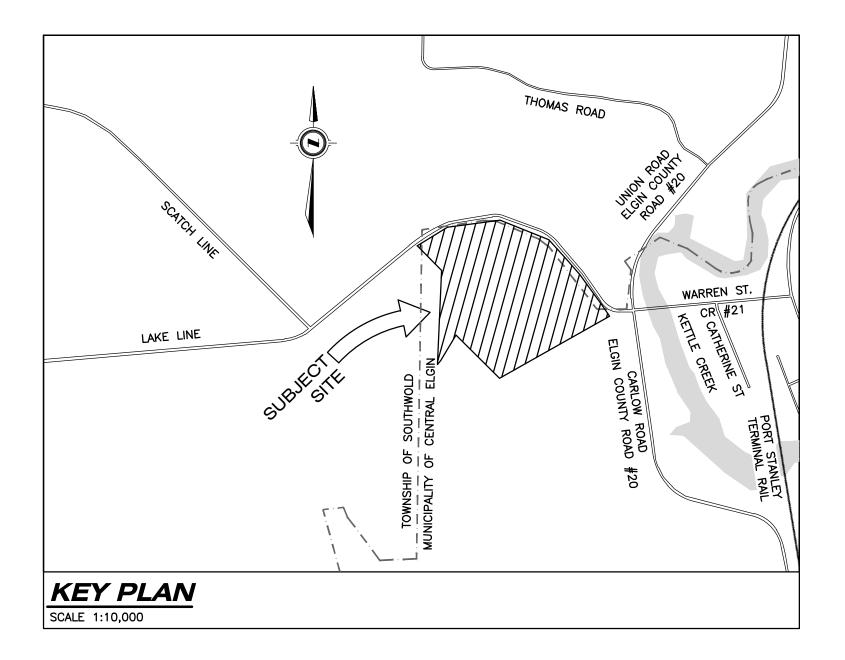
# KETTLE CREEK SUBDIVISION 37719 LAKE LINE PORT STANLEY, ONTARIO





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			LIST OF DRAWINGS		
1	NOTES, LEGEND, AND DETAILS	10A	SUBDIVISION GRADING PLAN - SOUTHEAST	14	STREET 'B' – PLAN & PROFILE
2	SUBDIVISION PLAN	10B	SUBDIVISION GRADING PLAN - NORTHWEST	15A	EASEMENT/EXTENSION/RECONSTRUCTION - STA 3+000 TO 4+180 PLAN & PROFILE
3	EXISTING CONDITIONS, REMOVALS AND SEDIMENT & EROSION CONTROL PLAN	10C	SUBDIVISION GRADING PLAN - SOUTHWEST	15B	EASEMENT/EXTENSION/RECONSTRUCTION - STA 4+180 TO 4+409 PLAN & PROFILE
4	MASTER SERVICING PLAN	10D	SUBDIVISION GRADING PLAN - SWM POND GRADING PLAN	15C	EASEMENT/EXTENSION/RECONSTRUCTION - STA 4+409 TO 4+615 PLAN & PROFILE
5	STORM CATCHMENT AREAS PLAN	11	MAJOR FLOWS CATCHMENT AREAS PLAN	15D	EASEMENT/EXTENSION/RECONSTRUCTION - STA 5+000 TO 5+658 PLAN & PROFILE
6A	STORM DESIGN SHEET	12A	STORMWATER MANAGEMENT FACILITY SECTIONS, NOTES AND DETAILS	16	CONCEPTUAL STREET LIGHT PLAN
6B	MUNICIPAL DRAIN DESIGN SHEETS	12B	STORMWATER MANAGEMENT FACILITY SECTIONS, NOTES AND DETAILS	17	COMMUNITY MAILBOX AND OGS DETAILS
7	SANITARY CATCHMENT AREAS PLAN	13A	STREET 'A' – STA 1+000 TO 1+323 PLAN & PROFILE	18	MUNICIPALITY OF CENTRAL ELGIN STANDARD DETAILS
8	SANITARY DESIGN SHEET	13B	STREET 'A' – STA 1+323 TO 1+646 PLAN & PROFILE	19	ONTARIO PROVINCIAL STANDARD DRAWINGS
9	WATER DISTRIBUTION PLAN	13C	STREET 'A' - STA 1+646 TO 1+864 PLAN & PROFILE		





## THE CORPORATION OF THE MUNICIPALITY OF CENTRAL ELGIN

<u>GENERAL NOTES:</u>	
<ol> <li>THE OWNER'S PROFESSIONAL ENGINEER IS REQUIRED TO FIELD REVIEW THE INSTALLATION OF SERVICES INCLUDED IN THIS PROJECT IN ACCORDANCE WITH THE GENERAL REVIEW COMMITMENT CERTIFICATION PROCESS. THE OWNER'S CONTRACTOR IS TO PROVIDE STRIK, BALDINELLI, MONIZ LTD. (SBM) AND THE MUNICIPALITY OF CENTRAL ELGIN PHYSICAL SERVICES DEPARTMENT AT LEAST 48 HOURS NOTICE PRIOR TO COMMENCING CONSTRUCTION OF THE SITE SERVICES.</li> <li>AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION ON ANY EXISTING ROAD ALLOWANCE MAINTAINED BY THE COUNTY OF ELGIN, THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS FROM THE COUNTY ENGINEER'S DEPARTMENT, AFTER DISCUSSION WITH THE STAFF.</li> <li>THE OWNER/OWNER'S CONTRACTOR SHALL HAVE ITS PROFESSIONAL ENGINEER PROVIDE FULL—TIME ONSITE REVIEW DURING CONSTRUCTION ON AN EXISTING MUNICIPAL STREET OR EASEMENT AND PROVIDE A CERTIFICATE OF COMPLETION OF WORKS UPON COMPLETION OF ALL WORKS TO BE CONSTRUCTED.</li> <li>ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE CURRENT ONTARIO BUILDING CODE (OBC) AND ANY APPLICABLE STATUTES, REGULATIONS, CODES AND BY-LAWS.</li> <li>SBM IS NOT RESPONSIBLE FOR THE INFORMATION (EXISTING TOPOGRAPHY, BENCHMARKS, PROPERTY BOUNDARY, ETC.) PROVIDED BY OTHERS.</li> </ol>	2. 3. 4. 5.
CONSTRUCTION NOTES:	
<ol> <li>THE OWNER'S CONTRACTOR IS TO CONTACT THE CONSULTING ENGINEER (SBM) FOR FINAL ONSITE REVIEW. THE CONTRACTOR IS TO PROVIDE AT LEAST 48 HOURS NOTICE PRIOR TO REQUIRED ONSITE REVIEW.</li> <li>THE OWNER'S CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES UNDER THE OCCUPATIONAL HEALTH AND SAFETY ACT AS REQUIRED BY THE MINISTRY OF LABOUR TO EXECUTE THE WORK.</li> <li>THE OWNER'S CONTRACTOR IS TO REVIEW AND CONFIRM ALL EXISTING CONDITION INFORMATION &amp; INFORM SBM OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. SBM</li> </ol>	OPSD OPSD OPSD OPSD OPSD
<ul> <li>IN NO WAY ACCEPTS RESPONSIBILITY FOR ANY INACCURACIES FOUND ON THIS PLAN RELATIVE TO EXISTING CONDITIONS FOR THE SITE.</li> <li>4. PRIOR TO COMMENCING ANY CONSTRUCTION, ALL SEWER OUTLET INFORMATION, BENCHMARKS, ELEVATIONS, DIMENSIONS, GRADES, ETC. MUST BE CHECKED BY THE CONTRACTOR AND VERIFIED AND ANY DISCREPANCIES REPORTED TO THE ENGINEERS.</li> <li>5. PRIOR TO COMMENCING ANY WORK ON THE INSTALLATION OF SERVICES &amp; GRADING, AN APPROVED SET OF PLANS AND SPECIFICATIONS MUST BE AVAILABLE ON THE JOB AND SHALL REMAIN THERE WHILE WORK IS BEING DONE.</li> </ul>	OPSD OPSD OPSD OPSD OPSD
<ol> <li>6. STRIP FULL DEPTH OF TOPSOIL IN AREAS TO BE DISTURBED AND STOCK PILE FOR RE-USE IN GRASSED/LANDSCAPED AREAS.</li> <li>7. OWNER'S CONTRACTOR IS RESPONSIBLE FOR ALL AS-BUILT INVERTS AND GRADES, RECORD ANY DEVIATION OF PIPE OR STRUCTURE LOCATION INVOLVED WITH THIS PROJECT AND OWNER'S CONTRACTOR TO PROVIDE A COPY OF THE AS-BUILT DRAWING SHOWING ALL CHANGES CLEARLY MARKED IN RED.</li> <li>8. THE OWNER'S CONTRACTOR SHALL CONSTRUCT TEMPORARY MEASURES TO CONTROL SILT ENTERING THE STORM DRAINAGE SYSTEM TO THE SPECIFICATIONS OUTLINED IN</li> </ol>	OPSD OPSD OPSD OPSD OPSD
<ul> <li>THE GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES PREPARED BY THE MINISTRY OF NATURAL RESOURCES. THESE MEASURES ARE TO BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION FOR THIS PROJECT AND ARE TO REMAIN IN PLACE UNTIL CONSTRUCTION HAS BEEN COMPLETED TO BASE ASPHALT AND SOD OR THE SATISFACTION OF THE MUNICIPAL ENGINEER.</li> <li>9. THE CONTRACTOR IS RESPONSIBLE FOR:</li> <li>9.1. CONNECTING ANY EXISTING SEWER OR DRAIN ENCOUNTERED DURING CONSTRUCTION TO A NEW SEWER OF SIMILAR TYPE, SIZE AND MATERIAL OR INTO ANOTHER EXISTING SEWER OF THE SAME TYPE AND TO REPORT ON AS-BUILT DRAWINGS.</li> <li>9.2. ENSURING THAT THERE IS NO INTERRUPTION OF ANY SURFACE OR SUBSURFACE DRAINAGE FLOW THAT WOULD ADVERSELY AFFECT NEIGHBOURING PROPERTIES.</li> </ul>	OPSD OPSD OPSD OPSD OPSD OPSD OPSD
10. NO FOUNDATION DRAIN CONNECTIONS WILL BE PERMITTED INTO THE SANITARY SEWERS AND NO DIRECT GRAVITY CONNECTIONS FROM THE FOUNDATION DRAINS WILL BE PERMITTED TO THE STORM SYSTEM UNLESS THE STORM SYSTEM HAS THE CAPACITY TO PROVIDE FOR SUCH CONNECTIONS TO THE SATISFACTION OF THE MUNICIPAL	OPSD OPSD

ENGINEER. 11. WORK ON OR ADJACENT TO THE MUNICIPAL CITY RIGHT OF WAY (R.O.W.) SHALL BE COMPLETED IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 AND BOOK 18 CURRENT EDITION.

### SURFACE WORKS NOTES:

1. ALL WORK IN THE MUNICIPAL ROAD ALLOWANCE SHALL MEET THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE CURRENT MUNICIPALITY OF CENTRAL ELGIN INFRASTRUCTURE DESIGN GUIDELINES AND CONSTRUCTION STANDARDS (IDGCS) ARE TO BE APPLIED TO WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE UNLESS OTHERWISE APPROVED BY THE MUNICIPALITY ENGINEER. THE CONTRACTOR IS REQUIRED TO OBTAIN & PAY FOR PERMIT TO WORK IN MUNICIPAL R.O.W. . ALL SURFACES WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION AT LEAST AS GOOD AS ORIGINAL, OR AS PER BELOW (WHICHEVER

- IS GREATER) OR IF WITHIN THE MUNICIPAL RIGHT OF WAY TO THE SATISFACTION OF THE MUNICIPAL ENGINEER, ALL AT NO COST TO THE MUNICIPALITY 2.1. GRASSED AREAS TO BE RESTORED w/ 100mm (MIN) TOPSOIL + SOD
- 2.2. CONCRETE SIDEWALK TO OPSD 310.010 (CONCRETE SIDEWALK).
- 2.3. CONCRETE CURB AND GUTTER TO OPSD 600.100 (CONCRETE MOUNTABLE CURB WITH NARROW GUTTER) OR OPSD 600.110 (CARLOW ROAD BARRIER CURB). 2.4. ANY ASPHALT AREA DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AS FOLLOWS:
- 2.4.1. PROOF ROLL SUBGRADE (TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER) PRIOR TO PLACEMENT OF GRANULARS (98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD) MIN.).

2.4.2.	MILL ADJACENT ASPHALT TO	D BE TIED INTO 50mm	DEEP x 500mm WIDE PRIOF	R TO RESTORATION SEE DET	AIL ON SHEET C1.	
	-	PROPOS	ED PAVEMENT S			TO BE PLACED N 2 LIFTS
MATERIAL	LAKE LINE	STREET 'A'	STREET 'B'	CARLOW ROAD	PARKING LOT	DRIVEWAY
HL-3	40mm	40mm	40mm	40mm	35mm	-
HL-4	-	-	-	-	-	<b>1</b> 60mm
HL-8	40mm	40mm	40mm	40mm	40mm	-
GRANULAR 'A'	150mm	150mm	150mm	150mm	150mm	150mm

2.5. RESTORE ALL PAVEMENT MARKINGS TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS (UNLESS OTHERWISE NOTED) AND MARKINGS SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 710 'CONSTRUCTION SPECIFICATION FOR PAVEMENT MARKING' ALL EXTERIOR HORIZONTAL CONCRETE SHALL BE MIN 150mm THICK PER IDGCS 6.6.e), 30 MPa AT 28 DAYS c/w 5-8% AIR ENTRAINMENT AND TEMPERATURE

400mm

BETWEEN 10-28°C. ON MIN 150mm THICK GRANULAR 'A' COMPACTED TO 100% SPMDD. ALL AREAS OUTSIDE THE CONSTRUCTION LIMITS SHALL NOT BE DISTURBED. ANY DAMAGED TO THOSE AREAS ARE TO BE REPAIRED AT THE CONTRACTORS EXPENSE.

400mm

#### SERVICING NOTES

400mm

400mm

GRANULAR 'B'

(SEE ADDITIONAL SERVICING NOTES ON SHEET 4)

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350mm

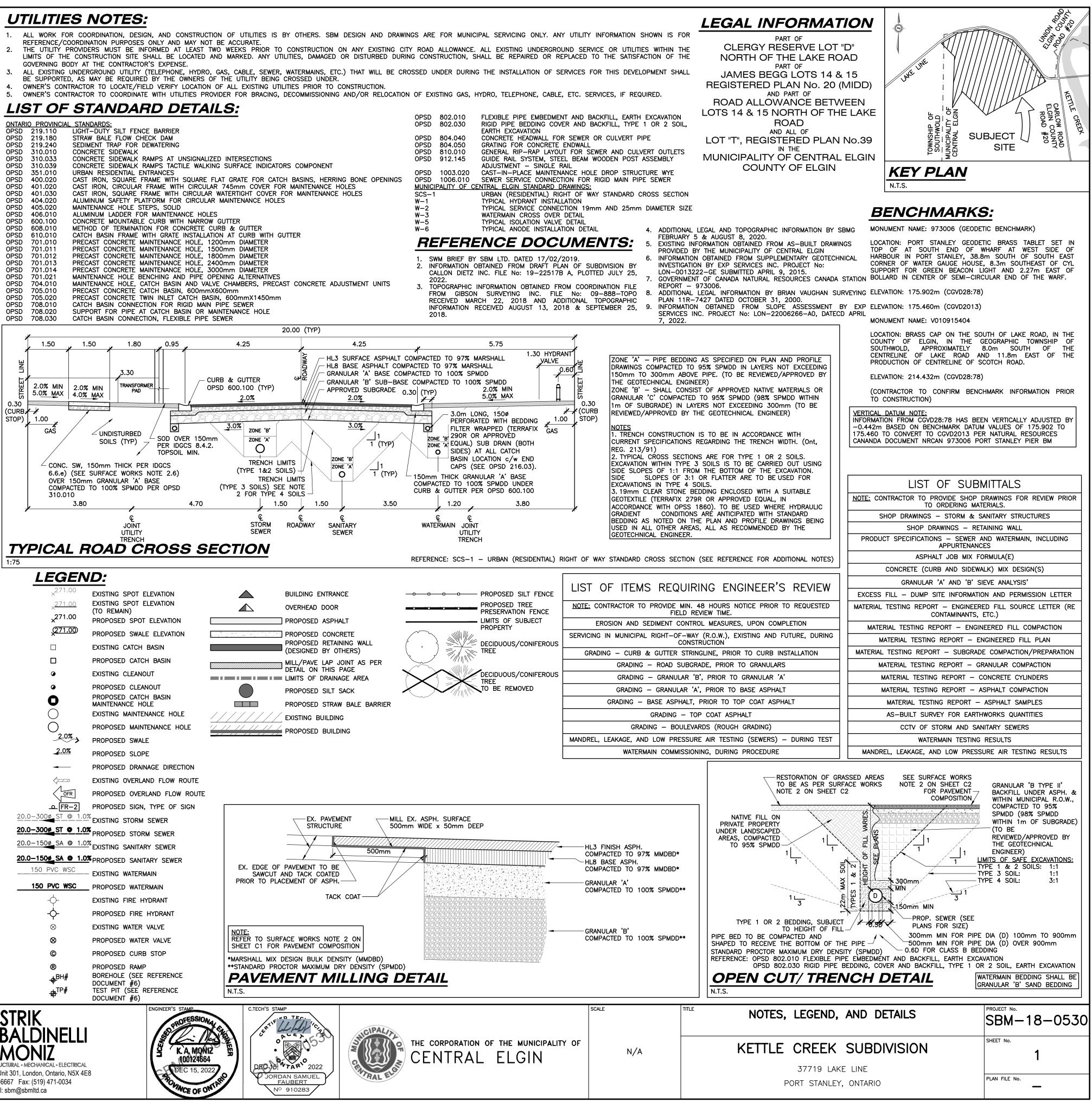
- ALL STORM AND/OR SANITARY SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT MUNICIPALITY OF CENTRAL ELGIN'S STANDARDS AND SPECIFICATIONS AND THE CURRENT EDITION OF THE ONTARIO BUILDING CODE. ALL ORGANIC. UNSTABLE OR UNSUITABLE MATERIALS BENEATH THE ROAD ALLOWANCE, SERVICES, UTILITIES, OR FOUNDATIONS MUST BE REMOVED AND THESE AREAS BACKFILLED WITH AN APPROVED FILL MATERIAL, ALL TO THE SATISFACTION OF A GEOTECHNICAL ENGINEER AND SHOULD BE PLACED IN LIFTS NOT EXCEEDING 300mm .00SE) THAT ARE COMPACTED TO 95% SPMDD (100% FOR PAVED SURFACES). THE FILL MATERIAL SHOULD COMPRISE OF CLEAN, COMPACTIBLE FILL WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT
- REMOVE ALL TRENCH WATER WHEN PIPE LAYING IS IN PROGRESS. ALL REQUIREMENTS FOR DEWATERING PERMITS (INCLUDING THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS (M.E.CP)'S PERMIT TO TAKE WATER, IF REQUIRED) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONNECTIONS FROM FOUNDATIONS, WEEPING TILE. SUMP PUMP, AND ROOF DRAINS ARE NOT PERMITTED TO ENTER THE SANITARY SEWER SYSTEM AND SHALL BE IN ACCORDANCE WITH THE MUNICIPALITY OF CENTRAL ELGIN INFRASTRUCTURE DESIGN GUIDELINES AND CONSTRUCTION STANDARDS INCLUDING, BUT NOT LIMITED TO
- **REQUIREMENTS IN SECTION 2.7.** 5. ALL PROPOSED STORM SEWER PIPE SHALL BE: PVC SMOOTH WALL (CSA B182.2) (1000 TO 6000) OR RIBBED (CSA B182.4) (2000 TO 6000) OR REINFORCED CONCRETE (CAN/CSA 257.2) AND SANITARY SEWER PIPE TO BE PVC SMOOTH WALL (CSA B182.2) (1000 TO 6000) OR RIBBED (CSA B182.4) (2000 TO 6000). PVC PIPE SHALL BE LAID WITH TYPE I BEDDING UNDER 4.5m OF COVER AND TYPE II BEDDING OVER 4.5m OF COVER. CONCRETE PIPE SHALL BE LAID WITH CLASS B (B1 OR B2) BEDDING. ALL SEWER BACKFILL MUST BE COMPACTED TO 95% STANDARD MAXIMUM DRY DENSITY (MINIMUM) (100% FOR PAVED AREAS). REFER TO OPSD
- 802.010, OPSD 802.030, AND MUNICIPALITY OF CENTRAL ELGIN CURRENT STANDARDS. THE MINIMUM DEPTH OF A STORM SEWER SHALL BE 1.5m (1.25m FOR CATCH BASIN LEADS) FROM THE FINISHED GROUND ELEVATION TO THE CROWN OF THE PIPE AS PER THE MUNICIPALITY OF CENTRAL ELGIN INFRASTRUCTURE DESIGN GUIDELINES AND CONSTRUCTION STANDARDS. WHERE MINIMUM DEPTHS CANNOT BE ACHIEVED AND THEREFORE FROST PROTECTION IS WARRANTED, INSULATION IS REQUIRED AS PER THE MUNICIPALITY OF CENTRAL ELGIN DRAWIN W-3 'WATERMAIN CROSS OVER DETAIL'. ALL STORM AND SANITARY SEWERS/SERVICES AND CATCHBASIN LEADS SHALL HAVE APPROVED RUBBER GASKET JOINTS + BE INSTALLED USING A LASER LEVEL.
- 8. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL PRECAST CONCRETE STRUCTURES PRIOR TO ORDERING THEM FOR REVIEW BY ENGINEER. 9. ALL CATCHBASINS TO HAVE 0.6m SUMP AS PER OPSD 705.010 AND CATCHBASIN MAINTENANCE HOLES 12000 & LARGER TO HAVE 0.3m SUMP AS PER OPSD 701.010. 10. 3.0m LENGTHS OF 150mm DIAMETER PERFORATED FILTER WRAPPED PVC PIPE ARE TO BE INSTALLED AS SUBDRAINS CONNECTED TO TWO SIDES OF EACH CATCHBASIN AND CATCHBASIN MAINTENANCE HOLE WITHIN PAVED AREAS. THE SUBDRAINS ARE TO BE LOCATED JUST BELOW SUBGRADE ELEVATION AND RUN PARALLEL WITH THE
- CURB AS PER MUNICIPALITY OF CENTRAL ELGIN DRAWING SCS-1. 11. MAINTENANCE HOLES TO BE CONSTRUCTED OF PRE-CAST CONCRETE. ALL MAINTENANCE HOLES TO BE INSTALLED IN ACCORDANCE WITH THE ONTARIO PROVINCIAL STANDARDS (OPSD) DIVISION 700 DETAILS AND REQUIREMENTS, SEE LIST OF COMMON DETAILS.
- 12. ENSURE MINIMUM OF 1 ADJUSTMENT UNIT FOR ALL STRUCTURES. MAXIMUM TOTAL ADJUSTMENT UNITS HEIGHT: 300mm. 13. RUNG SPACING IN MAINTENANCE HOLES TO BE 300mm MIN. AND A MAX. OF 600mm DISTANCE BETWEEN THE LID AND THE FIRST RUNG.
- 14. WATERMAINS 250mm AND ABOVE MUST BE RESTRAINED FOR 30.0m IN EITHER DIRECTION OF DEAD END/VALVE.
- 15. WHERE ANY WATER SERVICE CONNECTION IS REQUIRED TO BE MADE FOLLOWING THE CONSTRUCTION OF CURB, GUTTER, CONCRETE SIDEWALKS, AND/OR WEARING SURFACE COAT OF ASPHALT ON ANY STREET IN A NEW SUBDIVISION, SUCH WATER SERVICE CONNECTION SHALL NOT BE MADE USING 'OPEN CUT' METHODS BUT SHALL BE MADE USING TRENCHLESS TECHNOLOGIES AND IN SUCH A MANNER AS TO ELIMINATE THE POSSIBILITY OF SETTLEMENT OF SUCH CURB, GUTTER, CONCRETE SIDEWALKS AND/OR WEARING SURFACE COAT OF ASPHALT; IT BEING UNDERSTOOD THAT THIS POLICY SHALL APPLY, EXCEPT WHERE IN THE OPINION OF THE MUNICIPAL ENGINEER, GROUND CONDITIONS ARE SUCH THAT THE USE OF DRILLING OR BORING METHODS BECOME UNREASONABLE OR UNECONOMICAL.
- 16. ALL WATERMAIN MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE CURRENT MUNICIPALITY'S STANDARDS AND SPECIFICATIONS. 17. ALL FIRE HYDRANTS SHALL BE 3-WAY HYDRANTS c/w STORZ CONNECTION WITH VALVE DIRECTIONAL OPERATION TO BE ESTABLISHED BY MUNICIPALITY OF CENTRAL ELGIN
- AS PER THE MUNICIPALITY OF CENTRAL ELGIN'S STANDARDS AND SPECIFICATIONS. 18. ALL WATERMAIN VALVES SHALL BE GATE VALVES MANUFACTURED TO AWWA C500 AND EPOXY COATED TO AWWA C550 WITH VALVE DIRECTIONAL OPERATION TO BE ESTABLISHED BY MUNICIPALITY OF CENTRAL ELGIN.
- 19. INSTALLATION, HYDROSTATIC TESTING, SWABBING, FLUSHING AND DISINFECTION SHALL BE DONE IN ACCORDANCE WITH THE MUNICIPALITY OF CENTRAL ELGIN'S STANDARDS AND SPECIFICATIONS. 20. SEPARATION BETWEEN BURIED WSC & PDC AS PER M.E.C.P. GUIDELINES AND MUNICIPALITY OF CENTRAL ENGIN'S STANDARDS AND SPECIFICATIONS
- 21. WATER SERVICE TO BE PEX AND ALL WATER PIPE TO HAVE 12AWG TRACER WIRE INSTALLED ON ALL PVC WATERMAINS, VALVES, AND FIRE HYDRANTS. APPROVED TRACER WIRE FOR OPEN CUT INSTALLATION: "COPPERHEAD 1230-HS". WATERMAIN TO BE INSTALLED WITH 1.7m MIN COVER. PEX WATER SERVICE REQUIRES BRASS FITTINGS AS PER THE MUNICIPALITY OF CENTRAL ELGIN'S STANDARDS AND SPECIFICATIONS. PROVIDE PIPE RESTRAINTS AS REQUIRED BY THE PIPE MANUFACTURER 22. WHEN CROSSING ABOVE A SANITARY/STORM SEWER THE CONTRACTOR IS TO ENSURE A MINIMUM 0.15m VERTICAL SEPARATION FROM THE UNDERSIDE OF THE WATER SERVICE TO THE TOP OF THE SEWER AS OUTLINED IN THE CURRENT EDITION OF THE M.E.C.P "DESIGN GUIDELINES FOR DRINKING-WATER SYSTEMS" AND INSULATE WATER SERVICE MUNICIPALITY OF CENTRAL ELGIN DRAWING W-3. WHERE REQUIRED.
- 23. ALL SUBSTITUTIONS MUST BE APPROVED BY THE MUNICIPAL ENGINEER. 24. THE ELEVATION OF THE GROUND WATER TABLE IS UNKNOWN. CONTRACTOR TO ADVISE SBM IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION OPERATIONS; FURTHER REVIEW/INVESTIGATION BY A GEOTECHNICAL ENGINEER MAY BE REQUIRED. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION OPERATIONS. CIVIL STRUCTURES AND PIPES ARE TO BE DESIGNED FOR HYDROSTATIC PRESSURE AND UPLIFT/BUOYANCY FORCES. PROVIDE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO FOR REVIEW. CONTRACTOR IS RESPONSIBLE OF APPLYING FOR ANY REGISTRY AND/OR PERMIT TO TAKE WATER IF REQUIRED, SEE NOTE ON SHEET 2.

