

Functional Servicing Report

Proposed Draft Plan of Subdivision & Zoning Bylaw Amendment

Rural Subdivision
Wallace Point Road
Lots 17 and 18
Concession 15

D.M. Wills Project No. 21-85162



D.M. Wills Associates Limited

Partners in Engineering, Planning and
Environmental Services
Peterborough

March 2026

Prepared for:
Life at Wallace Point Inc.

Summary of Revisions

Revision No.	Revision Title	Date of Release	Summary of Revisions
0	Draft Plan Approval	April 2023	First Submission
1	Draft Plan Approval	March 2026	Second Submission

This report has been formatted considering the requirements of the Accessibility for Ontarians with Disabilities Act.

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1.0 Introduction

D.M. Wills Associates Limited (Wills) has been retained by Life at Wallace Point Inc. c/o Rubal Kundra to prepare a Functioning Servicing Report (FSR) for the property located on Wallace Point Road, Lots 17 and 18, Concession 15 in the Township of Otonabee-South Monaghan (Township). The Site is located north-east of the Wallace Point Road and Matchett Line intersection, just north of Crystal Springs. The proposed development is a rural subdivision with 50 residential lots, 1 commercial block, and 1 stormwater management (SWM) block supported with an access block. The purpose of this report is to provide sufficient information to establish that the proposed development is feasible. The FSR will provide guidance for future detailed design of sanitary (septic), domestic water, stormwater and utility servicing of the Site.

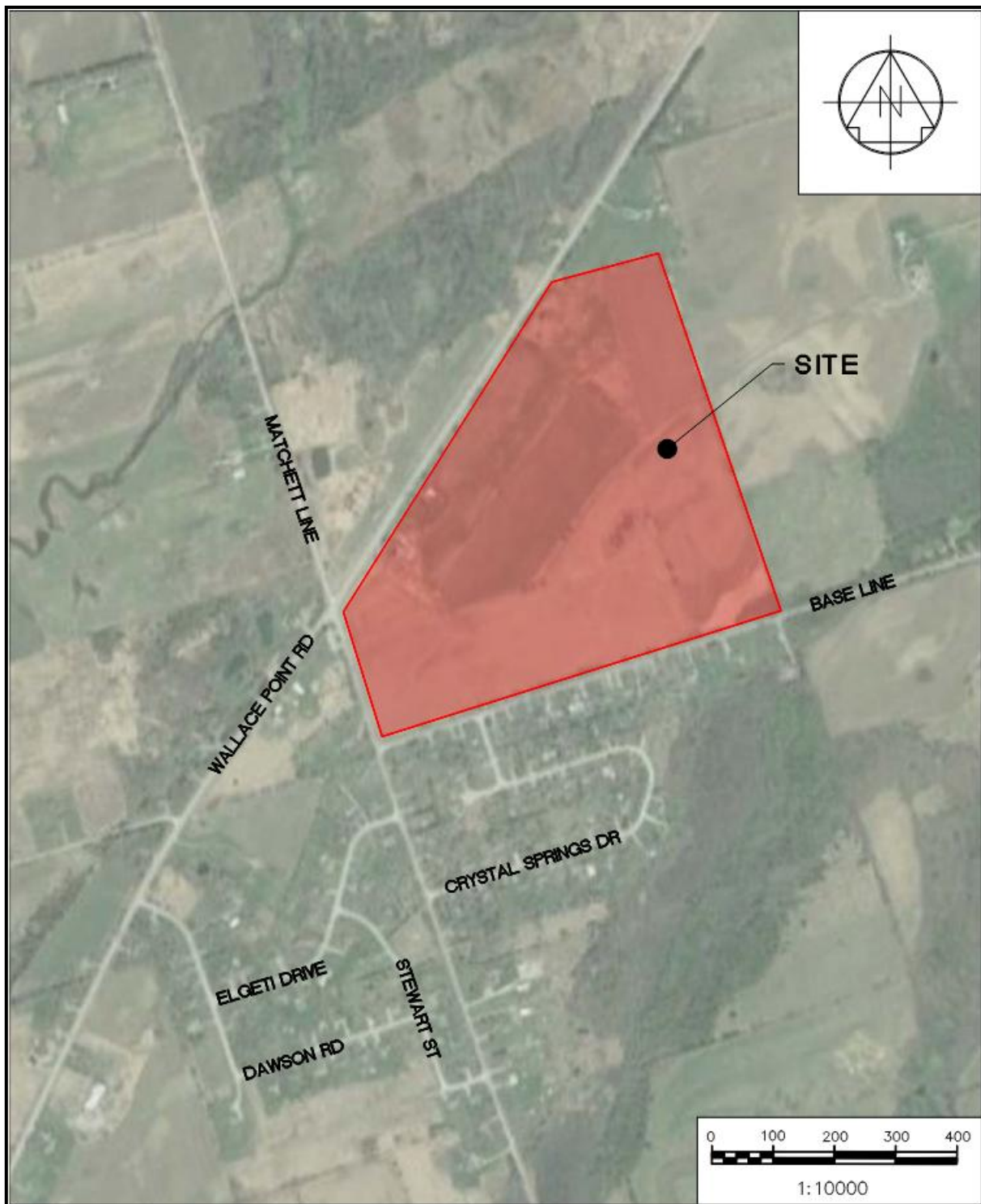
1.1 Site Location / Study Area

The Site is legally defined as Lots 17 and 18, Concession 15, in the Township of Otonabee-South Monaghan, County of Peterborough. The surrounding land use is mainly agricultural land with low-density residential to the south (see **Figure 1 – Site Location Map**).

The Site has an existing farmhouse with a neighbouring barn and silos. The 24.79 ha Site is currently zoned for future development with unevaluated wetlands located at the north and east limits of the Site. In post-development conditions, the wetlands will be removed and compensated for on a neighbouring property owned by the client.

A Draft Plan prepared by Wills defines the 50 new single detached houses, commercial block and Stormwater Management facility (**Appendix A – Draft Plan – Sheet 100**). A private subdivision entrance is proposed from Base Line to provide access to all the properties.

Figure 1 – Site Location Map



2.0 Site Grading and Servicing

2.1 Site Grading

A topographic survey of the existing Site contours was provided by Elliott and Parr, dated October 6, 2022. There is approximately 14 m of elevation change from the south end of the Site (along Base Line) to the culvert crossing in the north-west end of the Site which will be maintained or upgraded as the Site's low point and outlet.

The majority of the proposed grading takes place within the common element and includes a 2-lane paved roadway, paved shoulder and roadside ditches. The roadway grading will collect drainage and direct it towards the north end of the Site to ultimately outlet to the SWM Pond. Proposed grading outside the common element will make use of existing topography wherever possible.

Lot grading will generally follow the existing topography of the Site. Once building footprints have been established, detailed lot grading including side yard and apron swales will be detailed to direct water away from the dwelling units and toward the stormwater management pond. Refer to **Appendix A – Preliminary Engineering Drawings** which include the Servicing Plan, Stormwater Pond Plan and Plans/Profiles.

2.2 Sanitary Servicing

There is no existing sanitary sewer infrastructure located in close proximity of the proposed development. The existing soil conditions are capable of supporting private septic systems for each house (refer to the **Hydrogeological Study** prepared by Wills, dated March 2026).

Each septic system will be sized for the individual block and will be comprised of a septic tank, a primary tile field and reserve tile field. The septic tank provides the first level of sewage treatment by separating the solids and liquids as well as providing space for the solids to break down. The primary tile field provides the second level of treatment by way of filtration. Liquids exiting the septic tank enter the tile field; the wastewater then percolates into the existing soils or granular structure. The reserve tile field is required in septic designs and is intended to act as a reserve area should the existing tile field need to be replaced. Refer to **Appendix A – Servicing Plan – Sheet 200**.

2.3 Storm Servicing

There is no existing storm sewer outlet for the Site. Storm servicing will be accommodated through swales and ditches conveying rainfall to the proposed stormwater management pond. A 450 mm diameter driveway culvert will be provided at each lot entrance location. Refer to the **Preliminary Storm Water Management Report** prepared by Wills, dated January 2026 for a full review of the proposed stormwater management and drainage system proposed for the development.

2.4 Water Servicing

2.4.1 Design Criteria

The following water service design calculations reference the "Design Guidelines for Drinking-Water Systems" published by the Ministry of the Environment (MOE) dated January 2016, revised May 2023. The MOE Design Guidelines provides different methods of calculating the water demands of a drinking water system. Below we have provided two methods: 1) based on historical data and values provided in the MOE Design Guidelines, and 2) based on values provided in MOE Design Guidelines.

The MOE Design Guidelines states for design purposes to use a flow rate of 270 – 450 L/Person/Day. The Township has directed the use of 450 L/Person/Day for water demand calculations.

2.4.2 Proposed Servicing

There is a new 200 mm watermain along Base Line. This Site's 150 mm waterman will either connect with the future watermain on Baseline, or the proposed watermain on Crystal Springs Drive and will extend within the common element road to service all the proposed lots within the Site.

The Elgeti-Crystal Springs drinking water system will not be providing fire protection, therefore, fire flows are not required in analysis.

2.4.3 Commercial Water Demand

Within the proposed development a commercial block is also proposed. There are no existing commercial lots to provide a historical benchmark.

The configuration of the commercial development has yet to be determined; however, for the purposes of this report, a building coverage based on a maximum 30% of the lot area was used resulting in a proposed building of 5,160 m².

From the referenced guideline above, the following data was used to determine post-development conditions:

- Anticipated Building Footprint: 5,160 m²
- Commercial Flow: 2.8 L/m²/day

- Maximum Day Factor: 3.0
- Peak Hour Factor: 4.5

Based on the above data it is anticipated that the proposed commercial block will demand 43.34 m³/day.

As the proposed water system will not be designed to support fire flows, it is suggested that this block have an on-site water storage and dry hydrant. If required, details will be provided with the detail design submission.

2.4.4 Historical Domestic Water Demand

Based on Maximum Daily Flow records from 2010 to 2024 (except years 2019, 2022, and 2023), the maximum daily water demand for the system was 234 m³/day (from May 2015). If the proposed residential development uses the same per capita water demand, the new maximum residential demand will increase by 109.35 m³/day. The total Maximum Day Demand (historical, new residential and the commercial demand) sums to 386.7 m³/day.

An alternative, more conservative estimate of the residential water demand due to the development is included in the next section.

2.4.5 New Domestic Water Demand

Using "Table 3-3: Peaking Factors for Drinking-Water Systems Serving Fewer than 500 People" from the referenced guideline above (Section 2.4.1), the following data was used based on the 157 dwelling units serviced under post-development conditions:

- Equivalent Population: TOTAL = 471
Existing Elgeti and Crystal Springs Developments: 321 (3 persons/unit)
Proposed Development: 150 (3 persons/unit)
- Maximum Day Factor: 3.0
- Peak Hour Factor: 4.5

Based on the above data including the required 450 L/Person/Day, the Maximum Residential Demand on the system due to the proposed development is 202.50 m³/d. As this is greater than the 109.35 m³/day based on historical usage rates, this value will be used for further consideration.

2.4.6 Water Demand Conclusion

Combining the historical Elgeti and Crystal Springs water usage and the calculated demand from the 50 new residential lots and one commercial block, the total water maximum day demand will be 479.84 m³/day for the entire system.

This value is lower than the current Maximum Capacity of the water treatment plan of 540 m³/day; therefore, all 50 proposed residential lots and the commercial block can

be serviced. Refer to **Appendix B – Water Analysis**. It should be noted the values used in the above calculation are considered to be overly conservative for calculating water capacity in 2026.

It should be noted based on this calculation method there remains residual capacity in the treatment plant to add an additional 44 persons (in addition to this proposed development) to the system before its capacity is reached.

To summarize, Wills has reviewed the available Annual Water Reports (dated 2009-2024) for the Elgeti & Crystal Springs Drinking Water System and confirmed there is available capacity to support the proposed development. Refer to **Appendix B – Water Analysis** for the annual report data along with calculation sheets used to determine the above results.

2.5 Utility Servicing

Currently primary electrical service is readily available via overhead aerial cable located on the east side of Matchett Line approximately 165 m west of the Site entrance. Alternatively, connections to the existing primary electrical service can be accomplished from the east side of Wallace Point Road or from the existing neighbouring subdivision on the south side of Base Line. The adequacy of the overhead hydro will be determined by an electrical consultant during the detailed design stage. (Refer to **Appendix C – Correspondence** for plans from Hydro One.)

Currently Bell's telecommunication services are readily available as overhead aerial cable on the same poles as Hydro. Connecting to Bell's existing infrastructure can be accomplished at the same location as connecting to Hydro (Refer to **Appendix C – Correspondence** for plans from Bell).

3.0 Conclusion

Servicing for the proposed development is feasible.

1. Stormwater runoff will be accommodated by a system of swales and sheet drainage that divert water to the proposed roadside infiltration ditches and ultimately the stormwater management pond.
2. Sanitary servicing will be accommodated by individual septic systems (treatment, tanks and tile fields).
3. Domestic water servicing will be provided by connecting to the existing municipal watermain infrastructure along Base Line.
4. Utilities to service the development are readily available overhead within the Wallace Point Road and Matchett Line right-of-way, along with the Crystal Springs subdivision to the south.

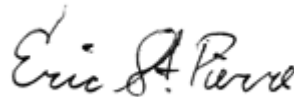
If you require any further information, or have any questions, please do not hesitate to contact the undersigned.

Respectfully submitted,



Chris Proctor, P.Eng.
Manager, Land Development Engineering

CP/ESP/jh



Eric St. Pierre
Project Engineer

Statement of Limitations

This report has been prepared by D.M. Wills Associates Limited on behalf Life at Wallace Point Inc. to address the requirements of the Township of Otonabee-South Monaghan.

The conclusions and recommendations in this report are based on available background documentation and discussions with applicable agencies at the time of preparation.

The report is intended to determine the feasibility of the proposed development with respect to sanitary, water, stormwater and utility servicing of the subject lands. The design information provided in this report is preliminary in nature and should not be used for construction purposes.

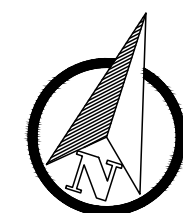
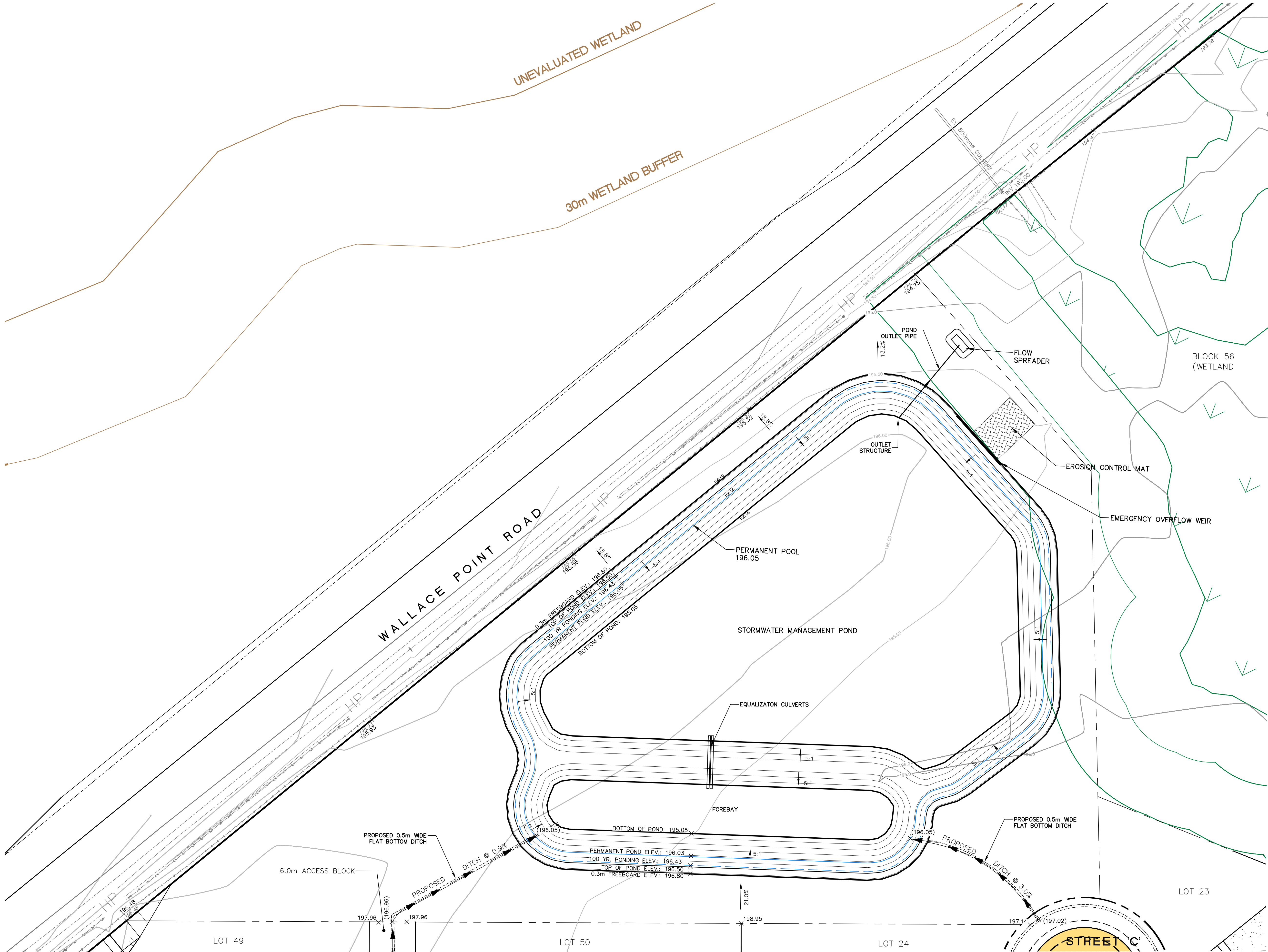
Any use that a third party makes of this report other than a functional servicing report for the proposed development is the responsibility of such third parties. D.M. Wills Associates Limited accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or action taken based on using this report for purposes other than a functional servicing report for the subject property located on Wallace Point Road.

Appendix A

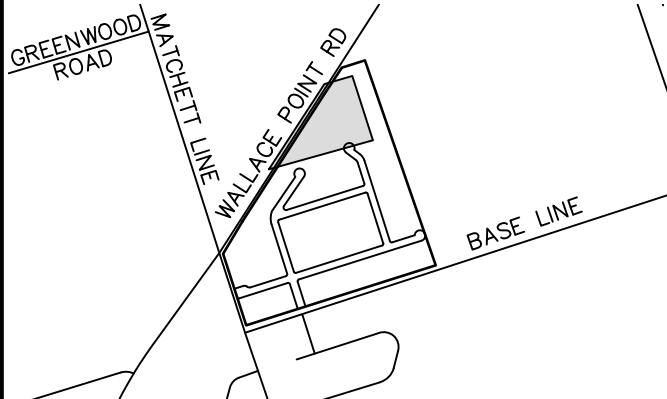
Preliminary Engineering Drawings



Printed By: mjb@wills.ca Printed On: March 20, 2026
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KEY PLAN



REVISIONS

No.	Description	Date
2	DRAFT PLAN APPROVAL	03/19/26
1	FIRST SUBMISSION	04/21/23

METRIC

Dimensions are in METRES and/or MILLIMETRES unless otherwise shown

LEGEND

	EX. BUILDING
	EX./PR. EDGE OF PAVEMENT
	EX./PR. ROAD CENTERLINE
	EX./PR. EDGE OF SHOULDER/GRAVEL
	EX./PR. WATER VALVE
	EX. OVERHEAD HYDRO
	EX. UNDERGROUND HYDRO
	EX./PR. DITCH
	PR. SWALE
	PR. CULVERT
	PR. CATCH BASIN
	EX./PR. WATERMAIN
	R.O.W.
	PROPERTY LINE
	EXISTING VEGETATION
	PROPOSED HOUSE WITH 2 CAR GARAGE
	SEPTIC TANK
	TILE FIELD AND MANTLE
	EX./PR. ELEVATION
	EX./PR. SWALE/BTM OF DITCH ELEVATION



D.M. Wills Associates Limited
150 Jameson Drive
Peterborough, Ontario
Canada K9J 0B9
P. 705.742.2297
F. 705.748.9944
E. wills@dmwills.com

Project Name/Location

PROPOSED RESIDENTIAL DEVELOPMENT

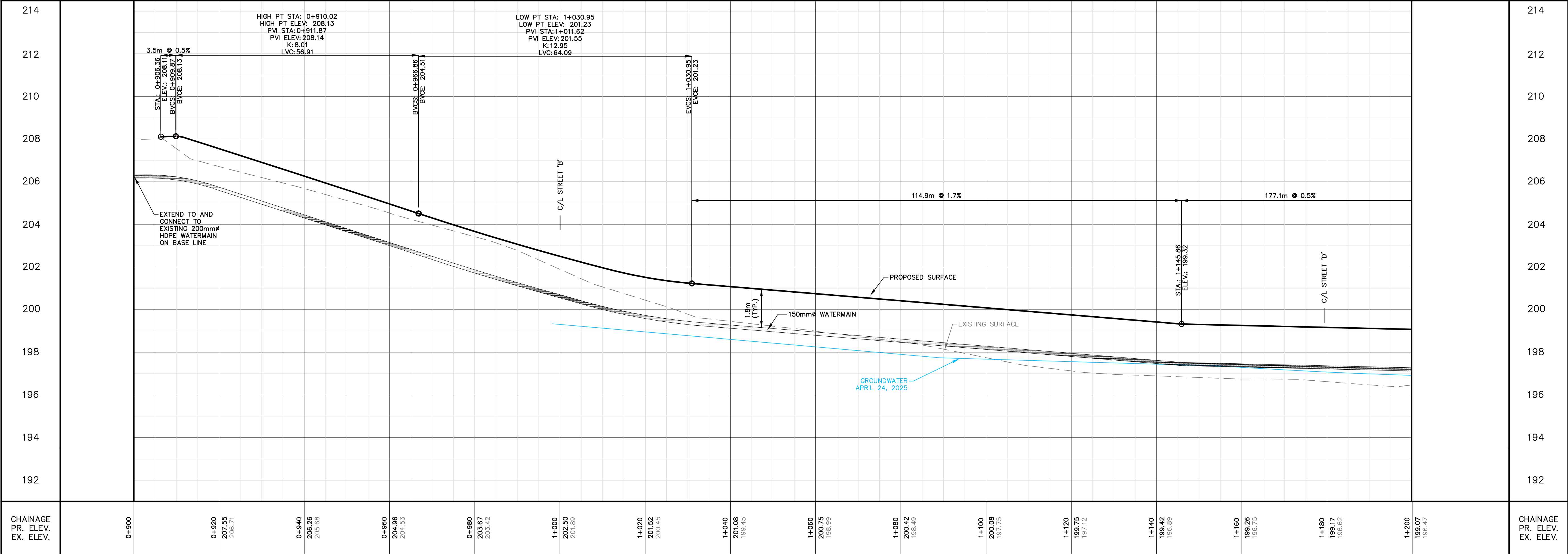
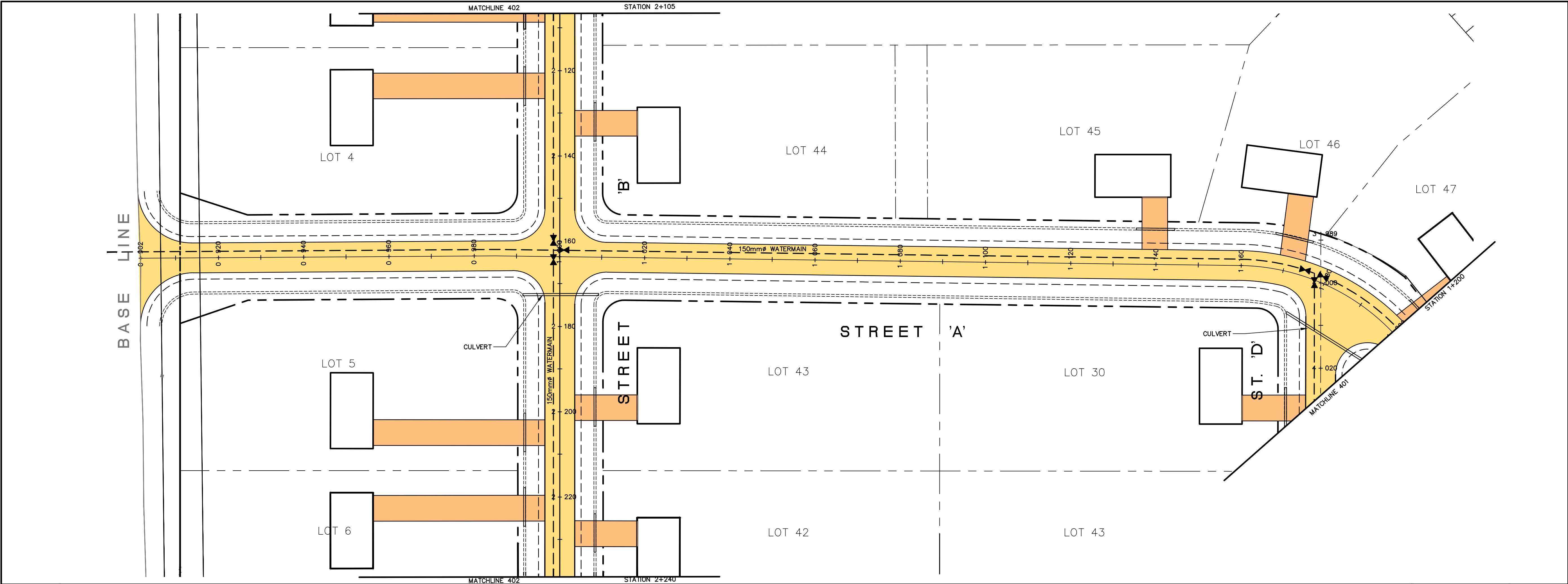
3491 WALLACE POINT ROAD, PETERBOROUGH

