project cost

$ 6,164
per household

$ 118
All-in per month
if project cost share financed for 15 years

$ 71
All-in per month
if project cost share paid up front

ALL TAXPAYERS

$ 285,452
Share of net project cost

$10.53
per year - for 10 years

+ potential one-time costs

IF WORST CASE SCENARIO IS BETTERED

All of Village Serviced

$400,000 FCM Grant Received

VILLAGERS

$ 4,211
per household

$ 103
All-in per month
if project cost share
if financed for15 years

$ 65
All-in per month
if project cost share
paid up front

ALL TAXPAYERS

$ 8.85

per year - for 10 years

+ potential one-time costs

Village of Lanark
Water and Wastewater Systems
Preliminary Design

Presented by:

CH2MHILL

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

Golder Associates

October 26, 2009

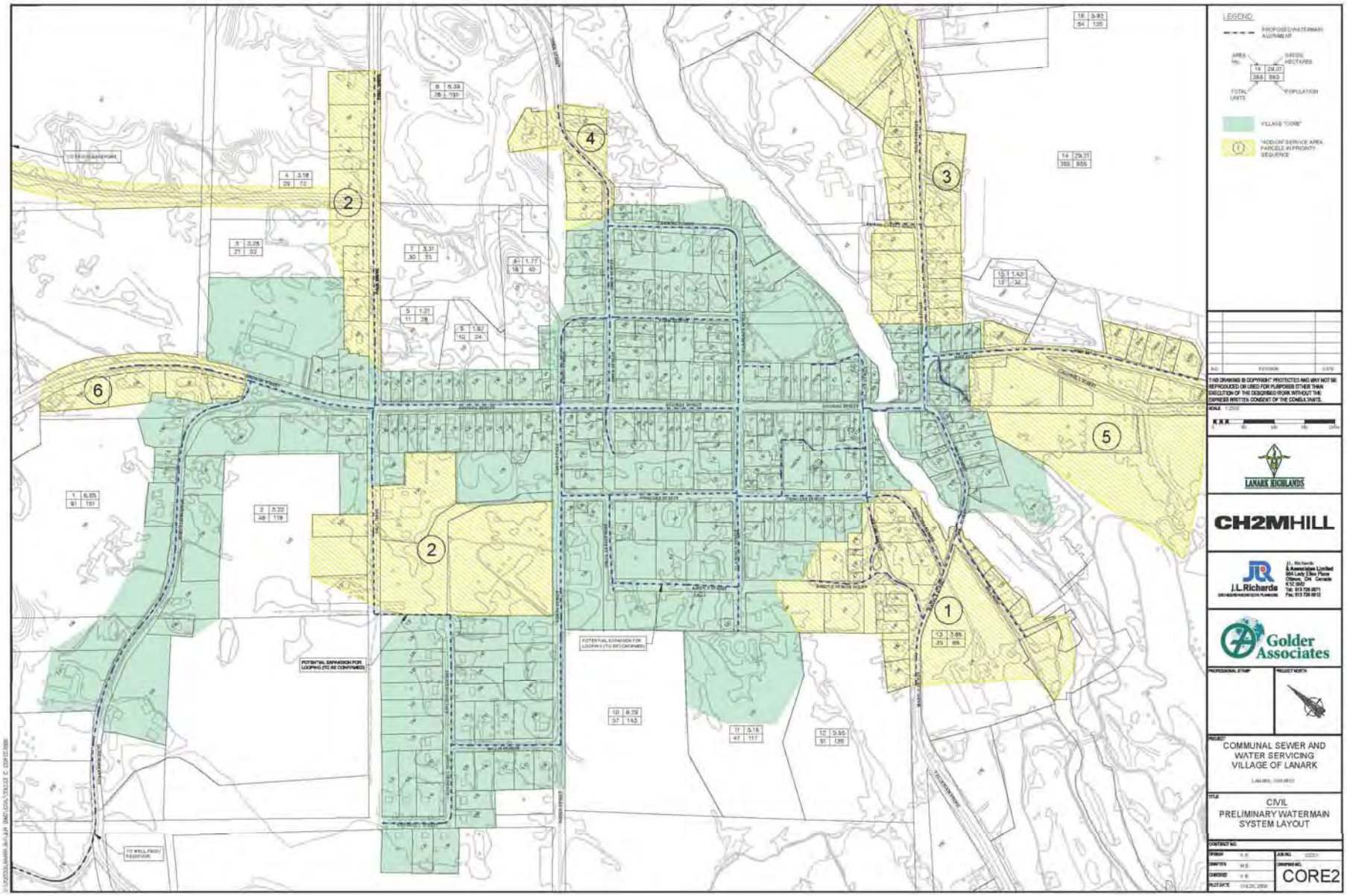
Overall Project Scope

- Water supply
- Water distribution
- Sanitary collection
- Sanitary pumping (to Wastewater Treatment Plant)
- Wastewater Treatment Plant and disposal – by others

Core Service Area

"Core" Service Area

Additional Service Parcels



Additional Service Parcels

Funds permitting, the following would be added to project scope:

1. Hillier St./Argyle St. So./Markle Rd.
2. Paul Dr. (east and west of George St.)
3. South St. (east of the core)
4. Owen St. (east of Canning)
5. Hwy 511 (so. of #2984)
6. Hwy 511 (north of Maple Grove School)

Water Supply

- 4 Test Wells drilled – 3 or 4 to be used as production wells
- Water storage tank
- Chlorination/Booster Pumping Station
- Standby power
- Water meters

Above Grade Bolted Steel Tank

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CH2MHILL J.L.Richards ENGINEERS · ARCHITECTS · PLANNERS Golder Associates