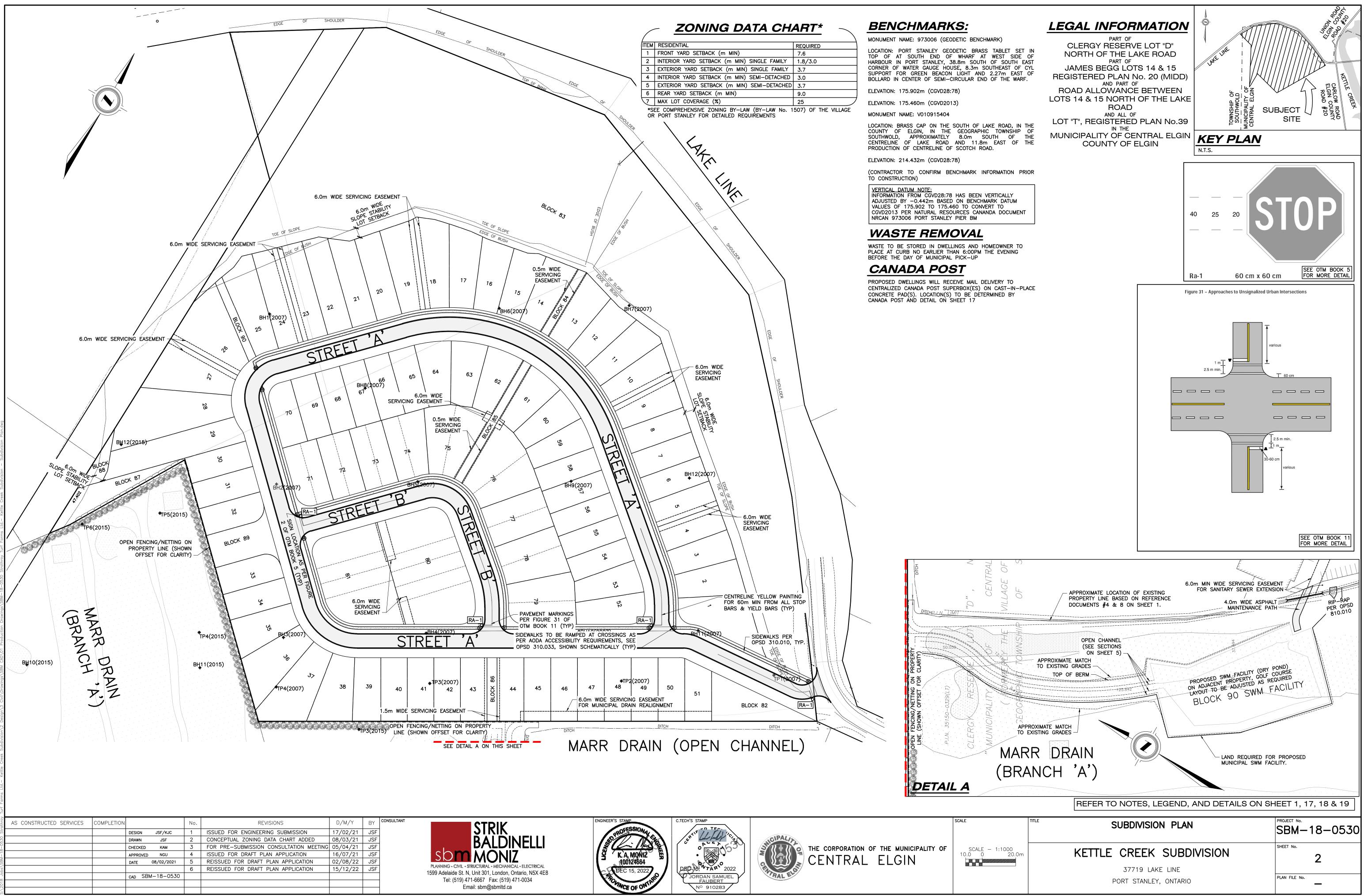
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athro	AS CONSTRUCTED SERVICES	COMPLETION			No.	REVISIONS	D/M/Y	BY	CONSULTANT
Str			DESIGN	JSF/KJC	1	ISSUED FOR ENGINEERING SUBMISSION	17/02/21	JSF	] JI
530			DRAWN	JSF	2	CONCEPTUAL ZONING DATA CHART ADDED	08/03/21	JSF	] <b>R A</b>
8-0			CHECKED	KAM	3	FOR PRE-SUBMISSION CONSULTATION MEETING	05/04/21	JSF	
(-1)			APPROVED	NGU	4	ISSUED FOR DRAFT PLAN APPLICATION	16/07/21	JSF	
SBN			DATE	08/02/2021	5	REISSUED FOR DRAFT PLAN APPLICATION	02/08/22	JSF	
\sq					6	REISSUED FOR DRAFT PLAN APPLICATION	15/12/22	JSF	PLANNING • CIVIL • STRUCTURAL 1599 Adelaide St. N, Unit 301
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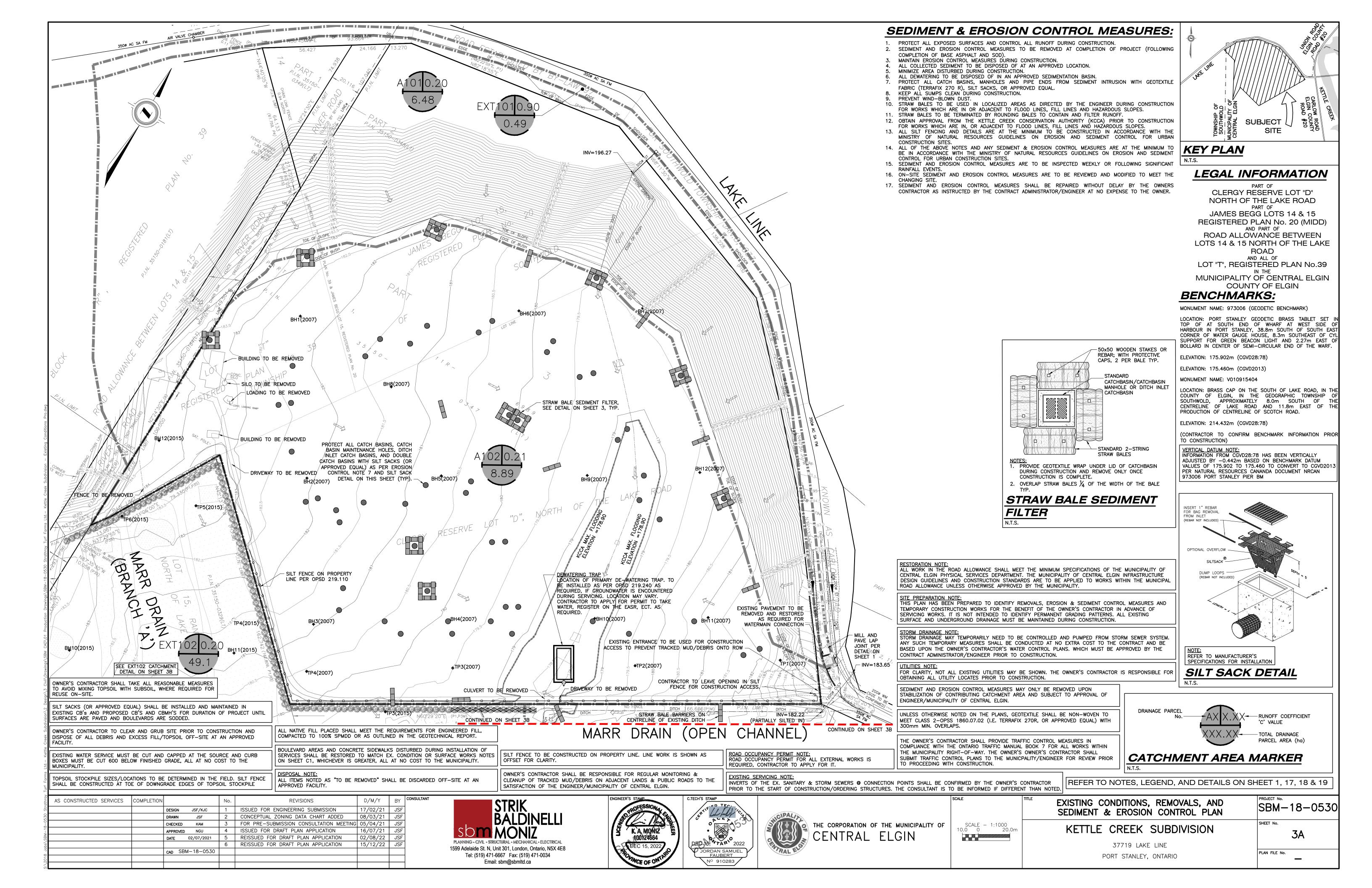
#### TILITIES NOTES:

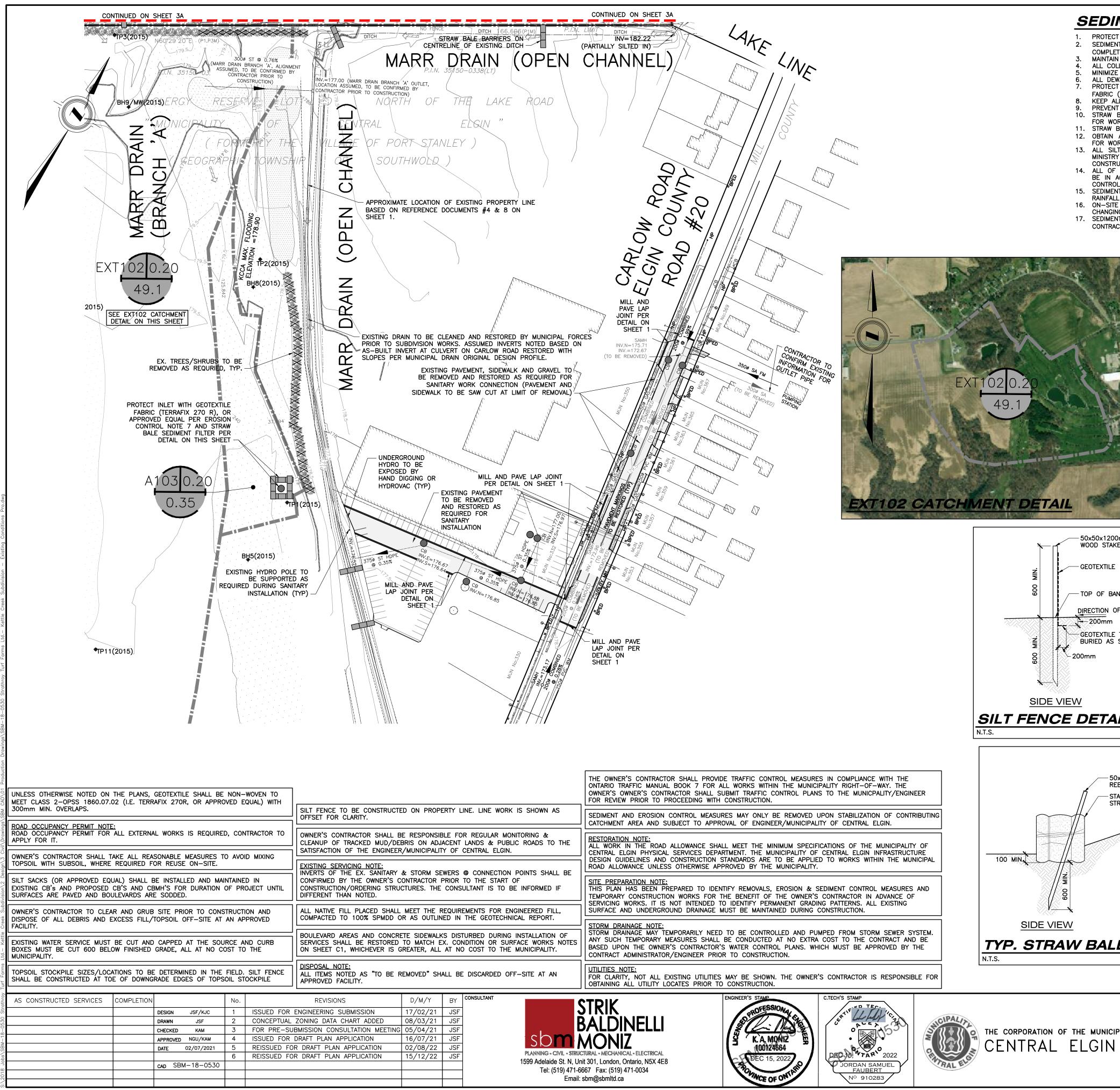
REFERENCE/COORDINATION PURPOSES ONLY AND MAY NOT BE ACCURATE. GOVERNING BODY AT THE CONTRACTOR'S EXPENSE.

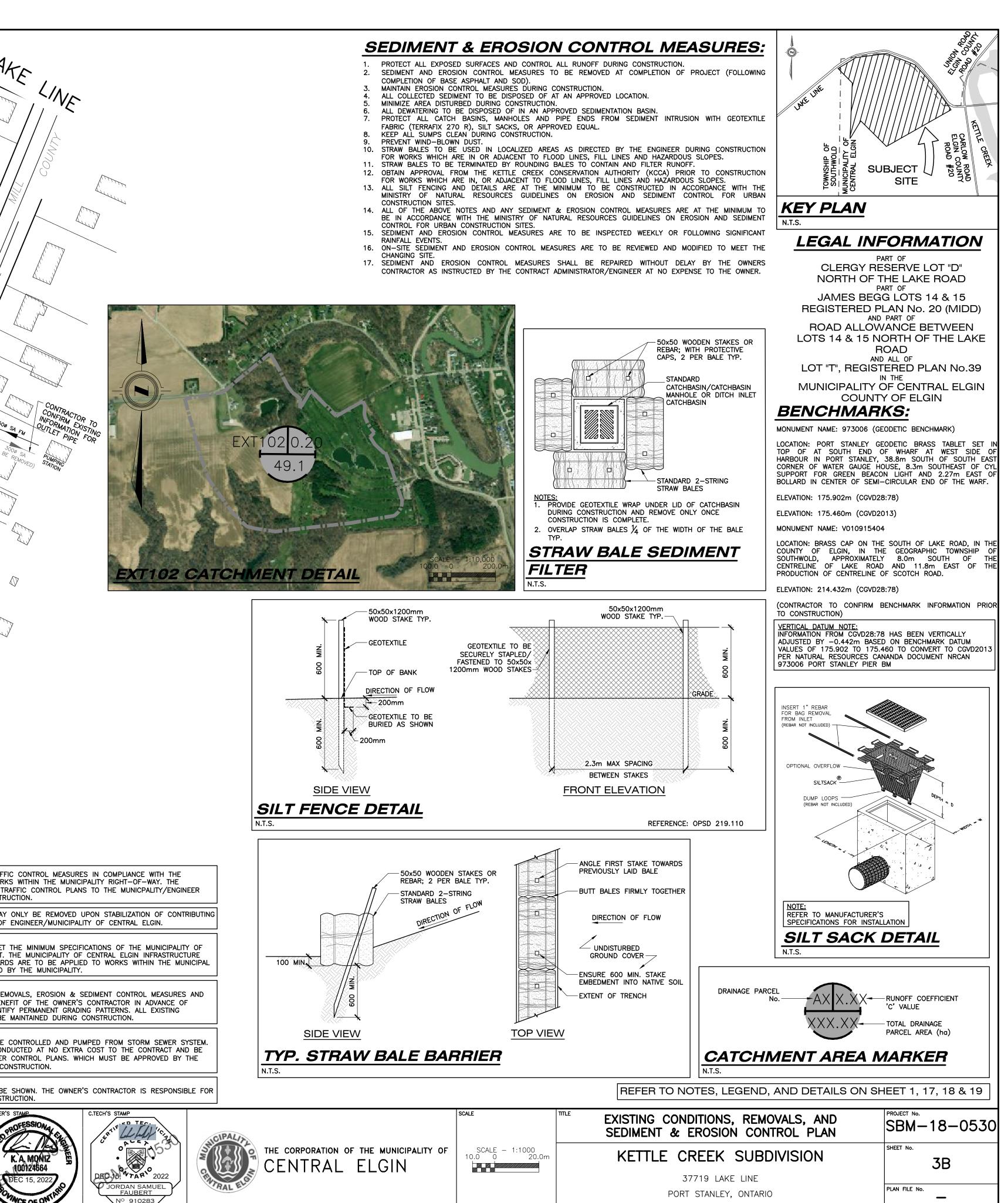
BE SUPPORTED, AS MAY BE REQUIRED BY THE OWNERS OF THE UTILITY BEING CROSSED UNDER.