STORMWATER MANAGEMENT POND

Drawn By: M.B.J.	SCALE: Horiz. 1:400	Vert. —
Designed By: S.C.	Issue Date: MARCH 19, 2026.	
Checked By: J.R.	Project No.: 21-85162	Sht. No.:
Engineer: C.P.	Dwg File No.: 85162 - POND	300

NOT FOR CONSTRUCTION

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KEY PLAN

REVISIONS		
No.	Description	Date
2	DRAFT PLAN APPROVAL	03/19/26
1	FIRST SUBMISSION	04/21/23

METRIC	
Dimensions are in METRES and/or MILLIMETRES unless otherwise shown	
TO BE READ IN CONJUNCTION WITH OPSD 100 SERIES	
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED MEDIUM DUTY ASPHALT
	PROPOSED SURFACE DRAINAGE STORAGE AREA
	PROPOSED UNDERGROUND DRAINAGE STORAGE AREA
	EX. BUILDING
	EX./PR. EDGE OF PAVEMENT
	EX./PR. ROAD CENTERLINE
	EX./PR. EDGE OF SHOULDER/GRAVEL
	EX./PR. WATER VALVE
	EXISTING HYDRO POLE
	EX. OVERHEAD HYDRO
	EX. UNDERGROUND HYDRO
	EX./PR. DITCH
	PR. SWALE
	PR. CULVERT
	PR. CATCH BASIN
	EX./PR. WATERMAIN
	R.O.W.
	PROPERTY LINE
	EXISTING VEGETATION
	PROPOSED HOUSE WITH 2 CAR GARAGE
	SEPTIC TANK
	TILE FIELD AND MANTLE
	EX./PR. ELEVATION

D.M. Wills Associates Limited
150 Jameson Drive
Peterborough, Ontario
Canada K9J 0B9
P: 705.742.2297
F: 705.746.9944
E: wills@dmwills.com

Project Name/Location

PROPOSED RESIDENTIAL DEVELOPMENT

3491 WALLACE POINT ROAD, PETERBOROUGH

Drawing Title

PLAN AND PROFILE

STREET 'A'

STA. 0+906 TO 1+200

Drawn By: MBJ

SCALE: Horz. 1:500

Vert. 1:50

Designed By: MBJ

Issue Date: MARCH 19, 2026

Checked By: JBR

Project No.: 21-85162

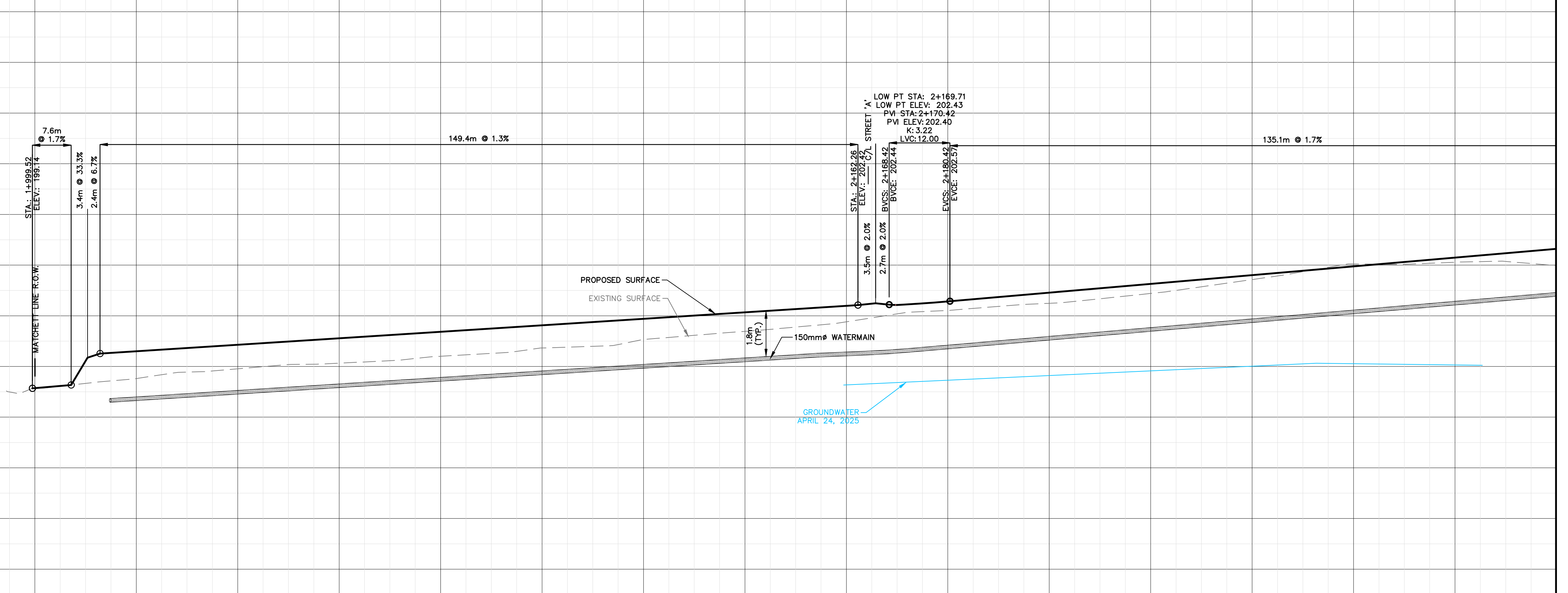
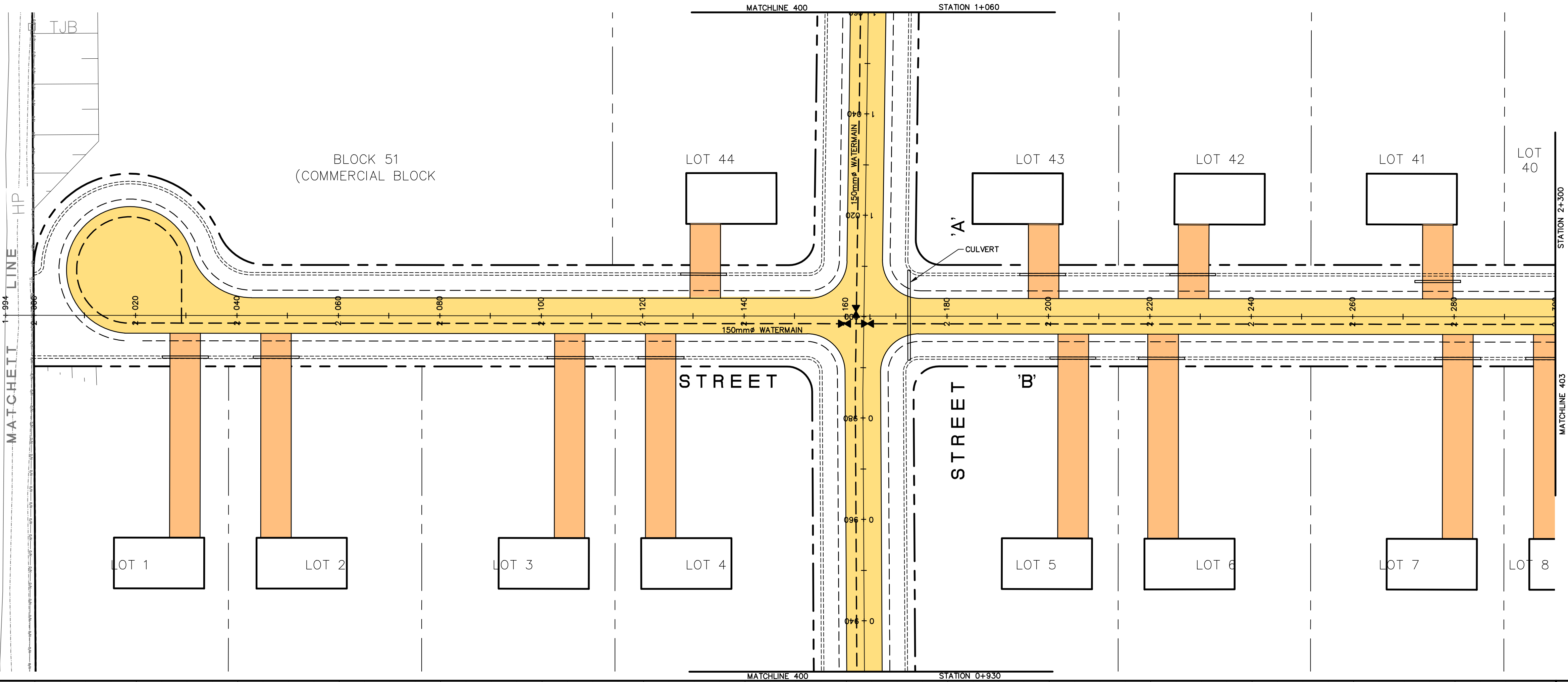
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Dwg File No.: PP

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KEY PLAN

REVISIONS		
No.	Description	Date
2	DRAFT PLAN APPROVAL	03/19/26
1	FIRST SUBMISSION	04/21/23

METRIC	
LEGEND	
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED MEDIUM DUTY ASPHALT
	PROPOSED SURFACE DRAINAGE STORAGE AREA
	PROPOSED UNDERGROUND DRAINAGE STORAGE AREA
	EX. BUILDING
	EX./PR. EDGE OF PAVEMENT
	EX./PR. ROAD CENTERLINE
	EX./PR. EDGE OF SHOULDER/GRAVEL
	EX./PR. WATER VALVE
	EXISTING HYDRO POLE
	EX. OVERHEAD HYDRO
	EX. UNDERGROUND HYDRO
	EX./PR. DITCH
	PR. SWALE
	PR. CULVERT
	PR. CATCH BASIN
	EX./PR. WATERMAIN
	R.O.W.
	PROPERTY LINE
	EXISTING VEGETATION
	PROPOSED HOUSE WITH 2 CAR GARAGE
	SEPTIC TANK
	TILE FIELD AND MANTLE
	EX./PR. ELEVATION

D.M. Wills Associates Limited
150 Jameson Drive
Peterborough, Ontario
Canada K9J 0B9
P: 705.742.2297
F: 705.746.9944
E: wills@dmwills.com

Project Name/Location

PROPOSED RESIDENTIAL DEVELOPMENT

3491 WALLACE POINT ROAD, PETERBOROUGH

Drawing Title

PLAN and PROFILE

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STA. 2+000 to 2+300

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Checked By: JBR	Project No.: 21-85162	Sht. No.: 402
Engineer: CP	Dwg File No.: PP	

NOT FOR CONSTRUCTION

CHAINAGE
PR. ELEV.
EX. ELEV.

1+980

2+000
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199.14

2+020
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199.52

2+040
200.86
199.91

2+060
201.11
200.13

2+080
201.37
200.40

2+100
201.63
200.73

2+120
201.88
201.06

2+140
202.14
201.38

2+160
202.39
201.76

2+180
202.57
202.21

2+200
202.81
202.49

2+220
203.26
202.88

2+240
203.60
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2+260
203.95
204.05

2+280
204.30
204.11

2+300
204.64
203.98

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PR. ELEV.
EX. ELEV.

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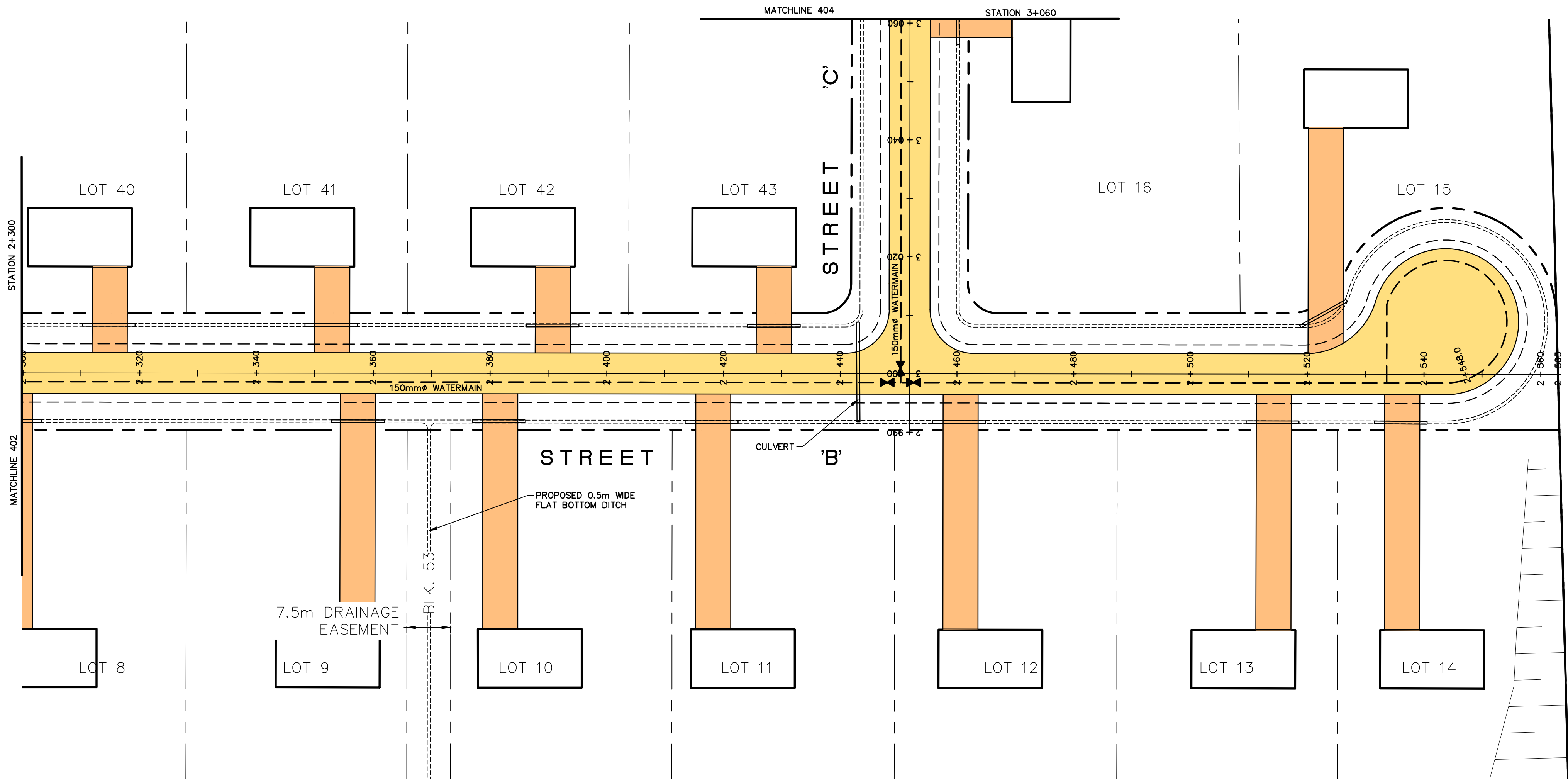
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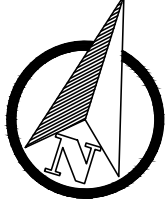
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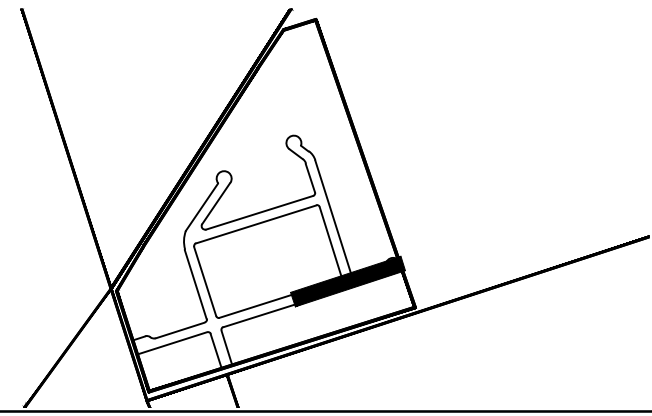
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KEY PLAN



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2	DRAFT PLAN APPROVAL	03/19/26
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METRIC

LEGEND

 PROPOSED HEAVY DUTY ASPHALT

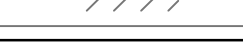
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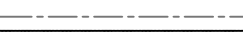
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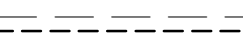
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 EX. BUILDING

 EX./PR. EDGE OF PAVEMENT

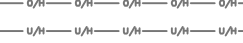
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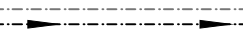
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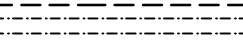
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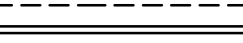
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 EX. OVERHEAD HYDRO

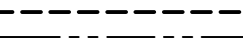
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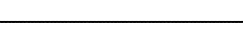
 EX./PR. DITCH

 PR. SWALE

 PR. CULVERT

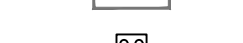
 PR. CATCH BASIN

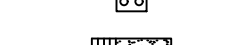
 EX./PR. WATERMAIN

 R.O.W

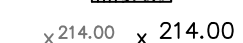
 PROPERTY LINE

 EXISTING VEGETATION

 PROPOSED HOUSE WITH 2 CAR GARAGE

 SEPTIC TANK

 TILE FIELD AND MANTLE

 EX./PR. ELEVATION





Project Name/Location

PROPOSED RESIDENTIAL DEVELOPMENT

3491 WALLACE POINT ROAD, PETERBOROUGH

Drawing Title

PLAN AND PROFILE

STREET 'B'

STA. 2+300 to 2+580

Drawn By: MBJ

Designed By: MBJ

Checked By: JR

Engineer: CP

SCALE: Horz. 1:500

Issue Date: MARCH 19, 2026

Project No.: 21-85162

Dwg File No.: PP

Sht. No.: 403

NOT FOR CONSTRUCTION

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CHAINAGE

PR. ELEV.

EX. ELEV.

2+300

204.64

203.98

2+320

204.98

204.33

2+340

205.00

204.38

2+360

204.72

202.92

2+380

204.43

201.34

2+400

204.13

202.00

2+420

203.84

203.91

2+440

203.55

204.08

2+460

203.47

203.91

2+480

203.59

203.31

2+500

203.74

202.08

2+520

203.89

201.69

2+540

204.04

201.81

2+560

202.19

201.56

2+580

CHAINAGE

PR. ELEV.

EX. ELEV.

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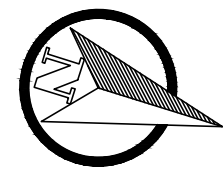
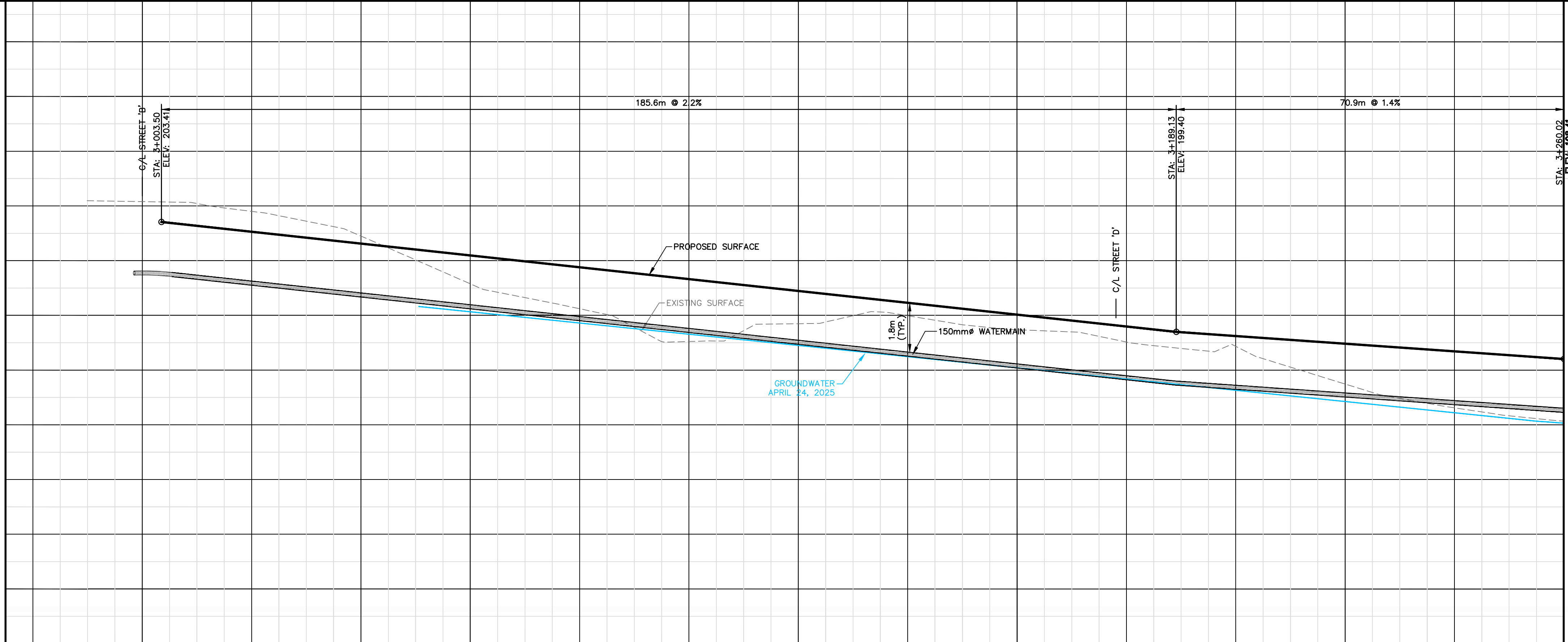
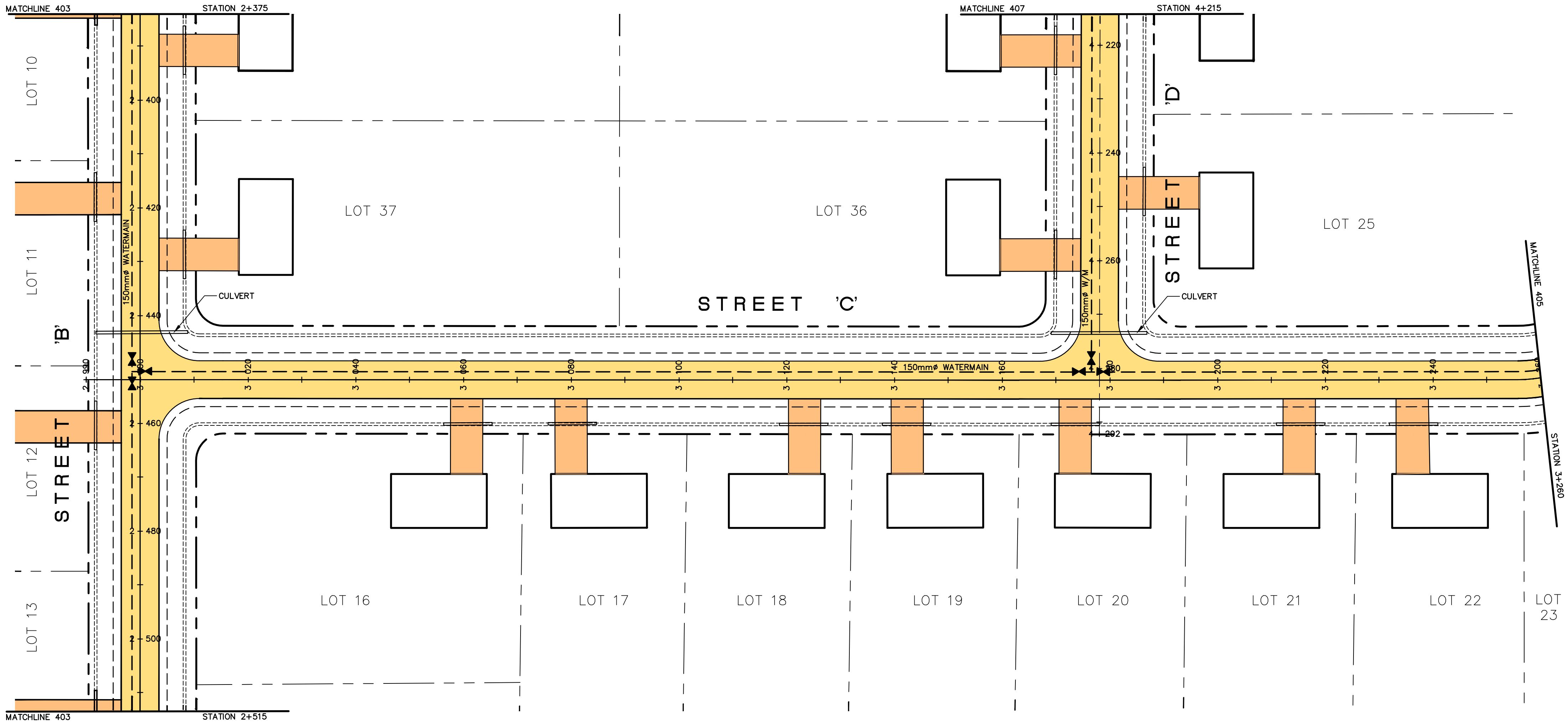
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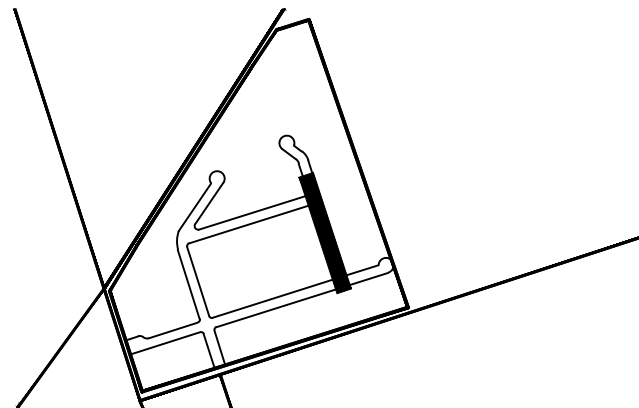
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Printed By: mpoliceur Printed On: March 20, 2026
q:\35000 - private\85100-85199\85162 - 3491 wallace point rd\02 drawings\02 current drawings\cod\log\85162 - pp.dwg



