

Reference: LON-23002025-A0

October 18, 2023

Mr. Deren Lyle, P. Eng.

Cyril J. Demeyere Limited
Consulting Engineers
261 Broadway, P.O. Box 460
Tillsonburg, Ontario. N4G 4H8

Dear Mr. Lyle:

**Geotechnical Comments Regarding Ravine Crossing Work
Eagle Ridge Subdivision - Phase 2, Southdale Line, Central Elgin, ON, Ontario**

As requested by Cyril J. Demeyere Limited (CJDL) on behalf of the client, EXP Services Inc. has prepared this letter with geotechnical comments regarding the ravine alteration work located on east side of Hawk's Gate culvert crossing at Eagle Ridge Subdivision - Phase 2, Southdale Line, Central Elgin, Ontario.

The following documents have been received and reviewed:

- The Eagle Ridge, Phase 2 contract drawings (REV 4: Reissued for Construction, 12 Sept 2023) (attached);
- 19012_Geotech Package (Sep-13-2023)_2_3 (attached);
- 19012_Sketch of Severance (18 Oct 2023) (attached);
- Results of geotechnical quality assurance inspection and testing services provided by EXP Services Inc. ; and
- Recent photographs of the site after construction (attached).

Based on the available documents and photographs, the following were drawn:

- The Eagle Ridge, Phase 2 contract drawings have been reviewed and approved by the Municipality of Central Elgin and have been constructed.
- Two cross-sections designated as A1&A2 were provided within the attached drawings at the front and rear of the proposed dwelling on Parcel 'C'. The slopes for the open channel were approximately 2.4H:1V and 2.7H:1V (right at the headwall), tapering to 5.6H:1V and 6.5H:1V as moving east (at the rear of the house) with maximum height of the embankment is 2.1m. There is a 3.0 m flat spot beyond the south top of bank, but within the open channel block. CJDL had reviewed/approved with the Municipality of Central Elgin to ensure they could be provided reasonable maintenance access from the south side of the channel.

- Construction of the engineered fill was carried out between September 11 to 25, 2023. During this period of construction of the engineered fill, EXP conducted various visits for quality assurance purposes. The reports show that the subgrade consisted of clayey silt till and the engineered fill consisted of onsite clayey silt within the road embankment construction and imported silty sand for the majority of the ravine crossing fill. Granular materials were used for culvert bedding and embedment as per OPSD and manufacturer's recommendations. EXP completed compaction testing at our discretion, supplemented by visual observations of construction methods and site conditions. Attached are relevant inspection records.
- The filling of the Hawk's Gate right-of-way has been encroached the erosion hazard limits previously applicable in this area.
- The retaining wall on either side of the Hawk's Gate right-of-way was deleted. The culvert has been extended longer in each direction, complete with a headwall at each end, to facilitate the right-of-way being constructed to a standard cross-section, and then slopes down to match existing on both the east and west sides of the road.
- There are 2x cable concrete mats upstream of the headwall, but the balance of the open channel is vegetated with grass. There is a catchbasin that was installed at the upstream end of the open channel (CB 18A) that intercepts all minor flows from the channel, meaning that it would take a storm event >5-year to actually have flows along the channel and through the culvert. Given the infrequency of utilization of the channel, exposure to erosion is anticipated to be very limited.

Conclusion

All work was completed under the supervision of EXP and was found to be satisfactory and within specifications.

The slopes for the open channel are considered stable and all work completed on the east side of Hawk's Gate has no adverse impact on surrounding areas and is considered acceptable.

Given that the maximum height of the embankment is 2.1m and max inclination is 2.4H:1V, global stability assessment is considered unnecessary and therefore not being performed. Contract Drawing 12 shows that the foundation is below the post-development channel bottom. In the event of erosion, the 3m wide access corridor is provided and can be used to easily maintain/fix anything although it is not expected this will ever need to be used. To this end, EXP concurs with the above entire work and no further study is required from a geotechnical standpoint.

This report has been prepared to accompany forthcoming Consent and Zoning By-Law Amendment applications, to be filed with Elgin County and the Municipality of Central Elgin respectively, for lands located at 42399 Southdale Line. The applicant is proposing to create three (3) single family residential building lots, as shown within the attachments of this report. From a geotechnical standpoint, the proposed lot creation (Parcels 'A', 'B' and 'C') and their foundations will have no adverse impact on the stability of the newly constructed embankments and furthermore the proposed lots might not be

CLIENT: 144658 - 2561603 Ontario Ltd.

PROJECT NAME: Geotechnical Comments Regarding Ravine Crossing Work

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subject to any geotechnical setback restrictions. However, EXP should review foundation details once they are finalized to ensure no further recommendations are required.

We trust this is satisfactory for your current needs. Should you have any questions, please contact this office.

Yours truly,

EXP Services Inc.

A handwritten signature in blue ink, appearing to read 'A. Sadoun', is written over a light blue rectangular background.

Adeeb Sadoun, M.Sc., P. Eng.
Senior Engineer, Geotechnical Services

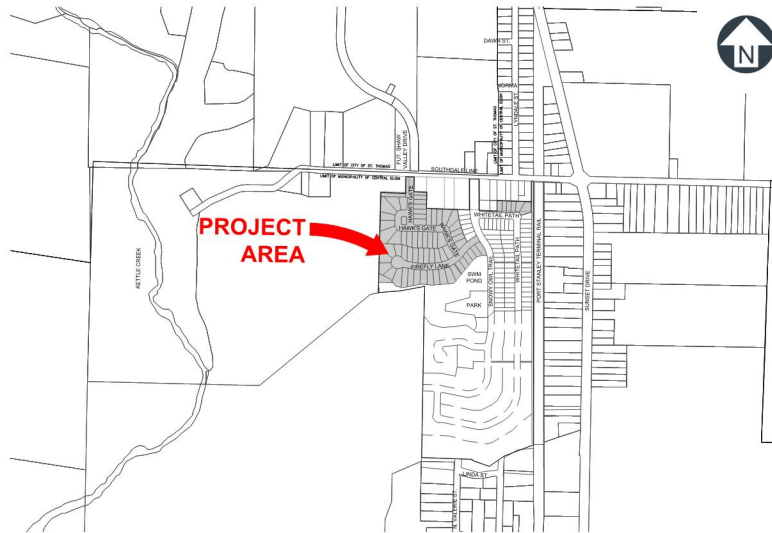
Attachments:

- Drawings
- EXP's inspection and testing reports
- Site photographs



EAGLE RIDGE SUBDIVISION

PHASE 2 - RP 11M-263 DOUG TARRY LIMITED



KEY PLAN
SCALE: 1:7,500



REVISION			
No.	DESCRIPTION	DATE	BY
4	REISSUED FOR CONSTRUCTION	12 SEPT 2023	D.J.L.
3	ISSUED FOR CONSTRUCTION	26 JAN 2023	D.J.L.
2	ISSUED FOR TENDER	15 DEC 2022	D.J.L.
1	ISSUED FOR MECP APPLICATION	25 NOV 2022	D.J.L.

LIST OF DRAWINGS	
#	TITLE
1	COVER PAGE
2	GENERAL PLAN OF SERVICES
3	GRADING PLAN (NORTH) & EROSION CONTROL PLAN
4	GRADING PLAN (SOUTH) & EROSION CONTROL PLAN
5	SANITARY DRAINAGE SYSTEM AND AREAS
6	STORM DRAINAGE SYSTEM AND AREAS
7	COMPOSITE UTILITY PLAN (NORTH)
8	COMPOSITE UTILITY PLAN (SOUTH)
9	FIREFLY LANE
10	HAWK'S GATE (SOUTH)
11	HAWK'S GATE (NORTH)
12	HAWK'S GATE CULVERT CROSSING
13	HAWK'S GATE CULVERT SECTIONS & DETAILS
14	MISCELLANEOUS DETAILS
15	GENERAL NOTES

CONSULTANTS

CJDL
Consulting Engineers

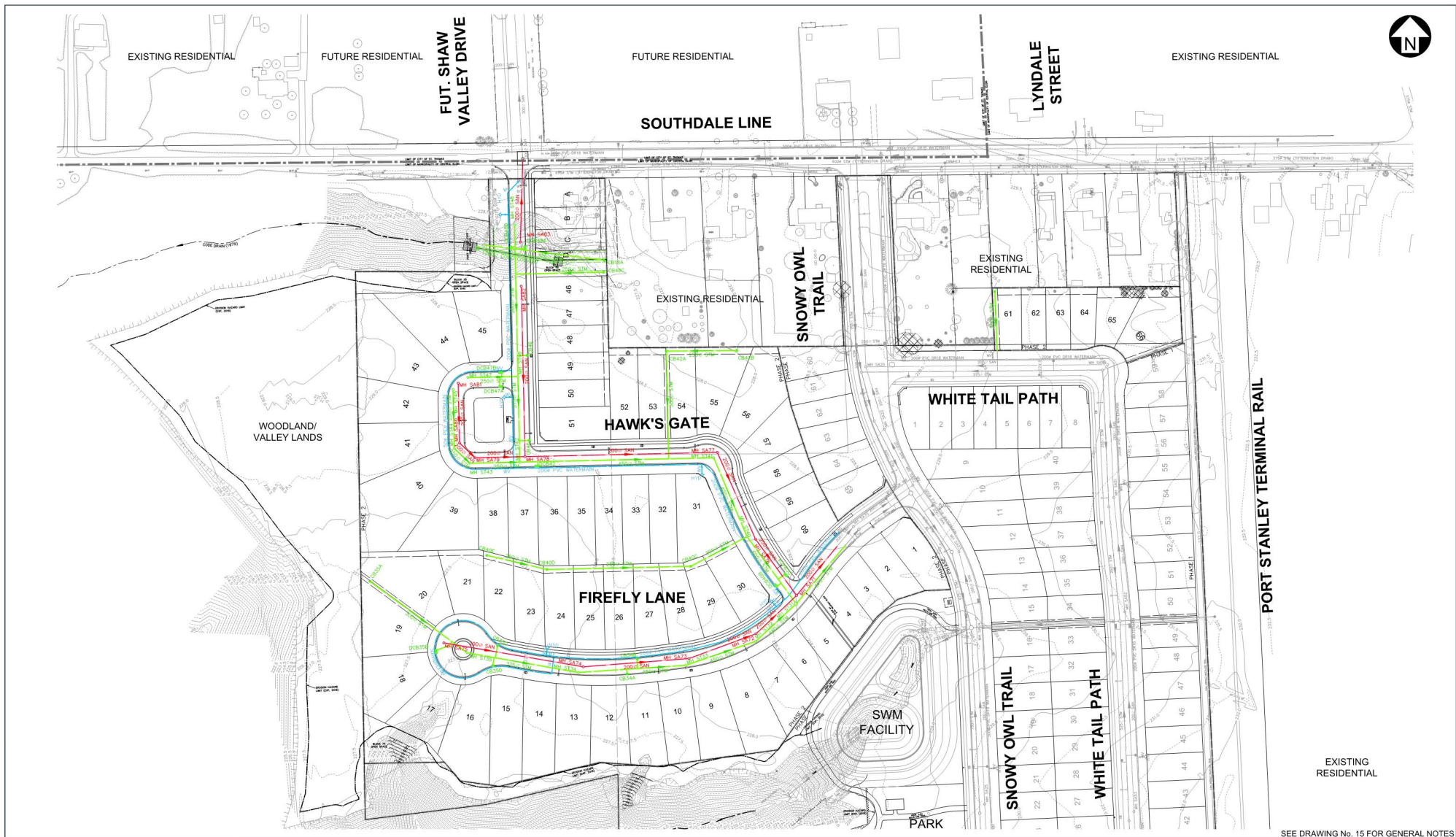
Cyril J. Demeyere Limited
P.O. Box 460, 261 Broadway
Tilsonburg, Ontario, N4G 4N8
Tel: 519-688-1000
866-302-9886
Fax: 519-842-3235
cjd@cjdeng.com

CONTRACT #:
PROJECT NAME:

19012
EAGLE RIDGE SUBDIVISION
PHASE 2 - RP 11M-263
DOUG TARRY LIMITED

SCALE: AS NOTED

DRAWING #: 1



SEE DRAWING No. 15 FOR GENERAL NOTES

LEGEND

— PROPOSED SANITARY SEWER	— PROPOSED WATERMAIN	⊕ MAINTENANCE HOLE
— EXISTING SANITARY SEWER	— EXISTING WATERMAIN	⊕ CATCH BASIN
— FUTURE SANITARY SEWER	— FUTURE WATERMAIN	⊕ WATER VALVE
— PROPOSED STORM SEWER	— PHASE LIMITS	⊕ WATER SERVICE CURB STOP
— EXISTING STORM SEWER		⊕ HYDRANT