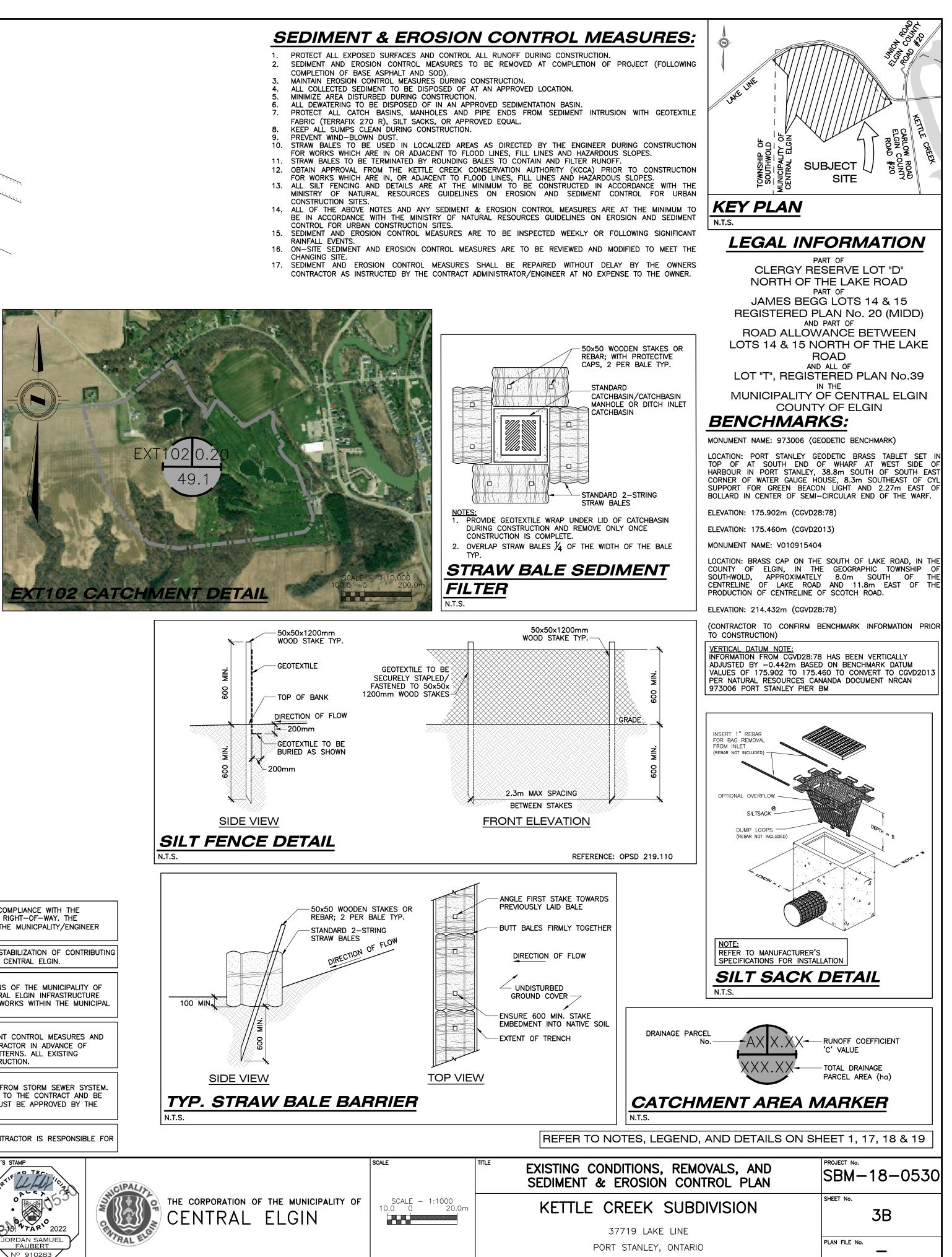


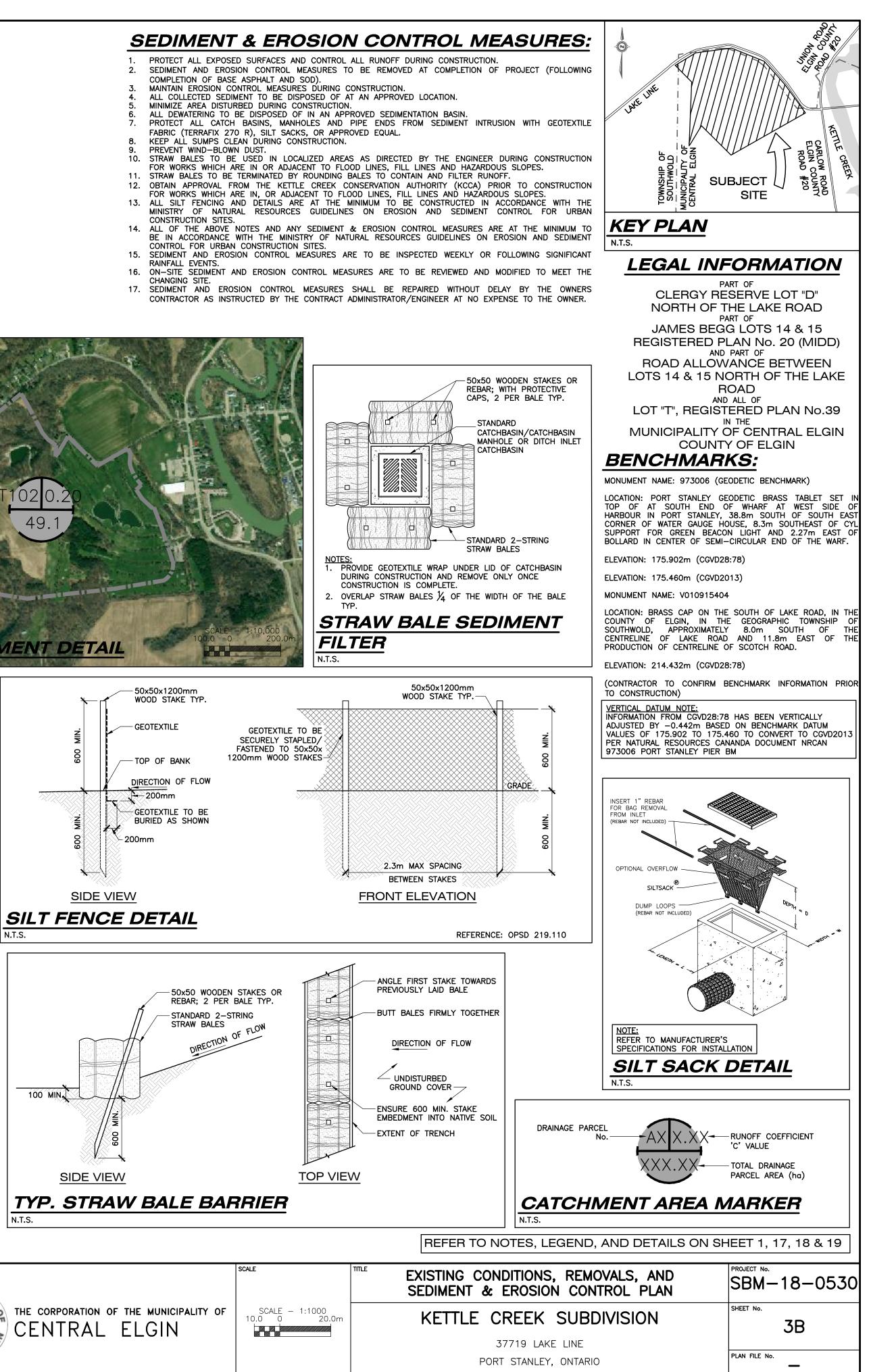


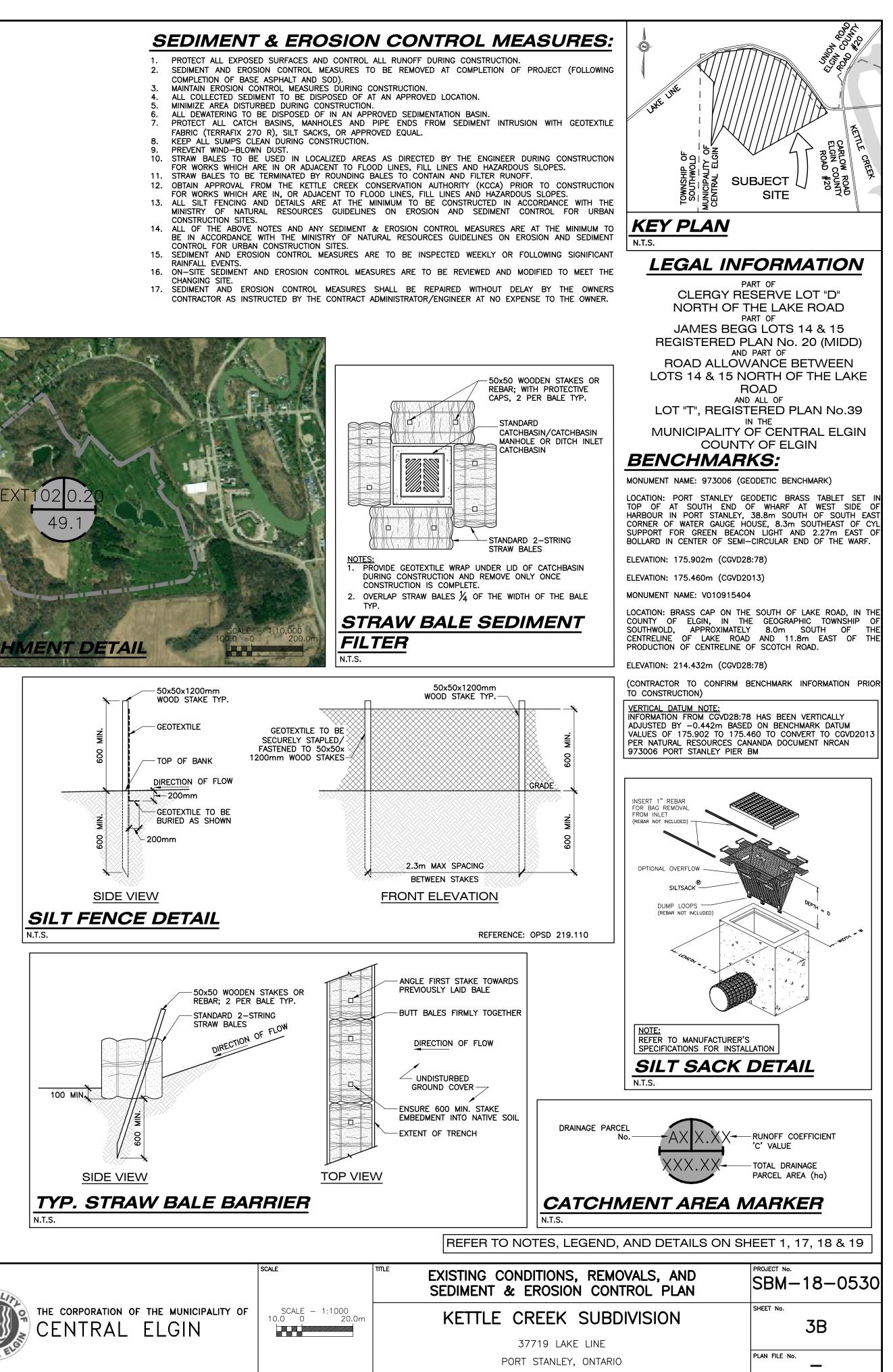


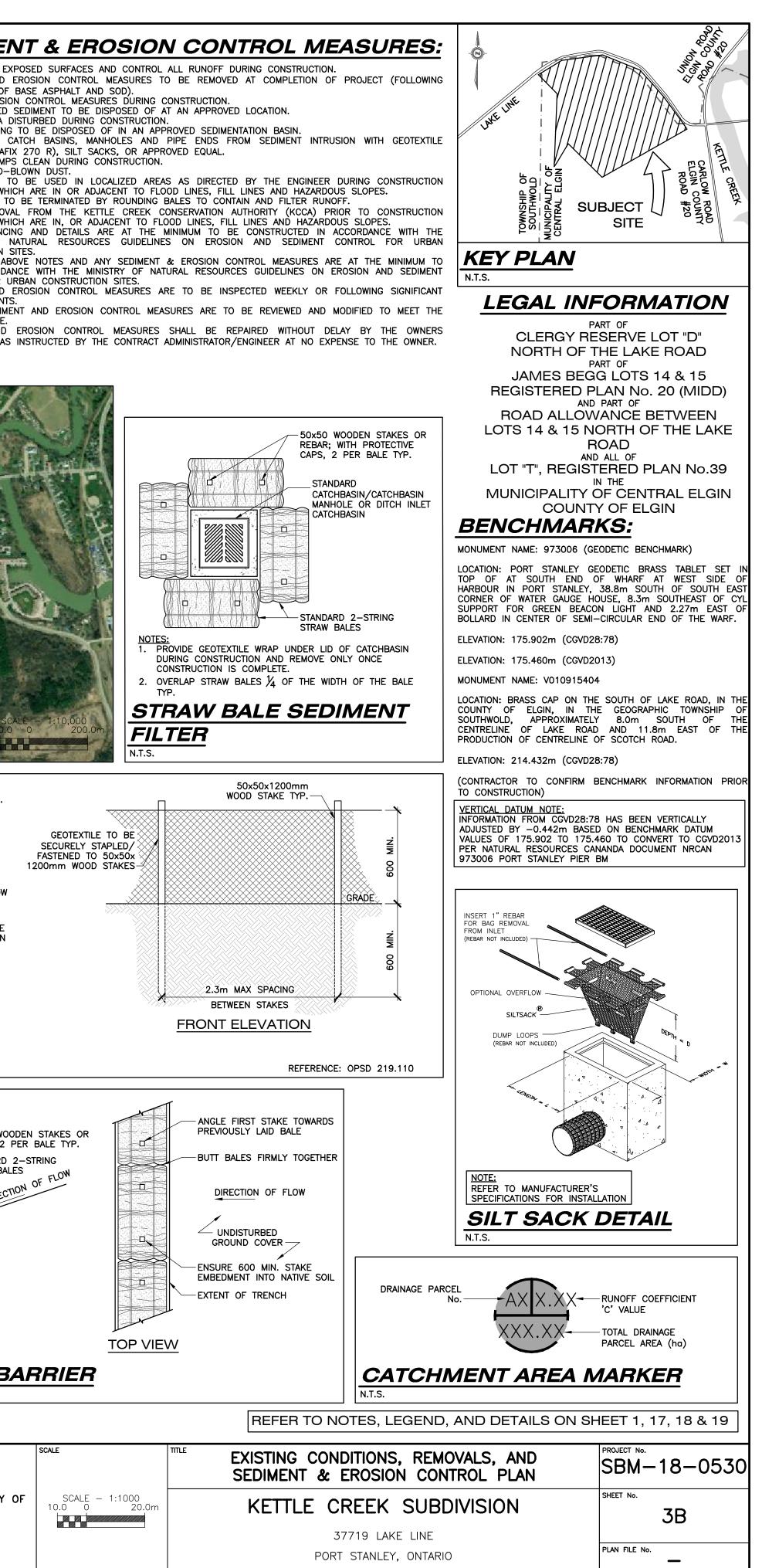


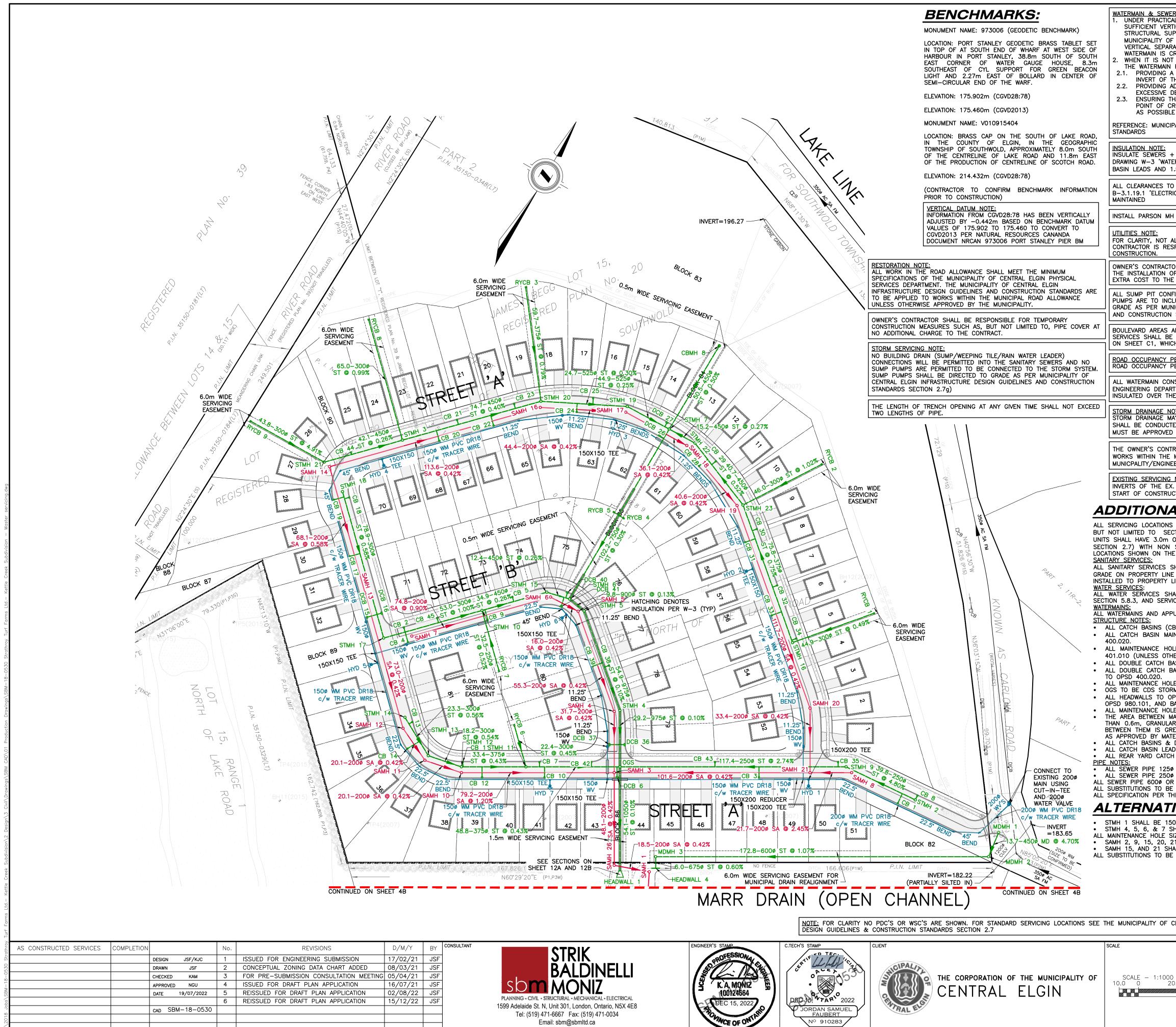




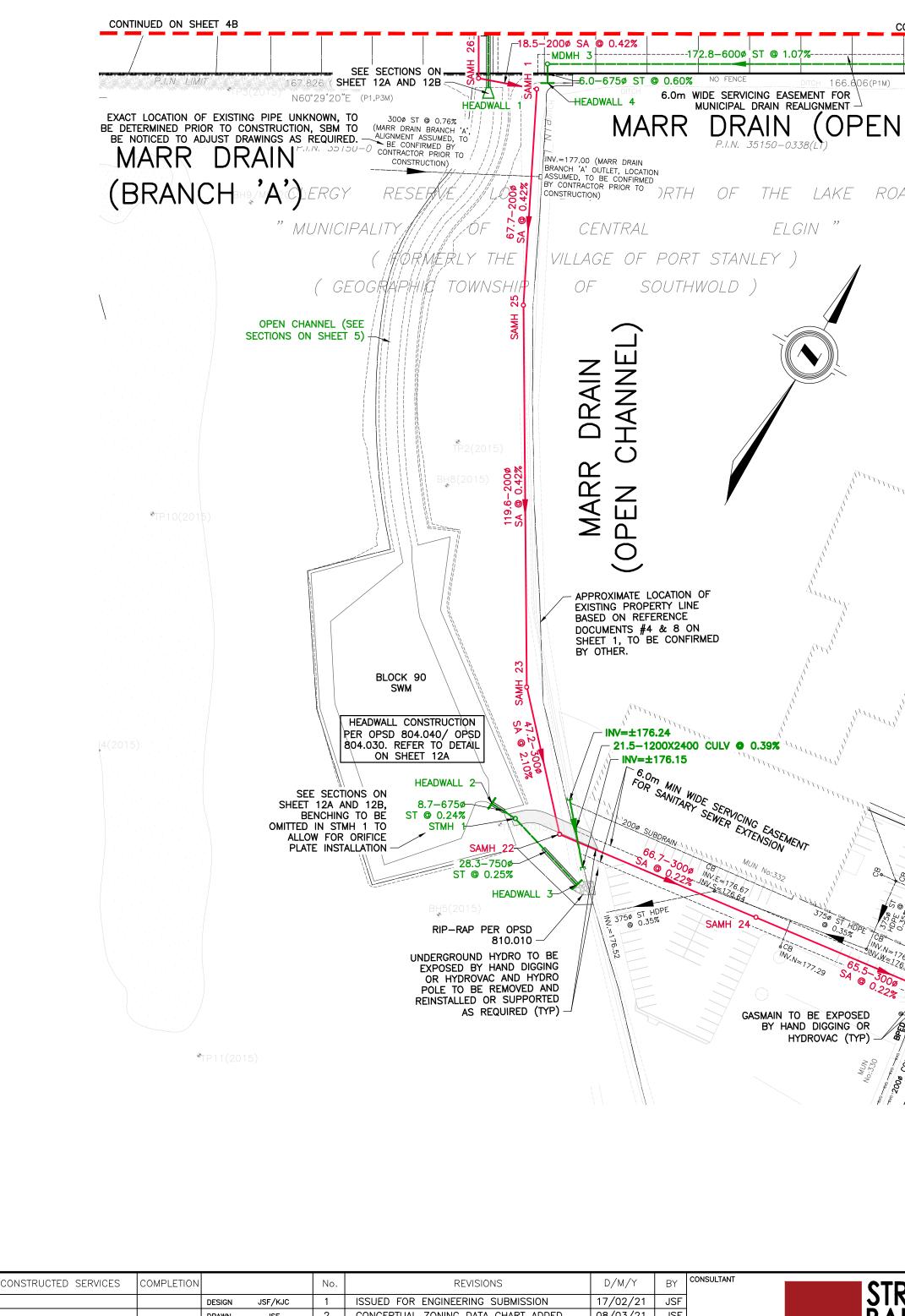








R CROSSING NOTE:         AL CONDITIONS, WATERMAINS SHALL CROSS ABOVE SEWERS WITH         TICAL SEPARATION TO ALLOW FOR PROPER BEDDING AND         IPPORT OF THE WATERMAIN AND SEWER. INSULATE AS PER         F CENTRAL ELGIN DRAWING W-3 (WHERE REQUIRED). ROW MINIMUM         RATION 0.15m TO PROVIDE SUFFICIENT BEDDING DEPTH WHEN         CROSSING ABOVE THE SEWER.         T POSSIBLE FOR THE WATERMAIN TO CROSS ABOVE THE SEWER,         PASSING UNDER A SEWER SHALL BE PROTECTED BY:         A VERTICAL SEPARATION OF AT LEAST 0.5 METRES BETWEEN THE         THE SEWER AND THE CROWN OF THE WATERMAIN;         ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS TO PREVENT         DEFLECTION OF JOINTS AND SETTLING; AND         HAT THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE         ROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR         E FROM THE SEWER.         PALITY OF CENTRAL ELGIN DESIGN GUIDELINES AND CONSTRUCTION         + WATER PIPES AS PER THE MUNICIPALITY OF CENTRAL ELGIN         ERMAIN CROSS OVER DETAIL' WHERE 1.70m (1.25m FOR CATCH         1.5m FOR SEWER MAINS) COVER CAN NOT BE PROVIDED.	MUNICIPALITY MARINA MUNICIPALITY AND ALL AND
D ELECTRICAL CONDUCTORS AS SET OUT IN THE 2012 OBC DIV. RICAL CONDUCTOR CLEARANCES TO BUILDINGS' SHALL BE	LEGAL INFORMATION
H INSERT IN ALL SANITARY MANHOLES	PART OF CLERGY RESERVE LOT "D" NORTH OF THE LAKE ROAD
ALL EXISTING UTILITIES MAY BE SHOWN. THE OWNER'S SPONSIBLE FOR OBTAINING ALL UTILITY LOCATES PRIOR TO	PART OF JAMES BEGG LOTS 14 & 15 REGISTERED PLAN No. 20 (MIDD)
OR SHALL SUPPORT ALL EXISTING UTILITIES AS REQUIRED DURING OF SERVICES TO THE SATISFACTION OF THE UTILITY OWNER AT NO E CONTRACT.	AND PART OF ROAD ALLOWANCE BETWEEN LOTS 14 & 15 NORTH OF THE LAKE
FIGURATIONS SHALL MEET, AT MINIMUM, OBC SECTION 7. ALL LUDE A CHECK VALVE. ALL SUMP PUMPS SHALL DISCHARGE TO NICIPALITY OF CENTRAL ELGIN INFRASTRUCTURE DESIGN GUIDELINES STANDARDS SECTION 2.7g).	ROAD AND ALL OF LOT "T", REGISTERED PLAN No.39 IN THE MUNICIPALITY OF CENTRAL ELGIN
AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES CHEVER IS GREATER, ALL AT NO COST TO THE MUNICIPALITY.	
<u>PERMIT NOTE:</u> PERMIT FOR ALL EXTERNAL WORKS IS REQUIRED.	]
NSTRUCTION TO CONFORM TO THE CURRENT STANDARDS AND SPECI TMENT. WHERE COVER IS LESS THAN 1.7m (EVEN TEMPORARY CON IE AFFECTED LENGTH.	
<u>OTE:</u> AY TEMPORARILY NEED TO BE CONTROLLED AND PUMPED FROM ST ED AT NO EXTRA COST TO THE CONTRACT AND BE BASED UPON T BY THE CONTRACT ADMINISTRATOR/ENGINEER PRIOR TO CONSTRUC	HE OWNER'S CONTRACTORS WATER CONTROL PLANS. WHICH
RACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIAN MUNICIPAL RIGHT-OF-WAY. THE OWNER'S OWNER'S CONTRACTOR S EER FOR REVIEW PRIOR TO PROCEEDING WITH CONSTRUCTION.	
<u>NOTE:</u> (. SANITARY & STORM SEWERS @ CONNECTION POINTS SHALL BE C CTION/ORDERING STRUCTURES. THE CONSULTANT IS TO BE INFORMI	
AL SERVICING NOTES: S SHALL BE INSTALLED AS PER MUNICIPALITY OF CENTRAL ELGIN CTION 2.7 (WITH SANITARY SERVICES MARKED WITH A MARKER POS OFFSET MEASURED FROM WATER SERVICE RATHER THAN & OF LOT STANDARD OR TOP OF RUN WATER SERVICE LOCATIONS SHOWN E CATCHMENT AREA PLANS, SHALL BE 1250 PVC DR28 © 2.0% MINIMUM AS PER SECTION 2.	T PAINTED RED AND SANITARY SERVICES FOR SEMI-DETACHED ) & DRAWING W-2 (NO STORM PDC'S TO BE PERMITTED PER ON WATER DISTRIBUTION PLAN AND STORM AND SANITARY
E AS PER SECTION 4.3.10. PDC SHALL BE INSTALLED PER OPSD 1 LINE WITH 1.0m DEPTH BELOW USF ELEVATION.	006.010 USING FACTORY MADE TEES. SANITARY PDC'S TO BE
IALL BE INSTALLED PER MUNICIPALITY OF CENTRAL ELGIN DRAWI ICING NOTES ON SHEET 1. WATER SERVICES TO BE INSTALLED AT I PURTENANCES SHALL BE CONSTRUCTED AS PER MUNICIPALITY OF CI	LEAST TO PROPERTY LINE.
B) & REAR YARD CATCH BASINS (RYCB) TO BE 600X600 TO OPSE INTENANCE HOLES (CBMH) TO BE 12000 TO OPSD 701.010 (UNI	0 705.010, WITH FRAME AND GRATE TO OPSD 400.020
LES (SAMH/STMH/MDMH) TO BE 1200Ø TO OPSD 701.010 (UNL HERWISE NOTED) AND SHALL BE LOCATED TO AVOID CONFLICT WITH ASINS (DCB) TO BE 600X1450 TO OPSD 705.020, WITH FRAMES A BASIN MAINTENANCE HOLES (DCBMH) TO BE 1500Ø TO OPSD 701.	THE CURB & GUTTER. ND GRATES TO OPSD 400.020
LES TO BE BENCHED AS PER OPSD 701.021. RMCEPTOR MODEL EF010, SEE DETAIL ON SHEET 17, OR APPROVED IPSD 804.030 (LESS THAN 900Ø PIPE) OR OPSD 804.040 c/w GI BAFFLE BLOCKS.	
LES GREATER THAN 5m DEPTH SHALL HAVE SAFETY LANDINGS INST MAINTENANCE HOLES SHALL BE BACKFILLED WITH CONCRETE OR CR R MATERIAL WHERE THE DISTANCE BETWEEN THEM IS 0.6m TO 2 REATER THAN 2.4m. ALL BACKFILL SHALL BE PROPERLY COMPACTE TERIAL TESTING ON—SITE BY GEOTECHNICAL ENGINEER REPRESENTATI DOUBLE CATCH BASINS SHALL HAVE 0.6m SUMP AND ALL CATCH DS TO BE 2000 @ 1.0% MINIMUM WITH 1.25m MINIMUM COVER WI H BASIN AND DOUBLE CATCH BASIN LEADS TO BE 2500 @ 0.56%	USHED STONE WHERE THE DISTANCE BETWEEN THEM IS LESS 2.4m, OR APPROVED NATIVE MATERIAL WHERE THE DISTANCE ED TO THE SPMDD SPECIFIED IN THE GEOTECHNICAL REPORT IVE. BASIN MAINTENANCE HOLES SHALL HAVE 0.3m SUMP TH CONNECTION PER OPSD 708.010 OR 708.030
Ø TO 200Ø SHALL BE PVC DR28 Ø TO 525Ø SHALL BE PVC DR35 R GREATER SHALL BE CONCRETE WITH CLASS PER OPSD 807.010. E APPROVED BY MUNICIPAL ENGINEER. HE ABOVE UNLESS OTHERWISE NOTED.	
<b>IVE STRUCTURE SPECIFICA</b> 000¢ AS PER OPSD 701.011 AS PER SIZING REQUIREMENTS OF OP SHALL BE 1800¢ AS PER OPSD 701.012 AS PER SIZING REQUIREM SIZING BASED ON ASSUMED PIPE SIZES, REQUIRED SIZE TO BE CON 21, 23, AND 24 SHALL HAVE SAFETY PLATFORMS AS PER OPSD 40 ALL HAVE DROP STRUCTURES AS PER OPSD 1003.020 E APPROVED BY MUNICIPAL ENGINEER	SD 701.021 ENTS OF OPSD 701.021 NFIRMED BY MANUFACTURER
CENTRAL ELGIN REFER TO NOTES, LEGEND,	AND DETAILS ON SHEET 1, 17, 18 & 19
MASTER SERVICING F	PROJECT No. SBM-18-0530
KETTLE CREEK SUBE	DIVISION SHEET No. 4A
J 37719 LAKE LINE PORT STANLEY, ONTARIO	PLAN FILE NO

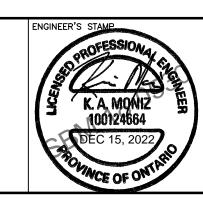


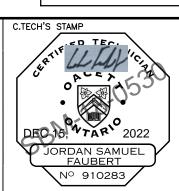
AS CONSTRUCTED SERVI	CES COMPLETION			No.	REVISIONS	D/M/Y	BY	CONSULTANT
		DESIGN	JSF/KJC	1	ISSUED FOR ENGINEERING SUBMISSION	17/02/21	JSF	
		DRAWN	JSF	2	CONCEPTUAL ZONING DATA CHART ADDED	08/03/21	JSF	
		CHECKED	KAM	3	FOR PRE-SUBMISSION CONSULTATION MEETING	05/04/21	JSF	
		APPROVE	D NGU/KAM	4	ISSUED FOR DRAFT PLAN APPLICATION	16/07/21	JSF	
		DATE	19/07/2022	5	REISSUED FOR DRAFT PLAN APPLICATION	02/08/22	JSF	
				6	REISSUED FOR DRAFT PLAN APPLICATION	15/12/22	JSF	PL 150
Ş		CAD SE	BM-18-0530					159
								]
								]

	BENCHMARKS:	WATERMAIN & SEWER 1. UNDER PRACTICAL
	MONUMENT NAME: 973006 (GEODETIC BENCHMARK)	SUFFICIENT VERTIC
	LOCATION: PORT STANLEY GEODETIC BRASS TABLET SET IN TOP OF AT SOUTH END OF WHARF AT WEST SIDE OF HARBOUR IN PORT STANLEY, 38.8m SOUTH OF SOUTH EAST CORNER OF WATER GAUGE HOUSE, 8.3m	MUNICIPALITY OF VERTICAL SEPARAT WATERMAIN IS CRI 2. WHEN IT IS NOT
	SOUTHEAST OF CYL SUPPORT FOR GREEN BEACON LIGHT AND 2.27m EAST OF BOLLARD IN CENTER OF SEMI-CIRCULAR END OF THE WARF.	THE WATERMAIN P 2.1. PROVIDING A INVERT OF TH 2.2. PROVIDING AD