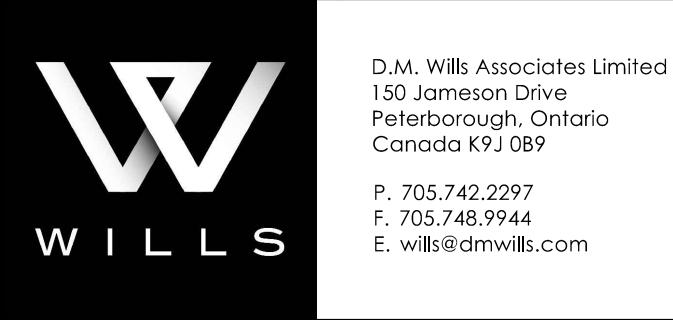
KEY PLAN



REVISIONS		
No.	Description	Date
2	DRAFT PLAN APPROVAL	03/19/26
1	FIRST SUBMISSION	04/21/23

METRIC Dimensions are in METRES and/or MILLIMETRES unless otherwise shown
LEGEND TO BE READ IN CONJUNCTION WITH OPSD 100 SERIES

	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED MEDIUM DUTY ASPHALT
	PROPOSED SURFACE DRAINAGE STORAGE AREA
	PROPOSED UNDERGROUND DRAINAGE STORAGE AREA
	EX. BUILDING
	EX./PR. EDGE OF PAVEMENT
	EX./PR. ROAD CENTERLINE
	EX./PR. EDGE OF SHOULDER/GRAVEL
	EX./PR. WATER VALVE
	EXISTING HYDRO POLE
	EX. OVERHEAD HYDRO
	EX. UNDERGROUND HYDRO
	EX./PR. DITCH
	PR. SWALE
	PR. CULVERT
	PR. CATCH BASIN
	EX./PR. WATERMAIN
	R.O.W
	PROPERTY LINE
	EXISTING VEGETATION
	PROPOSED HOUSE WITH 2 CAR GARAGE
	SEPTIC TANK
	TILE FIELD AND MANTLE
	EX./PR. ELEVATION

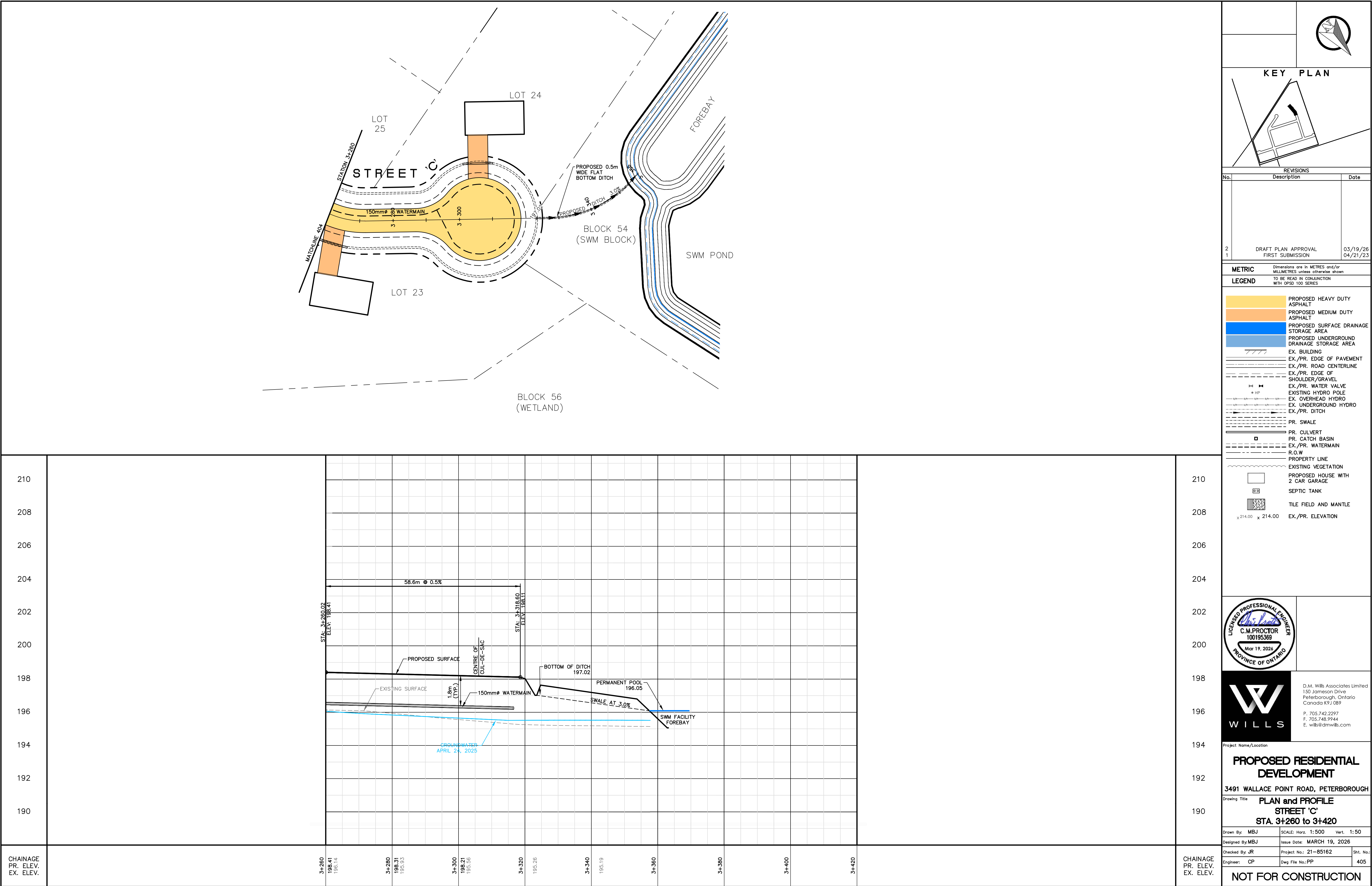


Project Name/Location
PROPOSED RESIDENTIAL DEVELOPMENT
3491 WALLACE POINT ROAD, PETERBOROUGH
Drawing Title
PLAN AND PROFILE STREET 'C' STA. 2+990 to 3+260

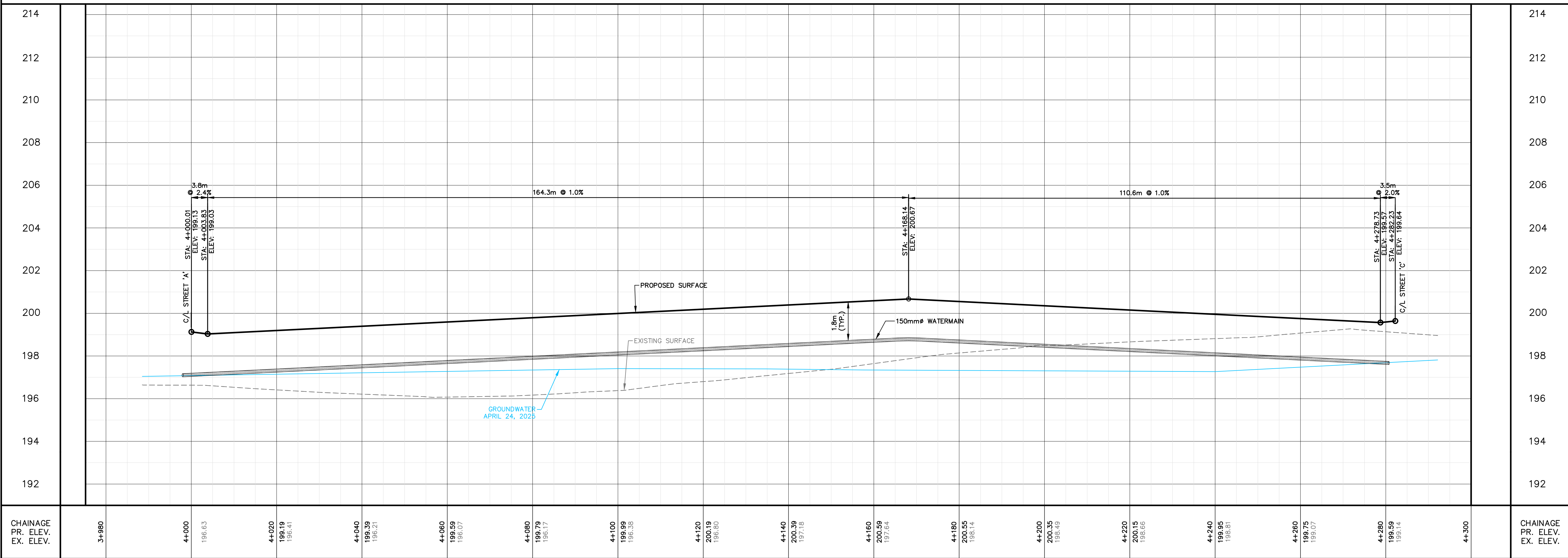
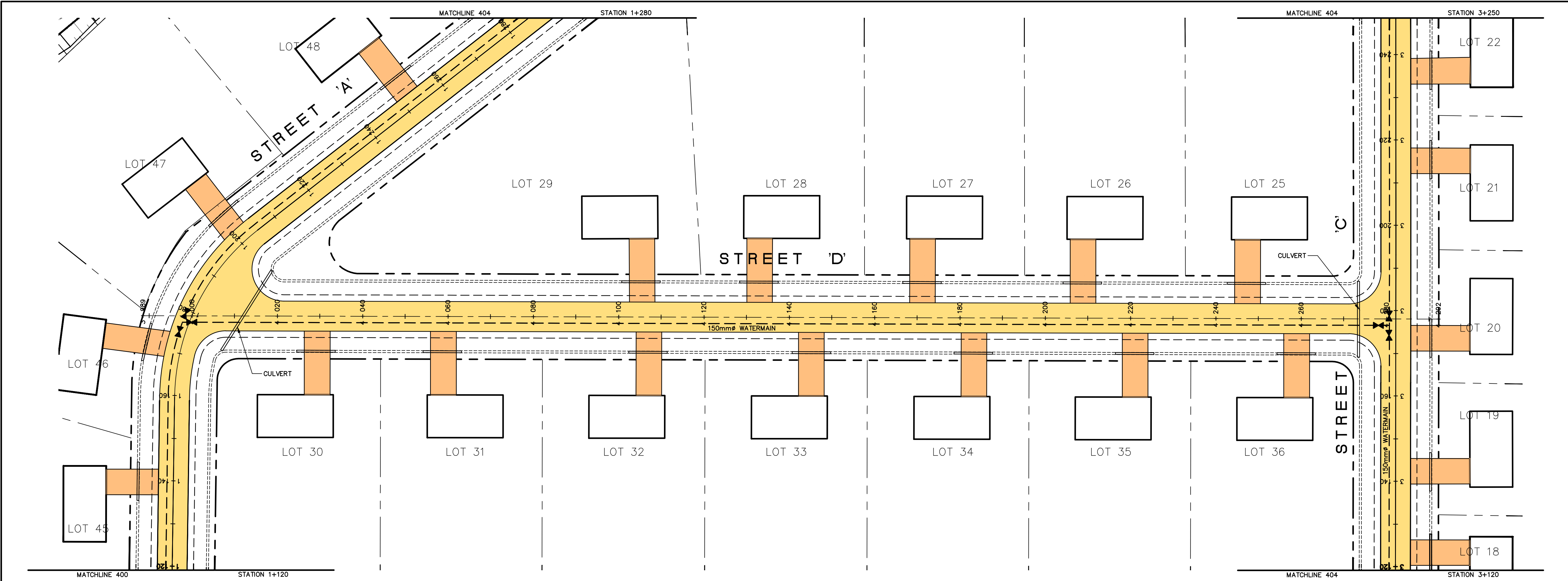
Drawn By: MBJ	SCALE: Horz. 1:500 Vert. 1:50	Sht. No.: 404
Designed By: MBJ	Issue Date: MARCH 19, 2026.	
Checked By: JBR	Project No.: 21-85162	404
Engineer: CP	Dwg File No.: PP	

NOT FOR CONSTRUCTION

Printed By: mpoliceur Printed On: March 20, 2026
q:\35000 - Private\35100-85162\35162 - 3491 wallace point rd\02 drawings\02 current drawings\cod\35162 - pp.dwg



Printed By: mpoliceur Printed On: March 20, 2026
q:\35000 - private\85100-85199\85162 - 3491 wallace point rd\02 drawings\02 current drawings\02\85162 - pp.dwg



KEY PLAN

REVISIONS		
No.	Description	Date
2	DRAFT PLAN APPROVAL	03/19/26
1	FIRST SUBMISSION	04/21/23

METRIC

LEGEND

PROPOSED HEAVY DUTY ASPHALT

PROPOSED MEDIUM DUTY ASPHALT

PROPOSED SURFACE DRAINAGE STORAGE AREA

PROPOSED UNDERGROUND DRAINAGE STORAGE AREA

EX. BUILDING

EX./PR. EDGE OF PAVEMENT

EX./PR. ROAD CENTERLINE

EX./PR. EDGE OF SHOULDER/GRAVEL

EX./PR. WATER VALVE

EXISTING HYDRO POLE

EX. OVERHEAD HYDRO

EX. UNDERGROUND HYDRO

EX./PR. DITCH

PR. SWALE

PR. CULVERT

PR. CATCH BASIN

EX./PR. WATERMAIN

R.O.W.

PROPERTY LINE

EXISTING VEGETATION

PROPOSED HOUSE WITH 2 CAR GARAGE

SEPTIC TANK

TILE FIELD AND MANTLE

EX./PR. ELEVATION

LICENSED PROFESSIONAL ENGINEER

C.M. PROCTOR

100195369

Mar 19, 2026

PROVINCE OF ONTARIO

D.M. Wills Associates Limited

150 Jameson Drive

Peterborough, Ontario

Canada K9J 0B9

P: 705.742.2297

F: 705.746.9944

E: wills@dmwills.com

Project Name/Location

PROPOSED RESIDENTIAL DEVELOPMENT

3491 WALLACE POINT ROAD, PETERBOROUGH

Drawing Title

PLAN AND PROFILE

STREET 'D'

STA. 4+000 to 4+202

Drawn By: MBJ

SCALE: Horz. 1:500

Vert. 1:50

Designed By: MBJ

Issue Date: MARCH 19, 2026

Checked By: JBR

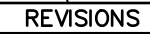
Project No.: 21-85162

Sht. No.: 406

Engineer: CP

Dwg File No.: PP

NOT FOR CONSTRUCTION

METRIC

PR. HEAVY DUTY ASPHALT



Project Name/Location

PROPOSED RESIDENTIAL DEVELOPMENT

3491 WALLACE POINT ROAD, PETERBOROUGH

Drawing Title

PRELIMINARY GRADING

Drawn By: M.B.J.	SCALE: Horz. 1:1500	Vert. —
Designed By: M.B.J.	Issue Date: MARCH 19, 2026.	
Checked By: C.P.	Project No.: 21-85162	Sht. No. 500
Engineer: C.P.	Dwg File No.: MP	

NOT FOR CONSTRUCTION

Appendix B

Water Analysis





WILLS

Date: January 27, 2026

Project: 85162 - Wallace Point Subdivision

D.M. Wills Associates Limited

150 Jameson Drive

Peterborough, ON K9J 0B9

P. 705.742.2297 F. 705.741.3568

Water Capacity Analysis

Year	Maximum Daily Flows Per Month												Max Daily Flow (m ³ /d)	Max Capacity (m ³ /d)
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
2010	133	100	107	136	213	134	144	152	118	99	96	97	213	540
2011	100	96	118	110	145	148	181	101	107	102	98	100	181	540
2012	132	103	129	132	166	127	150	157	143	150	150	178	178	540
2013	140	140	140	145	227	161	175	149	95	87	104	91	227	540
2014	96	88	88	99	138	161	116	125	106	126	110	109	161	540
2015	107	106	101	122	234	115	159	131	142	138	128	167	234	540
2016	143	139	142	156	204	227	128	113	84	75	80	67	227	540
2017	59	118	82	93	109	92	92	92	89	75	99	102	118	540
2018	91	81	76	76	109	114	162	128	101	85	103	89	162	540
2020	85	76	79	97	158	201	185	141	109	99	94	108	201	540
2021	122	136	174	95	176	175	162	127	114	129	125	163	176	540
2024	59	58	61	77	116	109	117	137	80	61	62	79	137	540
Notes: - Using the Maximum Daily Flow information of 234.0m ³ /day gathered since 2010, we can determine, based on the plant currently servicing 107 dwellings, that each dwelling uses an average maximum flow of 2.19m ³ /day. Using this value we can predict that the additional 50 dwellings will increase the Maximum Day Demand by 109.35 m ³ /day. The commercial block water demand is based on theoretical values as no historical data is available. Therefore, the post-development Maximum Day Demand is calculated to be 386.7 m ³ /day.												Maximum Daily Flow Recorded	234.00	Servicing 107 dwellings
												New Residential Max Day Demand:	109.35	Servicing 50 dwellings
												Proposed Commercial Max Day Demand:	43.34	Servicing 1 Block
												Total Max Day Demand (Post-Development):	386.7 m ³ /d	Servicing 157 dwellings + 1 Commercial Block

PROJECT INFORMATION

PROJECT LOCATION: Township of Otonabee-South Monaghan
DM WILLS PROJECT: 3491 Wallace Point Rd
DM WILLS PROJECT No.: 85162



DESIGNED BY: E. St. Pierre
CHECKED BY: C. Proctor

Date: 01/27/26

PROPOSED DOMESTIC WATER DEMAND - Commercial

CRITERIA USED: Guidelines for the Design of Water Distribution Systems - July 1985
 Design Guidelines for Drinking-Water Systems - 2008

COMMERCIAL (Building Footprint):	5,160	m ²	A
COMMERCIAL FLOW:	2.8	L/(footprint) m ² /day	B
MAX. DAY FACTOR:	3.0		C
PEAK HOUR FACTOR:	4.5		D

CALCULATIONS:

Total Commercial Development fire Flow
 (flow previously calculated)

FF= FF
 FF= 0.00 L/min
 FF= 0.00 L/s

Average Day Demand:

$F_{AvgD} = A \times B \times O_{day}$
 $F_{AvgD} = 14448 \text{ L/Day}$
 $F_{AvgD} = 0.17 \text{ L/s}$

Maximum Day Demand:

$F_{MaxD} = F_{AvgD} \times C$
 $F_{MaxD} = 0.50 \text{ L/s}$

Peak Hour Demand:

$F_{PeakH} = F_{AvgD} \times F$
 $F_{PeakH} = 0.75 \text{ L/s}$

Total Maximum Demand:
 (Max Day + Fire Flow vs. Peak Hour)

$F_{Total} = F_{MaxD} + FF$
 $F_{Total} = 0.75 \text{ L/s}$
 $F_{Total} = 65.02 \text{ m}^3/\text{d}$

PROJECT INFORMATION

PROJECT LOCATION: Township of Otonabee-South Monaghan
DM WILLS PROJECT: 3491 Wallace Point Rd
DM WILLS PROJECT No.: 85162



DESIGNED BY: E. St. Pierre
CHECKED BY: C. Proctor

Date: 01/07/26

PROPOSED DOMESTIC WATER DEMAND - MOE Demands

CRITERIA USED: Guidelines for the Design of Water Distribution Systems - July 1985
 Design Guidelines for Drinking-Water Systems - 2008
 Existing Historical Flows - Ontario Clean Water Agency 2020 Report

DOMESTIC WATER DEMAND:	450	L/person/day	A
No. OF UNITS:	50	units	B
No. PERSONS/UNIT (Low Density):	3.0	persons/unit	C
MAX. DAY FACTOR (MOE):	3.00		D
PEAK HOUR FACTOR (MOE):	4.50		E

CALCULATIONS:

Total Residential Development fire Flow
 (flow previously calculated)

FF= FF

FF= 0.00 L/min

FF= 0.00 L/s

Prop. Development Average Day Demand:

Prop. Maximum Day Demand:

$$F_{\text{PropAvgD}} = A \times B \times C$$

$$F_{\text{PropAvgD}} = 67500 \text{ L/Day}$$

$$F_{\text{PropAvgD}} = 0.78 \text{ L/s}$$

$$F_{\text{MaxD}} = F_{\text{PropAvgD}} \times D$$

$$F_{\text{MaxD}} = 2.34 \text{ L/s}$$

$$F_{\text{MaxD}} = 202.50 \text{ m}^3/\text{d}$$

Total Peak Hour Demand:

$$F_{\text{PeakH}} = F_{\text{PropAvgD}} \times E$$

$$F_{\text{PeakH}} = 3.52 \text{ L/s}$$

Appendix C

Correspondence



G-tel Engineering Inc.

1150 Frances St 2nd Floor
London, Ontario
N5W 5N5

Planning Request For: HONI Planning (H1DPLAN),

Ticket #: 2022119292

Issued By: G-tel Lookup Dept.

Date: 03/14/2022

Time: 12:57:23

Requester: MITCHELL BELL

Requester's Email: mbell@dmwills.com

Requesting Company: D.M. WILLS ASSOCIATES LIMITED

Fax #:

Ticket Request Type: Design And Planning

Location: 3491 WALLACE POINT RD (COUNTY ROAD 21)

Locate Details:

REQUESTING MARK-UPS ONLY

Remarks:

REQUESTING MARK-UPS ONLY DEPTH UNKNOWN PETERBOROUGH

Comments To Excavator:

If you have any questions or concerns regarding your planning request, please call G-tel Engineering at 1-866-692-0208, dial 0 and request the lookup department.

CAUTION: The details provided are to be used solely for planning your design and not for excavation. You must call Ontario One Call at 1-800-400-2255 at least 1 week prior to excavation to obtain a physical locate.

See disclaimer document for further details.



Planning Request Disclaimer

This letter is to indicate that the drawing(s) and information provided is the property of Hydro One and its licensees (all rights reserved), and is to be used for planning and design purposes only solely to assist you in reviewing your project. The drawing(s) and information is not to be altered or used for any other purpose.

Please note that the attached drawings represent Hydro One distribution lines.

The attached drawing(s) and information **do not** include Hydro One transmission line information and they **not** include privately owned/third party owned conductor.

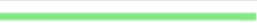
The drawing(s) and information is **not** to be used for excavation purposes. The distribution lines and equipment locations indicated should not be relied upon for construction purposes as being exact. The exact location, configuration and/or materials used may not be accurately represented.

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You understand that you must contact Ontario One Call (1-800-400-2255) for more details for your excavation purposes, and must contact Ontario One Call to obtain locates a minimum of 5 business days prior to your excavation needs.