CONSULTANT:
CJDL
 Consulting Engineers

City of Winnipeg Limited
 400 Main Street, Suite 1000
 Winnipeg, Manitoba R2C 1A6
 Tel: 204-944-3333
 Fax: 204-944-3335
 cjd@cjdl.com



REVISION		
4	ISSUED FOR CONSTRUCTION	12 SEPT 2023 D.J.L.
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#	DESCRIPTION	DOMMYTYY BY

GENERAL PLAN OF SERVICES

CONTRACT #: 19012 **SCALE:** 1:1000
PROJECT NAME: EAGLE RIDGE SUBDIVISION
 PHASE 2 - RP 11M-263
 DOUG TARRY LIMITED **DRAWING #:** 2



LEGEND

42.90	PROPOSED FINISHED ELEVATIONS
42.60	INTERIM FINISHED ELEVATIONS
43.30	FINISHED GROUND ELEVATIONS
43.45	PROPOSED TOP OF FOUNDATION
6	LOT NUMBER
42.15	MINIMUM FINISHED GROUND ELEVATIONS AT REAR
D.B. - W.O.	DAYLIGHT BASEMENT, WALKOUT

PROPOSED SURFACE DRAINAGE, EXISTING
DITCH/SWALE
FENCE
MAJOR FLOW
SIGN
UTILITY PEDESTAL

MAINTENANCE HOLE
CLEAN OUT
CATCH BASIN
WATER VALVE
WATER SERVICE CURB STOP
HYDRANT
BLOW OFF
WATER SAMPLING STATION

ORIGINAL ELEVATIONS
INDICATIONS (SPS 819.33)
ELEVATIONS AFTER EARTH GRADING
APPROXIMATE LIMIT OF ENG. FILL
TOP OF ENGINEERED FILL
UNDERSIDE OF ENGINEERED FILL
NO PARKING ZONE

TACTILE WALKING SURFACE
INDICATIONS (SPS 819.33)
CONIFEROUS, DECIDUOUS TREE
SHRUB
TREES TO BE REMOVED
EDGE OF SUBURBAN LINE
GEOTECHNICAL BORE HOLE

CONSULTANT:

CJDL

Consulting Engineers

Stamp: O.J. LYLE 100174772 SEP 2022

REVISION	
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#	DESCRIPTION DOMMYTTY BY

GRADING PLAN (NORTH) & EROSION CONTROL PLAN

CONTRACT #: 19012 SCALE: 1:500

PROJECT NAME: EAGLE RIDGE SUBDIVISION PHASE 2 - RP 11M-263 DOUG TARRY LIMITED

DRAWING #: 3

SEE DRAWING No. 15 FOR GENERAL NOTES

NOTES

DATUM = DATUM IS GEODETIC RELATED TO THE CITY OF ST. THOMAS GEODETIC BENCHMARK 2000-07 LOCATED AT 42488 SOUTHDAL LINE, ELEVATION 228.45m.

OTHER BENCHMARKS SHOWN ON THE DRAWINGS ARE NOT GUARANTEED BY THE CITY OF ST. THOMAS OR BY CIVIL & REMEDIATION LIMITED.

ADD 200.00 TO ELEVATIONS ON THIS PLAN TO GET GEODETIC METRIC DATUM.

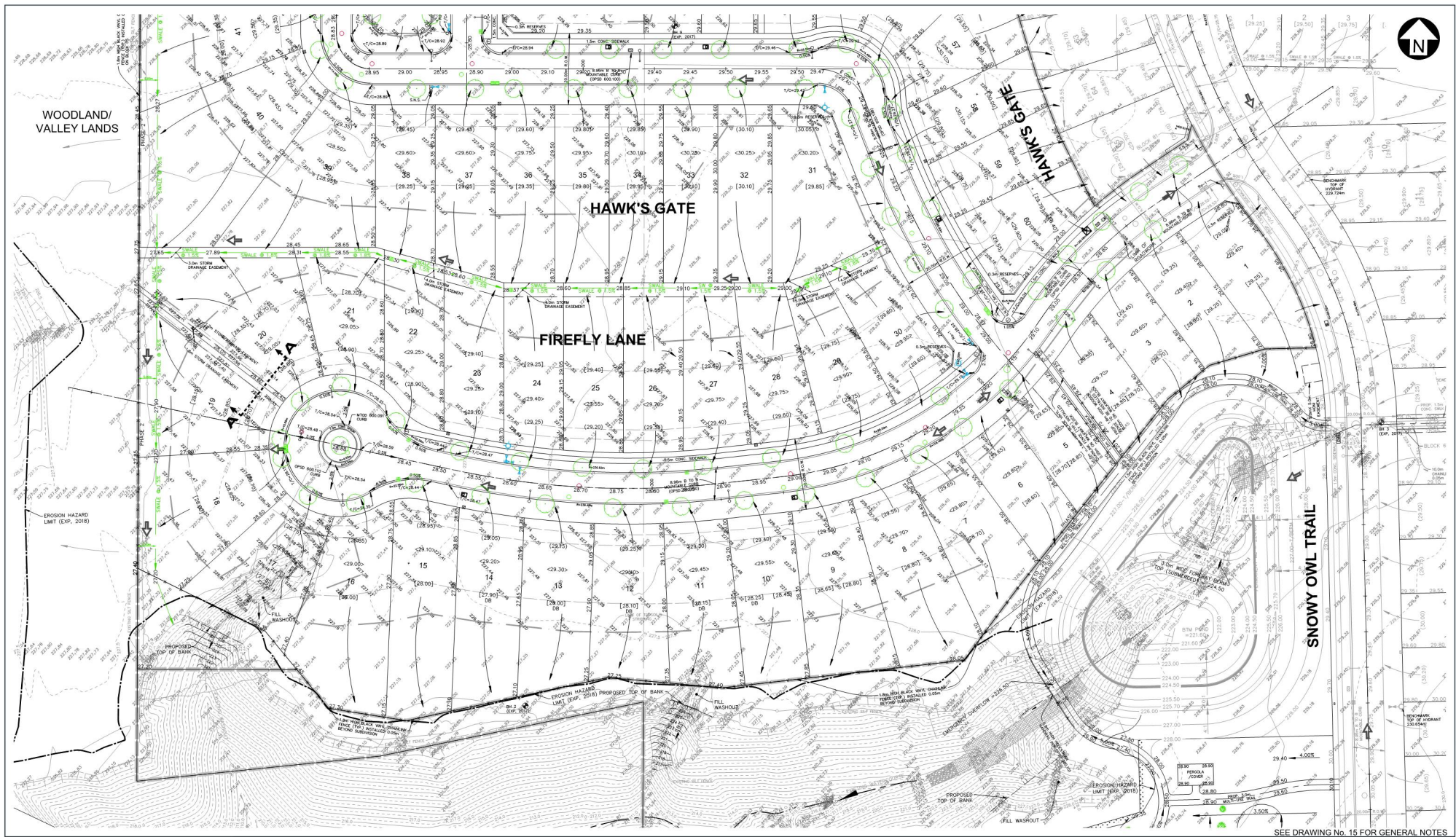
- REAR YARD SWALES SHALL BE 1.5% MINIMUM GRADE EXCEPT AS SHOWN
- SWALE SLOPES SHALL BE 3:1 MAXIMUM (V-BOTTOM ACCEPTABLE)
- ALL YARDS SHALL BE GRADED AT 2% MINIMUM TO SWALES AND/OR CURBS
- CONTROL SEDIMENT WITH SILT FENCES AND STRAW BALES UNTIL GROWTH IS ESTABLISHED
- INDIVIDUAL SITE PLANS MUST BE SUBMITTED FOR THE APPROVAL OF THE CONSULTING ENGINEER
- DRIVEWAY EXISTING LOT GRADING MUST BE CONSTRUCTED WITH FINISHED ASPHALT IN STRICT CONFORMANCE WITH THE CITY OF ST. THOMAS GRADING STANDARDS
- ALLOW ADJACENT SEEDING TO BE PLACED FLUSH WITH THE PAVEMENT

STREET SIGN LEGEND - PHASE 2

Ra-1	STOP SIGN (60cm x 60cm)	= 4
Ra-21	YIELD SIGN (75cm)	= 2
S.N.S.	STREET NAME SIGN (15cm x XXcm)	= 2

SEDIMENT CONTROL NOTES

- CONTROL SEDIMENT IN SWALES AND TO STORM WATER AREA WITH SILT FENCES & STRAW BALES UNTIL GROWTH IS ESTABLISHED. ALL IN ACCORDANCE WITH THE GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES, BY MNR.
- PROTECT AND MAINTAIN ALL EXPOSED SURFACES AND CONTROL ALL RUNOFF DURING CONSTRUCTION
- ALL EROSION CONTROL MEASURES TO BE IN PLACE BEFORE STARTING CONSTRUCTION AND REMAIN IN PLACE UNTIL RESTORATION IS COMPLETED
- PROTECT ALL CATCH BASINS, MANHOLES AND PIPE ENDS FROM SEDIMENT INTRUSION WITH GEOTEXTILE (TERRAFIX 270 R)
- CLEAN ALL SUMPS/BALT FENCES AND CHECK DAMS REGULARLY DURING CONSTRUCTION
- STRAW BALES TO BE USED IN LOCALIZED AREAS AS CHECKED BY THE ENGINEER DURING CONSTRUCTION FOR WORKS WHICH ARE IN OR ADJACENT TO FLOOD LINES, FILL LINES AND HAZARDOUS SLOPES
- ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST BE CHECKED BY OWNER FOR STABILITY AND EROSION FOLLOWING EVERY RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK
- ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY
- PLEASE CONTACT DOUG TARRY LIMITED (519-833-9300) IF THERE ARE ANY QUESTIONS OR CONCERNS REGARDING EROSION CONTROL MEASURES



LEGEND

42.90
42.67
[43.30]
[43.45]
6
[42.15]
D.B. - W.O.

PROPOSED FINISHED ELEVATIONS
INTERIM FINISHED ELEVATIONS
FINISHED GROUND ELEVATIONS
AT FRONT OF BUILDING
PROPOSED TOP OF FOUNDATION
LOT NUMBER
MINIMUM FINISHED GROUND
ELEVATIONS AT REAR
DAYLIGHT BASEMENT, WALKOUT

PROPOSED SURFACE
DRAINAGE, EXISTING
DITCH/SWALE
FENCE
MAJOR FLOW
SIGN
UTILITY PEDESTAL

MAINTENANCE HOLE
CLEAN OUT
CATCH BASIN
WATER VALVE
WATER SERVICE CURB STOP
HYDRANT
BLOW OFF
WATER SAMPLING STATION

ORIGINAL ELEVATIONS
(MAY NOT BE VALID NOW)
ELEVATIONS AFTER EARTH GRADING
APPROXIMATE LIMIT OF ENG. FILL
TOP OF ENGINEERED FILL
UNDERSIDE OF ENGINEERED FILL
NO PARKING ZONE

TACTILE WALKING SURFACE
INDICATORS (RP118.03)
CONIFEROUS, DECIDUOUS TREE
SHRUB
TREES TO BE REMOVED
EDGE OF SUBURBAN LINE
GEOTECHNICAL BORE HOLE