	ELEVATION: 175.902m (CGVD28:78)	EXCESSIVE DE 2.3. ENSURING THA
	ELEVATION: 175.460m (CGVD2013)	POINT OF CRO AS POSSIBLE
	MONUMENT NAME: V010915404 LOCATION: BRASS CAP ON THE SOUTH OF LAKE ROAD,	REFERENCE: MUNICIPA STANDARDS
	IN THE COUNTY OF ELGIN, IN THE GEOGRAPHIC TOWNSHIP OF SOUTHWOLD, APPROXIMATELY 8.0m SOUTH OF THE CENTRELINE OF LAKE ROAD AND 11.8m EAST OF THE PRODUCTION OF CENTRELINE OF SCOTCH ROAD. ELEVATION: 214.432m (CGVD28:78)	INSULATION NOTE: INSULATE SEWERS + DRAWING W-3 'WATER BASIN LEADS AND 1.5
CONTINUED ON SHEET 4B BLOCK 82	(CONTRACTOR TO CONFIRM BENCHMARK INFORMATION PRIOR TO CONSTRUCTION)	ALL CLEARANCES TO B-3.1.19.1 'ELECTRIC MAINTAINED
P.I.N. LIMIT DITCH	VERTICAL DATUM NOTE: INFORMATION FROM CGVD28:78 HAS BEEN VERTICALLY ADJUSTED BY -0.442m BASED ON BENCHMARK DATUM	INSTALL PARSON MH
(PARTIALLY SILTED IN)	VALUES OF 175.902 TO 175.460 TO CONVERT TO CGVD2013 PER NATURAL RESOURCES CANANDA DOCUMENT NRCAN 973006 PORT STANLEY PIER BM	UTILITIES NOTE: FOR CLARITY, NOT ALI CONTRACTOR IS RESP CONSTRUCTION.
dunup /	EXISTING SERVICING NOTE:	OWNER'S CONTRACTOR THE INSTALLATION OF
DAD DAC	INVERTS OF THE EX. SANITARY & STORM SEWERS @ CONNECTION POINTS SHALL BE CONFIRMED BY THE OWNER'S CONTRACTOR PRIOR TO THE START OF CONSTRUCTION/ORDERING STRUCTURES. THE CONSULTANT IS TO BE INFORMED IF DIFFERENT THAN NOTED.	ALL SUMP PIT CONFIC PUMPS ARE TO INCLU GRADE AS PER MUNIC
anna star	RESTORATION NOTE: ALL WORK IN THE ROAD ALLOWANCE SHALL MEET THE MINIMUM SPECIFICATIONS OF THE MUNICIPALITY OF CENTRAL ELGIN PHYSICAL	AND CONSTRUCTION S
And a start of the	SERVICES DEPARTMENT. THE MUNICIPALITY OF CENTRAL ELGIN INFRASTRUCTURE DESIGN GUIDELINES AND CONSTRUCTION STANDARDS ARE TO BE APPLIED TO WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE UNLESS OTHERWISE APPROVED BY THE MUNICIPALITY.	SERVICES SHALL BE F ON SHEET C1, WHICH ROAD OCCUPANCY PE
	OWNER'S CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY CONSTRUCTION MEASURES SUCH AS, BUT NOT LIMITED TO, PIPE COVER AT NO ADDITIONAL CHARGE TO THE CONTRACT.	ALL WATERMAIN CONS ENGINEERING DEPARTM INSULATED OVER THE
g and a start with	STORM SERVICING NOTE: NO BUILDING DRAIN (SUMP/WEEPING TILE/RAIN WATER LEADER) CONNECTIONS WILL BE PERMITTED INTO THE SANITARY SEWERS AND NO SUMP PUMPS ARE PERMITTED TO BE CONNECTED TO THE STORM SYSTEM. SUMP PUMPS SHALL BE DIRECTED TO GRADE AS PER MUNICIPALITY OF	STORM DRAINAGE NOT STORM DRAINAGE MAY SHALL BE CONDUCTED
	CENTRAL ELGIN INFRASTRUCTURE DESIGN GUIDELINES AND CONSTRUCTION STANDARDS SECTION 2.7g) THE LENGTH OF TRENCH OPENING AT ANY GIVEN TIME SHALL NOT EXCEED	THE OWNER'S CONTRA
	TWO LENGTHS OF PIPE.	DDITIONA
	ALL	SERVICING LOCATIONS
The second secon	UNIT	NOT LIMITED TO SECT IS SHALL HAVE 3.0m OF TION 2.7) WITH NON S
SAMH 15	LOC/ SAN	ATIONS SHOWN ON THE <u>ITARY SERVICES:</u> SANITARY SERVICES SH
	GRA INST	DE ON PROPERTY LINE TALLED TO PROPERTY LIN
SA @ 0.32%	ALL SEC	<u>ER SERVICES</u> : WATER SERVICES SHAL TION 5.8.3, AND SERVICI
What where the second s	ALL	<u>ERMAINS:</u> WATERMAINS AND APPUI <u>UCTURE NOTES:</u>
	•	ALL CATCH BASINS (CB) ALL CATCH BASIN MAIN
E C C C C C C C C C C C C C C C C C C C	•	400.020. ALL MAINTENANCE HOLE 401.010 (UNLESS OTHER
	•	ALL DOUBLE CATCH BAS
WEI STATUS	•	TO OPSD 400.020. ALL MAINTENANCE HOLES OGS TO BE STORMCEPTO
B C C C C C C C C C C C C C C C C C C C		ALL HEADWALLS TO OPS OPSD 980.101, AND BAI ALL MAINTENANCE HOLES
	•	THE AREA BETWEEN MAI THAN 0.6m, GRANULAR
	•	BETWEEN THEM IS GREA AS APPROVED BY MATER ALL CATCH BASINS & D
1000 353 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	•	ALL CATCH BASIN LEADS ALL REAR YARD CATCH <u>E NOTES:</u>
The second secon	•	ALL SEWER PIPE 1250 - ALL SEWER PIPE 2500 -
	ALL	ALL SEWER PIPE 6000 SUBSTITUTIONS TO BE / SPECIFICATION PER THE
SAMH 9		LTERNATI
	FOR	ALTERNATIVE STRUCTUR

NOTE: FOR CLARITY NO PDC'S OR WSC'S ARE SHOWN. FOR STANDARD SERVICING LOCATIONS SEE THE MUNICIPALITY OF CENTRAL ELGIN DESIGN GUIDELINES & CONSTRUCTION STANDARDS SECTION 2.7



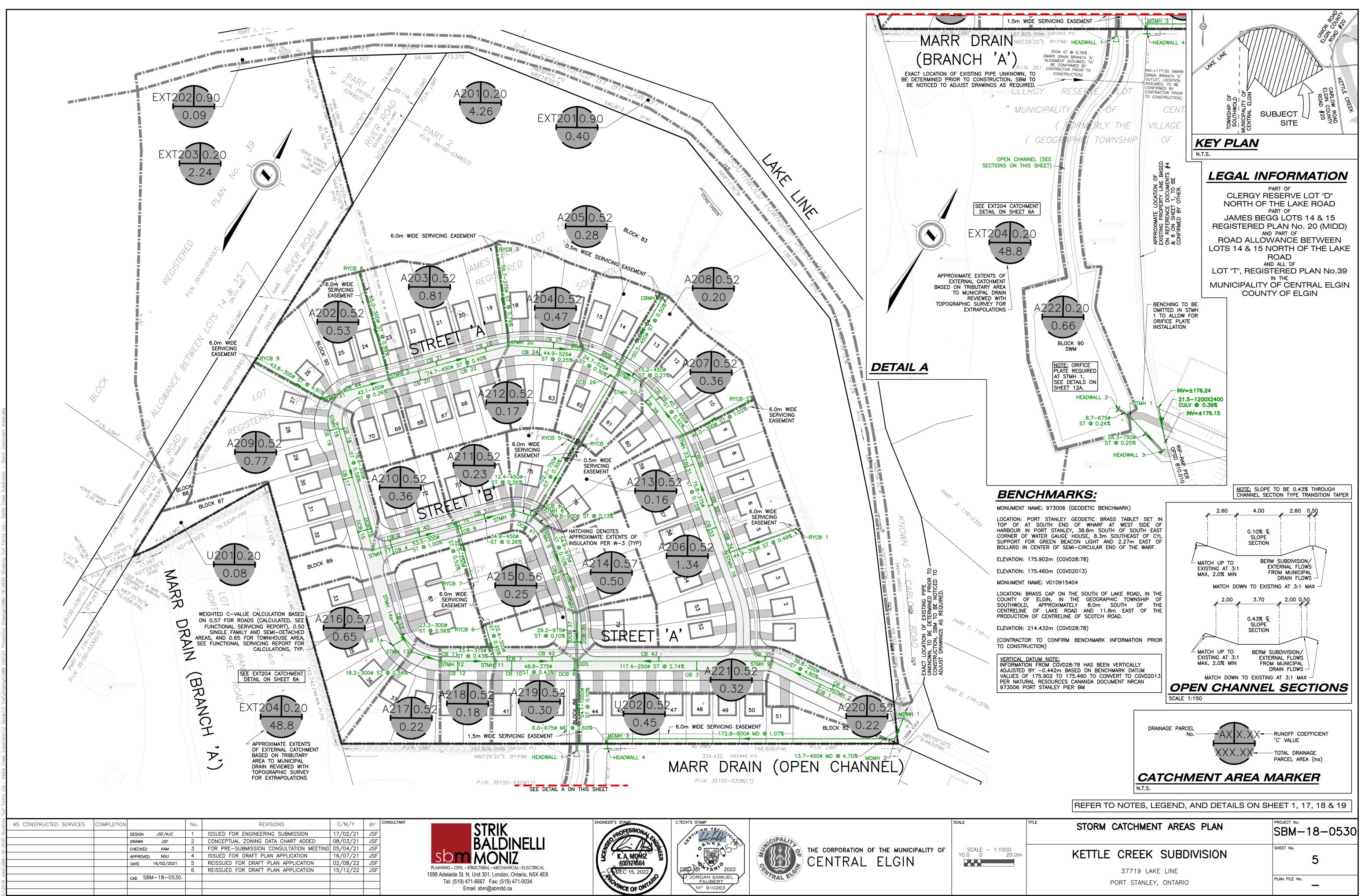






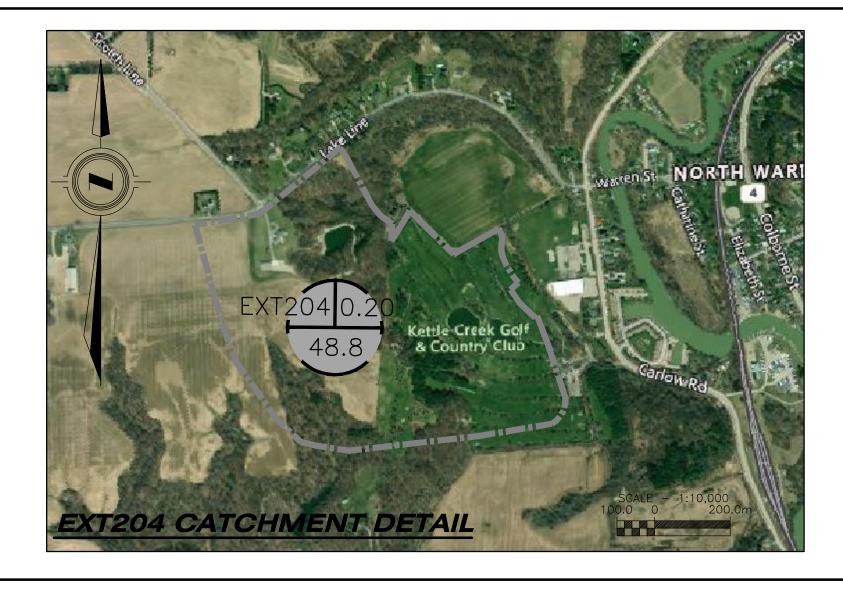
THE CORPORATION OF THE MUNICIPALITY OF CENTRAL ELGIN





AS CONSTRUCTED SERVICES       COMPLETION       No.       REVISIONS       D/M/Y       BY       CONSULTANT         AS CONSTRUCTED SERVICES       DESIGN       JSF/KJC       1       ISSUED FOR ENGINEERING SUBMISSION       17/02/21       JSF         Image: Consultant of the construction of the const		1							1
DRAWN       JSF       2       CONCEPTUAL ZONING DATA CHART ADDED       08/03/21       JSF         CHECKED       KAM       3       FOR PRE-SUBMISSION CONSULTATION MEETING       05/04/21       JSF         APPROVED       NGU       4       ISSUED FOR DRAFT PLAN APPLICATION       16/07/21       JSF         DATE       16/02/2021       5       REISSUED FOR DRAFT PLAN APPLICATION       02/08/22       JSF         DATE       16/02/2021       5       REISSUED FOR DRAFT PLAN APPLICATION       02/08/22       JSF         CAD       SBM-18-0530       -       -       -       -       -	AS CONSTRUCTED SERVICES	COMPLETION			No.	REVISIONS	D/M/Y	ΒY	
APPROVED       NGU       4       ISSUED FOR DRAFT PLAN APPLICATION       16/07/21       JSF         DATE       16/02/2021       5       REISSUED FOR DRAFT PLAN APPLICATION       02/08/22       JSF         End       6       REISSUED FOR DRAFT PLAN APPLICATION       15/12/22       JSF         Image: Comparison of the structure of th			DESIGN	JSF/KJC	1	ISSUED FOR ENGINEERING SUBMISSION	17/02/21	JSF	<u> </u>
APPROVED       NGU       4       ISSUED FOR DRAFT PLAN APPLICATION       16/07/21       JSF         DATE       16/02/2021       5       REISSUED FOR DRAFT PLAN APPLICATION       02/08/22       JSF         End       6       REISSUED FOR DRAFT PLAN APPLICATION       15/12/22       JSF         Image: Comparison of the structure of th			DRAWN	JSF	2	CONCEPTUAL ZONING DATA CHART ADDED	08/03/21	JSF	
DATE       16/02/2021       5       REISSUED FOR DRAFT PLAN APPLICATION       02/08/22       JSF         DATE       16/02/2021       5       REISSUED FOR DRAFT PLAN APPLICATION       02/08/22       JSF         CAD       SBM-18-0530       CAD       SBM-18-0530       Tel: (519) 471-6667			CHECKED	KAM	3	FOR PRE-SUBMISSION CONSULTATION MEETING	05/04/21	JSF	
6         REISSUED FOR DRAFT PLAN APPLICATION         15/12/22         JSF         PLANNING - CIVIL - STRUCTUR           CAD         SBM-18-0530         Image: Comparison of the structure         Image: Comparison of the structure         Tel: (519) 471-6667         Tel: (519) 471-6667			APPROVED	NGU	4	ISSUED FOR DRAFT PLAN APPLICATION	16/07/21	JSF	
CAD         SBM-18-0530         FOR         DRAFT         PLAN         APPLICATION         15/12/22         JSF         1599 Adelaide St. N, Unit 30           Tel:         (519) 471-6667         Tel:         (519) 471-6667 </td <td></td> <td></td> <td>DATE</td> <td>16/02/2021</td> <td>5</td> <td>REISSUED FOR DRAFT PLAN APPLICATION</td> <td>02/08/22</td> <td>JSF</td> <td></td>			DATE	16/02/2021	5	REISSUED FOR DRAFT PLAN APPLICATION	02/08/22	JSF	
Tel: (519) 471-6667					6	REISSUED FOR DRAFT PLAN APPLICATION	15/12/22	JSF	
			CAD SBN	M-18-0530					
									( )