Well and Supply System Site Plan

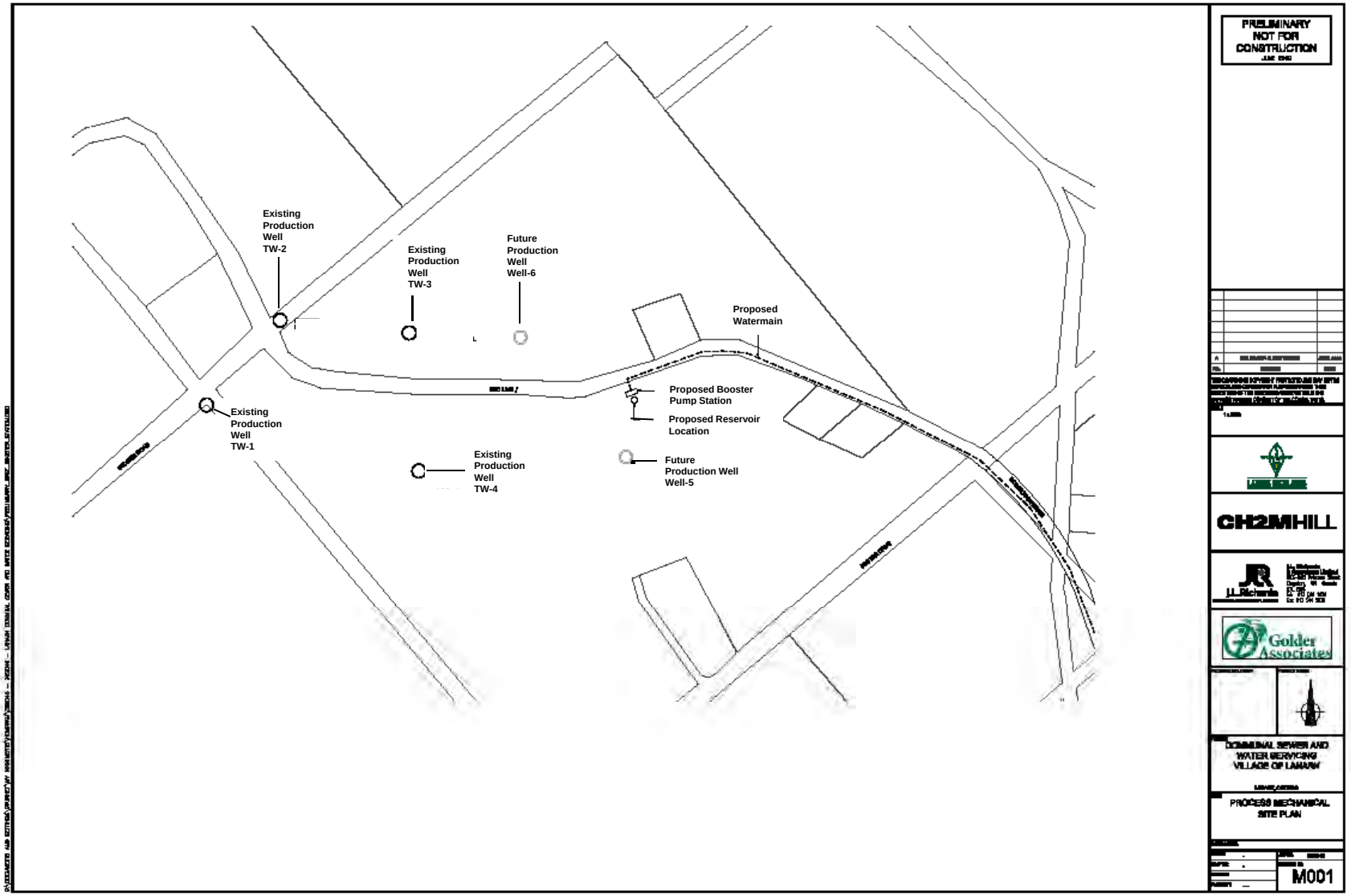


Exhibit 8

Water Pumping Station Floor Plan and Well Chamber

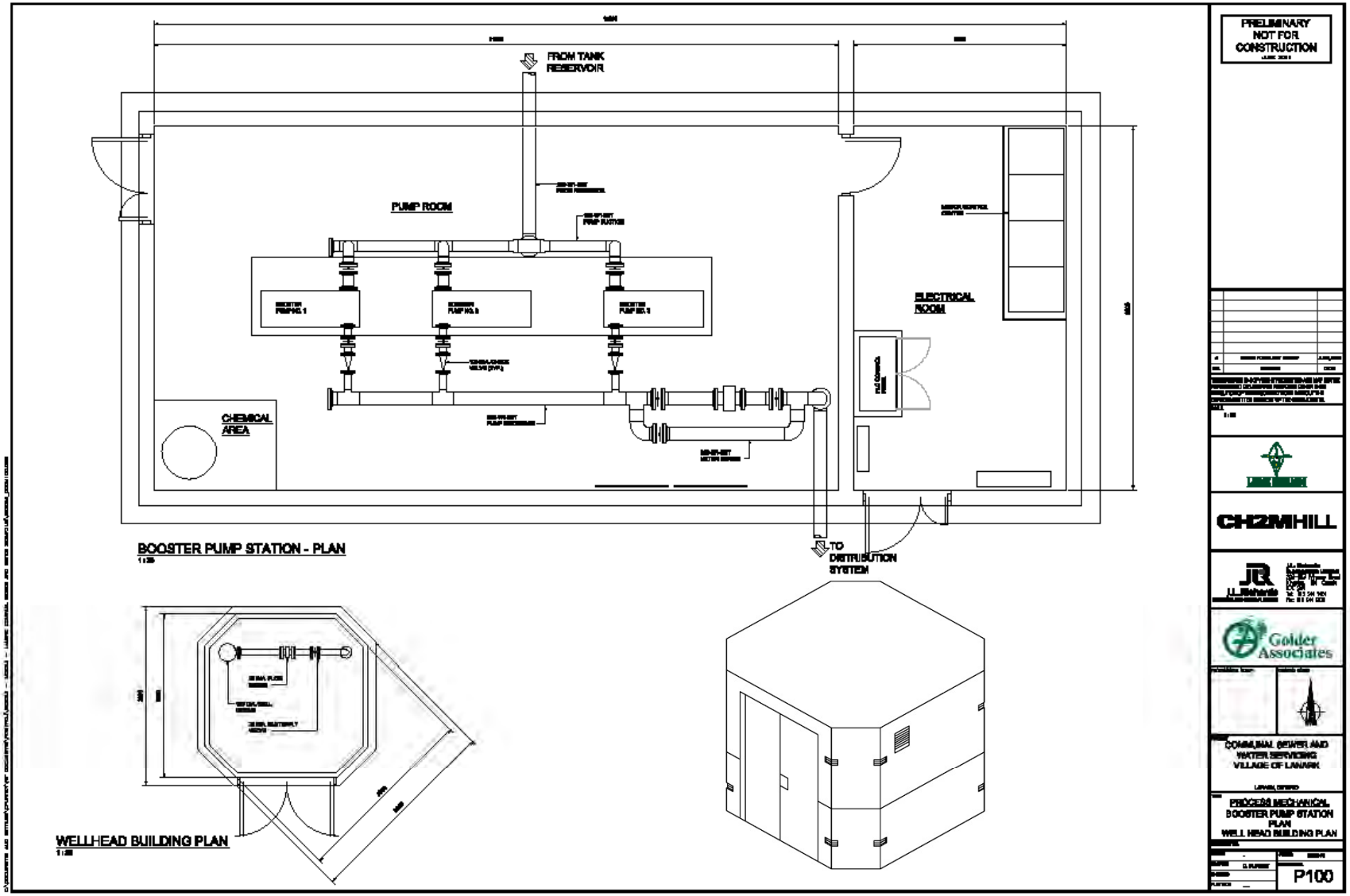
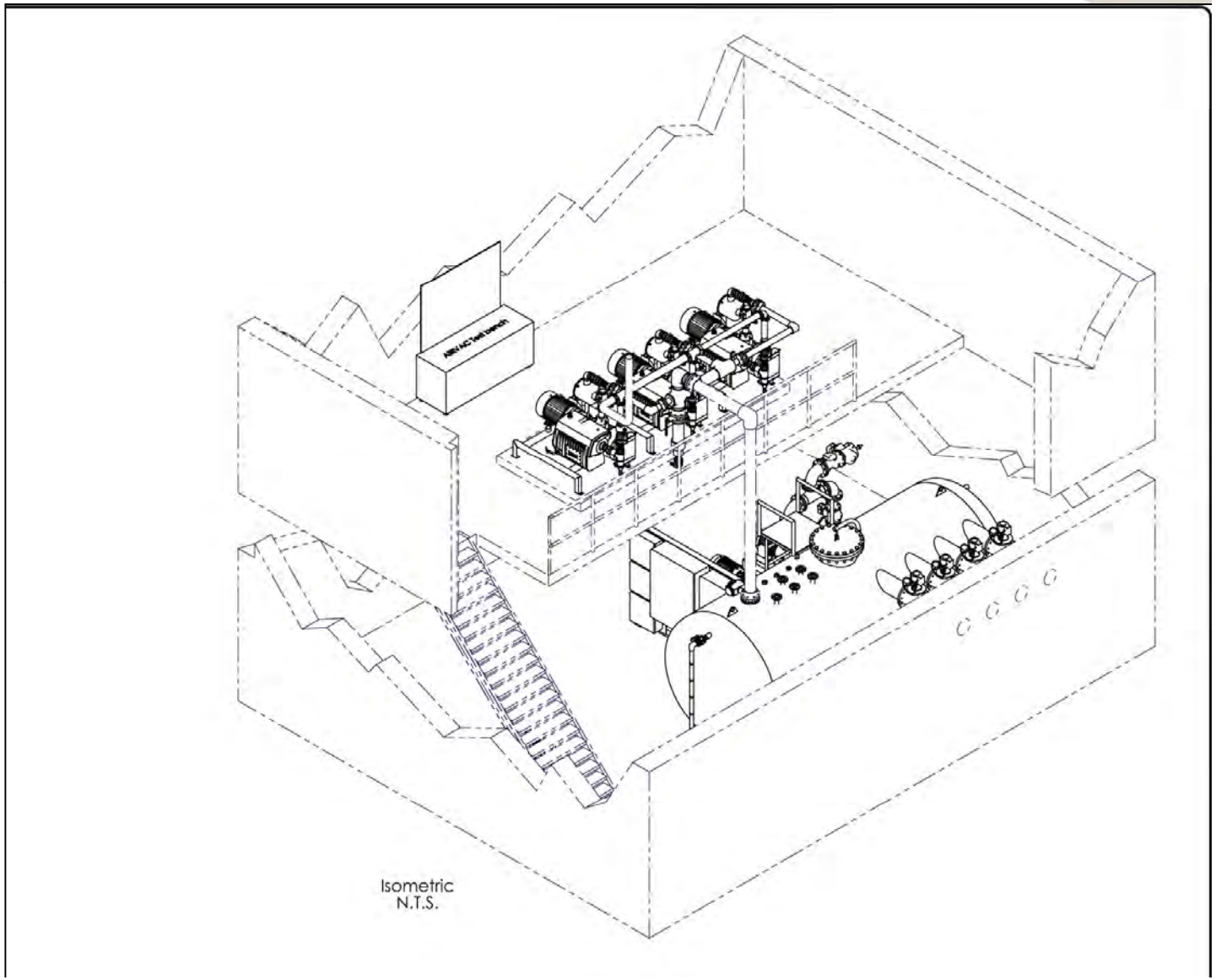