CONSULTANT:
CJDL
Consulting Engineers

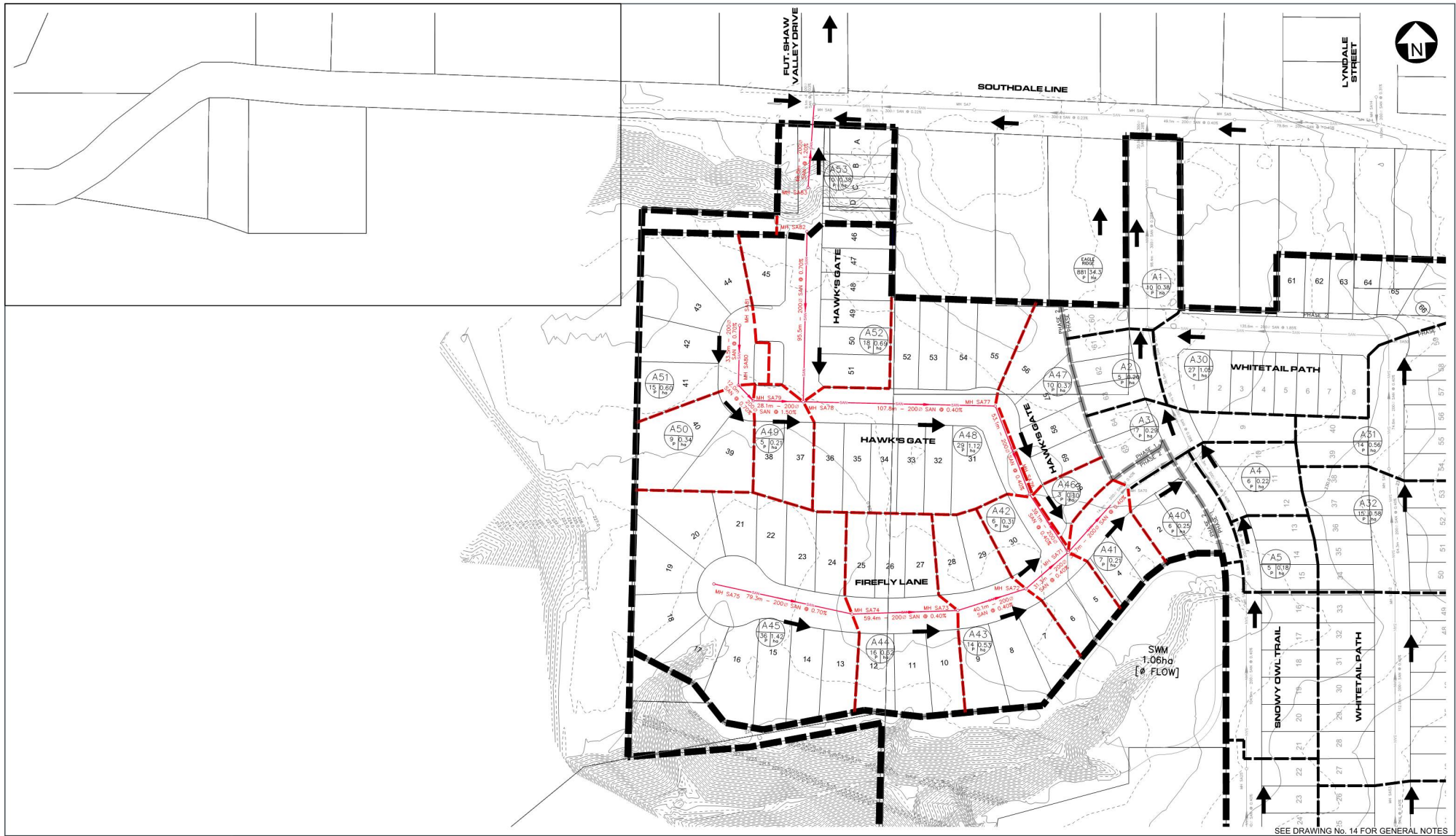
STAMP:
PROFESSIONAL
D.J. LYLE
100174772
12 SEP 2023
ENGINEER OF ONTARIO

REVISION		
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CONTRACT #: 19012
PROJECT NAME: EAGLE RIDGE SUBDIVISION
PHASE 2 - RP 11M-263
DOUG TARRY LIMITED

SCALE: 1:500
DRAWING #: 4

SEE DRAWING No. 15 FOR GENERAL NOTES



SEE DRAWING No. 14 FOR GENERAL NOTES

- LEGEND**
- PROPOSED SANITARY SEWER
 - EXISTING SANITARY SEWER
 - FUTURE SANITARY SEWER
 - PROPOSED MANHOLE, EXISTING/FUTURE
 - LIMIT OF DRAINAGE AREA

METRIC CONTOUR ELEVATIONS IN METRES
(BY C.O.L. SITE SURVEY)
EAGLE RIDGE SUBDIVISION PHASE LIMITS
AREA NUMBER
AREA IN HECTARES
POPULATION

CONSULTANT:
CJDL
Consulting Engineers

Stamp: O.J. LYLE
100174772
SEP 2022
PROFESSIONAL ENGINEER
ONTOARIO

REVISION		
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#	DESCRIPTION	DDMMYYYY BY

**SANITARY DRAINAGE
SYSTEM AND AREAS**

CONTRACT #: 19012 SCALE: 1:1000
PROJECT NAME: EAGLE RIDGE SUBDIVISION
PHASE 2 - RP 11M-XXX
DOUG TARRY LIMITED
DRAWING #: 5



REFER TO ELECTRICAL, ALL MATERIALS AND MANSHIP SHALL BE IN ACCORDANCE WITH HYDRO ONE UNDERGROUND DISTRIBUTION STANDARDS (SUB-SECTION 4-2). REFER TO HYDRO ONE DUCT, XXXXXX-XX-XXX.

REFER TO BELL DUGS AND SPECIFICATIONS FOR THE INSTALLATION OF BELL UTILITIES

REFER TO ROGERS DUGS AND SPECIFICATIONS FOR THE INSTALLATION OF ROGERS UTILITIES

REFER TO ENBRIDGE DUGS AND SPECIFICATIONS FOR THE INSTALLATION OF ENBRIDGE UTILITIES.

MATERIALS MUST BE SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

DUCT LENGTHS SHALL EXTEND 1.0M BEYOND BACK OF CURB. SEE DRAWING 13 "SMOOTH CROSS-SECTIONS" FOR UTILITY RUNNING LINES AND NOTES 11 TO 14. ENDS & SIDES OF DUCT BANK SHALL BE ROUGH-FORMED TO DIMENSIONS SHOWN IF SMOOTH TRUNK WALLS CANNOT BE MAINTAINED.

CONCRETE SHALL CONFORM TO APPENDIX "A". CONCRETE AND SAND SHALL BE SUPPLIED BY CONTRACTOR.

5" ANGLE COUPLINGS SHALL BE USED AS REQUIRED TO CREATE OFFSETS IF EXISTING CONFLICTING UTILITIES ARE ENCOUNTERED.

4. POLYPROPYLENE BORE DUCTS SHALL BE USED FOR THE FOLLOWING PULLING OF CABLES. AT LEAST 100mm OF LOOSE ROPE MUST BE LEFT AT EACH END OF DUCT. DUCTS MUST BE TERMINATED AT EACH END WITH A CAP OR 300mm OF DUCT EXTENDING BEYOND CONCRETE ENCASEMENT FOR FUTURE EXTENSION. THE ENDS OF ALL ROAD CROSSING DUCTS SHALL BE MARKED WITH 50X100 RED POSTS. ONE (1) SPIRAE DUCT IS REQUIRED FOR EACH UTILITY DUCT BANK, OR OTHERWISE NOTED IN PLAN. SCHEDULE DUCTS SHALL ENTER DUCT STRUCTURES THROUGH PIPES, FILL BOIES, ETC.) WHICHEVER POSSIBLE.

JUNT HYDRO, BELL & CABLE TRENCHES ARE PLANNED 1.4m FROM PROPERTY LINE IN CUL-DE-SAC BULBS. ALL OTHERS ARE 1.0m FROM PROPERTY LINE. GUY WANDS ARE 0.3m FROM PROPERTY LINE.

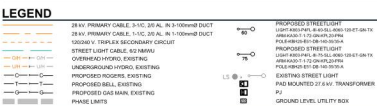
STREET LIGHTS ARE 4.80m FROM PROPERTY LINE. SEE PLAN VIEW FOR DIMENSIONAL LOCATIONS FOR STREET LIGHTS AND TRANSFORMERS.

BELL AND CABLE TRENCHES ARE 0.3m FROM PROPERTY LINE AND 1.2M FROM LOT LINE.

ELECTRICAL, BELL & CABLE TRENCH SERVICES ARE 1.0m FROM LOT LINE TO INTERMEDIATE LOTS AND AS SHOWN FOR CORNER LOTS. LEAVE 16m CUL (OR AS OTHERWISE SHOWN) BURIED LIVING LIFT AT STANDARD TRENCH DEPTH 1.0 TO 2.0m PAST PROPERTY OR EASEMENT LINE, WITH SAND BEDDING, THEN COVERED WITH STREET FLOW CURB. ALL TRENCHES SHALL BE 0.3m DEEP. SECONDARY TANK 0.3m LONG TO BE ATTACHED TO STANDARD MARKING 1.0m FROM PROPERTY LINE FOR TESTING/LOADING. BELL & CABLE TRENCHES SHALL BE NOTED IN SECONDARY CUL. ADJUST LENGTH OF ELECTRICAL SERVICE CUL TO MATCH LENGTH OF BELL & CABLE TRENCHES.

THE CONTRACTOR SHALL PROVIDE 3 - #6 CUL OF WHITE, 1 BLACK, 1 RED) TWO PLUS 1 - #6 CUL BARE CONDUCTOR FROM INSIDE THE TRANSFORMER TO THE PO3 DISCONNECT FOR THE STREETLIGHT HUBBARD.

SECONDARY SERVICE DUCT HAS BEEN INSTALLED UNDER THE PHASE 1 ELECTRICAL SERVING CONTRACT TO LOTS 61 THROUGH 66, EXTENDING 1m PAST PROPERTY LINE.



MANHOLE, CATCHBASIN
HYDRANT, WATERVALVE
PROPOSED TELEPHONE & CABLE PIEDestal, EXISTING
PROPOSED DRIVEWAY
PROPOSED COMMUNITY MAIL BOX, EXISTING
EXISTING TREES, PROPOSED, FUTURE

CONSULTANT:
CJDL
Consulting Engineers

MUNICIPALITY OF
CENTRAL ELGIN

Cyrex J. Demeyere Limited
P.O. Box 460, 261 Broadway
Tilsonburg, Ontario, N4G 4H1
Tel: 519-698-1000
866-332-9080
Fax: 519-642-3225
cid@csdinc.com

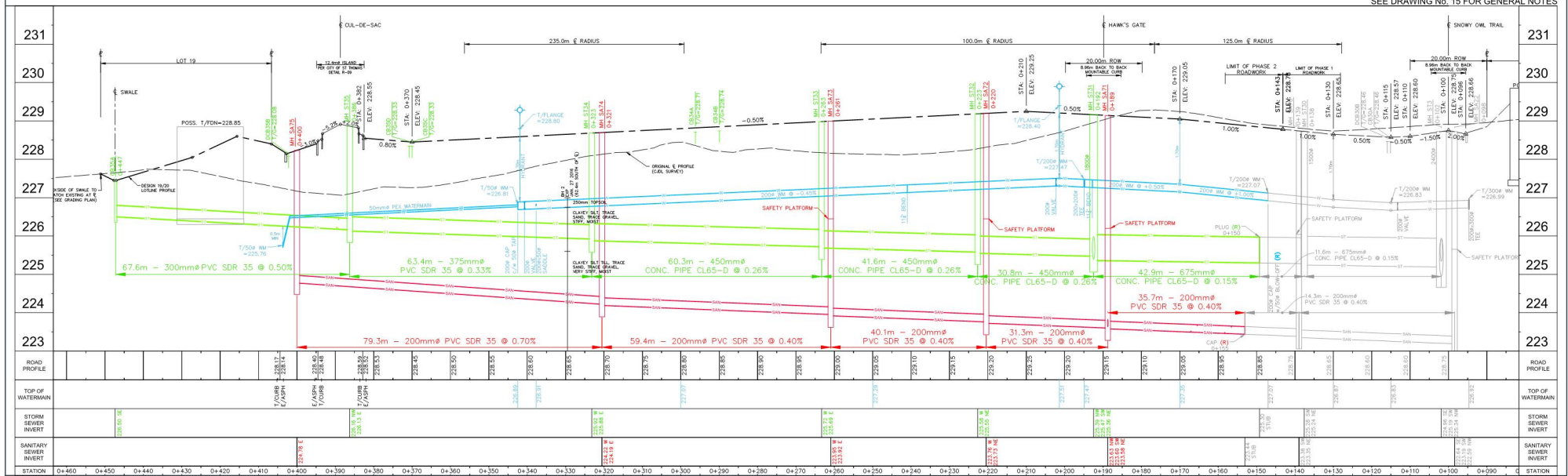
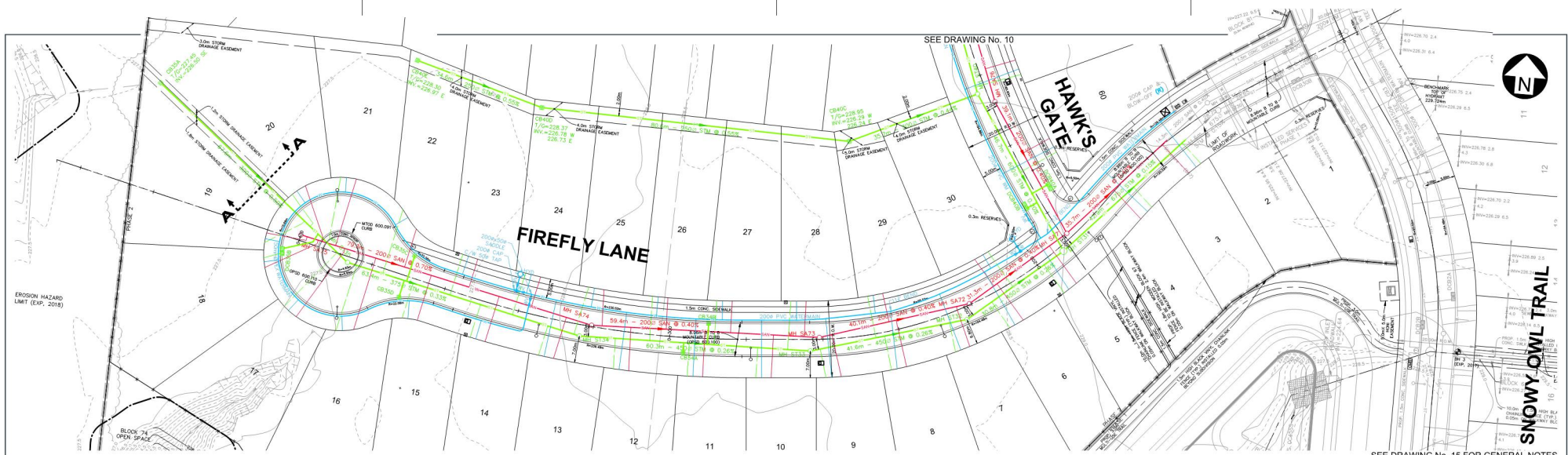
STAMP:



A circular professional engineer stamp from the Province of Ontario. The outer ring contains the text "PROFESSIONAL ENGINEER" at the top and "PROVINCE OF ONTARIO" at the bottom. Inside the ring, the name "D.J. LYLE" and license number "100174772" are printed. A date stamp "12 SEPT 2023" is visible. A signature is written across the center of the stamp.