RUNOFF COEFFICIENT 'C' VALUES THE FOLLOWING 'C' VALUES WILL APPLY WHEN DESIGNING STORM SEWERS:

	PARKS, PLAYGROUNDS, OPEN SPACE	0.20	PROJECT NAM
	SINGLE FAMILY	0.35-0.75	0.52 USED IN COMBINATION WITH ROW
	SEMI-DETACHED	0.40-0.75	0.52 USED IN COMBINATION WITH ROW
	APARTMENTS	0.50 - 0.70	
	COMMERCIAL, INSTITUTIONAL & INDUSTRIAL	0.50 - 0.90	
dwg	DENSELY BUILT, PAVED	0.90	

CAD SBM-18-0530

15/12/22 JSF

	LOCATION				AREA	_ <b>_</b>		TOTAL (A x C)	-		R	AINFALL INTE	NSITY	Q				SEWER DES	GN	-		_		PROFILE		
											TIME EN	NTRY mm													INVERT /	ELEVATION
		FROM	то	DELTA	TOTAL		TOTAL	TOTAL	TOTAL	TOTAL			INTENSITY		PIPE SIZE			Q	VELOCITY	LENGTH	TIME OF	FALL IN	HEADLOSS	DROP IN		1
AREA No.	STREET	MANHOLE	MANHOLE	HECTARE	HECTARES	C AxC	SECTION	LATERAL	SEWER	2.78AxC	SECTION	ACCUM.	mm/hr	L/s	mm	n	SLOPE %	CAP I/s	m / s	m	FLOW	SEWER	IN D.S. MH	MANHOLE	U.S.	D.S.
EXT201	LAKE LINE	EXTERNAL	CBMH 8	0.40	0.40	0.90 0.36	0.00	0.00	0.36	1.00	0.0	20.0	53.1	53.1												<u> </u>
A201	BLOCK 91	CBMH 8	STMH 7	4.26	4.66	0.20 0.85	0.36	0.00	1.21	3.37	0.0	20.0	53.1	178.8	450	0.013	0.50	201.6	1.27	50.5	0.66	0.252	0.000	-	178.82	178.57
											0.7	20.7														<u> </u>
EXT202	LAKE LINE	EXTERNAL	EXTERNAL	0.09	0.09	0.90 0.08	0.00	0.00	0.08	0.23	0.0	20.0	53.1	11.9												L
EXT203	LAKE LINE	EXTERNAL	STMH 21	2.24	2.33	0.20 0.45	0.08	0.00	0.53	1.47	0.0	20.0	53.1	78.0												<u> </u>
A202	STREET 'A'	STMH 21	STMH 3	0.53	2.86	0.52 0.28	0.53	0.00	0.80	2.24	0.0	20.0	53.1	118.7	450	0.013	0.26	145.4	0.91	42.1	0.77	0.110	0.000		179.16	179.05
A203	STREET 'A'	STMH 3	STMH 20	0.81	3.67	0.52 0.42	0.80	0.00	1.23	3.41	0.8	20.8	51.8	176.4	450	0.013	0.40	180.3	1.13	74.7	1.10	0.299	0.000	0.010	179.04	178.74
A204	STREET 'A'	STMH 20	STMH 19	0.47	4.14	0.52 0.24	1.23	0.00	1.47	4.09	1.1	21.9	50.0	204.5	525	0.013		215.0	0.99	44.9	0.75	0.112	0.025	0.080	178.66	178.55
A205	STREET 'A'	STMH 19	STMH 7	0.28	4.42	0.52 0.15	1.47	0.00	1.62	4.49	0.8	22.6	48.9	219.8	525	0.013	0.30	235.5	1.09	24.7	0.38	0.074	0.096	0.030	178.52	178.45
								_			0.4	23.0													'	<b></b>
A206	STREET 'A'	STMH 16	STMH 23	1.36	1.36	0.52 0.71	0.00	0.00	0.71	1.97	0.0	20.0	53.1	104.3	375	0.013		151.8	1.37	75.8	0.92	0.569	0.028		179.48	178.91
A207	STREET 'A'	STMH 23	STMH 22	0.36	1.72	0.52 0.19	0.71	0.00	0.89	2.49	0.9	20.9	51.5	128.1	450	0.013	0.52	205.6	1.29	40.7	0.52	0.212	0.018	0.080	178.83	178.62
A208	STREET 'A'	STMH 22	STMH 7	0.20	1.92	0.52 0.10	0.89	0.00	1.00	2.78	0.5	21.4	50.7	140.7	450	0.013	0.27	148.1	0.93	15.2	0.27	0.041	0.096	0.030	178.59	178.55
											0.3	21.7													'	<b></b>
	BLOCK 92	STMH 7	STMH 6	0.00	11.00	0.20 0.00	1.21	2.61	3.83	10.64	0.0	21.9	50.0	531.8	750	0.013	0.30	606.7	1.37	102.2	1.24	0.304	0.051	0.146	178.30	178.00
											1.2	23.1													'	<b></b>
A209	STREET 'A'	STMH 18	STMH 17	0.77	0.77	0.52 0.40	0.00	0.00	0.40	1.11	0.0	20.0	53.1	59.1	300	0.013		73.6	1.04	78.9	1.26	0.458	0.095	-	179.26	178.80
A210	STREET 'B'	STMH 17	STMH 10	0.36	1.13	0.52 0.19	0.40	0.00	0.59	1.63	1.3	21.3	51.0	83.3	300	0.013	1.00	96.7	1.37	53.0	0.65	0.530	0.000	0.100	178.70	178.17
A211	STREET 'B'	STMH 10	STMH 15	0.24	1.37	0.52 0.12	0.59	0.00	0.71	1.98	0.6	21.9	50.0	99.0	450	0.013	0.26	145.4	0.91	34.9	0.64	0.091	0.023	0.053	178.12	178.03
A212	STREET 'B'	STMH 15	STMH 6	0.17	1.54	0.52 0.09	0.71	0.00	0.80	2.23	0.6	22.5	49.0	109.2	450	0.013	0.26	145.4	0.91	12.4	0.23	0.032	0.021	0.030	178.00	177.97
											0.2	22.8										_				<u> </u>
A213	STREET 'B'	STMH 6	STMH 5	0.16	12.54	0.52 0.08	0.80	3.83	4.71	13.09	0.0	23.1	48.3	632.4	900	0.013		652.7	1.03	9.8	0.16	0.013	0.024	0.029	177.94	177.92
A214	STREET 'B'	STMH 5	STMH 4	0.50	13.04	0.57 0.29	4.71	0.00	5.00	13.89	0.2	23.2	48.1	667.6	975	0.013	0.10	708.7	0.95	54.9	0.96	0.055	0.016	0.030	177.89	177.84
A215	STREET 'B'	STMH 4	OGS	0.25	13.29	0.56 0.14	5.00	0.00	5.14	14.28	1.0	24.2	46.8	668.2	975	0.013	0.10	708.7	0.95	29.2	0.51	0.029	0.000	0.030	177.81	177.78
					0.05					1.00	0.5	24.7					0.50								170.01	170.00
A216	STREET 'A'	STMH 14	STMH 13	0.65	0.65	0.57 0.37		0.00	0.37	1.03	0.0	20.0	53.1	54.7	300	0.013		72.4	1.02	23.3		0.130	0.032	-	178.81	
A217	STREET 'A'	STMH 13	STMH 12	0.22	0.87	0.52 0.11	0.37	0.00	0.48	1.35	0.4	20.4	52.4	70.7	300	0.013		71.1	1.01	18.2	0.30	0.098	0.019	0.030	178.65	178.55
A218	STREET 'A'	STMH 12	STMH 11	0.18	1.05	0.52 0.09	0.48	0.00	0.58	1.61	0.3	20.7	51.9	83.5	375	0.013		115.0	1.04	33.4	0.54	0.144	0.000	0.080	178.47	178.33
A219	STREET 'A'	STMH 11	OGS	0.30	1.35	0.52 0.16	0.58	0.00	0.73	2.04	0.5	21.2	51.0	104.2	375	0.013	0.43	115.0	1.04	48.8	0.78	0.210	0.051	0.012	178.32	178.11
4220		CTN 411 2		0.22	0.22	0.52 0.11	0.00	0.00	0.11	0.22	0.8	22.0	F2 1	10.0	250	0.012	4.00	120.2	2.05	20.0	0.25	1.010	0.086		102.02	101.02
A220	STREET 'A' STREET 'A'	STMH 2	STMH 9	0.22	0.22	0.52 0.11 0.52 0.17	0.00	0.00	0.11	0.32	0.0	20.0	53.1	16.9	250	0.013		130.3	2.65	39.8	0.25	1.910	0.086	-	183.83	181.92 177.84
A221	SIREELA	STMH 9	OGS	0.32	0.54	0.52 0.17	0.11	0.00	0.28	0.78	0.2	20.2	52.6	41.1	250	0.013	2.74	98.4	2.01	117.4	0.98	3.217	0.051	0.860	181.06	177.84
	BLOCK 95	OGS	HW 1	0.00	15.18	0.20 0.00	5.14	1.02	6.15	17.10	1.0	21.2 24.2	46.8	800.5	1050	0.013	0.10	863.5	1.00	54.1	0.90	0.054		0.002	177.78	177.73
	BEOCK 95	003		0.00	15.10	0.20 0.00	5.14	1.02	0.15	17.10	0.0	24.2	40.0	800.5	1050	0.015	0.10	803.5	1.00	54.1	0.90	0.054	-	0.002	1/7.70	1/7.75
EXT204	OVERLAND	-	_	46.50	46.50	0.52 24.18	0.00	0.00	24.18	67.22														+		<u> </u>
EX1204	OVERLAND	-	-	40.50	40.50	0.52 24.16	0.00	0.00	24.10	07.22											-	-		+		<u> </u>
A222	SWM FACILITY	HW 2	STMH 1	0.66	62.34	0.33 0.22	6.15	24.18	30.55	84.92		SEE SWM I			675	0.013	0.24	SEE S\A/A	A MODELING	8.7		0.021	0.000	+	176.83	176.81
~~~~	SWM FACILITY	STMH 1	HW 3	0.00	62.34	0.33 0.22	30.55	0.00	30.55	84.92	<u>م</u>	EE SWM MODI		917.0	750	0.013			/ MODELING	28.3		0.021		0.010	176.80	176.73
RESTRICTED FLOW	V VALUE, SEE FUNCTIONAL SERVICING REPORT			0.00	02.34	0.52 0.00	30.33	0.00	50.55	04.32				517.0	7.50	0.013	0.25			20.5		0.071				1/0./3
											CHONIES	C CTAND		STAND							CONF					
AS CONSTRUCTED	SERVICES COMPLETION	No.	REVISIONS		D/M/Y BY	CONSULTANT		STRI	Y			R'S STAMP	C.TECH'S	SIAMP							SCALE		IIILE	STC	DRM DESI	GN SHEE
	DESIGN JSF/KJC		NGINEERING SUB		17/02/21 JS	F		- Sivi				PROFESSIONA	e at	FILLI	10	(IDA)										
	DRAWN JSF		ZONING DATA CH		08/03/21 JS	F		BAI	DINEL			U: R		ALEX	230	HIGIPAL	74				_					
	CHECKED KAM		BMISSION CONSUL		05/04/21 JS 16/07/21 JS		chr				\ <b>[</b> § \	K A MOAND	"魚」			3 ( 🔊 (	SA THE CO		OF THE MUN	ICIPALITY O	F	N /A		KETTLE	CRFFK	SURDIN
	DATE 16/02/2021		R DRAFT PLAN AF		02/08/22 JS		50	n MOI	NIZ		3	100124664	<sup>∞</sup> )   _			() <b>*</b> *		NTRAL	of the mun _ ELGII	N		N/A				
			R DRAFT PLAN AF		15/12/22 JS		PLANNING • CIV	IL • STRUCTURAL • MEC	HANICAL • ELECTRI	ICAL		DEC 15 2022		6 VTAR	2022	er 😂	<u>s</u>								37719 LAK	(F LINF

#### **BENCHMARKS:**

MONUMENT NAME: 973006 (GEODETIC BENCHMARK)

LOCATION: PORT STANLEY GEODETIC BRASS TABLET SET TOP OF AT SOUTH END OF WHARF AT WEST SIDE OF HARBOUR IN PORT STANLEY, 38.8m SOUTH OF SOUTH EAS

CORNER OF WATER GAUGE HOUSE, 8.3m SOUTHEAST OF CO SUPPORT FOR GREEN BEACON LIGHT AND 2.27m EAST C BOLLARD IN CENTER OF SEMI-CIRCULAR END OF THE WARF.

ELEVATION: 175.902m (CGVD28:78)

ELEVATION: 175.460m (CGVD2013) MONUMENT NAME: V010915404

LOCATION: BRASS CAP ON THE SOUTH OF LAKE ROAD, IN T COUNTY OF ELGIN, IN THE GEOGRAPHIC TOWNSHIP SOUTHWOLD, APPROXIMATELY 8.0m SOUTH OF T CENTRELINE OF LAKE ROAD AND 11.8m EAST OF T PRODUCTION OF CENTRELINE OF SCOTCH ROAD.

ELEVATION: 214.432m (CGVD28:78)

(CONTRACTOR TO CONFIRM BENCHMARK INFORMATION PRIC TO CONSTRUCTION)

VERTICAL DATUM NOTE: INFORMATION FROM CGVD28:78 HAS BEEN VERTICALLY ADJUSTED BY -0.442m BASED ON BENCHMARK DATUM VALUES OF 175.902 TO 175.460 TO CONVERT TO CGVD2013 PER NATURAL RESOURCES CANANDA DOCUMENT NRCAN 973006 PORT STANLEY PIER BM