Exhibit 7

Sanitary Collection System

- Vacuum collection system
- Vacuum Station (on existing tennis court)
- Standby power
- Forcemain (to Wastewater Treatment Plant)

Vacuum Station Drawing



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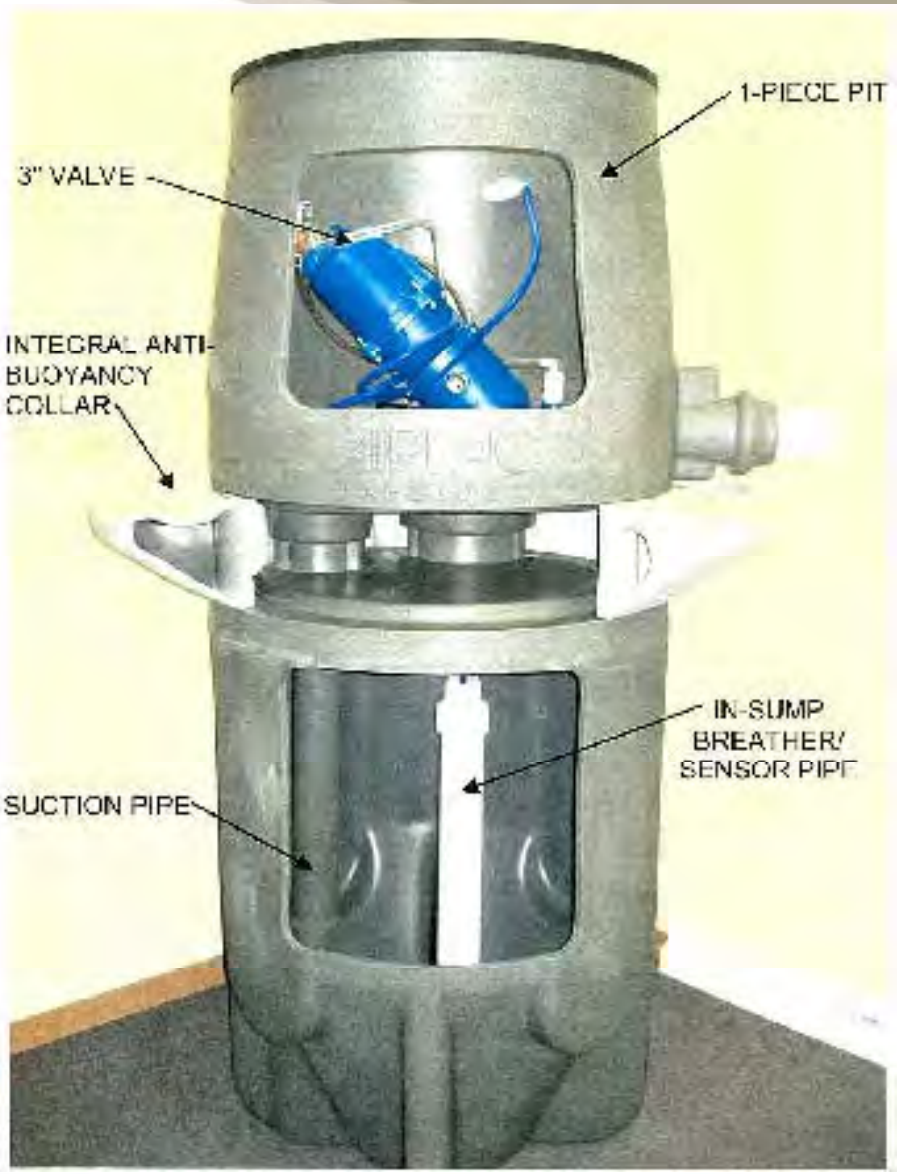
Valve Pit Drawing

- Valve pit components
- PE 1-piece Pit



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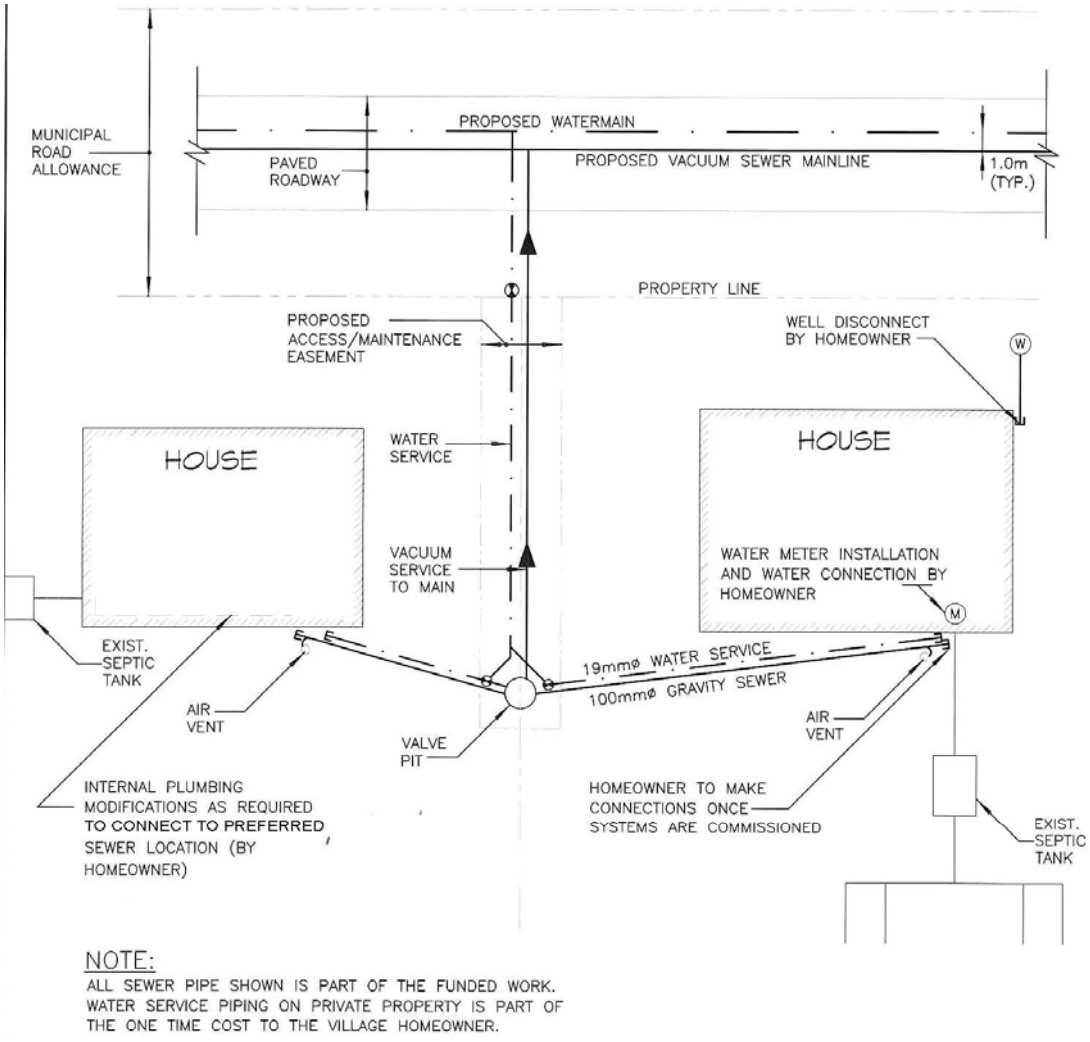
Water/Wastewater Servicing