REVISION			
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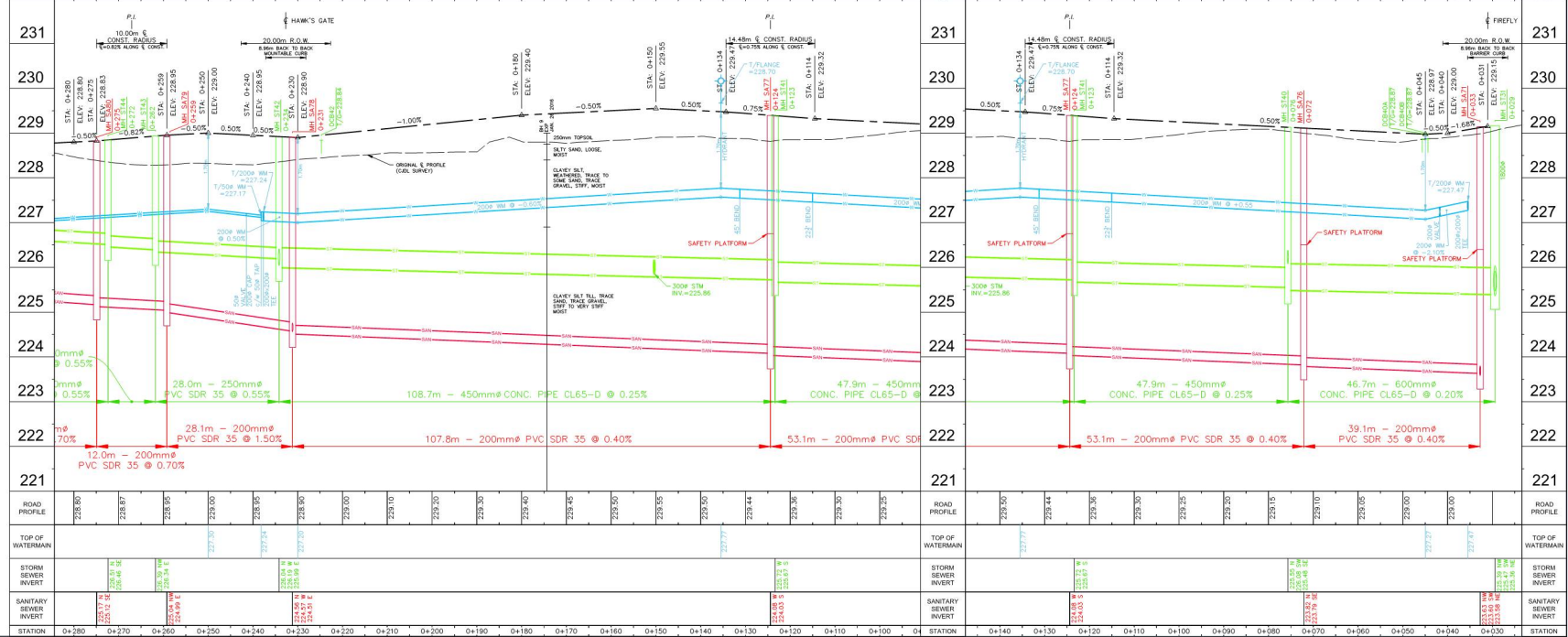
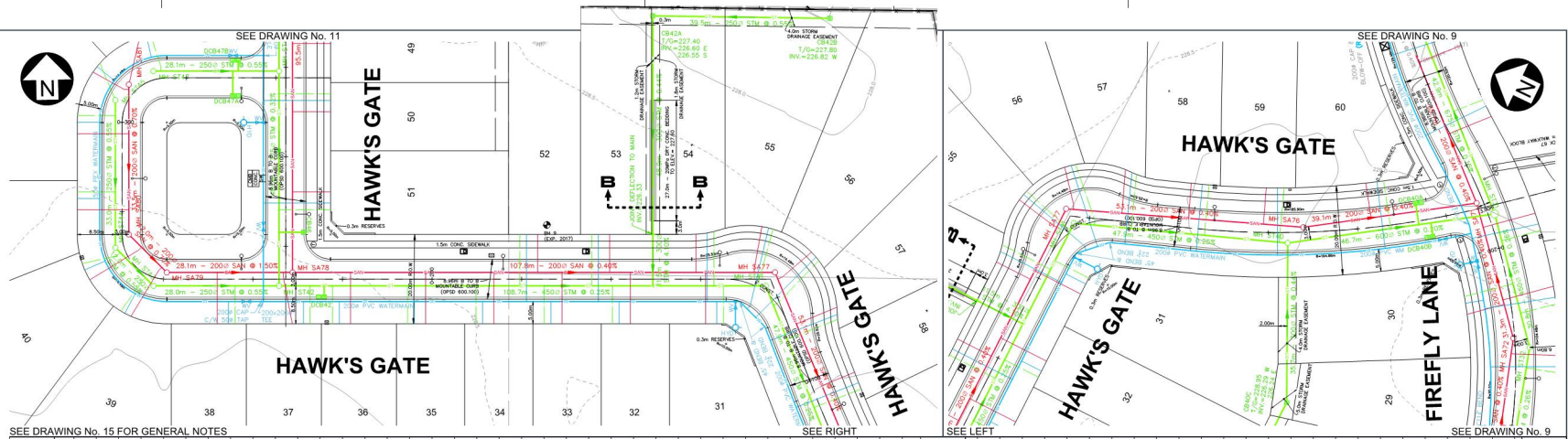
CONTRACT #:	19012	SCALE:	HOR. 1:500
PROJECT NAME:	EAGLE RIDGE SUBDIVISION PHASE 2 - RP 11M-263 DOUG TARRY LIMITED	DRAWING #:	8



LEGEND

<ul style="list-style-type: none"> — SANITARY SEWER — STORM SEWER — WATERMAIN — WATER SERVICE — NATURAL GAS LINE — UNDERGROUND POWER LINE — OVERHEAD POWER LINE — UNDERGROUND FIBRE OPTIC LINE 	<ul style="list-style-type: none"> — UNDERGROUND BELL LINE — UNDERGROUND CABLE LINE — DITCH/WALLE — TOE OF SLOPE, TOP OF BANK — FENCE — EDGE OF GRAVEL — CURB, DROPPED CURB — EDGE OF PAVEMENT 	<ul style="list-style-type: none"> ○ MAINTENANCE HOLE □ CLEAN OUT □ CATCH BASIN □ WATER VALVE □ WATER SERVICE CURB STOP □ HYDRANT 	<ul style="list-style-type: none"> ○ GUY WIRE, UTILITY POLE ○ LIGHT STANDARD ○ TRAFFIC SIGNAL ○ SIGN ○ GAS VALVE ○ UTILITY PEDESTAL 	<ul style="list-style-type: none"> ○ TRANSFORMER ○ SURVEY BARS ○ CONIFEROUS, DECIDUOUS TREE ○ SHRUB ○ EDGE OF BUSH/ROCK LINE ○ GEOTECHNICAL BORE HOLE
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CONSULTANT:
CJDL
 Consulting Engineers
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LEGEND

— 100 —	SANITARY SEWER	— 100 —	UNDERGROUND BELL LINE	— 100 —	MAINTENANCE HOLE	— 100 —	UTILITY POLE	— 100 —	TRANSFORMER
— 100 —	STORM SEWER	— 100 —	UNDERGROUND CABLE LINE	— 100 —	CLEAN OUT	— 100 —	LIGHT STANDARD	— 100 —	SURVEY BARS
— 100 —	WATERMAIN	— 100 —	DITCH/VALE	— 100 —	CATCH BASIN	— 100 —	TRAFFIC SIGNAL	— 100 —	CONFEROUS, DECIDUOUS TREE
— 100 —	WATER SERVICE	— 100 —	TOE OF SLOPE, TOP OF BANK	— 100 —	WATER VALVE	— 100 —	WATER SERVICE CURB STOP	— 100 —	SHRUB
— 100 —	NATURAL GAS LINE	— 100 —	FENCE	— 100 —	EDGE OF GRAVEL	— 100 —	EDGE OF BUSH/DRIP LINE	— 100 —	GEOTECHNICAL SORE HOLE
— 100 —	UNDERGROUND POWER LINE	— 100 —	CURB, DROPPED CURB	— 100 —	EDGE OF PAVEMENT	— 100 —	HYDRANT	— 100 —	
— 100 —	OVERHEAD POWER LINE	— 100 —		— 100 —		— 100 —		— 100 —	
— 100 —	UNDERGROUND FIBRE OPTIC LINE	— 100 —		— 100 —		— 100 —		— 100 —	

CONSULTANT:

CJDL
Consulting Engineers

Stamp

Stamp

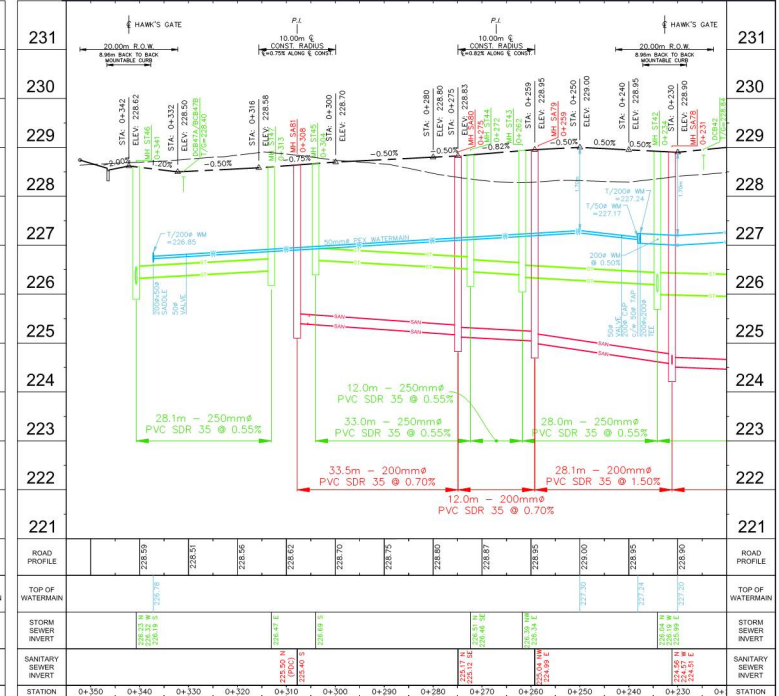
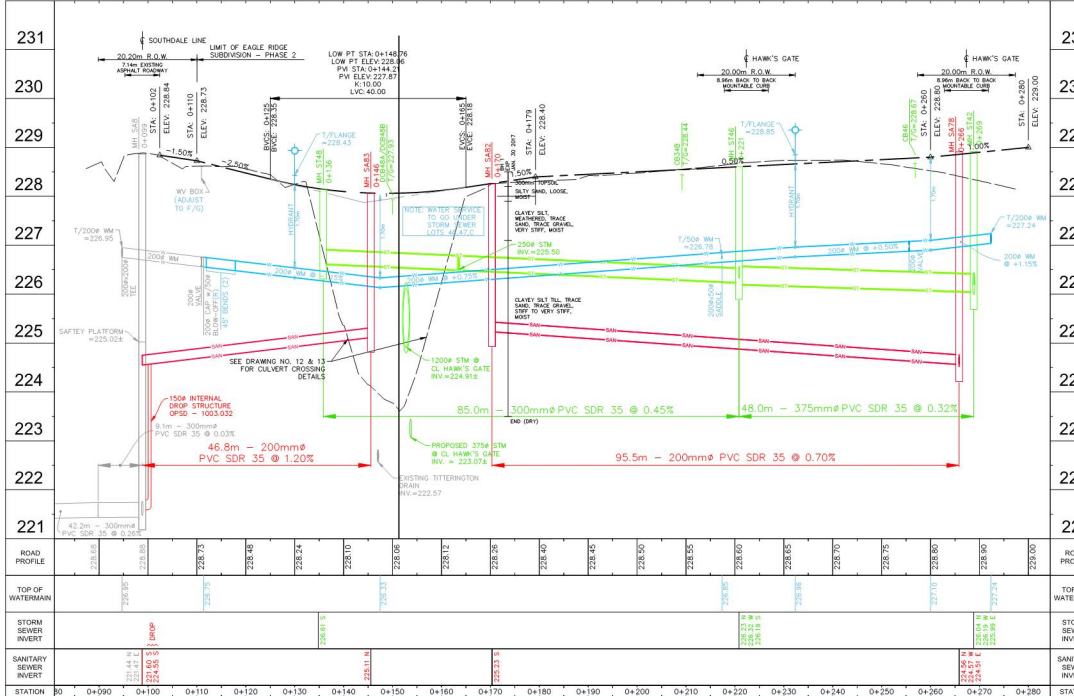
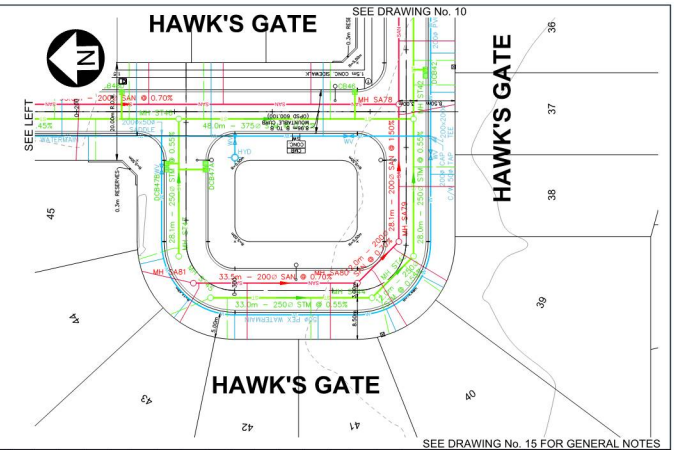
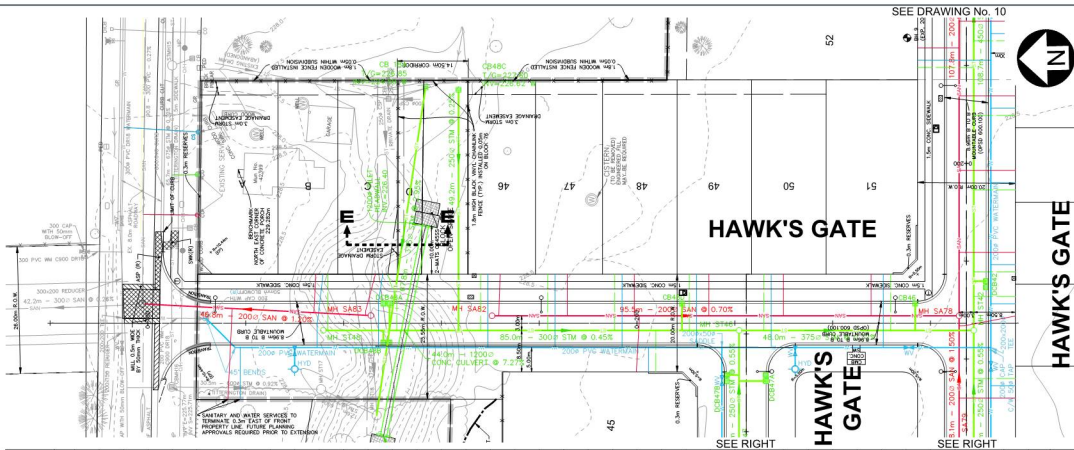


REVISION

#	DESCRIPTION	DATE	BY
4	REISSUED FOR CONSTRUCTION	12 SEPT 2023	D.J.L.
3	ISSUED FOR CONSTRUCTION	28 JAN 2023	D.J.L.
2	ISSUED FOR TENDER	5 DEC 2022	D.J.L.
1	ISSUED FOR RECIP APPLICATION	25 NOV 2022	D.J.L.
#	DESCRIPTION	DATE	BY

HAWK'S GATE (SOUTH)

CONTRACT #:	19012	SCALE:	HOR. 1:500 VER. 1:50
PROJECT NAME:	EAGLE RIDGE SUBDIVISION PHASE 2 - RP 11M-253 DOUG TARRY LIMITED	DRAWING #:	10



LEGEND

— SANITARY SEWER	— UNDERGROUND BELL LINE	— MAINTENANCE HOLE	— GUY WIRE, UTILITY POLE	— TRANSFORMER
— STORM SEWER	— UNDERGROUND CABLE LINE	— CLEAN OUT	— LIGHT STANDARD	— SURVEY BARS
— WATERMAIN	— DITCH/VALE	— CATCH BASIN	— TRAFFIC SIGNAL	— CONFEROUS, DECIDUOUS TREE
— NATURAL GAS LINE	— TOE OF SLOPE, TOP OF BANK	— WATER VALVE	— SIGN	— SHRUB
— UNDERGROUND POWER LINE	— FENCE	— WATER SERVICE CURB STOP	— GAS VALVE	— EDGE OF BUSH/DRIP LINE
— OVERHEAD POWER LINE	— EDGE OF GRAVEL	— HYDRANT	— UTILITY PEDESTAL	— GEOTECHNICAL BORE HOLE
— UNDERGROUND FIBRE OPTIC LINE	— CURB, DROPPED CURB			
	— EDGE OF PAVEMENT			

CONSULTANT:
CJDL
Consulting Engineers



STAMP



REVISION

#	DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	12 SEPT 2023	D.L.
2	ISSUED FOR CONSTRUCTION	26 JAN 2023	D.L.
3	ISSUED FOR CONSTRUCTION	5 DEC 2022	D.L.
4	ISSUED FOR CONSTRUCTION	25 NOV 2022	D.L.
5	ISSUED FOR CONSTRUCTION	12 SEP 2022	D.L.

HAWK'S GATE (NORTH)

CONTRACT #:	19012	SCALE:	HOR. 1:500 VER. 1:50
PROJECT NAME:	EAGLE RIDGE SUBDIVISION PHASE 2 - RP 11M-263 DOUG TARRY LIMITED	DRAWING #:	11

GENERAL NOTES

1. ONCE CONSTRUCTION BEGINS EVERY EFFORT SHOULD BE MADE TO COMPLETE THE WORKS EXPEDITIOUSLY. IF AN UNEXPECTED RUNOFF EVENT IS EXPERIENCED DURING THE CONSTRUCTION, SAFETY, ENVIRONMENTAL/SEDIMENT CONTROL AND CONSTRUCTION INTEGRITY MUST BE REGARDED. DECISIONS IN THIS REGARD, ARE AT THE DISCRETION OF THE SUPERVISING ENGINEER.
2. SEDIMENT LOADING MUST BE MINIMIZED AT ALL TIMES BY PLACING SILT FENCES (WITH STRAW BALES, IF REQUIRED) ADJACENT TO CROSSING EMBANKMENT, ADJACENT TO RAINFALL CHANNEL, AND AROUND WORK SITE AS DIRECTED ON SITE. SEDIMENT CONTROLS MUST BE CHECKED, CLEANED AND MAINTAINED BY CONTRACTOR AS DIRECTED UNTIL PROJECT IS ACCEPTED. THE CONTRACTOR SHALL RETURN TO REMOVE THE SILT FENCES AND/OR STRAW BALES UPON ESTABLISHMENT OF GROWTH AT NO EXTRA COST. ANY ACCUMULATED SILT SHALL BE REMOVED AT REGULAR INTERVALS AT NO ADDITIONAL COST TO THIS PROJECT.
3. STUMPS SHALL BE REMOVED AND DISPOSED OFF-SITE. CONTRACTOR TO STRIP TOPSOIL FROM AREAS TO RECEIVE CLAY FILL ON ROADWAY AREA AND FROM CULVERT AND STREAM REALIGNMENT AREAS. NOTE: TOPSOIL TO BE RE-USED AS FILL. ROOT INFESTED TOPSOIL, INCLUDING SMALL STUMPS AND MIXED FILL SHALL BE DISPOSED OF OFFSITE. BALANCE OF TOPSOIL TO BE USED FOR SLOPE RESTORATION/FILL.
4. PRECAST 1200mmØ CONCRETE CULVERT IS DIMENSIONED AND SHALL BE AS MANUFACTURED BY M. CON PIPE & PRODUCTS INC. 1-866-537-3338 OR APPROVED EQUAL IN ACCORDANCE WITH THE LATEST EDITION OF THE CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC) CAN/CSA-58 AND SEALED BY A LICENSED PROFESSIONAL ENGINEER.
5. CULVERT SECTION D-D VIEW IS LOCATED AT THE CENTER LINE OF THE PROPOSED CULVERT, PERPENDICULAR TO HAWK'S GATE RIGHT-OF-WAY. THEREFORE CULVERT IS PROJECTED ONTO SECTION D-D, REFER TO DRAWING No. 12 FOR PLAN DIMENSIONS.
6. ALL POURED CONCRETE MUST BE FORMED AND SHALL BE IN ACCORDANCE WITH SPECIFICATIONS. ALL EXPOSED CORNERS SHALL BE CHAMFERED 20 mm.
7. REINFORCING STEEL SHALL BE EPOXY COATED GRADE 400, CSA TSD, 630-12. BENDING AND FABRICATION TO BE IN ACCORDANCE WITH A.C.I. SPECIFICATIONS. CLEAR COVER ON REINFORCING STEEL SHALL BE 75 mm.
8. ALL RIP-RIP (OPSS 1004) C/W GEOTEXTILE UNDERLAY IN ACCORDANCE WITH OPSS 810.010 PLACED TO LIMITS SHOWN ON PLAN AND SECTIONS SEE DWG No. 3 & 12.
9. COMPACTION, LIFTS AND FILL SHAPING OF ROADWAY/RAINFALL FILL SHALL BE PER GENERAL NOTES. PLACE CLAY FILL AND TOPSOIL CONCURRENTLY TO MAINTAIN VERTICAL KNOT INTERFACE.
10. ALL ABUTTING LIMITS DISTURBED SHALL RECEIVE 150 mm TOPSOIL AND SEED. SEED EMBANKMENT SIDE SLOPES. CONTRACTOR SHALL RETURN TO CORRECT ANY EROSION AND SHALL BE RESPONSIBLE FOR MAINTENANCE UNTIL GROWTH IS ESTABLISHED.
11. A MAXIMUM GAP OF 150mm WILL BE ACCEPTABLE IN JOINTS BETWEEN CULVERT SECTIONS WITHOUT GROUT INSIDE IF CULVERT. SECTIONS SHOULD BE PULLED TOGETHER WITH A COME-ALONG TO MINIMIZE JOINT SPACING. JOINTS EXCEEDING 150mm SHALL BE GROUTED ON INSIDE OF CULVERT.