Hydro One
Distribution Damage Prevention Team

Hydro One Network

Layer name	Display	Description
PRI_UG_CONDUCTOR		Primary Underground – 2.4/4.16kV; 4.8/8.32 kV
		Primary Underground – 7.2/12.51 kV
		Primary Underground – 16.0/27.6 kV; 34.5 kV; 44 kV
		Primary Underground – All other voltage
PRI_OH_CONDUCTOR		Primary Overhead – 2.4/4.16kV; 4.8/8.32 kV
		Primary Overhead – 7.2/12.51 kV
		Primary Overhead – 16.0/27.6 kV; 44 kV
		Primary Overhead – All other voltage
SEC_UG_CONDUCTOR		Secondary Underground Conductor
SEC_OH_CONDUCTOR		Secondary Overhead Conductor
TRANSFORMER		Single Phase Underground
		Single Phase Overhead
POLES		Poles
AWITCHINGFACILITY		Structures: Pad, Vault and Other
BUSBAR		Shown same as Primary Underground
RISERS		PVC or Fiberglass type risers

Hydro One Landbase

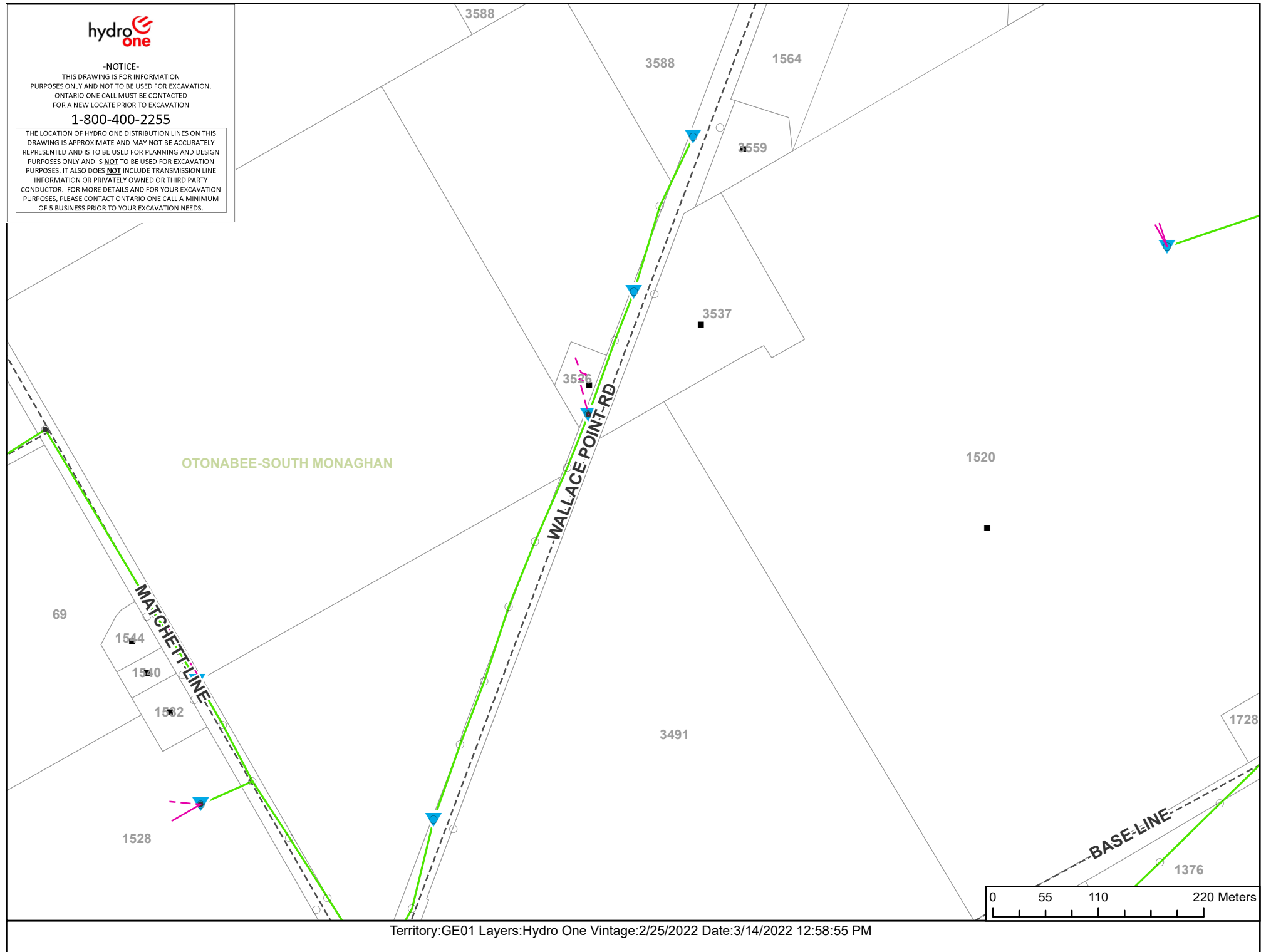
Layer name	Display	Description
STREETS		Centre line of road
PARCELS		Polygons representing parcel



-NOTICE-
THIS DRAWING IS FOR INFORMATION
PURPOSES ONLY AND NOT TO BE USED FOR EXCAVATION.
ONTARIO ONE CALL MUST BE CONTACTED
FOR A NEW LOCATE PRIOR TO EXCAVATION

1-800-400-2255

THE LOCATION OF HYDRO ONE DISTRIBUTION LINES ON THIS
DRAWING IS APPROXIMATE AND MAY NOT BE ACCURATELY
REPRESENTED AND IS TO BE USED FOR PLANNING AND DESIGN
PURPOSES ONLY AND IS NOT TO BE USED FOR EXCAVATION
PURPOSES. IT ALSO DOES NOT INCLUDE TRANSMISSION LINE
INFORMATION OR PRIVATELY OWNED OR THIRD PARTY
CONDUCTOR. FOR MORE DETAILS AND FOR YOUR EXCAVATION
PURPOSES, PLEASE CONTACT ONTARIO ONE CALL A MINIMUM
OF 5 BUSINESS PRIOR TO YOUR EXCAVATION NEEDS.

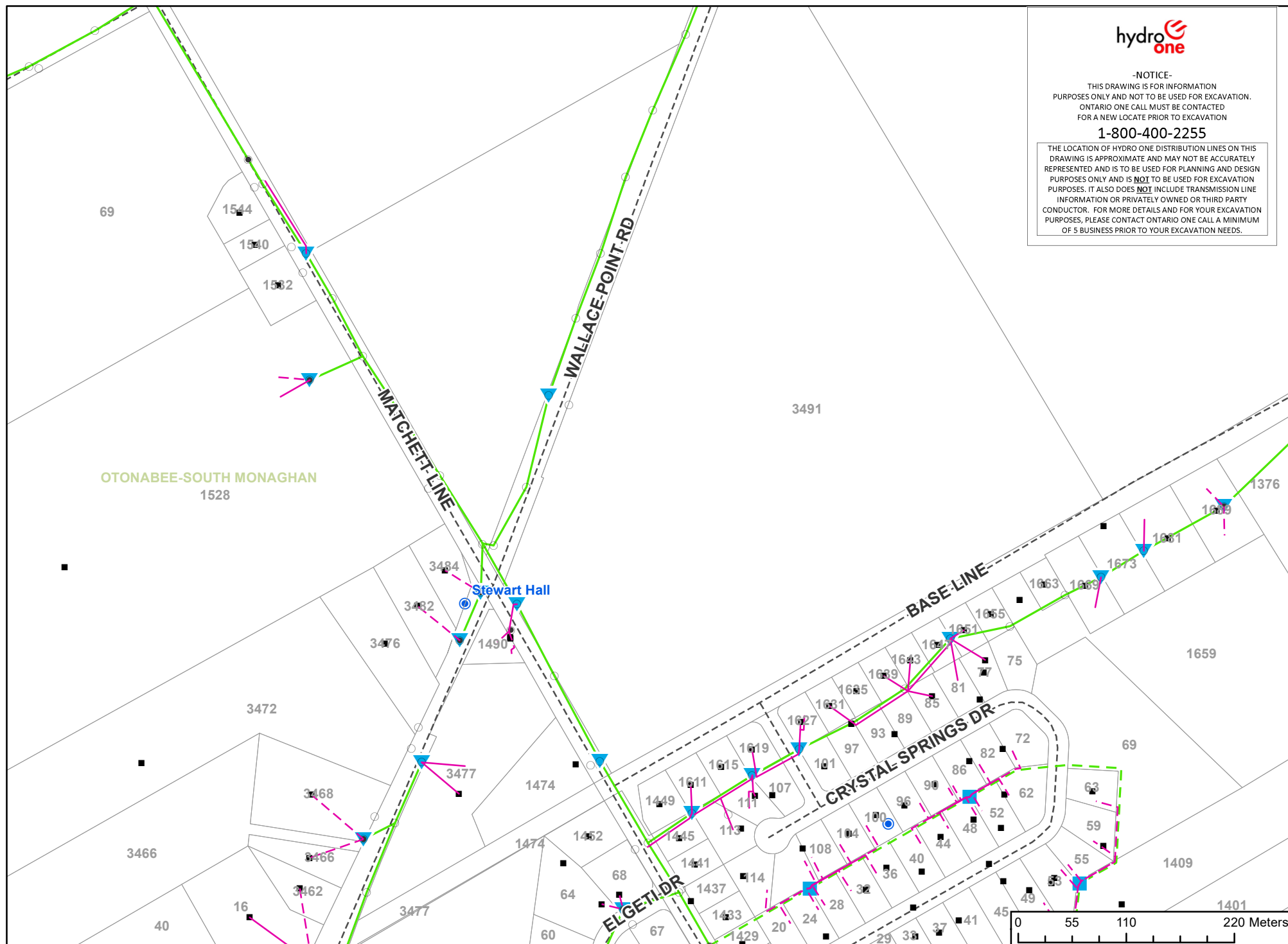




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G-tel Engineering Inc.

1150 Frances St 2nd Floor
London, Ontario
N5W 5N5

Planning Request For: HONI Planning (H1DPLAN),

Ticket #: 2022119292

Issued By: G-tel Lookup Dept.

Date: 03/14/2022

Time: 12:57:23

Requester: MITCHELL BELL

Requester's Email: mbell@dmwills.com

Requesting Company: D.M. WILLS ASSOCIATES LIMITED

Fax #:

Ticket Request Type: Design And Planning

Location: 3491 WALLACE POINT RD (COUNTY ROAD 21)

Locate Details:

REQUESTING MARK-UPS ONLY

Remarks:

REQUESTING MARK-UPS ONLY DEPTH UNKNOWN PETERBOROUGH

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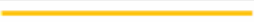
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Hydro One
Distribution Damage Prevention Team

Hydro One Network

Layer name	Display	Description
PRI_UG_CONDUCTOR		Primary Underground – 2.4/4.16kV; 4.8/8.32 kV
		Primary Underground – 7.2/12.51 kV
		Primary Underground – 16.0/27.6 kV; 34.5 kV; 44 kV
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		Primary Overhead – 7.2/12.51 kV
		Primary Overhead – 16.0/27.6 kV; 44 kV
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SEC_UG_CONDUCTOR		Secondary Underground Conductor
SEC_OH_CONDUCTOR		Secondary Overhead Conductor
TRANSFORMER		Single Phase Underground
		Single Phase Overhead
POLES		Poles
AWITCHINGFACILITY		Structures: Pad, Vault and Other
BUSBAR		Shown same as Primary Underground
RISERS		PVC or Fiberglass type risers

Hydro One Landbase

Layer name	Display	Description
STREETS		Centre line of road
PARCELS		Polygons representing parcel



Application for Plant Location and Consent

Mark Up Number	28343	Date Received from Applicant	2022-03-09 07:37:24
MU Administrator Name	Anita Devar		
Mark Up Response Date	2022-03-30 09:15:00		

Applicant Information

Applicant	D.M. WILLIS ASSOCIATES LIMITED		
Applicant Ref Number	2022118120		
Applicant First Name	MITCHELL	Applicant Last Name	BELL
Applicant Phone Number	7057422297.0	Extension	x288
Applicant Email	mbell@dmwills.com		

Construction Details

Project Municipality	OTONABEE-SOUTH MONAGHAN
Project Location	
Project Street	WALLACE POINT RD (COUNTY ROAD 21)
Detail Type of Construction Taking Place	Not Provided
Opportunity for Joint Build	No
Is it in Conflict	No
Conflict Identified Date	
Conflict Comments	

Group Mark Up #

Critical Mark Up Details Pertaining Bell Plant Location

Existing and/or proposed Bell Canada underground plant are indicated on the attached plan
Not for PUCC approval - Mark up only
Caution - Bell has plant around proposed area. Tie-in measurements are a guideline only and physical verification may be required by applicant to determine the true separation between plant. Call for locates. Maintain min 0.6m horizontal clearance and min 0.3m vertical clearance when crossing Bell. Within 1m of Bell and when crossing Bell, hand dig.

PROCEDURES TO FOLLOW:

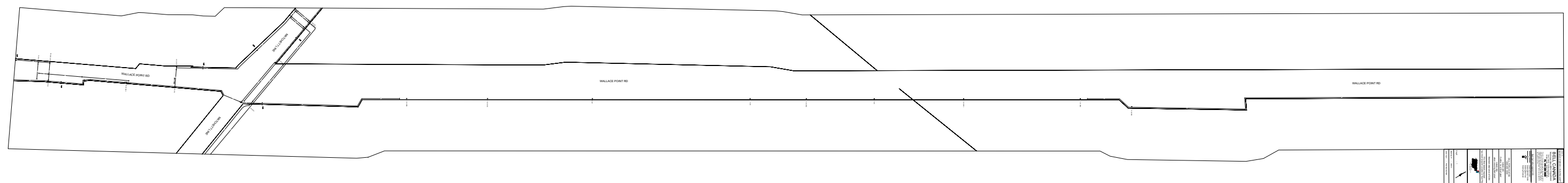
1. Request locates prior to construction 1-800-400-2255
2. If exact location and depth are critical – test pits are recommended
3. Bell Canada plant location information is approximate
4. If the location of your proposed design changes, it will be necessary to re-apply
5. Permits expire six (6) months from approval date

Signature:

Anita Devar

Date:

2022-03-30



Appendix D

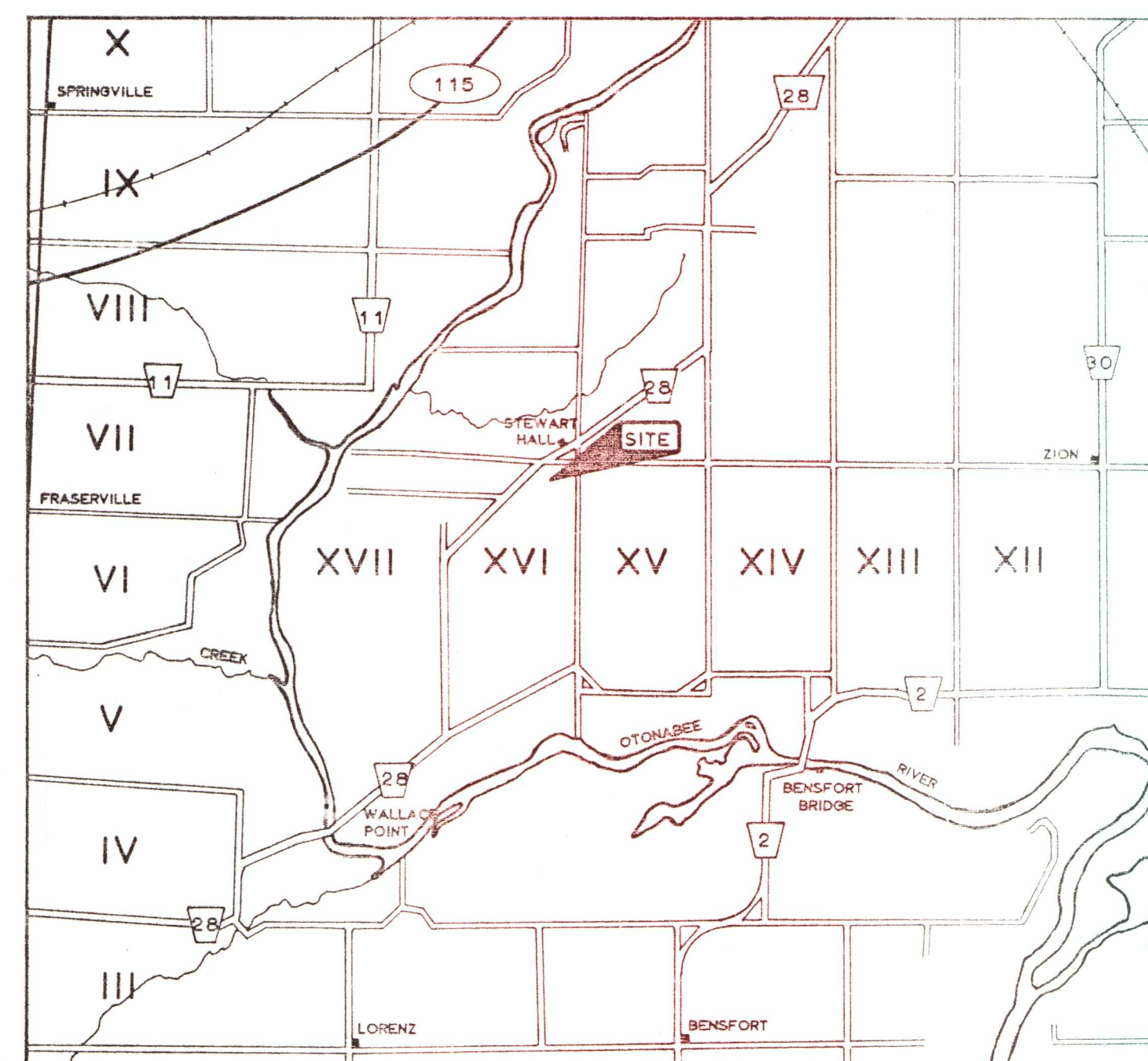
As-Builts



ELGETI SUBDIVISION

TOWNSHIP OF OTONABEE

PROJECT NO. 83-D-101

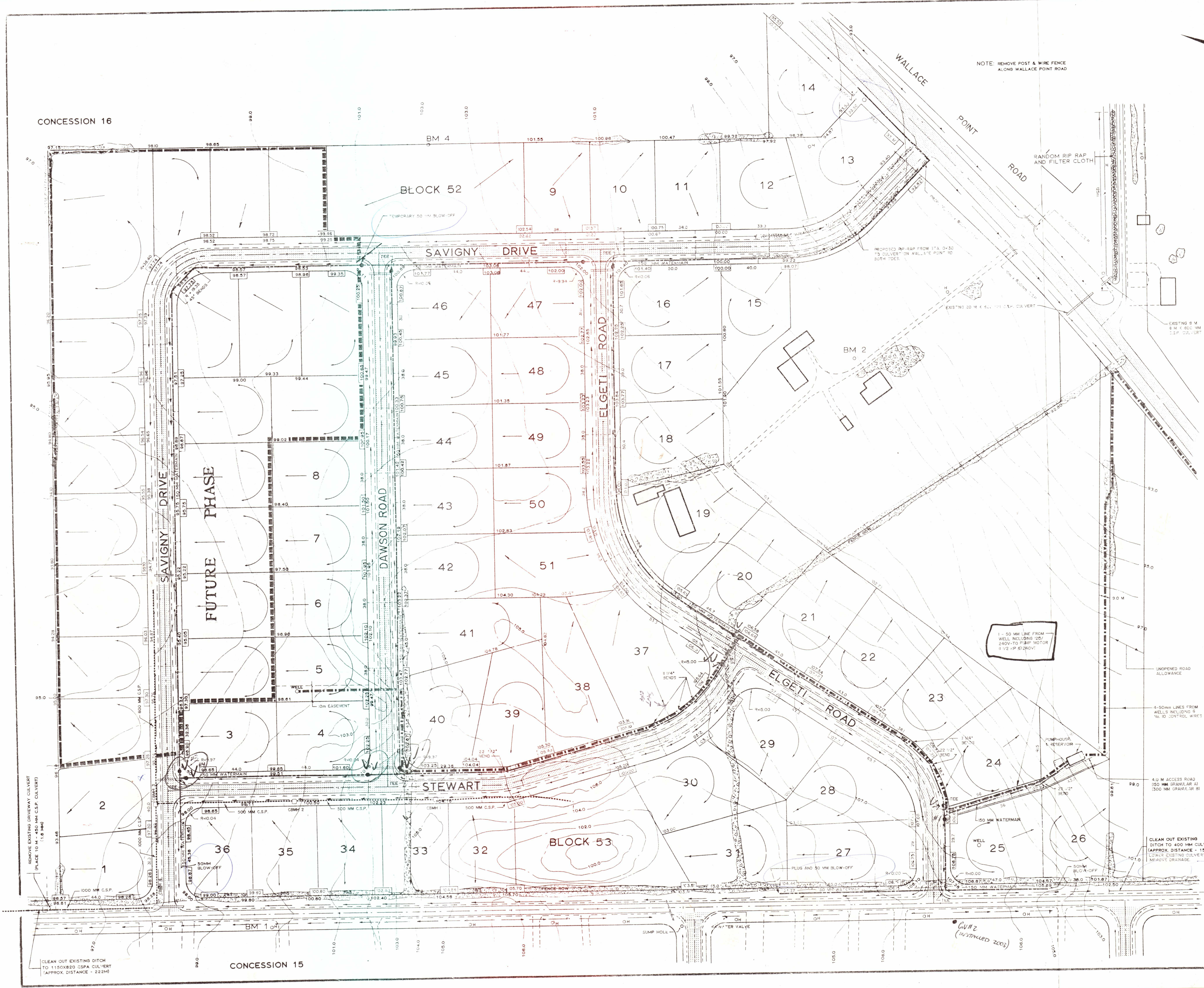


KEY PLAN
1 : 63360

OWNER: HERMAN ELGETI
R.R. N°. 11
PETERBOROUGH, ONTARIO

ENGINEER: M.J. DAVENPORT & ASSOCIATES LTD.
169 LANSDOWNE ST. E., SUITE 101
PETERBOROUGH, ONTARIO
K9J 7P7

MAY 26 1989



- BM 1 ELEV. 100.00
WEST FACE OF HYDRO POLE ON SOUTH SIDE OF DRIVEWAY IN FRONT OF BARTLY RESIDENCE.
- BM 2 ELEV. 99.56
NORTH FACE OF HYDRO POLE LOCATED AT THE WEST SIDE OF ELGETI RESIDENCE.
- BM 3 ELEV. 95.58
NORTH FACE OF BELL POLE LOCATED IN NORTH-WEST CORNER OF PROPERTY ALONG WALLACE POINT ROAD.
- BM 4 ELEV. 103.76
NAIL IN FENCE LOCATED AT THE BACK OF LOT 10.