NOTE:
ALL SEWER PIPE SHOWN IS PART OF THE FUNDED WORK. WATER SERVICE PIPING ON PRIVATE PROPERTY IS PART OF THE ONE TIME COST TO THE VILLAGE HOMEOWNER.

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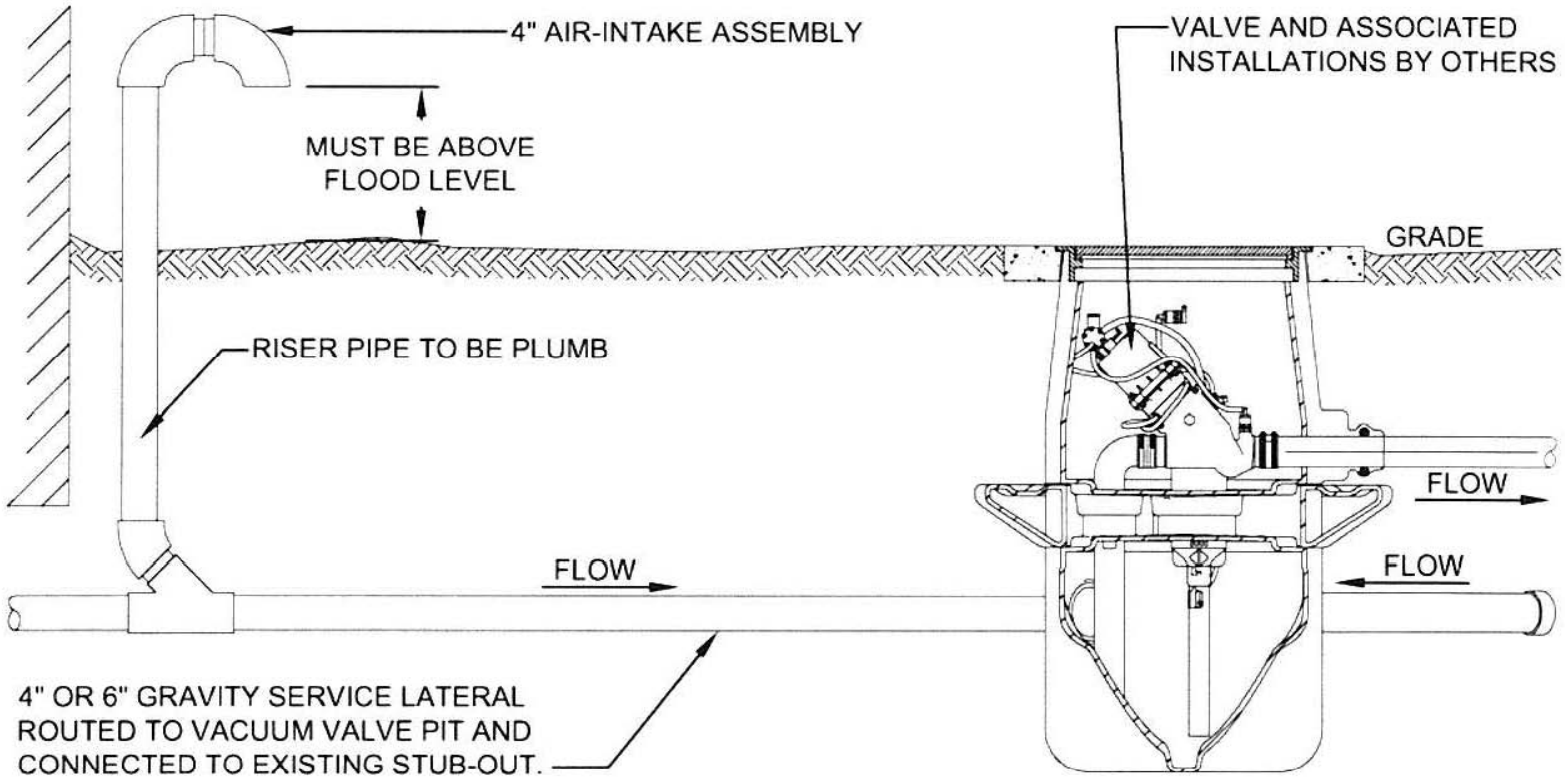
Wastewater Servicing Connection



VALVE PIT INSTALLATION AFTER HOME HOOK-UP

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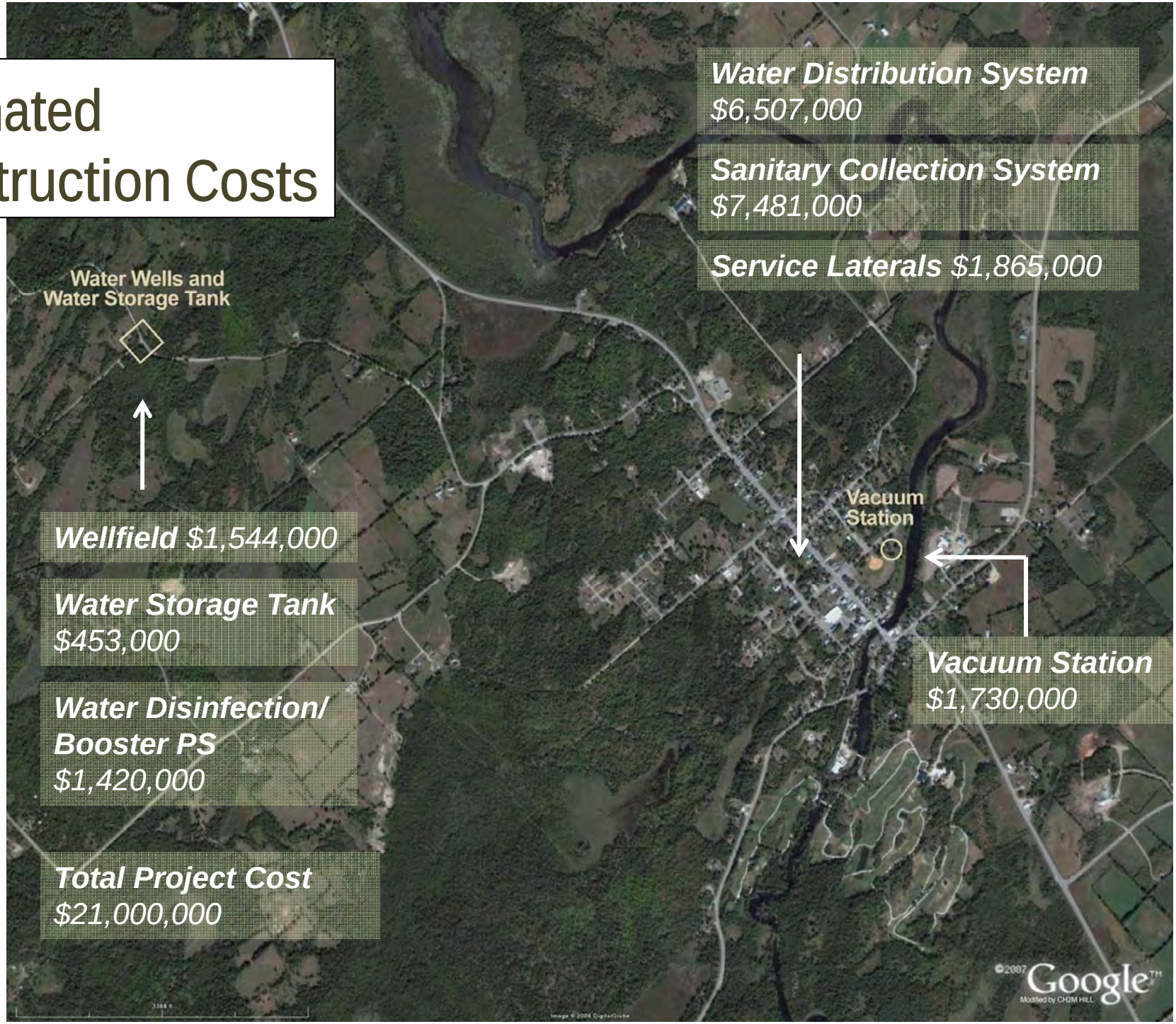
Detail Design Schedule