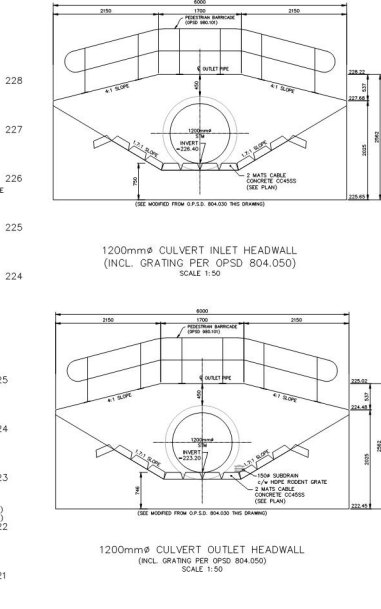
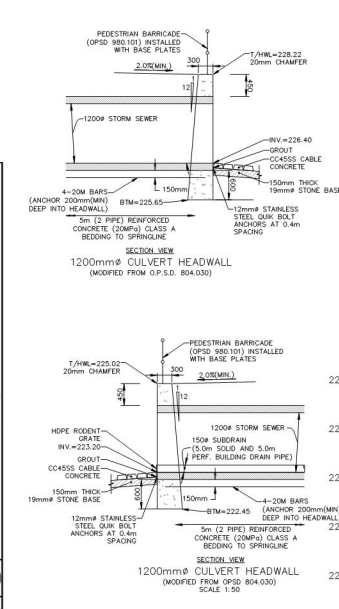
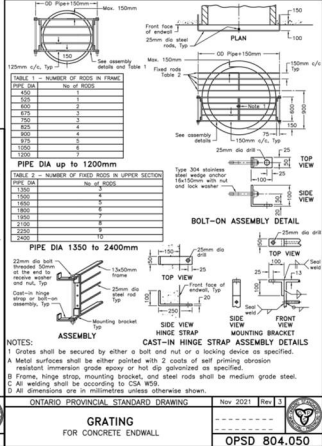
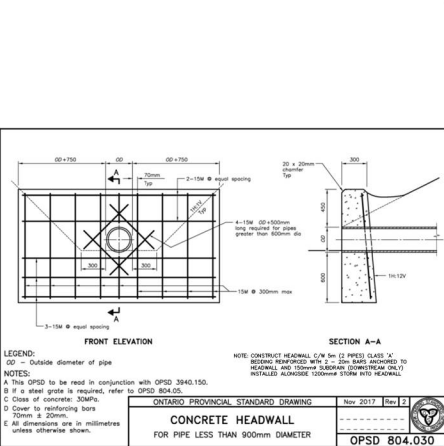
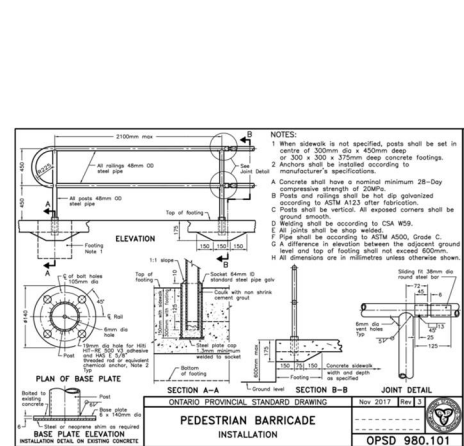
SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER IN ACCORDANCE WITH TABLE 1 (THIS SHEET) FOR APPROVAL.

SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR FOR DIMENSIONAL CORRELATION WITH THE DRAWINGS AND FIELD CONDITIONS PRIOR TO SUBMITTING TO THE ENGINEER.

TABLE 1: SHOP DRAWING SUBMITTALS

ITEM	REQUIRED SUBMITTAL	PROFESSIONAL ENGINEER SEAL REQUIRED
CONCRETE MIX DESIGNS	YES	NO
GRANULAR GRADATION	YES	NO
MISC. METALS (INCLUDING PEDESTRIAN BARRICADE)	YES	NO
PRECAST HEADWALLS	YES	YES



LEGEND

— SANITARY SEWER	— UNDERGROUND BELL LINE	— MAINTENANCE HOLE	— GUY WIRE, UTILITY POLE
— STORM SEWER	— UNDERGROUND CABLE LINE	— CLEAN OUT	— LIGHT STANDARD
— WATERMAIN	— DITCH/VALE	— CATCH BASIN	— TRAFFIC SIGNAL
— WATER SERVICE	— TOE OF SLOPE, TOP OF BANK	— WATER VALVE	— SIGN
— NATURAL GAS LINE	— FENCE	— WATER SERVICE CURB STOP	— GAS VALVE
— UNDERGROUND POWER LINE	— EDGE OF GRAVEL	— CURB, DROPPED CURB	— UTILITY PEDESTAL
— OVERHEAD POWER LINE	— CURB, DROPPED CURB	— HYDRANT	
— UNDERGROUND FIBRE OPTIC LINE	— EDGE OF PAVEMENT		

CONSULTANT: **CJDL** Consulting Engineers

Stamp: PROFESSIONAL ENGINEER, O.J. LYLE, 100174772, SEP 2022

REVISION		
#	DESCRIPTION	DATE
1	ISSUED FOR CONSTRUCTION	12 SEPT 2023
2	ISSUED FOR TENDER	5 DEC 2022
3	ISSUED FOR MECP APPLICATION	25 NOV 2022
4	ISSUED FOR CONSTRUCTION	28 JAN 2023

HAWK'S GATE CULVERT SECTIONS & DETAILS

CONTRACT #:	19012	SCALE:	AS SHOWN
PROJECT NAME:	EAGLE RIDGE SUBDIVISION PHASE 2 - RP 11M-263 DOUG TARRY LIMITED	DRAWING #:	13

GEOTECHNICAL INVESTIGATION

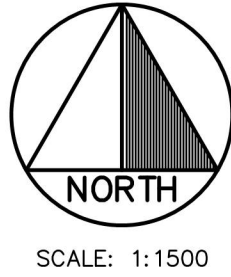
KEMSLEY FARM SUBDIVISION
DOUG TARRY LIMITED

ALL OF PART 1 11R-3198
AND
PART OF LOT 2 11M-253
GEOGRAPHIC TOWNSHIP OF YARMOUTH
MUNICIPALITY OF CENTRAL ELGIN

base plan prepared by
CJDL
Consulting Engineers

Civil 3, Demore Limited
P.O. Box 480, 261 Broadway
Tillsonburg, Ontario, N4G 4H5
Tel: 519-688-1000
866-302-9886
Fax: 519-642-2235
cjd@cjdl.com

Job No. 1312 22 FEBRUARY 2017
REV. 13 DECEMBER 2017
REV. 2 13 SEPT 2023



LEGEND

- SUBDIVISION BOUNDARY LIMIT
- EXISTING GROUND CONTOURS (2017), CJDL
- EXISTING WELL
- BOREHOLES (2017), EXP
- TOP OF BANK
- PROPOSED TOP OF BANK
- DRIPLINE (2017), CJDL
- DITCH
- EROSION HAZARD LIMIT
- KCCA REGULATION LIMIT
- LIMIT OF FILL
- SECTION LINE (REFER TO ENCLOSURE No. 2)



EXP .ENCLOSURE No. 2
REF. No: ----

GEOTECHNICAL INVESTIGATION

KEMSLEY FARM SUBDIVISION
DOUG TARRY LIMITED

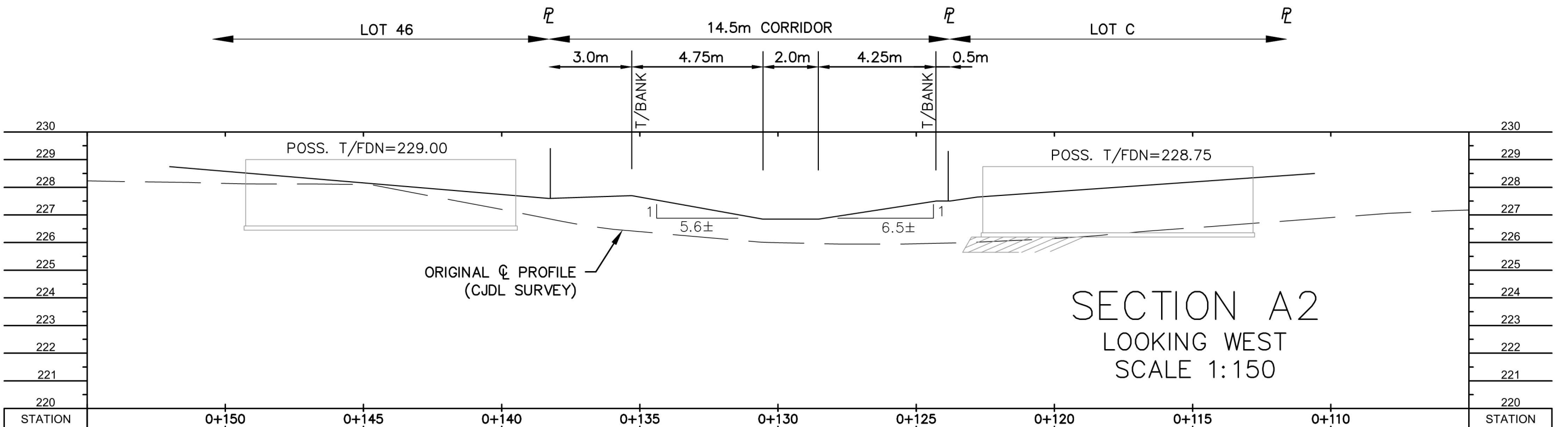
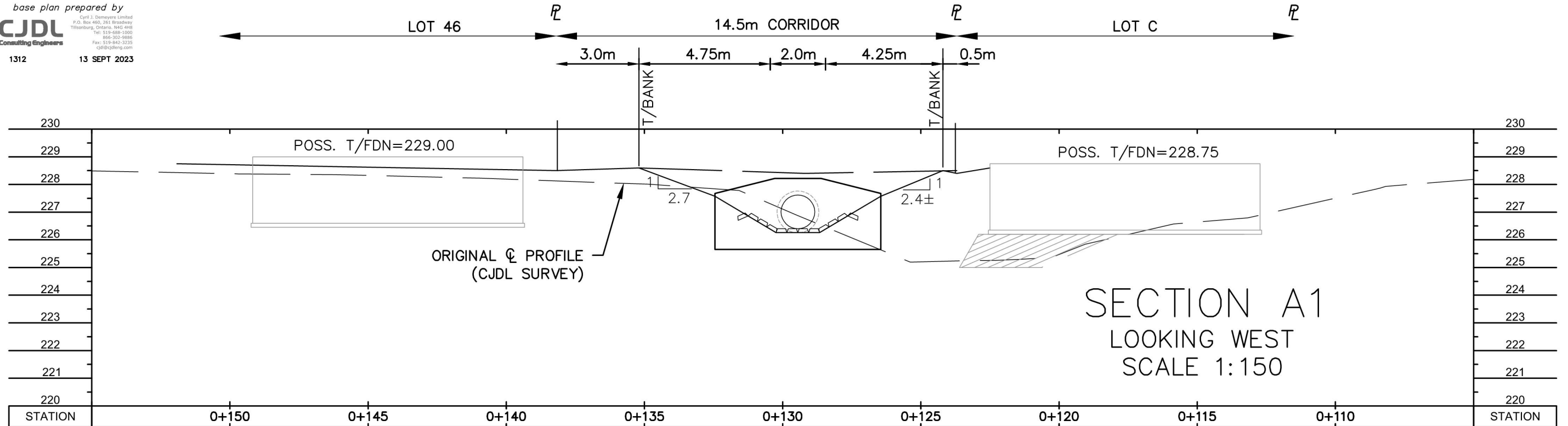
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base plan prepared by