#### **STORM SEWER DESIGN SHEET**

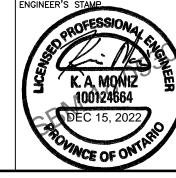
MUNICIPALITY OF CENTRAL ELGIN

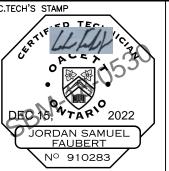
#### KETTLE CREEK SUBDIVISION ME:

FLOW Q = 2.78 x A x I x R

WHERE Q=PEAK FLOW IN LITRES PER SECOND (L / s) A=AREA IN HECTARES (Ha) R=RUNOFF COEFFICIENT I=RAINFALL INTENSITY (mm / hr) RETURN PERIOD = 2 YEARS









	LEGAL INFORMATION	
T IN OF EAST	PART OF CLERGY RESERVE LOT "D" NORTH OF THE LAKE ROAD	Unite Store
CYL FOF RF.	PART OF JAMES BEGG LOTS 14 & 15	UNE LI
	REGISTERED PLAN No. 20 (MIDD) AND PART OF ROAD ALLOWANCE BETWEEN	
	LOTS 14 & 15 NORTH OF THE LAKE ROAD	
THE OF THE THE	AND ALL OF LOT "T", REGISTERED PLAN NO.39 IN THE	
	MUNICIPALITY OF CENTRAL ELGIN COUNTY OF ELGIN	KEY PLAN
RIOR		N.T.S.

	Date:	November 30, 202	22	
	Job Number:	SBM-18-0530		
	Client:	Strathroy Turf Far	ms	
	Project:	Kettle Creek Subd	ivision	
	Designed By:	JSF		
	<b>Reviewed By:</b>	KAM/NGu		
	Project File No.	SBM-18-0530		
_		PROFILE	1	
			INVERT	ELEVATION
	HEADLOSS	DROP IN		
	HEADLOSS IN D.S. MH		U.S.	ELEVATION D.S.
	IN D.S. MH	DROP IN	U.S.	D.S.
		DROP IN		
	IN D.S. MH	DROP IN MANHOLE	U.S.	D.S.
	IN D.S. MH	DROP IN MANHOLE	U.S.	D.S.
	IN D.S. MH 0.000	DROP IN MANHOLE	U.S. 178.82	<b>D.S.</b> 178.57
	IN D.S. MH 0.000 0.000	DROP IN MANHOLE -	U.S. 178.82 179.16	<b>D.S.</b> 178.57 179.05
	IN D.S. MH 0.000 0.000 0.000	DROP IN MANHOLE - - 0.010	U.S. 178.82 179.16 179.04	D.S. 178.57 179.05 178.74
	IN D.S. MH 0.000 0.000 0.000 0.025	DROP IN MANHOLE - - 0.010 0.080	U.S. 178.82 179.16 179.04 178.66	D.S. 178.57 179.05 178.74 178.55
	IN D.S. MH 0.000 0.000 0.000	DROP IN MANHOLE - - 0.010	U.S. 178.82 179.16 179.04	D.S. 178.57 179.05 178.74

REFER TO NOTES, LEGEND, AND DETAILS ON SHEET 1, 17, 18 & 19

PROJECT No.

VISION

37719 LAKE LINE PORT STANLEY, ONTARIO SBM-18-0530 SHEET No. 6A

PLAN FILE No. —

PRO

	LOCATION			AREA		TOTAL (A x C)				RAINFALL INTENSITY Q			Q	SEWER DESIGN						PROFILE						
				TIME EN	TRY mm													INVERT E	ELEVATION							
		FROM	то	DELTA	TOTAL		TOTAL	TOTAL	TOTAL	TOTAL			INTENSITY		PIPE SIZE			Q	VELOCITY	LENGTH	TIME OF	FALL IN	HEADLOSS	DROP IN		1
AREA No.	STREET	MANHOLE	MANHOLE	HECTARE	HECTARES	C AxC	SECTION	LATERAL	SEWER	2.78AxC	SECTION	ACCUM.	mm/hr	L/s	mm	n	SLOPE %	CAP l/s	m / s	m	FLOW	SEWER	IN D.S. MH	MANHOLE	U.S.	D.S.
	LAKE LINE	EXTERNAL	MDMH 1	0.00	ASSUMED									618.1	450	0.013	4.70	618.1	3.89	N/A			0.771	-	UNKNOWN	181.69
	STREET 'A' REAR YARD	MDMH 1	MDMH 2	0.00	ASSUMED									618.1	450	0.013	4.70	618.1	3.89	13.7	0.06	0.643	0.222	0.770	180.92	180.28
	STREET 'A' REAR YARD	MDMH 2	MDMH 3	0.00	ASSUMED									618.1	600	0.013	1.07	633.6	2.24	172.8	1.28	1.840	0.169	0.518	179.76	177.92
	STREET 'A' REAR YARD	MDMH 3	HW 4	0.00	ASSUMED									618.1	675	0.013	0.60	651.1	1.82	6.0	0.05	0.036	-	0.169	177.75	177.71
618.1 L/s used	for Q value due to incoming flows from Marr Drain (maxim	um possible flows	s from upstream	run of connection	n point, 450dia @	4.7%)		•								•		•		•	•	-			•	

AS CONSTRUCTED SERVICES	COMPLETION			No.	REVISIONS	D/M/Y	BY	CONSULTANT
		DESIGN	JSF/KJC	1	ISSUED FOR ENGINEERING SUBMISSION	17/02/21	JSF	
		DRAWN	JSF	2	CONCEPTUAL ZONING DATA CHART ADDED	08/03/21	JSF	
		CHECKED	KAM	3	FOR PRE-SUBMISSION CONSULTATION MEETING	05/04/21	JSF	
		APPROVED	NGU/KAM	4	ISSUED FOR DRAFT PLAN APPLICATION	16/07/21	JSF	som
		DATE	16/02/2021	5	REISSUED FOR DRAFT PLAN APPLICATION	02/08/22	JSF	
				6	REISSUED FOR DRAFT PLAN APPLICATION	15/12/22	JSF	PLANNING • CIVIL • STRU
		CAD SBI	M-18-0530					- 1599 Adelaide St. N, Ur - Tel: (519) 471-6
								Email:

#### **BENCHMARKS**:

MONUMENT NAME: 973006 (GEODETIC BENCHMARK)

LOCATION: PORT STANLEY GEODETIC BRASS TABLET SET IN TOP OF AT SOUTH END OF WHARF AT WEST SIDE OF HARBOUR IN PORT STANLEY, 38.8m SOUTH OF SOUTH EAST CORNER OF WATER GAUGE HOUSE, 8.3m SOUTHEAST OF CYL SUPPORT FOR GREEN BEACON LIGHT AND 2.27m EAST OI BOLLARD IN CENTER OF SEMI-CIRCULAR END OF THE WARF.

ELEVATION: 175.902m (CGVD28:78)

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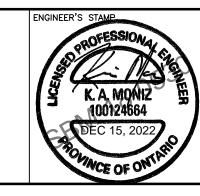
VERTICAL DATUM NOTE: INFORMATION FROM CGVD28:78 HAS BEEN VERTICALLY ADJUSTED BY -0.442m BASED ON BENCHMARK DATUM VALUES OF 175.902 TO 175.460 TO CONVERT TO CGVD2013 PER NATURAL RESOURCES CANANDA DOCUMENT NRCAN 973006 PORT STANLEY PIER BM

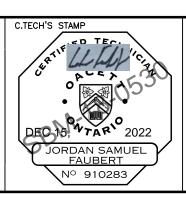
#### MARR DRAIN DESIGN SHEET

MUNICIPALITY OF CENTRAL ELGIN

#### DJECT NAME: **KETTLE CREEK SUBDIVISION**





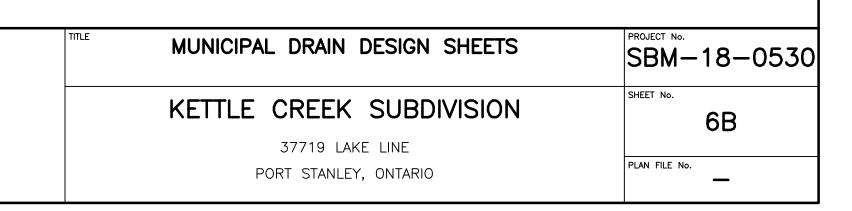


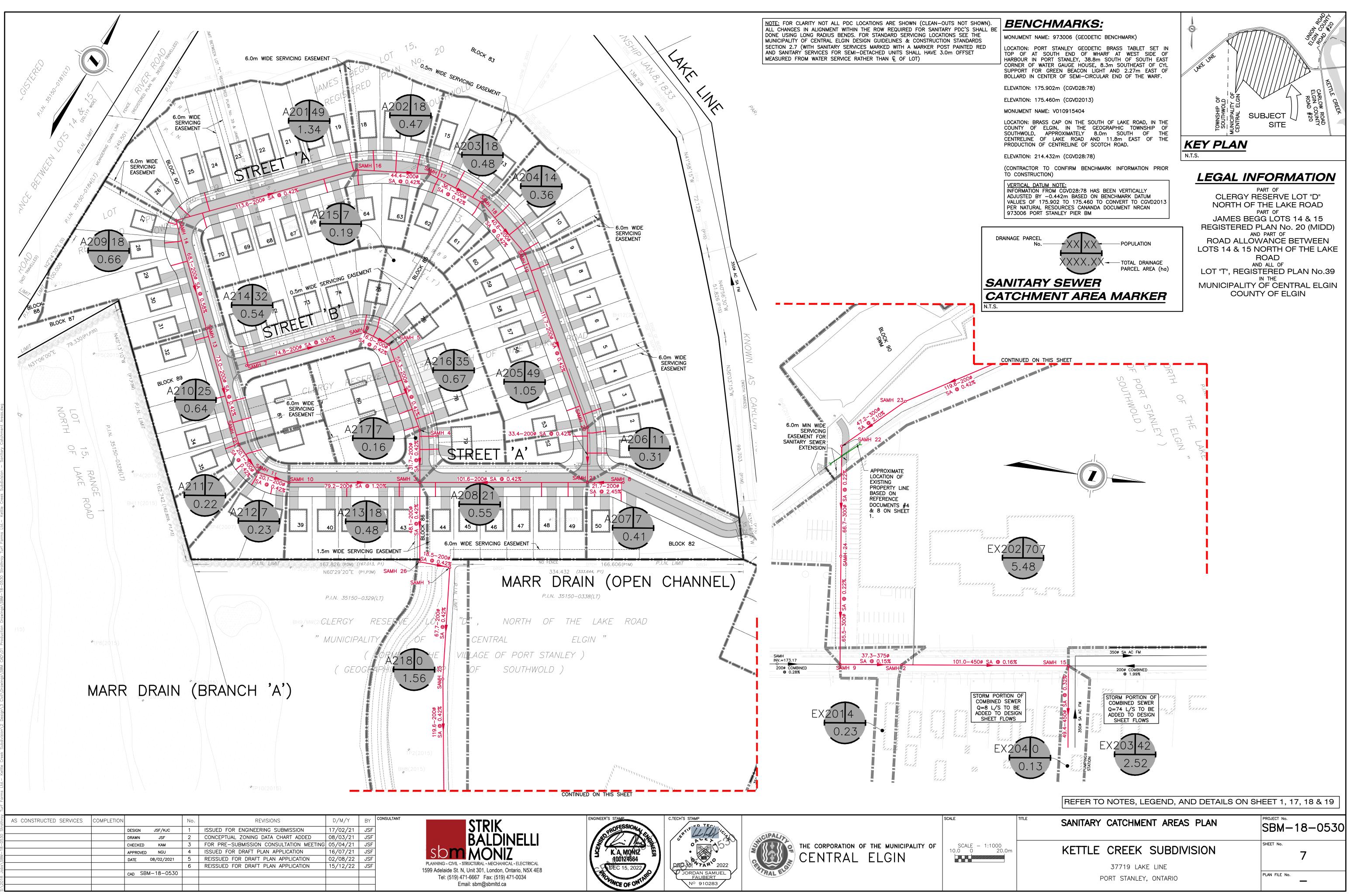


SCALE

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OR	
	REFER TO NOTES, LEGEND, AND DETAILS ON SHEET 1, 17, 18 & 19

July 12, 2022
SBM-18-0530
Strathroy Turf Farms
Kettle Creek Subdivision
JSF
KAM/NGu
SBM-18-0530





# STRIK BALDINELLI PLANNING · CIVIL · STRUCTURAL · MECHANICAL · ELECTRICAL

P: 519-471-6667

#### **Residential Population Densities**

Area Basis

Average Daily Domestic Flows = 3.5 people/unit

Populations for school and community centre approximated, see Functional Servicing Report for details/calculations

											Developmen												
	Loc	ation		A	rea						Sewag	ge Flows				Sewer d	esign					Profile	<u>ا</u> ڊ
Area N	o. Street Name	From MH	To MH	Delta Hectare	Total Hectare	People Per Lot	No. of Lots	Delta Pop.	Total Pop.	Harmon Peaking Factor	Infilt L/S	Sewage L/S	Total L/S	n	Pipe Slope %	Calc'd Dia. mm	Dia. mm	Capacity L/S	Velocity m/s	Length m	Fall in Sewer	Headloss	
A202	STREET 'A'	SAMH 14	SAMH 16	1.34	1.34	3.5	14	49	49	4.3165	0.27	0.98	1.25	0.013	0.42%	69.06	200	21.27	0.68	113.6	0.48	0.008	L
A202	STREET 'A'	SAMH 16	SAMH 17	0.47	1.81	3.5	5	18	67	4.2873	0.36	1.33	1.69	0.013	0.42%	77.42	200	21.27	0.68	44.4	0.19	0.010	
A203	STREET 'A'	SAMH 17	SAMH 18	0.48	2.29	3.5	5	18	85	4.2622	0.46	1.68	2.14	0.013	0.42%	84.48	200	21.27	0.68	36.1	0.15	0.009	L
A204	STREET 'A'	SAMH 18	SAMH 19	0.36	2.65	3.5	4	14	99	4.2448	0.53	1.95	2.48	0.013	0.42%	89.30	200	21.27	0.68	40.6	0.17	0.008	╞
A205	STREET 'A'	SAMH 19	SAMH 20	1.05	3.70	3.5	14	49	148	4.1929	0.74	2.87	3.61	0.013	0.42%	102.90	200	21.27	0.68	111.7	0.47	0.008	╞
A206	STREET 'A'	SAMH 20	SAMH 21	0.31	4.01	3.5	3	11	159	4.1827	0.80	3.08	3.88	0.013	0.42%	105.70	200	21.27	0.68	33.4	0.14	0.023	╞
				0.44	0.44	2.5				4 4202	0.00	0.14	0.00	0.010	0.450/	26.42	200	<b>54 07</b>		04 7	0.50		╀
A207	STREET 'A'	SAMH 8	SAMH 21	0.41	0.41	3.5	2	/	/	4.4283	0.08	0.14	0.23	0.013	2.45%	26.12	200	51.37	1.64	21.7	0.53	0.000	┢
A208	STREET 'A'	SAMH 21	SAMH 3	0.55	4.97	3.5	6	21	187	4.1585	0.99	3.60	4.59	0.013	0.42%	112.60	200	21.27	0.68	101.6	0.43	0.023	┢
	STREET A	SAIVIN 21	SAIVIN S	0.55	4.57	5.5	0	21	107	4.1365	0.99	5.00	4.55	0.015	0.4270	112.00	200	21.27	0.08	101.0	0.43	0.025	┢
A209	STREET 'A'	SAMH 14	SAMH 13	0.66	0.66	3.5	5	18	18	4.3864	0.13	0.37	0.50	0.013	0.58%	46.05	200	24.99	0.80	68.1	0.39	0.000	┢
A210	STREET 'A'	SAMH 13	SAMH 12	0.64	1.30	3.5	7	25	43	4.3275	0.26	0.86	1.12	0.013	0.42%	66.36	200	21.27	0.68	73.0	0.31	0.008	t
A212	STREET 'A'	SAMH 12	SAMH 11	0.22	1.52	3.5	2	7	50	4.3147	0.30	1.00	1.30	0.013	0.42%	70.19	200	21.27	0.68	20.1	0.08	0.014	F
A212	STREET 'A'	SAMH 11	SAMH 10	0.23	1.75	3.5	2	7	57	4.3029	0.35	1.14	1.49	0.013	0.42%	73.74	200	21.27	0.68	20.1	0.08	0.023	T
Å A213	STREET 'A'	SAMH 10	SAMH 3	0.48	2.23	3.5	5	18	75	4.2757	0.45	1.48	1.93	0.013	1.20%	66.82	200	35.95	1.14	79.2	0.95	0.023	T
A214	STREET 'B'	SAMH 7	SAMH 6	0.54	0.54	3.5	9	32	32	4.3502	0.11	0.64	0.75	0.013	0.90%	49.53	200	31.13	0.99	74.8	0.67	0.015	
A215	STREET 'B'	SAMH 6	SAMH 5	0.19	0.73	3.5	2	7	39	4.3353	0.15	0.78	0.93	0.013	0.42%	61.83	200	21.27	0.68	16.0	0.07	0.015	
A216	STREET 'B'	SAMH 5	SAMH 4	0.67	1.40	3.5	10	35	74	4.2771	0.28	1.47	1.75	0.013	0.42%	78.33	200	21.27	0.68	55.3	0.23	0.008	
A217	STREET 'B'	SAMH 4	SAMH 3	0.16	1.56	3.5	2	7	81	4.2675	0.31	1.60	1.91	0.013	0.42%	81.06	200	21.27	0.68	31.7	0.13	0.023	
c/s6u																						<b>_</b>	╞