* Assumed start
** Tendering assistance not in contract

	09		10				
	Nov *	Dec	Jan	Feb	Mar	Apr	May
Detail Design							
60% Drawings/Spec							
Draft Brief							
Review Meeting							
Final Brief							
Council Presentation							
Contract Docs							
100% Drawings/Spec							
Council Presentation							
Public Meeting							
Tendering & Award **							
Tender Period							

Estimated Construction Costs



Water Distribution System *$6,507,000*

Sanitary Collection System *$7,481,000*

Service Laterals *$1,865,000*

Wellfield *$1,544,000*

Water Storage Tank *$453,000*

Water Disinfection/ Booster PS *$1,420,000*

Vacuum Station *$1,730,000*

Total Project Cost *$21,000,000*

Allowances

Project cost includes 20% contingency for:

- Vacuum systems are new technology for Ontario contractors
- Contaminated soil and groundwater
- Work on private properties
- Geotechnical conditions at Vacuum Station
- Rock excavation
- Archaeological

Cost Saving Measures in Preliminary Design

- Reduced automation and monitoring
- Common trench for water and sanitary
- Minimized number of valve pits
- Servicing core area (with expansion options)
- Moving storage tank and Booster PS near well field
- Optimized sanitary collection routing (eliminated additional sanitary pump station)
- Rear-yard servicing (where possible)
- Optimized valve pit locations (some on private property)

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PROPOSED ADDENDUM TO ENVIRONMENTAL STUDY REPORT OF APRIL, 2008

INTRODUCTIONS

- DOUG HUBER FROM HUBER ENVIRONMENTAL CONSULTING
- JEFF WHITE NORTHERN WATERTEK

SEQUENCE OF EVENTS

- Oct ’02 - ESR Process Starts
- May ‘08 – ESR Process Completed
- Oct ‘08 – CH2MHILL contracted
- Nov ’08 – CH2MHILL advises Cost of WWTP doubled; Staff looks at alternatives
- Feb ’09 - Council authorizes Staff to pursue NWC Proposal

  - Council authorizes CH2MHILL to explore Mech Plant to Clyde as fallback option

PROPOSED ESR ADDENDUM

- NWC PRODUCES PROCESS DESCRIPTION
- TOWNSHIP AND HUBER ENVIRONMENTAL PRODUCE DRAFT PROPOSED ADDENDUM TO ESR

MOE PRE-REVIEW

- MOE KINGSTON – have no objection to Lanark Highlands finalizing the addendum and, if no objections are filed, proceeding to obtain a Certificate of Approval

- MOE Approvals – Reviewed process and concluded that the proposal is workable. Final design will need to prove design objectives can be met, no surface runoff and no snow or aerosol drift off site

PROPOSED ADDENDUM
TO
ENVIRONMENTAL STUDY REPORT
APRIL 11, 2008
FOR
WATER AND WASTEWATER PROJECT
LANARK VILLAGE

PREPARED BY:

Lanark Highlands Township

and

Huber Environmental Consulting

October, 2009

CLASS ENVIRONMENTAL ASSESSMENT PROCESS

- PUBLIC CONSULTATIONS
- FINALIZE ESR ADDENDUM
- COUNCIL APPROVAL
- DISTRIBUTE ADDENDUM TO REVIEW AGENCIES AND POST FOR 30 DAYS
- NOTICE OF COMPLETION PUBLISHED
- IF NO CHALLENGE, EA PROCESS COMPLETE

OPTIONS

- Option #1 – Mechanical Plant to Sub-Surface (not a MembraneBioReactor)
- Option #2 – Mechanical Plant to Clyde
- Option #3 – NWC Proposal

EVALUATION OF OPTIONS

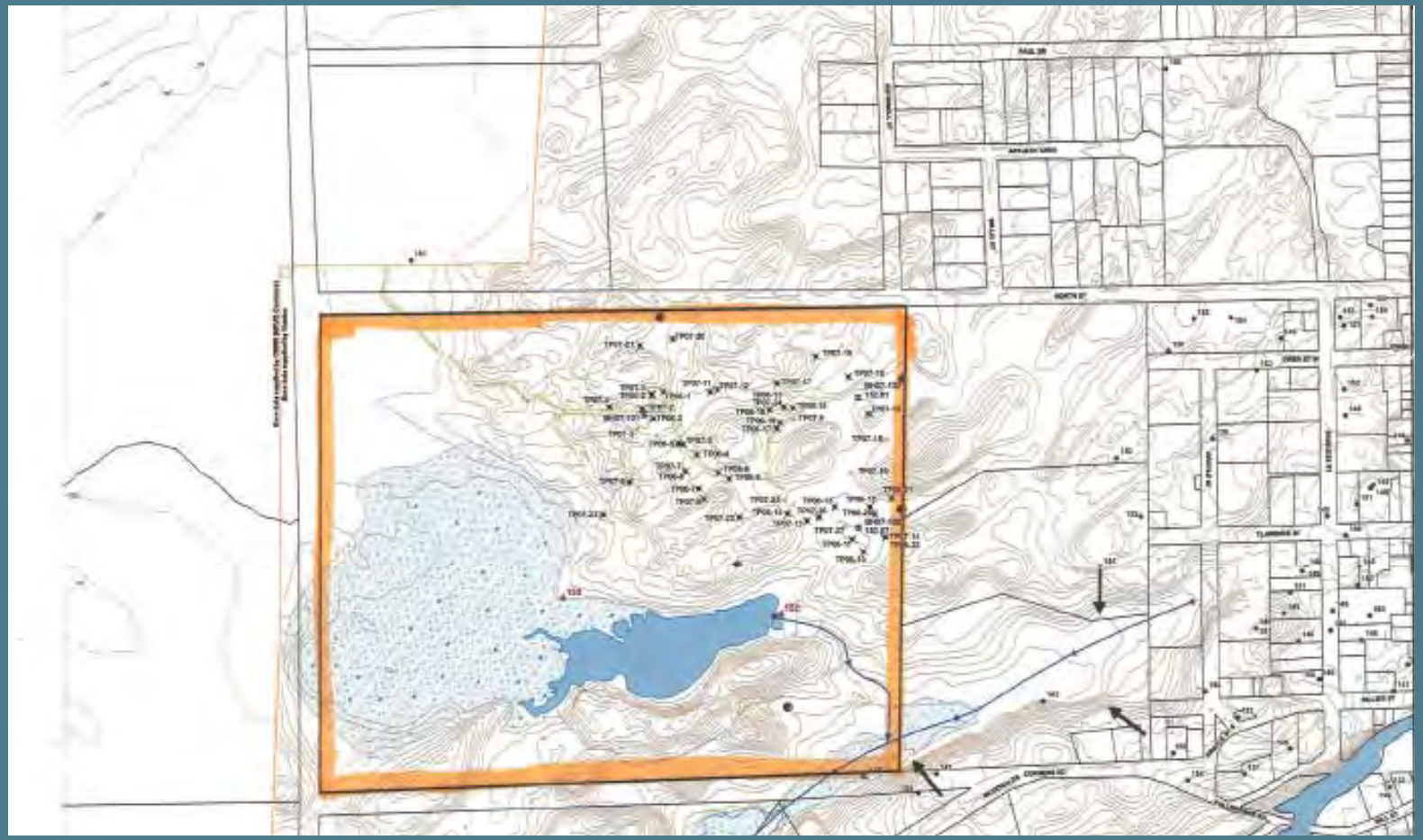
- Economic Criteria - 25%
  - Capital Cost
  - O&M Costs
  - Innovative Technology
- Environmental Criteria – 21%
  - Permanent Impact NE
  - Temporary Impact NE
- Social Criteria – 54%
  - Permanent Impact SE
  - Temporary Impact SE
  - Septage
  - Level of Acceptance – Vill.
  - Level of Acceptance – Out.V.