- LEGEND
- EDGE OF GRAVEL
 - ROAD DITCH
 - PAVED SURFACE
 - NATURAL DRAINAGE
 - PROPOSED DRAINAGE
 - PROPOSED WATERMAIN
 - PROPOSED LINES FROM WELLS
 - PHASE LIMIT
 - PROPOSED STORM SEWER

3	LOT LINES	SEPT/87	JHR	MJD
2	WATERMAIN	MAR/87	JHR	MJD
1	LOT NUMBERS & DRAINAGE	03/86	S.R.	MJD
NO.	REVISIONS	DATE	BY	APP

REGISTERED PROFESSIONAL ENGINEER
M. J. DAVENPORT
PROVINCE OF ONTARIO

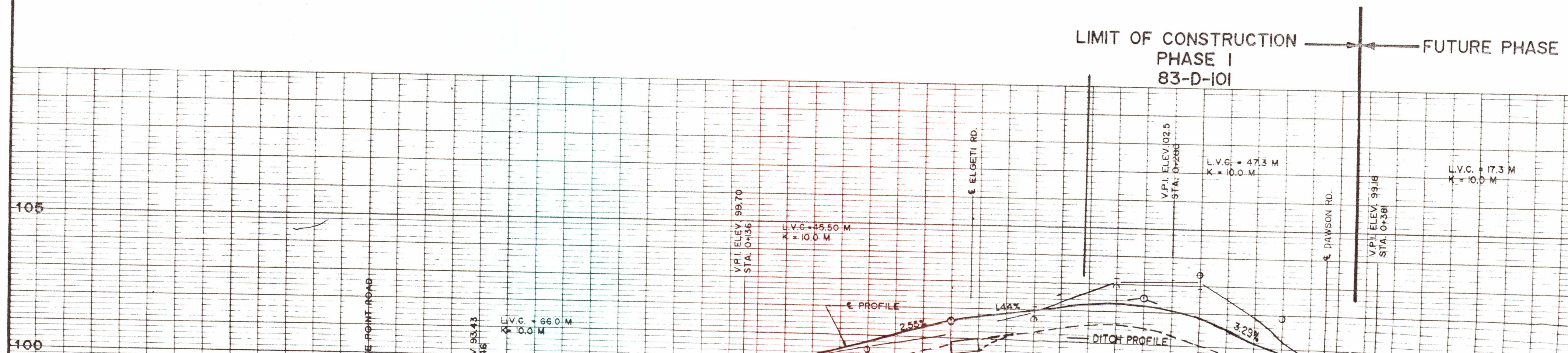
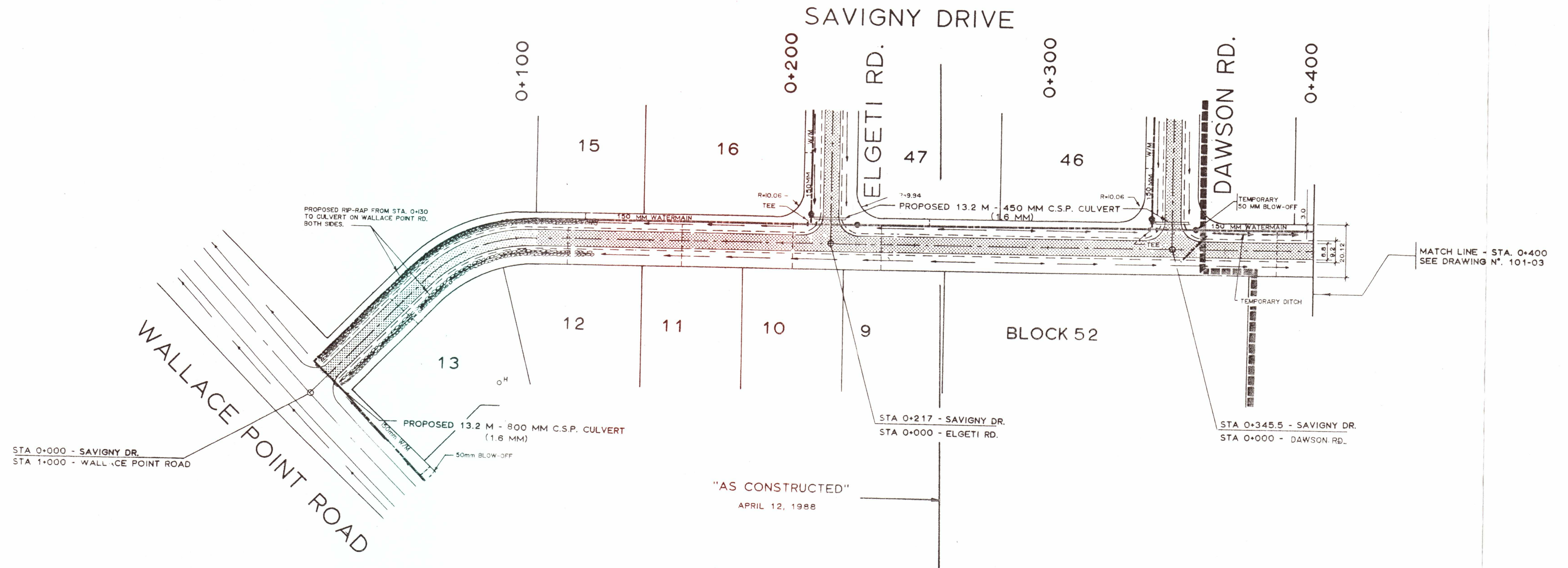
MAY 26 1989

M.J. DAVENPORT & ASSOCIATES LTD.
169 LANSDOWNE ST. E., SUITE 101
PETERBOROUGH, ONTARIO

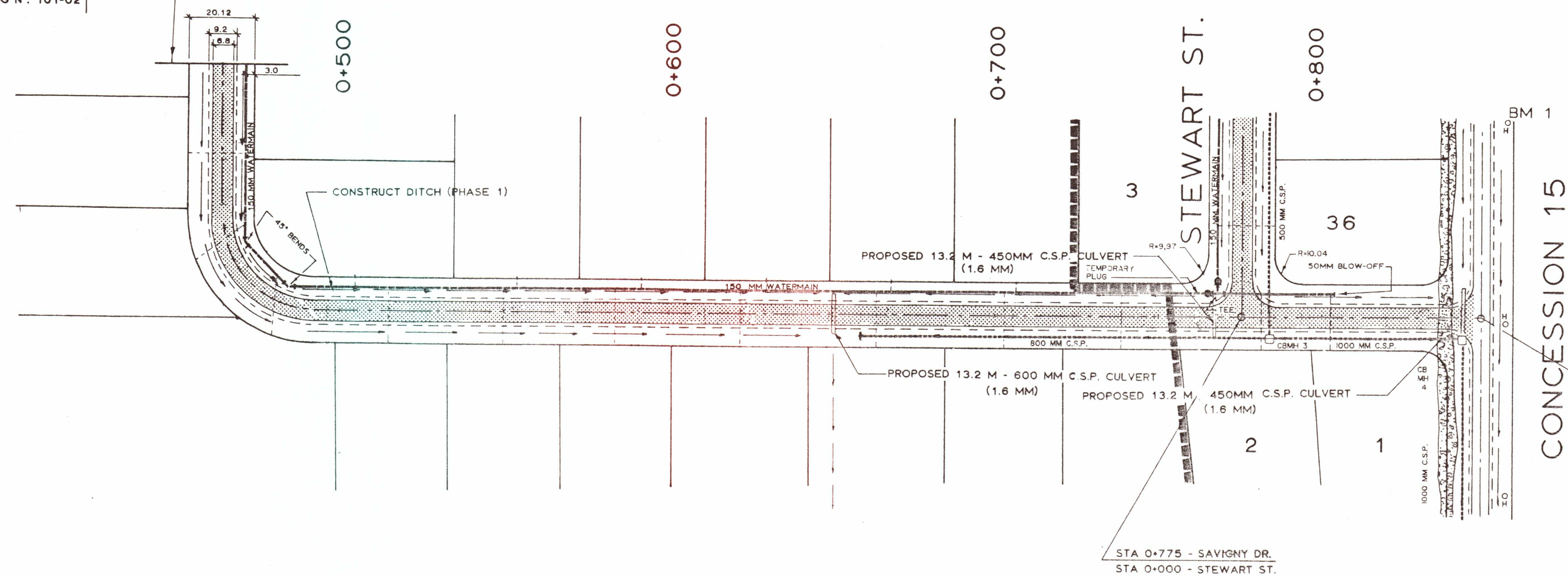
ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

LOT GRADING PLAN

DESIGNED BY M. DAVENPORT	SCALE HORIZONTAL: 1:1000 VERTICAL: AS SHOWN
DRAWN BY R.G. DUNFORD	DATE DECEMBER 14, 1984
PROJECT NO. 83-0-101	DRWG NO. 101-01



MATCH LINE - STA. 0+400
SEE DRAWING N°. 101-02



STA 0+849 - SAVIGNY DR.
STA 1+000 - CONCESSION 15

NOTES:

1. WATER SERVICES SHALL NOT BE INSTALLED IN DRIVEWAYS.
2. ALL WATERMAIN "TEE" CONNECTIONS REQUIRE RETAINING ISLAND RINGS WHERE THRUST BLOCKS CANNOT BE CONSTRUCTED ON SOLID GROUND.
3. WATERMAIN SHALL BE DUCTILE IRON TYTON-JOINT CLASS 52 CEMENT-LINED OR POLY-VINYL CHLORIDE (P.V.C.) CLASS 150 (SMALLER THAN 300 MM DIAMETER ONLY).
4. ALL WATERMAIN FITTINGS SHALL BE CAST-IRON CEMENT-LINED MECHANICAL JOINTED.

BM 1 ELEV. 100.00
WEST FACE OF HYDRO POLE ON SOUTH SIDE OF DRIVEWAY IN FRONT OF BARTLY RESIDENCE.

LEGEND

- EDGE OF GRAVEL
- ROAD DITCH
- PAVED SURFACE
- RIGHT PROPERTY LINE
- LEFT PROPERTY LINE
- NATURAL DRAINAGE
- PROPOSED DRAINAGE
- TEMPORARY DITCH

4	STORM SEWER	APR/89	J.W.S.	M.J.D.
3	LOT LINES	SEPT/87	J.H.R.	M.J.D.
2	WATERMAIN	MAR/87	J.H.R.	M.J.D.
1	RETENTION POND	03/86	D.B.	M.J.D.
NO.	REVISIONS	DATE	BY	APP'D

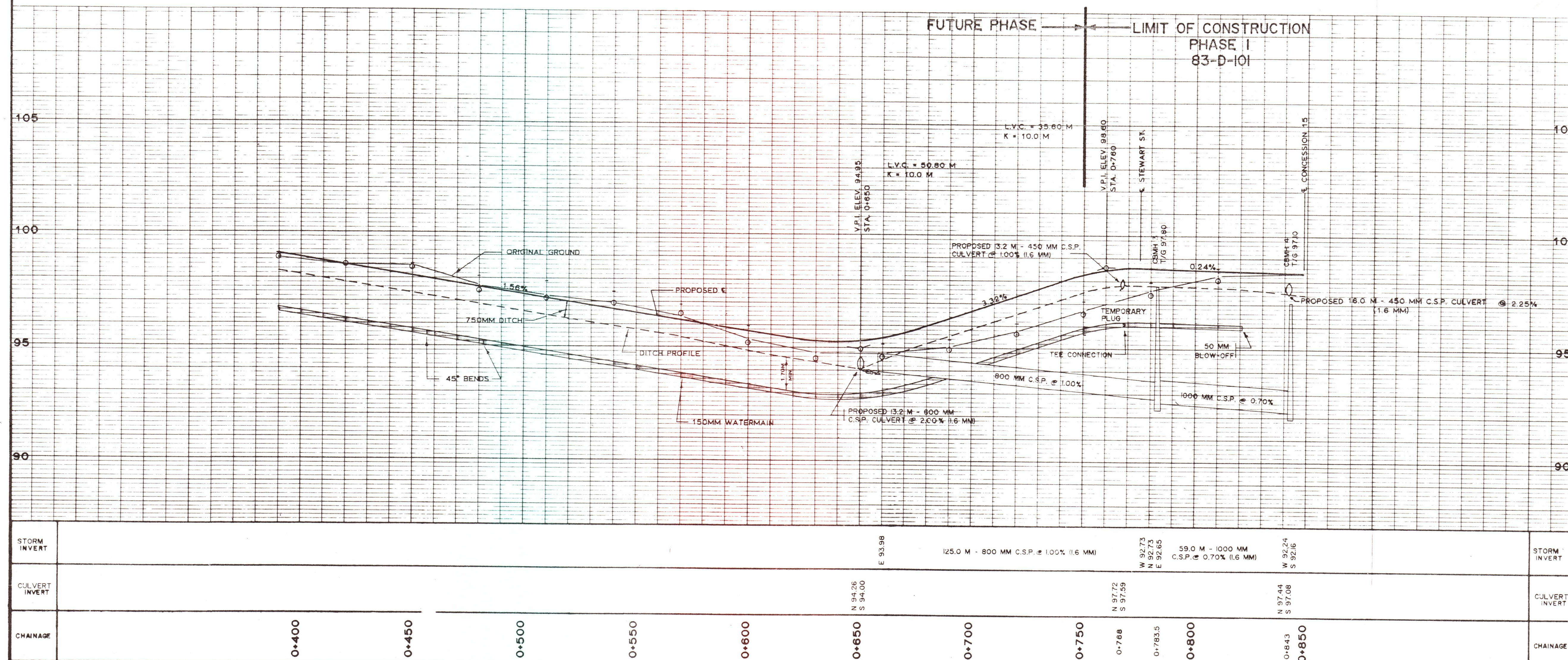


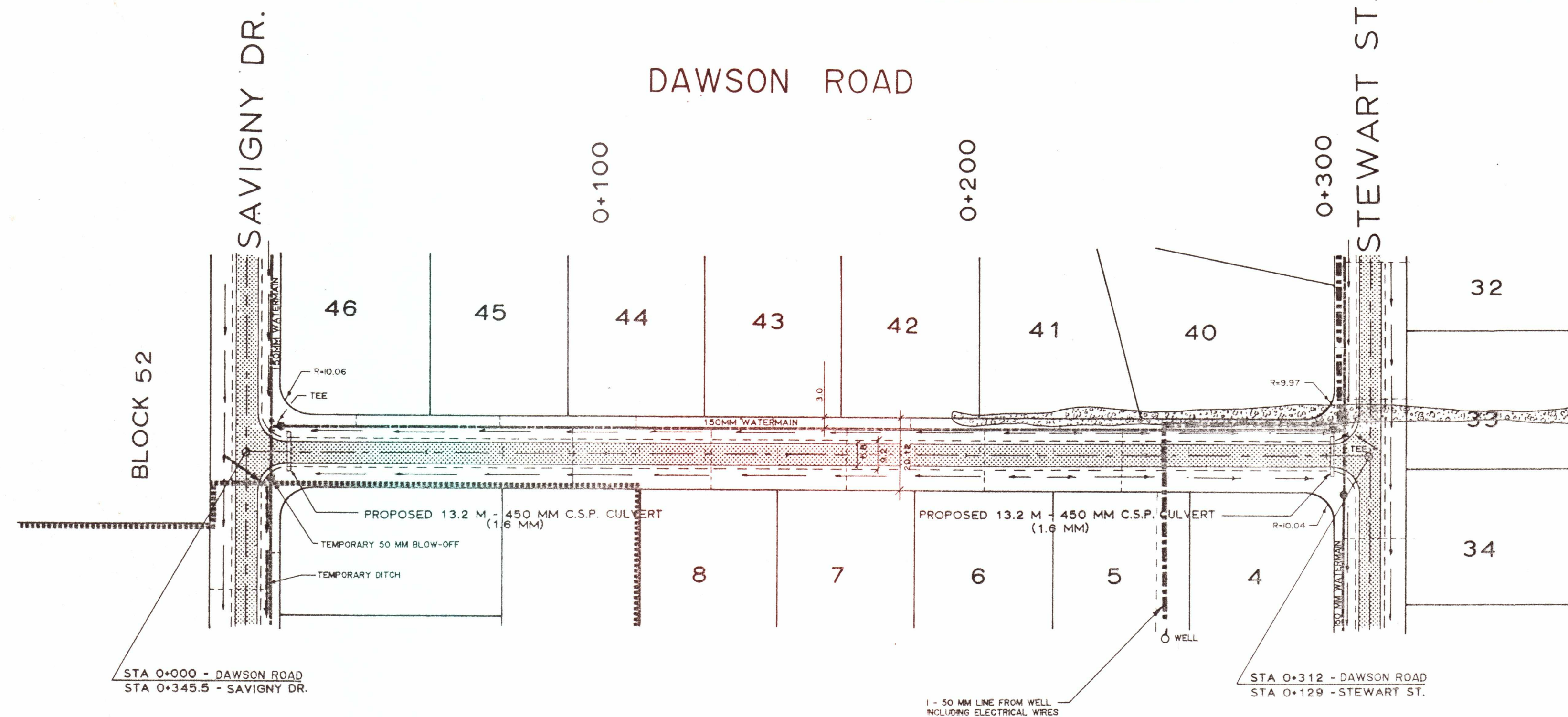
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PETERBOROUGH, ONTARIO

ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

SAVIGNY DRIVE
PLAN AND PROFILE

DESIGNED BY: M. DAVENPORT	SCALE: HORIZ: 1:1000 VERT: 1:100
DRAWN BY: R.G. DUNFORD	DRWG NO: 101-03
DATE: DECEMBER 13, 1984	PROJECT NO.: 83-D-101





NOTES:

1. WATER SERVICES SHALL NOT BE INSTALLED IN DRIVEWAYS.
2. ALL WATERMAIN "TEE" CONNECTIONS REQUIRE RETAINING GLAND RINGS WHERE THRUST BLOCKS CANNOT BE CONSTRUCTED ON SOLID GROUND.
3. WATERMAIN SHALL BE DUCTILE IRON TYTON-JOINT CLASS 52 CEMENT-LINED OR POLY-VINYL CHLORIDE (P.V.C.) CLASS 150 (SMALLER THAN 300 MM DIAMETER ONLY).
4. ALL WATERMAIN FITTINGS SHALL BE CAST-IRON CEMENT-LINED MECHANICAL JOINTED.

BM 4 ELEV. 103.76
NAIL IN FENCE LOCATED AT THE BACK OF LOT 10.

LEGEND

- EDGE OF GRAVEL
- ROAD DITCH
- PAVED SURFACE
- RIGHT PROPERTY LINE
- LEFT PROPERTY LINE
- NATURAL DRAINAGE
- PROPOSED DRAINAGE
- TEMPORARY DITCH

3	PROPOSED GRADE	DEC/87	E.A.B.	M.J.D.
2	LOT LINES	SEPT/87	J.H.R.	M.J.D.
1	WATERMAIN	MAR/87	J.H.R.	M.J.D.
NO.	REVISIONS	DATE	BY	APP'D



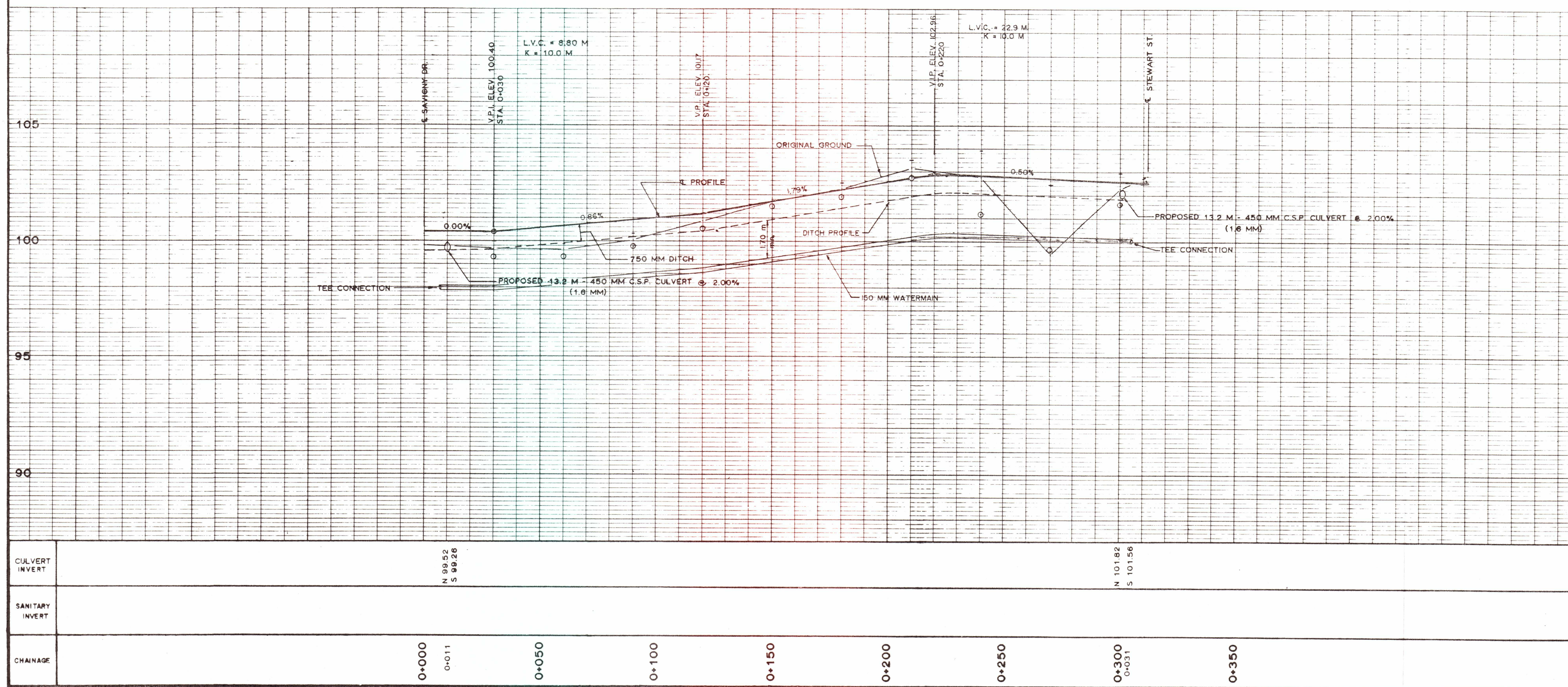
MAY 26 1989

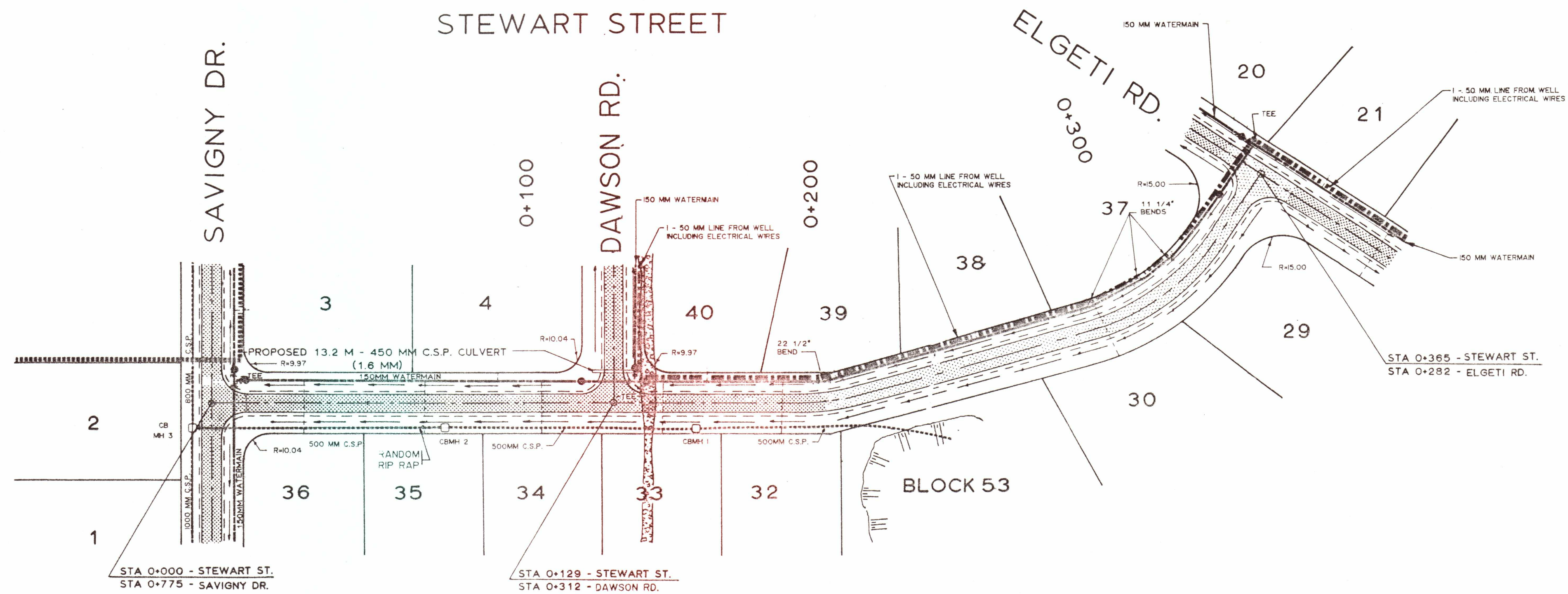
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ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

DAWSON ROAD PLAN AND PROFILE

DESIGNED BY: M. DAVENPORT	SCALE: HOR: 1 : 1000
DRAWN BY: R.G. DUNFORD	VERT: 1 : 100
DATE: DECEMBER 13, 1984	DRWG. NO.: 101-05
PROJECT NO.: 83-D-101	





NOTE: LOCATION OF STORM SEWER IS DIRECTLY BELOW DITCH LINE.

NOTES:

1. WATER SERVICES SHALL NOT BE INSTALLED IN DRIVEWAYS.
2. ALL WATERMAIN "TEE" CONNECTIONS REQUIRE RETAINING ISLAND RINGS WHERE THRUST BLOCKS CANNOT BE CONSTRUCTED ON SOLID GROUND.
3. WATERMAIN SHALL BE DUCTILE IRON TYTON-JOINT CLASS 52 CEMENT-LINED OR POLY-VINYL CHLORIDE (P.V.C.) CLASS 150 (SMALLER THAN 300 MM DIAMETER ONLY).
4. ALL WATERMAIN FITTINGS SHALL BE CAST-IRON CEMENT-LINED MECHANICAL JOINTED.

BM 1 ELEV. 100.00

WEST FACE OF HYDRO POLE ON SOUTH SIDE OF DRIVEWAY IN FRONT OF BARTLY RESIDENCE.

LEGEND

- EDGE OF GRAVEL
- ROAD DITCH
- ▨ PAVED SURFACE
- RIGHT PROPERTY LINE
- LEFT PROPERTY LINE
- NATURAL DRAINAGE
- PROPOSED DRAINAGE

NO.	REVISIONS	DATE	BY	APP'D.
3	STORM SEWER	APR/89	J.W.S.	M.J.D.
2	STORM OUTLET	SEPT/88	S.A.B.	M.J.D.
1	LOT LINES	SEPT/87	J.H.R.	M.J.D.
1	WATERMAIN	MAR/87	J.H.R.	M.J.D.