	STREET 'A'	SAMH 3	SAMH 26	0.00	8.76	3.5	0	0	343	4.0530	1.75	6.44	8.19	0.013	0.42%	139.85	200	21.27	0.68	48.1	0.20	0.001	┢
	SWM FACILITY	SAMH 26	SAMH 1	1.56	10.32	3.5	0	0	343	4.0530	2.06	6.44	8.50	0.013	0.42%	141.83	200	21.27	0.68	18.5	0.08	0.041	╞
	SWM FACILITY	SAMH 1	SAMH 25	0.00	10.32	3.5	0	0	343	4.0530	2.06	6.44	8.50	0.013	0.42%	141.83	200	21.27	0.68	67.7	0.28	0.000	┝
	SWM FACILITY GOLF COURSE	SAMH 25 SAMH 23	SAMH 23 SAMH 22	0.00	10.32 10.32	3.5 3.5	0	0	343 343	4.0530	2.06 2.06	6.44 6.44	8.50 8.50	0.013	0.42%	141.83 104.88	200 200	21.27 47.56	0.68	119.6 47.2	0.50 0.99	0.000	┝
		SAMH 22	SAMH 22	0.00	10.32	3.5	0	0	343	4.0530 4.0530	2.06	6.44	8.50	0.013	2.10% 0.22%	160.11	300	47.38	1.51 0.64	66.7	0.99	0.016	┢
- series	COMMUNITY CNTR	SAMH 24	SAMH 24	0.00	10.32	3.5	0	0	343	4.0530	2.00	6.44	8.50	0.013	0.22%	160.11	300	45.38	0.64	65.5	0.13	0.019	ł
		371411 24	37.11113	0.00	10.52	5.5	0	0	545	4.0550	2.00	0.44	0.50	0.015	0.2270	100.11	500	+3.50	0.04	03.5	0.14	0.015	t
	CARLOW ROAD	EXISTING	SAMH 9											0.013	0.28%	0.00	200	17.30	0.55	38.1	0.11	0.000	T
				AF	PPROX POPU	JLATION C	OF 82 FOR C	OMMUNIT	Y CENTRE A	DDED TO D	ELTA POPU	LATION BELC	)W	MAX (	CAPACITY OF	ABOVE PIPE A	ADDED TO	DOWNSTRE	AM Q				T
EX20	CARLOW ROAD	SAMH 9	SAMH 2	0.23	11.28	3.5	1	4	347	4.0507	2.26	6.51	26.07	0.013	0.15%	261.88	375	67.95	0.62	37.3	0.06	0.000	Γ
EX20	CARLOW ROAD	SAMH 2	SAMH 15	5.48	16.76	3.5	7	707	1054	3.7852	3.35	18.47	76.18	0.013	0.16%	386.81	450	114.11	0.72	101.0	0.16	0.053	
					APPRO	X POPULA	TION OF 60	0 FOR SCH	OOL ADDED	TO DELTA F	POPULATIO	N ABOVE				Q OF 8 L/S AD	DED TO A	REA EX202	TO ACCOUN	IT FOR STO	RM PORTIC	N OF COMB	١Ņ
EX20	STREET 'A'	EXISTING	SAMH 15	2.52	2.52	3.5	12	42	42	4.3294	0.50	0.84	75.35	0.013	1.99%	240.13	200	46.30	1.47	158.3	3.15	0.053	
DIFF	RENCE IN CAPACITY OF	PIPE ABOVE AND A	ASSUMED TOTAL	SEWAGE DI	EMAND ADI	DED TO EX	202 AND AI	LL DOWN S	TREAM ASS	UMING STC	RM OFR TO	D DOWN STR	EAM CB		(	ຊ OF 74 L/S AI	DDED TO A	AREA EX203	TO ACCOUI	NT FOR STO	RM PORTI	ON OF COM	311
EX20	PUMPING STATION	SAMH 15	SA PUMP	0.13	19.41	3.5	0	0	1096	3.7740	3.88	19.15	122.33	0.013	0.32%	405.70	450	161.38	1.01	49.4	0.16	0.000	Γ
5																							
AS CONSTR	1 2 4 1 1 2	INARESIGN JSF/KJC 1 RAWN JSF 2 HECKED KAM 3 PPROVED NGU 4 MATE 08/02/2021 5 6 AD SBM-18-0530	ISSUED FOR ENGI     CONCEPTUAL ZON     FOR PRE-SUBMIS     ISSUED FOR DRAF     REISSUED FOR DF     REISSUED FOR DF	IING DATA CHAF SION CONSULT T PLAN APPLIC RAFT PLAN APP	RT ADDED ATION MEETING CATION PLICATION	08/03/21	JSF JSF	PLANN 1599 Ac	NG - CIVIL - STRUCTU Ielaide St. N, Unit 3 Tel: (519) 471-6667	<b>TRIK</b> ALDINE ONIZ AL - MECHANICAL - EI 01, London, Ontario 7 Fax: (519) 471-00 m@sbmltd.ca	ectrical d, N5X 4E8	LICENC	ROFESSION ROFESSION K.A. MONIZ 100124664 DEC 15, 2021		CH'S STAMP			he corporat CENTR/			Y OF	N/A	

### LONDON LOCATION 1599 Adelaide St. N., Units 301 & 203 London, ON N5X 4E8

## **KITCHENER LOCATION**

1415 Huron Rd., Unit 225 Kitchener, ON N2R 0L3 P: 519-725-8093

www.sbmltd.ca

sbm@sbmltd.ca

## Sanitary Sewer Design Sheet

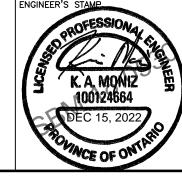
Municipality of Central Elgin

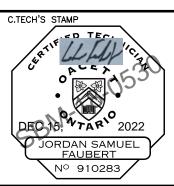
Date: December 12, 2022 Job Number: SBM-18-0530 **Client:** Strathroy Turf Farms Project: Kettle Creek Subdivision Designed By: JSF Reviewed By: KAM/NGu Project File No.: SBM-18-0530

Design Critera (Litres/capita/day) 400
Sewage Infiltration (Litres/hectare/sec) 0.2
Harmon Formula (Peaking Factor)
$M = (1 + \frac{14}{(4 + P^{0.5})})$

Uncertain Development Factor of 1.1 applied to sewage peak flow

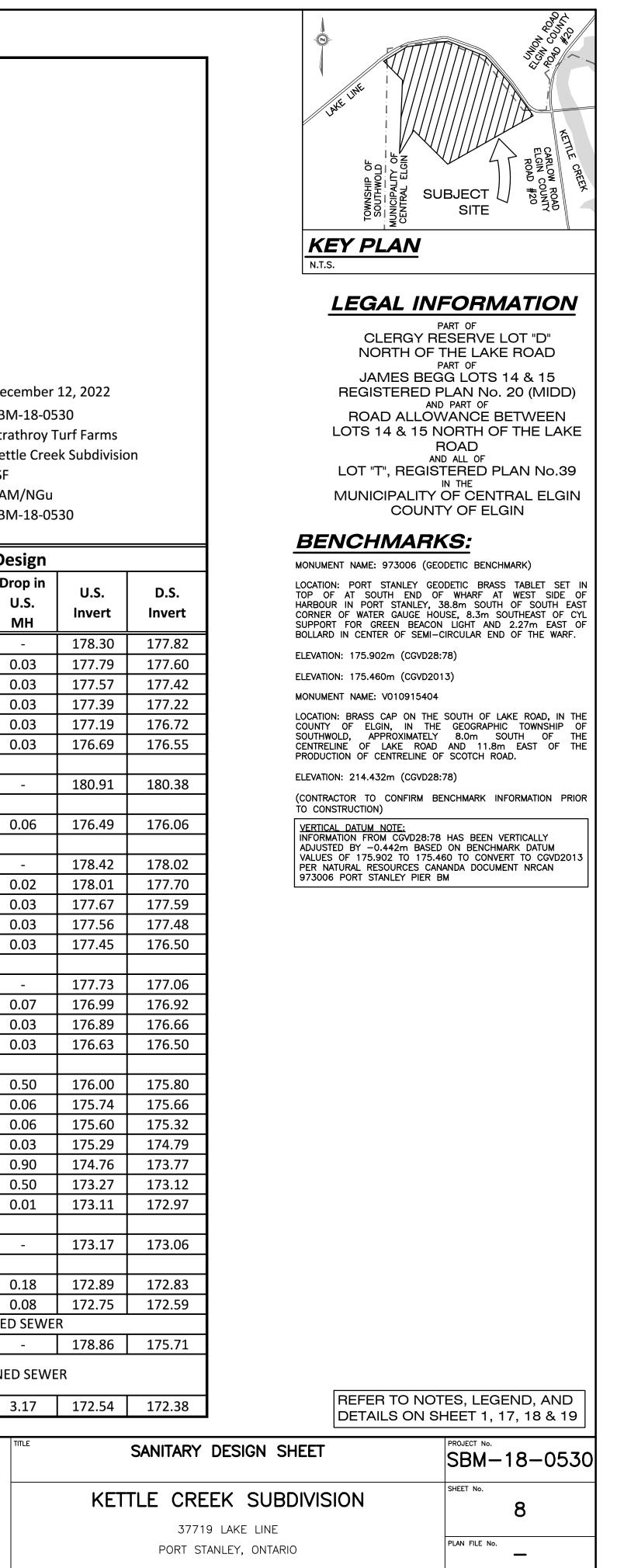


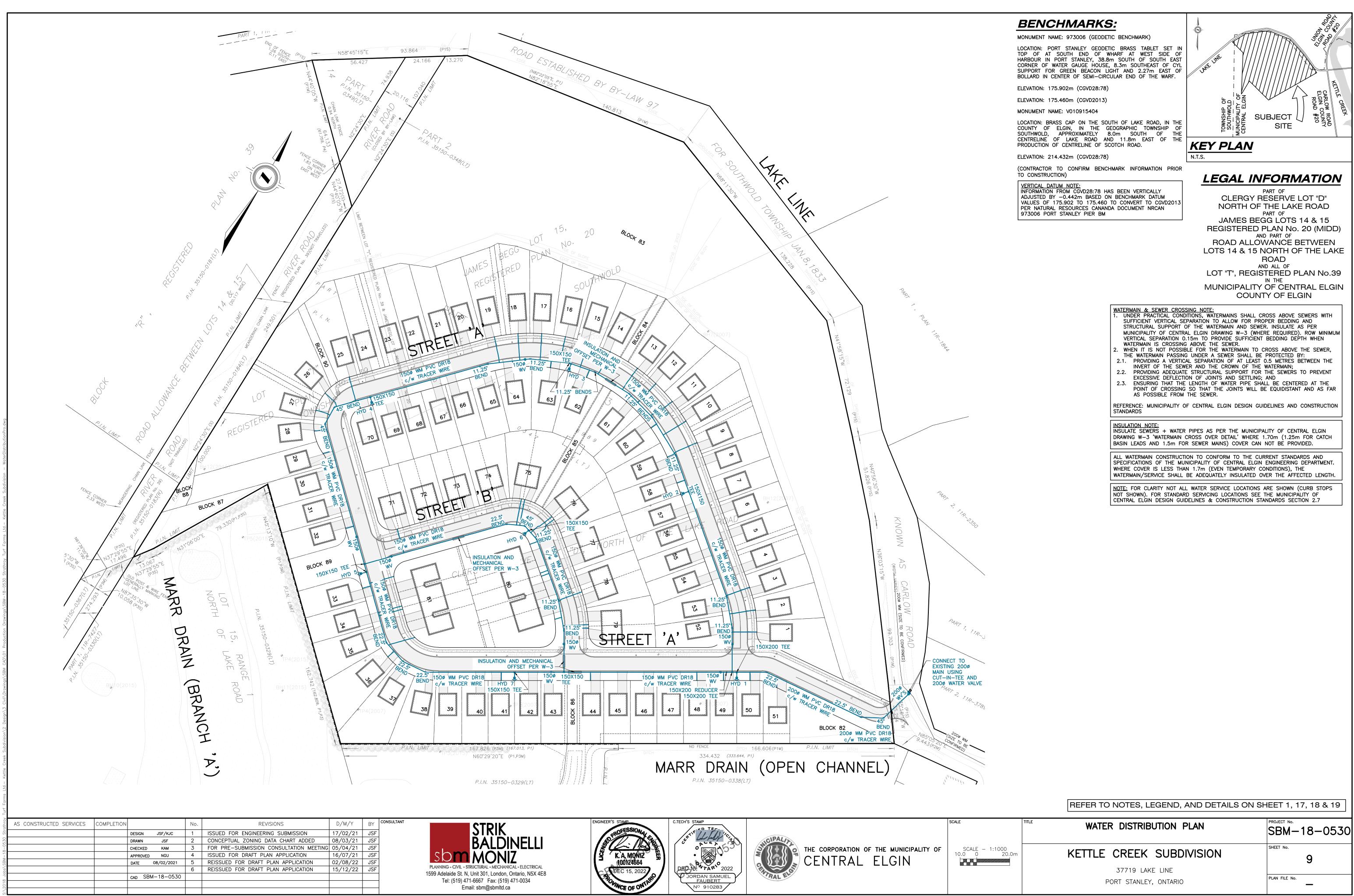


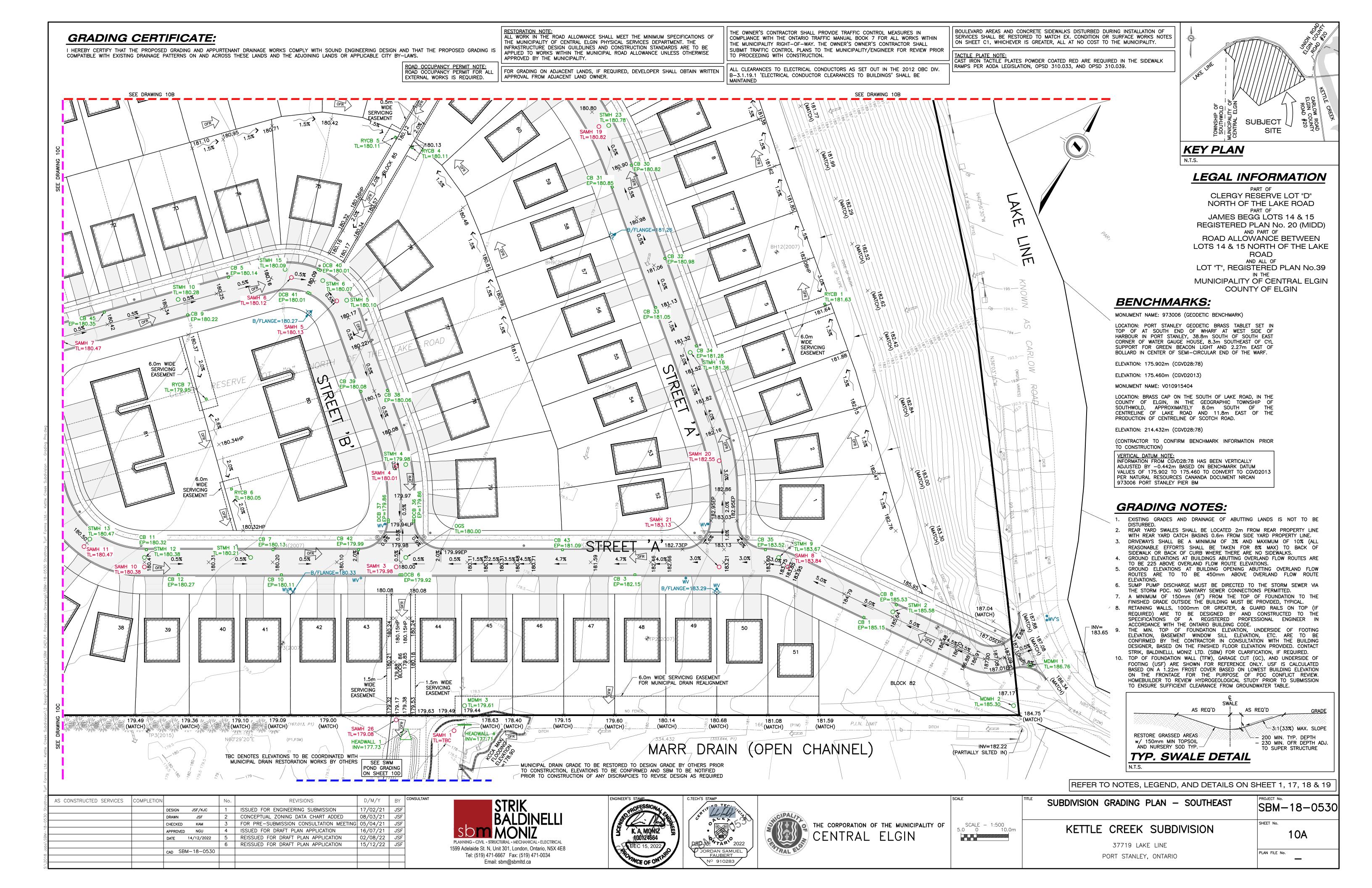


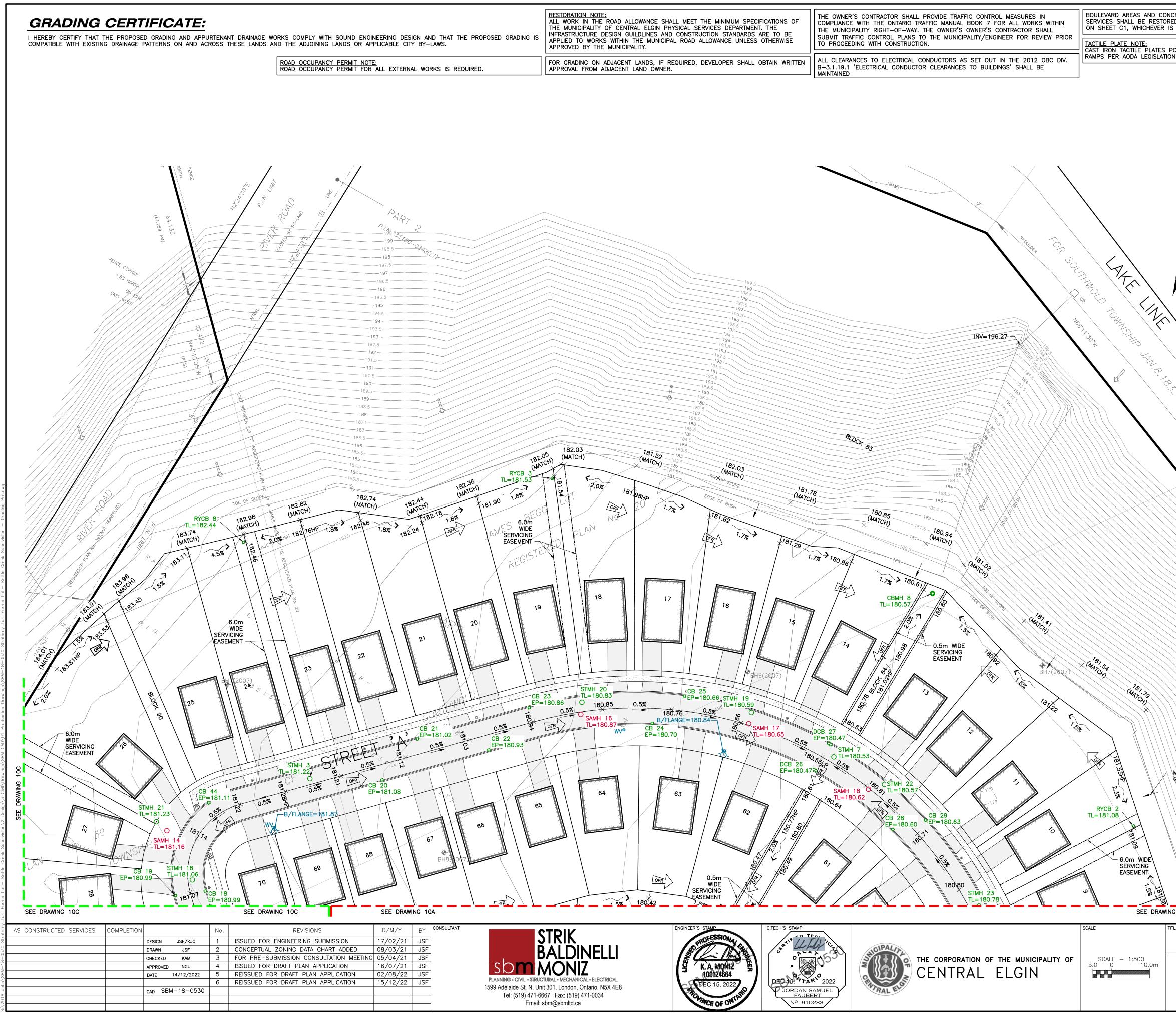


e Design Drop in U.S. D.S. U.S. Invert Invert MH 178.30 177.82 -0.03 177.79 177.60 0.03 177.57 177.42 177.22 0.03 177.39 0.03 177.19 176.72 0.03 176.69 176.55 180.91 180.38 -0.06 176.49 176.06 178.42 178.02 -178.01 0.02 177.70 0.03 | 177.67 177.59 0.03 177.56 177.48 0.03 177.45 176.50 177.73 177.06 -0.07 176.92 176.99 0.03 176.89 176.66 176.50 0.03 176.63 175.80 0.50 176.00 0.06 175.74 175.66 175.32 0.06 175.60 175.29 0.03 174.79 173.77 0.90 174.76 0.50 173.27 173.12 0.01 172.97 173.11 173.17 173.06 -0.18 172.89 172.83 0.08 172.75 172.59 BINED SEWER - 178.86 175.71 1BINED SEWER









RESTORATION NOTE: ALL WORK IN THE ROAD ALLOWANCE SHALL MEET THE MINIMUM SPECIFICATIONS OF THE MUNICIPALITY OF CENTRAL ELGIN PHYSICAL SERVICES DEPARTMENT. THE INFRASTRUCTURE DESIGN GUILDLINES AND CONSTRUCTION STANDARDS ARE TO BE	THE OWNER'S CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES IN COMPLIANCE WITH THE ONTARIO TRAFFIC MANUAL BOOK 7 FOR ALL WORKS WITHIN THE MUNICIPALITY RIGHT-OF-WAY. THE OWNER'S OWNER'S CONTRACTOR SHALL	BOULEVARD AREAS AND SERVICES SHALL BE RE ON SHEET C1, WHICHEN
APPLIED TO WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE UNLESS OTHERWISE	SUBMIT TRAFFIC CONTROL PLANS TO THE MUNICIPALITY/ENGINEER FOR REVIEW PRIOR	
APPROVED BY THE MUNICIPALITY.	TO PROCEEDING WITH CONSTRUCTION.	TACTILE PLATE NOTE:
		CAST IRON TACTILE PLA
	ALL CLEARANCES TO ELECTRICAL CONDUCTORS AS SET OUT IN THE 2012 OBC DIV.	RAMPS PER AODA LEGIS
APPRUVAL FRUM ADJAJENI LAND UWINER.		
FOR GRADING ON ADJACENT LANDS, IF REQUIRED, DEVELOPER SHALL OBTAIN WRITTEN APPROVAL FROM ADJACENT LAND OWNER.	ALL CLEARANCES TO ELECTRICAL CONDUCTORS AS SET OUT IN THE 2012 OBC DIV. B-3.1.19.1 'ELECTRICAL CONDUCTOR CLEARANCES TO BUILDINGS' SHALL BE MAINTAINED	RAMPS PER AODA LEG

AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES HEVER IS GREATER, ALL AT NO COST TO THE MUNICIPALITY.

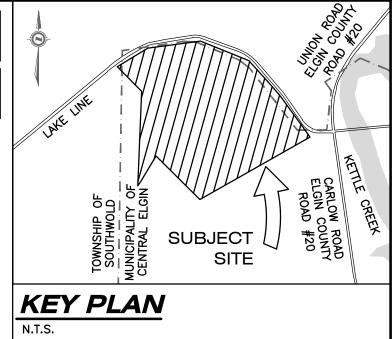
PLATES POWDER COATED RED ARE REQUIRED IN THE SIDEWALK GISLATION, OPSD 310.033, AND OPSD 310.039.

0

0

(F

- MATCH TO EXISTING GRADE AT 2.0%, TYP.



#### LEGAL INFORMATION

PART OF CLERGY RESERVE LOT "D" NORTH OF THE LAKE ROAD PART OF JAMES BEGG LOTS 14 & 15 REGISTERED PLAN No. 20 (MIDD) AND PART OF ROAD ALLOWANCE BETWEEN LOTS 14 & 15 NORTH OF THE LAKE ROAD AND ALL OF LOT "T", REGISTERED PLAN No.39 IN THE MUNICIPALITY OF CENTRAL ELGIN

COUNTY OF ELGIN

**BENCHMARKS:** 

MONUMENT NAME: 973006 (GEODETIC BENCHMARK)

LOCATION: PORT STANLEY GEODETIC BRASS TABLET SET IN TOP OF AT SOUTH END OF WHARF AT WEST SIDE OF HARBOUR IN PORT STANLEY, 38.8m SOUTH OF SOUTH EAST CORNER OF WATER GAUGE HOUSE, 8.3m SOUTHEAST OF CYL SUPPORT FOR GREEN BEACON LIGHT AND 2.27m EAST OF BOLLARD IN CENTER OF SEMI-CIRCULAR END OF THE WARF.

ELEVATION: 175.902m (CGVD28:78)

ELEVATION: 175.460m (CGVD2013)

MONUMENT NAME: V010915404

LOCATION: BRASS CAP ON THE SOUTH OF LAKE ROAD, IN THE COUNTY OF ELGIN, IN THE GEOGRAPHIC TOWNSHIP OF SOUTHWOLD. APPROXIMATELY 8.0m SOUTH OF THE CENTRELINE OF LAKE ROAD AND 11.8m EAST OF THE PRODUCTION OF CENTRELINE OF SCOTCH ROAD.

ELEVATION: 214.432m (CGVD28:78)

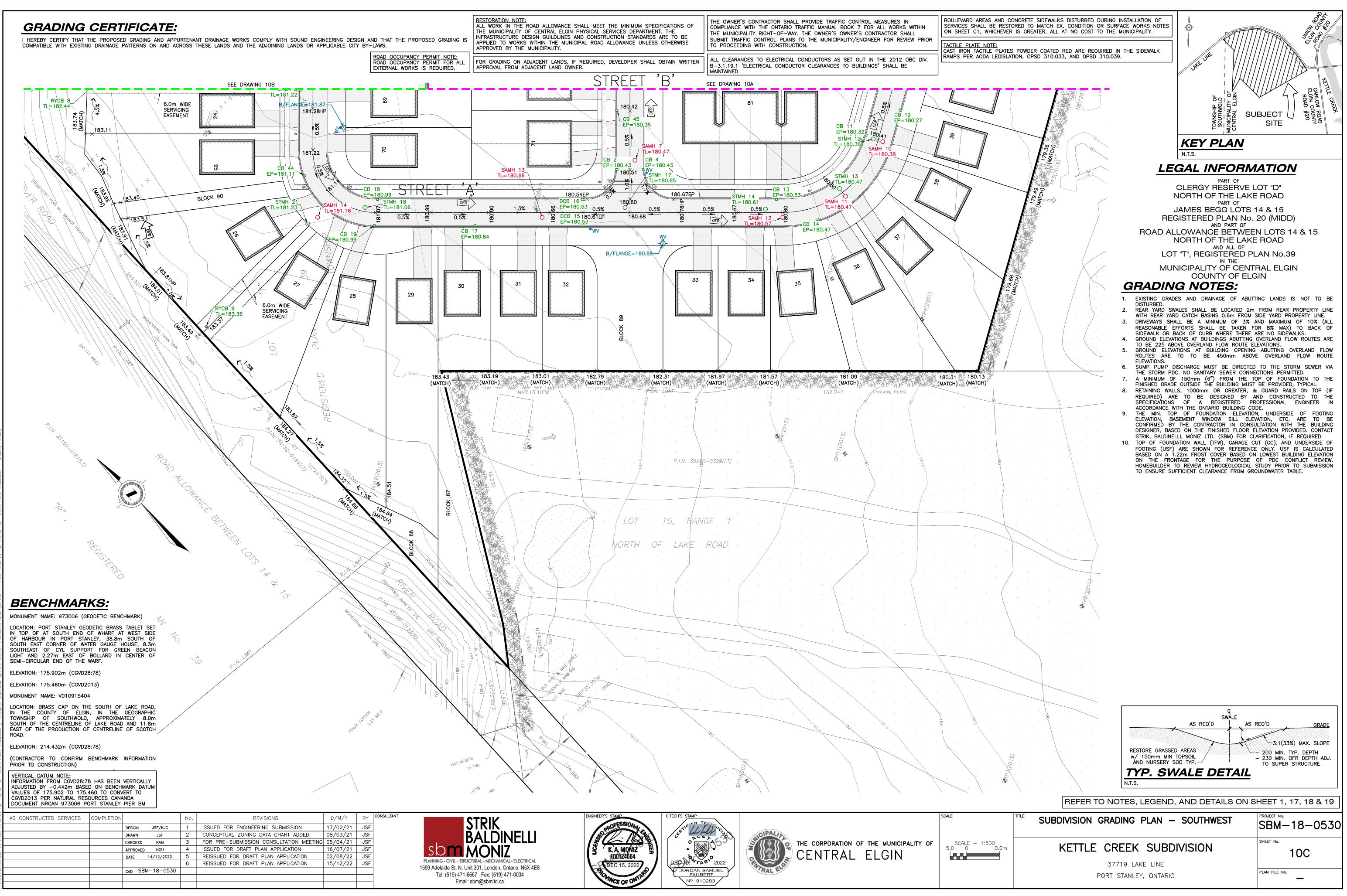
(CONTRACTOR TO CONFIRM BENCHMARK INFORMATION PRIOR TO CONSTRUCTION)

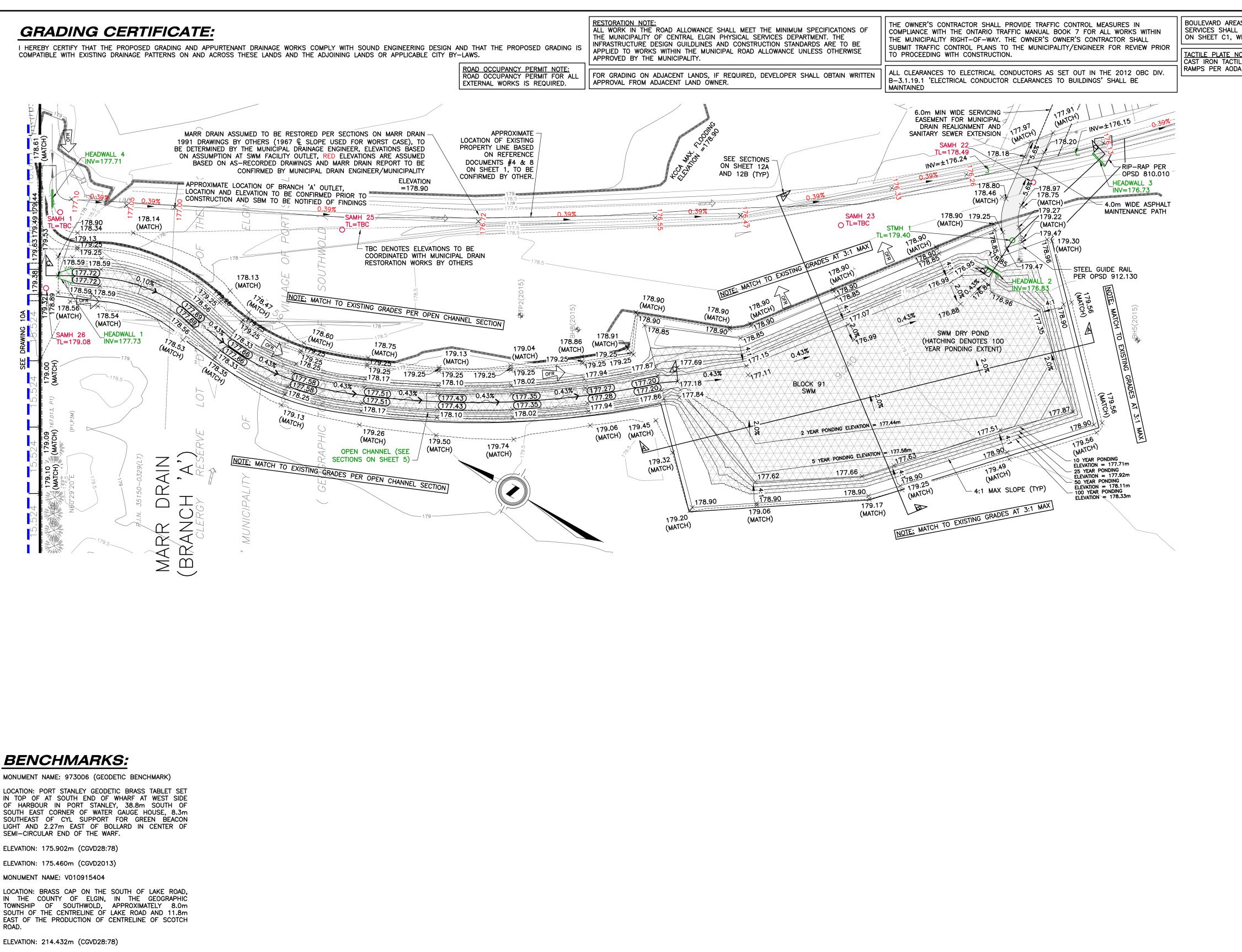
VERTICAL DATUM NOTE: INFORMATION FROM CGVD28:78 HAS BEEN VERTICALLY ADJUSTED BY -0.442m BASED ON BENCHMARK DATUM VALUES OF 175.902 TO 175.460 TO CONVERT TO CGVD2013 PER NATURAL RESOURCES CANANDA DOCUMENT NRCAN 973006 PORT STANLEY PIER BM

#### GRADING NOTES:

- EXISTING GRADES AND DRAINAGE OF ABUTTING LANDS IS NOT TO BE DISTURBED.
- REAR YARD SWALES SHALL BE LOCATED 2m FROM REAR PROPERTY LINE 2. WITH REAR YARD CATCH BASINS 0.6m FROM SIDE YARD PROPERTY LINE. DRIVEWAYS SHALL BE A MINIMUM OF 3% AND MAXIMUM OF 10% (ALL
- REASONABLE EFFORTS SHALL BE TAKEN FOR 8% MAX) TO BACK OF SIDEWALK OR BACK OF CURB WHERE THERE ARE NO SIDEWALKS. GROUND ELEVATIONS AT BUILDINGS ABUTTING OVERLAND FLOW ROUTES ARE TO BE 225 ABOVE OVERLAND FLOW ROUTE ELEVATIONS. GROUND ELEVATIONS AT BUILDING OPENING ABUTTING OVERLAND FLOW 5.
- ROUTES ARE TO TO BE 450mm ABOVE OVERLAND FLOW ROUTE ELEVATIONS. SUMP PUMP DISCHARGE MUST BE DIRECTED TO THE STORM SEWER VIA THE STORM PDC. NO SANITARY SEWER CONNECTIONS PERMITTED.