SELECTION OF PREFERRED OPTION

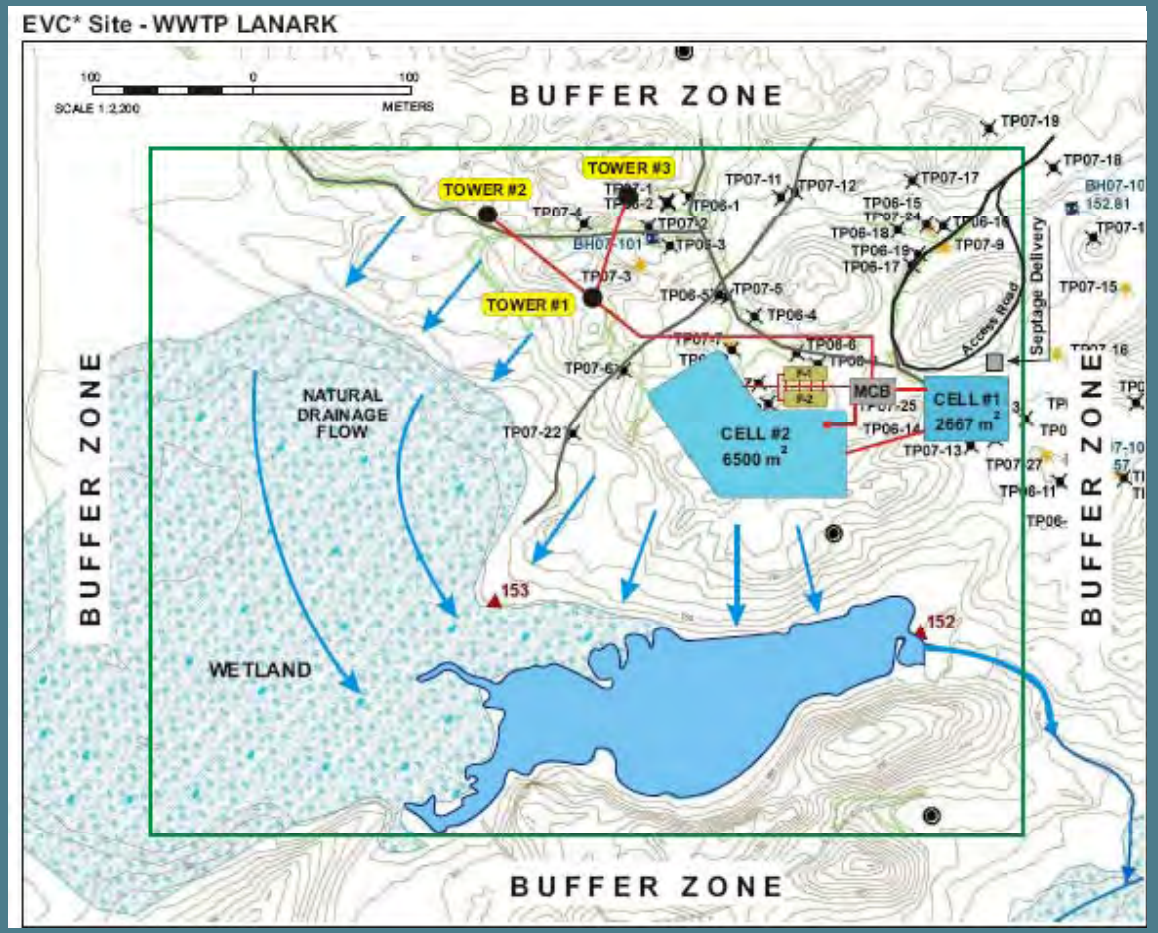
- Used ESR Criteria and Weighting Factors
- Scores very close
- NWC's low O&M cost and septage handling ability made it the preferred option