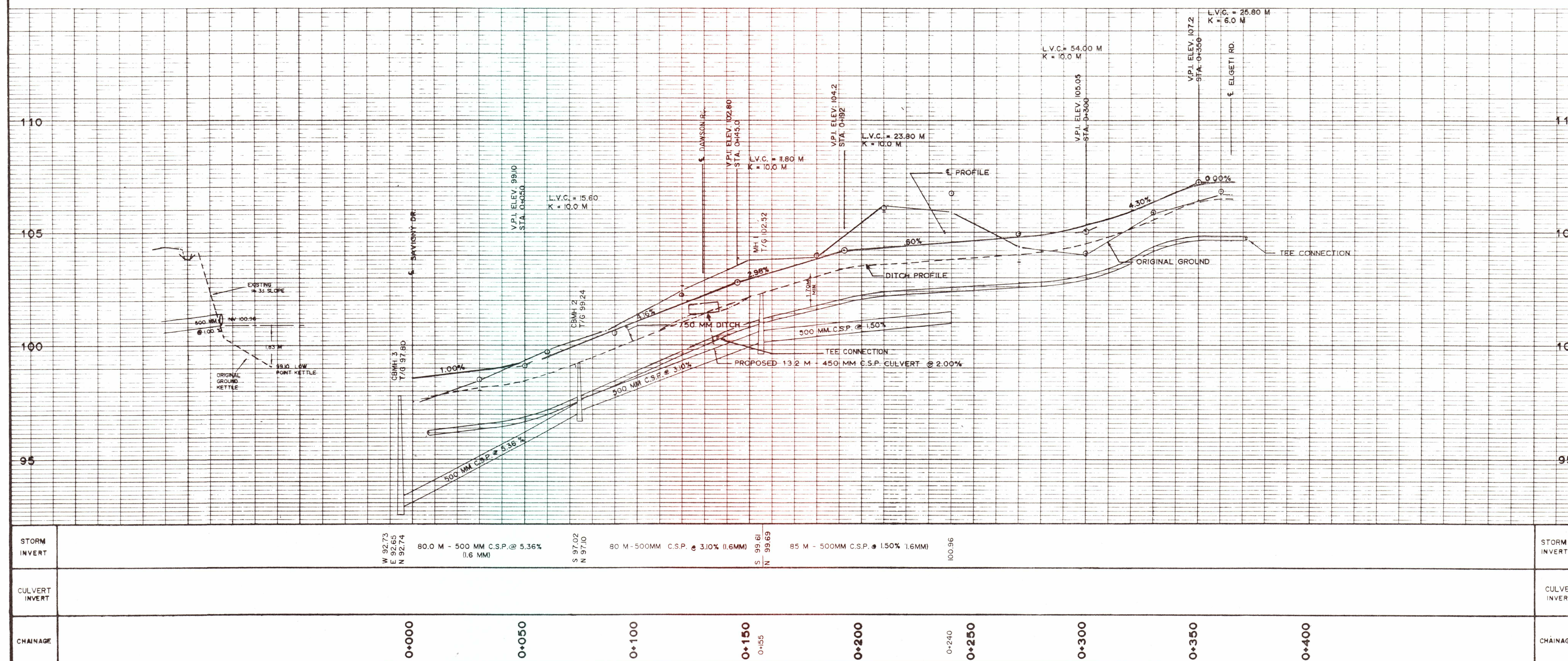
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PETERBOROUGH, ONTARIO

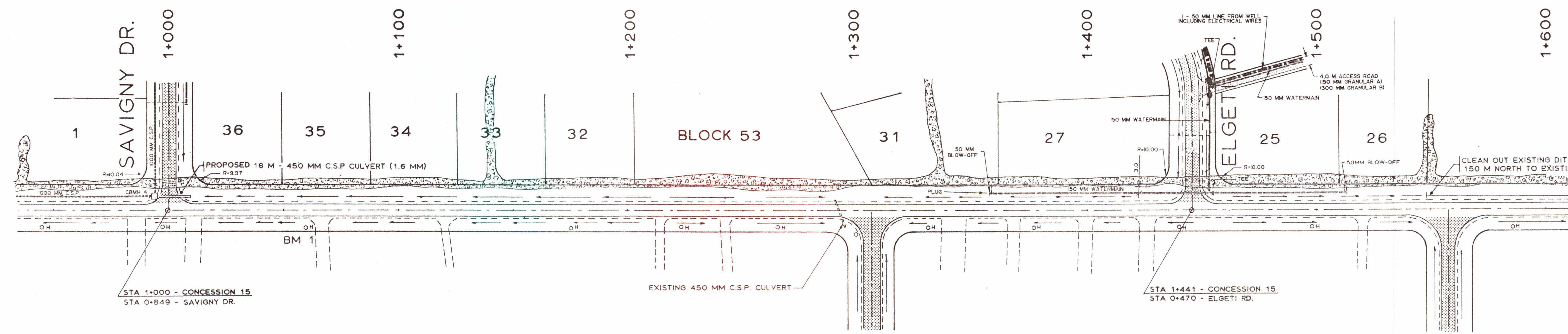
ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

STEWART STREET PLAN AND PROFILE

DESIGNED BY: M. DAVENPORT	SCALE:
DRAWN BY: R.G. DUNFORD	HOR: 1:1000
DATE: DECEMBER 13, 1984	VERT: 1:100
PROJECT NO.: 83-D-101	DRWG. NO.: 101-06



CONCESSION 15



- NOTES:
1. WATER SERVICES SHALL NOT BE INSTALLED IN DRIVEWAYS.
 2. ALL WATERMAIN "TEE" CONNECTIONS REQUIRE RETAINING BLIND RINGS WHERE THRUST BLOCKS CANNOT BE CONSTRUCTED ON SOLID GROUND.
 3. WATERMAIN SHALL BE DUCTILE IRON TYTON-JOINT CLASS 52 CEMENT-LINED OR POLY-VINYL CHLORIDE (P.V.C.) CLASS 150 (SMALLER THAN 300 MM DIAMETER ONLY).
 4. ALL WATERMAIN FITTINGS SHALL BE CAST-IRON CEMENT-LINED MECHANICAL JOINTED.

BM 1 ELEV. 100.00
WEST FACE OF HYDRO POLE ON SOUTH SIDE OF DRIVEWAY IN FRONT OF BARTLY RESIDENCE.

- LEGEND
- EDGE OF GRAVEL
 - ROAD DITCH
 - PAVED SURFACE
 - RIGHT PROPERTY LINE
 - LEFT PROPERTY LINE
 - NATURAL DRAINAGE
 - PROPOSED DRAINAGE

NO.	REVISIONS	DATE	BY	APP'D.
3	STORM SEWER	APR/89	J.W.S.	M.J.D.
2	LOT LINES	SEPT/87	J.H.R.	M.J.D.
1	WATERMAIN	MAR/87	J.H.R.	M.J.D.



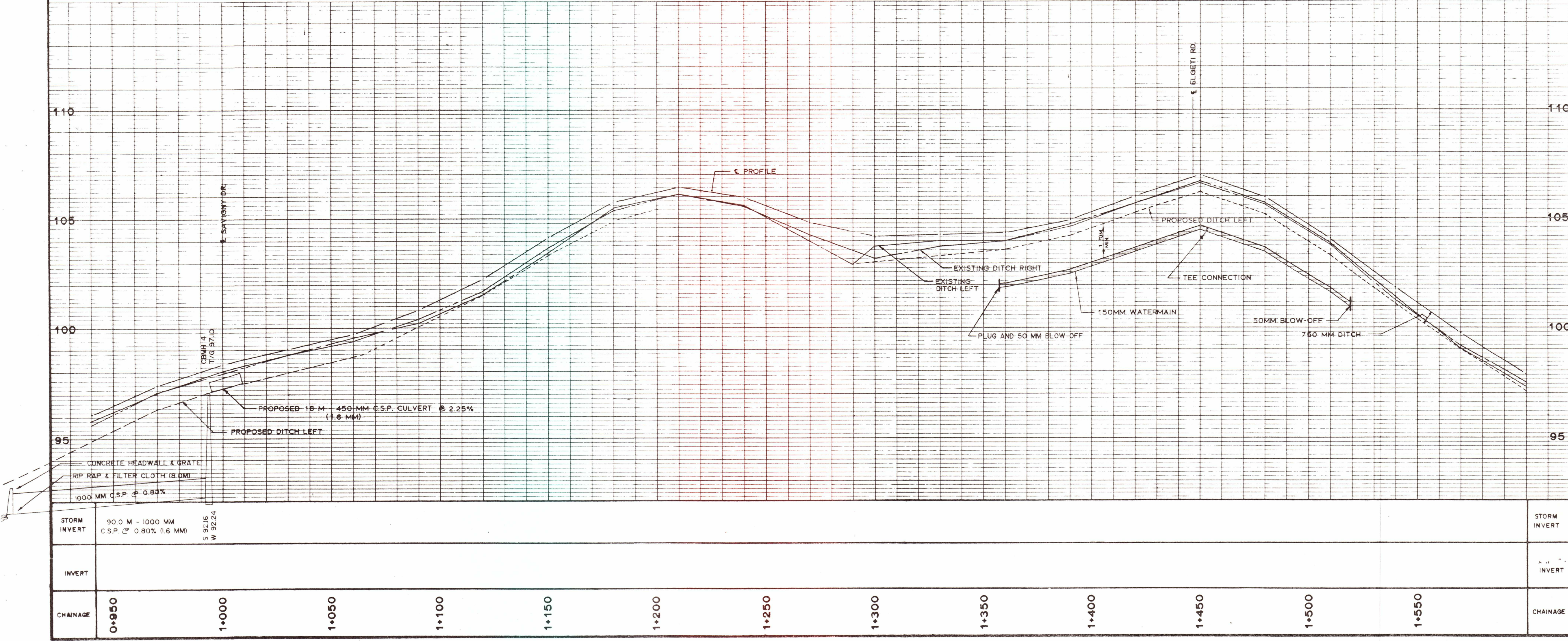
MAY 26 1989

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ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

CONCESSION 15
PLAN AND PROFILE

DESIGNED BY: M. DAVENPORT	SCALE: HOR: 1 : 1000 VERT: 1 : 100
DRAWN BY: R.G. DUNFORD	DATE: DECEMBER 13, 1984
PROJECT NO.: 83-D-101	DRWG NO.: 101-07





1. WATER SERVICES SHALL NOT BE INSTALLED IN DRIVEWAYS.
2. ALL WATERMAIN "TEE" CONNECTIONS REQUIRE THROUSTING GLAND RINGS WHERE THRUST BLOCKS CANNOT BE CONSTRUCTED ON SOLID GROUND.
3. WATERMAIN SHALL BE DUCTILE IRON TYTON-JOINT CLASS 52 CEMENT-LINED OR POLY-VINYL CHLORIDE (P.V.C.) CLASS ISO (SMALLER THAN 300 MM DIAMETER ONLY).
4. ALL WATERMAIN FITTINGS SHALL BE CAST-IRON CEMENT-LINED MECHANICAL JOINTED.

NORTH FACE OF BELL POLE LOCATED IN NORTH-
WEST CORNER OF PROPERTY ALONG WALLACE
POINT ROAD.

- - - - - EDGE OF GRAVEL
 → → → ROAD DITCH
 [] PAVED SURFACE
 ⊙ RIGHT PROPERTY LINE
 — LEFT PROPERTY LINE
 - - - - - NATURAL DRAINAGE
 → → → PROPOSED DRAINAGE

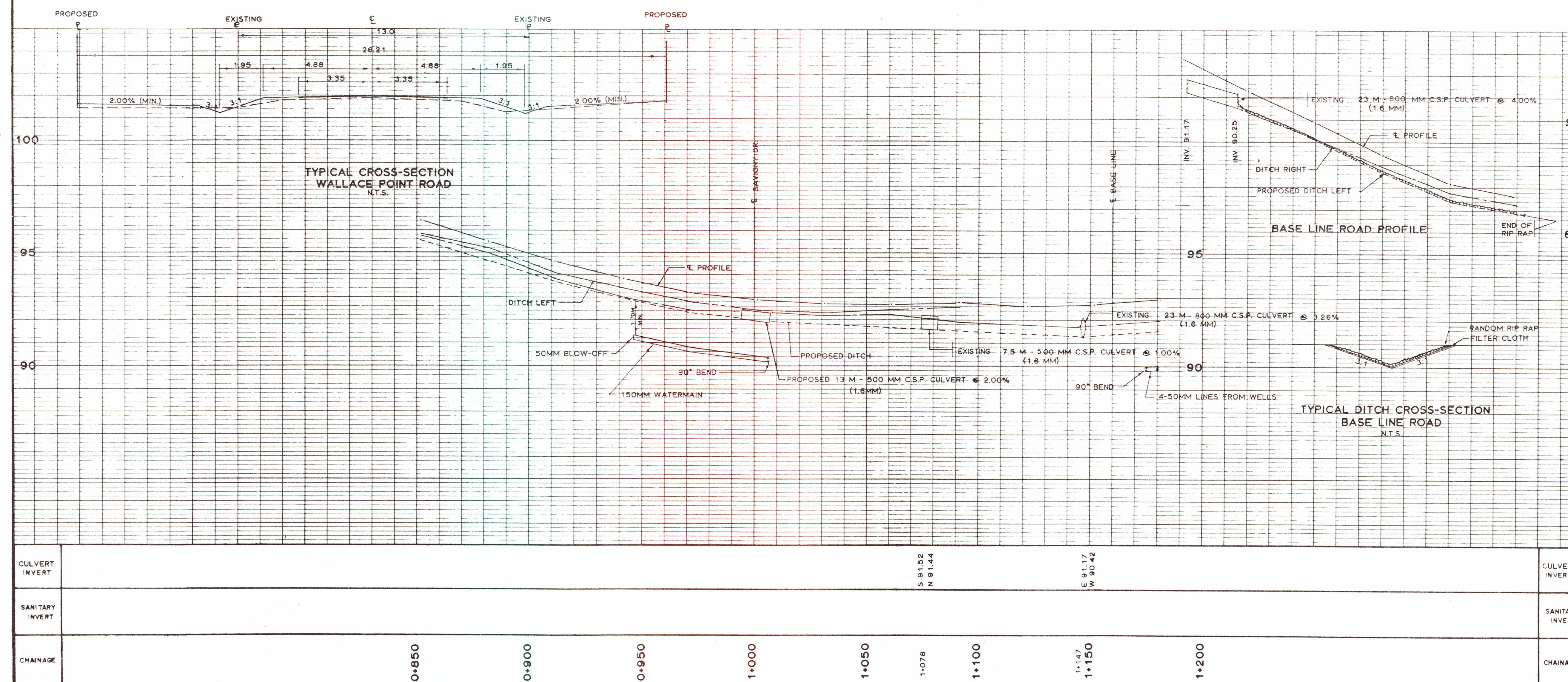
3				
2	LOT LINES	SEPT/87	J.H.R.	M.J.D.
1	WATERMAIN	MAR/87	J.H.R.	M.J.D.
NO.	REVISIONS	DATE	BY	APP

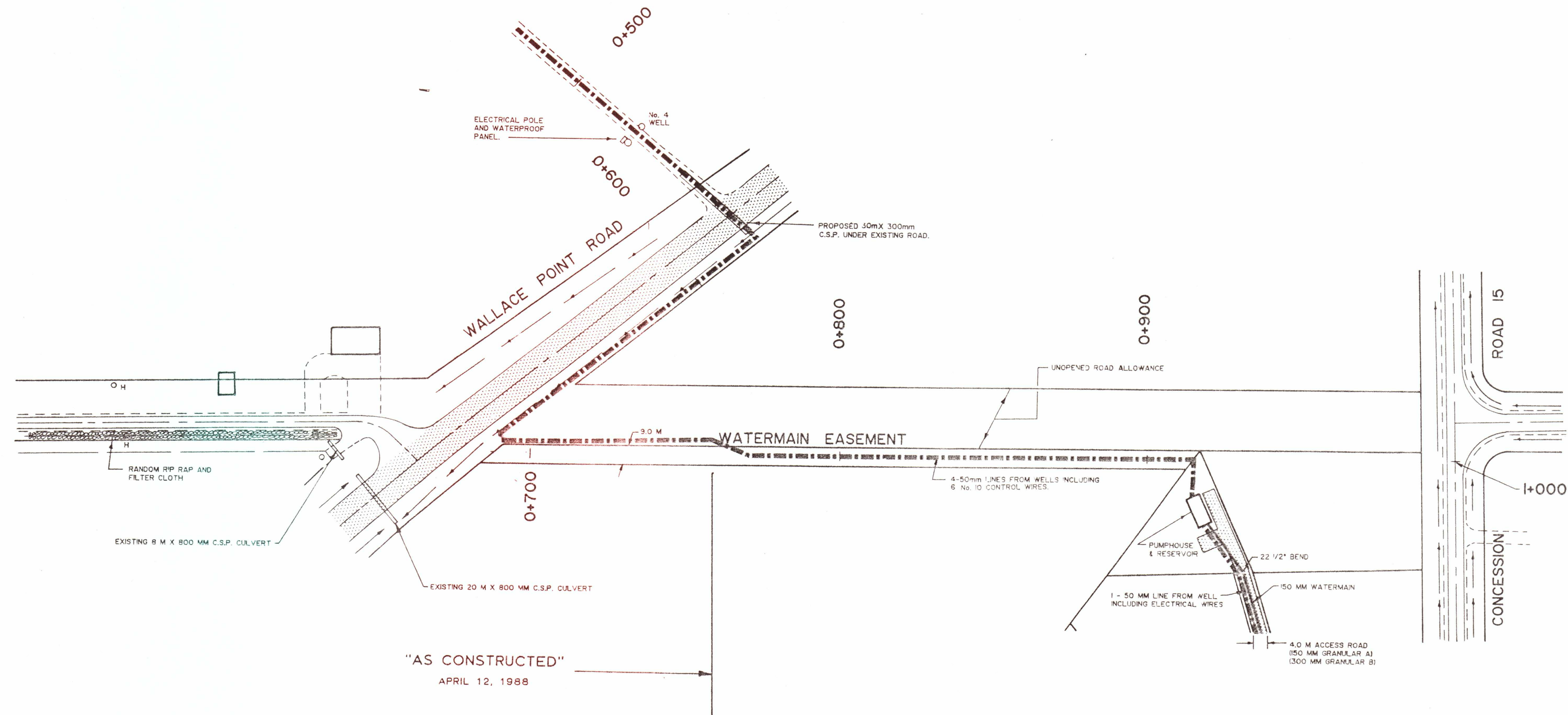


MAY 26 198

ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

DESIGNED BY:	M. DAVENPORT	SCALE:	HORIZ: 1 : 1000 VERT: 1 : 100
	DRAWN BY:		
DATE:	APRIL 18, 1985	DRWG. NO.:	101-0
PROJECT NO.:	83-D-101		





NOTES:

1. WATER SERVICES SHALL NOT BE INSTALLED IN DRIVEWAYS.
2. ALL WATERMAIN "TEE" CONNECTIONS REQUIRE RETAINING GLAND RINGS WHERE THRUST BLOCKS CANNOT BE CONSTRUCTED ON SOLID GROUND.
3. WATERMAIN SHALL BE DUCTILE IRON TYTON-JOINT CLASS 52 CEMENT-LINED OR POTY-VINYL CHLORIDE (P.V.C.) CLASS 150 (SMALLER THAN 300 MM DIAMETER ONLY).
4. ALL WATERMAIN FITTINGS SHALL BE CAST-IRON CEMENT-LINED MECHANICAL JOINTED.

BM 1 ELEV. 100.000

WEST FACE OF HYDRO POLE ON SOUTH SIDE OF DRIVEWAY IN FRONT OF BARTLY RESIDENCE.

BM 2 ELEV. 99.56

NORTH FACE OF HYDRO POLE LOCATED AT THE WEST SIDE OF ELGETI RESIDENCE.

BM 3 ELEV. 95.58

NORTH FACE OF BELL POLE LOCATED IN NORTH-WEST CORNER OF PROPERTY ALONG WALLACE POINT ROAD.

BM 4 ELEV. 103.76

NAIL IN FENCE LOCATED AT THE BACK OF LOT 10.

LEGEND

- EDGE OF GRAVEL
- ROAD DITCH
- PAVED SURFACE
- NATURAL DRAINAGE
- PROPOSED DRAINAGE
- PROPOSED WATERMAIN
- PROPOSED LINES FROM WELLS

3				
2				
1	"AS CONSTRUCTED"	APR. 88	SAB	MJD
NO.	REVISIONS	DATE	BY	APP'D.



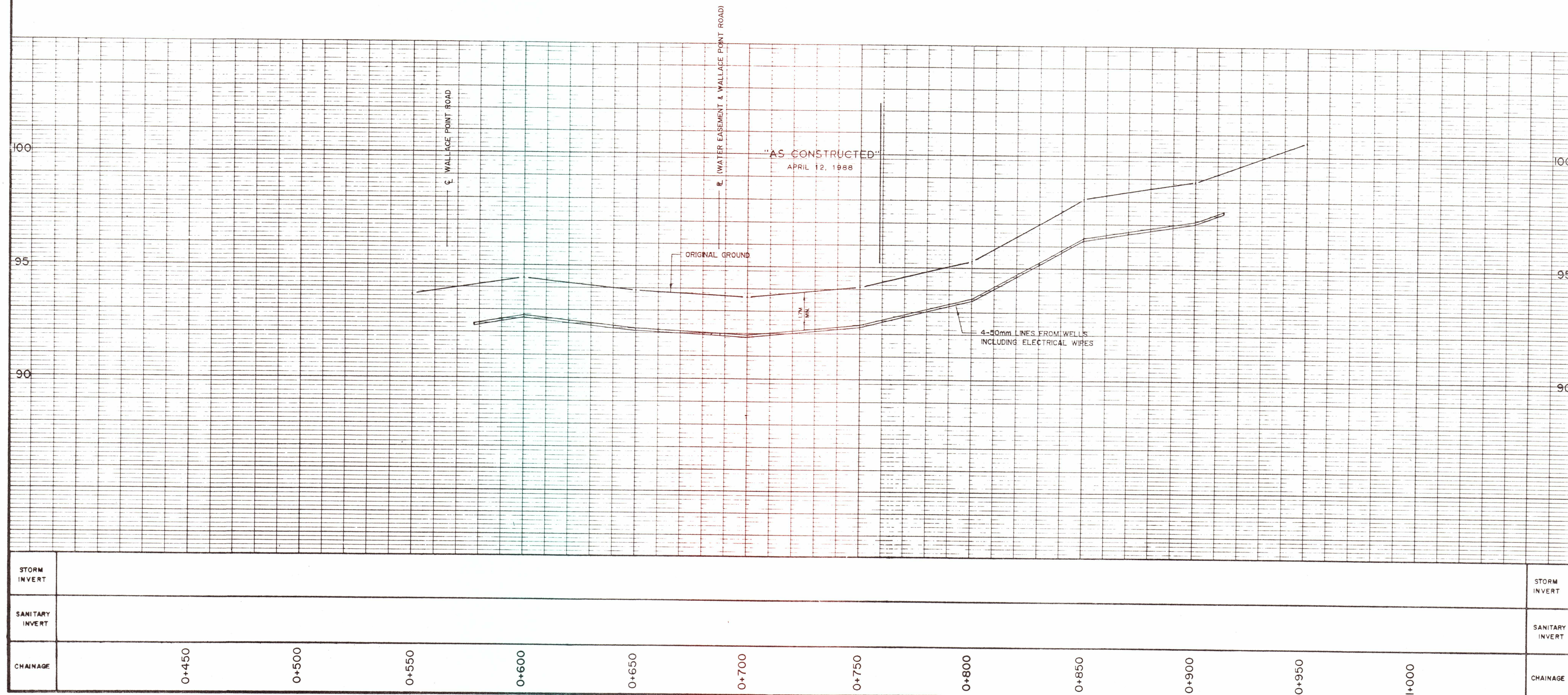
MAY 26 1989

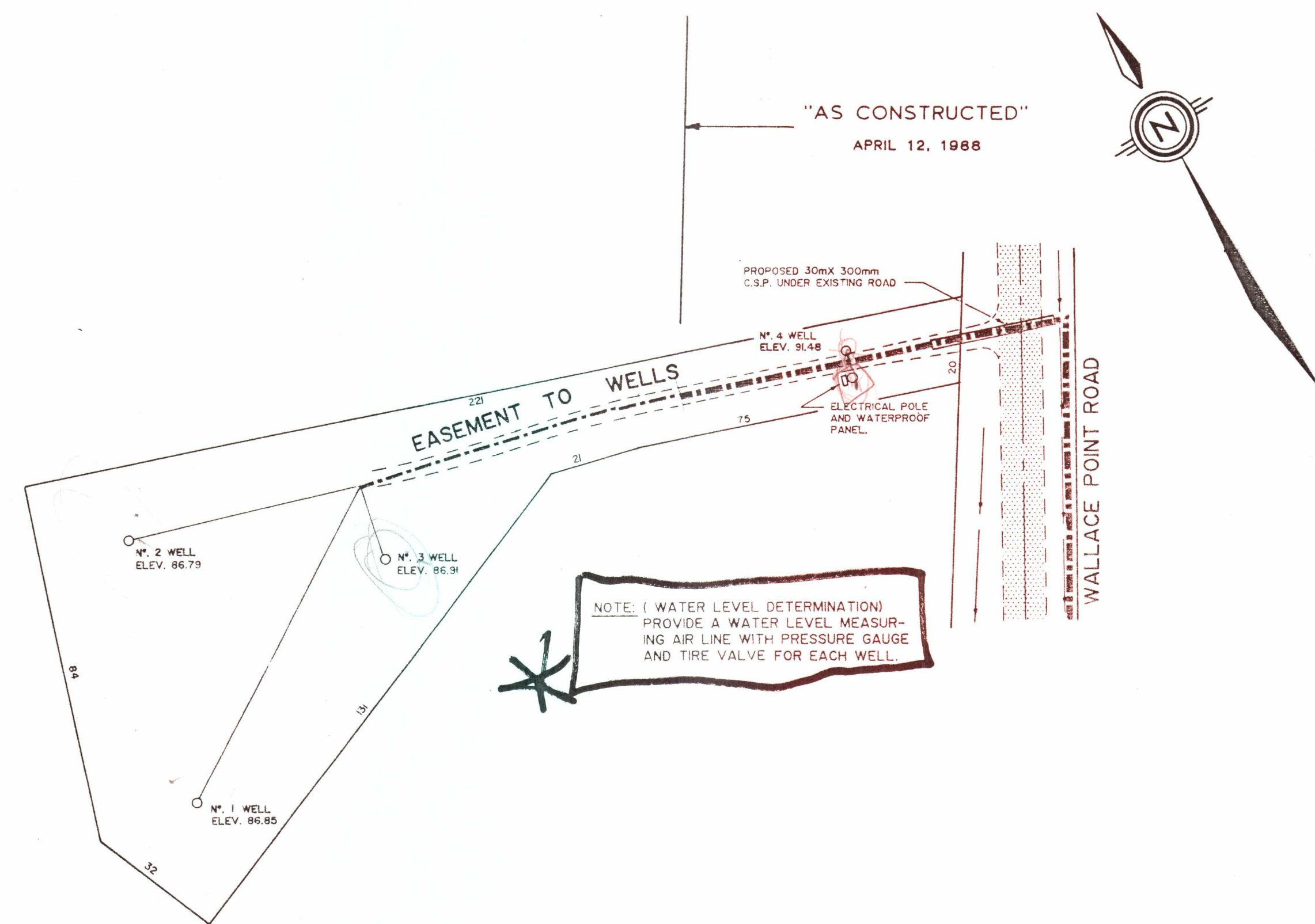
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ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