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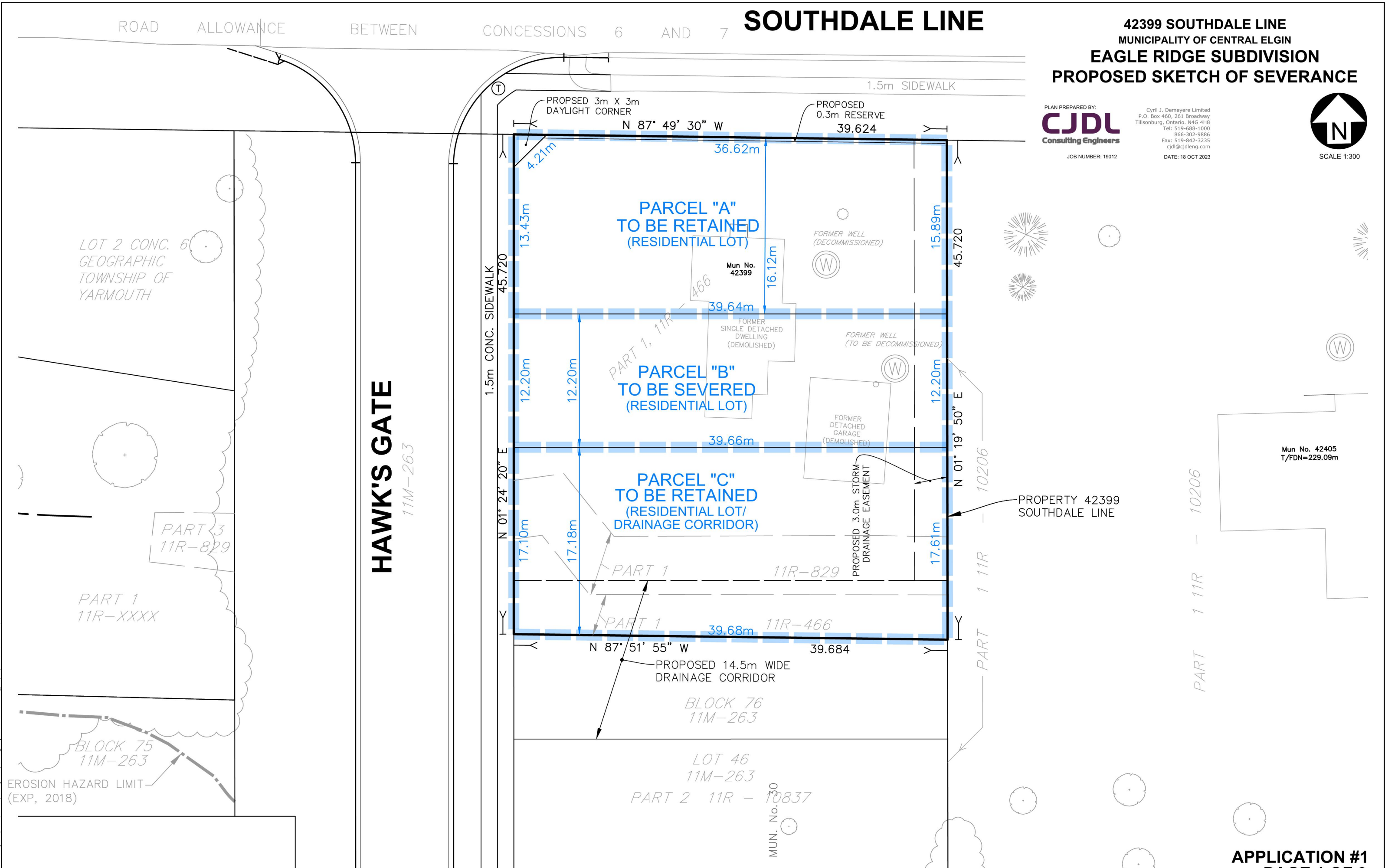
Job No. 1312 13 SEPT 2023



JOB NUMBER: 19012



SCALE 1:300



SOUTHDALE LINE

42399 SOUTHDALE LINE
MUNICIPALITY OF CENTRAL ELGIN
EAGLE RIDGE SUBDIVISION
PROPOSED SKETCH OF SEVERANCE

PLAN PREPARED BY:
CJDL
Consulting Engineers

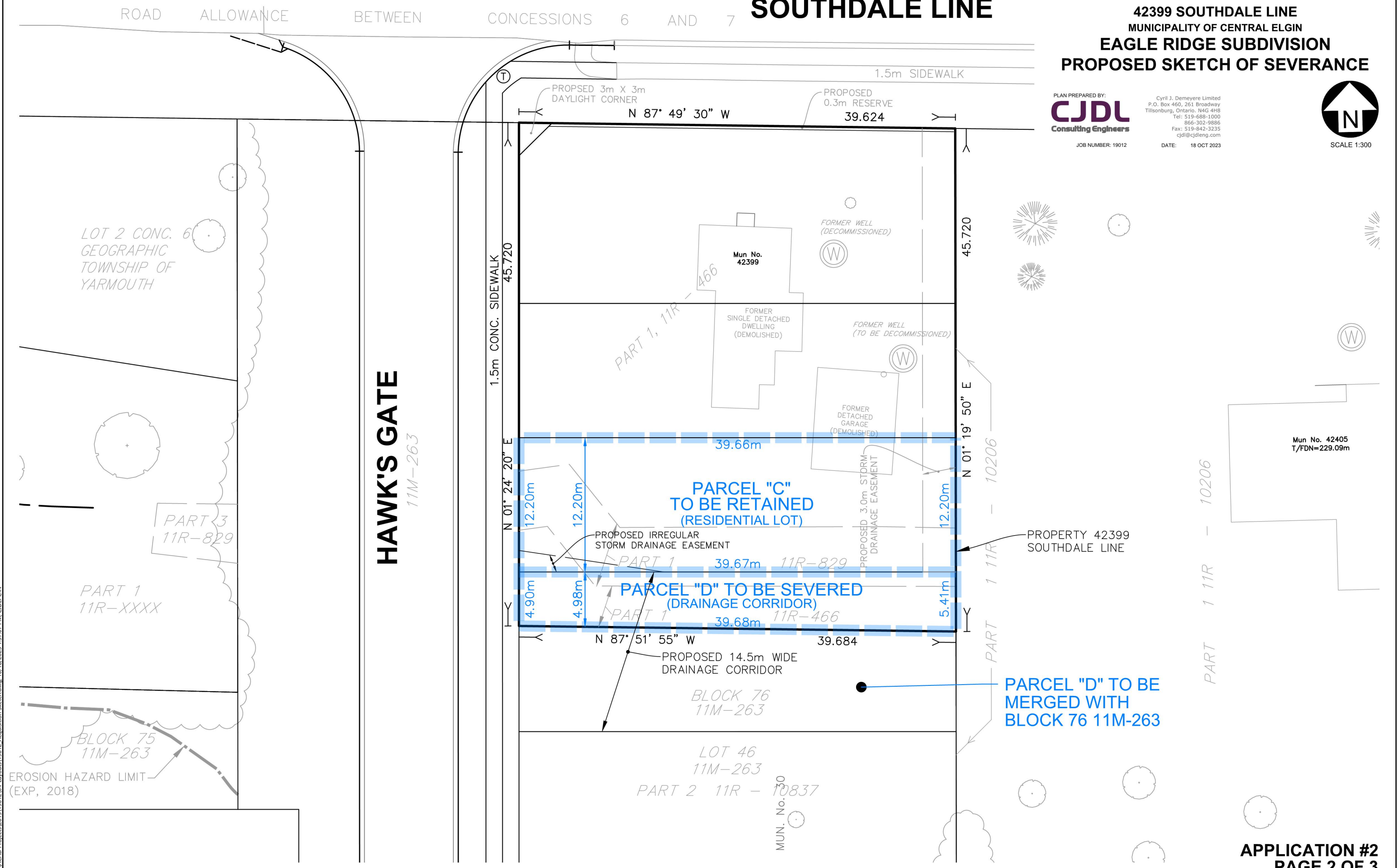
JOB NUMBER: 19012

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DATE: 18 OCT 2023



SCALE 1:300



SOUTHDALE LINE

42399 SOUTHDALE LINE
MUNICIPALITY OF CENTRAL ELGIN
EAGLE RIDGE SUBDIVISION
PROPOSED SKETCH OF SEVERANCE

PLAN PREPARED BY:
CJDL
Consulting Engineers

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JOB NUMBER: 19012

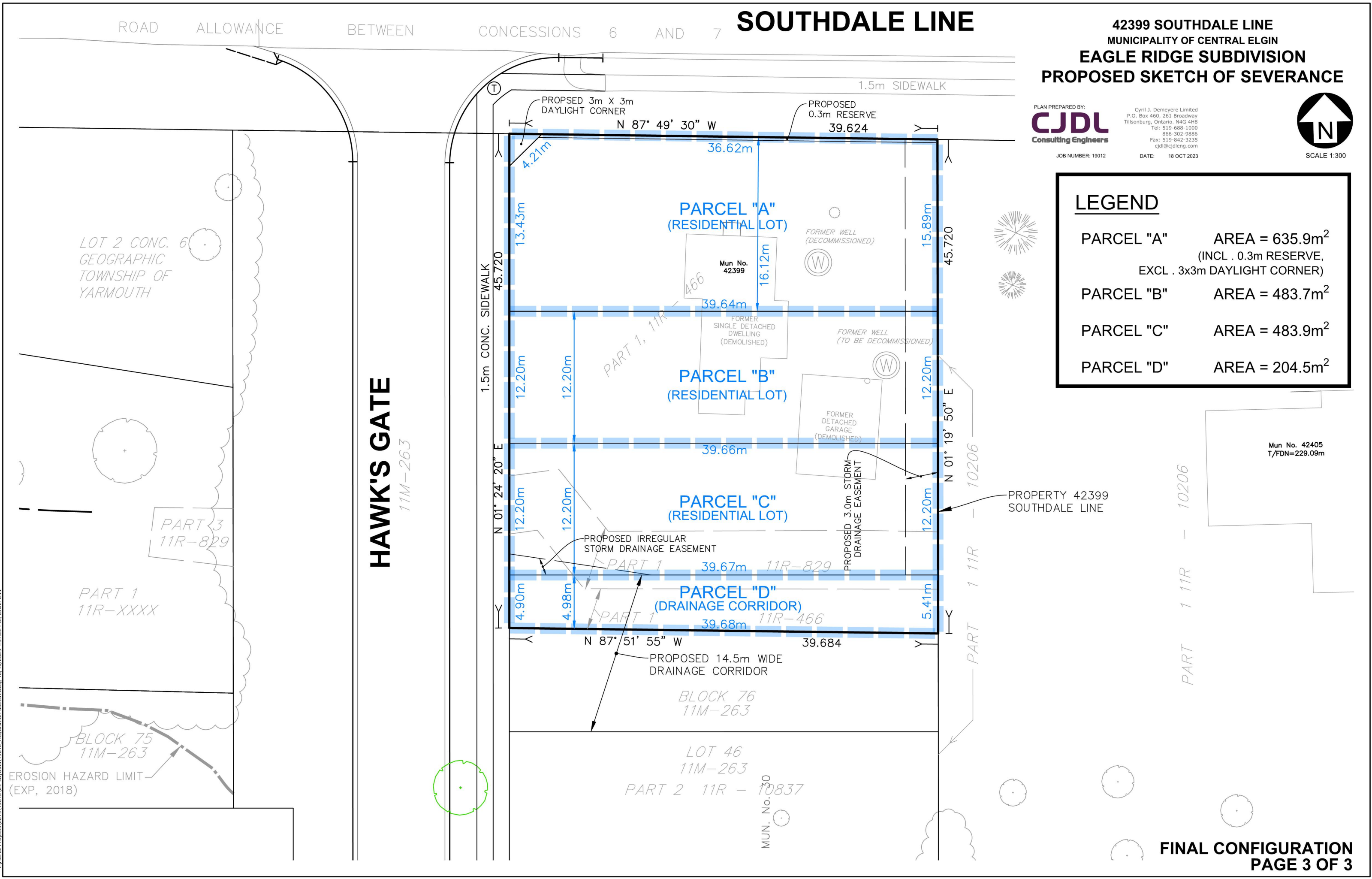
DATE: 18 OCT 2023



SCALE 1:300

LEGEND

PARCEL "A"	AREA = 635.9m ² (INCL . 0.3m RESERVE, EXCL . 3x3m DAYLIGHT CORNER)
PARCEL "B"	AREA = 483.7m ²
PARCEL "C"	AREA = 483.9m ²
PARCEL "D"	AREA = 204.5m ²





IN-PLACE DENSITY MEASUREMENTS

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Project No.: LON-23002025-A0 100

Report No.: 2023-8

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 11, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Additional Site Information:

Compaction Equipment: Sheepsfoot roller

Weather: Clear

Location of Testing: Road fill near MH ST18, Hawks Gate

Temperature: 20 °C

Lift Thickness: 300 mm

Type of Material Tested	Material / Soil Description	Optimum Moisture Content (%)	Reference Density (kg/m ³) <small>Opt. / Stone Corr.</small>		Source of Reference Density	Specified Compaction Level (%)	Test Results (pass/fail)
Engineered Fill	Silty clay	15.0	1870	-	Field Proctor	98	Pass

Comments: Nuclear results are considered as approximate measurements of insitu density conditions at the test elevation and location indicated. Results based on estimated reference densities are subject to change after actual laboratory density values are obtained. Asphalt densities by nuclear gauge may be higher or lower than the actual density determined by asphalt cores.