- A MINIMUM OF 150mm (6") FROM THE TOP OF FOUNDATION TO THE FINISHED GRADE OUTSIDE THE BUILDING MUST BE PROVIDED, TYPICAL.
- RETAINING WALLS, 1000mm OR GREATER, & GUARD RAILS ON TOP (IF REQUIRED) ARE TO BE DESIGNED BY AND CONSTRUCTED TO THE SPECIFICATIONS OF A REGISTERED PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE ONTARIO BUILDING CODE.
- THE MIN. TOP OF FOUNDATION ELEVATION. UNDERSIDE OF FOOTING ELEVATION, BASEMENT WINDOW SILL ELEVATION, ETC. ARE TO BE CONFIRMED BY THE CONTRACTOR IN CONSULTATION WITH THE BUILDING DESIGNER, BASED ON THE FINISHED FLOOR ELEVATION PROVIDED. CONTACT STRIK, BALDINELLI, MONIZ LTD. (SBM) FOR CLARIFICATION, IF REQUIRED.
- 10. TOP OF FOUNDATION WALL (TFW), GARAGE CUT (GC), AND UNDERSIDE OF FOOTING (USF) ARE SHOWN FOR REFERENCE ONLY. USF IS CALCULATED BASED ON A 1.22m FROST COVER BASED ON LOWEST BUILDING ELEVATION ON THE FRONTAGE FOR THE PURPOSE OF PDC CONFLICT REVIEW. HOMEBUILDER TO REVIEW HYDROGEOLOGICAL STUDY PRIOR TO SUBMISSION TO ENSURE SUFFICIENT CLEARANCE FROM GROUNDWATER TABLE.

181.46 (MATCH SWAL AS REQ'D AS REQ'D GRADE -3:1(33%) MAX. SLOPE RESTORE GRASSED AREAS 200 MIN. TYP. DEPTH w/ 150mm MIN TOPSOIL - 230 MIN. OFR DEPTH ADJ. AND NURSERY SOD TYP.-TO SUPER STRUCTURE TYP. SWALE DETAIL 181.77 (MATCH REFER TO NOTES, LEGEND, AND DETAILS ON SHEET 1, 17, 18 & 19 SEE DRAWING 10A SUBDIVISION GRADING PLAN - NORTHWEST SBM-18-0530 SHEET No. KETTLE CREEK SUBDIVISION 10B 37719 LAKE LINE PLAN FILE No. PORT STANLEY, ONTARIO \_

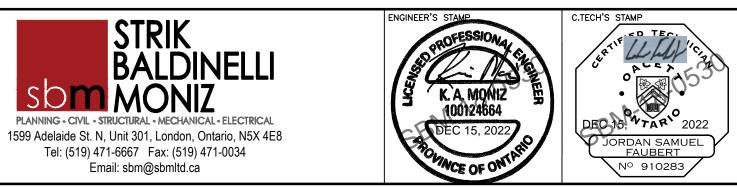




(CONTRACTOR TO CONFIRM BENCHMARK INFORMATION PRIOR TO CONSTRUCTION)

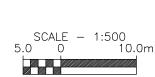
VERTICAL DATUM NOTE: INFORMATION FROM CGVD28:78 HAS BEEN VERTICALLY ADJUSTED BY -0.442m BASED ON BENCHMARK DATUM VALUES OF 175.902 TO 175.460 TO CONVERT TO CGVD2013 PER NATURAL RESOURCES CANANDA DOCUMENT NRCAN 973006 PORT STANLEY PIER BM

athroy	AS CONSTRUCTED SERVICES	COMPLETION			No.	REVISIONS	D/M/Y	BY	CONSULTANT	
Str			DESIGN	JSF/KJC	1	ISSUED FOR ENGINEERING SUBMISSION	17/02/21	JSF		
530			DRAWN	JSF	2	CONCEPTUAL ZONING DATA CHART ADDED	08/03/21	JSF		
8-0			CHECKED	KAM	3	FOR PRE-SUBMISSION CONSULTATION MEETING	05/04/21	JSF		- 1
1 - 18			APPROVED	NGU/KAM	4	ISSUED FOR DRAFT PLAN APPLICATION	16/07/21	JSF		SN
SBN			DATE	14/12/2022	5	REISSUED FOR DRAFT PLAN APPLICATION	02/08/22	JSF		
\sq					6	REISSUED FOR DRAFT PLAN APPLICATION	15/12/22	JSF		LANNING • CI 9 Adelaide
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THE CORPORATION OF THE MUNICIPALITY OF CENTRAL ELGIN



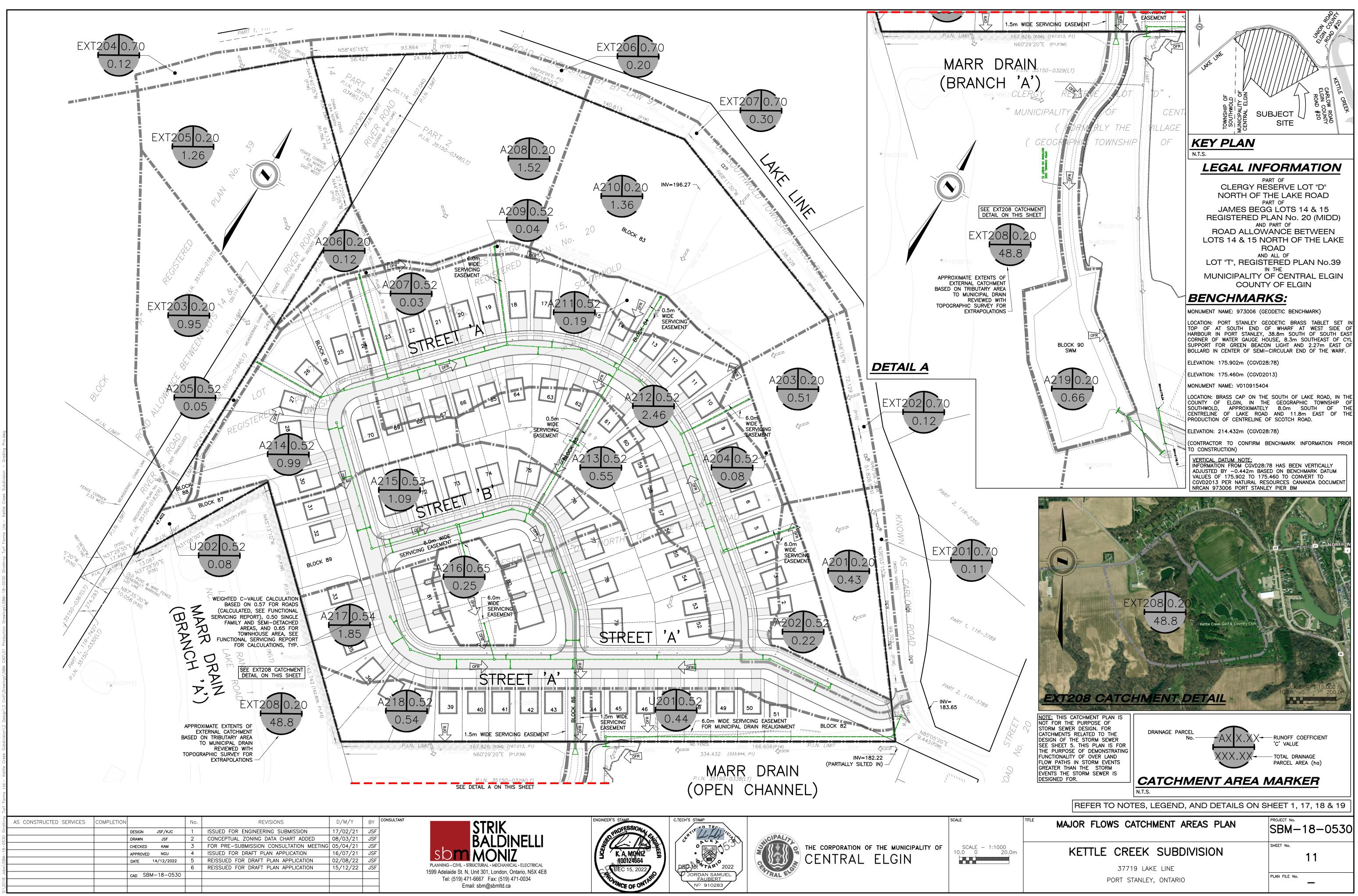
BOULEVARD AREAS AND CONCRETE SIDEWALKS DISTURBED DURING INSTALLATION OF SERVICES SHALL BE RESTORED TO MATCH EX. CONDITION OR SURFACE WORKS NOTES ON SHEET C1, WHICHEVER IS GREATER, ALL AT NO COST TO THE MUNICIPALITY. TACTILE PLATE NOTE: CAST IRON TACTILE PLATES POWDER COATED RED ARE REQUIRED IN THE SIDEWALK RAMPS PER AODA LEGISLATION, OPSD 310.033, AND OPSD 310.039. SUBJECT SITE **KEY PLAN** N.T.S. LEGAL INFORMATION PART OF CLERGY RESERVE LOT "D" NORTH OF THE LAKE ROAD PART OF JAMES BEGG LOTS 14 & 15 REGISTERED PLAN No. 20 (MIDD) AND PART OF ROAD ALLOWANCE BETWEEN LOTS 14 & 15 NORTH OF THE LAKE ROAD AND ALL OF LOT "T", REGISTERED PLAN No.39 IN THE MUNICIPALITY OF CENTRAL ELGIN COUNTY OF ELGIN **GRADING NOTES:** EXISTING GRADES AND DRAINAGE OF ABUTTING LANDS IS NOT TO BE DISTURBED. REAR YARD SWALES SHALL BE LOCATED 2m FROM REAR PROPERTY LINE 2. WITH REAR YARD CATCH BASINS 0.6m FROM SIDE YARD PROPERTY LINE. 3. DRIVEWAYS SHALL BE A MINIMUM OF 3% AND MAXIMUM OF 10% (ALL REASONABLE EFFORTS SHALL BE TAKEN FOR 8% MAX) TO BACK OF SIDEWALK OR BACK OF CURB WHERE THERE ARE NO SIDEWALKS. GROUND ELEVATIONS AT BUILDINGS ABUTTING OVERLAND FLOW ROUTES ARE TO BE 225 ABOVE OVERLAND FLOW ROUTE ELEVATIONS. GROUND ELEVATIONS AT BUILDING OPENING ABUTTING OVERLAND FLOW ROUTES ARE TO TO BE 450mm ABOVE OVERLAND FLOW ROUTE ELEVATIONS. 6. SUMP PUMP DISCHARGE MUST BE DIRECTED TO THE STORM SEWER VIA THE STORM PDC. NO SANITARY SEWER CONNECTIONS PERMITTED. A MINIMUM OF 150mm (6") FROM THE TOP OF FOUNDATION TO THE FINISHED GRADE OUTSIDE THE BUILDING MUST BE PROVIDED, TYPICAL. RETAINING WALLS, 1000mm OR GREATER, & GUARD RAILS ON TOP (IF REQUIRED) ARE TO BE DESIGNED BY AND CONSTRUCTED TO THE SPECIFICATIONS OF A REGISTERED PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE ONTARIO BUILDING CODE. THE MIN. TOP OF FOUNDATION ELEVATION, UNDERSIDE OF FOOTING ELEVATION, BASEMENT WINDOW SILL ELEVATION, ETC. ARE TO BE CONFIRMED BY THE CONTRACTOR IN CONSULTATION WITH THE BUILDING DESIGNER, BASED ON THE FINISHED FLOOR ELEVATION PROVIDED. CONTACT STRIK, BALDINELLI, MONIZ LTD. (SBM) FOR CLARIFICATION, IF REQUIRED. 10. TOP OF FOUNDATION WALL (TFW), GARAGE CUT (GC), AND UNDERSIDE OF FOOTING (USF) ARE SHOWN FOR REFERENCE ONLY. USF IS CALCULATED BASED ON A 1.22m FROST COVER BASED ON LOWEST BUILDING ELEVATION ON THE FRONTAGE FOR THE PURPOSE OF PDC CONFLICT REVIEW. HOMEBUILDER TO REVIEW HYDROGEOLOGICAL STUDY PRIOR TO SUBMISSION TO ENSURE SUFFICIENT CLEARANCE FROM GROUNDWATER TABLE. SWALE AS REQ'D AS REQ'D GRADE -3:1(33%) MAX. SLOPE RESTORE GRASSED AREAS 200 MIN. TYP. DEPTH w/ 150mm MIN TOPSOIL - 230 MIN. OFR DEPTH ADJ. AND NURSERY SOD TYP.-TO SUPER STRUCTURE TYP. SWALE DETAIL N.T.S. REFER TO NOTES, LEGEND, AND DETAILS ON SHEET 1, 17, 18 & 19 SUBDIVISION GRADING PLAN - SOUTHWEST & SBM-18-0530 SWM POND GRADING PLAN SHEET No. KETTLE CREEK SUBDIVISION 10D

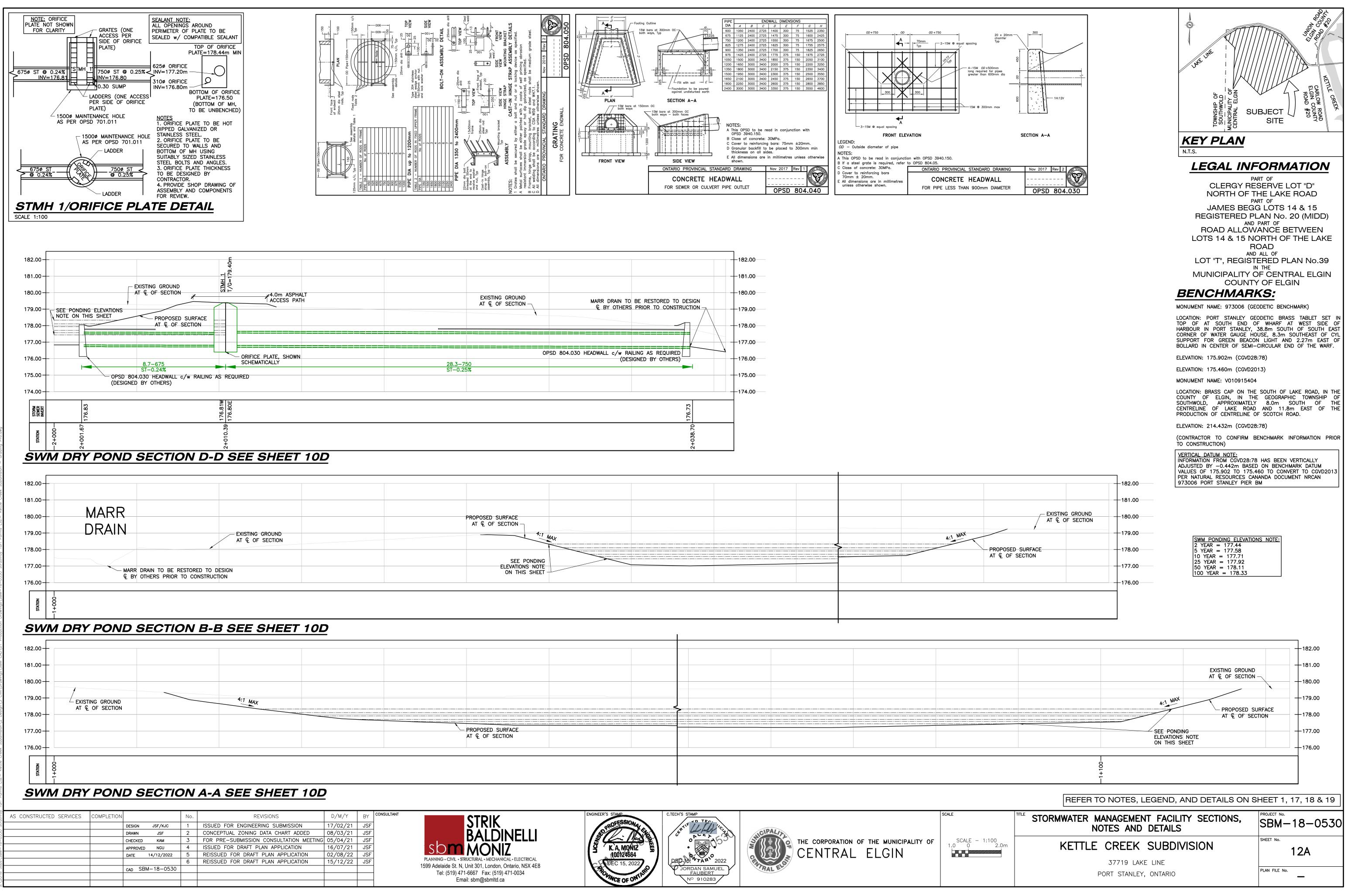
37719 LAKE LINE

PORT STANLEY, ONTARIO

PLAN FILE No.

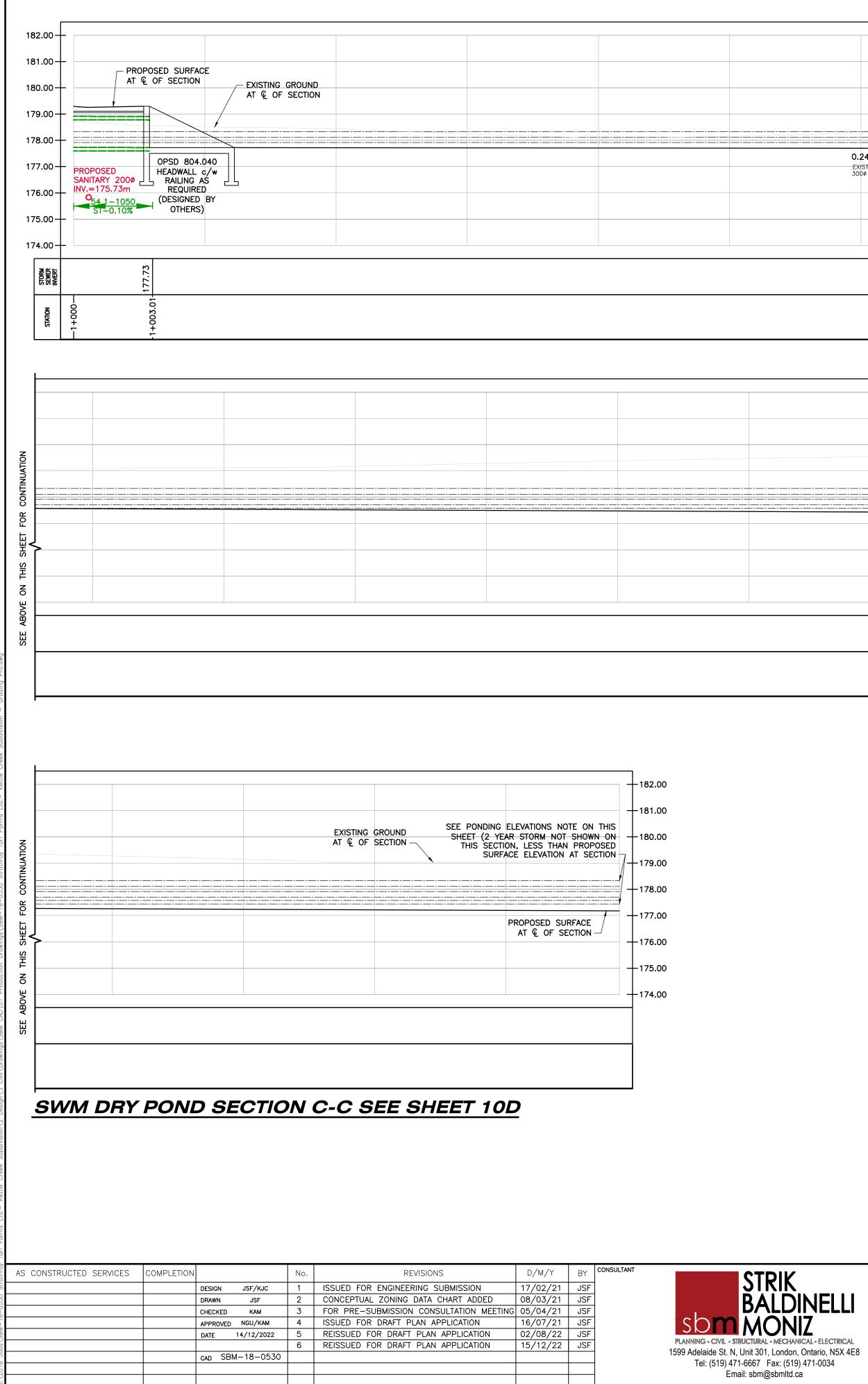
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OPOSED SURFACE		 				
AT & OF SECTION						
4:1	MAX				4:1 MAX	
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						PROPO
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ON THIS SHEET						

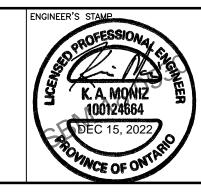
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OPOSED SURFACE				
€ OF SECTION				

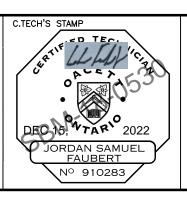


- INSULATION PER W-3 WHERE EXISTING DRAIN EXPOSED AT	
CHANNEL CROSSING	
0.24m Existing Branch 'a'	
EXISTING BRANCH A 300ø INV.=±177.16m	
5000 INV177.10II	

	← EXISTING GROUND AT & OF SECTION		
	PROPOSED SURFACE		

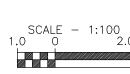
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THE CORPORATION OF THE MUNICIPALITY OF CENTRAL ELGIN



SCALE

		KEY PLAN N.T.S.      LEGAL INFO N.T.S.      LEGAL INFO     PAR     CLERGY RES     NORTH OF TH     PAR     JAMES BEGG     REGISTERED PL     AND F     ROAD ALLOWA     LOTS 14 & 15 NO     ROAD ALLOWA     LOTS 14 & 15 NO     COUNTY      SENCEMPAREM NUNICIPALITY OU     COUNTY      SENCEMPAREM NUMERI NAME: 973006 (GEO     CATION: PORT STANLEY GEO P OF AT SOUTH END OF     ROAD IN CENTER OF SEMI-OF     EVATION: 175.902m (CGVD28: EVATION: 175.460m (CGVD28: EVATION: 175.460m (CGVD28: ONTRACTOR TO CONFIRM BE     OONTRUCTION)  ETICAL DATUM NOTE: FORMATION FROM CGVD28:78 DUUSED BY -0.442m BASED AULES OF 175.902 TO 175.462 CANTURAL RESOURCES CAMA 30006 PORT STANLEY PIER BH   SUMMENT NAME: PONDING  EVATION: 214.432m (CGVD28:78 DUUSTO OT 175.902 TO 175.462 CANTURAL RESOURCES CAMA 30006 PORT STANLEY PIER BH   SUM PONDING  SUM PONDING  SUM PONDING  SUM PONDING  SUM PONDING  SUM PONDING  ND DETAILS ON SH  AND	DETIC BENCHMARK) DETIC BRASS TABLET SET IN WHARF AT WEST SIDE OF 8.8m SOUTH OF SOUTH FAST OF IGRULAR END OF THE WARF. 78) 3) SOUTH OF LAKE ROAD, IN THE GEOGRAPHIC TOWNSHIP OF 8.0m SOUTH OF THE AND 11.8m EAST OF THE SCOTCH ROAD. 78) NCHMARK INFORMATION PRIOR HAS BEEN VERTICALLY ON BENCHMARK DATUM SO TO CONVERT TO CGVD2013 NDA DOCUMENT NRCAN M ELEVATIONS NOTE: .44 .58 7.71 7.92 8.11 78.33
	STORMWATER MANAGEMENT FACILI NOTES AND DETAILS	ty sections,	SBM-18-0530
2.0m	KETTLE CREEK SUBDIN	/ISION	SHEET NO. 12B
	37719 LAKE LINE		
	PORT STANLEY, ONTARIO	PLAN FILE No.	