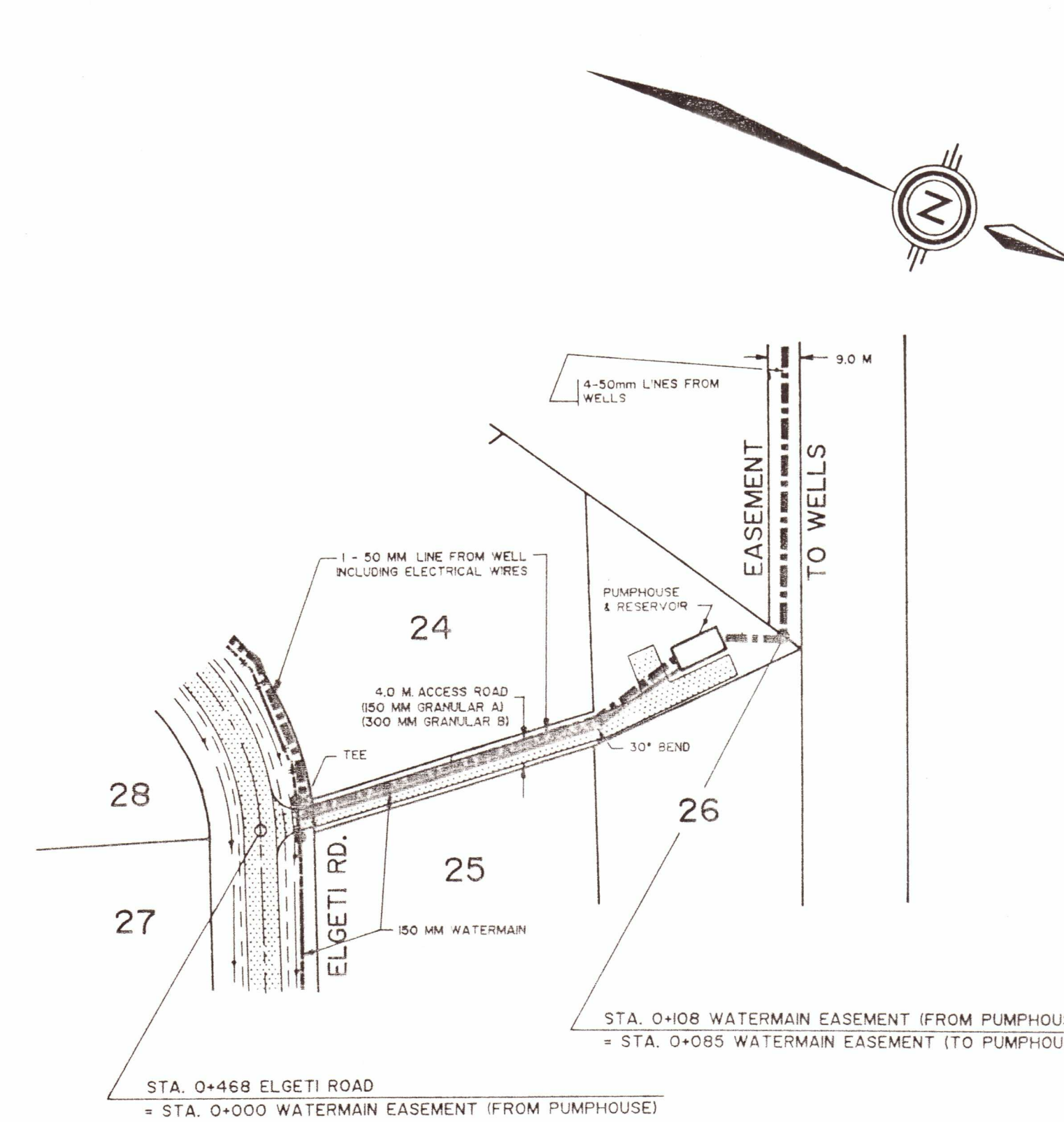
WATERMAIN EASEMENT PLAN AND PROFILE

DESIGNED BY: M. DAVENPORT	SCALE: HOR: 1 : 1000
DRAWN BY: J. RUTLEDGE	VERT:
DATE: SEPTEMBER, 1987	DRWG. NO.: 101-09
PROJECT NO.: 93-D-101	





EASEMENT TO WELLS



EASEMENT TO PUMPHOUSE

- NOTES:
1. WATER SERVICES SHALL NOT BE INSTALLED IN DRIVEWAYS.
 2. ALL WATERMAIN "TEE" CONNECTIONS REQUIRE RETAINING GLAND RINGS WHERE THRUST BLOCKS CANNOT BE CONSTRUCTED ON SOLID GROUND.
 3. WATERMAIN SHALL BE DUCTILE IRON TYTON-JOINT CLASS 52 CEMENT-LINED OR POLY-VINYL CHLORIDE (P.V.C.) CLASS 150 (SMALLER THAN 300 MM DIAMETER ONLY).
 4. ALL WATERMAIN FITTINGS SHALL BE CAST-IRON CEMENT-LINED MECHANICAL JOINTED.

- BM 1 ELEV. 100.000
WEST FACE OF HYDRO POLE ON SOUTH SIDE OF DRIVEWAY IN FRONT OF BARTLY RESIDENCE.
- BM 2 ELEV. 99.56
NORTH FACE OF HYDRO POLE LOCATED AT THE WEST SIDE OF ELGETI RESIDENCE.
- BM 3 ELEV. 95.58
NORTH FACE OF BELL POLE LOCATED IN NORTH-WEST CORNER OF PROPERTY ALONG WALLACE POINT ROAD.
- BM 4 ELEV. 103.76
NAIL IN FENCE LOCATED AT THE BACK OF LOT 10.

LEGEND

- EDGE OF GRAVEL
- ROAD DITCH
- PAVED SURFACE
- NATURAL DRAINAGE
- PROPOSED DRAINAGE
- PROPOSED WATERMAIN
- PROPOSED LINES FROM WELLS

NO.	REVISIONS	DATE	BY	APP'D.
3				
2	AS CONSTRUCTED	APR 88	SAB	MJD
1	EASEMENTS TO WELLS	APR 88	JHR	MJD

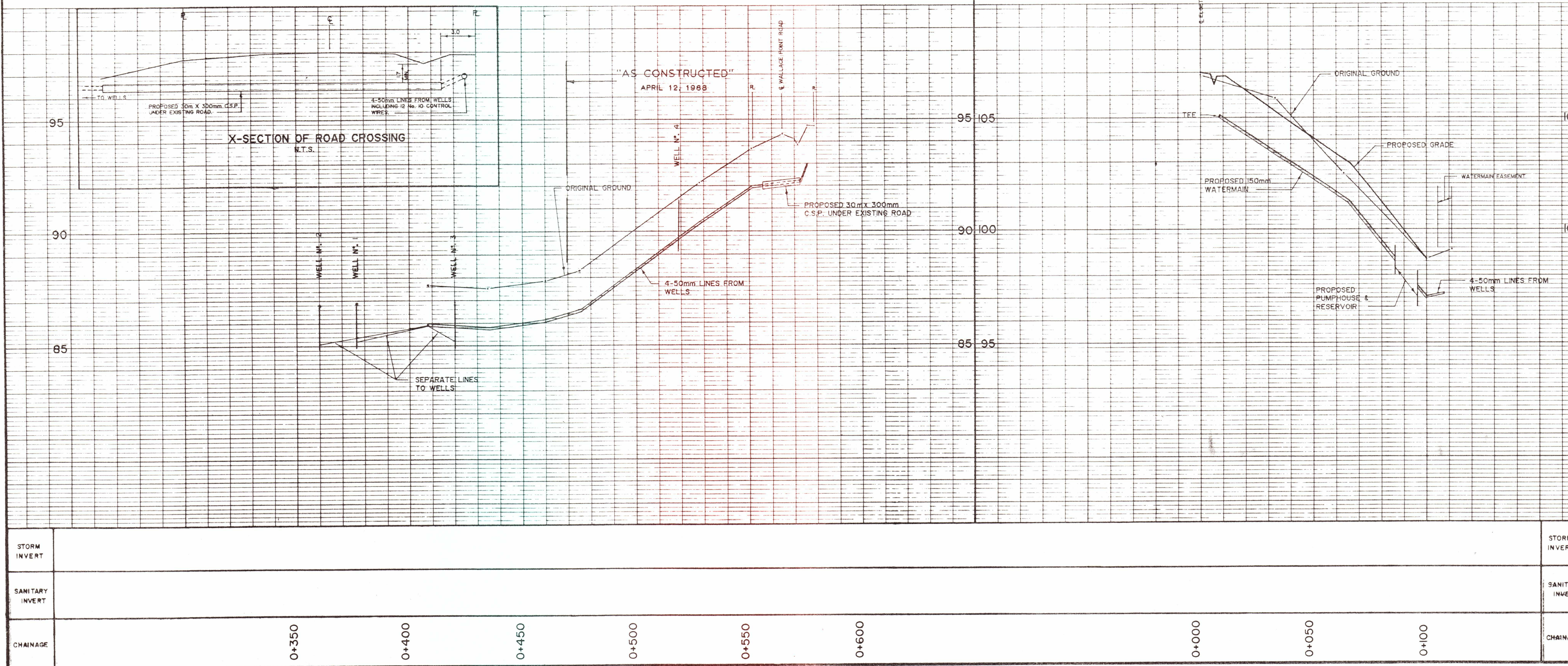


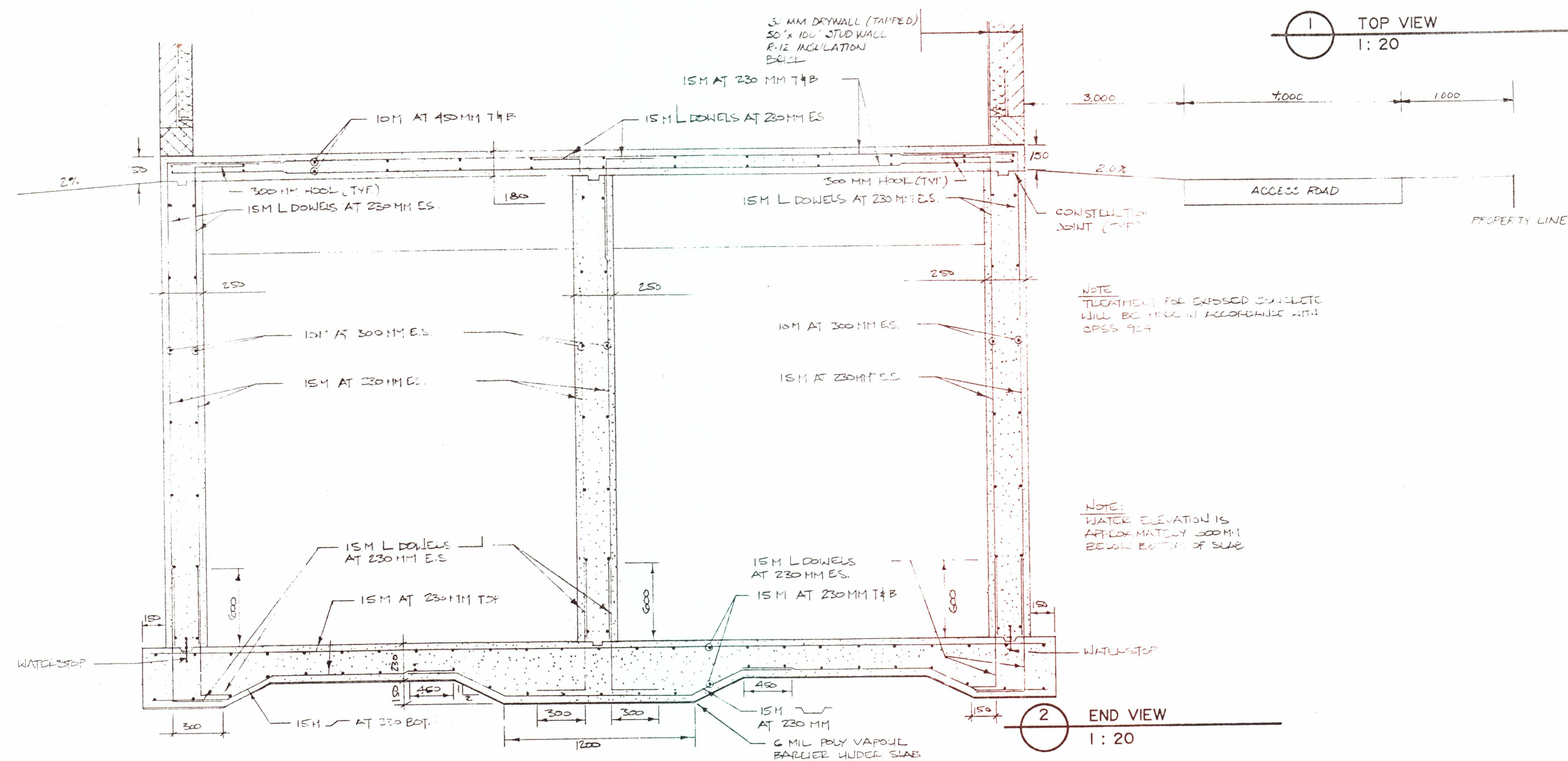
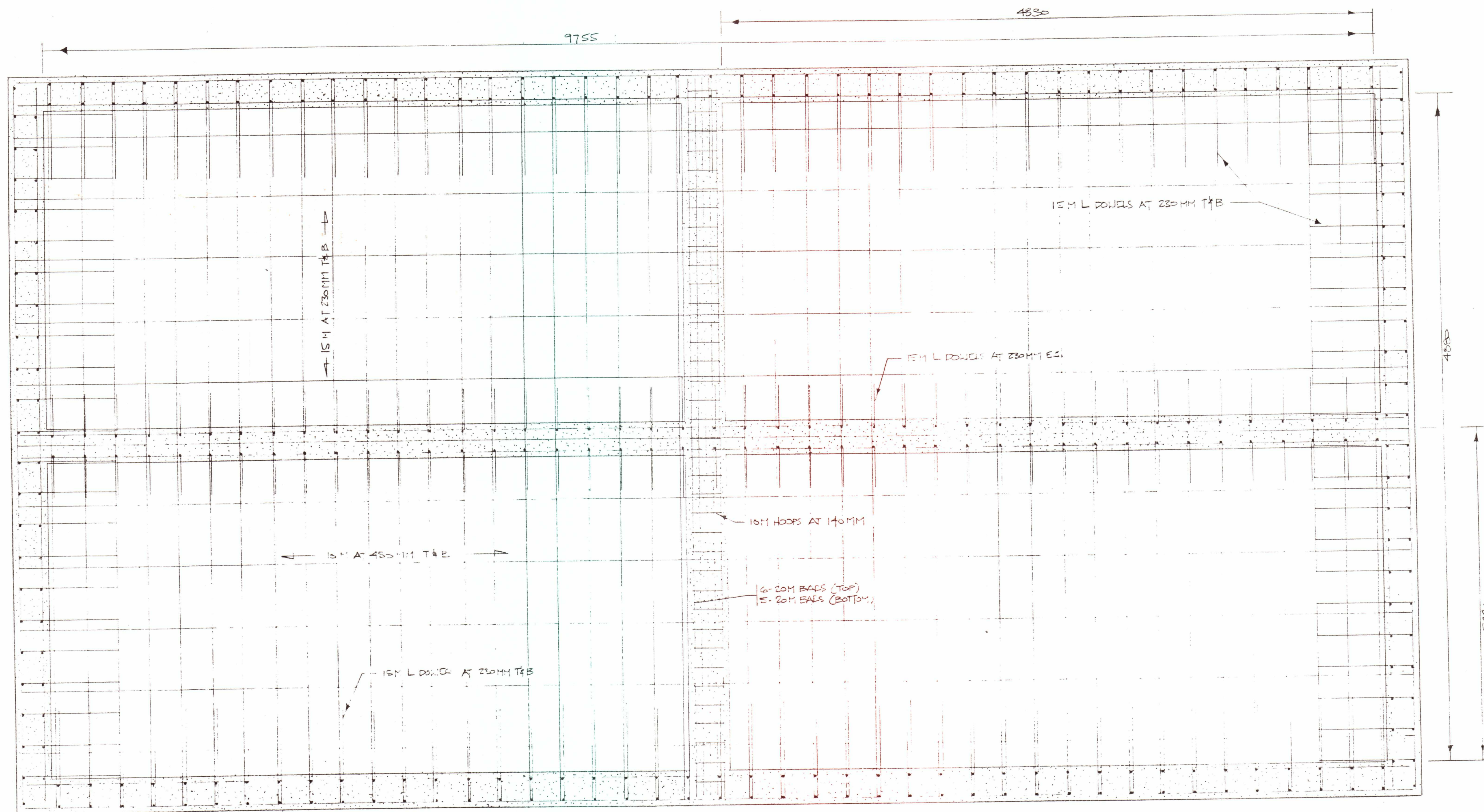
MAY 26 1988

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169 LANSDOWNE ST. E., SUITE 101
PETERBOROUGH, ONTARIO

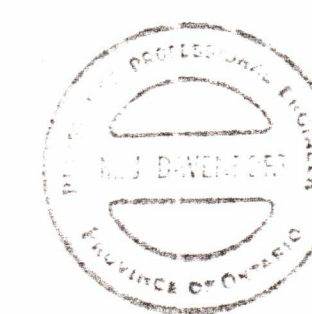
ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

WATERMAIN EASEMENT
PLAN AND PROFILE





3				
2				
1				
No.	REVISIONS	DATE	BY	APPD



MAY 26 1989

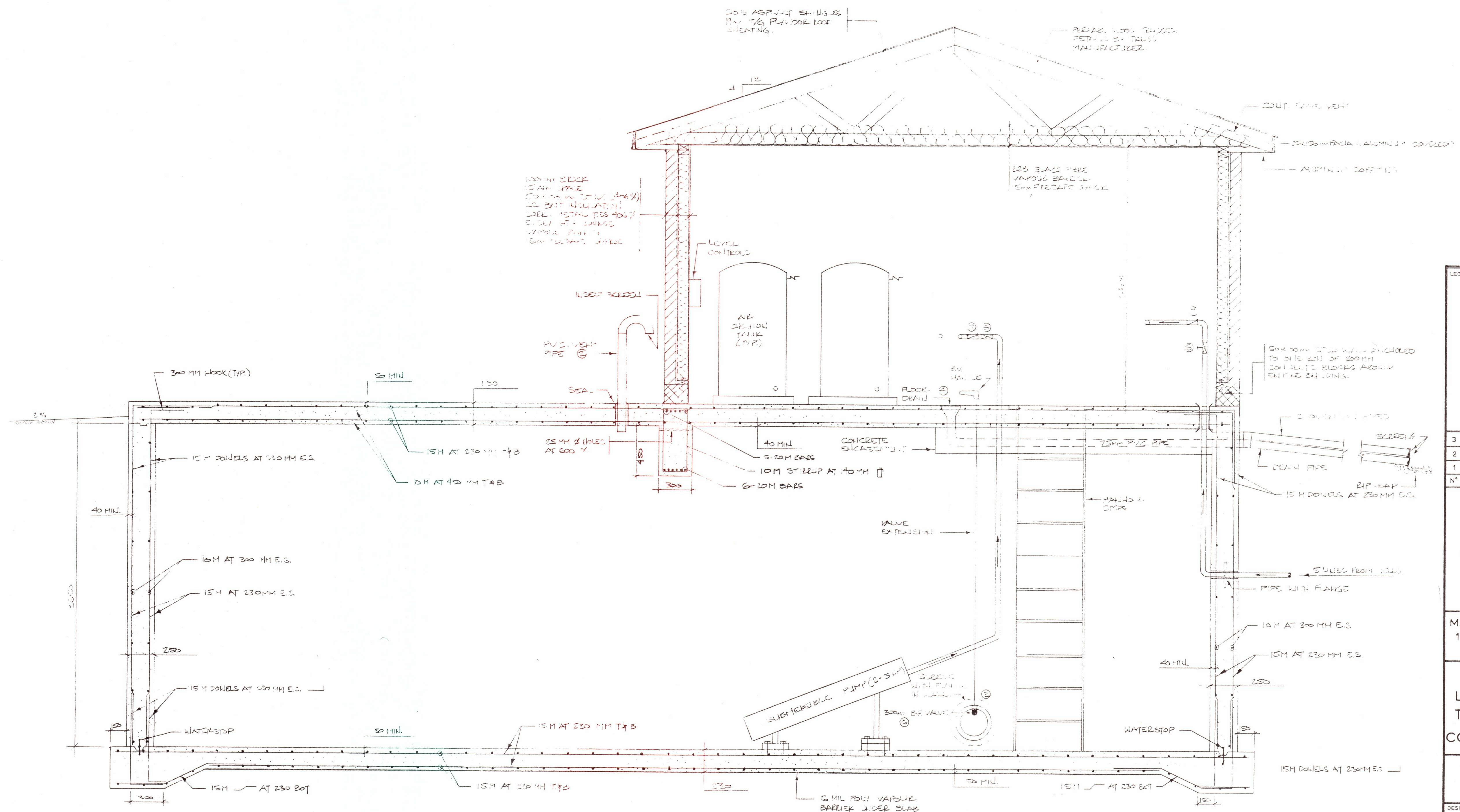
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PETERBOROUGH, ONTARIO

ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

RESERVOIR TANK DETAILS

DESIGNED BY: J. BURKE	SCALE: HORIZ: 1:20
DRAWN BY: J. RUTLEDGE	VERT:
DATE: AUGUST, 1987	DRAWING NO: 101-II
PROJECT NO: 83-D-101	

ROOF LOADING:
 D.S.L. = 2.3 kN/m^2 (60 psf)
 LIVE LOAD = 1.7 kN/m^2 (36 psf)



SECTION A-A
1 : 20

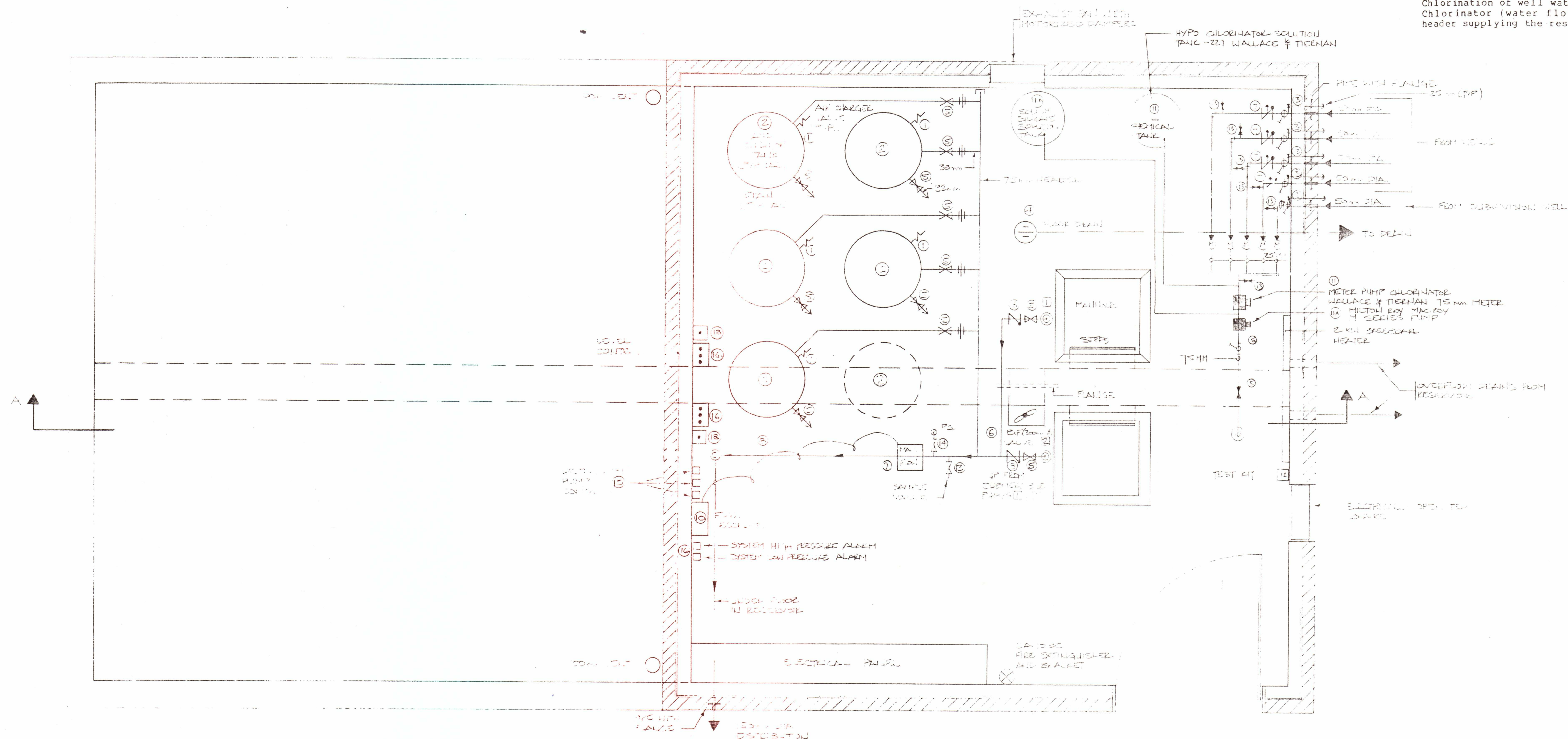
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3				
2				
1				
N°	REVISIONS	DATE	BY	APP'D
				
M.J. DAVENPORT & ASSOCIATES LTD. 169 LANSDOWNE ST. E., SUITE 101 PETERBOROUGH, ONTARIO				
ELGETI SUBDIVISION LOT 16, CONCESSION 16 TOWNSHIP OF OTONABEE COUNTY OF PETERBOROUGH				
MECHANICAL AND STRUCTURAL DETAILS				
DESIGNED BY: J. BURKE		SCALE:		
DRAWN BY: J. RUTLEDGE		HORIZ: 1 : 20		
DATE: MAY, 1987		VERT:		
PROJECT N°: 83-D-101		DRAWING N°: 101-12		

OPERATION OF THE SYSTEM

Wells start and stop on demand from the level controls to maintain the reservoir levels between 3200 mm and 2300 mm above the reservoir floor. Wells are protected by "Sub Guards" in the wells which bypass water back into the wells so the pumps always have adequate water for cooling even at low water levels in the wells.