☒ **TEST RESULTS GENERALLY MEET SPECIFICATION**

☐ **VARIABLE TEST RESULTS - AT & BELOW SPECIFICATION**

☐ Preliminary Report left on site with

☐ **TEST RESULTS GENERALLY BELOW SPECIFICATION**

☐ Sample(s) Obtained for Laboratory Analysis

☐ Soil Moisture Content Requires Adjustments

☐ Additional Compaction Recommended

☐ Asphalt Flushing/Bleeding Noted

☐ Asphalt Surface Segregation/Cracking Noted

☐ Contact EXP for Retesting

Number of Samples:

Additional Notes:

Report Distribution:

2561603 Ontario Ltd. - Zachary Rachar
CJDL - Jeff Vickers
CJDL - Cameron Cluett
CJDL - Deren Lyle

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Site Inspector:

J. Guenther

D. Speller, P. Eng.

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Project No.: LON-23002025-A0 100

Report No.: 2023-8

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 11, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Test No.	Test Location and Depth	Material Description	Test Results	Comments
1	5m east of ST 18 Approximate elevation 227.90m	Silty clay	Pass	
2	10m east of ST 18 Approximate elevation 227.90m	Silty clay	Pass	

Compaction Required:	Silty clay	98	% SPMDD
Comments			

Test locations referenced from specified manhole
Test elevations reference: Geodetic



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Project No.: LON-23002025-A0 100

Report No.: 2023-9

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 12, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Additional Site Information:

Compaction Equipment: Sheepsfoot roller

Weather: Cloudy

Location of Testing: Road fill near MH ST18, Hawks Gate

Temperature: 20 °C

Lift Thickness: 300 mm

Type of Material Tested	Material / Soil Description	Optimum Moisture Content (%)	Reference Density (kg/m ³) <small>Opt. / Stone Corr.</small>		Source of Reference Density	Specified Compaction Level (%)	Test Results (pass/fail)
Engineered Fill	Silty clay	15.0	1870	-	Field Proctor	98	Pass

Comments: Nuclear results are considered as approximate measurements of insitu density conditions at the test elevation and location indicated. Results based on estimated reference densities are subject to change after actual laboratory density values are obtained. Asphalt densities by nuclear gauge may be higher or lower than the actual density determined by asphalt cores.

☒ **TEST RESULTS GENERALLY MEET SPECIFICATION**

☐ **VARIABLE TEST RESULTS - AT & BELOW SPECIFICATION**

☐ Preliminary Report left on site with

☐ **TEST RESULTS GENERALLY BELOW SPECIFICATION**

☐ Sample(s) Obtained for Laboratory Analysis

☐ Soil Moisture Content Requires Adjustments

☐ Additional Compaction Recommended

☐ Asphalt Flushing/Bleeding Noted

☐ Asphalt Surface Segregation/Cracking Noted

☐ Contact EXP for Retesting

Number of Samples:

Additional Notes:

Report Distribution:

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CJDL - Cameron Cluett
CJDL - Deren Lyle

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Site Inspector:

J. Guenther

D. Speller, P. Eng.

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Project No.: LON-23002025-A0 100

Report No.: 2023-9

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 12, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Test No.	Test Location and Depth	Material Description	Test Results	Comments
1	5m east of ST 18 Approximate elevation 228.90m	Silty clay	Pass	
2	15m east of ST 18 Approximate elevation 229.00m	Silty clay	Pass	
3	25m east of ST 18 Approximate elevation 229.00m	Silty clay	Pass	
4	35m east of ST 18 Approximate elevation 229.3m	Silty clay	Pass	
5	45m east of ST 18 Approximate elevation 229.30m	Silty clay	Pass	

Compaction Required:	Silty clay	98	% SPMDD

Comments

Test locations referenced from specified manhole

Test elevations reference: Geodetic



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Project No.: LON-23002025-A0 100

Report No.: 2023-13

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 13, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Additional Site Information:

Compaction Equipment: Sheepsfoot roller, hoe pack.

Weather: Sunny

Location of Testing: SA 83 - Existing SAN on Southdale Line.

Temperature: 19 °C

Lift Thickness: 300 mm

Type of Material Tested	Material / Soil Description	Optimum Moisture Content (%)	Reference Density (kg/m ³) <small>Opt. / Stone Corr.</small>	Source of Reference Density	Specified Compaction Level (%)	Test Results (pass/fail)
Trench Backfill	Silty Clay	13.0	1885	Laboratory	95	Pass
Road Subbase	Granular B	6.1	2290	Laboratory	100	Pass

Comments: Nuclear results are considered as approximate measurements of insitu density conditions at the test elevation and location indicated. Results based on estimated reference densities are subject to change after actual laboratory density values are obtained. Asphalt densities by nuclear gauge may be higher or lower than the actual density determined by asphalt cores.

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☐ Sample(s) Obtained for Laboratory Analysis

☐ Soil Moisture Content Requires Adjustments

☐ Additional Compaction Recommended

☐ Asphalt Flushing/Bleeding Noted

☐ Asphalt Surface Segregation/Cracking Noted

☐ Contact EXP for Retesting

Number of Samples:

Additional Notes:

Report Distribution:

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E. McWhirter

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Project No.: LON-23002025-A0 100

Report No.: 2023-13

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 13, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Test No.	Test Location and Depth	Material Description	Test Results	Comments
1	4 m south, 1 m west of SA 83 2 m below top of subgrade	Silty Clay	Pass	
2	3 m south, 1 m east of SA 83 2 m below top of subgrade	Silty Clay	Pass	
3	8 m north of SA 83 1.5 m below top of subgrade	Silty Clay	Pass	
4	15 m north of SA 83 1.0 m below top of subgrade	Silty Clay	Pass	
5	Southdale Line, westbound lane 2 m south of existing SAN. Top of granular base.	Granular B	Pass	

Compaction Required:	Silty Clay	95	% SPMDD
	Granular B	100	% SPMDD
Comments			

Slight deflection, no rutting in silty clay material. Area south of SA 83 was repacked and retested.



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Project No.: LON-23002025-A0 100

Report No.: 2023-10

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 19, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Additional Site Information:

Compaction Equipment: Sheepsfoot roller

Weather: Clear

Location of Testing: Road fill near SAMH 83, Hawks Gate

Temperature: 20 °C

Lift Thickness: 300 mm

Type of Material Tested	Material / Soil Description	Optimum Moisture Content (%)	Reference Density (kg/m ³) <small>Opt. / Stone Corr.</small>		Source of Reference Density	Specified Compaction Level (%)	Test Results (pass/fail)
Road Fill	Silty Clay	13.0	1885	1888	Laboratory	98	Pass

Comments: Nuclear results are considered as approximate measurements of insitu density conditions at the test elevation and location indicated. Results based on estimated reference densities are subject to change after actual laboratory density values are obtained. Asphalt densities by nuclear gauge may be higher or lower than the actual density determined by asphalt cores.

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☐ Preliminary Report left on site with

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☐ Soil Moisture Content Requires Adjustments

☐ Additional Compaction Recommended

☐ Asphalt Flushing/Bleeding Noted

☐ Asphalt Surface Segregation/Cracking Noted

☐ Contact EXP for Retesting

Number of Samples:

Additional Notes:

Report Distribution:

2561603 Ontario Ltd. - Zachary Rachar
CJDL - Jeff Vickers
CJDL - Cameron Cluett
CJDL - Deren Lyle

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Site Inspector:

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fax: 519.332.5662

Project No.: LON-23002025-A0 100

Report No.: 2023-10

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 19, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Test No.	Test Location and Depth	Material Description	Test Results	Comments
1	8 m S, 2 m W 0.6 m below subgrade	Silty Clay	Pass	
2	8 m S, 2 m E 0.6 m below subgrade	Silty Clay	Pass	
3	8 m S, 6 m E 0.6 m below subgrade	Silty Clay	Pass	
4	8 m S, 2 m W At subgrade	Silty Clay	Pass	
5	8 m S, 3 m E At subgrade	Silty Clay	Pass	
6	8 m S, 6 m E At subgrade	Silty Clay	Pass	

Compaction Required:	Silty Clay	98	% SPMDD
Comments			

All tests referenced from SAMH 83.



SITE VISIT REPORT

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Project No.: LON-23002025-A0 **Project Name:** Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

2561603 Ontario Ltd. - Zachary Rachar c/o Cyril J. Demeyere Limited 261 Broadway Street PO Box 460 Tillsonburg, ON N4G 4H8	Site: Southdale Line Central Elgin, ON	
	Report Number:	2023-7
	Date of Visit:	Sep 20, 2023
	Time of Visit:	AM
	Weather:	Overcast 13 °C

Subgrade Examination - Lot C, Hawks Gate

As requested, EXP visited the above site to observe the subgrade soil conditions at the above-mentioned location, prior to engineer fill placement.

EXP observed that the contractor had excavated the previous fill material and removed the previous drain. The exposed soil was found to be a native grey silty clay till observed at approximately 223.06 m. The north bank of excavation is native and does not require expanding the excavation in that direction. The excavation was expanded on all other sides to accommodate suitable engineered fill geometry. Fill material will be imported and will be a fine sand.

As determined by hand probing in visual observation, the area is considered suitable for the placement of engineered fill.

EXP will return to monitor progress.

Technician: J. Guenther

Distribution:

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CJDL - Cameron Cluett
CJDL - Deren Lyle

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Project No.: LON-23002025-A0 100

Report No.: 2023-12

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 20, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Additional Site Information:

Compaction Equipment: Sheepsfoot roller

Weather: Clear

Location of Testing: Lot C, Hawks Gate

Temperature: 20 °C

Lift Thickness: 300 mm

Type of Material Tested	Material / Soil Description	Optimum Moisture Content (%)	Reference Density (kg/m ³) <small>Opt. / Stone Corr.</small>	Source of Reference Density	Specified Compaction Level (%)	Test Results (pass/fail)
Engineered Fill	Silty fine sand	14.0	1780 -	Field Proctor	100	Pass

Comments: Nuclear results are considered as approximate measurements of insitu density conditions at the test elevation and location indicated. Results based on estimated reference densities are subject to change after actual laboratory density values are obtained. Asphalt densities by nuclear gauge may be higher or lower than the actual density determined by asphalt cores.

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☐ Preliminary Report left on site with

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☐ Soil Moisture Content Requires Adjustments

☐ Additional Compaction Recommended

☐ Asphalt Flushing/Bleeding Noted

☐ Asphalt Surface Segregation/Cracking Noted

☐ Contact EXP for Retesting

Number of Samples: 1

Additional Notes:

Report Distribution:

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Site Inspector:

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Project No.: LON-23002025-A0 100

Report No.: 2023-12

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 20, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Test No.	Test Location and Depth	Material Description	Test Results	Comments
1	Front 1.0m below	Silty fine sand	Pass	
2	Rear 0.7m below	Silty fine sand	Pass	
3	Front at top of engineered fill	Silty fine sand	Pass	
4	Centre 0.3m below	Silty fine sand	Pass	

Compaction Required:	Silty fine sand	100	% SPMDD
Comments			

Test locations referenced from specified area of building footprint

Test elevations referenced from top of engineered fill (150mm above proposed underside of footing)



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Project No.: LON-23002025-A0 100

Report No.: 2023-11

Project Name: Eagle Ridge Subdivision - Phase 2, Central Elgin, ON

Date Tested: Sep 21, 2023

Project Location: Southdale Line
Central Elgin, ON

Contractor: Titan

Additional Site Information:

Compaction Equipment: Sheepsfoot roller

Weather: Clear

Location of Testing: Road fill near MH SA83, Hawks Gate

Temperature: 20 °C

Lift Thickness: 300 mm

Type of Material Tested	Material / Soil Description	Optimum Moisture Content (%)	Reference Density (kg/m ³) <small>Opt. / Stone Corr.</small>		Source of Reference Density	Specified Compaction Level (%)	Test Results (pass/fail)
Road Base	Silty clay	13.0	1885	1888	Laboratory	98	Pass

Comments: Nuclear results are considered as approximate measurements of insitu density conditions at the test elevation and location indicated. Results based on estimated reference densities are subject to change after actual laboratory density values are obtained. Asphalt densities by nuclear gauge may be higher or lower than the actual density determined by asphalt cores.

☒ **TEST RESULTS GENERALLY MEET SPECIFICATION**

☐ **VARIABLE TEST RESULTS - AT & BELOW SPECIFICATION**

☐ Preliminary Report left on site with

☐ **TEST RESULTS GENERALLY BELOW SPECIFICATION**

☐ Sample(s) Obtained for Laboratory Analysis

☐ Soil Moisture Content Requires Adjustments

☐ Additional Compaction Recommended

☐ Asphalt Flushing/Bleeding Noted

☐ Asphalt Surface Segregation/Cracking Noted

☐ Contact EXP for Retesting

Number of Samples:

Additional Notes:

Report Distribution:

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IN-PLACE DENSITY MEASUREMENTS

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Test No.	Test Location and Depth	Material Description	Test Results	Comments
1	3m west, 1m south at subgrade	Silty clay	Pass	
2	4m west, 3m north at subgrade	Silty clay	Pass	
3	4m west, 6m north at subgrade	Silty clay	Pass	

Compaction Required:	Silty clay	98	% SPMDD
Comments			

Test locations referenced from specified manholes.
Test elevations referenced from subgrade.