DESCRIPTION OF THE PLANT

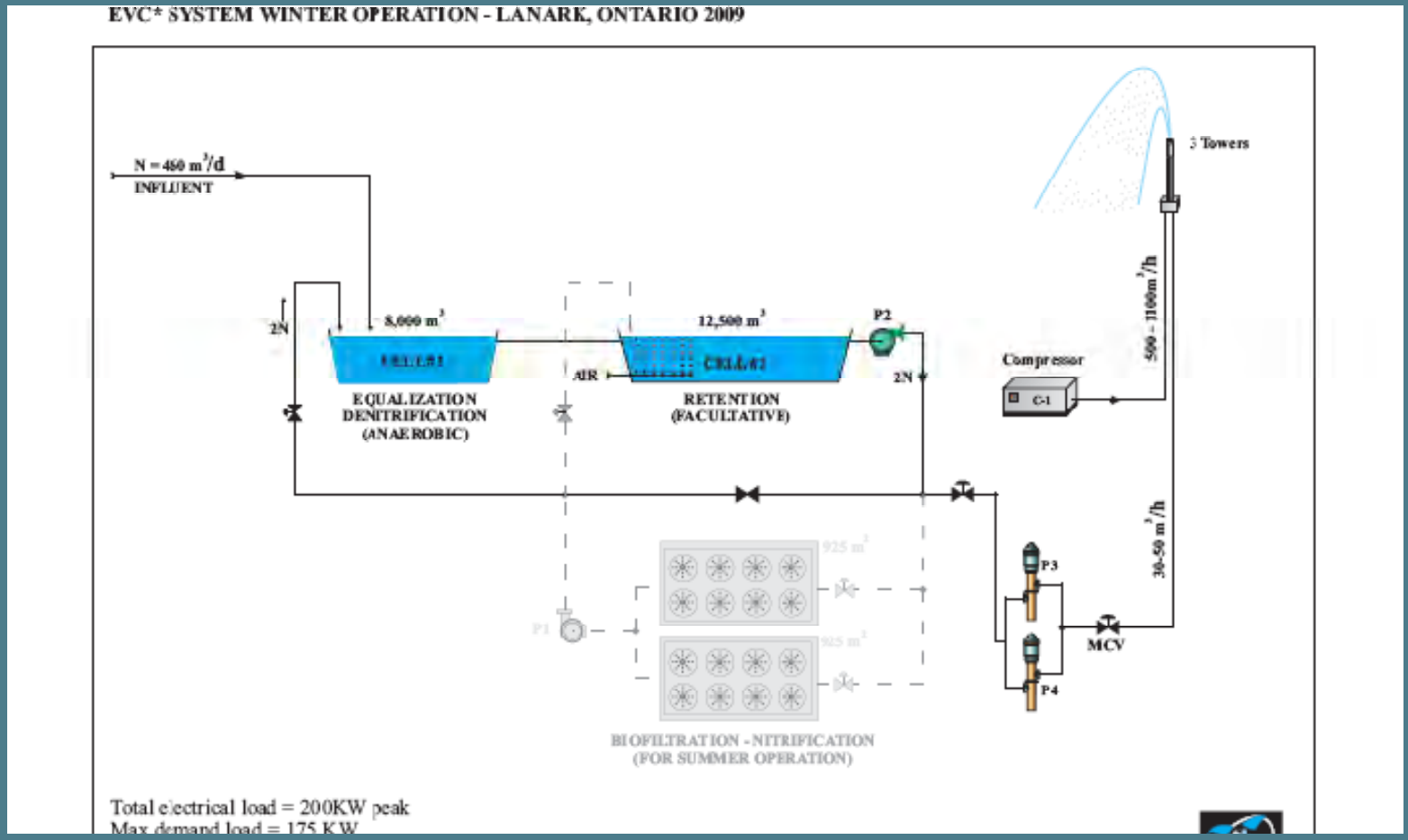
SITE LOCATION



PLANT LAYOUT



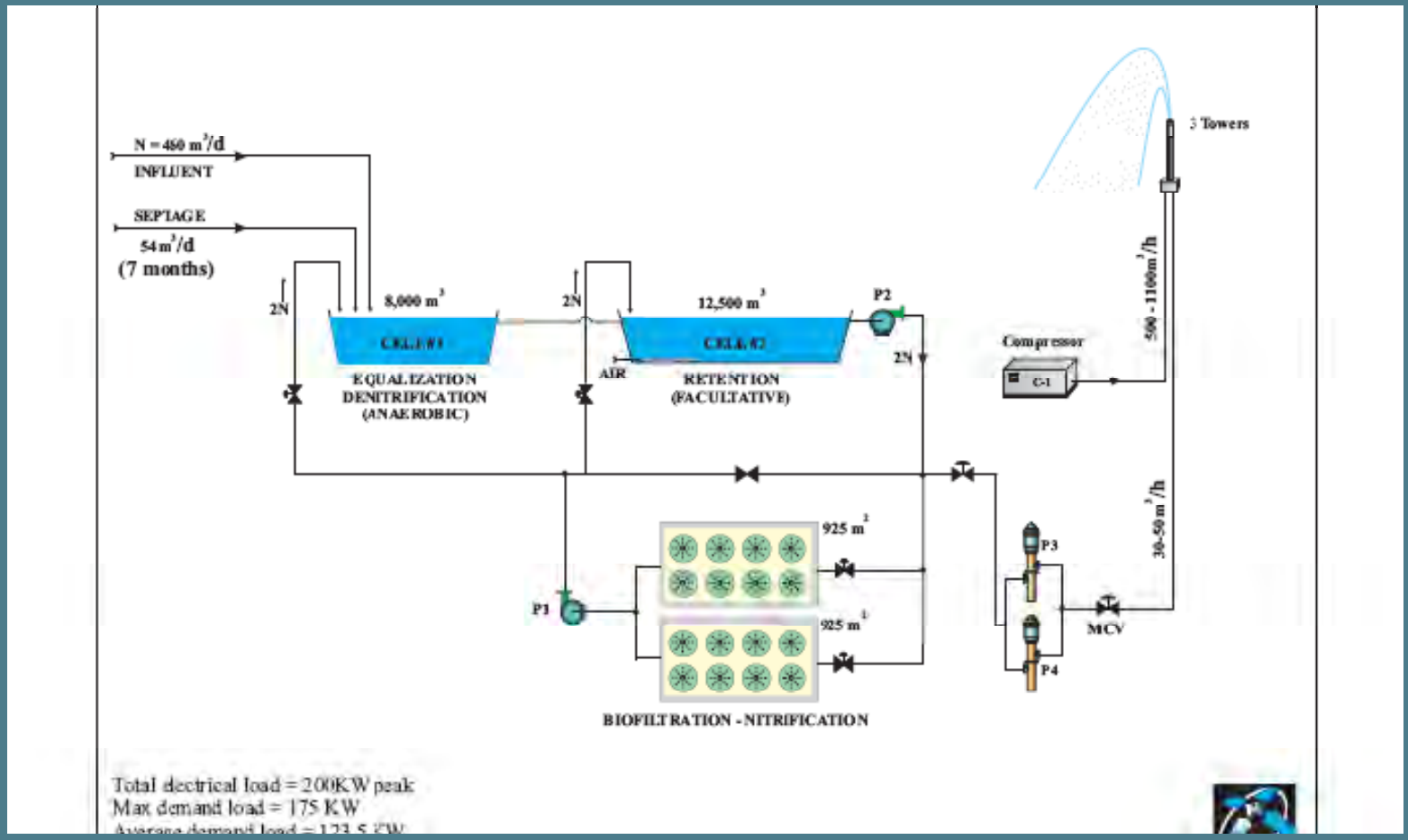
SCHEMATIC - WINTER



SNOW MAKING - WESTPORT

Figure 4. Winter Operation, AFC* - Snowfluent*.

PLANT SCHEMATIC - SUMMER



RECIRCULATING INTERMITTENT FILTER

ENVIRONMENTAL CONCERNS

- **Ground Water**

  Effluent treated to higher standard than Stantec Proposal which was accepted by MOE