The distribution pumps are controlled by the pressuretrols and run on an alternating basis as required to satisfy the system demands. The pumps are protected by a low level cut off and alarm in the reservoir.

Chlorination of well water is accomplished by the Meter Pump Chlorinator (water flow operated) on the 75 mm diameter header supplying the reservoir with well water.

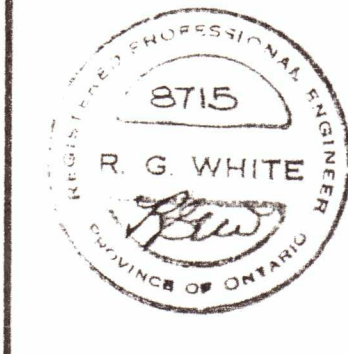


NOTES:

1. ALL PIPING AND FITTINGS SHALL BE GALVANIZED - PAINTED WITH GALVANIZED PAINT - 2 COATS ON ALL THREADS
2. WELLS 1-4, SEE DRAWING 101-10
3. SUBDIVISION WELL - SEE DRAWING 101-01 IN LOT # 3.

LEGEND	
	HORIZONTAL LINE WITH ARROW
	VERTICAL LINE WITH ARROW
	HORIZONTAL LINE WITH CROSS
	VERTICAL LINE WITH CROSS
	HORIZONTAL LINE WITH CIRCLE
	VERTICAL LINE WITH CIRCLE

3				
2				
1	SODIUM SILICATE PUMP, TANK, SUBMITTER, JHR, MSD			
N°	REVISIONS	DATE	BY	APPD



MAY 26 1989

M.J. DAVENPORT & ASSOCIATES LTD.
169 LANSLOWNE ST. E., SUITE 101
PETERBOROUGH, ONTARIO

ELGETI SUBDIVISION
LOT 16, CONCESSION 16
TOWNSHIP OF OTONABEE
COUNTY OF PETERBOROUGH

MECHANICAL DETAILS

DESIGNED BY: B. WHITE	SCALE: HORIZ: 1:20
DRAWN BY: J. RUTLEDGE	VERT:
DATE: MAY, 1987	DRAWING N°: 101-13
PROJECT N°: 83-D-101	

EQUIPMENT LIST

1. Air charging valve for pneumatic tanks - Myers #5000 A10.
2. Air cushion pneumatic tanks - Myers 100 Gallon with float.
3. Wall flange pipe sections - all pipes passing through walls.
4. Floor drain - 75 mm Ancon # 100.
5. Valves - Gate or Ball - Jenkins or Worchester 32 mm, 38 mm, 50 mm.
6. Butterfly Valve - Reservoir - 300 mm valve with extension stem up through the floor with operating handle.
7. Combination flow control and check valve.
8. Check valve.
9. Mag. flow meter - Fischer Porter model 10 D1419 50 mm in size.
10. Flow recorder - Totalizer and converter - Fischer Porter Model 1102 D1 - 7 day chart.
11. Chemical pumps: Meter pump chlorinator Wallace & Tiernan and tank (model no. 227) 75mm (Hypo-chlorinator solution).

12. Test kit - Myers # M1650.
13. Sampling valve - EMCO # B 2010 Brass Faucet.
14. Pressure Gauge - Bronze 100 mm face - 0 to 700 KPa. Terice or Morrison with pet cocks.
15. Pressure Switches - Honeywell Pressure Trols #L404 with Pet Cocks for Distribution pump control.
16. Level Controls - Reservoir - Warrick Level switches # 1G101 with electrodes. Well pumps Control. NEMA 4
17. Low level protection - Wells - Sub guard - Model 200 manufactured by Flowmatic corporation available from Triangle Plumbing, Peterborough, Ontario.
18. Low level alarms for distribution pumps - Warrick level alarm.
Pipe - Vent & Drain - P.V.C.
Water - SCH 40 Galv. Iron in Pumhouse.
PVC to distribution.

Fittings - Galv. M.I. 150

Unions - Galv. M.I. REX

Pipe Supports - Grinnell Fig. 264

Wall louvre & motor - 305 mm x 305 mm. Louvre with damper motor-interlock with wall fan to open when fan starts.

Wall fan & motorized damper - Greenheck model GW-85-D- (217 L/S @ 62 Pa) sp. with motorized damper.

Distribution pumps - Myers SJ 5080, 5 HP 230/1/60, complete with well shroud and stand & control box CJ50-31 or Grundfos equivalent with flow inducer sleeve and stand & control box.

Well Pumps (see note at right) - Myers or Grundfos HP 230/1/60 depending on well capacity, depth of well & static level.

Maintenance and operation manuals required for all equipment.

Master Control Panel (shown on drawing 101-14)

This panel is to operate the two distribution pumps on the pressure trols and the low water cut off on an alternating basis. Pressure trol settings 45 to 55 p.s.i. (310 KPa to 380 KPa) Low distribution pressure - 20 p.s.i. (138 KPa). High pressure distribution - 70 p.s.i. (483 KPa).

The wall pumps operate on the level switches in the reservoirs and are to start sequentially and pump between the 2300 mm level to the 3200 mm level with the alarm shut off at the 3350 mm level.

All pumps are to have hand-off automatic magnetic starters and pilot lights for run & off.

Electrical connections from this control panel to the control boxes and level controls as shown on the E-1 drawing.

NOTE: MYERS WELL PUMPS

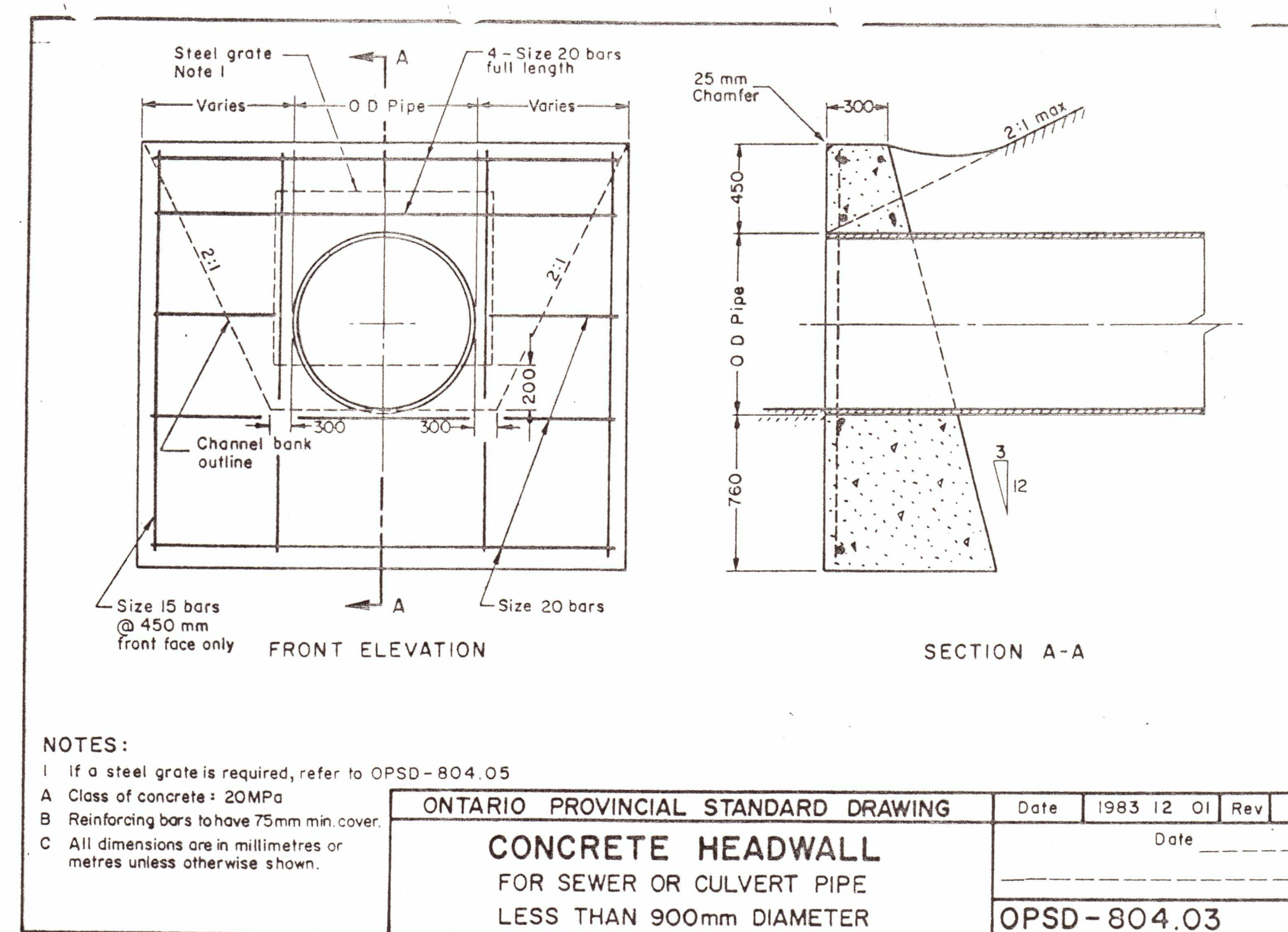
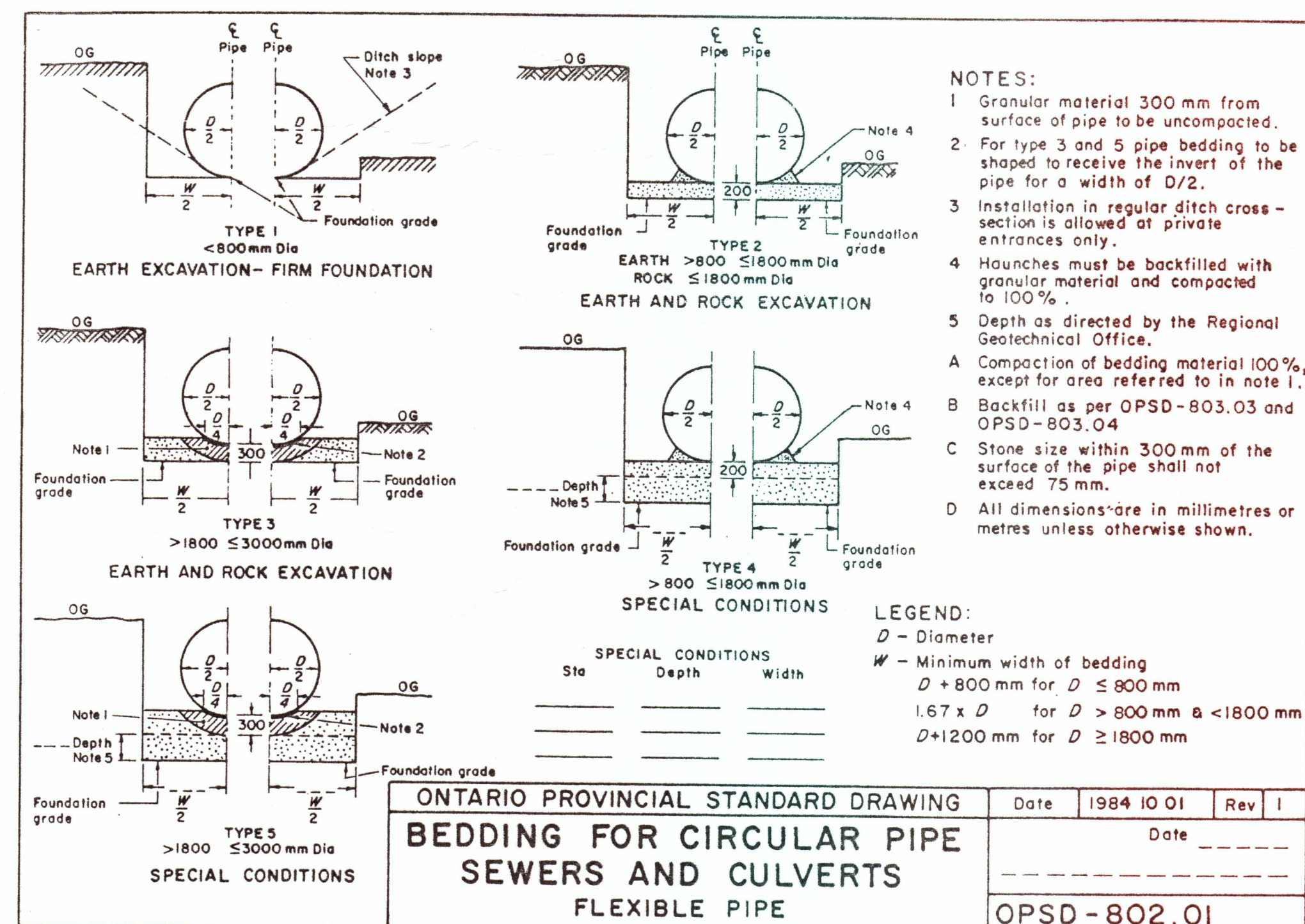
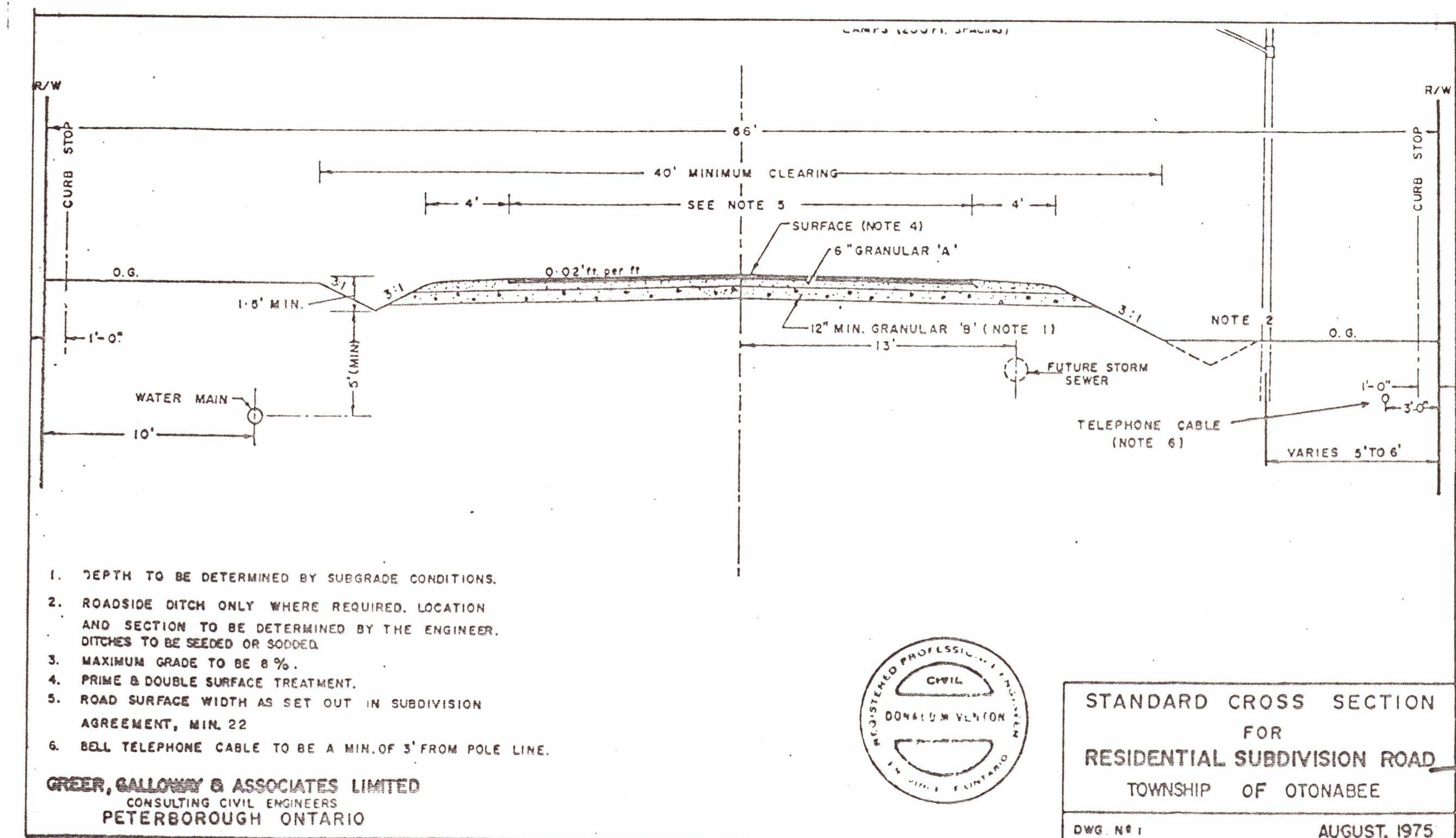
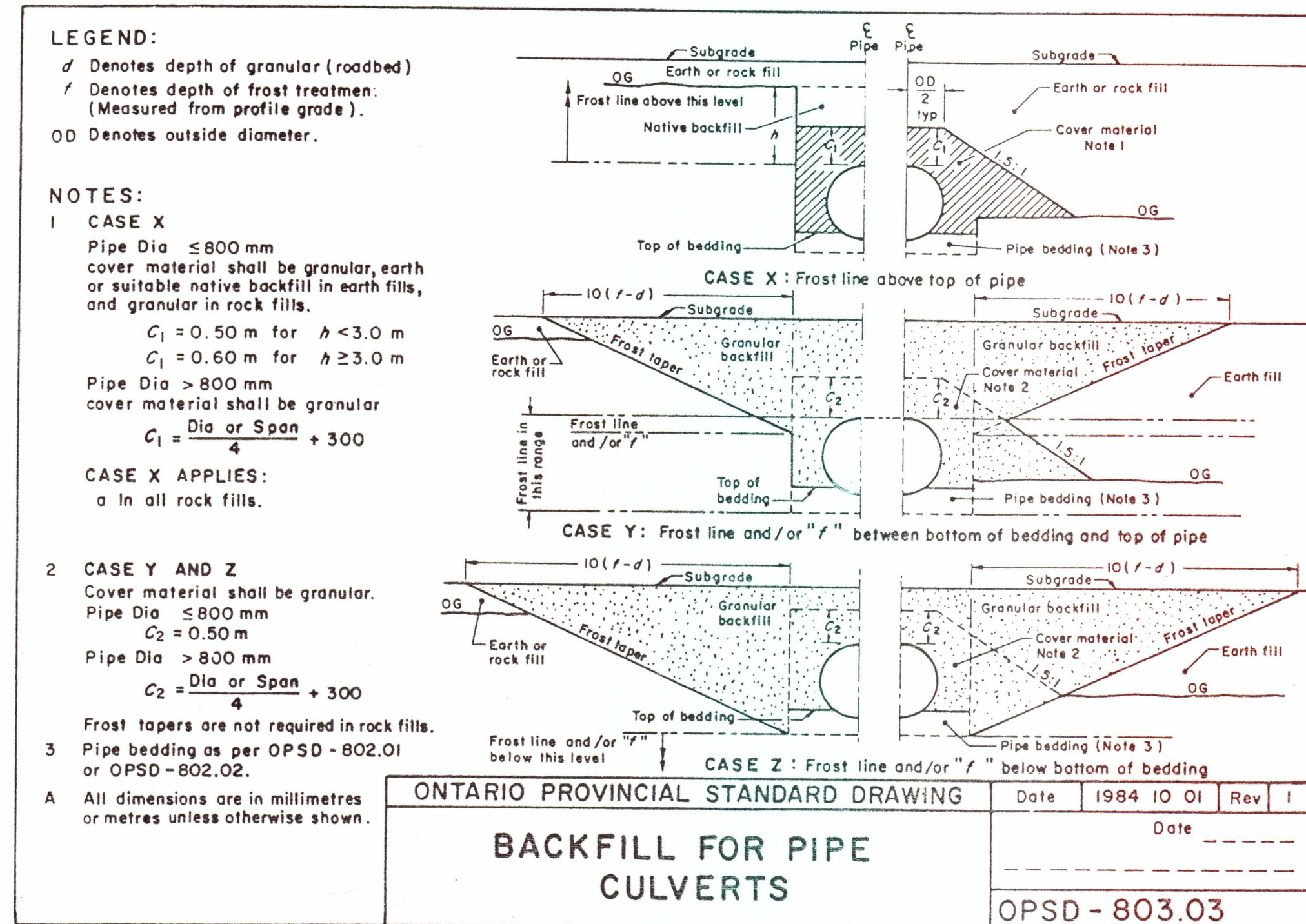
1. J718 - 3/4 HP 230 V 1 Ø
2. J718 - 3/4 HP 230 V 1 Ø
3. J718 - 3/4 HP 230 V 1 Ø
4. J34 - 1/3 HP 230 V 1 Ø

SUBDIVISION - SJ535 - 1 1/2 HP 230 V 1 Ø

RESERVOIR LEVELS PUMP OPERATION

3350 - HIGH LEVEL ALARM (OVERFLOW)
3200 - WELL PUMPS STOP
(900 mm PUMP UP)

2300 - WELL PUMPS START
900 - LOW LEVEL ALARM AND SHUT-OFF OF DISTRIBUTION PUMPS.



3				
2				
1				
NO.	REVISIONS	DATE	BY	APP'D
		MAY 26 1988		
M.J. DAVENPORT & ASSOCIATES LTD. R.R. N°. 7, LEANNE AVENUE PETERBOROUGH, ONTARIO				
ELGETI SUBDIVISION LOT 16, CONCESSION 16 TOWNSHIP OF OTONABEE COUNTY OF PETERBOROUGH				
STANDARDS				
DESIGNED BY: M. DAVENPORT		SCALE:		
DRAWN BY: R.G. DUNFORD		HOR: VARIOUS VERT:		
DATE: DECEMBER 31, 1984		DRWG NO:		
PROJECT NO.: 84-D-101		101-15		