  Effluent goes to ground predominantly when plants/trees are active

  Therefore no impact on natural environment

  Surface Water

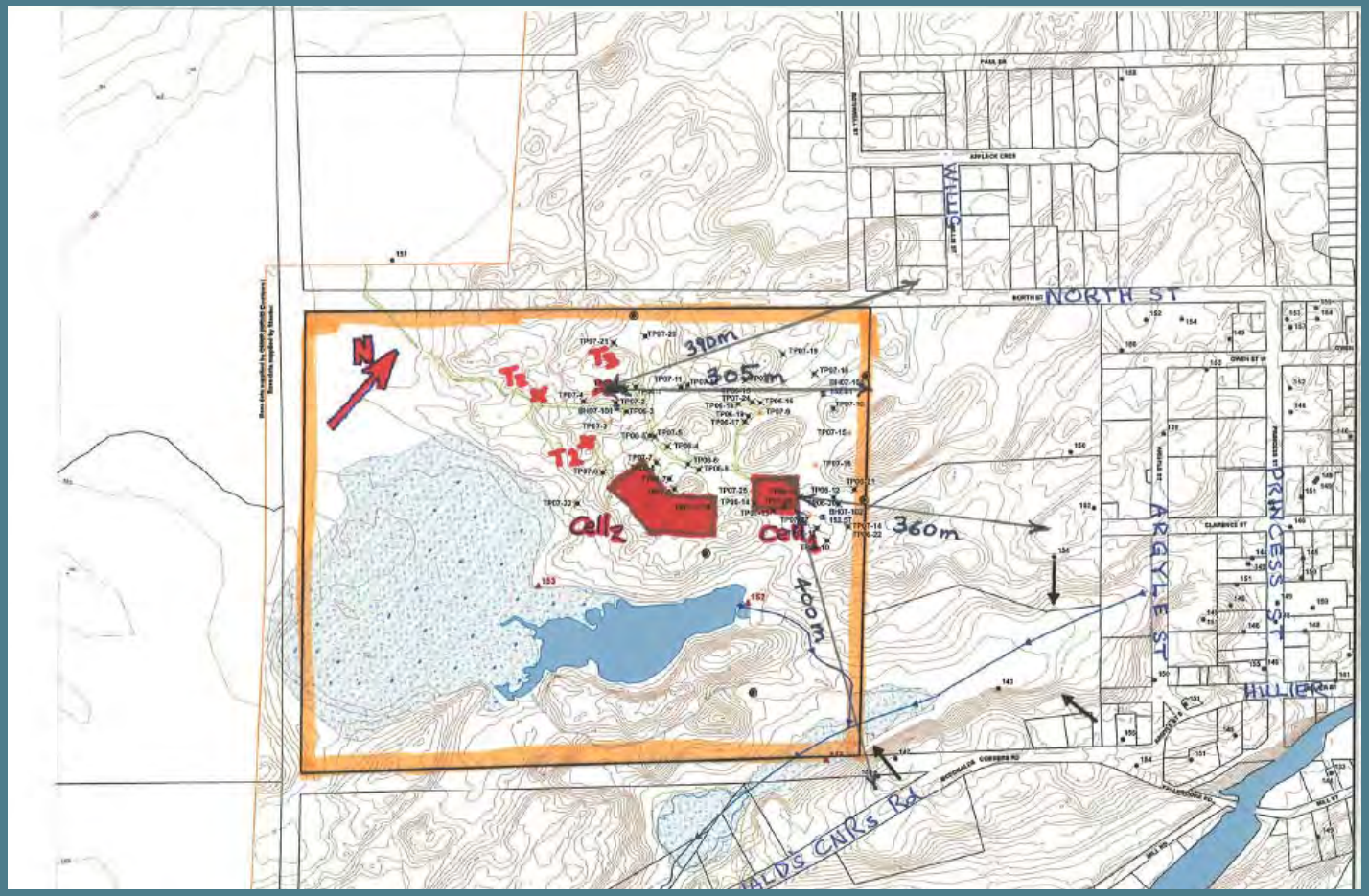
  All surface runoff directed to Cell#2

SOCIAL CONCERNS

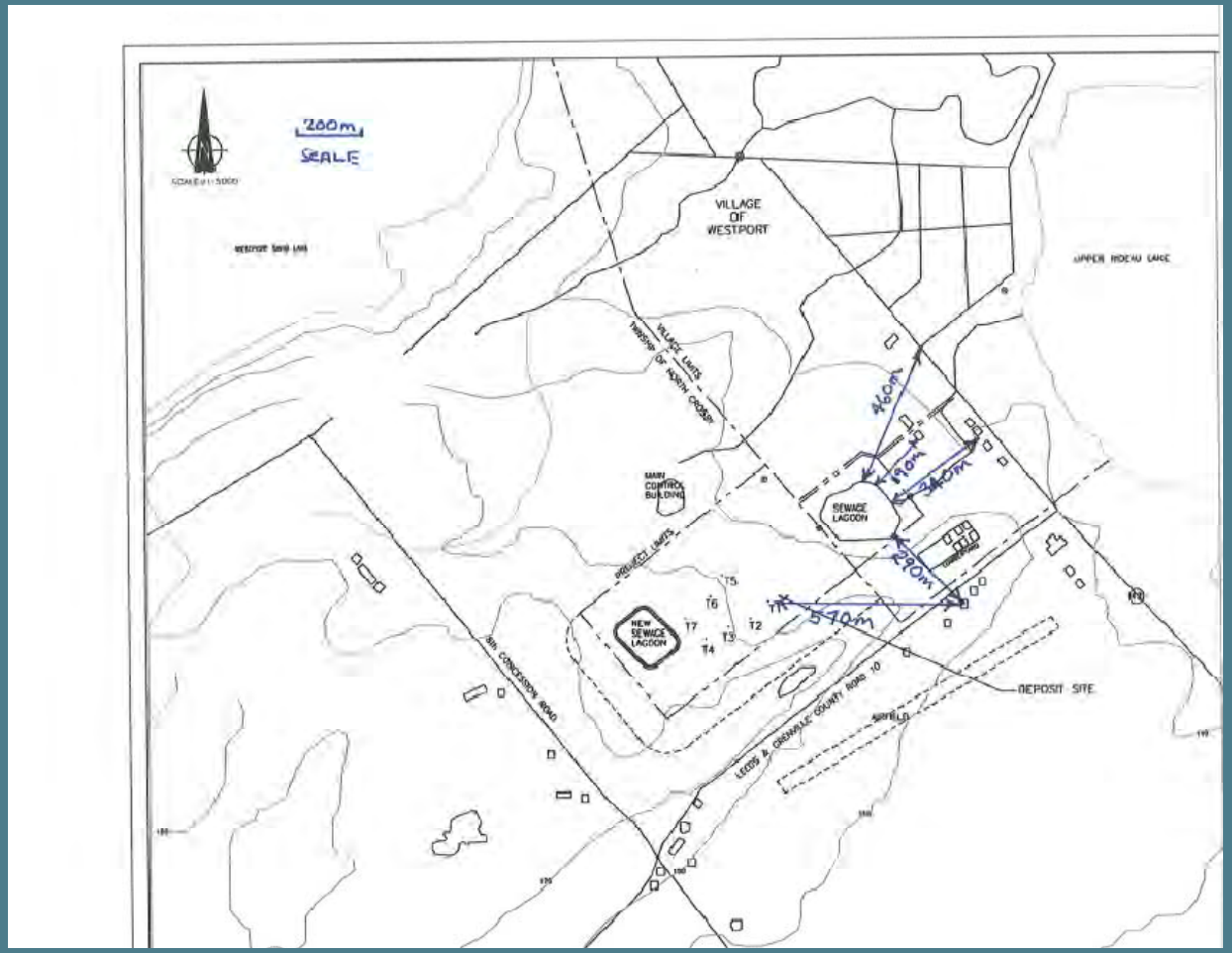
- **Odours**
- **Bacteria and Aerosols**
- **Noise**
- **Safety**
- **Septage**

ODOURS

- Distances larger than Westport
- Cell #1 covered
- Recirculation to Cell #1
- Aeration in Cell #2
- RIF provides further aeration
- Changing levels in Cell #2


NORTH ST
WILLIS ST
ARGYLE ST
PRINCESS ST
HILLIER
T3
T2
T1
Cell2
Cell1
390m
305m
360m
400m
N

WESTPORT


200m
SCALE
VILLAGE
OF
WESTPORT
UPPER RIDEAU LAKE
VILLAGE LIMITS
TOWNSHIP OF NORTH CROSBY
460m
410m
340m
290m
540m
MAIN
CONTROL
BUILDING
SEWAGE
LAGOON
PROJECT LIMITS
T5
T6
T7
T2
T3
T4
NEW
SEWAGE
LAGOON
9th CONCESSION ROAD
LEEDS & GRENVILLE COUNTY ROAD 10
DEPOSIT SITE

BACTERIA AND AEROSOLS

- Retention Times
- Bacteria undetectable in aerosol at 100 m

  (Nearest habitable property is over 300m away)
- In snowpack bacteria kill rate is 99.9% - typical for chlorination process

SOCIAL CONCERNS

- **Odours**
- **Bacteria and Aerosols**
- **Noise**
- **Safety**
- **Septage**

SEPTAGE

- Process designed to handle septage for up to 9300 residents.
- Full capacity would result in approximately 4 trucks per day using the facility
- If this proves to be a social problem, haulage could be reduced to include township residences only.

SUMMARY OF COSTS

- **Capital Costs** **$3,500,000**

  (Compared to approximately $12m for the ESR option)
- **Annual O&M Costs:** **$100,000**

  (Leading to a total W&S household cost per month approximately 35% less than the Mech Plant to Clyde and 50%less than the Mech Plant to sub-surface)

FURTHER INFORMATION

- Proposed Addendum is on the Township Website and at the front desk.
- Call or Email me at the Township Office